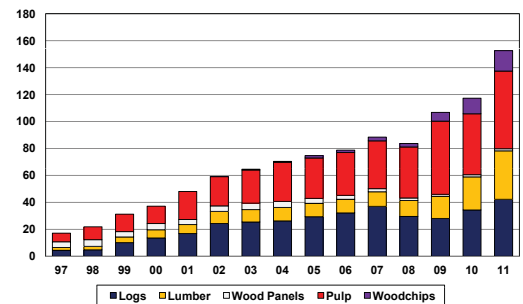


**FOURTH EDITION:** An independent, comprehensive investment analysis of global planted forest projects.

China's imports of logs, lumber, woodchips and pulp hit record levels in 2011, when its timber supply deficit surged more than 30% to an estimated 152 million m<sup>3</sup>. Similarly, demand for timber in other wood deficit countries (like India) is also on the rise. While some countries clamor for wood resources, concerns about deforestation have caused an increasing share of the world's native forests to be set aside for conservation.

These global trends are increasing the market's dependence on man-made forest plantations (tree farms). Not surprisingly, an increasing number of players in the timber industry are interested in developing tree farms – often in new regions and with relatively unproven species. This type of investment requires analysis that incorporates political and economic factors, as well as direct costs, and biological growth rates.

**China Timber Deficit, 1997-2011**  
Million Cubic Meters



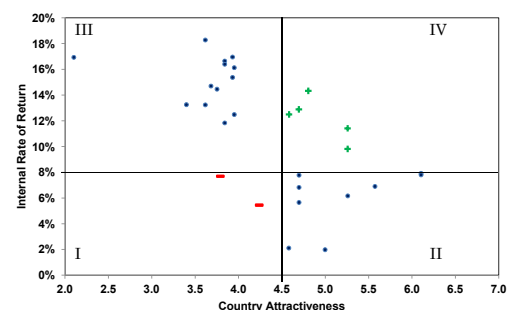
### Where are the most attractive countries/regions for timberland investments, and which species and management regimes offer the best returns?

This study provides an updated analysis of the most attractive forest resources and timberland investment opportunities. It covers more than 50 major timber producing countries in the world across North & South America, Asia, Oceania, Europe and Africa.

The **Global Tree Farm Economics Review** benchmarks investment costs and returns for a wide cross-section of potential plantation forest projects. It also analyzes major economic, geographic and political factors in each country that could impact returns for tree farm investors.

By combining country attractiveness with expected financial returns, the report identifies those countries with the best long-term potential for forest plantation investment and industry development.

**Hardwood Sawlogs Case Studies - risk vs. return**



Quadrant 4 shows the most favorable opportunities for investment: low risk, high return projects.

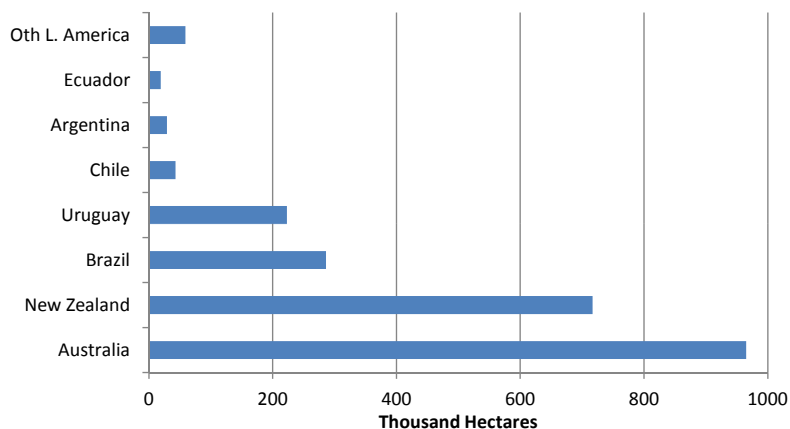
In addition to the robust analysis, the study includes a comprehensive database of private forest ownership with 730 entries from 61 different countries, making **Global Tree Farm Economics Review** the concise reference tool for forest resources and forest investment information globally.

## Who will benefit from this study?

**Global Tree Farm Economics Review** is invaluable for any owner, investor or potential investor in timberlands and plantations, including:

- Pension Funds
- Timber Investment Management Organizations (TIMOs)
- Real Estate Investment Trusts (REITs)
- Timberland owners
- Financial analysts
- Lending institutions
- Forest products companies
- Consulting firms

## Institutional Ownership of Timberland in Latin America and Oceania, 2011



## Study Objectives

**Global Tree Farm Economics Review** analyzes a wide range of forest resources and timberland investment opportunities across the globe. It will help you compare the opportunities, species and management methods to determine which investments will provide the best returns. Included are:

- Country Profiles, providing an overview of native forest and plantation forest resources in more than 60 countries. The profiles include data on forest trade, timber harvest and certification, and overviews of key issues and opportunities for timberland investors.
- More than 100 case studies providing detailed data on growing costs, wood yields, harvesting costs and stumpage costs. Included is a calculated average growing cost per cubic meter and Internal Rate of Return (IRR) for various management regimens for 30 different species in 35 countries.
- Timberland Investment Attractiveness Rankings for 51 countries, including 7 international benchmarks on political and economic factors and tree-farm specific factors.
- Comparable data on growing costs, IRR, and tree farm investment attractiveness and how they have changed from previous editions of this report in 1997, 2002 and 2007.
- A comprehensive database of forest ownership, with more than 730 entries of ownership in 2011, organized by company in 61 countries.
- Timberland investment challenges and risks in each major timber producing country in the world.
- Expected long-term growing costs for pulpwood and for sawlogs in different regions.

## Study Authors

### Robert Flynn, Director, International Timber, RISI

Robert (Bob) Flynn has more than 35 years experience in the forest industry, including 9 years as a forester for Champion International in Oregon. Prior to joining RISI in April 2006, Bob spent 20 years as a consultant with several firms, assisting clients in understanding timber supply and demand trends; international trade of logs, woodchips, and biomass; and trends in international timberland investment in Southern Hemisphere plantation forest countries, China, and elsewhere. At RISI, in addition to writing the previous edition of **Global Tree Farm Economics Review**, Bob has published three reports on China's timber supply and demand; a profile of India's forest products industry; an analysis of the impact of Russia's log export tax on Asian log markets; a study on South American plantation forestry and bioenergy markets, as well as annual reports on international trade in woodchips and biomass.

### Dennis Neilson, Director, DANA Limited

Dennis founded DANA in 1992, a New Zealand based international forest industry advisory and publishing firm, that undertakes benchmarking, strategic planning, investment and marketing assignments for international corporate clients. Prior to DANA, Dennis held a number of management positions with Fletcher Challenge Ltd. in its forestry and pulp and paper sectors. Dennis' experience enables him to benchmark the New Zealand tree farm and wood processing industries against a number of others worldwide. In addition to The **Global Tree Farm Economics Review**, Dennis co-authors RISI's *International Pulpwood Trade Review*.

## Table of Contents

### INTRODUCTION

### STUDY FORMAT AND METHODOLOGY

### OVERVIEW OF GLOBAL FORESTS

For each country below, analysis is provided on the following:

- Forest Resources
- Major Issues / Opportunities for Timberland Investors
- Tree Farm Economics
- International Benchmark Rankings and Investment Attractiveness

### NORTH AMERICA

- Canada
- USA

### LATIN AMERICA

- Argentina
- Bolivia
- Chile
- Colombia
- Costa Rica
- Ecuador
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- Uruguay
- Other Latin America

### OCEANIA

- Australia
- Fiji
- New Zealand
- Papua New Guinea
- Solomon Islands

### ASIA

- Cambodia
- China
- India

- Indonesia
- Malaysia
- Sri Lanka
- Thailand
- Vietnam
- Other Asia

### EUROPE

- Germany
- Hungary
- Ireland
- Latvia
- Poland
- Romania
- Russia
- Slovakia
- Spain
- Sweden

### AFRICA

- Angola
- Democratic Rep of Congo
- Ghana
- Malawi
- Mozambique
- Rwanda
- South Africa
- Sudan
- Tanzania
- Uganda
- Other Africa

### CONCLUSIONS AND KEY FINDINGS

#### APPENDIX I - Tree Farm Areas by Owner, 2011

#### APPENDIX II - Case Study Data Summaries

#### APPENDIX III - IRR and Growing Cost Summary Tables for Case Study Results

## About RISI

RISI is the leading information provider for the global forest products industry. The company works with clients in the pulp and paper, wood products, timber, biomass, tissue, nonwovens, printing and publishing industries to help them make better decisions. Headquartered in Boston, MA, RISI operates additional offices throughout North and South America, Europe and Asia. More information can be found at [www.risi.com](http://www.risi.com).

## TO ORDER

### WOOD PRODUCTS AND TIMBER

#### Worldwide:

Trish Roche  
+1.781.734.8967  
troche@risi.com

### PULP AND PAPER

#### In Europe :

Tea Tuuli  
+32.2.536.0743  
ttuuli@risi.com

#### In EMEA & Oceania:

Gregory Ardoullie  
+32.2.536.0753  
gardoullie@risi.com

#### In Asia:

Levi Li  
+86.186.1683.4068  
lli@risi.com

#### In Latin America:

Luis Sucupira  
+55.11.3848.9051 ext.21  
lsucupira@risi.com

#### In North America:

Producers, Governments,  
Associations, Printers,  
Merchants, Converters  
Natalie Rotondi  
+1.781.734.8963  
nrotondi@risi.com

Paul Lohnes  
+1.781.734.8934  
plohn@risi.com

Financials, End Users,  
Consultants

Sara Girtz  
+1.770.373.3001  
sgirtz@risi.com

Suppliers, Engineers  
Misty Belser

+1 919.285.2800  
mbelser@risi.com

#### MAIL: RISI

4 Alfred Circle  
Bedford MA 01730  
USA

#### FAX (North America):

+1.781.271.0337

#### FAX (Europe):

+32.2.536.0757

WEB: [www.risi.com/treefarm](http://www.risi.com/treefarm)

## Order Form

### Order the *Global Tree Farm Economics Review!*

Price – Corporate License\*: \$ 12,000

Price – Single Print Copy: \$ 9,500

\* **Corporate License includes:** A print copy of the Report + online access to: PDF, summary slides, On-demand webinar presentation on study findings + Internal Distribution Rights

### Please complete the information below:

Your Name (please print) \_\_\_\_\_

Company \_\_\_\_\_

Address 1 \_\_\_\_\_

Address 2 \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_

ZIP/Postal Code \_\_\_\_\_

Country \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

### Payment info:

Please send me an invoice (Order will be shipped/access provided upon receipt of payment.)

Payment enclosed. (Make checks payable to "RISI")

Please charge to:  Visa  MasterCard  American Express

Card No. \_\_\_\_\_

Expiration Date \_\_\_\_\_

Wire Transfer **For payment in USD:** RISI, Inc.

Eastern Bank

PO Box 391

Lynn, MA 01903-9668

Acct# 600 394 563

Swift Code # EASRUS31 or ABA # 011301798

**For payment in euros:** KBC

Agentschap Brussel Louiza

Louizalaan 280B

1050 Brussels

Acct# 433-8257692-10

SWIFT – KREDBEBB

IBAN – BE41 4338 2576 9210

RISI