# Regulatory Status of IBCA's

8 years after REBECA

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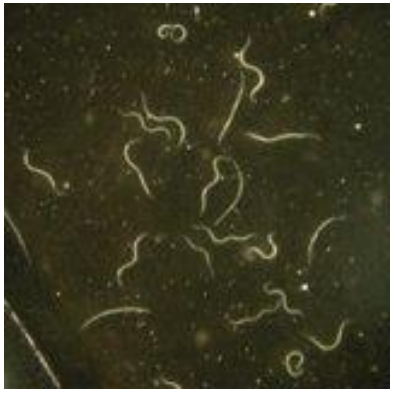
# Scope

- Invertebrate Biological Control Agents (IBCA's) include insects, entomopathogenic nematodes and predatory mites

Convention on Biological Diversity

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# International Convention of Biodiversity (CBD 1992)

## 1 Conservation of Biological diversity

"*prevent the introduction of all alien species and, when prevention fails, to control as far as possible species that threaten indigenous ecosystems, habitats or species*"

## 2 Sustainable use of biological components

## 3 ABS

Ratifications: (# 194) Almost all EU countries, S-AM, ~~(USA)~~

# IBCA Regulation history:

- **1996** FAO ISPM 3 (IPPC)
- **1997** EPPO / CABI on Safety and Efficacy of Biological Control in EU: endorsment ISPM 3
- **1999** EPPO Guidelines for the first import of exotic BCAs for research under contained conditions
- **2000** EPPO Guidelines for import and release of exotic BCAs
- **2002** EPPO positive list with IBCAs widely used in the EPPO region
- **1998-2002** ERBIC; detailed criteria for RA and IBCA ranking (safety)
- **2003** OECD Guidance for information requirements for IBCAs
- **2003** IOBC/WPRS Commission for the Harmonisation of Regulation of IBCA's
- **2005** FAO: revised version of ISPM 3
- **2006** Bigler *et al*. 2006: book as framework for ERA of IBCAs
- **2006-2008**: REBECA (EU Policy Support Action)

(Ehlers, 2011)

# REBECA project (EU 2006-2008)

- Need for balanced and appropriate EU regulatory systems for import and release of BCA's
  - For biopesticides; aim was procedural improvements but not reached
  - IBCA's : EPPO guidelines
    - Human health risk: usually limited
    - Environmental risks of exotic species (CBD)

# How to evaluate IBCAs environmental risk?

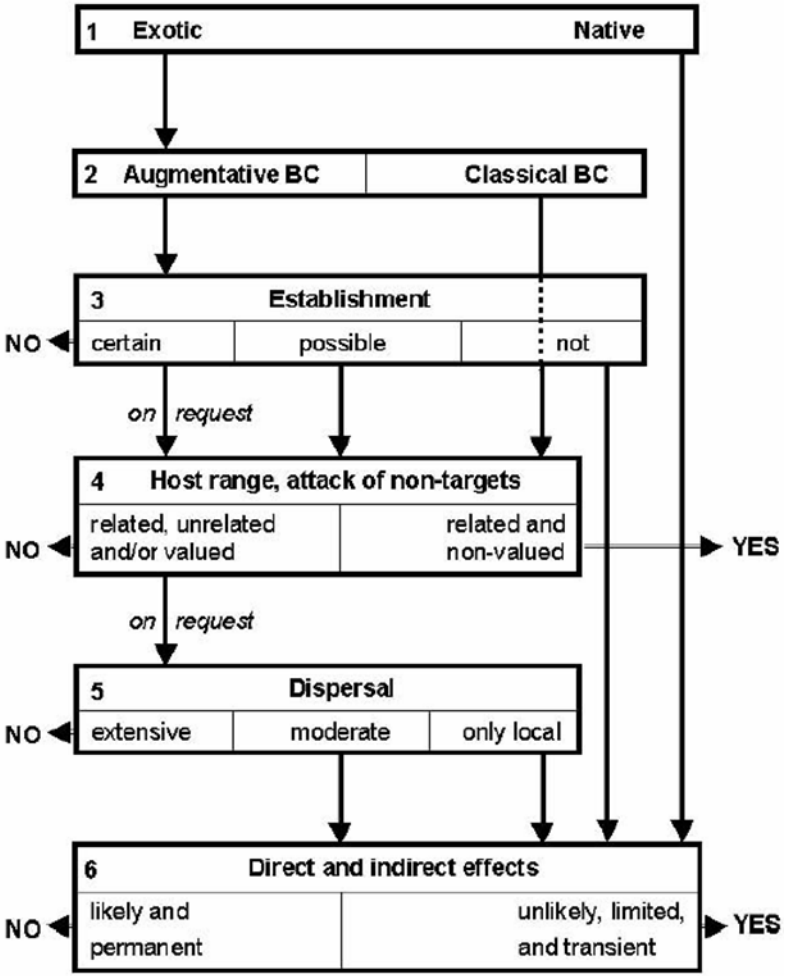
Identify risks of introducing exotic natural enemy

- **Establishment** and/or **dispersal** in non-target habitat
- Non-target **host range**
- (In) direct effects on **non-target organisms**

**Determine likelihood and magnitude of each of the risks**
**Quantify risk and apply cost-benefit analysis (also for other control methods!!!)**

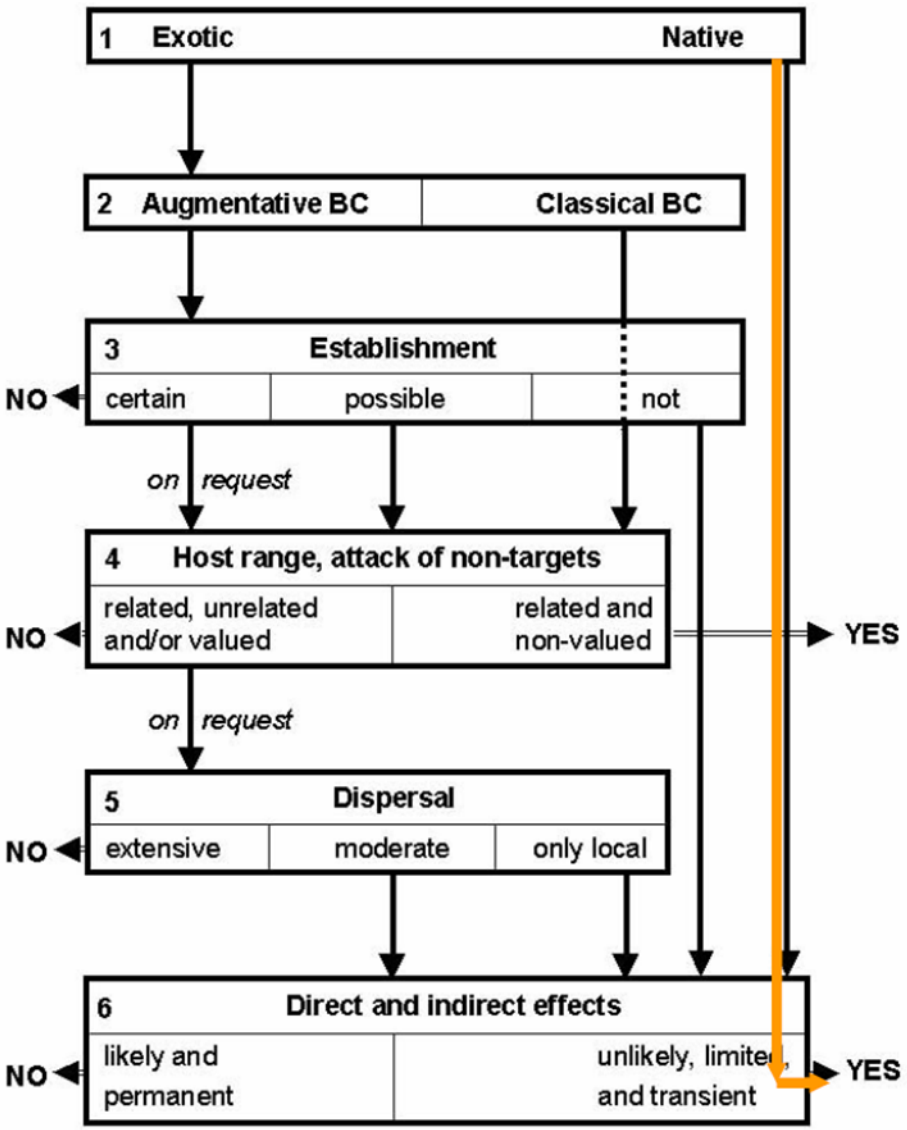
(Van Lenteren, 2006)

# Stepwise risk assessment : from 5 to 1 sheme




- Clearly good or bad species are discovered early in evaluation (saves money and time)
- Only doubtful species go through whole evaluation
- Scheme can be used for quick scan or comprehensive evaluation
- We tested 150 commercially available species with this sheme

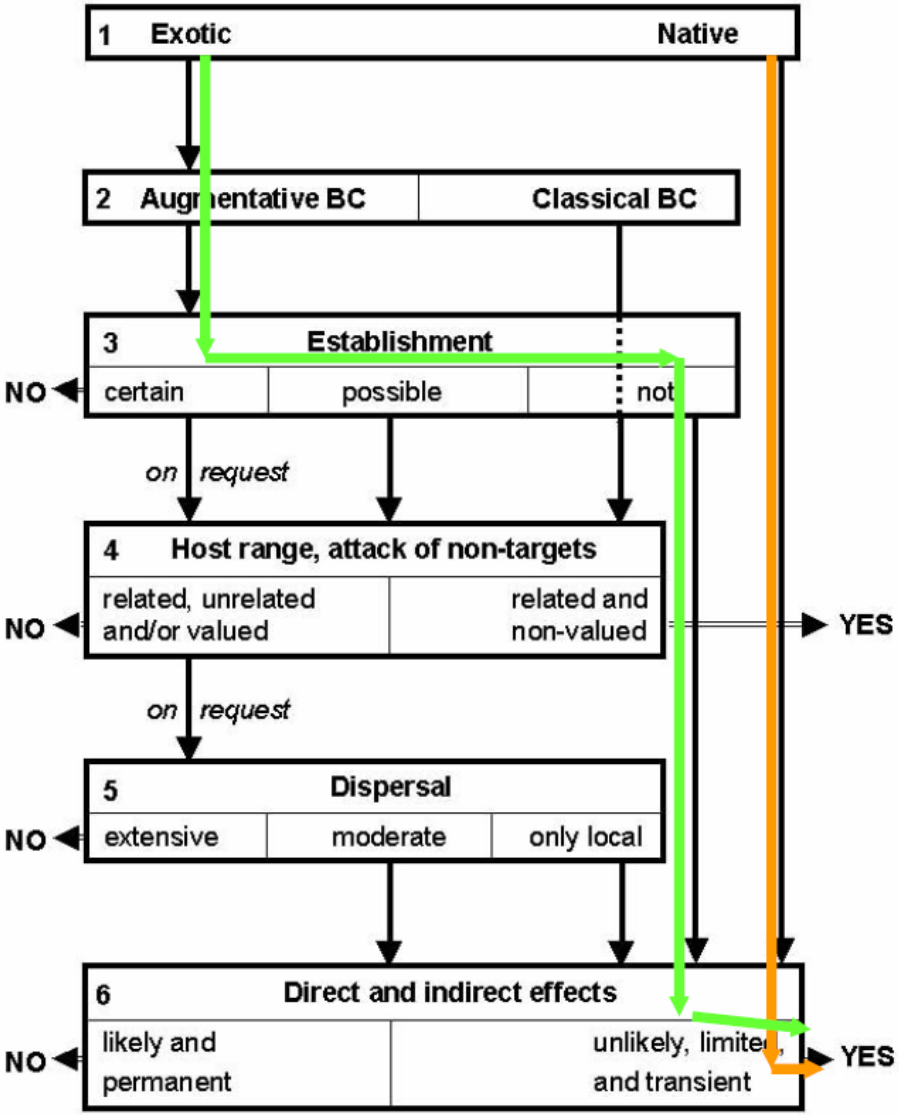
Van Lenteren, 2006




IOBC
OILB

## Native natural enemy:

all natives (34 spp.): safe



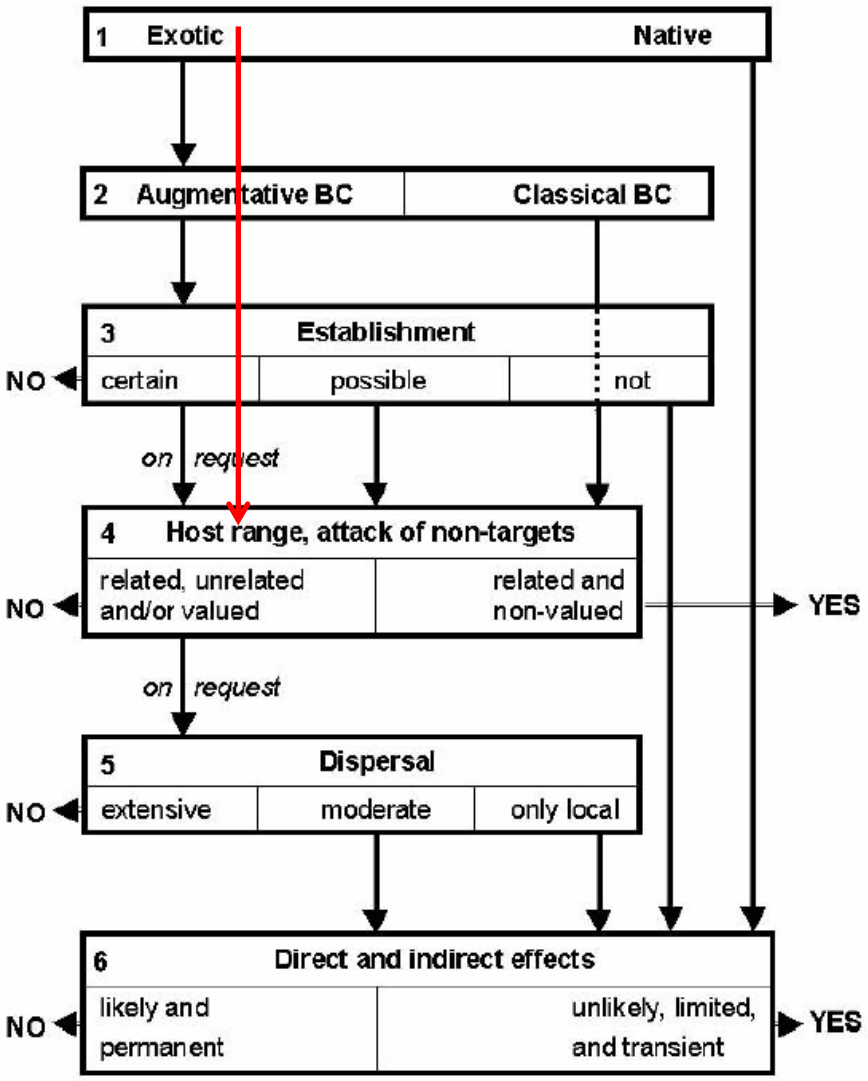

IOBC
OILB

Native natural enemy
all natives: safe

Exotic natural enemy for greenhouse use

If establishment impossible, usually safe
If establishment possible: more work!

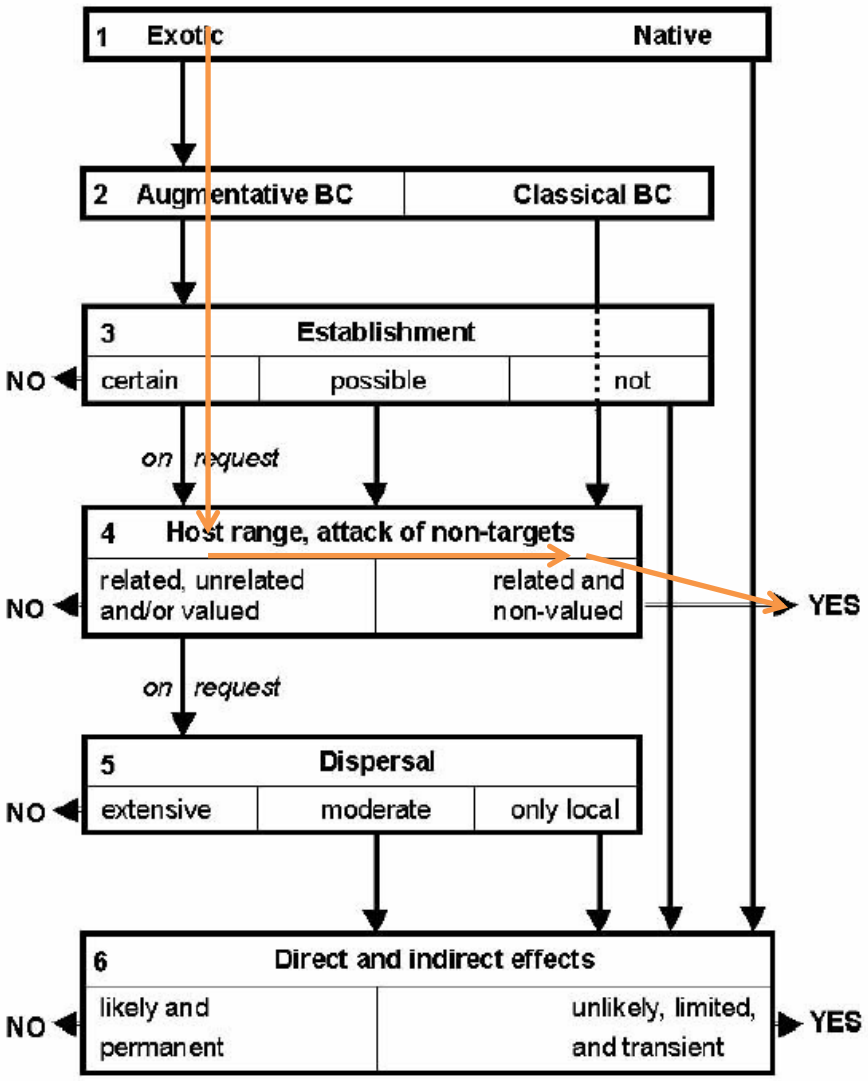
Van Lenteren, 2006




IOBC
OILB

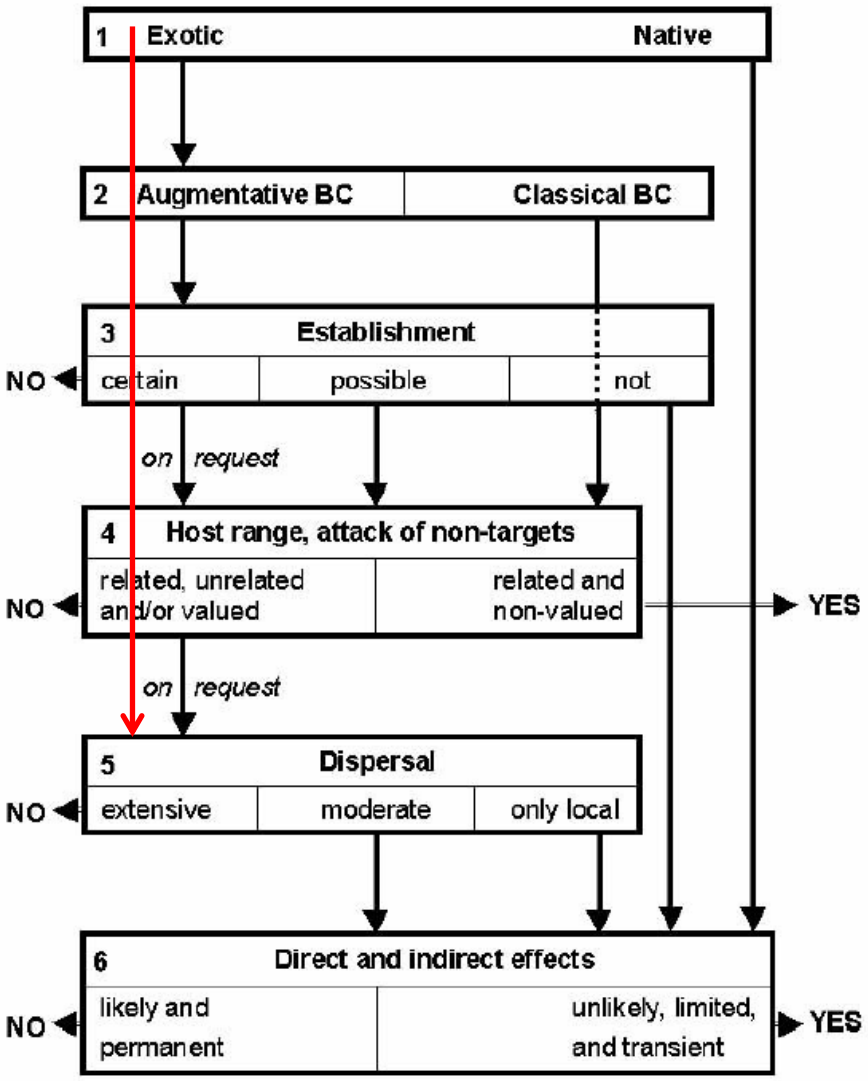
- Exotic species for augmentative biological control that are likely to establish are detected very early in the evaluation process, and will be excluded from release without further studies

Van Lenteren, 2006




- Exotic species that attack only related spp. and do not attack valued non-targets are also detected early in the evaluation without the need to study dispersal and direct/indirect non-target effects; they can be released

Van Lenteren, 2006




Exotic species that attack related and unrelated non-targets and/or valued non-targets will be excluded from release without the study of dispersal and(in)direct non-target effects

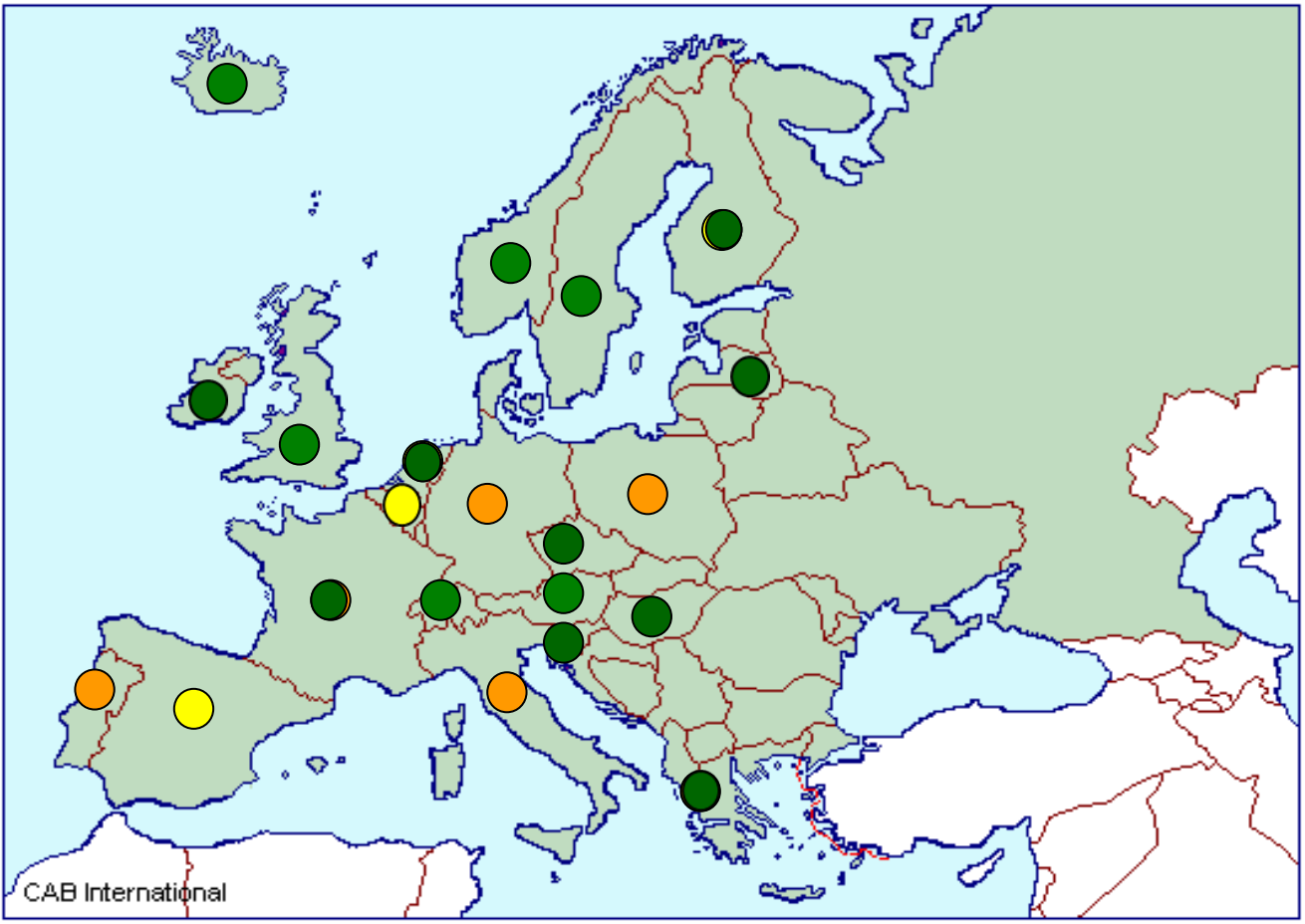
Van Lenteren, 2006

# Conclusions application hierarchical screening

- All native species (34) considered safe for release

- Compared to earlier risk analyses: prevent unnecessary studies, quicker, cheaper, simpler

# Status of national regulation in European countries:




- Implemented (15)
- In preparation (2)
- No regulation

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# International Regulation

- NAPPO region: NAPPO application: US, CAN and MEX
- Rest of the world : country specific

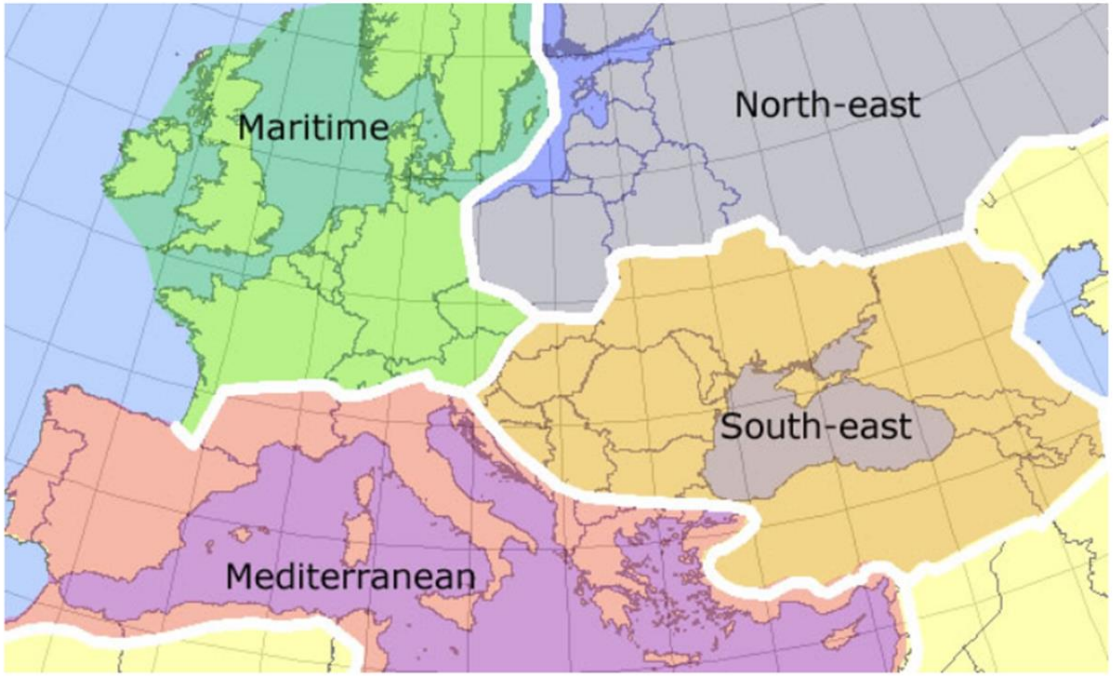
# Bottlenecks

- All IBCA's are seen as potential IAS
- Lack of taxonomic reports
- Unexperienced authorities
- Procedure not transparent
- Responsibilities of dossier evaluation unclear
- Product specific regulation with biopesticide- like procedures
- Lack of full implementation of EPPO guidelines
- Different formats of (EPPO) application form
- Unclearity about host range testing protocols

# ‘National biodiversity’

# Prospectives

- Harmonized IBCA regulation within an ecological zone context (relevant a/biotic parameters limiting species distribution)



- Use EPPO list as a positive list with safe IBCA's
- Risk categories: ranking according to risk:
  - *Develop tools based on these categories: the safer the category, the lesser assessment required*
    - *For specialist parasitoids less data required as for generalist predators*

- Expected vs perceived risk
- Quick scan 150 species: 80 approved directly, 15 after assessment

# Best way to meet CBD goals?

conservation of biodiversity
sustainable use of biological components


?

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# THANK YOU FOR YOUR ATTENTION!