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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

39th meeting
Strasbourg, 3-6 December 2019

13th meeting of the Bern Convention Group of Experts on Invasive Alien Species

Batumi (Georgia), 24-25 June 2019

REPORTING 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

- COMPILATION OF NATIONAL REPORTS -

Document prepared by
the Directorate of Democratic Participation

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Armenia / Arménie

Country	Armenia
Name and position of responsible person	Hasmik Ghalachyan, Head of Plant resources management Division,
Institution/Organisation	BMA, Ministry of Environment
E-mail	hasmik.ghalachyan@mnp.am ghalachyanhasmik@yahoo.com, ghalachyanhasmik@gmail.com

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[1]:

1.	Building awareness and support	
2.	Collecting, managing and sharing information	Publication: 1. Fayvush G., Vardanyan Zh., Aleksanyan A. Invasiveness risk assessment of woody plants of Armenia // Thaiszia – J. Bot. 28, 2, p.81-91. 2. Ghasabyan M., Kandaurov A. New species for Armenia Sciurus vulgaris Linneus,1758 • Scientific Center of Zoology and Hydroecology NAS RA, P. Sevak 7, Yerevan, 0014, Armenia • Institute of Zoology, Ilia State University, G. Tsereteli St. 3, Tbilisi, 0162, Georgia
3.	Strengthening national policy legal and institutional frameworks	Creation of the draft law on Flora and fauna with the changes about invasive alien species. The "Strategy and State Program of Conservation, Use and Reproduction of Biological Diversity in the Republic of Armenia" (Gov. act. 2015, N54-A) includes following provisions about invasive species for 2020: • Implement invasive species inventory, identify pathways to penetrate the territory of Armenia and assess the degree of prevalence in ecosystems.

[1] Please add as much space as you need for your replies under each question.

4.	Regional cooperation and responsibility	
5.	Prevention	Discovered three new invasive species that can become invasive: • Grindelia squarrosa • Cuscuta campestris • Polygonum orientale • Sciurus vulgaris Linneus,1758
6.	Early detection and rapid response	Implementation of scientific theme (Institute of Botany NAS RA): "Assessment of threat to specially protected natural areas and ecological networks of Armenia from invasive plant species".

7.	Mitigation of impacts	
8.	Restauration of native biodiversity	"Strategy and State Program of Conservation, Use and Reproduction of Biological Diversity in the Republic of Armenia" (Gov. dec. 2015, N54-A, 2016-2020)

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

There is continuation of work with *Ambrosia artemisiifolia* in Armenia, computer modelling of its further distribution (Aleksanyan A., Aleksanyan T., Fayvush G. Modeling of possible distribution of common ragweed (*Ambrosia artemisiifolia* L.) under climate change in Armenia // Abstr. of Final conference "Sustainable management of *Ambrosia artemisiifolia* in Europe", Vianden – Luxembourg, September 13th, 2016, p. 3.)

Czech Republic / République Tchèque

Information on the institution/agency/person reporting

Country	Czech Republic
Name and position of responsible person	Jana Pěknicová, Department of the Species Protection and Implementation of International Commitments & Jan Plesník, Department of International cooperation
Institution/Organisation	Ministry of the Environment (MoE) & Nature Conservation Agency of the Czech Republic (NCA)
E-mail	Jana.Peknicova@mzp.cz

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[2]:

1.	Building awareness and support	The Czech Republic has a strong and long tradition in research focused on IAS (especially on plant invasions). Scientists from the Institute of Botany of the Czech Academy of Sciences cooperate with the Ministry and Nature Conservation Agency on the implementation of the EU Regulation No 1143/2014. In 2018, the Ministry, with cooperation of the Institute of Botany and the Agency, significantly strengthened efforts in awareness raising about IAS from the Union List through media (e.g. interviews). In addition, the Agency published a summary brochure about IAS from the Union List (available at: http://invaznidruhy.nature.cz/res/archive/410/067872.pdf?seek=1547133735). In September 2019, the EMAPI 2019 conference will be held in Prague, organised by Petr Pyšek and Jan Pergl (Institute of Botany). For more information, please see: http://www.ibot.cas.cz/invasions/EMAPi_conferences/emapi2019.php
2.	Collecting, managing and sharing information	National data is integrated into the database system of the Agency (mobile application BioLog). More information about sharing information on IAS occurrence is available here: http://invaznidruhy.nature.cz/co-delat-kdyz/nalez-invazniho-druhu/ Supported research projects (e.g): • Prediction of threats posed by non-native fish and crayfish and optimization of eradication methods for invasive species (2017-2020) https://starfos.tacr.cz/en/project/TH02030687 • Development of Invasive Alien Species Geoinformation Portal (2017-2019) https://starfos.tacr.cz/en/project/TH02030523

[2] Please add as much space as you need for your replies under each question.

		• Detection and monitoring of invasive species using unmanned aircraft (2014-2017) https://starfos.tacr.cz/en/project/TA04020455
3.	Strengthening national policy legal and institutional frameworks	In 2018, the Ministry finalised the draft of a legal amendment to Act No. 114/1992 Coll., on the Nature Conservation and Landscape Protection as amended later, implementing all provisions set by EU Regulation No 1143/2014 and expects its final adoption by the second quarter of 2020. IAS are addressed in the following strategic documents of the Czech Republic: • State Nature Conservation and Landscape Protection Programme of the Czech Republic • State Environmental Policy of the Czech Republic • National Biodiversity Strategy of the Czech Republic 2016–2025 • National Action Plan on Adaptation to Climate Change
4.	Regional cooperation and responsibility	
5.	Prevention	Border controls for IAS from the Union List have been carried out since 2016. The analysis of priority pathways of introduction, prepared by the Institute of Botany (including IAS on the Union List and IAS prioritised in CZ), is to be finalised in 2019.
6.	Early detection and rapid response	Cooperation of the Ministry and the Agency on early detection system EASIN is ongoing (in 2017, eradication measures were taken in the case of *Procambarus fallax f. virginalis)* Early warning system is available on the webpage of the Agency: http://invaznidruhy.nature.cz/vcasne-varovani/

7.	Mitigation of impacts	In 2017 and 2018 management measures according to Article 19 of EU Regulation No 1143/2014 were created, with focus on 11 IAS: *Ailanthus altissima, Heracleum mantegazzianum, Elodea nutalli, Myocastor coypus, Orconectes limosus, Pseudorasbora parva, Impatiens glandulifera, Asclepias syriaca, Trachemys scripta, Procyon lotor, Alopochen aegyptiaca*.
8.	Restauration of native biodiversity	-

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

European Code of Conduct on Horticulture and Invasive Alien Plants (2008) - Illustrated version (2011): the document was translated into Czech language and distributed to relevant stakeholders. However, currently there is no feedback on the use of the document.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

It is foreseen that some of the Codes of conduct might be used for the preparation of national guidelines on IAS management.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

The evaluation is not possible, since there is no feedback on the Codes of conduct being implemented at national level by relevant sectors and actors.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

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Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

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Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

In 2017, the Czech Republic adopted the National Action Plan on Adaptation to Climate Change. IAS are addressed as target 19.

https://climate-adapt.eea.europa.eu/countries-regions/countries/czech-republic

Estonia / Estonie

Information on the institution/agency/person reporting

Country	Estonia
Name and position of responsible person	Merike Linnamägi, senior officer
Institution/Organisation	Ministry of Environment
E-mail	Merike.Linnamagi@envir.ee

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[3]:

1.	Building awareness and support	Variety of actions are carried out on this topic the main are: • Annual or biannual trainings for the Customs officers on national and EU IAS regulation • Annual or biannual trainings for the Environmental Inspectorate officers on national and EU IAS regulation • Building awareness in zoo and in botanical gardens through lectures and direct communications • Lectures for public on local IAS • Lectures for local town or county environment officials on horticulture and IAS • The largest Estonian nature magazine Eesti Loodus (Estonian Nature) had a special issue on IAS in March 2019. • As a new measure we use people carrying out community service sentences for plant eradication actions. This has a strong awareness raising component to the people participating.
2.	Collecting, managing and sharing information	• Citizen science – species occurrences data including IAS data is collected in an easy mobile app (Windows, Android and Apple interfaces) the app enables citizens to report 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.

[3] Please add as much space as you need for your replies under each question.

		• All state funded species and habitats inventories include obligation to notify of any EU or EE IAS regulation species. • State funded Plant Atlas project is being finalized, most data collected based on 9 x 11 km rectangles, all alien plant info collected with GPS coordinates to allow any fallow up actions. • IAS species maps are publicly available to increase knowledge. • New portal on all biodiversity info is planned to be developed in next years including strong IAS part- at the moment IAS info is represented on many governmental sites but there is no single clear site for people to reference. • IAS data is shared to NOBANIS and GBIF databases and indirectly to EASIN.
3.	Strengthening national policy legal and institutional frameworks	• Estonia has had IAS mentioned in legal acts since 1994 with a direct ban on all alien species introductions to nature, and therefore this is rather well known by officials (but not all general public). • IAS is an integral part of Estonian Nature Conservation Action Plan 2012-2020, new action plan will be compiled in 2020 for period 2021+. • Some alien species are covered in dedicated action plans which are regularly renewed (alien hogweeds, raccoon dog, Himalayan balsam) or are part of a dedicated action plan on the native species (American mink in European mink action plan, alien crayfish in noble crayfish action plan). • Priority pathways were analysed in 2017-2018, pathway management plan will be developed for horticulture, pets (including aquarium and terrarium species) and live bait and live food in 2019. • Where relevant IAS are addressed in local protected area management plans.
4.	Regional cooperation and responsibility	• Estonia takes part in international expert groups to share the knowledge • Where possible active cooperation with direct neighbours (specific IAS study trips to Finland, etc). • Dedicated IT development made that if EU IAS is detected near the border automatic notification is sent to expert who then can notify the neighbouring MS.
5.	Prevention	• Strong legislation banning all alien species introductions to nature.

		• Legally binding Estonian black list (ban on sale, import, owning, growing and breeding) • Legally binding white list on some trees allowed to be used in forestry. • Direct work with Customs and Environmental Inspectorate to enforce the legislation. • Different awareness raising actions (see point 1) to reduce intentional and unintentional releases by public.
6.	Early detection and rapid response	• IAS detection reporting built in in all species and habitat monitoring schemes, also citizen science schemes used. • Eradication and rapid response is done by Environmental Board in all environments, so there is clear dedicated body responsible for the actions • Eradication and rapid response done by Environmental Board specialists, contracted partners (including universities, hunters etc.) or through public procurement procedure. Where possible landowners are involved.

7.	Mitigation of impacts	Mitigation of impacts are done in small scale on a local level. For example, dedicated hunting of widespread species of mink and raccoon dog on small ilands important for nesting birds. Also strong catching pressure is done for alien crayfish to limit the spread of the species and the diseases they carry. In general mitigation has not been a priority compared to eradication actions.
8.	Restauration of native biodiversity	-

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Unfortunately there have not been finances to translate the codes and this has limited the implementation of the codes.

The codes have been sent to relevant partners (e.g CoC on horticulture and CoC on botanical gardens to botanical gardens, CoC on zoos to zoos), but there is limited feedback on if and how they have been implemented.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

See Q2a

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

International codes of conduct are very useful if either translated to national language or translated and adapted to local needs. They have been used as source materials when compiling our marine (published 2011) and terrestrial (2013) handbooks.

Unfortunately, there has not been enough resources (mostly time and manpower) to take more advantage of these Codes of Conduct which are a valuable resource in Estonia- to publicise, promote and implement them in an effective manner.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

No, not directly. Several studies on pollinators and their declines are being carried out currently but these focus mostly on European honey bee (*Apis mellifera*). Different studies on native pollinators including bumblebees are planned by The Estonian Environment Agency. The direct threat would be *Vespa velutina nigrithorax* which has not so far been found in Estonia.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

After several more studies are carried out, the pollinator action plan is planned to be compiled in Estonia (probably in 2022). IAS threat to pollinators will be part of the plan.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

There has been almost no work on IAS and climate change in Estonia.

As an exception to the previous statement, when carrying out the pathway analysis for the EU regulation species climate and climate change was taken into account as one of the main factors having an effect on both establishments as well as species surviving the transport to Estonia.

European Union / Union Européenne

Information on the institution/agency/person reporting

Country	This contribution refers to activities of the European Commission in relation to the implementation of the EU Regulation on IAS. It is however the EU Member States that undertake the concrete implementation and their individual reports could provide more details on specific actions within but also beyond the scope of the EU Regulation.
Name and position of responsible person	Spyridon Flevaris Policy Officer
Institution/Organisation	European Commission, Directorate-General for Environment
E-mail	spyridon.flevaris@ec.europa.eu

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[4]:

1.	Building awareness and support	Main activities of the European Commission in this area: • Publication of information material on the 49 species included in the list of IAS of Union concern: https://publications.europa.eu/en/publication-detail/-/publication/adedfc12-4478-11e9-a8ed-01aa75ed71a1 • Deployment of a citizen science application on the 49 species included in the list of IAS of Union concern: http://digitalearthlab.jrc.ec.europa.eu/app/invasive-alien-species-europe • Commissioned several reports for technical support: https://circabc.europa.eu/w/browse/0606f9b8-b567-4f53-9bc8-76e7800f0971 • Development (ongoing) of Frequently Asked Questions on how the Invasive Alien Species Regulation interacts with the EU Nature Directives. This guidance is expected to become available by end of 2019.
2.	Collecting, managing and sharing information	Main activities of the European Commission in this area: • The information support system EASIN is constantly improved and expanded. Web services enable users to query a catalogue including around 14,000 alien species and retrieve species information: https://easin.jrc.ec.europa.eu

[4] Please add as much space as you need for your replies under each question.

		https://easin.jrc.ec.europa.eu/easin/Services/RestfulWebService • Publication of reports on the baseline distribution of 48 of the species included in the list of IAS of Union concern: https://easin.jrc.ec.europa.eu/easin/Documentation/Baseline • Development of risk assessments: https://circabc.europa.eu/w/browse/ed95cea1-4f6a-4a3b-b27d-b2bfb8288c42
3.	Strengthening national policy legal and institutional frameworks	The European Commission is assisted by expert groups that enable the coordination of activities, exchange of information and strengthening the implementation of the EU Regulation on invasive alien species: • Scientific Forum: This group consists of representatives of the scientific community appointed by the Member States. It provides advice on scientific questions related to the application of the EU Regulation. Information on its activities can be found here: https://circabc.europa.eu/ui/group/98665af0-7dfa-448c-8bf4-e1e086b50d2c/library/1c9c76e8-5aa6-4e8c-8d60-756abb2e8a65?p=1&n=10&sort=modified_DESC • Working Group on invasive alien species (WGIAS): This group enables the exchanges and coordination between the Commission, the Member States, the stakeholders and other related organisations. Information on its activities, including reports developed by this group, can be found here: https://circabc.europa.eu/ui/group/4cd6cb36-b0f1-4db4-915e-65cd29067f49/library/2cc89b36-fd67-4b70-a50e-bb4c006166e9?p=1&n=10&sort=modified_DESC • Invasive Alien Species Expert Group (IASEG): This group enables the exchanges and coordination between the Commission and the Member States on concrete questions relating to the implementation of the EU Regulation. Information on its activities can be found here: https://circabc.europa.eu/ui/group/4cd6cb36-b0f1-4db4-915e-65cd29067f49/library/2cc89b36-fd67-4b70-a50e-bb4c006166e9?p=1&n=10&sort=modified_DESC
4.	Regional cooperation and responsibility	The EU Regulation has enabled the application of uniform rules across the Union territory in relation to the species in the Union list. Member States may nevertheless implement more stringent measures, including on IAS not in the Union list.

5.	Prevention	• Work is ongoing for the further expansion of the list of IAS of Union concern: http://ec.europa.eu/environment/nature/invasivealien/list/index_en.htm • Guidance was developed to support identification of IAS in the framework of prevention: https://circabc.europa.eu/sd/a/59ccbe20-4953-4305-a486-c732e5c0e108/Identification%20guide.pdf https://circabc.europa.eu/sd/a/2535b9ce-80a9-4c30-9de2-1077eae21aaf/2018-identification-guide.pdf • A description of the CBD pathway categorisation was developed: https://circabc.europa.eu/w/browse/591f53bc-346c-43ee-9647-a0f69c59fc6d
6.	Early detection and rapid response	• The EU Regulation requires that Member States apply rapid eradication measures for any confirmed early detection of introduction or presence of invasive alien species of Union concern. A notification system is in place, allowing exchange of information of early detections and subsequent rapid eradication measures between the Member States and the Commission. While use is restricted to authorised users, most of the information is publically accessible: https://easin.jrc.ec.europa.eu/notsys • Identification guidance was developed to help identification in the field: https://circabc.europa.eu/sd/a/8062f840-b609-4926-ac63-3ca1b2b0a926/2018%20-%20Field%20guide%20-%20surveillance.pdf

7.	Mitigation of impacts	Under the EU Regulation, it is the Member States' responsibility to undertake measures to mitigate the impacts of IAS.
8.	Restoration of native biodiversity	Under the EU Regulation, it is the Member States' responsibility to undertake restoration measures to assist the recovery of ecosystems affected by IAS.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Member States are currently finalising their action plans on priority pathways of unintentional introduction of IAS of Union concern. The Codes of Conducts may support this work.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Codes of conducts overall support the implementation of the IAS policies and are very useful for reaching out to specific sectors and actors and increasing their awareness of the problems posed by IAS. Within the EU, there is an emerging challenge as regards the implementation of codes of conducts. Sectors that may have agreed on voluntary measures under a code of conduct, in particular at the national level, can be faced with new and/or different legal obligations as the EU policy evolves and more IAS are regulated under the EU Regulation.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

On 1 June 2018, the European Commission adopted a Communication on the first-ever EU initiative on pollinators:
http://ec.europa.eu/environment/nature/conservation/species/pollinators/index_en.htm

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.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

As per Q4.

EU Member States may be implementing further management plans.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

The EU Regulation on IAS requires to consider "foreseeable climate change conditions" when carrying out risk assessments for IAS. Since 2017, two studies financed by the European Commission that include 20 risk assessments for the purposes of the EU Regulation have been published. Each risk assessment includes an estimate of the effect of climate change on the potential distribution of the respective species. For this purpose, species distribution modelling techniques were applied and the difficulties of this approach are discussed.

These studies are available online:

https://publications.europa.eu/en/publication-detail/-/publication/c01568d9-025e-11e8-b8f5-01aa75ed71a1/language-en/format-PDF/source-96152503

https://publications.europa.eu/en/publication-detail/-/publication/f15625e3-2053-11e9-8d04-01aa75ed71a1/language-en/format-PDF/source-96152648

Finland / Finlande

Information on the institution/agency/person reporting

Country	Finland
Name and position of responsible person	Johanna Niemivuo-Lahti, Ministerial Adviser
Institution/Organisation	Ministry of Agriculture and Forestry
E-mail	johanna.niemivuo-lahti@mmm.fi

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[5]:

1.	Building awareness and support	The Ministry of Agriculture and Forestry is responsible for the overall coordination of invasive alien species IAS matters in Finland, such as implementing the EU and national invasive alien species legislation as well as the National Strategy on Invasive Alien Species. The Finnish Advisory Board for Invasive Alien Species, appointed by the Council of State, including **22 different key stakeholders and bodies**, is Finland's **national expert body** in matters concerning invasive alien species. Its key tasks include following the implementation of the invasive alien species legislation and **awareness raising of the impacts and management measures concerning invasive alien species**. Finland´s national management plans of IAS are supporting the implementation of the EU and national IAS legislation in Finland. The management plans include measures which concern **setting up information and education programmes for different target audiences** (general public, schools, local authorities, etc.), as well as support **holding workshops and conferences** on IAS. EU regulation Act on Managing the Risk Caused by Alien Species EU List of species of Union concern Government decree on invasive alien species of national concern and the national list Hallintasuunnitelma II haitallisten vieraslajien torjumiseksi (hyväksytty 23.5.2019) PDF 1,3MB

[5] Please add as much space as you need for your replies under each question.

		Hallintasuunnitelma I haitallisten vieraslajien torjumiseksi (hyväksytty 13.3.2018) PDF 145kB
2.	Collecting, managing and sharing information	The national management plans on IAS were developed and based on the national inventory data and risk assessments of the IAS listed: EU-IAS list concerning the EU-IAS-Regulation as well as a national IAS list concerning the national IAS legislation. National management plans on IAS also include the identification and analysis of the pathways of unintentional introduction and spread of IAS. According to the analysis, Finland has established an action plan to address the priority pathways we identified. Hallintasuunnitelma II haitallisten vieraslajien torjumiseksi (hyväksytty 23.5.2019) PDF 1,3MB Hallintasuunnitelma I haitallisten vieraslajien torjumiseksi (hyväksytty 13.3.2018) PDF 145kB IAS web portal Finland has developed and published in 2014 a national IAS portal / web pages where can be found help for identification and eradication of IAS, and report observations of IAS. The pages contain information on species, legislation and managing the IAS, as well as images and distribution maps of invasive species in Finland. http://vieraslajit.fi/fi/content/welcome-invasive-alien-species-portal , http://vieraslajit.fi/fi The national IAS portal includes the link to the EU-IAS-Regulation information networks and rapid dissemination systems. The pages are regularly updated but now also under complete reconstruction, and more developed pages will be published by the end of the year 2019.
3.	Strengthening national policy legal and institutional frameworks	Leadership and coordination The Ministry of Agriculture and Forestry is responsible for the overall coordination of alien species matters in Finland, such as implementing the EU and national invasive alien species legislation. The Ministry of Agriculture and Forestry steers and monitors the implementation of the IAS national Act in cooperation with the Ministry of Transport and Communications and Ministry of the Environment. The Finnish Advisory Board for Invasive Alien Species, appointed by the Council of State, including 22 different key stakeholders, is Finland's national expert body in

		matters concerning invasive alien species. The different bodies and stakeholders are engaged to raise awareness. Also other IAS working groups and expert groups have been established to assist the implementation of the IAS legislation as well as general management of the IAS. Legal framework The EU Regulation on invasive alien species was adopted in September 2014. Its aim is to reduce the environmental, social and economic damage caused by alien species and to prevent new invasive alien species from spreading to the EU territory. The measures introduced by the regulation are targeted at the most harmful invasive alien species. The Finnish national Act on Managing the Risk Caused by Alien Species (1709/2015) lays down provisions on how the EU Regulation on Invasive Alien Species is to be implemented in Finland. In addition, the Act contains 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, and the control of other alien species, which are not, at least not at this time, considered invasive alien species. The list of species of EU concern contains the invasive alien species to which the EU Regulation on Invasive Alien Species applies. A separate regulation by the EU Commission contains provisions regarding the List. The list is being updated regularly. The Finnish national list includes the invasive alien species which are not included on List of species of the EU concern but which can be considered harmful in the Finnish environment. Provisions on the national list are laid down in a Government decree. The list is being updated as necessary. An invasive alien species included on the List of species of the EU or on Finland´s national list may not be imported to Finland from outside the EU, or from another EU country. Such a species may not be cultivated, sold or marketed. It is prohibited to release such a species into the environment. Provisions may be issued by Government decree concerning a species included on the list of national concern to specify that not all of the aforementioned bans apply to the species or its specific use. However, releasing the species into the environment is prohibited without exception. EU regulation Act on Managing the Risk Caused by Alien Species EU List of species of Union concern Government decree on invasive alien species of national concern and the national list

		Policy and legal review By 1 June 2019, and every six years thereafter, EU Member States (also Finland) send a full report to the EU Commission on IAS distribution and management, a description on the surveillance system and the official control system on IAS, and other information referring to the EU-IAS-Regulation. Strategy and action plan Finland's National Strategy on Invasive Alien Species PDF 2,4MB Finland's National Strategy was adopted by a Government Resolution on 15 March 2012. Its leading idea is the prevent the damages and risks caused by invasive alien species to the Finnish nature, sustainable use of natural resources, livelihoods and well-being of the society and people. The National Strategy on Invasive Alien Species is based on a proposal prepared in collaboration between a broadly-based working group and experts, involving a total of more than 100 people. The background material for the Strategy and Action Plan were finalised on the basis of the Resolution and extensive round of comments. The objective of Finland's National Strategy on Invasive Alien Species is to minimise the threat and damage caused by invasive alien species, both those already present in Finland and the potential ones. The measures proposed in the Strategy address invasive alien species introduced to Finland by human action, intentionally or unintentionally, which are spreading uncontrolledly and cause harmful impacts as they do so. The purpose of the Strategy is to prevent the introduction to Finland of new invasive alien species that spread uncontrolledly. Mitigation of the harmful impacts of invasive alien species requires a division of responsibilities between actors and a wide range of measures. The Action Plan for Finland's National Strategy on Invasive Alien Species puts forward 16 measures, 12 against all invasive alien species and 4 against specific groups of species.
4.	Regional cooperation and responsibility	Cooperation between Bern Convention Parties EU Member States cooperate with each other while implementing the EU IAS Regulation eg. by sharing information and best practices as well as meeting each other regularly in different meetings in Brussels. Another example of a regional cooperation is a project product – a animated film - by Finland, Sweden and Norway to make travellers to the Arctic area more aware about how they may inadvertently transport IAS to these

		vulnerable natural areas. The film is directed as much to permanent residents, researchers and students in the Arctic area, as to tourists. It is available in 11 different languages and will be spread to as many stakeholders as possible. The main message is that you as a passenger can contribute to protecting the vulnerable nature in the Arctic by taking a few simple measures. It is part of an information campaign that addresses the problem with the introduction of IAS www.stoparcticaliens.com.
5.	Prevention	Border control and other prevention measures In Finland, according to the national IAS Act, the Centre for Economic Development, Transport and the Environment supervises the compliance with the EU IAS Regulation and the national Act. The Centre for Economic Development, Transport and the Environment decides on the application of rapid eradication measures. The Customs controls the importation referred to the EU IAS Regulation and supervises the compliance with the ban on importation from outside the European Union. Act on Managing the Risk Caused by Alien Species National management plans include prioritized effective management measures for those listed IAS in the EU and in Finland (national list). Management plans include measures concerning both intentional as well as unintentional introductions. Also national Finland´s IAS Strategy includes an action plan with measures to implement. Hallintasuunnitelma II haitallisten vieraslajien torjumiseksi (hyväksytty 23.5.2019) PDF 1,3MB Hallintasuunnitelma I haitallisten vieraslajien torjumiseksi (hyväksytty 13.3.2018) PDF 145kB
6.	Early detection and rapid response	According to the EU-IAS-Regulation, in the EU, the Member States apply early detection and eradication measures and notify those measures to the Commission and inform the other Member States through a special notification system. Member States use this surveillance system to confirm early detection of the introduction or presence of listed IAS of the EU. In Finland the Centre for Economic Development, Transport and the Environment decides on the application of rapid eradication measures. The national IAS portal includes the link to the EU-IAS-Regulation information networks and rapid dissemination systems.

7.	Mitigation of impacts	Legal basis for mitigation measures and procedures In Finland the national Act on Managing the Risk Caused by Alien Species (1709/2015) lays down provisions on how the EU Regulation on Invasive Alien Species is to be implemented in Finland; which

		competent authorities with powers are to take appropriate IAS mitigation measures. Act on Managing the Risk Caused by Alien Species Eradication, containment and control The national IAS management plans include prioritized effective eradication, containment and control measures for those prioritised listed IAS in the EU (EU list) and in Finland (national list). The measures are developed and based on an analysis of costs and benefits and are prioritised based on the risk evaluation and their cost-effectiveness. The plans also includes the most cost-effective sites and regions where in Finland the eradication and other management measures should take place. Hallintasuunnitelma II haitallisten vieraslajien torjumiseksi (hyväksytty 23.5.2019) PDF 1,3MB Hallintasuunnitelma I haitallisten vieraslajien torjumiseksi (hyväksytty 13.3.2018) PDF 145kB
8.	Restauration of native biodiversity	The EU IAS Regulation includes measures concerning the restoration of the damaged ecosystems. These measures Member States carry out as appropriate.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

The Codes of Conduct are very important and useful, but Finland as a Member State of the EU, needs to primarily and in the first place to apply and implement the EU and national IAS legislation. By implementing the IAS legislation also several codes of conducts are being used and utilized at the same time.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

In Finland the Finnish Advisory Board for Invasive Alien Species, including 22 stakeholders and IAS bodies, is informed about and aware of the IAS codes of conduct and is entitled to take use of the information.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

The EU and national IAS legislation is the primary implementation source but the Codes of Conduct are valuable data sources, which widen the perspective of implementation. The challenge is often sparse, tight or lacking resources, which restrict the full use of Codes of Conduct.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

Not that we know of.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

Not that we know of.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

Not that we know of.

Georgia / Géorgie

Information on the institution/agency/person reporting

Country	Georgia
Name and position of responsible person	Mariam Sulkhanishvili, Second Category Senior Specialist, Biodiversity and Forestry Department
Institution/Organisation	Ministry of Environmental Protection and Agriculture
E-mail	Mariam.sulkhnaishvili@mepa.gov.ge

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[6]:

1.	Building awareness and support	-
2.	Collecting, managing and sharing information	Present and future threats associated with invasive alien plants (IAP) in areas of high conservation value in Georgia were assessed by a joint team of Swiss (University of Fribourg, University of Lausanne) and Georgian scientists (Institute of Botany) in 2013-2014. A list of 50 worst alien plants threatening biodiversity in Georgia was prepared by Institute of Botany of Ilia State University in 2013-2014 under the framework of the project: "Elaboration of the Indicators S3 "*Population sizes of selected species"* (Part 1: Flora) and P9 "*Number and distribution of invasive species" - (50 worst alien plant species in Georgia* funded by GIZ Office South Caucasus. In addition, monitoring program was carried out to collect baseline data on presence of invasive alien plants and evaluate their expansion rate and impact on biodiversity at five selected protected areas in Georgia (three protected areas in East Georgia and two protected areas in West Georgia). Monitoring survey of invasive species was carried out in selected protected areas (Kolkheti national

[6] Please add as much space as you need for your replies under each question.

		park, Kobuleti protected areas, Mtirala national park and Tbilisi national park) in 2016-2017. Control of Invasive Common Ragweed *Ambrosia artemisiifolia* and Survey of Alien / Invasive Species along the Baku-Tbilisi-Ceyhan (BTC)/South Caucasus Pipeline (SCP) ROW was carried out by a joint team of international experts and Georgian ecologists on behalf of BP – Georgia in 2010 – 2015. Survey of Alien / Invasive Species along the BTC/SCP ROW continued up to date.
3.	Strengthening national policy legal and institutional frameworks	-
4.	Regional cooperation and responsibility	-
5.	Prevention	-
6.	Early detection and rapid response	-
7.	Mitigation of impacts	-
8.	Restauration of native biodiversity	-

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

NO

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

N/A

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

N/A

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

No

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

No

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

No

Hungary / Hongrie

Information on the institution/agency/person reporting

Country	Hungary
Name and position of responsible person	Gergő Gábor Nagy, PhD, Natura 2000 expert
Institution/Organisation	Ministry of Agriculture, Hungary, Department for Nature Conservation
E-mail	gabor.gergo.nagy@am.gov.hu

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[7]:

1.	Building awareness and support	In 2016, on behalf of the Ministry of Agriculture, Department for Nature Conservation, the Centre for Ecological Research of the Hungarian Academy of Sciences prepared the publication of a study which provides a comprehensive analysis and assessment of the spreading pathways of invasive alien species, both plants and animals (*Inváziós fajok terjedési útvonalainak átfogó elemzése és hazai értékelése*). In 2018, based on the above mentioned study, the Ministry of Agriculture, Department for Nature Conservation published a study (*Hódítás úton, útfélen - Idegenhonos inváziós fajok bekerülési és terjedési útvonalai*) which reflects the view of the Hungarian state on nature conservation. Both studies are concerned with the pathways of unintentional introduction and spread of invasive alien species such as trade, agriculture, ornamental plants, pets, etc. and also discuss the measures to be taken through good examples. Following the announcement of the first EU list (13.07.2016), the colleagues of the Ministry of Agriculture, Department for Nature Conservation and the National Park Directorates, started to compile educational materials (identifying guide) for plant and animal species which are on the EU list. The structure is the following: nomenclature, distribution, methods of introduction, habitat, appearance and reproduction, effect on native wildlife, identification elements. In 2018, two large posters were made. One of these deals with ladybugs in Hungary and the other with turtle species.

[7] Please add as much space as you need for your replies under each question.

		Since the entry into force of EU legislation, the Ministry of Agriculture, Department of Nature Conservation operates a webpage within the Hungarian State Nature Conservation website, which deals specifically with invasive alien species (http://www.termeszetvedelem.hu/idegenhonos-invazios-fajok). After the short introductory, there is a description of EU legislation and its Hungarian implementation. The 49 plant and animal species in the two Union lists with Hungarian distribution are figured in a table. The site contains the scientific inventories of the potential invasive alien species in Hungary (http://www.termeszetvedelem.hu/termeszetes-allat-es-novenyvilagra-veszelyt-jelento-idegenhonos-invazios-fajok-hazai-tudomanyos-alapu-jegyzekei), and publications on invasive alien species can be downloaded. All publications and presentations of professional days and conferences about IAS are also accessible and can be downloaded (http://www.termeszetvedelem.hu/invazios-fajokkal-kapcsolatos-kiadvanyok; http://www.termeszetvedelem.hu/invazios-fajokkal-kapcsolatos-konferenciak-eloadasok). It is planned that a new invasion site will be launched in autumn 2019, which will be much more modern and more user-friendly. Since the entry into force of EU legislation, we held several thematic meetings, workshops and open days, most of which were for public. Five events are worth highlighting, three of them were held by the Ministry of Agriculture, Department of Nature Conservation. All three events were of great interest, with about 150 participants. The themes were on a wide range, from the presentation of EU legislation and its implementation in Hungary, the presentation of case studies, reports of the county government offices or the description of the invasive insect species. The presentations are available at the following link: http://www.termeszetvedelem.hu/invazios-fajokkal-kapcsolatos-konferenciak-eloadasok.
2.	Collecting, managing and sharing information	Since the entry into force of EU legislation, the Ministry of Agriculture, Department of Nature Conservation operates a webpage within the Hungarian State Nature Conservation website, which deals specifically with invasive alien species (http://www.termeszetvedelem.hu/idegenhonos-invazios-fajok). The site contains the scientific inventories of the potential invasive alien species in Hungary (http://www.termeszetvedelem.hu/termeszetes-allat-es-novenyvilagra-veszelyt-jelento-idegenhonos-invazios-fajok-hazai-tudomanyos-alapu-jegyzekei). However, this list was finalised before the entry into force of the EU Regulation, so a new national list is needed.

		Technically it will be drafted by combining two main approaches: First, by recording already widespread species and assigning mainly management measures; and second, the Ministry intends to pay particular attention to recording species that are not or not significantly present in Hungary but, based on the relevant literature, are potentially invasive. So far we have prepared the list of birds and list of invertebrates and plants are partially ready also. We will order management methods for each species, i.e. what can or cannot be done with the species.
3.	Strengthening national policy legal and institutional frameworks	The comprehensive legal framework for the control of invasive species is provided by different sectors. The effective implementation of the tasks was created by Hungarian Government, from year 2017 it ensures the cost of personal and material expenses. 78 new employees were employed. In Hungary, the 20 county government offices cover the entire area of the country. Their work was helped with workshops and recommendation guidelines by the Department for Nature Conservation. The tasks of the colleagues of the county government offices are varied, for example they collect data on the distribution of IAS, conduct consultations and provide information for relevant stakeholders, farmers, traders, and carry out the authorisation procedures. Effective implementation of tasks on IAS requires continuous communication between sectors, with a clear view of the respective tasks. More discussions, meetings were held between the different sectors in coordination by the Ministry of Agriculture, Department for Nature Conservation, however continuous communication is essential in the future as well. In order to implement the tasks prescribed in Regulation 1143/2014/EU, Hungary enacted Act CXXXVII of 2016 to amend six Acts in relation to the prevention and management of the introduction and spread of invasive alien species, including the Nature Conservation Act, which contains a paragraph about possibility of imposing fine about IAS. In 2016, on behalf of the Ministry of Agriculture, Department for Nature Conservation, the Centre for Ecological Research of the Hungarian Academy of Sciences prepared the publication of a study which provides a comprehensive analysis and assessment of the spreading pathways of invasive alien species, both plants and animals (*Inváziós fajok terjedési útvonalainak átfogó elemzése és hazai értékelése*). In 2018, based on the above mentioned study, the Ministry of Agriculture, Department for Nature Conservation published a study (*Hódítás úton, útfélen - Idegenhonos inváziós fajok bekerülési és terjedési útvonalai*) which reflects the view of the Hungarian state on nature conservation. Both studies are concerned with the pathways of unintentional introduction and spread of

		invasive alien species such as trade, agriculture, ornamental plants, pets, etc. and also discuss the measures to be taken through good examples. Since the entry into force of EU legislation, the Ministry of Agriculture, Department of Nature Conservation operates a webpage within the Hungarian State Nature Conservation website, which deals specifically with invasive alien species (http://www.termeszetvedelem.hu/idegenhonos-invazios-fajok). It is planned that a new invasion site will be launched in autumn 2019, which will be much more modern and more user-friendly. On these pages there is up-to-date information about IAS.
4.	Regional cooperation and responsibility	In the future, Hungary will try to share Hungarian experiences about management of IAS in different meetings such as Meeting of the Group of Experts on Invasive Alien Species (Bern Convention). We are trying to cooperate with neighboring countries. It would be essential because many IAS are the same and they causes similar problems, therefor the management of these IAS is also similar.
5.	Prevention	The regulation of the Hungarian customs authority on the control of IAS includes the procedures and arrangements of the relations between the customs offices and the partner bodies. The - continuously updated - contact information of the co-agencies is available on the intranet site of the customs authority for the customs offices. It should also be noted that a valid cooperation agreement (MoU) between the Hungarian customs authorities and the ministry involved in controlling of IAS. In the Customs Service, the Police Headquarters and the National Bureau of Investigation at present there is no distinct unit designated solely for IAS or other nature conservation enforcement, but in each institution there is a special unit which is responsible for IAS related issues and incorporates such responsibilities – usually among other environmental matters. The establishment and effective operation of a National Environmental Security Task Force (NEST) is our future goal. Relevant information should be gathered through an estabilished cooperation network (which is under construction). One goal of this task force should be the compilation of a national strategy on envirnmental crime; wich will consider illegal trade routes and modus operandi. There are dedicated rescue centres in Hungary and prepared for housing seized or confiscated animals and plants. According to Hungarian legislation the main rescue centres are zoos. Two of them, Szeged Zoo, and the Budapest Zoo are rescue centres with a special quarantine facility for rescued animals, and they make regular improvement in their facilities in case of

		unexpected housing. Other municipal zoos also function as rescue centres if necessary. These zoos are also suitable for accommodating invasive alien animal species that have been seized or pet owners do not want them any longer. Guidance was issued by the Ministry of Agriculture, Department for Nature Conservation to authorities on how to license rescue centres and the licensing of several rescue centres took place in 2017. A new website was set up by the Department for Nature Conservation to help the public rescue of injured animals (http://www.termeszetvedelem.hu/vedett-madarak-mentese). These places are also suitable for accommodating invasive alien animal species that have been seized or pet owners do not want them any longer. In Hungary, botanical gardens and other plant collections, as well as zoos, are places where potentially IAS occurs, in other words, these places could hold them. These institutions have strict regulatory system, so the probability of the release of these species is practically equal to zero. Since the entry into force of EU legislation, the Ministry of Agriculture, Department of Nature Conservation operates a webpage within the Hungarian State Nature Conservation website, which deals specifically with invasive alien species (http://www.termeszetvedelem.hu/idegenhonos-invazios-fajok). The site contains the scientific inventories of the potential invasive alien species in Hungary (http://www.termeszetvedelem.hu/termeszetes-allat-es-novenyvilagra-veszelyt-jelento-idegenhonos-invazios-fajok-hazai-tudomanyos-alapu-jegyzekei). However, this list was finalised before the entry into force of the EU Regulation, so a new national list is needed. Technically it will be drafted by combining two main approaches: First, by recording already widespread species and assigning mainly management measures; and second, the Ministry intends to pay particular attention to recording species that are not or not significantly present in Hungary but, based on the relevant literature, are potentially invasive. So far we have prepared the list of birds and list of invertebrates and plants are partially ready also. We will order management methods for each species, i.e. what can or cannot be done with the species.
6.	Early detection and rapid response	The comprehensive legal framework for the control of invasive species is provided by different sectors. The effective implementation of the tasks was created by Hungarian Government, from year 2017 it ensures the cost of personal and material expenses. 78 new employees were employed. In Hungary, the 20 county government offices cover the entire area of the country. Their work was helped with workshops and recommendation guidelines by the Department for Nature

		Conservation. The tasks of the colleagues of the county government offices are varied, for example they collect data on the distribution of IAS, conduct consultations and provide information for relevant stakeholders, farmers, traders, and carry out the authorisation procedures. All in all, the personal and financial conditions of the detection and risk analysis system have been met, and the system is up and running. The Ministry of Agriculture, Department for Nature Conservation coodrinates the government offices through workshops and recommendation guidelines. The case of the Egyptian goose (*Alopechen aegyptiaca*) is a good example of early detection and eradication. The species was bred in 2016 and 2017 in Hungary (Vas county, in a gravel pit lake). However, the species was eradicated successfully in 2017, the female and the nine nestling were shot. The action was taken in perfect cooperation between three organization (Vas County Government Office Department for Nature Conservation, Vas Count Government Office Department for Hunting Management, Őrség National Park Directorate).
7.	Mitigation of impacts	The comprehensive legal framework for the control of invasive species is provided by different sectors. Effective implementation of tasks on IAS requires continuous communication between sectors, with a clear view of the respective tasks. In Hungary, the 20 county government offices cover the entire area of the country. Their work was helped with workshops and recommendation guidelines by the Department for Nature Conservation. The tasks of the colleagues of the county government offices are varied, for example they collect data on the distribution of IAS, conduct consultations and provide information for relevant stakeholders, farmers, traders, and carry out the authorisation procedures. Hunting authorities have an important role and have cooperated successfully with National Park Directorates and Government Offices in the eradication and regulation of several species. The case of the Egyptian goose (*Alopechen aegyptiaca*) is a good example for this. The species was bred in 2016 and 2017 in Hungary (Vas county, in a gravel pit lake). However, the species was eradicated successfully in 2017, the female and the nine nestling were shot. The action was taken in perfect cooperation between three organization (Vas County Government Office Department for Nature Conservation, Vas Count Government Office Department for Hunting Management, Őrség National Park Directorate). In addition, there are several species on the EU lists which are huntable in Hungary (i.e. muskrat, racoon), therefore the hunting companies also take part in the regulation of these species. On the other hand, it is also possible to hunt

		those IAS species which are not officially declared as game in Hungary, such as coypu. Since the entry into force of EU legislation, the Ministry of Agriculture, Department of Nature Conservation operates a webpage within the Hungarian State Nature Conservation website, which deals specifically with invasive alien species (http://www.termeszetvedelem.hu/idegenhonos-invazios-fajok). The site contains the scientific inventories of the potential invasive alien species in Hungary (http://www.termeszetvedelem.hu/termeszetes-allat-es-novenyvilagra-veszelyt-jelento-idegenhonos-invazios-fajok-hazai-tudomanyos-alapu-jegyzekei). However, this list was finalised before the entry into force of the EU Regulation, so a new national list is needed. Technically it will be drafted by combining two main approaches: First, by recording already widespread species and assigning mainly management measures; and second, the Ministry intends to pay particular attention to recording species that are not or not significantly present in Hungary but, based on the relevant literature, are potentially invasive. So far we have prepared the list of birds and list of invertebrates and plants are partially ready also. We will order management methods for each species, i.e. what can or cannot be done with the species. In many parts of the country, mainly in protected or Natura 2000 areas, measures have been taken to suppress invasive species. Most protective measures have been taken against milkweed, hogweed species, Himalayan balsam and Egyptian goose. The proportion of protected or Natura 2000 areas cleaned from invasive alien species have grown from 768.2 ha in 2015 to 5172.2 ha in 2017.
8.	Restauration of native biodiversity	In many parts of the country, mainly in protected or Natura 2000 areas, measures have been taken to suppress invasive species. Most protective measures have been taken against milkweed, hogweed species, Himalayan balsam and Egyptian goose. The proportion of protected or Natura 2000 areas cleaned from invasive alien species have grown from 768.2 ha in 2015 to 5172.2 ha in 2017.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Not relevant.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Not relevant.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Because of lack of capacity and financial resource, all Codes of conducts are available only in English. However it would be important to translate them to Hungarian language to help the relevant sectors and actors. For example, the European strategy on invasive alien species has Hungarian version and this document helps the different relevant stakeholders.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

Invasive alien plant species, such as milkweed (*Asclepias syriaca*) which is very common in Hungary, has clear negative effects on the insect communities including pollinators. However there are not many direct studies about these effects. In many parts of the country, mainly in protected or Natura 2000 areas, measures have been taken to suppress invasive species. Most protective measures have been taken against milkweed, hogweed species, Himalayan balsam and Egyptian goose. The proportion of protected or Natura 2000 areas cleaned from invasive alien species have grown from 768.2 ha in 2015 to 5172.2 ha in 2017.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

In Hungary there are management plans for numerous important pollinators such as *Pilenia tigrina*, *Polyommatus damon*, *Euphydryas maturna*, *Coenonympha oedippus*. These management plans also manage invasive alien species directly or indirectly. Moreover, in the frame of a project coordinated by the Ministry of Agriculture, Department for Nature Conservation, some new management plans are being prepared which also include some important pollinators.

The mid-term review of the Biodiversity Strategy 2015-2018 contain a chapter which deal invasive alien species. The chapter consist the most important tasks and their results.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

There are no such studies.

Iceland / Islande

Information on the institution/agency/person reporting

Country	Iceland
Name and position of responsible person	Pawel Wasowicz,, Ph.D Botanist Trausti Baldursson, Director of Ecology and Consultancy Dept.
Institution/Organisation	The Icelandic Institute of Natural History
E-mail	pawel@ni.is trausti@ni.is

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[8]:

1.	Building awareness and support	Information campaigns through different media aimed at building awareness of the impact of IAS are carried out in Iceland by the Icelandic Institute of Natural History, the Environment Agency of Iceland and other relevant institutions (including those at local level).
2.	Collecting, managing and sharing information	A monitoring plan including many different aspects of the natural environment was recently initiated in Iceland. These monitoring activities include also monitoring of IAS (both existing populations and also new species coming to Iceland). These activities carried out mostly by the Icelandic Institute of Natural History are aimed to ensure early detection and rapid response to new IAS. Monitoring and collection of data on IAS is also carried out by nature centres and the Marine Institute.
3.	Strengthening national policy legal and institutional frameworks	A review of ancient introductions has been carried out for vascular plants and published: Wasowicz P. 2019. The first attempt to list the archaeophytes of Iceland. Acta Societatis Botanicorum Poloniae 87(4): 3608. https://doi.org/10.5586/asbp.3608

[8] Please add as much space as you need for your replies under each question.

		Legislation on IAS was strengthened by Act on Nature conservation no 60/2013 which came into force November 2015.
4.	Regional cooperation and responsibility	Iceland continues to support the work of the Convention´s Group of Experts on IAS. Iceland took over the secretariat of NOBANIS network and continues to support the work of this initiative.
5.	Prevention	A detailed map of distribution of the main Icelandic plant invader Lupinus nootkatensis was produced and published: Guðjohnsen SK, Magnússon B. 2019. Útbreiðsla og flatarmál lúpínubreiða á Íslandi 2017. http://utgafa.ni.is/skyrslur/2019/NI-19001.pdf In some municipalities (e.g. Reykjavík, Stykkishólmur, Akureyri) there is an ongoing eradication of e.g. lupine. The Vatnajökull National Park have eradicated lupine in some areas. The Soil Conservation have stopped using e.g. lupine in restoration projcects in some areas. IAS are common subject in EIA.
6.	Early detection and rapid response	A monitoring plan including many different aspects of the natural environment was recently initiated in Iceland. These monitoring activities include also monitoring of IAS (both existing populations and also new species coming to Iceland). These activities carried out mostly by the Icelandic Institute of Natural History are aimed to ensure early detection and rapid response to new IAS.
7.	Mitigation of impacts	See above.
8.	Restauration of native biodiversity	Iceland promotes the use of native plant species of known local provenance in landscaping, revegetation and erosion control.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

The codes have not been used or implemented directly but they have been an inspiration to the work that is going one in our country on IAS as are all international conventions concerning the subject.

Q2 a): Which Codes of Conduct were used and in which way?

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

There is still a lack of implementation plan for the codes of conduct in Iceland.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?
Our scientists are well aware of the problem but at the moment there has no direct work or plan been initiated on the subject.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

No.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

Iceland have been working on detection of main effects of climate change and IAS have been one of the targets. (https://www.vedur.is/media/loftslag/Skyrsla-loftslagsbreytingar-2018-Vefur-NY.pdf) There is no national management plan available on IAS and climate change.

Poland / Pologne

Information on the institution/agency/person reporting

Country	Poland
Name and position of responsible person	Ewa Pisarczyk, chief expert
Institution/Organisation	General Directorate for Environmental Protection
E-mail	ewa.pisarczyk@gdos.gov.pl

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[9]:

1.	Building awareness and support	There is a project on development and testing of management methods of IAS together with educational campaign, carried out in 2016-2021 by the General Directorate of Environmental Protection, cofinanced by EU. In frame of the project, there will be an information campaign organized, including trainings and cooperation with media.
2.	Collecting, managing and sharing information	As a result of the above mentioned project, a data repository on IAS of Union concern and on IAS of national concern has been established. Invasiveness of IAS of Union concern and on IAS of national concern has been assessed on basis of the Harmonia methodology. Information a.o. on spatial distribution, reproduction patterns, biology, history of introduction and management has been collected. Different management measures will be tested for selected species and guidance documents on management will be prepared.
3.	Strengthening national policy legal and institutional frameworks	An alien species act is under legislative drafting.
4.	Regional cooperation and responsibility	The EU Regulation 1143/2014 already foresees a possibility of regional cooperation on IAS management.
5.	Prevention	As a result of the above mentioned project, an analysis of pathways of unintentional introduction and spread of IAS of Union concern and on IAS of national concern

[9] Please add as much space as you need for your replies under each question.

		has been carried out. The priority pathways have been described and action plans for them have been prepared.
6.	Early detection and rapid response	A system of early detection and rapid response is under legislative drafting.
7.	Mitigation of impacts	A system of mitigation measures is under legislative drafting.
8.	Restauration of native biodiversity	An obligation of restoration of destroyed habitats and species is under legislative drafting.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

1) The European Code of Conduct on Horticulture and Invasive Alien Plants

The European Code was translated into Polish and a national code was elaborated on the basis of the European Code. The national Code was prepared together with many specialists from the horticultural sector, science, ngos and administration. It was published, accompanied by a brochure, leaflets on each species and a poster. There was a dedicated web page developed http://projekty.gdos.gov.pl/kdpo-zalozenia. The Code is promoted a.o. during the fair for environmental protection in Poland POL-ECO.

The Code comprises 9 rules, a list of IAS forbidden by law, a list of IAS which will be not sold or kept on a voluntary basis and a list of other IAS which should be subject to safety rules described in the Code. Each of the species from the latter list has a description in the Code. A person, company or institution can sign a declaration that the Code will be applied. A right to use the Code logo is assigned to those who signed the declaration.

2) The Recommendation on the control of the American mink (Neovison vison) in Europe

The recommendation was sent to the Minister of Agriculture and Rural Development for its implementation as appropriate. As regards the points 4 and 10 of the recommendation the Minister informed that:

- The Ordinance of the Minister of Agriculture and Rural Development of 28 June 2010 *on minimum conditions on keeping livestock species other than these, for which the protection standards are laid down in the provisions of the European Union* sets obligations as regards keeping the American mink in farms, including:
  - protection of the farm area with a double fence, one of the fences should be without holes, minimum 2 m high, and the second fence should be made from net or other material resistant to chewing through by American minks, with holes of diameter preventing them to escape, and dug into the ground to 50 cm;
  - a live trap, which should be located in every corner of the internal fence and checked minimum once a day.
- No escapes have been noted by Polish associations of mink farmers from the farms of its members.
- 180 of 257 mink farms have implemented a surveillance system and established an emergency plan in case of an escape or spread of the American mink, including recapturing or elimination if necessary. The surveillance system foresees that every cage is checked minimum once a day. There are also protocols where the total number of minks in the farm

is registered. If an animal escapes, a contingency plan is set in place. Trainings on the contingency plans are carried out. The contingency plan is hung out on an information board.

As regards point 6 of the recommendation, there is a legislation process ongoing on amendment of the Ordinance of the Council of Ministers of 9 November 2010 *on types of projects likely to have a significant impact on the environment*. The amendment foresees lowering the threshold which is used for qualification of a mink farm to the group of projects that are potentially likely to have a significant impact on the environment.

As regards point 13, in frame of the project of the General Directorate of Environmental Protection on development and testing of management methods of IAS together with educational campaign, there will be an information campaign organized, a.o. on the American mink.

3) 18 Bern Convention documents were translated into Polish, including 9 Codes of conduct or guidelines on IAS. The Codes are sent to relevant stakeholders to apply them as appropriate. The recommendations in Polish version are made available on a webpage dedicated to the Bern Convention: http://www.gdos.gov.pl/konwencja-bernenska.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

1) Already 66 declarations of implementation of the Polish Code of conduct "Horticulture towards invasive plants of alien origin" were collected. The number includes: botanical gardens, landscape parks, companies, public authorities, associations of allotment gardens, ngos, private persons, horticultural associations, a horticultural wholesale market, a school and a university. The General Directorate for Environmental Protection promotes implementation of the Code.

2) The General Directorate for Environmental Protection disseminated information on the recommendation on the control of the American mink (Neovison vison) in Europe. It is partially implemented a.o. by the Minister of Agriculture and Rural Development.

3) The General Directorate for Environmental Protection is responsible for implementation of the Bern Convention, this includes also its recommendations.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

In our opinion the recommendations that are aimed at other sectors, such as agriculture, horticulture, etc. are very helpful.

They bring knowledge and good practices to society and stakeholders who are usually not familiar with IAS issues.

The recommendations bring also higher political importance to the problem which should be solved.

The recommendations with precise guidelines and accompanied by examples are useful for the national implementation.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

No

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

No

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

The project on development and testing of management methods of IAS together with educational campaign, includes impact of the climate change on invasiveness on 118 invasive alien species in Poland (http://projekty.gdos.gov.pl/).

Republic of Moldova / Republique de Moldova

Country	Republic of Moldova
Name and position of responsible person	Veronika Josu, Biodiversity Policies Department
Institution/Organisation	Ministry of Agriculture, Regional Development and Environment
E-mail	veronica.josu@madrm.gov.md

Reporting period: May 2017 – June 2019

During this report period (2017 – May 2019), the Republic of Moldova carried out several activities with the invasive alien species, specifically related to the following issues:

1. The Regulation on Combating and Prevention spreading the ambrosia weeds (Ambrosia artemisiifolia) and the Action Plan to combat and prevent the spread of weeds of ambrosia (Ambrosia artemisiifolia) for the years 2019-2024, approved by the GD No. 967 of 03.10.2018. The Regulation establishes rules and responsibilities for the actors responsible for land management (landowners, public roads, railways, watercourses, lakes, irrigation systems and fishponds) in order to mitigate the hazards caused by the mentioned weed on human health and to ensure a healthy living environment. The Ministry of Health, Labor and Social Protection, Ministry of Agriculture, Regional Development and Environment, National Agency for Food Safety, in collaboration with the local public authorities, are responsible bodies to ensure monitoring and control over spreading of the Ambrosia weed. In order to implement the requirements of the Regulation, the draft provides for the approval of an Action Plan with the concrete setting of the measures, the deadlines and the executors. http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=377540

With the support of the European Union under the project "Technical Assistance for Implementation of the Sectoral Reform Contract: European Neighborhood Program for Agriculture and Rural Development (ENPARD)" (Technical Assistance for the Implementation of the Sectoral Reform Contract: European Neighborhood Program for Agriculture and Rural Development Rural Development (ENPARD), a poster was developed to inform the public on the way of spreading, the allergy symptoms and the methods of combating Ambrosia.

On March 14, 2019, during the spring edition of the Moldagrotech Specialized International Exhibition on Agriculture, Regional Development and Environment, the topic "Policies in the field of plant protection", the issue on the need to take urgent measures of combating weeds ambrosia was raised.

Over 11 thousand leaflets and brochures "Attention ambrosia" were distributed to all public institutions in the country's localities. These flyers tell you where the ambrosia grows, how it spreads, what the symptoms of the pollen allergy are, and how we have to act to minimize the negative impact on our health.

2. In the year 2017 a new edition of the Republic of Moldova's ichtyofauna was published: Threats, Trends and Recommendations for Rehabilitation, author Dumitru BULAT - Doctor of Biology, Associate Professor, Institute of Zoology. Chapter 4 of the paper deals with the phenomenon of bioinvasion in the ichtyocenoses of Republic of Moldova.
http://zoology.asm.md/uploades/File/Publicatii/BULAT%20MONOG%20II.pdf

As a result of the research, it has been found that from the beginning of the 20th century and up until now in the natural aquatic ecosystems of the Republic of Moldova, over 40 alien and interventional fish species have been reported, of which: 4 taxons are considered naturalized alien species, 21 introduced species and 12 intervening species.

From the idioadaptation group of invasive species of fish in the conditions of the Republic of Moldova, which ensured their obvious biological progression, such idioadaptations can be mentioned: small size, short life, early maturation, intense generative metabolism, spawning in several cycles and long reproduction period, pronounced flexibility in reproductive substrates (polyphilia) or specific and opportune reproduction modes (ostracophilia, incubator bag), care for the offspring, competitiveness and high trophic flexibility, dominance of r population type, resistance to alternation of environmental gradients and toxic resistance.

According to the Fish Invasiveness Screening Kit (FISK), the most dangerous invasive species under the conditions of the Republic of Moldova are the: Prussian carp (*Carrassius gibelio*), Chinese sleeper (*Perccotus glenii Dybowski*), Stone moroko (*Pseudorasbora parva* (Temminck et Schlegel, 1844)), pumpkinseed (*Lepomis gibbosus* (L., 1758)). From the group of intervening fish species, the most dangerous for the structural and functional state of local ichthyocenoses are the following taxa: Black-striped pipefish (*Syngnathus abaster* Eichwald, 1831), Monkey goby (*Neogobius fluviatilis* Pallas (1811)), Three-spined stickleback (*Gasterosteus aculeatus* Linnaeus, 1758), small southern nine-spined stickleback (*Pugtius platygaster* (Kessler, 1859)), Racer goby (*Babka gymnotrachelus* (1880)), Black Sea sprat (*Clupeonella cultriventris* (Nordmann, 1840) Kessler, 1857), Tubenose goby (Proterorhinus marmoratus), and Bighead goby (*Neogobius kessleri*).

Reproductive potential in some non-native and intermittent fish species (*Lepomis gibbosus* (L, *Perccotus glenii* Dybowski, *Pseudorasbora parva* (Temminck et Schlegel, 1844), *Gasterosteus aculeatus*, *Syngnathus abaster*, *Neogobius kessleri*) was evaluated through histological investigations.

The highest degree of biocontamination with fish species invasion under the conditions of the Republic of Moldova is found in the aquatic ecosystems of small rivers, characterized by profound hydrobiotopic alteration, chronic pollution and an insufficient trophic level of fish species.

Serbia / Serbie

Information on the institution/agency/person reporting

Country	Republic of Serbia
Name and position of responsible person	Coordinated by Snezana Prokic, FP for Bern Convention
Institution/Organisation	Ministry of Environmental Protection of the Republic of Serbia in cooperation with the Institute for Nature Protection of Serbia (Expert Ms Aleksandra Zatezalo) and Institute for Nature Protection of Vojvodina Province
E-mail	snezana.prokic@ekologija.gov.rs

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[10]:

1.	Building awareness and support	An integral part of the studies of protection for future protected areas contain lists of identified invasive species with prescribed guidelines and protection measures in order to suppress them, in order to preserve autochthonous species. IAS are incorporated in education programmes concerning, native species, nature conservation, protected areas, wildlife trade…Target audience are schools, quarantine services, protected area managers, wildlife trade personnel, government departments responsible for agriculture and forestry, water resource management, infrastructure development etc. Also increasing public awareness through different media like TV, social networks, manifestations and fairs… Research at the Universities and scientific institutes, Non-governmental organisations programmes and actions. Wworkshops and conferences on IAS: - Joint EPPO / Institute for Plant Protection and Environment (Belgrade) Training Workshop-Introduction to methodologies for conducting Pest Risk Analysis for Invasive Alien Plants, 30.11.-01.12. 12.2018.) -Joint ESENIAS and DIAS Scientific Conference and8thESENIAS Workshop Management and sharing of IAS data to support knowledge- based decision making

[10] Please add as much space as you need for your replies under each question.

		at regional level26- 28 September 2018 BUCHAREST, ROMANI
2.	Collecting, managing and sharing information	There are few publications that providing lists of invasive organisms: -Lazarevic et al., 2012:A Preliminary list of invasive species in Serbia, with general measures of control and reduction as basis of future legal acts. -Zatezalo 2014:Invasive species of invertebrates in Serbia -Stojanovic & Jovanovic, 2019:The survey of invasive and potentially invasive plant species in Serbia and neighboring countries for the purpose of determining their status at the national level. -Publication within BioREGIO Carpathians project-Draft List Of Invasive Alien Species Of The Carpathian Region // Carpathian Red List Of Forest Habitats And Species Carpathian List Of Invasive Alien Species. Online databases: -Database on invasive plant and animal species of Vojvodina (iasv.dbe.pmf.uns.ac.rs) Serbian experts provide data for international databases as DAISIE, CABI, and EPPO list of invasive plants. In the framework of the international project "Restoring the fragmented habitats from the Danube River corridor through joint transnational cooperation", it is planned to map invasive plant species in the Bosut forest area. Also, several media visits were held with the theme of raising awareness about the negative impact of invasive plant and animal species. Within the project "Sava Ties" it is planned to map invasive vegetation and its removal within the SNR "Obedska bar" and SNR "Zasavica". There is no integral database on national level.
3.	Strengthening national policy legal and institutional frameworks	Legislation considering IAS: -Law on Nature Protection, ("Official Gazette of RS", no. 36/2009, 88/2010, 14/2016 and 95/18- other low) -Law on Game Animal and Hunting, ("Official Gazette of RS", no . 18/2010 from 26.3.2010) -Law on the Protection and Sustainable Use of Fish Stocks ("Official Gazette of the Republic of Serbia", No 128/2014 and 95/2018 other low) -Code on the trans boundary movement and trade in protected species,("Official Gazette of RS", no. 99/2009 from 1.12.2009) -Biodiversity Strategy of the Republic of Serbia for the period 2011 – 2018-invasive species are recognised as one of the main threats for biodiversity

		-Draft Nature Protection Strategy for the period 2019-2025 is in preparation There is no legal act (low, code, and strategy or action plan) on invasive species specifically. Governmental authorities and institutions, national plant protection organisations, customs and quarantine services, CITES authorities, veterinary authorities needs better coordination and communication in order to provide adequate legal act. Legal -gap analysis assessment of respective provisions of national legislation and suggestions for alignment with Regulation (EU) 1143/2014 on invasive alien species and institutional gap -need assessment including capacity building activities will be carried out through external expertise in 2019. When issuing the requirements for the protection of nature for project documentation, spatial and urban plans, different bases (forestry, hunting, fishing, water management, etc.), programs and strategies in all activities affecting nature of surfaces indicate the obligation to control invasive plant species.
4.	Regional cooperation and responsibility	The project EU Environment Partnership Programme for Accession (EPPA) in the Western Balkans and Turkey is created to be a major driver of reform and development in environmental governance through compliance with the EU environmental acquis. The overall objective of the programme is to strengthen the implementation of the EU environmental acquis in the Western Balkans and Turkey 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. The actions of the managers of protected areas on the removal of invasive fish species in protected areas are supported. Recent international and trans boundary Projects and publications: -Preserving Sava River Basin Habitats through Transnational Management of Invasive Alien Species-Sava TIES-Institute for nature conservation of Vojvodina province -Project: East and South European Network for Invasive Alien Species – A tool to support the management of alien species in Bulgaria (ESENIAS-TOOLS), D-33-51, 2015-2016. Project partner Department for Biology, University of Novi Sad, project participant Prof. dr. Milka Glavendekić -FA COST Action TD1209 European System for Alien Species (ALIEN CHALLENGE) European Cooperation

		in Science and Technology, 2013-2017, MC member: MC Substitute: Prof. dr. Milka Glavendekić - Ana A. Anđelković1,2,*, Milica M. Živković2, Dušanka Lj. Cvijanović2, Maja Z. Novković2, Dragana P. Marisavljević1, Danijela M. Pavlović1 and Snežana B. Radulović2: The contemporary records of aquatic plants invasion through the Danubian floodplain corridor in Serbia
5.	Prevention	Currently, only the import of invasive alien is regulated, as specific provisions in national legislation exist only with respect to rejection of the import of wildlife which is deemed to be a threat to the native fauna and flora (Rulebook on Transboundary Movement and Trade in Protected Species). Prevention is provided through licensing rules for containment facilities holding potential IAS (e.g. botanic gardens, greenhouses, arboreta, garden centres, zoos, animal-breeding establishments, fish farms, research institutes). Also there is control of international and domestic trade in plants and animals through quarantine. It is included in the procedure for issuance of conditions for nature protection for project documentation, spatial and urban plans, various bases (forestry, hunting, fishing, water management, etc.), programs and strategies of surfaces indicate the ban on planting IVS.
6.	Early detection and rapid response	IAS are included in existing wildlife monitoring arrangements, protected area staff is trained to conduct surveys and recognize some of the most problematic invasive species. Citizens and NGOs reporting networks are developed through discussion forums and social networks Based on the studies on protection in the preparation of the Annual Management Program, the managers incorporate detection and control measures aimed at the suppression of invasive species in protected areas. Also, project activities are carried out with the same task. For these activities, the Institute for Nature Protection of Serbia and the Institute for Nature Conservation of Vojvodina Province issue conditions of nature protection in order to make it more efficient.

		Recent Project conducted on the faculty of forestry: -FPS COST Action FP1401 A global network of nurseries as early warning system against alien tree pests (GLOBAL WARNING), 2014-2018, MC member: Prof. dr. Milka Glavendekić http://www.cost.eu/COST_Actions/fps/FP1401

7.	Mitigation of impacts	Effective weed control based on existing legal measures Species user groups like hunters, falconry's, and fisherman are involved in monitoring and mitigation. Responsibility for landowners, occupiers and Relevant stakeholders to prevent or control further spread of listed invasive alien species should be established. All the above activities help to alleviate the harmful effects of the spread of invasive species to nature
8.	Restauration of native biodiversity	Regional INTERREG project *Sava TIES* - Preserving Sava River Basin Habitats through Transnational Management of Invasive Alien Species is being implemented. The main goal is to find an effective solution for permanent eradication of invasive alien plants, to reduce habitat fragmentation and improve the connectivity of the transnational ecological corridor taking into account cross-sectoral cooperation. Gene banks and Sperm cryopreservation started in Laboratory of Hydrobiology and Centre for Conservation of Biodiversity and Fishing in inland waters - AQUARIUM „PMF KG" Through projects of revitalization of natural habitats, that is, habitats of strictly protected and protected species, invasive species are being suppressed. The Institute for Nature Conservation of Vojvodina Province carries out expert inspections in order to implement as efficiently as possible measures for protection against the spread of invasive species in protected areas, ecological network habitats and ecological corridors.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

The Rulebook on way, tools and means for professional fishing, as well as ways, tools, equipment and means for recreational fishing prescribes that allochthones fish species can not be used as an alive fishing bait for recreational fishing (European Code of Conduct on Recreational Fishing and IAS)

Protected areas and invasive alien species

Recreational fishing and invasive alien species

Plantation forestry and invasive alien species

European Codes of Conduct are not developed at the national level.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Managers of protected areas where there are invasive fish species present in the watercourses (Ictalurus nebulosus for example) participated in the carving. Fishermen also. PC "Vojvodinašume" and PWMC "Vode Vojvodine" cooperate on the suppression of invasive plant species. Cooperation with the media and NGOs is of great importance in raising awareness and awareness of the negative effects of invasive species on indigenous species.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

The negative impact of invasive species of invertebrates were treated in the studies for protected areas together with the importance of conservation of pollinators

Projects that may be considered as initiation and good base for assessing the role of IAS in the decline in insect species:

-Combination of ecosystem services: mechanisms and interactions for optimal crop protection, improvement of pollination and productivity.(Kombinovanje ekosistemskih usluga: mehanizmi i interakcije za optimalnu zaštitu useva, unapređivanje polinacije i produktivnosti) (ECOSTACK).H2020-SFS-2017-2 -ID 773554-2 (10. septembar 2018 –09. septembar 2023

-Sustainable pollination in Europe - joint research on bees and other pollinators (SUPER-BFACOST Action FA1307

- Conservation strategy for protected and strictly protected hoverflies (Insecta: Diptera: Syrphidae) species in Serbia – Case study "Konzervaciona strategija za očuvanje zaštićenih i strogo zaštićenih vrsta u Srbiji – osolike muve (Diptera: Syrphidae) kao model organizmi"-Ministarstvo prosvete i nauke Republike Srbije OI173002

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

Most deals with the negative impact of invasive species on the honey bee, or directly to other pollinators in protected areas, especially strogozaštićene species.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

Regarding climate change, there is currently a weak interaction between researchers, policymakers and stakeholders dealing with biodiversity and climate change, while the potential for their direct cooperation is high. There is no systematic monitoring of the impacts of climate change on biodiversity, as well as a sufficient number of models for projections of these, and in particular, there is a low public awareness of the impact of climate change on biodiversity.

Slovak Republic / République slovaque

Information on the institution/agency/person reporting

Country	Slovakia
Name and position of responsible person	Ema Gojdičová; botanist (in cooperation with Ivana Havranová: zoologist, Andrea Lešová: zoologist and Michaela Mrázová: coordinator of international agreements)
Institution/Organisation	State Nature Conservancy of the Slovak Republic
E-mail	ema.gojdicova@sopsr.sk

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[11]:

1.	Building awareness and support	IAS issues have stable place in study/education programmes and research works. In the period of 2017 – 2018 Slovakia like other EU Member States was busy with the implementation of EU Regulation on No. 1143/2014 on the prevention and management of the introduction and spread of IAS (EU Regulation on IAS). IAS appeared in media as a short news or thematic articles, e.g. http://www.quark.sk/nebezpecne-invazne-druhy/; http://www.quark.sk/monitorujte-s-nami-nepovodne-organizmy/. The public can find and download more information on IAS both IAS of Union concern (EU List of IAS) and Slovak concern (National List of IAS) from the homepage of the State Nature Conservancy of the Slovak Republic (herafter SNC SR): http://www.sopsr.sk/invazne-web/. Wide public is informed about IAS topical information also via homepage of SNC SR (section News): http://www.sopsr.sk/web/?cl=20 and the Facebook profile: https://www.facebook.com/sopsr.sk/.
2.	Collecting, managing and sharing information	Data on IAS/alien species are gathered in several database systems: *Complex Information and Monitoring System* (KIMS) of SNC SR covers data on both animal and plant species: http://www.biomonitoring.sk/Home/OccurenceData The Plant Science and Biodiversity Center of the Slovak Academy of Sciences developed databases for plant species and information on the occurrence of IAS/alien species. They are available in the *Central Database of Phytocenological Relevés* (CDF):

[11] Please add as much space as you need for your replies under each question.

		http://ibot.sav.sk/cdf/ or Database of Alien Plant Species (DASS): http://dass.sav.sk/. The Central Control and Testing Institute in Agriculture also publishes information on IAS of the Union concern on its homepage: http://web.uksup.agroinstitut.sk/oor-buriny-a-popisy/. The Slovak Republic submitted first report for each of the invasive alien species of Union concern and for each invasive alien species of regional concern subject to measures as provided for in Article 11(2) of Regulation (EU) No 1143/2014 for the period 2015-2018. The report is available on the website: https://cdr.eionet.europa.eu/.
3.	Strengthening national policy legal and institutional frameworks	When the EU Regulation on IAS entered into force, Slovakia (Ministry of Environment of the Slovak Republic) intensified its work on the implementation of the EU Regulation and prepared proposal of a new Act on the prevention and management of the introduction and spread of IAS. [12] Ministry of Environment of the Slovak Republic also proposed for adoption a new strategic document Conception of nature and landscape protection up to 2030. The Conception also covers issue of IAS.
4.	Regional cooperation and responsibility	Traditionally there is a good bilateral cooperation between neighbouring countries: Czech Republic, Poland, Hungary, and Austria. The cooperation is both formalized (via annual protocols on bilateral cooperation) and informal based on the cooperation of the staff of the relevant nature protection bodies (ministries and expert institutions – protected areas administrations) in neighbouring countries. IAS e.g. were subject to the meeting of bilateral Slovak – Czech Commission on Nature and Landscape Protection in February 2018 where the implementation of EU Regulation on IAS and priorities were discussed. LIFE project "*LIFE NAT 16/CZ 000001 Optimalization of Natura 2000 sites management delivery in the South Bohemia Region and the territory of South Slovakia"* is a practical example of the Czech and Slovak cooperation. The project ambition is to find and test new methods for management of selected invasive plant species (*Ailanthus altissima* and *Asclepias syriaca*), which could be applied instead of herbicides containing glyphosates. As an example of cooperation with Poland the LIFE project "*LIFE 12 NAT/PL000034 Nature mosaics – protection of species and habitats in Natura 2000 site Pieniny"* can serve. Removal of invasive alien plant species in selected sites on the territory of both Pieniny National Parks was one of the project activities. More

[12] After series of discussions with the sectors and general public the Act No. 150/2019 on prevention and management of introduction and spread of invasive alien species as amended was adopted on 10th May 2018. It will enter into force 1st August 2019, Slovak version available on: https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2019/150/20190801.

		information about the project available on website: https://nfosigw.gov.pl/oferta-finansowania/srodki-zagraniczne/instrument-finansowy-life/wiecej-o-life/realizowane-projekty/. IAS were also subject of the bilateral Slovak – Lithuanian experience sharing event during the study visit of the Lithuanian delegation in November 2018.
5.	Prevention	Comprehensive analysis of the pathways of unintentional introduction and spread of IAS in Slovakia has not been finished yet and a specific system of surveillance of IAS has not been established yet. Official border controls cover only basic controls of the Financial Administration/Customs Institute according to the provision of the Act No 199/2004 (Customs Act). See also information provided in Q2 section of the template.
6.	Early detection and rapid response	The Slovak Republic has not established system on early detection and rapid respond for IAS yet. This role will cover the homepage of SNC SR: http://www.sopsr.sk/invazne-web/?page_id=73. In the case of the occurrence of a new IAS in the territory of Slovakia, its rapid eradication is solved individually.

7.	Mitigation of impacts	Continuation of the IAS management activities (eradication, containment, control) coordinated and implemented by the SNC SR with focus on protected areas and their buffer zones. Continuation of management activities of some other sectors, e.g. water management authorities contribute to the elimination of invasive alien plant species through more or less regular management of water courses, rivers of Laborec, Uh, Poprad, Dunajec, Orava, Váh can be mentioned; National Motorway Company and Railway Company Slovakia implements measures aimed at increasing of safety which include management of invasive alien species along motorways, expressways, and railways. Cooperation of the SNC SR with municipalities in order to help them organize elimination of IAS within their urban areas. And cooperation with district offices, integrated rescue system, and National ZOO Bojnice in management of *Trachemys scripta.*
8.	Restauration of native biodiversity	Project LIFE "*LIFE 10 NAT/SK/083 Restoration of endemic Pannonic salt marshes and sand dunes in Southern Slovakia"* is a very good example of restoration of native biodiversity. Site of Community Interest (SCI) SKUEV067 Čenkov is a unique site in Slovakia with the occurrence of specific habitats: (6260* Pannonic sand steppes, 6120* Xeric and calcareous grasslands, 91N0* Pannonic inland sand dune ticket – *Junipero – Populetum albae*). These habitats are threatened by IAS and *Ailanthus altissima* is the most problematic. Detailed mapping of the occurrence of the species in the site and its removal was one of activities of the project. More

		information available at: http://www.perlypodunajska.sk/. IAS are tackled in the management plans adopted for relevant protected sites such as national parks and Natura 2000 sites. Till now the Government of SR adopted management plans for 2 national parks and 13 special protection areas (established according to the EU Birds Directive) and district offices adopted 89 management plans for 97 special areas of conservantion (designated according to the EU Habitats Directive). IAS are issue in wetland and forest sites.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Code of Conduct on Horticulture and Invasive Alien Plants was used in the discussion of the Ministry of the Environment (in cooperation with SNC SR) with the Ministry of Agriculture and Rural development of the Slovak Republic and the Slovak Union of Gardeners – promoting the Code of conduct a searching for ways for joint implementation of this voluntary tool.

European guidelines on Protected Areas and IAS – As the SNC SR is responsible for protected areas in the Slovak Republic, the document is used by its staff on every day base (mapping of IAS in protected areas, preparation of protected area management plan/programme etc.).

Code of conduct for Invasive Alien Trees – the only Code of Conduct translated into the Slovak Language (still requires the proof reading) – will be used for communication with the forestry sector (both state and private).

All the above mentioned Codes of Conduct and Guidelines are being used in the work on the implementation of EU Regulation No 1143/2014 on IAS – pathway analyses, prioritization of pathways and action plans.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Plant Health authorities, the Slovak Union of Gardeners – national, district and local (selected – mostly in bigger towns) committees, horticulture shops/chains and garden centres (e.g. BAUMAX, - while active in Slovakia; Sadex – garden centre).

How: official letters and meetings, personal communication (telephone calls, e-mails, visits in shops).

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

The Code of Conducts and Guidelines are welcomed by the professionals (many new ideas and approaches for every day work). However, wide implementation by other stakeholders/the public is more challenging, as the Slovak Republic is a country which does not have tradition in implementing voluntary tools/requirements (the situation is changing very slowly).

Building capacities (both personnel and financial) for the issue of IAS at all levels (from national to local ones) would be very helpful. Translation of Code of Conducts and Guidelines into Slovak language can also contribute to the implementation of the documents.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

Yes, e.g. Ministry of the Environment of the Slovak Republic has initiated an integrated project on changes in landscape use, connectivity, and biodiversity. Climate change, pollinators, and IAS should be covered by the project.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

SNC SR prepared a few recovery programs for protected and threatened insect species, e.g. *Parnassius apollo*, *Colias myrmidone*, genus Maculinea (in the Slovak language available on the link: http://www.sopsr.sk/web/?cl=30; http://www.sopsr.sk/cinnost/programy/zltacik.pdf; http://www.sopsr.sk/cinnost/programy/PZ_Maculinea.pdf). Recovery programmes for *Parnassius apollo* and genus Maculinea recognize invasive alien plant species as a threatening factor and require elimination of IAS in proposed management measures.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

Yes, some scientific institutions are dealing with the effects of climate change on biodiversity including IAS/alien species and their management. As an example a project of Plant Science and Biodiversity Center of the Slovak Academy of Sciences can be mentioned. The Center has been running the project since 2013. The project team focuses on the effects of non-native black locust (*Robinia pseudo-acacia*) forests on vegetation diversity and change in microclimate. There are cca 200 pair research plots on the border of natural forest and monoculture of black locust in Slovakia. In 60 model research plots the datalloggers have been placed. Datalloggers are recording air temperature and moisture in one hour interval all year round. The project team evaluates the gathered data.

Slovenia / Slovénie

Information on the institution/agency/person reporting

Country	Slovenia
Name and position of responsible person	Branka Tavzes, Undersecretary
Institution/Organisation	MINISTRY OF THE ENVIRONMENT AND SPATIAL PLANNING
E-mail	branka.tavzes@gov.si

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[13]:

1.	Building awareness and support	Information on invasive alien species at the webpage of the Ministry of the Environment and Spatial Planning continues to be regularly updated. Since 2016 the main focus is on invasive alien species of Union concern. For the species from the EU list information in Slovene, including photo and description of the species, its biology, habitat, presence in Slovenia, pathways of introduction, possible impacts and possible measures for their removal is available, separately for plant and animal species.
		- Information on invasive alien animal species http://www.mop.gov.si/si/delovna_podrocja/narava/invazivne_tujerodne_vrste_rastlin_in_zivali/rastline_invazivne_tujerodne_vrste/ - Information on invasive alien plant species http://www.mop.gov.si/si/delovna_podrocja/narava/invazivne_tujerodne_vrste_rastlin_in_zivali/rastline_invazivne_tujerodne_vrste/
		For each species, where available, links to publicly available results of research, monitoring or management measures are provided. This information is also available among other information related to research, articles, publications, activities, projects, events or other relevant information in the Library or News section of the webpage. Public is informed about invasive alien species and Regulation (EU) No 1143/2014 also through different projects (co-) financed by the EU funds, by municipalities or by non-governmental organizations. One of main ongoing awareness raising project in the reporting period is a LIFE ARTEMIS (LIFE15 GIE/SI/000770) project dedicated to the invasive alien species. The goal of the project LIFE ARTEMIS is to contribute to the reduction of the harmful impacts of invasive alien species on biodiversity by increasing public awareness and by setting up an effective early warning and rapid response framework for invasive alien species in forests. http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5829; https://www.tujerodne-vrste.info/en/project-life-artemis/ In 2017 and 2018 a public survey on the general knowledge on invasive alien species was carried out in the project LIFE ARTEMIS. The survey was conducted using on-line questionnaire, covering a range of questions on people's knowledge of IAS-

[13] Please add as much space as you need for your replies under each question.

		related issues, their ability to identify different IASs, their knowledge of control and eradication measures and support for those measures In 2017 general survey, respondents ranked invasive alien species (IAS) as the least important among different environmental risks. However, 76 % of respondents had heard of the term alien species, and 83 % think IAS are a problem. Respondents seem to think IAS are more critical globally and not as much locally, which is an interesting phenomenon observed in some other studies as well. More than 75 % of all respondents have not yet had any problems with IASs personally, but more than half of those expected this to change in the future. Almost all respondents associated IASs with negative and not positive effects they might have on environment and society. https://www.tujerodne-vrste.info/wp-content/uploads/2018/01/LIFE-ARTEMIS_Javnomnenjska-raziskava-2017.pdf In the 2018 survey (report in preparation) preliminary analysis show that IAS are still considered as not so important environmental risk, however the percentage has grown. The percentage of people that think IAS are a problem has grown to 91 %. The awareness that IAS are also a local problem has increased. The ability to recognise selected invasive alien species has improved during the project. The support for control and eradication measures has also improved. The Municipality of the capital city Ljubljana has a webpage dedicated to invasive alien species (https://www.ljubljana.si/sl/moja-ljubljana/varstvo-okolja/invazivne-tujerodne-vrste/) where information can be found on invasive alien species present in the municipality and on their localities, as well as information on possible management measures that can be provided by the citizens. The Municipality of Ljubljana is also a lead partner in the UIA project APPLAUSE. Part of this project is awareness raising and other activities for management of invasive alien species as well as to seek for innovative solutions for their use in line with the principles of circular economy (https://www.uia-initiative.eu/en/uia-cities/ljubljana). Within projects for implementation of the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 several projects for Natura 2000 sites and species are ongoing. They include measures for gathering data on invasive alien species their removal and promotion of the Regulation (EU) No 1143/2014 to general public. Examples of projects funded under the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 addressing also IAS: - PoLJUBA https://www.poljuba.si/ - VIPava https://www.projektvipava.si/; https://www.projektvipava.si/blog/izlovili-ze-51-tujerodnih-zelv-v-sezoni-2018/ In 2017 the Fisheries Research Institute of Slovenia conducted a raising awareness action in the framework of the project LIFE for LASCA (LIFE 16/NAT/SI/000644) among the Fishing clubs organised in the Fishing Association of Slovenia (17.000 members). Ministry of Agriculture, Forestry and Food distributed information on invasive alien species to farmers through a brochure (https://www.program-podezelja.si/sl/knjiznica/101-invazivne-rastline-v-kmetijski-krajini/file) and also in the main agriculture fairs. Agriculture consultants were also taught about the topic and can provide advice to farmers.
2.	Collecting, managing and sharing	Data on the presence of invasive alien species of Union concern in the environment are collected in the framework of the existing monitoring schemes where biological elements are surveyed including monitoring required under relevant EU Directives (Habitats, Birds, Water framework and Marine Directive) upgraded with the specific monitoring, surveillance and management activities on invasive alien species.

	information	Additional surveys, targeting the information on occurrence and distribution of invasive alien species of Union concern were also carried out. There is an ongoing 4 year project (2018-2021) for monitoring the presence of alien species in the marine environment. It is aimed for monitoring the areas which are most susceptible for alien species (ports, estuaries and areas with mariculture). Selected monitoring was also carried out in 2018 for signal crayfish to establish its distribution. In one case where release of *Procambarus clarkii* was detected and rapid eradication took place also a new technique using e-DNA was used in order to monitor the efficiency of eradication.
		Examples of information on species, monitoring and management measures: http://www.mop.gov.si/si/delovna_podrocja/narava/invazivne_tujerodne_vrste_rastlin_in_zivali/ http://www.natura2000.si/o-naturi-2000/natura-2000-v-sloveniji/ http://www.zgs.si/delovna_podrocja/gozdne_zivali_in_lovstvo/letni_nacrti_lovsko_upravljavskih_obmocij/index.html http://www.biosweb.org/?task=about# Examples of monitoring aimed specifically for alien species: - Monitoring of signal crayfish: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/invazivke/Monitoring_Raki_signalnirak2018.pdf - Monitoring of marine alien species: http://www.ribiski-sklad.si/en/List_of_operations/Monitoring_of_species_diversity_and_abundance_of_non-native_species_in_the_Slovenian_sea/
		Data on invasive alien species are also collected within the surveillance activities in the protected areas. In the reporting period several other nature protection projects funded by public funds took place where data on invasive species were gathered and also actions for their eradication or management were carried out.
		Examples of projects where data on invasive species were gathered and eradication of species took place: - PoLJUBA https://www.poljuba.si/ - VIPava https://www.projektvipava.si/
		For the reporting and data collection on invasive alien species citizen science was also used. In the reporting period several projects addressed collection of information on the presence of invasive alien species from different stakeholder groups and general public. Collection of data through citizen science, supported by the scientific support by experts for confirmation of the identification of species already enabled rapid detection of the appearance of invasive alien species in the environment.
		Citizen science projects: - LIFE ARTEMIS (LIFE15 GIE/SI/000770) https://lifeslovenija.si/en/awareness-raising-training-and-measures-on-invasive-alien-species-in-forests/, https://www.invazivke.si/ - Ujemite naravo! (http://ribiska-zveza.si/projekti/projekt-ujemite-naravo) - Invazivke nikoli ne počivajo (http://invazivke.weebly.com/)
		Monitoring studies funded with public funds and information on management measures are publicly available at webpages of ministries or public bodies responsible for collection of data on species or as well at webpages of financial funds under which different project or operations are financed.
		Example of publicly available results of monitoring and research:

		http://www.natura2000.si/o-naturi-2000/natura-2000-v-sloveniji/spremljanje-stanja-monitoring/ http://www.mop.gov.si/si/delovna_podrocja/narava/invazivne_tujerodne_vrste_rastlin_in_zivali/knjiznica/
3.	Strengthening national policy legal and institutional frameworks	For strengthening national policy on invasive alien species and for the implementation of the EU Regulation 1143/2014 on the prevention and management of the introduction and spread of invasive alien species there is an ongoing process for amendment of the national legislation on Nature protection and a preparation of a Decree on the implementation of EU Regulation 1143/2014. First draft of the Act Amending the Nature Conservation Act has been in public consultations since May 2019 http://www.mop.gov.si/si/medijsko_sredisce/novica/8915/.
4.	Regional cooperation and responsibility	Regional cooperation takes place between EU Member states in the framework of implementation of the EU Regulation (EU) No 1143/2014.
5.	Prevention	Restrictions from Article 7 of the EU Regulation (EU) No 1143/2014 are the most stringent preventive measures. They are complemented by communication and building awareness activities described in the first section of this report.
6.	Early detection and rapid response	In the reporting period three cases of early detection of invasive alien species of Union concern took place. Two species (*Procambarus clarkii* and *Pueraria montana* var. *lobata*) were detected in 2018. Eradication activities took place in 2018. Monitoring of the effectiveness of eradication will take place later in 2019. Presence of one species (*Lysichiton americanus*) has been confirmed in 2019. Eradication activities are in progress. In the project LIFE ARTEMIS an information system for collecting data on IAS has been developed. This system serves also as a tool for early detection of the appearance of invasive alien species in the environment https://www.invazivke.si/start.aspx.

7.	Mitigation of impacts	Mitigation of impacts is provided through management of species. Besides regular management activities described in previous reports eradication activities described in the Early detection and rapid response section took place.

8.	Restauration of native biodiversity	In the project LIFE for LASCA (LIFE 16/NAT/SI/000644) https://www.lifeforlasca.eu/ an invasive Common nase is being removed from the Vipava river basin. In the continuation of the project a native South European nase [Lasca] *(Protochondrostoma genei)* will be reintroduced into their former distribution sections of the Vipava river basin.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

In this reporting period Codes of Conduct, developed in the frame of the Bern Convention were not directly used at a national level. In communication and in building awareness activities however principles from the Codes of Conduct have been considered.

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

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Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

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Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

No.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

No.

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

In the framework of the EU Regulation (EU) No 1143/2014 part of the decision to include species on the list of IAS of Union concern is also to consider foreseeable climate change conditions in relation with the possibility for establishment of viable population and spreading in the environment for individual species. Climate change scenarios are thus included in the risk assessments.

On a national level management of IAS is considered as one of the measures for adaptation to climate change. Therefore, funds from the Climate Change Funding Programme for 2019 have been dedicated for management of IAS in protected areas established by the Government.

Spain / Espagne

Information on the institution/agency/person reporting

Country	Spain
Name and position of responsible person	Miguel Aymerich Huyghues-Despointes, Deputy Director
Institution/Organisation	Ministry for the Ecological Transition (MITECO)
E-mail	Maymerich@miteco.es

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[14]:

1.	Building awareness and support	At all levels, actions regarding Invasive Alien Species (IAS) problem have been taken. Examples: Education workshops for schools were developed since 2013 till last year, for more than 38.000 persons (scholars and adults) in Extremadura. Since June 2017 other workshops were developed for about 4.000 scholars in 20 schools located in Madrid (in the framework of LIFE INVASEP project (2012-2018) www.invasep.eu Other Life projects are in progress with the objective of rising public and other stakeholders awareness, as well as to produce and disseminate information and guidance: LIFE INVASAQUA (2018-2023) https://www.efeverde.com/tematica/lifeinvasaqua/ LIFE STOP CORTADERIA http://stopcortaderia.org/ Many conferences and symposium have been held on this issue with the active participation of Universities, public and private firms, regional and central administrations. For instance: The International Conference on Invasive No-native Species: Problems, Management, Control and Eradication Tools celebrated on March 20 and 21 at Cáceres The first meeting of the Working Group to fight Pampas grass (Cortaderia spp) in the Atlantic Arc was held, within the LIFE Stop Cortaderia project. The 14th edition of National Congress on the Environment (CONAMA) took place on 26-29 November 2018 in Madrid with a special emphasize on IAS. This conference counted with the participation of thousands of attendees ranging from company representatives, civil society organizations, scientists, ecologists, politicians, institutions to entrepreneurs. MITECO collaborated in the preparation and as a participant in the debates.

[14] Please add as much space as you need for your replies under each question.

2.	Collecting, managing and sharing information	The Working Group on IAS: at least once a year representatives of the different Spanish regions, general administration and experts meet for collecting and sharing information, take decisions about IAS etc. On the other hand, specific projects have been developed: Spain and Portugal have launched LIFE INVASAQUA (2018-2023) that seeks to reduce the introduction and spread of invasive Species of Freshwater an Estuarine Systems in the Iberian Peninsula by increasing public and stakeholders awareness and developing key tools to improve an early warning and rapid response. https://www.efeverde.com/tematica/lifeinvasaqua/ Other interregional LIFE project LIFE INVASEP project www.invasep.eu On the other hand, Spain actively participate at the Invasive Alien Species Expert Group, a meeting with the representatives of the Member States that is held at Brussels twice a year.
3.	Strengthening national policy legal and institutional frameworks	The Working Group on IAS has representatives of different levels of government. This group coordinates the efforts of responsable agencies and subnational governments dealing with IAS. National strategies for control, management and possible eradication of IAS were elaborated in the frame. Since 2017 three new national strategies were elaborated and approved for *Cortaderia* spp, Ophidians in islands and *Eichhornia crassipes* (this last is about to be approved)
4.	Regional cooperation and responsibility	In pursuing the objectives of the Regulation (EU) no 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of IAS), there is a constant communication between the states and the EU about the possible risks posed by a new detection of an IAS (Notsys, emails etc) as well as activities that may avoid unintentional introductions (strengthen control at customs, collaboration between states). This month is the deadline for reporting to EU the situation with all listed alien species (on the National Catalogue and the list of Union concern).
5.	Prevention	Prevention is generally more environmentally desirable and cost-effective than reaction after the fact, and should be prioritised. Therefore, as well as the existing normative on IAS (Law 42/2007, of December 13, on Natural Heritage and Biodiversity; Royal Decree 630/2013, of August 2, which regulates the Spanish catalog of invasive alien species), the last national regulation is oriented to avoid the entry of potential future invaders: Royal Decree 216/2019, of March 29, approving the list of invasive alien species of concern for the outermost region of the Canary Islands and amending Royal Decree 630/2013, of August 2, by which regulates the Spanish Catalog of invasive alien species. Project of Royal Decree regulating the administrative procedure for the prior authorization of import in the national territory of alien species in order to preserve the Spanish native biodiversity; As requires the EU Regulation, we work in developing an action plan on the pathways of invasive alien species which require priority action ('priority

		pathways') because of the volume of species or of the potential damage caused by the species entering the Union through those pathways.
6.	Early detection and rapid response	Information about IAS is spread through our warning system network in order to confirm early detection of the introduction or presence of invasive alien species in the national territory. If the invasive species is on the EU list, we notify it using the official tool for EU Member States to notify the Commission and inform the other Member States as required by Reg. 1143/2014 on (IAS) (The EASIN NOTSYS platform). The platform is also a tool for sharing information about successful methods for eradication etc.

7.	Mitigation of impacts	Regional administrations that has the competence in their territories are in charge of developing actions on a regular basis to mitigate the impact of IAS. As mentioned before, for the most worrying species, we intend to develop strategies for control, management and possible eradication. In the meantime, specific LIFE projects are undertaken to mitigate the impacts of some IAS.
8.	Restauration of native biodiversity	Once a habitat is recovered, actions of restauration and improving native biodiversity are planned, in the frame of different projects (some of the latest Life Projects were already mentioned) as a measure of avoiding new invasions.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

European Code of Conduct on Horticulture and Invasive Alien Plants (2008) was used in the frame of LIFE INVASEP, especially for elaborating the Code of conduct to prevent trade of invasive alien plants (Código de conducta para evitar el comercio de plantas exóticas invasoras).

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Representatives of ornamental horticulture and nursery sector participated in a meeting where a draft of the future code of conduct based in the European code was discussed. An exemplar of the European Code was shown to the participants.

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Based on our experience with the codes of conduct elaborated in the framework of LIFE INVASEP we can affirm that a voluntary code has little impact on the relevant sectors where there is a normative already implemented.

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

At this moment there is an advanced draft of a national plan of action for the conservation of pollinators that contemplate monitoring and new methods for control of damages produced by *Vespa velutina*.

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

See Q4

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

There are some research works that deal with the effects of Climate change on biological invasions, for instance:

Vilà, M., González-Moreno, P., & Montero-Castaño, A. 2015. Biological Invasions under a Climate Change scenario.

In: Herrero A. & Zavala MA, eds (2015) Los Bosques y la Biodiversidad frente al Cambio Climático: Impactos, Vulnerabilidad y Adaptación en España. Ministerio de Agricultura, Alimentación y Medio Ambiente, Madrid.

https://www.miteco.gob.es/es/cambio-climatico/temas/impactos-vulnerabilidad-y-adaptacion/informecompletoconentradilla2_tcm30-70199.pdf

This work was funded by the Spanish Ministry for Ecological Transition and compile some of the more recent works carried out in this matter.

Switzerland / Suisse

OVERVIEW OF IAS WORK IN SWITZERLAND CONTRIBUTION TO THE MEETING OF THE GROUP OF EXPERTS ON IAS IN BATUMI, (GEORGIA), JUNE 2019

By Dr. Gian-Reto Walther, Federal Office for the Environment, Switzerland

After adoption of the national strategy on invasive alien species in Switzerland* by the Swiss Federal Council in 2016, the implementation of the measures formulated in the strategy is in progress. With highest priority, the on-going work focuses on the harmonisation and modification of the national law dealing with invasive alien species, the organisation of a strengthened national coordination and the update of the national inventory on invasive alien species in Switzerland:

- A draft version of the modification of the Federal Act on the Protection of the Environment (Environmental Protection Act, SR 814.01) with new measures for prevention, management and surveillance of invasive alien species has been elaborated and is now in the phase of public consultation*.
- For the national coordination, a new organisational form is about to be established including all actors responsible for implementing the measures of the strategy.
- The national inventory on invasive alien species in Switzerland dates back to 2006. An update of the relevant information is necessary as well as the implementation of a national expert group keeping the information updated. An important role in this regard will be taken by the national species' data centres (www.infospecies.ch).

Apart from the work on the implementation on the measures of the national strategy, the work based on the existing national legislation, in particular, the Ordinance on the Handling of Organisms in the Environment (Release Ordinance, SR 814.911) continues. The Release Ordinance lists in its appendix 14 invasive alien taxa (11 plants and 3 animals) for which the handling in the environment is prohibited, except for measures of control. In addition to the Release Ordinance, other federal ordinances such as the Ordinance on Hunting and the Protection of Wild Mammals and Birds (SR 922.01*) and the Ordinance on the Federal Act on Fish and Fishery (SR 923.01*) include regulations for particular non-native species groups, such as birds, mammals, fish and crustacean.

The «Environment Switzerland 2018» report provides an overview of the current state and development of the environment in Switzerland. It assesses the measures implemented by the federal authorities to improve the quality of the environment and identifies areas in which further action is required, including invasive alien species.

* available in French, German and Italian only

Turkey / Turquie

Information on the institution/agency/person reporting

Country	TURKEY
Name and position of responsible person	DR. IRFAN UYSAL
Institution/Organisation	THE MIN. OF AGRICULTURE AND FORESTRY, GENERAL DIRECTORATE OF NATURE CONSERVATION AND NATIONAL PARKS
E-mail	uysal.irfan@tarimorman.gov.tr

Q1. Please provide information on the measures put in place at national level, since the last meeting of the Group of Experts on Invasive Alien Species in 1-3 June 2017 (Madeira, Portugal), for implementing Recommendation No. 99 (2003) on the European Strategy on Invasive Alien Species and in particular in the following areas of the Strategy[15]:

1.	Building awareness and support	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. An important goal of these projects is to increased knowledge and awareness on IAS threats, impacts, management options and best practices.
2.	Collecting, managing and sharing information	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and it is planned to start at the end of 2019. An important component of these projects is to build capacity building, knowledge and information sharing systems to address the IAS threats.
3.	Strengthening national policy legal and institutional frameworks	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and

[15] Please add as much space as you need for your replies under each question.

		Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. An important component of these projects is to develop an effective national policy on invasive species.
4.	Regional cooperation and responsibility	
5.	Prevention	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. The objective of these projects is "To ensure resilience of marine and coastal ecosystems, inland and terrestrial ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species."
6.	Early detection and rapid response	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. The objective of these projects is "To ensure resilience of marine and coastal ecosystems, inland and terrestrial ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species."

7.	Mitigation of impacts	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. The goal of these projects is to minimize negative impacts of IAS. The objective of these projects is "To ensure resilience of marine and coastal ecosystems through strengthened capacities and investment in prevention, detection, control and management of Invasive Alien Species."
8.	Restauration of native biodiversity	The GEF-6 period project, called PIMS 5733: "Addressing Invasive Alien Species (IAS) Threats at Key Marine Biodiversity Areas", started in August 2018. In

		addition, EU the IPA II project, called "Addressing of Invasive Alien Species Threats in Terrestrial Areas and Inland Waters in Turkey" is in the tender phase and ıt is planned to start at the end of 2019. An important component of these projects is to make investment in sustainable management, prevention, eradication, and control of IAS and restore of IAS-degraded habitat at key marine and coastal areas, terrestrial areas and inland waters.

Q2. Have the European Codes of Conduct, developed in the frame of the Bern Convention (see above), been used at national level in your country and if yes,

Q2 a): Which Codes of Conduct were used and in which way?

Q2 b). Which bodies, agencies and stakeholders were involved in implementing the Codes and how?

Q3. What is your evaluation of the benefits and challenges linked to the implementation of the Codes of conduct and how their use at national level by the relevant sectors and actors can be improved?

Q4. Has your country initiated some work on the effects of IAS on pollinators and on assessing the role of IAS in the decline in insect species?

Q5. Are IAS part of any management plans for threatened or declining insect/pollinator groups?

Q6. Has your country been working on identifying ways of dealing with the effects of climate change in IAS management today? What approaches and models are being used and what research is being developed?

United Kingdom / Royaume-Uni

1. STRATEGY AND LEGISLATION

Implementation of the EU Invasive Alien Species Regulation
The Government was strongly supportive of the strict measures in the EU Invasive Alien Species Regulation 1143/2014, ("the EU Regulation") when it came into force in 2015. These measures remain essential to tackle the significant threats that these species pose to our native plants and animals. The Invasive Non-native Species (Amendment etc.) (EU Exit) Regulations 2019 (2019 No. 223), as amended, correct operability issues in the EU Regulation and will come into force on the day we leave the European Union. These regulations will ensure that the strict protections that are in place for these species are maintained when we leave the European Union. The Invasive Alien Species (Enforcement and Permitting) Order (2019 No 527) ensures that this retained EU Regulation is effectively enforced in England and Wales, as well as at the UK border and in the offshore marine area with similar legislation in place or in preparation in Scotland and Northern Ireland.

25 Year Environment Plan (England)
Defra's 25-year Environment Plan was published in January 2018 and includes a commitment to enhance biosecurity[16]. For invasive non-native species, this will be done by:

- Developing plans to reduce the risk from all high priority pathways for invasive non-native species introduction into England.
- Working with partners to raise awareness of invasive non-native species and the need for strong biosecurity.
- Maintaining an alert system to detect high priority invasive non-native species and implement contingency plans to rapidly eradicate them where feasible.

The plan also includes commitments to continue to deliver the GB Invasive Non-native Species Strategy and seek to manage species where it is not feasible to eradicate them because they are too widely established.

2. PREVENTION

Pathway Analysis and Action Plans
We have carried out a comprehensive analysis of the pathways of introduction and spread of invasive alien species based on all established non-native species in Great Britain. Based on this analysis eight unintentional pathways (including escape pathways) were prioritised based on the analysis of GB established species and a further two prioritised based on the analysis of species of Union concern. These were: (1) hull fouling, (2) horticulture escapes, (3) contaminants of ornamental plants, (4) ballast water, (5) stowaways on fishing equipment, (6) other stowaways, (7) contaminants of aquaculture animals, (8) ornamental escapes (from wildlife collections), (9) pet escapes and (10) zoo or botanic garden escapes.

Having produced our first pathway action plan (for zoos and aquaria) in 2016, part of the output of which is a GB code of conduct based on the Council of Europe's Code of Conduct for zoos, we are currently developing two further pathway action plans – for recreational boating; and angling and the working groups are making good progress and hope to have these finalised by the end of 2019. As with the Zoos pathway action plan we will be modifying the Bern codes of conduct for use in GB. We will also be carrying out a comprehensive horizon scanning exercise later in 2019 to identify Invasive Species that pose a risk of invading the UK and causing significant harm.

[16] https://www.gov.uk/government/publications/25-year-environment-plan

Contingency Planning

Contingency plans have been drafted in principle in England (with similar plans in development in Wales and Scotland) for five generic groups: terrestrial vertebrates, terrestrial plants, freshwater animals, freshwater plants and marine species. We are currently in the process of developing a terrestrial invertebrates plan. Similar plans have been drafted in Wales and Scotland (although the marine and terrestrial invertebrates plan for these administrations is still to be finalised). All agreed plans have been presented to stakeholders for comment. We used the contingency plans to guide the response to the escape of 2 coatis in 2018.

3. EARLY WARNING AND RAPID RESPONSE

Risk Management

We have developed a risk management scheme to support the prioritisation of invasive alien species for eradication[17]. The scheme works in combination with the UK's existing horizon scanning/risk assessment schemes to identify species for which eradication should be prioritised based on an assessment of the feasibility of delivering a response. This has been used to inform current priorities for eradication as well as the development of contingency plans for species likely to arrive in the near future, and has been used to estimate our future resource needs related to rapid response.

Rapid Response Eradications

Ongoing rapid responses

The national scale rapid response to American bullfrog has been successful, although monitoring will continue to confirm that eradication is complete. We are also carrying out rapid response eradications at a national scale on the following species:

- Water primrose. Now eradicated from 15 out of 36 sites (when the campaign started there were only six known sites, so the problem is still growing).

- Various-leaved water milfoil (*Myriophylum heterophylum*). Work continues to eradicate this species at its only GB site. The final pond (of three) will be filled in this year.

- Topmouth Gudgeon. Eradicated from all but 2 sites in England (out of a total of 30 across England and Wales). There are also 2-3 sites in Wales (where they are using eDNA to investigate presence/absence)

- Monk parakeet. From an initial population of 100-120 birds at three locations we have reduced the population to about 20 birds at one location. These are currently being controlled using egg control alone – 57 eggs were removed in 2018. Defra is currently paying for research on a novel nest trap to capture adults and remove the remaining.

Asian Hornet

We have detected the Asian hornet (*Vespa velutina*) in the UK in every year since 2016, with one nest detected in each of 2016 and 2017 and 4 nests in 2018, all of which have been destroyed. We have extensive surveillance in place to detect this species and investigate any sightings. We have an Asian Hornet Watch mobile app to make it easier for suspected sightings to be reported. The number of reports reached 8000 in 2018, all of which needed to be sifted carefully.

4. ON-GOING ERADICATION - RUDDY DUCK

[17] Booy, O. et al (2017). "Risk management to prioritise the eradication of new and emerging invasive non-native species." Biological Invasions 19(8): 2401-2417. https://link.springer.com/article/10.1007%2Fs10530-017-1451-z

The UK Ruddy Duck Eradication Programme began in 2005. At the start of the Programme, 4,400 ruddy ducks were estimated to be in the wild within the UK. The estimated UK population is now 23, with 17 birds removed in 2018. The largest remaining concentration is in north-west England. These are being targeted in 2019.

5. CROSS-CUTTING ISSUES

Research

Detection, eradication and management are a continuing focus of our research programme. We continue to support the development, testing, release and monitoring of biological control agents for invasive plant species; a psyllid (sap-sucking bug) for Japanese knotweed, a rust fungus for Himalayan balsam, a mite for Australian swamp stonecrop, a weevil for floating pennywort; and evaluating a potential mycoherbicide for Japanese knotweed.

We are supporting the development of fertility control methods for management of grey squirrels. Our research has developed suitable oral delivery method. Modelling is being used to assess the potential for oral contraceptives to achieve population level management either alone or in association with other control methods under realistic scenarios. The research is complemented by research funded by stakeholders to further develop the contraceptive into a viable and effective product.

Communications: Invasive Species Week

In 2015, we launched the first Invasive Species Week to bring together a wide range of organisations to raise awareness of invasive non-native species, highlight work going on to tackle them and inspire people to get involved and help prevent their spread. Following a successful first year, the campaign has been repeated annually since 2015, growing in profile each year.

Invasive Species Week 2018 took place in March and highlights included:

- 8 countries involved (Ireland, IOM, Jersey and Guernsey taking part for the first time);
- A joint ministerial launch at the British Irish Council meeting;
- 310 organisations taking part;
- 90 events held.

Invasive Species Week 2019 will take place from 13th - 17th May across the UK, Ireland, Jersey, Guernsey and the Isle of Man. This year the key focus is on the wide-ranging impacts of invasive species, to highlight the relevance of the issue to everyone. Each day will be based around a different habitat, with examples of species impacting on that habitat and wider impacts on the economy, human health and recreation.

Resourcing

We are currently developing proposals for improving our response to invasive species threats (including elements for public awareness, enforcement, alerts and rapid responses) and for resourcing these measures.

UK Overseas Territories Biosecurity

Invasive alien species are a huge threat to the 16 UK Overseas Territories although. Most of them have limited capacity and need support to reduce the risk of future invasions and to manage existing ones. We have secured £3m funding over four years (2016-2020) for two projects.

The first project (£1.25m) is helping the development of comprehensive biosecurity for the Overseas Territories by providing them with access to UK Government expertise. Having completed a gap analysis of capacity and practice which found that the main gaps were on horizon scanning, pathway analysis and pathway action planning, we carried out a programme of horizon scanning. This is being followed by the development of pathway action plans with local stakeholders. In the meantime model biosecurity legislation is being drafted for the territories.

The second project (£1.75m) is a contribution to the RSPB-led eradication of mice from Gough Island in the South Atlantic. The mice kill approx. 800,000 seabird chicks per annum and are the main threat to the endangered Tristan albatross and Gough Island bunting. The eradication is planned for 2020 and preparatory work is progressing well.