



## Action Plan

### Addressing Escape From Confinement of Invasive Alien Species (IAS) of Union Concern

Pets • Aquaria • Terrarium species

2020

**Front page photos**

*Trachemys scripta* - Red-eared slider

*Procambarus clarkii* - Red Swamp Crayfish

More information on Invasive Alien Species is available at [era.org.mt](http://era.org.mt)

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Action Plan Addressing Escape From Confinement of IAS of Union Concern 2020 (Pets • Aquaria • Terrarium species)

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## 1. Aim and scope

The general aim of this Action Plan is the control of potential unintentional introduction of invasive alien species (IAS) of Union concern into and within Malta, especially when considering escape from confinement, with particular reference to pet, aquarium and terrarium species (including live food for such species). IAS covered by this AP include mainly escapees, dumping of unwanted specimens, or inappropriate disposal of aquatic plants. The pathway, 'Escape from confinement', has been identified as a 'priority pathway' of potential unintentional introduction of IAS of EU concern into and within Malta. This pathway may potentially lead to the largest number (volume) of introductions and the greatest potential damage to the environment. This pathway analysis was carried out as required by Regulation (EU) No 1143/2014<sup>1</sup> on the prevention and management of the introduction and spread of invasive alien species (hereinafter referred to as Regulation), specifically Article 13(1).

Although the trade of IAS of Union concern was prohibited following the adoption of the list of such species as per said Regulation, keeping of pet specimens obtained prior to inclusion is allowed on conditions, that their reproduction and escape are impossible (Article 31 (1) of the Regulation). Meanwhile, a number of aquarium plant species may be accidentally present in trade due to misidentification or mislabelling, which may lead to their unintentional introduction. The illegal breeding and trade of specimens (including internet trade, which makes control of traded goods difficult, if not impossible) should also be taken into consideration.

This Action Plan hence seeks to set a number of measures to address this 'priority pathway', which includes a timetable for action, describing the measures to be adopted, including as relevant voluntary actions and codes of good practice, in order to address the identified priority pathway, and hence to prevent the unintentional introduction and spread of invasive alien species into or within Malta (and hence the European Union) – as per Article 13(4) of the Regulation. Such measures incorporate aspects related to awareness-raising and provide solutions for unwanted specimens. Awareness-raising is relevant to the public in general, with a specific focus on the owners of exotic species, and hence on restrictions and risks associated with the release or escape of such specimens, providing relevant guidance; however, it is also relevant to sector-specific stakeholders (importers, pet shops, garden centres), with a specific focus on legal restrictions, while assuring cooperation and communication, and provision of relevant guidance.

It is worth noting that the set measures will in actual fact provide an umbrella effect, as this will also be relevant for species of national concern and possibly also for other pathways that have not been identified as being priority pathways.

The implementation of this Action Plan will mostly be affected through national funds/resources.

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<sup>1</sup> Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R1143&from=EN> (Accessed on: 30 May 2019)

## 2. Policy and legal background

Regulation 1143/2014 came into force in January 2015, with the aim to control various species included on the list of IAS of Union concern. Currently, such list contains 66 species (30 animal species and 36 plant species) and is expected to be regularly updated. This Regulation requires Member States to adopt measures to address IAS of Union concern. In this regard, measures for prevention, early detection, rapid eradication and management are required. One of the main actions to be taken to address such aspects is covered through Article 13 – Action plans on the pathways of invasive alien species.

Article 13 (1) of the Regulation, requires Member States to carry out a “*comprehensive analysis of pathways of unintentional introduction and spread of IAS of Union concern at least in their territory as well as in marine waters, and identify the pathways 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.*”

Furthermore, Article 13 (2) specifies that “*Within three years of the adoption of the Union list, each Member State shall establish and implement one single action plan or a set of action plans to address the priority pathways it has identified pursuant to paragraph 1. Action plans shall include timetables for action and shall describe the measures to be adopted and, as appropriate, voluntary actions and codes of good practice, to address the priority pathways and to prevent the unintentional introduction and spread of invasive alien species into or within the Union.*”

Malta has carried out an analysis of pathways and is hereby setting a relevant Action Plan in this regard.

On a national scale, national legislation was published to provide for the provisions required for the implementation of this Regulation. This was affected through Subsidiary Legislation 549.119 - Control of Invasive Alien Species of European Union Concern Regulations<sup>2</sup>, under the auspices of the Environment Protection Act<sup>3</sup>.

Subsidiary environmental legislation is issued under the legal vires of the Cap. 549 (Environment Protection Act), which makes provision for the protection of the environment and for the establishment under its Article 6 of the Environment and Resources Authority (Designated National Environment Regulator body, with the powers delegated by the said Act), with its functions defined in Article 7. Additionally, implementing bodies, like Ambjent Malta and Eco Gozo, are responsible for issues linked with natural capital, and Malta’s sister island Gozo, respectively.

National legislation also transposes the two Nature Directives, the Birds Directive (Directive 2009/147/EC<sup>4</sup>) and the Habitats Directive (Directive 92/43/EEC<sup>5</sup>). Both of Directives implement the EU’s biodiversity policy. Article 11 of the Birds Directive states: ‘Member states shall see that any introduction of species of bird which do not occur naturally in the wild state in the European territory of the member states does not prejudice the local fauna and flora’. Meanwhile, Article 22 of the Habitats Directive, states that in implementing the provisions of this Directive, Member States shall: ‘ensure that the deliberate

<sup>2</sup> Available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12729&l=1> (Accessed on: 31 May 2019)

<sup>3</sup> Available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12446&l=1> (Accessed on: 31 May 2019)

<sup>4</sup> Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0147&from=EN> (Accessed on: 31 May 2019)

<sup>5</sup> Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01992L0043-20070101&from=EN> (Accessed on: 3 June 2019)



introduction into the wild of any species which is not native to their territory is regulated so as not to prejudice natural habitats within their natural range or the wild native fauna and flora and, if they consider it necessary, prohibit such introduction’.

Furthermore, other Directive containing provision regarding IAS is the Marine Strategy Framework Directive 2008/56/EC<sup>6</sup>, which requires Member States to take the necessary measures to achieve or maintain good environmental status (GES) in the marine environment by the year 2020 at the latest. Said Directive has been transposed into domestic law via the “Marine Policy Framework Regulations, 2011” (S.L. 549.62) enacted under the auspices of the Environment Protection Act (CAP. 549), the Territorial Waters and Contiguous Zone Act (CAP. 226), the Continental Shelf Act (Cap. 194), the Fishing Waters (Designation) and Extended Maritime Jurisdiction Act (CAP. 479), the Fisheries Conservation and Management Act (Cap. 425), the Authority for Transport in Malta Act (Cap. 499) and Malta Resources Act (CAP. 423). Annex I to the MSFD lists 11 qualitative descriptors to support the determination of GES at sea. Amongst these is the descriptor 2 ‘Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems’.

To further back national legislation, S.L. 549.44 – The Flora, Fauna and Natural Habitats Protection Regulations<sup>7</sup> also covers for the release in the environment of species that could lead to environmental damage. Furthermore, Malta published in 2012 the National Biodiversity Strategy and Action Plan (NBSAP<sup>8</sup>). This national strategy defines a comprehensive framework for safeguarding Malta’s biodiversity over the period 2012 to 2020, as required by the National Environmental Policy. Target 9 of the said NBSAP states that ‘Measures are in place to prevent, in so far as practical, the introduction and establishment of new invasive non-native species, while those that are established are identified and prioritised for eradication or control, where feasible.’ The NBSAP is based on the CBD Biodiversity Strategy<sup>9</sup> and the EU Biodiversity Strategy. In the Commission Communication<sup>10</sup> on “Our life insurance, our natural capital: an EU biodiversity strategy to 2020” of 2011, the spread of invasive species is seen as one of the continued and growing pressures in Europe that outweigh the benefits of combating biodiversity loss. The strategy in question also calls for more robust action taken at all levels to control IAS. Amongst the twenty targets defined in the strategy, Target 9 states that ‘By 2020, Invasive Alien Species (IAS) and their pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.’

In order to prevent and mitigate the impact of invasive alien species (IAS) in the Maltese Islands, Malta has developed a National Strategy, which includes accompanying set of sector-specific Codes of Good Practice<sup>11</sup>. A public consultation process was carried out in 2019, including also a workshop with all key stakeholders from various sectors, and one-to-one meetings. The Strategy and Codes are undergoing the necessary review and approval processes prior to formal national adoption. It is worth noting that these Codes have taken into consideration the Codes of Conduct developed through the Bern Convention regarding similar subject matters.

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<sup>6</sup> Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0056&from=EN> (Accessed on: 4 June 2019)

<sup>7</sup> Available at: <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=11550&l=1> (Accessed on: 4 June 2019)

<sup>8</sup> Available at: <https://era.org.mt/en/Documents/NBSAP%202012-2020.pdf> (Accessed on: 5 June 2019)

<sup>9</sup> More information available at: <https://www.cbd.int/sp/> (Accessed on: 5 June 2019)

<sup>10</sup> Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52011DC0244&from=EN> (Accessed on: 6 June 2019)

<sup>11</sup> Available at: <https://era.org.mt/en/Pages/Public-Consultation-IAS.aspx> (Accessed on: 6 June 2019)

In addition to the EU Regulation 1143/2014, various multilateral environmental agreements (MEAs) deal with alien species from various perspectives depending upon the primary aim of the treaty. The main global treaty that safeguards all aspects of biodiversity at all levels of biological organisation (including control of invasive alien species) is the UN Convention on Biological Diversity (CBD)<sup>12</sup>. Malta became a contracting party to the CBD on 12 December 2001 through ratification. Article 8(h) of the CBD on “in situ conservation” states that: ‘Each Contracting Party shall, as far as possible and as appropriate (...) prevent the introduction of, control or eradicate those alien species, which threaten ecosystems, habitats, or species’. In order to advance the implementation of the Convention text by Parties, the Conference of the Parties to the Convention (CBD COP), adopts decisions that address the various issues covered by the Convention, including on invasive alien species. Meanwhile, the Bern Convention<sup>13</sup> covers the natural heritage of Europe and some States of Africa. It aims at conserving wild flora and fauna and their natural habitats, with a particular focus on endangered natural habitats and endangered vulnerable species, including migratory species. Malta became a contracting party to Bern Convention on 26 November 1993 through accession. Article 11 paragraph 2(b) of the Bern Convention calls on its Contracting Parties to ‘strictly control the introduction of non-native species’. The Bern Convention is managed by a Standing Committee, which adopted a number of recommendations, technical reports, assessments, and codes of conduct on invasive alien species in relation to alien trees, horticulture, zoos and aquaria, botanic gardens, hunting, pets international travel, recreational boating and recreational fishing throughout the years. The work towards such recommendations (and IAS-related reports), is done by the Group of Experts on Invasive Alien Species, in collaboration with the IUCN Invasive Species Specialist Group. This group of experts developed a European Strategy on Invasive Alien Species<sup>14</sup>.

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<sup>12</sup> Available at: <https://www.cbd.int/invasive/> (Accessed on: 10 June 2019)

<sup>13</sup> Available at: <https://www.coe.int/en/web/bern-convention> (Accessed on: 10 June 2019)

<sup>14</sup> Available at: <https://www.cbd.int/doc/external/cop-09/bern-01-en.pdf> (Accessed on: 10 June 2019)

### 3. Description of targeted priority pathway

This Action Plan focuses on escape from confinement of specimens, especially those related to pets, aquaria and terraria.

Trade of exotic pets and aquarium plants led to introduction of many species in regions beyond their natural range. Horticultural and pet/aquarium escapees are the most frequent pathways by which IAS are introduced and spread, as revealed by the application of the CBD pathways categorisation to 500 IAS in the Global Invasive Species Database (McGeoch et al, 2016). Furthermore, most IAS of Union concern have been introduced into Europe through the main CBD pathway “Escape from confinement”. This pathway is mostly related to the sub-category “Pet/aquarium/terrarium species (including live food for such species)”, “Botanical garden/zoo/aquaria (excluding domestic aquaria)” and escapees linked with “Ornamental purpose other than horticulture”. It should be noted that most of the flora IAS of Union concern have been introduced through “Escape from confinement: Ornamental purpose other than horticulture” and that all freshwater crayfish have been introduced via “Escape from confinement: Pet/aquarium/terrarium species (including live food for such species)” and “Escape from confinement: Aquaculture/mariculture” (Tsiamis K et al., 2017).

Experience from Malta is similar, four out of six IAS of EU Concern recorded in the Maltese islands (*Trachemys scripta*, *Procambarus clarkii*, *Procambarus fallax* f. *virginalis* and *Pacifastacus leniusculus* – all fauna) are suspected to have been introduced through the pathway “Escape from confinement: Pet/aquarium/terrarium species (including live food for such species)”. The other two species are flora, the Crimson fountaingrass (*Pennisetum setaceum*) and the Water hyacinth (*Eichhornia crassipes*), with their introduction pathway being Escape from confinement: Ornamental purpose other than horticulture. Additionally, an analysis of pathways of unintentional introduction and spread of IAS of Union concern in the Maltese islands, carried out as required through Article 13(1) of Regulation 1143/2014, concluded that “Escape from confinement: pet/aquarium/terrarium species (including live food for such species)” is the ‘priority pathway’ for introduction of IAS of EU concern into the Maltese environment when considering the volume of species. A risk analysis (based on an environmental impact assessment) was also carried out, which confirmed that the highest level of potential damage could be caused by species entering also through such pathway.

This pathway includes both “true” escapes (escapes of pet animals, spread of aquatic plants from garden ponds during heavy rains, inappropriate disposal of aquarium/garden pond waters containing seeds, plant fragments, eggs, larvae, and so forth) and deliberate release of unwanted specimens. Regarding the latter, although the release might have been deliberate, successful introductions occurring through this act are considered unintentional, as the primary intention of such release is to simply get rid of unwanted specimens and not to introduce new species in the wild (as it is the case with true intentional introductions).

An “escape from confinement” is defined as “unintentional” even if the primary movement of the species to confinement was intentional (CBD, 2014).<sup>15</sup> Initially, species were originally intentionally imported, however, the aim of such importation was the pet/aquarium trade (keeping specimens in confinement)

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<sup>15</sup> Available at: <https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf> (Accessed on: 11 June 2019)



and not their release in the wild to serve specific purpose. Entry into natural areas occurs through various escape modes as explained earlier, hence introduction is considered unintentional.

Although majority of released pets usually do not survive in their new environment, generalist and opportunistic species (as well as species well-adapted for conditions of receipt habitat), could survive and thrive (if multiple specimens are released and reproduction is possible). Released individuals, even if they don't breed, may compete for territories or resources with native species (Davenport & Collins, 2016).

In case of deliberate release of unwanted specimens, establishment and spread of the species is spontaneous (without any human assistance following release; contrary with the true intentional introductions where specimens are sometimes catered for following introduction, and repeated introductions are often occurring, with the intention to assure successful establishment and diversity of genes in founder populations).

There are many examples of pet species introduced through this pathway becoming invasive in Europe, including Malta. Locally, one of the recent examples are crayfish species (Marbled crayfish – *Procambarus fallax* f. *virginialis*, Signal crayfish – *Pacifastacus leniusculus* and Red swamp crayfish – *Procambarus clarkii*). Originally, such species were imported as exotic pets and subsequently, suspected release of unwanted specimens led to their establishment and spread within a few valleys and water reservoirs.

Noting the provision of the Regulation 1143/2014 with regards to the non-commercial owners (Article 31), and further taking in consideration one of the main principles set in the European Union treaty<sup>16</sup> (single market), there is insufficient data on IAS of EU concern which were imported and are kept within Malta. Implementation of this action plan, especially through implementation of actions 5, 6, 7 and 8, could provide additional relevant information with regards to the presence/distribution of certain IAS of EU concern.

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<sup>16</sup> Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12012M/TXT&from=EN> (Accessed on: 11 June 2019)

## 4. Specific objectives

The main objectives of this Action Plan are:

- a) further awareness raising on IAS in particular regarding the introduction and damage caused by these species,
- b) preventing introduction of unwanted animals through the provision of alternatives to owners and the update of existing IAS legislation

The following actions will be carried out in order to support these objectives:

- a) Promotion and distribution of National Codes of Good Practice,
- b) production and installation of appropriate signage in key areas, as well as
- c) adapting and promoting delivery service tool and enhanced communication with relevant stakeholders and relevant government entities are envisaged.

Considering that prevention of IAS introductions and damage is the preferable option, these objectives are focused on prevent of unintentional introductions of various IAS of EU concerns into Malta environment (and subsequently, their damage, further reducing the costs of control of such species), through fostering stewardship of the environment, and promoting awareness and compliance.

This Action Plan seeks to take into consideration the following specific objectives:

- Continuation of awareness-raising campaigns on IAS of EU concern and beyond, especially regarding restrictions and conditions for keeping of certain pets, including responsible holding, as well as best practice with regard to hygiene/maintenance of aquariums and garden ponds (in particular when considering removal of wastewater and detritus).
- Update of relevant legislation.
- Provide solution/s to owners who are unable or unwilling to keep their exotic/IAS pets.
- Develop and publish an IAS delivery system, or other innovative tool, such as mobile or web-based apps, to engage citizens in the attainment of data, as well as serving as a support to raising awareness.
- Improve communication and cooperation with relevant stakeholders and relevant government entities.
- Monitor implementation of this action plan and update it when relevant

## 5. Actions and timeframes

### **Action 1** **Organise Awareness-raising Campaign for General Public, with Particular Focus on Exotic Pet Owners, and Pets and Aquarium Plants as IAS**

This action shall involve further awareness-raising aspects, with a focus on pet/aquarium IAS of EU concern species. In this regard, the production and distribution of information material on appropriate aquaria, terraria, and garden pond cleaning (with the focus on appropriate disposal of waste and water) shall be sought. These shall emphasise the importance of best practices, through explaining the concept of unintentional introductions of IAS through this pathway and potential consequences on native biodiversity.

Current status:

- Following adoption of the list of IAS of Union concern, all major pet shops/garden centres were informed about importation and trade restrictions emanating from Regulation 1143/2014.
- The Environment and Resources Authority (ERA) organised and participated in various awareness-raising activities. Amongst the produced information material, worth mentioning are clips shared on TV and social media<sup>17</sup> to raise awareness on the potential impacts that released pets could pose to native ecosystems; as well as a printout commissioned by ERA of a European Commission publication regarding IAS of EU concern<sup>18</sup>; and various information on the ERA website<sup>19</sup>.

Further activities envisaged under this action:

- Organise awareness-raising campaign, for general public, with particular focus on exotic pet owners, pets and aquarium plants as IAS, and explaining consequences of their introduction in the wild.
- The campaign should continue with promotion of National Code of Good Practice on Pets and IAS species, as well as producing and disseminating additional information material with a focus on keeping of exotic pets and their impacts on native species and habitats if introduction occurs and update of ERA website IAS info webpage. Production and installation of signage prohibiting releases of unwanted pets, briefly explaining harm to biodiversity that could arise from such an irresponsible act, are also envisaged.

<sup>17</sup> Available at: <https://www.facebook.com/Natura2kMalta/videos/323823231578780/>;

<https://www.facebook.com/Natura2kMalta/videos/381762109277566/>;

<https://www.facebook.com/Natura2kMalta/videos/998660286999903/>;

<https://www.facebook.com/Natura2kMalta/videos/388265368396959/>

<sup>18</sup> Available at: [https://ec.europa.eu/environment/nature/pdf/IAS\\_brochure\\_species.pdf](https://ec.europa.eu/environment/nature/pdf/IAS_brochure_species.pdf) (Accessed on: 13 June 2019)

<sup>19</sup> Available at: <https://era.org.mt/en/Pages/List-of-IAS-of-Union-Concern.aspx> (Accessed on: 13 June 2019)

## **Action 2**

### **Installation of Appropriate Signage in Key Areas, such as Freshwater Bodies**

Such signage shall provide direction regarding the prohibition of releasing unwanted pets, with the aim of discouraging owners from irresponsible releases. These will serve as a support to awareness-raising and removal/management actions.

Activities envisaged:

- Production and installation of informative signs in key natural areas.

## **Action 3**

### **Promote and Distribute IAS Codes of Good Practice Regarding the Responsible Keeping of Exotic Species and other aspects**

Eight National IAS Code of Good Practice (CoGP) for various sectors were prepared, and are, following a public consultation process in the final stage of review prior to formal publication. These are considered as important tools to support citizen engagement, indicating what can and cannot be done, fostering stewardship of the environment, and promoting awareness and compliance.

The main CoGP in relation to this action plan is National Code of Good Practice on pets and invasive alien species.

Although the focus of this Action Plan is pet/aquarium/terrarium escapees, an additional four CoGP (CoGP on Zoos, Aquaria and IAS; CoGP on Landscaping, Forestation & IAS; CoGP on Horticulture and IAS; CoGP on Gardens & IAS) are expected to also help in awareness-raising, and providing guidance and best practice so as to prevent the introduction of various escapees.

In this regard, the relevant CoGP shall be distributed to all relevant stakeholders, including pet shops, garden centres, and main registered importers/breeders, amongst others. Although trade of listed species is prohibited, pet shops, garden centres and breeders of exotic species may come in contact with the owners of pet IAS of EU concern, and should be able to provide relevant information when required (e.g. how to appropriately keep such pets: conditions and legal requirements, best practice with regard to appropriate disposal of waste from aquaria or garden ponds, where to handover unwanted pets, and so forth).

Furthermore, as distributors of exotic pets and plants (other than the species included in the EU list of IAS), such stakeholders should be able to help customers make well-informed decisions with respect to obtaining exotic species, so as to avoid later disappointment and incorrect disposal, by providing them with relevant details (e.g. lifespan, dietary and housing requirements, adult size, costs entailed, behaviour, and so forth).

This action will serve as a support to awareness-raising and removal/management actions.

#### **Action 4 Update of IAS Legislation**

Consider improvement of regulations on the importation, trade and release of invasive species and look-alikes into natural environment. Such amendment would aid in controlling species deemed as a threat to local biodiversity.

Current status:

- A recent amendment to national legislation shall allow the Competent Authority, ERA, to issue removal orders to facilitate the confiscation of specimens listed under SL 549.44 deemed detrimental to the environment and in such way prevent introductions.

Further actions envisaged:

- As part of the better regulation process, the regulations on IAS are to be amended and updated to better address emerging issues. In particular, ERA shall consider ameliorating restrictions on the transport, importation, trade and the release of invasive species and look-alikes into the natural environment, and address issues linked with internet commerce and trade, and issues linked with misidentification and mislabelling of species.

#### **Action 5 Explore Options for Designation of Receiving Centres that shall Accept and Cater for Unwanted Exotic Pets**

Available options for addressing the issue of unwanted exotic pets (including IAS), shall be assessed, in order to prevent introduction of such specimens in the environment.

Envisaged actions:

- The possibility of having a receiving centre shall be considered, with the aim of receiving and catering especially for unwanted exotic pets. This may include a national government centre and/or collaboration with existing animal parks, aquaria or NGOs. Launching of a rehoming programme for unwanted IAS pets could be considered.
- Depending on the results of the assessment, consideration of microchipping/ringing of collected IAS prior to their rehoming, coupled with creation of new owners' database may be considered. Such tagging would allow tracing of the origin (owner), if specimens are found in the environment.

**Action 6**  
**Develop IAS Delivery Service Tool to Engage Citizen Science or**  
**Other Related Tools (e.g. Mobile app or Web-based app)**

This action will seek the promotion of developed reporting/raising awareness tool and engagement of citizens. Such delivery service tool shall also include IAS of national concern and shall be a tool to engage citizens in the attainment of data, as well as serve as a support to raising awareness. It will facilitate information exchange through reporting by citizens on IAS of EU and national concern.

This action will serve as a support to awareness-raising and removal/management actions.

Current status:

- Discussions are ongoing on the utilisation of innovative technology to enable a real-time approach, promoting awareness and stewardship. In addition to the already available “Malta flora and fauna” mobile app (with the focus on raising awareness on native biodiversity, also allowing for reporting of specimens interesting/unknown to citizens), an app or other innovative tool dedicated to IAS (of EU and national concern) is required.

**Action 7**  
**Establish and Maintain Good Communication with Relevant Stakeholders and Government Entities**

Support of sector stakeholders is crucial for the successful control of the IAS. Furthermore, early detection at importing or trade points would prevent trade of misidentified aquatic plants, apart from other species, as well as general illegal trade. Fast response to reported escapees or observed IAS is crucial in prevention of establishment/spread.

This action will serve as a support to awareness-raising and removal/management actions.

Current status:

- ERA has already established communication channels with Veterinary Regulation Directorate, Plant Protection Directorate and Department of Customs, however, maintaining and enhancing this relationship further is one of the key priorities for effective addressing of IAS issues.

Envisaged actions:

- Maintaining and enhancing discussions to ensure continuous information exchange with relevant stakeholders, and ensure their support, as well as timely control of newly recorded IAS of EU concern.



### **Action 8**

#### **Monitoring and Updating of Action Plan and its Implementation**

ERA, as the Competent Authority responsible for the implementation of Regulation (EU) 1143/2014 in Malta, shall ensure the implementation of this Action Plan through the measures set therein, and shall commit to monitor such implementation in collaboration with relevant entities. Periodical review of this Action Plan is deemed relevant, within periods of no more than six years – as required through Article 13(5) of Regulation 1143/2014.

Envisaged actions:

- As part of the exercise of monitoring and updating of this Action Plan, ERA shall keep records of relevant IAS of Union concern, especially when considering reported IAS (including escapees) and appropriate actions taken, as well as unwanted specimens handed over (or rehomed, including database of owners).

The following table provides a summary of the Actions, indicating the lead responsible entity and timeframes for implementation.

Action	Comment	Responsibility	Timeframe
<b>A1.</b> <i>Organise awareness-raising campaign, for general public, but with particular focus for exotic pet owners, on pets and aquarium plants as IAS</i>	Continuation of raising awareness on IAS, with the focus on exotic pets and aquarium plants; Production of additional info material, updating of ERA info web page	ERA as lead	Ongoing
<b>A2.</b> <i>Installation of appropriate signage in key areas, such as freshwater bodies</i>	Produce and install signs indicating consequences of introductions of exotic species and prohibiting release of unwanted pets	ERA as lead	Q3 2020
<b>A3.</b> <i>Promote and distribute IAS Codes of Good Practice regarding the responsible keeping of exotic species and other aspects</i>	After process of public consultation on National CoGP on IAS, their review and publishing, distribute them to all relevant stakeholders. Although focus of this AP are escapees of pet/aquarium/terrarium species, all CoGP that are relevant for raising awareness on exotic species and prevention of escapes might be distributed to relevant entities	ERA as lead	Q4 2019
<b>A4.</b> <i>Update of IAS Legislation</i>	ERA shall consider ameliorating restrictions on the importation, trade and the release of invasive species and look-alikes into the natural environment.	ERA as lead	Q2 2020
<b>A5.</b> <i>Explore options for designation of receiving centres that shall accept and cater for unwanted exotic pets</i>	Establish facility that shall be accepting and catering for unwanted specimens;  Microchipping/ringing of collected IAS and compilation of owners database (if rehoming programme will be launched)	ERA as lead  Other stakeholders to be involved: Ministry for Environment, Climate Change and Planning (MECP), Ambjent Malta, Veterinary Regulation Directorate, Animal Welfare, Zoos, Aquarium, eNGOs	Q4 2020

<p><b>A6.</b> <i>Develop IAS delivery service tool to engage citizen science, or other related tools (e.g. mobile app or web-based app)</i></p>		<p>ERA as lead                   Ministry for Environment, Climate Change and Planning (MECP) and Ambjent Malta could be involved</p>	<p>Q2 2020</p>
<p><b>A7.</b> <i>Establish and maintain good communication with relevant stakeholders and government entities</i></p>	<p>Establish and maintain good communication with major importers, pet shops and garden centres, as well as border control</p>	<p>ERA as lead</p>	<p>Ongoing</p>
<p><b>A8.</b> <i>Monitoring and updating of action plan and its implementation</i></p>	<p>ERA shall lead on implementation of this action plan, and shall commit to monitor such implementation and amend action plan if deemed required</p>	<p>ERA as lead</p>	<p>Q4 2019- Q3 2025</p>

## 6. Main References

1. **Convention on Biological Diversity, 2014.** Pathways of introduction of invasive species, their prioritization and management. UNEP/CBD/SBSTTA/18/9/Add.1, Subsidiary Body on Scientific Technical and Technological Advice. Eighteenth meeting, Montreal. Available at: <https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf> (Accessed on: 14 August 2019)
2. **Davenport, K., & Collins, J., 2016.** European code of conduct on pets and invasive alien species. Council of Europe. Available at: [https://easin.jrc.ec.europa.eu/easin/Document/EuropeanCodeofConduct/Publication\\_Code\\_of\\_conduct\\_pets\\_IAS\\_2016\\_web.pdf](https://easin.jrc.ec.europa.eu/easin/Document/EuropeanCodeofConduct/Publication_Code_of_conduct_pets_IAS_2016_web.pdf) (Accessed on: 21 August 2019)
3. **Mc Geoch, M. A., Genovesi, P., Bellingham, P. J., Costello, M. J., McGrannachan, C., & Shepard, A., 2016.** Prioritizing species, pathways and sites to achieve conservation targets for biological invasion. *Biological Invasions*, 18, 299-314. doi:10.1007/s10530-015-1013-1 Available at: <https://link.springer.com/article/10.1007/s10530-015-1013-1> (Accessed on: 19 August 2019)
4. **Tsiamis, K., Gervasini, E., Deriu, I., D'amico, F., Nunes, A., Addamo, A., & De Jesus Cardoso, A., 2017.** Baseline distribution of invasive alien species of Union concern. Ispra: Publications Office of the European Union. doi:10.2760/772692 Available at: <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC104969/kj-na-28596-en-n.pdf> (Accessed on: 14 August 2019)

Additional information is available at the Environment & Resources Authority's web portal: [era.org.mt](http://era.org.mt).



