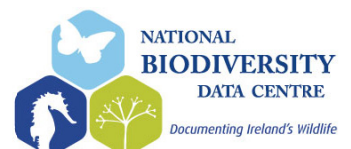


Recommendations from the workshop

Developing an early warning system for invasive alien species (IAS) based on the NOBANIS database

Waterford, June 1-2, 2010

NOBANIS
European Network on Invasive Alien Species
Gateway to information on Invasive Alien species in North and Central Europe



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EXECUTIVE SUMMARY

The purpose

The purpose of this document is to give recommendations on how a European Early Warning Rapid Response system can best be constructed and developed, in a way where it can help European countries in prioritising the effort against invasive alien species best possibly.

The Early warning system

The purpose of a European Early Warning Rapid Response system is to enable countries to take immediate action when new invasive alien species arrives. It should be issued when a new introduced species, which is considered to pose a risk to any European country, is discovered in Europe or if already present species change status and becomes a risk. Following an initial reporting from national authorities to a central EU authority, the EU authority should then perform a standardised basic risk screening, and if the species is considered to pose a risk to any country, an Early Warning should be sent out from the central European authority.

We identified minimum requirements for a notification message from a national authority to a European authority and also extra valuable information to be added by the European authority for the Early Warning message.

The added value of a regional system

We addressed the added value of a single regional system in comparison with many national systems and the benefits are listed for each of the 8 identified components of a European Early Warning and Rapid Response system. None of the components can stand alone and are all important parts of a framework. Nevertheless, at the workshop there was consensus that component 6: "Reporting and circulation of information" is the most important element for justifying a central European system. This is, in our opinion, where the largest added value would show.

The role of EU in an Early Warning Rapid Response system

We have identified the role of the European Commission in a European Early Warning Rapid Response system as follows:

Ensure a well coordinated and cost effective rapid response to the threats posed by IAS.

At the workshop we addressed the question of "what needs to be done to develop a European Early Warning Rapid Response system" for each of the components of the system. Furthermore, we identified 6 actions at the EU level, which we considered very important for all components of a European Early Warning Rapid Response system:

Important EU level actions for all components of an EWRR system

- Construct and maintain a centralised information system, incl. alarm list, black list etc.
- Collect and disseminate best practice and methodologies and ensure a standardised approach (a common understanding of methodology, criteria and terminology etc.)
- Address the legal inconsistencies and gaps to ensure preventative measures and adequate responses
- Support efforts with education and awareness material
- Identify and provide funding opportunities, including capacity building and contingency funding
- Identify ways to include other relevant non-EU countries in the European Early Warning Rapid Response system

BACKGROUND

The workshop was arranged by NOBANIS (The European Network for Alien Invasive Species) and the European Environmental Agency, funded by the Nordic Council of Ministers and hosted by The National Biodiversity Data Centre in Waterford, Ireland. Present at the workshop were 25 managers, experts and researchers from 20 different European countries.

The purpose

The purpose of the workshop was to discuss and give recommendations on how a European Early Warning Rapid Response system can best be constructed and developed, to determine methods and criteria and discuss how they are implemented, in a way where it can help European countries in prioritising the effort against invasive alien species best possibly.

The main components of a European Early Warning and Rapid Response system

The discussions of this workshop were based on the EEA Technical report No 5/2010: *Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe*. The report identifies some main components of an Early Warning and Rapid Response framework (see schematic overview in figure 1), which we used.

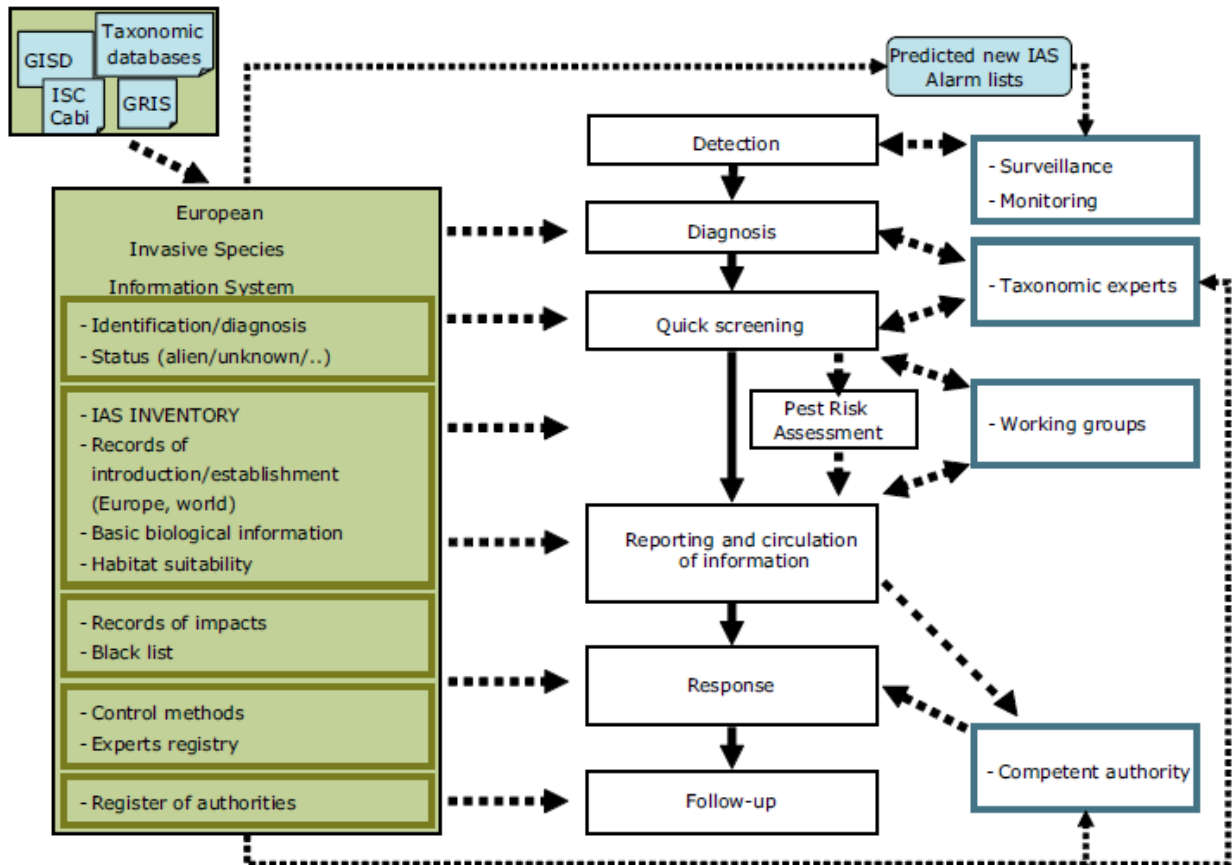


Figure 1: Structure of a pan-European early warning and rapid response framework (From P. Genovesi et al. 2010)

The main components of a European Early Warning and Rapid Response system

1. Horizon scanning
2. Detection, monitoring & surveillance
3. Diagnosis
4. Quick screening
5. Risk Assessment
6. Reporting and circulation of information
7. Response
8. Follow up

The recommendations

The following set of recommendations is the outcome of the workshop and is presented as an input to the European Commission for the further work on developing a European Early Warning Rapid Response system based on a centralised information system.

There are three parts of this document; Part 1 - The Early warning system, Part 2 – The added value of a regional system, and Part 3 – The role of EU in an Early Warning Rapid Response system.

Part 1 is a more detailed description of the construction of Early warning system.

Part 2 addresses the added value of a single regional system in comparison with many national systems. The benefits are listed for each of the 8 identified components of a European Early Warning and Rapid Response system. It is not an exhaustive list, but key points to focus on.

Part 3 describes the role of the European Commission in the different parts of a European Early Warning and Rapid Response system. The recommendations present the key points to focus on. Finally there is a list of EU level actions we prioritised for all 8 components.

THE RECOMMENDATIONS

Part 1 – The Early warning system

The purpose of a European Early Warning Rapid Response system is to enable countries to take immediate action when new invasive alien species arrive in accordance with the CBD guiding principles.

The process of an Early Warning

This describes one possible way to issue an Early Warning:

1. The offset for an Early Warning should be an initial reporting from national authorities to a central European authority
2. The European authority should then perform a standardised basic risk screening (either from a central alarm list or after an individual national risk assessment)
3. If the species is considered to pose a risk to any country, an Early Warning should be sent out from the central European authority
4. If it is not considered a national risk, the information should still be stored in a central database

The information for the initial notification and the Early Warning

We identified the minimum requirements for a notification message from a national authority:

Notification message, minimum requirements

- Scientific name of organism
- Where and when recorded (introduced) also habitat type/description of where found
- Contact details
- Is there a specimen?
- Actions taken?

We identified this as extra valuable information to be added by the European authority for the Early Warning message:

Early warning message

- Synonyms to the name of the organism
- Alien status
- Year of introduction (before or after xx)
- Pathway of introduction (and confidence)
- Impact
- Frequency (rare common etc.)
- Spread capacity
- Status (casual or established)
- Management options (if any known)
- Ecology (if known) / fact sheet link
- References (who)
- Type of record (picture, specimen etc)

Furthermore, it would be very useful if all Early Warning's also included management options or known effective management systems including preventative options.

The criteria for generating an early warning

When should national authorities send a notification to the central European authority?

Each country must evaluate individually when to send a notification to the central European authority. Examples are:

- New species to a country.
- Existing alien species becoming invasive in a country or a region
- Existing alien species suddenly begin a range expansion

This evaluation could be based on European alarm lists, but the system must also include new species to Europe. A common European methodology is necessary to ensure a unified assessment of the risk of a species establishing and/or have impacts in other countries.

When should the central EU authority issue an Early Warning?

If Early Warning's are issued for all new species in European, the IAS management would be flooded (e.g. DAISIE data shows 20 new invertebrate species per year to Europe). It is therefore evident that a risk screening by the central European authority is necessary.

Also, different level of warnings could be issued for parts of the region, because species that are native in one area may not be in another. To accomplish this, coordination at the European level is imperative.

Distribution of the Early Warning message

The Early Warning could be as simple as an email warning, sent out with "high priority" form a central European authority to competent authorities in all countries (listed on updated national lists).

If possible, countries could be presented with the possibility of choosing the type of alerts/information that they would receive.

The Early Warning should be posted on the web for a specified time period and afterwards moved to a "warning archive".

Information system supporting the Early Warning

At the workshop there was consensus that a centralised, permanent authority and database (information system) is necessary, because continuity and harmonisation is crucial. A flexible European structure is needed and it must have a regional approach taking the specific national needs to consideration.

The experience from NOBANIS shows us that the responsibility for the data should be national, with a central authority (secretariat) responsible for coordination and managing the system. However, the central authority should have a capacity large enough to facilitate countries in updating databases, correct misspellings, identify synonym differences etc. and to ensure harmonisation and functionality and provide support. This means that the secretariat would need more resources than is available to the NOBANIS secretariat today.

The individual countries could give data input and be responsible for uploading and updating to a central database, and this could be supplemented by data from relevant organisations and others (possibly by partnership agreements) by the central administration.

We found it imperative that data ownership and public availability of data should be a basic principle for the system.

NOBANIS pilot projects for an Early Warning system

At a network meeting after the workshop, the NOBANIS network identified and initialised two pilot projects to describe the different elements of an EW system. We hope to be able to present preliminary results within a few months.

(1) Email alert:

This pilot project will test how an Early Warning by email work, and will also identify gaps, new best practices and issues to improve or change.

- The 19 NOBANIS countries are to send species alerts with minimum details to the NOBANIS secretariat. The countries individually determine when to send an alert, but new arrivals only
- A high priority alert email is sent out from the NOBANIS secretariat to the NOBANIS network (the steering group)
- The steering group will pass the message on to other relevant national authorities and stakeholders
- The "species alert" will be put online for 2 weeks on the front page of NOBANIS, www.nobanis.org
- After the 2 week period, the alert will be put in an "alert archive" with direct access from front page menu
- The costs (work load) for this project are estimated for each country.

(2) IAS risk mapping in Europe

This pilot project will focus on the production of maps to identify endangered areas due to IAS establishment and spread. It will be tested using 28 detrimental non-native species, already established in terrestrial, freshwater and marine habitats within the NOBANIS area. The objectives of the project are as follows :

- to produce maps showing the current distribution of the 28 species in Northern, Western and Central Europe,
- to assess if the limits of species distribution match those of biogeographic areas in Europe as defined by the European Environmental Agency,
- to map the risk of non-native species establishment on that basis and to identify risk areas where they are not yet reported but are likely to be established in the near future (i.e. existing gaps within biogeographic areas),
- to build alarm lists on a country basis using risk maps as defined in previous point (warning tool for future establishment of detrimental species),
- to estimate the costs (work load) for this project for each country.

To reach that goal, all NOBANIS countries will gather information about the 28 species within the different bioclimatic areas. Risk maps will be distributed for national use.

Part 2 – The added value of a regional system

At the workshop we discussed what the added value of a regional system is compared to many national systems – “*why is it better with one regional system?*”

We addressed this question for all the 8 separate components of a European Early Warning and Rapid Response system.

All components presented in figure 1 forms the core of the European early warning and rapid response system (framework). At the workshop there was consensus that component 6: “Reporting and circulation of information” is the most important element for justifying a central European system. This is, in our opinion, where the largest added value would show. Still, we agreed that the key element is to obtain an EU-level data circulation and reporting facility where all users (countries) can obtain fast updated information on the state of the worst invaders.

1. Horizon scanning

- Minimise duplication of efforts
- Analysis of vectors and pathways to be regulated at the European level
- Facilitate the integration and information exchange with the areas of animal and plant health, mariculture and aquaculture and ballast water
- Ensure consistency and standardisation of terms and approaches used
- Prioritise within the region with subcategories by climatic biogeographical levels

2. Detection, monitoring & surveillance

- Provide basis for coordinated action between countries
- Produce European level species guides for identification
- Centralisation of all information can make it more available
- Assemble European alarm lists for supporting surveillance at a regional level
- Facilitate a common approach and harmonisation
- Harmonisation overview at European level helping national implementation of Water Framework Directive and Marine Strategy Framework
- Facilitate capacity building for port authorities and customs officials
- Facilitate capacity building for monitoring
- Make the public awareness and involvement more strategic; including involvement of citizens in reporting, info campaigns at European level, info “hot line”, regional website for reporting IAS
- Increase involvement of international NGO’s
- Structure the reporting of biodiversity information in a timely fashion
- Make guidance at the European level on the integration of IAS monitoring in existing monitoring programmes possible EU funding possibly more available

3. Diagnosis

- An European approach can make best use of existing expertise, and guarantees access to expertise
- Ensure a more efficient leverage of resources
- Make existing tools (like id keys, fact sheets) more available
- Ensure a harmonisation of terminology used
- Provide fair guidance to support national and EU legislation
- Aid national compliance of regulations by enabling exchange of information on a regional level about e.g. what is in trade in Europe, trade in subspecies, and false names used to get around regulations
- Provide a basis for developing identification tools (guides, online European DNA code online systems, web based id keys & guides)
- Facilitate sharing of taxonomic id tools (see previous point)

4. Quick screening (the points from Horizon scanning also apply here)

- A common databank of already performed risk screenings would accelerate the process
- Allow and facilitate a standardisation of methodology
- Aid the screening of risks at a biogeographical level
- Help in prioritisation for risk assessments and regulatory measures
- Improve the shared understanding and acceptance of risks and impacts of IAS
- Enable the exchange of information between countries within the region at risk
- Regional quick screenings would allow gathering of invasion and impact histories
- Facilitate harmonisation of national responses to IAS, provide appropriate methods to deal with the species

5. Risk Assessment (the points from Quick screening also apply here)

- Facilitate the sharing of results of risk assessments to conserve resources
- Ensure consistency of risk assessment procedures and results
- Risk assessments needs to take into account present & future climatic conditions, which may be difficult at national levels
- Include risk assessments of related (replacement) species, which may have similar impacts
- Aid streamlining with other relevant European systems (EPPO etc.)
- Advance the process for risk assessments and increase the capacity building for the region
- Facilitate EU guidance for undertaking risk assessments of species, like the regulation for use of alien species in aquaculture
- Generic guidance on treating issues like climate change and biofuels in risk assessments, pooling resources at the European level
- European system allows generic guidance to quantitative assessment (harmonization of risk assessments quantification)

6. Reporting and circulation of information

- Common systems essential for circulation and exchange of information in Europe and globally
- Facilitate the development of tools to foster information circulation, tools like EPPO bulletin, Aquatic Invasions etc.
- A European structure would be valuable in providing alerts
- Provide basis for common directory of competent authorities to be contacts

7. Response

- Support community responses when common interests are threatened (see EPPO experiences)
- Aid in defining legal basis for responses
- Provide a common funding device for responses (contingency funding, rapidly available) and enable proper level of response (catchment level response, European level response)
- Sharing of best practice experience
- Enable response in another country than where the problem is apparent (e.g. Ruddy duck eradication)
- Ensure a funding mechanism, which can foster cross country responses
- Provide political pressure
- Share methods and best practices
- More cost effective when working together instead of only nationally
- Dedicate ownership of IAS issues to specific national departments – through development of legislation
- Also aid non-governmental responses
- Code of conducts on European level

8. Follow up (implementation of the response action) – beyond EWRR

- Evaluate whether the actions were effective or need an update (risk assessments etc.)

Part 3 – The role of EU in an Early Warning Rapid Response system

We have identified the role of the European Commission in a European Early Warning Rapid Response system as follows:

Ensure a well coordinated and cost effective rapid response to the threats posed by IAS.

At the workshop we addressed the question of “what needs to be done to develop a European Early Warning Rapid Response system”

- 1) On the national level
- 2) On the EU level

Horizon scanning		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> • Make national inventories 	<ul style="list-style-type: none"> • Pathway analysis
Other priorities	<ul style="list-style-type: none"> • Being aware of what IAS is in your nearest neighbouring countries • What species arrive at ports (trade) – scan based on European lists 	<ul style="list-style-type: none"> • Do the horizon scanning first at European level and then use the relevant parts on national level as a starting point

Detection, monitoring & surveillance		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> • Invest in and develop IAS surveillance to facilitate early detection based on European alarm list • Develop and maintain a national centralised database with a reporting interface 	<ul style="list-style-type: none"> • Developing and communicate alarm or watch lists (as a result/ following step after the horizon scanning)
Other priorities	<ul style="list-style-type: none"> • Integrate IAS in existing monitoring programmes in relation to the specific national risks • Document impacts of IAS and ensure a timely reporting to EU • Target the active surveillance efforts at specific taxonomic groups (and identify gaps in groups that are less covered) 	<ul style="list-style-type: none"> • Develop a system for collecting national databases (define what data/information is required from the national level) • EU input to the pathway surveillance (coordination), maximise in plant and animal health

Diagnosis		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> Taxonomic identification of species 	<ul style="list-style-type: none"> Aid national compliance of regulations by enabling exchange of information on a regional level about e.g. what is in trade in Europe, trade in subspecies, and false names used to get around regulations Develop new identification tools (guides, fact sheets, online European DNA code online systems, web based id keys) and make existing tools more available
Other priorities	<ul style="list-style-type: none"> Commitment to sharing and contributing national expertise into the European system Determine alien status 	<ul style="list-style-type: none"> Support capacity building of research in taxonomy

Quick screening		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> Identify who is responsible for performing the quick screening of risks 	<ul style="list-style-type: none"> Ensure a rapid and transparent quick screening process
Other priorities		

Risk assessment		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> Establish coordinating national risk assessment authority 	<ul style="list-style-type: none"> Ensure an agreed framework and requirements to carry out national and regional risk assessments (also in the specific case for trade bans)
Other priorities	<ul style="list-style-type: none"> Share risk assessment methodology and results (presently, not an ultimate goal) Ensure that the risk assessments are based on scientific evidence when available 	<ul style="list-style-type: none"> Ensure the evaluation of the national risk assessments Make risk assessments for the entire region for selected species

Reporting and circulation of information		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> Develop and update a national directory of competent authorities to be contacts and ensure information flow in context to the other national stakeholders 	<ul style="list-style-type: none"> Ensure timely reporting and facilitate circulation of information to the relevant national competent authorities
Other priorities	<ul style="list-style-type: none"> Actively engage in networking with other countries 	

Response		
	National Level	EU Level
Highest priority	<ul style="list-style-type: none"> Establish funding mechanisms including contingency funds and adopt European contingency plans to national level Address the legal inconsistencies and gaps Identifying roles and responsibilities 	<ul style="list-style-type: none"> Address the legal inconsistencies and gaps Establish mandatory rapid response criteria supported by the EU followed by financial support
Other priorities		<ul style="list-style-type: none"> Cost benefit analysis on early eradication Provide protocols for contingency plans

Finally we identified 6 actions at the EU level, which we considered very important for all components of a European Early Warning Rapid Response system:

Important EU level actions for all components of an EWRR system

- Construct and maintain a centralised information system, incl. alarm list, black list etc.
 - Collect and disseminate best practice and methodologies and ensure a standardised approach (a common understanding of methodology, criteria and terminology etc.)
 - Address the legal inconsistencies and gaps to ensure preventative measures and adequate responses
 - Support efforts with education and awareness material
 - Identify and provide funding opportunities, including capacity building and contingency funding
 - Identify ways to include other relevant non-EU countries in the European Early Warning Rapid Response system
-