

## Protecting Forests from Invasive Species through Enhanced International Cooperation

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Presentation notes

Good afternoon. I am truly honoured to have the opportunity to speak to such an esteemed group of global forestry colleagues. Thank you.

The overall focus of our Forum and Dialogue on Forest Health this afternoon will be protecting forests from invasive species through enhanced international cooperation.

### Invasive Species

As first speaker, I would like to start this session by inviting all of you to focus on 3 questions. I will discuss these questions in my overview presentation and the presenters this afternoon will speak on various aspects of these 3 themes.

**First**, why are invasive species an international forest health issue?

There is increasing urgency about species introductions of all taxa into forests beyond their natural range. Species introductions are rising sharply because of increase trade, transport, travel and tourism. These provide vectors and pathways for live plants, animals, and biological material to cross biogeographical barriers that would usually block their way. Furthermore, stresses associated with changing climate can allow them to thrive where they would not normally.

**Second**, what instruments and tools have been developed to prevent or mitigate invasive species?

All of the presenters this afternoon will highlight specific tools currently being used to prevent the transboundary movement of pests into forests.

And then **finally**,

During our forum discussion we can focus on the final question. How do we enhance future international cooperation?

### Environmental impacts

Why are invasive species an international forest health issue?

Invasive species are the 2nd cause of biodiversity loss after habitat loss and a main driver of global environment change. One example, the invasive tree, *Miconia calvescens*, is the most damaging invasive species of the wet forests of the Pacific islands and now heavily invades 60 % of the island of Tahiti replacing the natural forest and its wildlife. This plant was introduced to Hawaii as an ornamental in the 1960s.

Often not considered, too, is the genetic impact that invasives have by diluting and potentially destroying locally adapted gene pools.

Economic studies are rare but show that invasive species take a heavy economic toll on governments, industries, and private citizens. For example in the US alone.... invasive species cost \$120 billion dollars per year

Invasive species have political impacts and can limit sustainable development opportunities by affecting international trade and economic growth if they prevent governments and industries from selling products or commodities

**Forests are at risk—world wide**

Although some regions, such as the Pacific Islands, are more impacted than others by invasive species, forests are risk, world wide.

Primarily due to increased international trade.

The world we all share has ever increasing technologies to increase trade markets, speed travel, and expand markets that require further transport.

Regulatory systems worldwide are overwhelmed with the increasing volume of international trade

### **Pathways**

Beginning in the 1980s, the global forestry community became aware of risks associated with wood packaging material and Nursery stock as a pathway. Research confirmed the threat.

For example, the following species are believed to have invaded North American forests via packing materials from Asia

- emerald ash borer
- Asian longhorned beetle
- brown spruce longhorn beetle

In return, the red turpentine beetle may have found its way to China's pine forests via packaging made from infested North American wood.

Additionally, *Sirex* woodwasp is likely to have entered Argentina, Australia, New Zealand and South Africa in wooden packaging from Europe or North Africa.

These are identified pathways. Pathways are ever changing and Pathway analysis must be continual!

### **Commitment to International Regulatory Efforts is Needed**

An unyielding commitment to international regulatory efforts is needed. Over 50 legal instruments are in place to deal with invasive species but the awareness of the regulations, the commitment to enforcement, and the in-country capacity to enforce the regulations varies widely.

A crucial instrument for the forestry sector is the IPPC and our next speaker will overview that instrument.

### **Invasive Species Networks and Databases**

A free flow of information is essential to manage and prevent new threats to forest ecosystems. Our speakers this later this afternoon will describe REGIONAL networks, how they work, and how they work best.

They will highlight possible ways to improve linkages and communication within and among networks and international partners.

And our forum discussion will explore the need to build upon and expand existing arrangements.

Finally, we all need to be thinking about what NEW networks and databases are needed and to start conversations to promote them.

### **Mountain Invasion Research Network (MIREN)**

Although our speakers this afternoon will focus on the importance of regional networks, networks of all levels are valuable. I think there is a specific need for invasive species networks that focus on the ecosystems that are richest in biodiversity and most vulnerable to invasion. These are typically ecosystems that are geographically and evolutionarily isolated such as mountains, islands, lakes etc. Those with unique biological communities have evolved over thousands of years.

For example, I am co-chair of MIREN a global network aimed at understanding plant invasions in mountains. We are new, just 2 years old but have connected with other mountain research networks and have developed

a standardized survey and monitoring protocol as part of global research to study to answer both basic and applied questions.

Our efforts, overtime, will also detect interactions with human disturbance, natural disturbance, and climate change.

Perhaps you can think of a fragile or especially valuable ecosystem in your forests that would benefit from an invasive species network?

### **How do we enhance future international cooperation?**

- Increase awareness
- Prevention--pathways
- Networks and Databases

In summary, our forum presentations today will share information about the importance of invasive species in international forestry. They will provide information on some of the regulatory aspects of protecting forests from invasive species, and they will discuss invasive species networks as a tool to prevent and mitigate invasions.

Thank you.