Convention on the conservation of European wildlife and natural habitats - 35th meeting of the Standing Committee - Strasbourg, 1 December - 4 December 2015

Code of Conduct on Plantation Forestry and Invasive Alien Trees

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COUNCIL OF EUROPE CONSEIL DE L'EUROPE

Strasbourg, 8 October 2015
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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

Standing Committee

35th meeting
Strasbourg, 1er-4 December 2015

CODE OF CONDUCT ON PLANTATION FORESTRY AND INVASIVE ALIEN TREES

- SECOND DRAFT -

Document prepared by
Mr Giuseppe Brundu & Mr David M. Richardson
(Department of Agriculture, University of Sassari, Italy - Centre for Invasion Biology, Department of Botany & Zoology, Stellenbosch University, South Africa)
on behalf of the Bern Convention

ALIEN (EXOTIC) species: a species occurring in an area outside of its historically known natural range as a result of intentional or accidental dispersal by human activities (CBD, IUCN, UNEP-WCMC)

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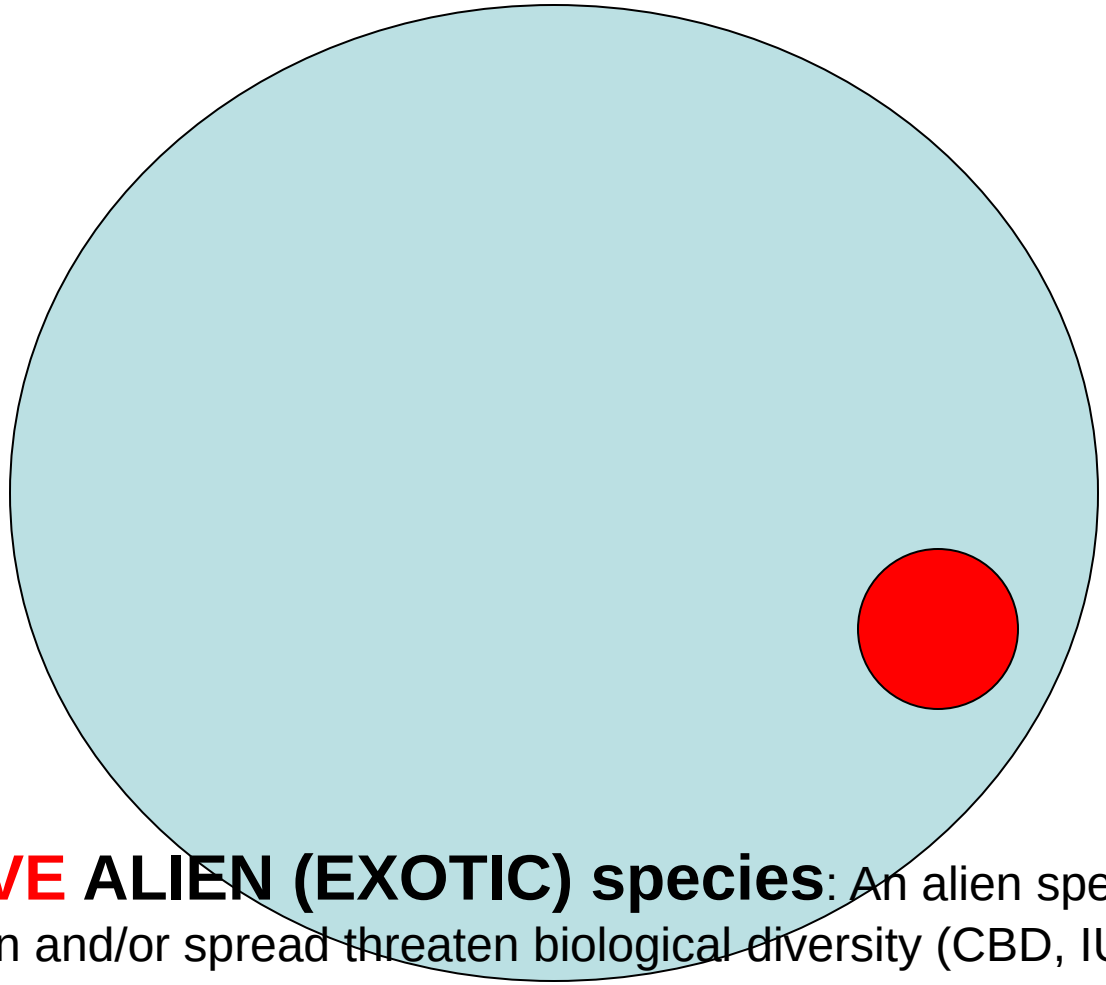

INVASIVE ALIEN (EXOTIC) species: An alien species whose introduction and/or spread threaten biological diversity (CBD, IUCN)

INVASIVE ALIEN (EXOTIC) species: An alien species whose introduction and/or spread threaten biological diversity (CBD, IUCN)

INVASIVE ALIEN TREE species: An alien tree species whose introduction and/or spread threaten biological diversity (CBD, IUCN).

e.g.,

Bern Convention

Convention on Biological Diversity

IPPC/FAO

Reg. EU no. 1143/2014

National and sub-national legislation (In many countries invasive alien trees are black listed or there are limitations to their use in protected areas).

UNEP

Convention on Biological Diversity

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26 June 2014***

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Eighteenth meeting
Montreal, 23-28 June 2014
Item 5.2 of the provisional agenda*

PATHWAYS OF INTRODUCTION OF INVASIVE SPECIES, THEIR PRIOR AND MANAGEMENT

Table 1: Categorization of pathways for the introduction of alien species

	Category	Subcategory	COP decision
Movement of COMMODITY	**RELEASE** IN NATURE (1)	Biological control	VIII/27
		Erosion control/ dune stabilization (windbreaks, hedges, ...)	
		Fishery in the wild (including game fishing)	VIII/27; X/38
		Hunting	X/38
		Landscape/flora/fauna "improvement" in the wild	
		Introduction for conservation purposes or wildlife management	
		Release in nature for use (other than above, e.g., fur, transport, medical use)	
		Other intentional release	
	ESCAPE FROM CONFINEMENT (2)	Agriculture (including Biofuel feedstocks)	X/38
		Aquaculture / mariculture	VIII/27; IX/4
		Botanical garden/zoo/aquaria (excluding domestic aquaria)	XI/28
		Pet/aquarium/terrarium species (including live food for such species)	VIII/27, X/38, XI/28
		Farmed animals (including animals left under limited control)	VIII/27
		Forestry (including afforestation or reforestation)	
		Fur farms	
		Horticulture	
		Ornamental purpose other than horticulture	
		Research and ex-situ breeding (in facilities)	VIII/27
		Live food and live bait	
		Other escape from confinement	
	TRANSPORT – **CONTAMINANT** (3)	Contaminant nursery material	
		Contaminated bait	
		Food contaminant (including of live food)	VIII/27; XI/28
		Contaminant on animals (except parasites, species transported by host/vector)	XI/28
		Parasites on animals (including species transported by host and vector)	XI/28
		Contaminant on plants (except parasites, species transported by host/vector)	XI/28
		Parasites on plants (including species transported by host and vector)	XI/28
		Seed contaminant	VIII/27
		Timber trade	
		Transportation of habitat material (soil, vegetation,...)	
VECTOR	TRANSPORT - **STOWAWAY** (4)	Angling/fishing equipment	VIII/27
		Container/bulk	VIII/27
		Hitchhikers in or on airplane	VIII/27, IX/4
		Hitchhikers on ship/boat (excluding ballast water and hull fouling)	
		Machinery/equipment	VIII/27
		People and their luggage/equipment (in particular tourism)	VIII/27
		Organic packing material, in particular wood packaging	
		Ship/boat ballast water	VIII/27
		Ship/boat hull fouling	VIII/27; IX/4
		Vehicles (car, train, ...)	
		Other means of transport	
SPREAD	**CORRIDOR** (5)	Interconnected waterways/basins/seas	VIII/27
		Tunnels and land bridges	
	UNAIDED (6)	Natural dispersal across borders of invasive alien species that have been introduced through pathways 1 to 5	

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Category	Subcategory	COP decision
RELEASE IN NATURE (1)	Biological control	VIII/27
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	Landscape/flora/fauna "improvement" in the wild	
	Introduction for conservation purposes or wildlife management	
	Release in nature for use (other than above, e.g., fur, transport, medical use)	
	Other intentional release	

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	Fur farms	
	Horticulture	
	Ornamental purpose other than horticulture	
	Research and *ex-situ* breeding (in facilities)	VIII/27
	Live food and live bait	
	Other escape from confinement	

Code of Conduct on Plantation Forestry and Invasive Alien Trees

The Code of Conduct on Plantation Forestry and Invasive Alien Trees

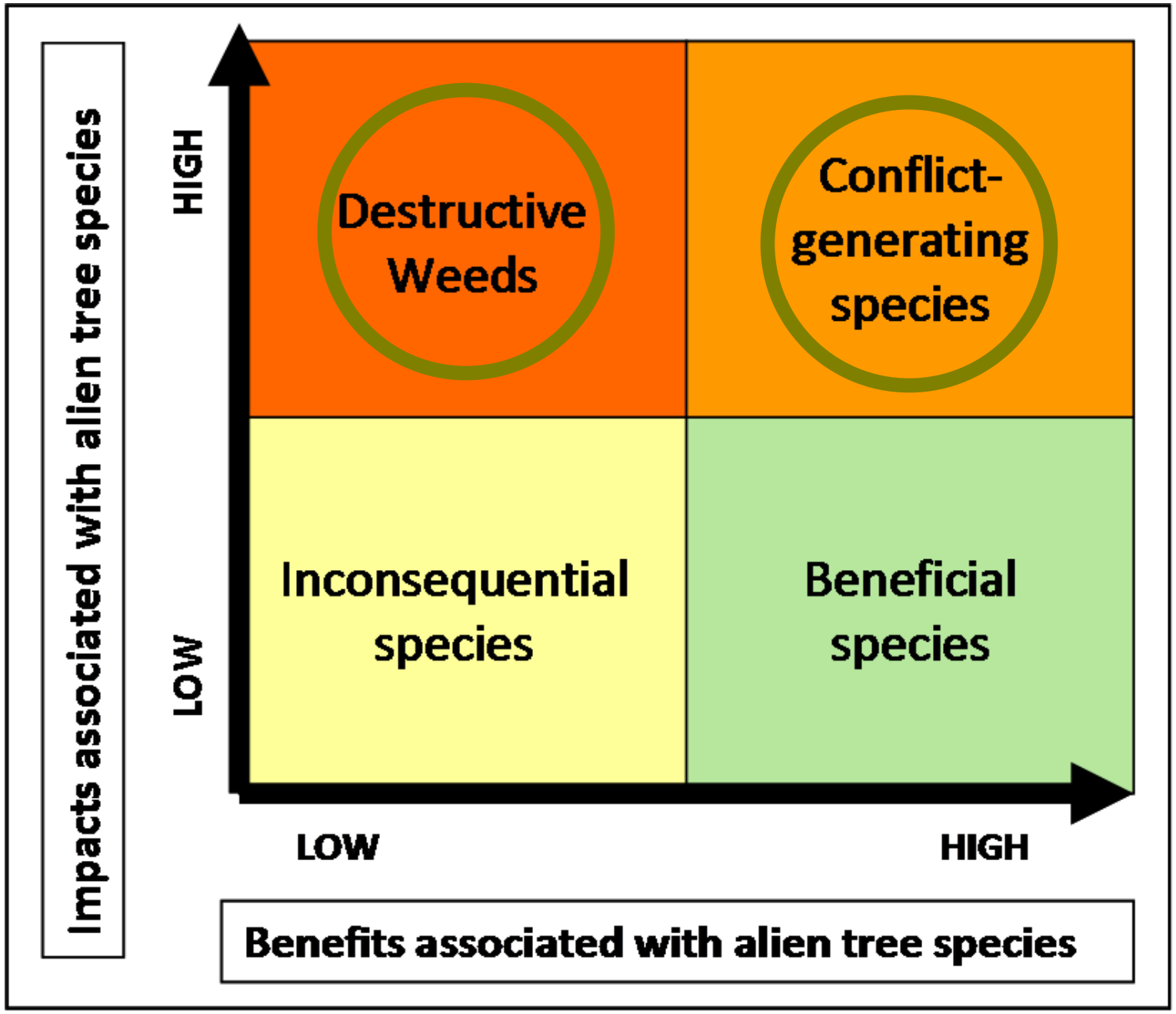
Is **NOT** against Plantation Forestry

Is **NOT** against Plantation Forestry with Alien Trees

Is **NOT** against Plantation Forestry with Invasive Alien Trees

The Code of Conduct on Plantation Forestry and Invasive Alien Trees

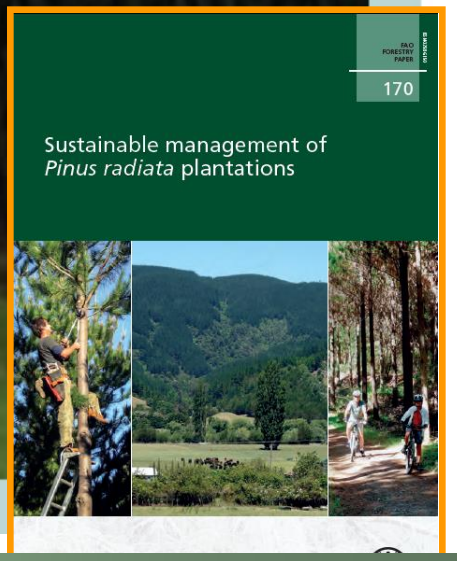
Suggests **guidelines** and good practices to **prevent risks** and **mitigate impacts** of Plantation Forestry with **Invasive** Alien Trees



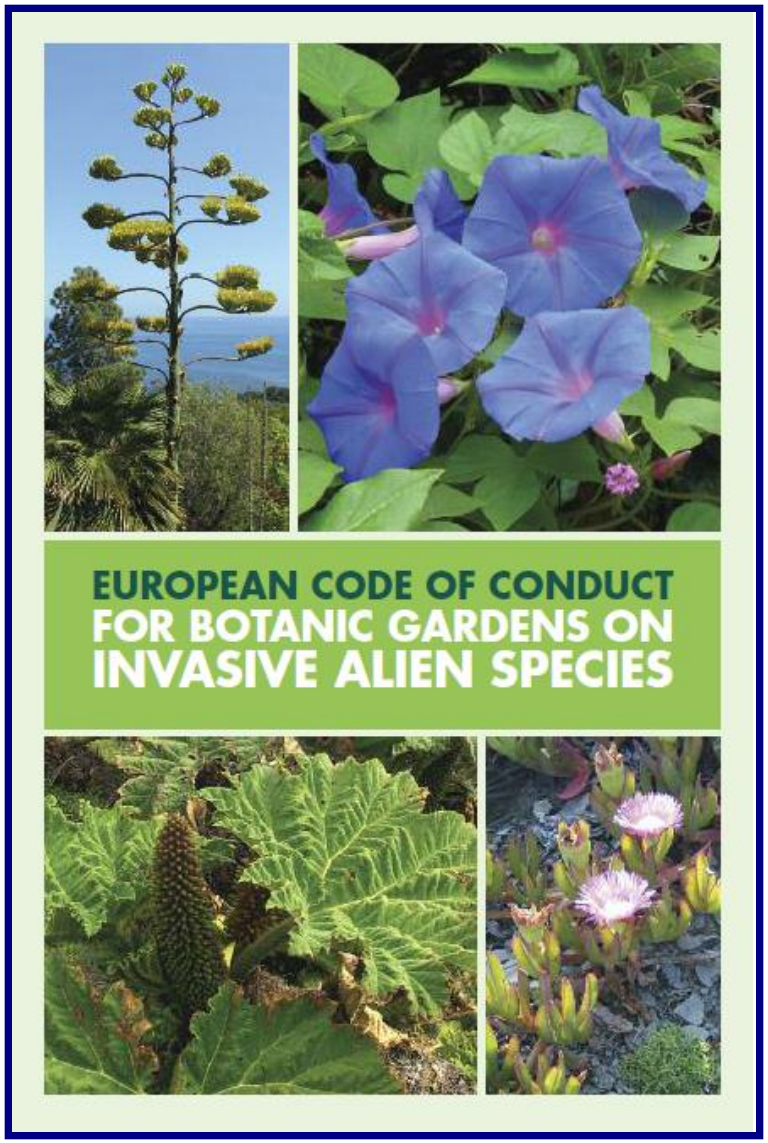
Redrawn from van Wilgen & Richardson (2014).

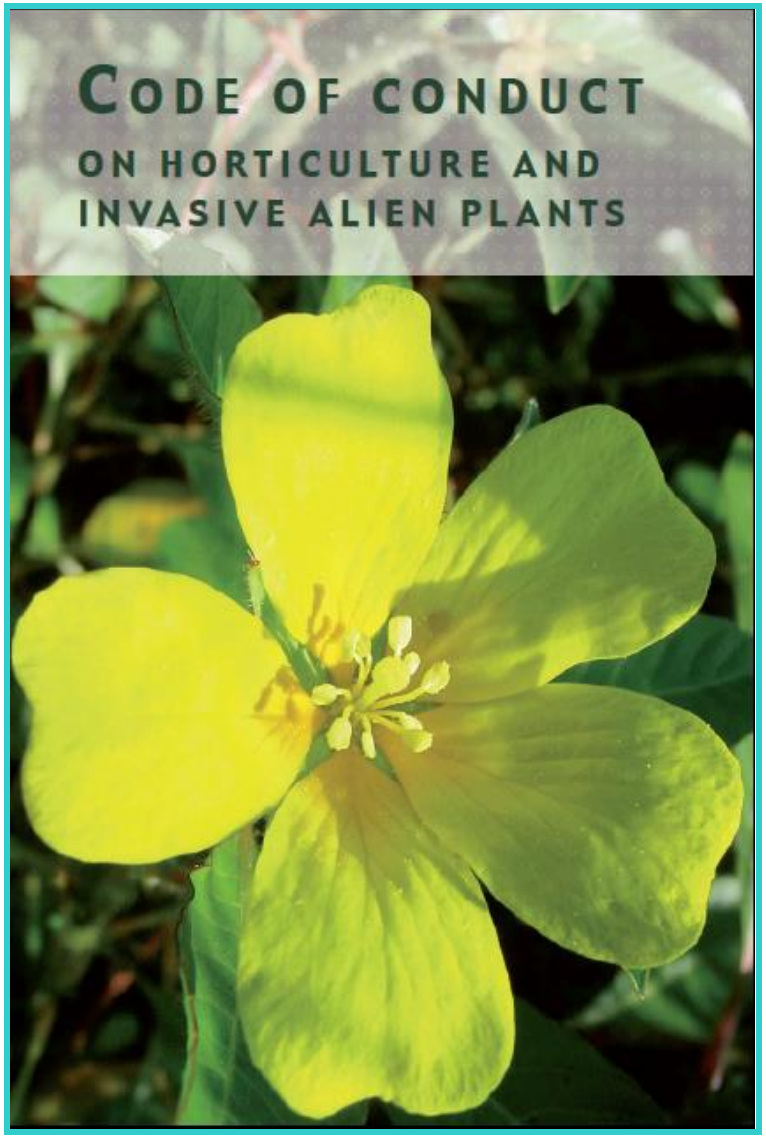
Erosion on a hill-country farm compared with a radiata pine plantation, Hawkes Bay, New Zealand, following a storm in 2011.

PHOTO: PETER SCOTT



Code of Conduct on Plantation Forestry and Invasive Alien Trees





Code of Conduct on Plantation Forestry and Invasive Alien Trees

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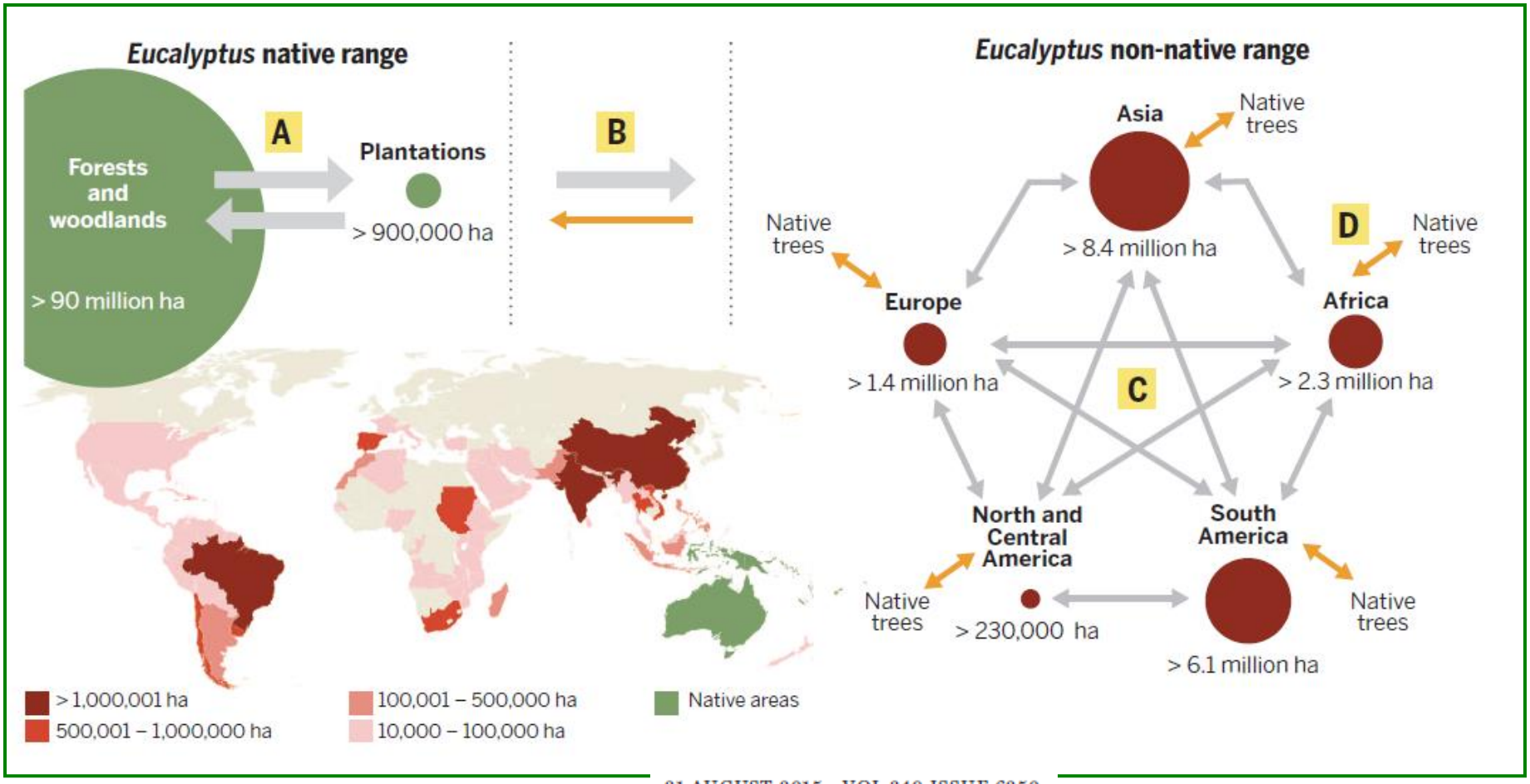


21 AUGUST 2015 • VOL 349 ISSUE 6250

REVIEW

Planted forest health: The need for a global strategy

M. J. Wingfield,[1]* E. G. Brockerhoff,[2] B. D. Wingfield,[1] B. Slippers[1]

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Diversity and Distributions, (Diversity Distrib.) (2011) **17**, 788–809

BIODIVERSITY REVIEW

Trees and shrubs as invasive alien species – a global review

David M. Richardson[1]* and Marcel Rejmánek[2]

Excessive users of resources

Donors of limiting resources

Fire promoters/suppressors

Sand stabilizers

Colonizers of intertidal mudflats/sediment stabilizers

Litter accumulators

Hybridisation & introgression

Transformers

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Code of Conduct on Plantation Forestry and Invasive Alien Trees

This Code of Conduct is addressed to all relevant stakeholders and decision makers in the **47 Member States of the Council of Europe**. It aims to enlist the co-operation of the Forest sector (trade and industry, national forest Authorities, certification bodies and environmental organizations) and associated professionals in preventing, reducing and controlling possible introductions of invasive alien tree species in Plantation Forestry.

It **complements** the Code of Conduct on Horticulture and Invasive Alien Plants published by the Council of Europe (Heywood & Brunel 2009, 2011) aimed at the horticultural industry and trade and the European Code of Conduct for Botanic Gardens on Invasive Alien Species (Heywood & Sharrock 2013).

Code of Conduct on Plantation Forestry and Invasive Alien Trees

AWARENESS

PREVENTION & CONTAINMENT

EDRR

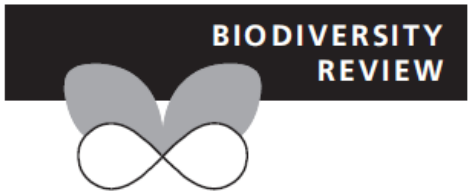
OUTREACH

FORWARD PLANNING

AWARENESS

- Be aware of **regulations** concerning invasive alien trees;
- Be aware of which alien tree species are **invasive** or that have a high risk of becoming invasive, and of the invasion debt;
- Develop systems for **information sharing** and **training** programmes.

Diversity and Distributions, (Diversity Distrib.) (2011) **17**, 788–809



Trees and shrubs as invasive alien species – a global review

David M. Richardson[1]* and Marcel Rejmánek[2]

Conifers as invasive aliens: a global survey and predictive framework

David M. Richardson[1]* and Marcel Rejmánek[2]

PREVENTION & CONTAINMENT

- Promote – where possible – the use of **native** trees;
- Adopt good nursery practices;
- Modify **plantation practices** to reduce problems with invasive alien tree species;
- Revise general land management practices in landscapes with planted forests;
- Adopt good practices for harvesting and transport of timber;
- Adopt good practices for **habitat restoration**.

Modify plantation practices to reduce problems with invasive alien tree species: (1/2):

Research findings should be applied to identify the most appropriate sites for cultivation within landscapes;

Biodiversity issues must be considered in plantation design (e.g., Carnus et al. 2006; COP 11 Decision XI/19 8 - 19 October 2012 - Hyderabad, India);

Avoid converting natural habitats for cultivation;

Restrict plantings to areas where alien tree species are already present;

Limit the total allowable area of planting, aggregate planting sites, and reduce the total boundary length;

Save or plant 2-3 rows of native and/or less invasive alien tree species around external boundaries or along margins of unplanted reserve areas inside plantations ;

Design plantation shape to minimise edges at right angles to prevailing winds during seed release season;

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Whenever possible, include sites with boundaries from where spread is difficult or acceptable (e.g., grazed areas, actively managed production forest, wide roads);

Whenever possible, use mixed-species plantations (Brockerhoff et al. 2008) and encourage structural diversity through different age classes (Evans 2009b);

Encourage the establishment of representative natural forest within the plantation estate and, where possible, restore natural forests on appropriate sites (Secretariat of the Convention on Biological Diversity 2009);

Prevent plantings at sites most favourable for long-distance dispersal of seed or pollen (hill tops, ridges);

Prevent plantings and minimize disturbance near wetlands, rivers and streams and create buffer zones;

Prevent plantings near Natura 2000 sites and other protected areas or endangered habitats;

Minimize soil movement, transport and disturbance in or around planted areas;

Stabilise disturbed soils as soon as possible.

EARLY DETECTION & RAPID RESPONSE

- Promote and implement early detection & rapid response programmes;
- Establish or join a network of **sentinel sites.**

International Plant Sentinel Network

OUTREACH

- Engage with the **public** on the risks posed by invasive alien trees, their impacts and on options for management.

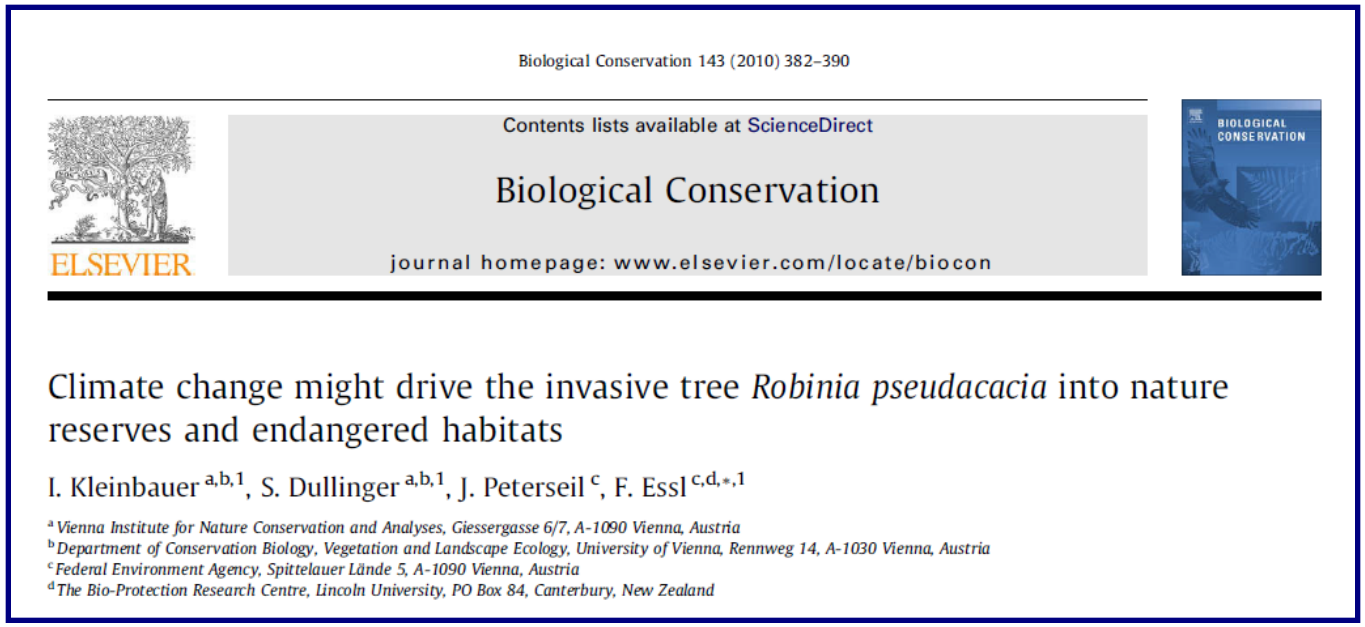
Combining methodologies to increase public awareness about invasive alien plants in Portugal

Elizabete Marchante[1], Hélia Marchante [2], Maria Morais [1] & Helena Freitas [1]

Oral presentations
2nd Workshop on Invasive alien plants in Mediterranean type regions of the world

FORWARD PLANNING

- Consider developing **research activities** on invasive alien trees species and becoming involved in collaborative research projects at national and regional levels;
- Take **global change trends** into consideration.



Biological Conservation 143 (2010) 382–390

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/biocon

Climate change might drive the invasive tree *Robinia pseudacacia* into nature reserves and endangered habitats

I. Kleinbauer [a,b,1], S. Dullinger [a,b,1], J. Peterseil [c], F. Essl [c,d,*,1]

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[b] Department of Conservation Biology, Vegetation and Landscape Ecology, University of Vienna, Rennweg 14, A-1030 Vienna, Austria
[c] Federal Environment Agency, Spittelauer Lände 5, A-1090 Vienna, Austria
[d] The Bio-Protection Research Centre, Lincoln University, PO Box 84, Canterbury, New Zealand

Code of Conduct on Plantation Forestry and Invasive Alien Trees

In plantation forestry, climate change could affect the dynamics of alien tree invasions in many interacting ways, for example: (a) by causing modification in the native ecosystems **promoting range changes**, naturalisation and spread of both native and alien trees (e.g., Iverson et al. 2008; McKenney et al. 2011); (b) by **favouring individual traits** of particular alien trees (e.g. Capdevila-Argüelles & Zilletti 2008; Kawaletz et al. 2013; Castro-Díez et al. 2014); and (c) by **modifying introduction pathways** and promoting a larger use of certain alien trees (Courbet et al. 2012; Lindenmayer et al. 2012) including a process of **re-thinking the importance of always choosing native species** (UK Forestry Commission). Also **assisted migration** has been proposed as a means to maintain forest productivity, health, and ecosystem services under rapid climate change (e.g., Gray et al. 2011; Kreyling et al. 2011; Pedlar et al. 2012).

Forestry Commission England

1 Introduction and key messages

The purpose of this pack

This pack presents the Forestry Commission's key messages on climate change. It draws together the information available from the Forestry Commission, Forest Research and other relevant organisations, to explain in one document the role of trees, woods and forests in tackling climate change.

Who is this pack aimed at?

The pack is primarily aimed at Forestry Commission staff, so that they are able to communicate the Forestry Commission's key climate change messages to the public.

Key messages: a summary

Trees, woods and forests can provide part of the solution to limiting climate change, and to helping society to adapt to the changes that we all face. We must help our trees, woods and forests to adapt and become resilient to the changing climate.

- Climate change resulting from human activity is a reality. Forests and forestry can be an important and attractive part of the solution.
- On a global scale, we must protect and manage the woods and forests that we already have as well as planting new forests, to "mitigate" climate change.
- Cutting down trees is not always bad for the environment. As long as woodlands are managed in a sustainable way, there can be a multitude of benefits: for the climate, for people and for wildlife.
- Wood is a smart choice. Timber is renewable and can replace other materials that require much larger fossil fuel inputs for their production. It can also replace fossil fuels directly in the form of renewable energy, or wood fuel.
- Trees can help us to adapt to a changing climate. They provide shade, alleviate flooding, and create a valuable wildlife habitat.
- Our forests are changing due to climate change and we need to plan ahead to help them adapt.

The Forestry Commission is working to provide the answers and best practical solutions based on sound evidence. Through its management of the public forest estate, and its research and promotional work, the Forestry Commission is already playing an important role in combating climate change, and in helping our forests adapt to the changing climate.

This pack provides more information about each of these key messages.

Code of Conduct on Plantation Forestry and Invasive Alien Trees

Bulletin OEPP/EPPO Bulletin (2014) **44** (2), 212–222 ISSN 0250-8052. DOI: 10.1111/epp.12111

The voluntary Code of conduct on invasive alien plants in Belgium: results and lessons learned from the AlterIAS LIFE+ project

M. Halford[1], L. Heemers[2], D. van Wesemael[2], C. Mathys[3], S. Wallens[4], E. Branquart[5], S. Vanderhoeven[6], A. Monty[1] and G. Mahy[1]

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Working with the horticultural industry to limit invasion risks: the Swiss experience

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Thank YOU!