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Foreword

How can science underpin effective biosecurity policy and improve risk management?

This important question was the focus of a workshop at the IUFRO* International Forest Biosecurity Conference held in Rotorua, New Zealand on 17 March 2009. Sponsored by the Organisation for Economic Co-operation and Development (OECD), this workshop provided a unique opportunity to explore the different perspectives of scientists, policy makers and forest managers. These are the people who must work together to reduce the economic and ecological damage caused by invasive organisms.

Internationally, forests make vital contributions to economies through timber and fibre production, the conservation of biodiversity and environmental protection. They also play a key role in strategies developed by many countries for offsetting carbon dioxide emissions and as a potential source for bioenergy. These benefits are increasingly at risk from biosecurity threats resulting from continued growth in international trade and tourism and also from a changing climate.

The term “biosecurity” refers to the exclusion, eradication, or effective management of pests (weeds, insects and diseases). There are many recent examples of the destruction of large forest areas, through the spread or change in risk patterns of forest pests. These examples include the spread of emerald ash borer through parts of the USA and Canada, and the occurrence of an invasive pathogen, *Phytophthora ramorum* in California and Europe.

At an international level, closer alignment and rationalisation of policies (and their implementation) can only assist with slowing the global spread of invasive organisms. This closer alignment is far more likely to be realised with greater international science co-operation. Fostering this kind of co-operation was a primary goal of the OECD-sponsored workshop.

The theme of the workshop was: “Managing the biosecurity threat to forests in a changing global environment: links between science, policy, regulation and management”. Its purpose was to bring scientists and policy makers together, along with the operational managers who have to implement these policies. This forum provided a unique opportunity for all parties to better understand each other’s challenges and to find more effective ways of aligning their collective efforts.

The views of a policy maker and forest manager are represented in the two special contributions at the beginning of these proceedings. Their views, sometimes provocative to scientists, were an important prelude to the discussions that followed. The perspective of the policy maker was given by Mr Peter Thomson, Director Post-Border with the Ministry of Agriculture and Forestry - Biosecurity New Zealand. He highlighted the challenges faced by agencies whose staff have to make rapid decisions at times of pest incursion, often in the absence of solid information. Science takes time to come up with answers, and risk management agencies often don’t have the luxury of time. If a new pest comes into the country, agencies need to act quickly, regardless of how much is known about it. Therein lies a tension between policy makers and scientists, who are often reluctant to venture opinions, because their training demands that conclusions can only be reached with a high level of supporting evidence.

Forest managers face similar challenges, as described by Mr Don Hammond, a New Zealand forester with extensive experience in biosecurity eradication programmes. As he explained, when dealing with forest health issues, managers must take action to protect their resource. At times like this, they depend on the best advice scientists can provide, based on whatever information is available. Don Hammond's presentation highlighted the importance of stable funding to maintain this knowledge capability at an appropriate level to meet the ongoing issues that arise.

The OECD Workshop provided an opportunity for scientists to better understand the pressures policy makers and forest managers face. At the same time, it provided a valuable forum to discuss some of the more pressing global biosecurity issues and demonstrate how science is being applied to address them.

The ten papers in this proceedings are based on the science presentations given at the Workshop. These show how the risks associated with invasive organisms are growing worldwide due to continuous growth in trade and tourism, and also from changing climates. The need for policy makers to recognise and address these risks is more critical than ever, particularly in terms of shutting down major pathways that enable the movement of pests.

The discussion arising from these presentations was facilitated to address the following questions, which were central to the Workshop's objectives:

- How can scientists contribute more effectively to policy and operational management?
- What are the main forest biosecurity challenges from both a science and policy perspective in a changing global environment?
- How can international collaboration help to meet these science challenges?

The conclusions from this discussion appear in the final chapter of these proceedings.

Scion and IUFRO are grateful for the generous support provided by the OECD for the Workshop. They made it possible for us to include prominent international researchers in the programme, all of whom have contributed to this document.

We trust that the collected knowledge that has been captured in these proceedings will help to ensure the implementation of effective biosecurity policies at national and international levels. Sound biosecurity policy should be informed by good science and science priorities should be underpinned by the needs of policy makers and the land managers who live with the consequences of incursions. This combination is vital for the protection of forests and the diverse benefits they provide.

* IUFRO – International Union of Forest Research Organisations

Guest Editors:

Dr Brian Richardson
Group Manager New Forests & Forestry Science
Scion
Private Bag 3020
Rotorua 3046
New Zealand

Ian Hood
Forest Protection Scientist
Scion
Private Bag 3020
Rotorua 3046
New Zealand

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