

USING CITIZEN SCIENCE FOR INVASIVE ALIEN PLANTS MAPPING

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INVASIVE ALIEN SPECIES

Species whose introduction and/or spread outside their natural past or present distribution threatens biological diversity

WEEDS

Plants that grow in sites where they are not wanted and that have detectable economic or environmental impacts





 EYE ON EARTH

European Environment Agency 



planetneptune.com; coldcalculation.blogspot.com; it.wikipedia.org; geograph.org.uk

 EYE ON EARTH

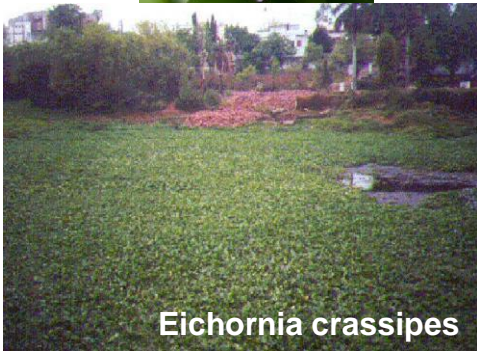
European Environment Agency 



ambrosia artemisiifolia



guenther-blaich.de; botany.cz




Eichornia crassipes





biodiversityexplorer.org;
treknature.com; ramsar.org





Physalis spp

The image shows a large field of green Physalis plants with some red fruits. A smaller inset shows a dirt path through a field of similar plants next to a body of water under a clear sky.



Solanum elaeagnifolium




The image features a field of purple Solanum elaeagnifolium flowers. In the foreground, there are several postage stamps from Cuba, one of which clearly shows a purple flower. The text 'Solanum elaeagnifolium' is overlaid on the image. A watermark '© Manuel Galán Subías' is visible at the bottom right of the flower image.

naturalezaenquinto.blogspot.com; stampmight.com



Oxalis pes-carpae

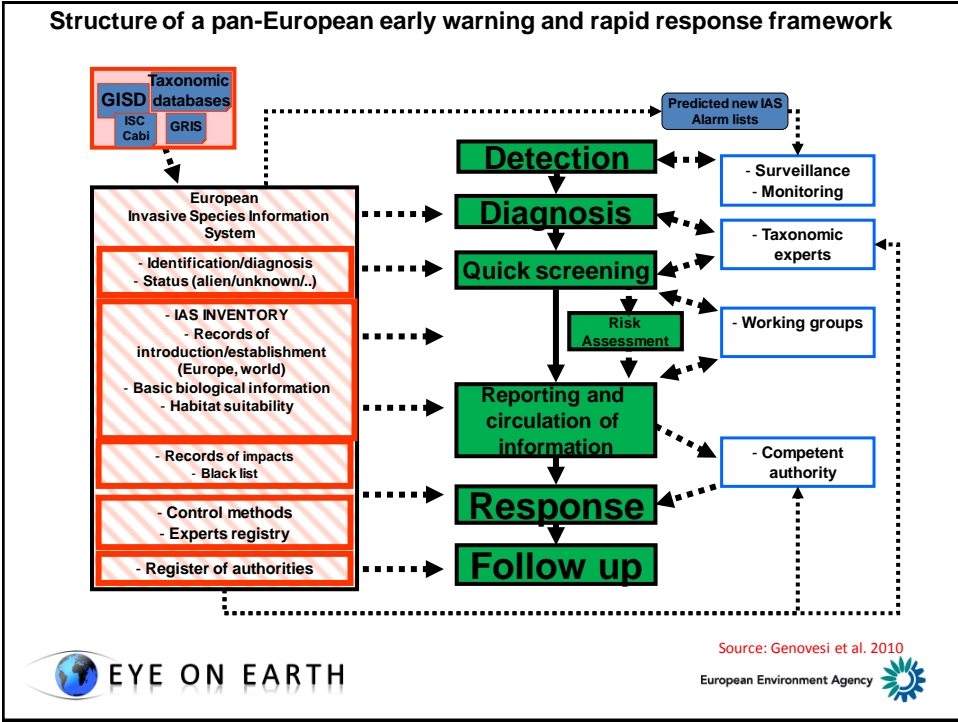


Prevention

**Early detection and
rapid response**

Mitigation of impacts





What is Citizen Science?

‘Organized research in which members of the public—who may or may not be trained in science—gather or analyze data’



EEA, Photographers Lars Rørup, Harald Elmegaard, Tommy Multala



Citizen Science

– added value

- Generates large amounts of data from many different people in several regions in a relatively short period of time
- Experienced volunteers can deliver more accurate/ consistent information than ‘short term’ technicians
- Useful when aiming to identify trends and spatial differences/ similarities in parameters or species observed



Types of Citizen Science projects

Contributory

- Participants primarily involved in sample collection and data recording

Collaborative

- Participants are involved in data analysis, project design refinement, and results dissemination

Co-created

- Jointly designed by scientists and members of the public; some public participants are involved in all aspects of the work



Why Citizen Science?

- Increasing interest in Citizen Science
- Commitment to engage with more target audiences
- Advancement and availability of Information, Communication, Technology (ICT) tools



EEA member and collaborating countries



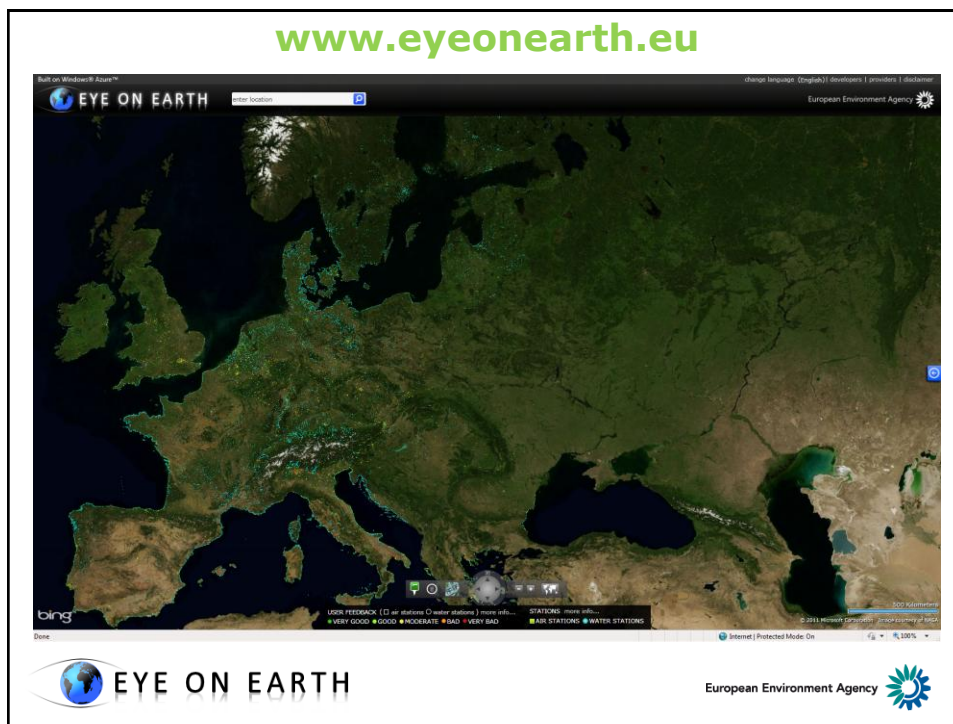
■ Member countries
■ Collaborating countries



To provide European decision makers and citizens with access to timely and relevant information and knowledge in order to

- **provide a sound basis for environmental policies**
- **help answer their questions about the environment in their daily lives**
- **ensure that environmental thinking and education is brought into the mainstream of decision-making**





Eye on Earth objectives

To provide a global social data website for creating and sharing geographic information to:

- Facilitate data sharing
- Promote environmental community building
- Enhance citizen science activities

To invite a wide variety of communities and individuals to participate in a dynamic online environmental community



Our vision

- To engage the public in the observation and reporting of environmental data and information to **fill important gaps in our knowledge and understanding of Europe's environment**



Overall objectives

- To design and implement Citizen Science activities enabling the Agency to **fill gaps** in European environmental data and information
- To establish citizen science as an important **monitoring activity** in Europe and ensure that it is **properly managed** across relevant networks, and in relation to key EU bodies and stakeholders
- To establish the **success criteria** required to properly design and evaluate Citizen Science projects



Waterwatch Airwatch Noisewatch Landwatch Naturewatch



Why this project?

- Political interest the monitoring of Invasive Alien Species (IAS)
- Expert emphasis on the need for 'surveillance and monitoring activities'
- Biodiversity monitoring is costly and active communities already exist



The vision

- To engage citizens in the observation and reporting of invasive alien species to fill gaps in our knowledge about changes in these, and hopefully contribute to the establishment of an IAS Early Warning and Rapid Response System.



Aim of this project

- Test new ways of monitoring the invasion of alien species in Europe
- Create a pilot with a longer term vision for an IAS monitoring system based on Citizen Science
- Raise general awareness of Invasive Alien Species
- Operate within the frame of the future EU strategy on IAS, ongoing activities in EU member states, and global IAS strategies (CBD)



Process foreseen

- Initial emphasis on IAS expert involvement
 - Citizen science as a tool to monitor IAS
 - Networks
 - Species
- Country involvement
 - Connecting with existing initiatives
 - Securing proper data flows, data import and verification
- Technical developments
 - Web and smart phone applications
 - Web services
- Pilot based on Citizen Science available when the longer term EU vision for an IAS monitoring system is ready



How do we use ICT to involve citizens?



- Eye on Earth
- Environmental watches
- Web and smart phone applications



- Invasive Alien Species will be a component of Naturewatch.
- The project aims monitoring and surveillance of invasive alien species, supporting policy activities in Europe and targets of Convention on Biological Diversity, and raising awareness in general public.
- A group of IAS experts has been determined criteria to choose species and species have been determined using a survey.

