FACILITATING INVESTMENT
A Role for Insurers?

Insuring the Performance of Certified Sustainable (Forest) Projects

Phil Cottle & Ignacio Murtagh

Katoomba
Rio de Janeiro 23 - 26 October 2001

Source: FSC
Partner Reinsurance Company Ltd.
Act as insurers of insurance companies - we take their risk

- Clients (insureds)
- ‘Fronting’ Insurance Company (e.g. Sul America in Brazil)
- ‘LEAD’ REINSURER
  - PRe 35%
  - Swiss Re 25%
  - ECF 10%
  - Axa Re 5%
  - Munich Re 10%

- Clients (insureds)
- ‘Fronting’ Insurance Company
  - 95% Risk

- Clients (insureds)
- ‘Fronting’ Insurance Company
  - 90% Risk

- Clients (insureds)
- ‘Fronting’ Insurance Company
  - 100%
PartnerRe Centres

Cambridge
Paris
Zurich
Oslo
New York
Bermuda
Kansas
Montreal
Toronto
Santiago
Buenos Aires
Seoul
Tokyo
Hong Kong
Singapore
Auckland

Partner Reinsurance Company Ltd.
Introduction to PartnerRe (PRe)

- Largest specialist forestry / Agriculture risk team
- Major global capacity for forestry & agricultural risks (Zurich Branch)
- Specialists in Catastrophe Insurance relevant for climate change
- Forms long term ethical relationships essential for environmental projects
- Product design for the insurance/forestry industry
Main Agricultural Reinsurers

<table>
<thead>
<tr>
<th>Reinsurer</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munich Re</td>
<td>22%</td>
</tr>
<tr>
<td>Hannover Re</td>
<td>15%</td>
</tr>
<tr>
<td>Lloyds</td>
<td>9%</td>
</tr>
<tr>
<td>PartnerRe</td>
<td>8%</td>
</tr>
<tr>
<td>ERC Group</td>
<td>7%</td>
</tr>
<tr>
<td>Swiss Re</td>
<td>7%</td>
</tr>
<tr>
<td>St Paul Re</td>
<td>5%</td>
</tr>
<tr>
<td>QBE</td>
<td>5%</td>
</tr>
</tbody>
</table>

Global Reinsurance Market Premium is estimated at $1.2 billion in 2000 (Private Sector)
Global Agriculture Premiums (inc. Forests) = US$7bn

Traditional Commercial Insurance = US$365 billion

Forestry Share? <1% or US$70m on 3.5bn ha
Reasons for Low Volume of Forestry Insurance

- Lack of forestry risk assessment skills among insurers
- Low awareness of insurance options by foresters & investors
- Therefor... limited coverage on offer to forestry sector
- Very little communication between sector and insurers

No progress to meet required needs
PRe; Widely Based Global Forestry Risk Assessments

PRe: Long Term Global Forestry Risk Management Expertise

Source: Global Forest Watch
Typical Forestry/Crop Insurance Products
(usually one year contracts)

<table>
<thead>
<tr>
<th>Hazards</th>
<th>Insured interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>✦ Fire (all causes)</td>
<td>✦ Loss of crop</td>
</tr>
<tr>
<td>✦ Options</td>
<td>✟ Timber / fibre / rubber / Crude palm oil / grains</td>
</tr>
<tr>
<td>✟ Drought/rainfall deficit</td>
<td>✦ Asset protection</td>
</tr>
<tr>
<td>✟ Disease</td>
<td>✦ Increased costs of working</td>
</tr>
<tr>
<td>✟ Wind</td>
<td>✦ Business Interruption</td>
</tr>
<tr>
<td>✟ Frost (seedlings)</td>
<td>✦ Capping expenditure on fire fighting &amp; other costs</td>
</tr>
<tr>
<td>✟ Wild animals</td>
<td>✦ Stabilising state budgets</td>
</tr>
<tr>
<td>✟ Strike, Riot, Civil</td>
<td></td>
</tr>
<tr>
<td>Commotion</td>
<td></td>
</tr>
</tbody>
</table>
Who Buys Forestry Insurance?
(usually state / private commercial operations)

- **Small forest Owners**
  - Forest Growers in Australia, Spain, France, Panama, UK,…

- **Banks, & other Financial Institutions**
  - Their borrowers are secured

- **Pulp, Paper & Timber Corporations**
  - Chile, South Africa, Australia, Spain, Brazil, Argentina, China, Indonesia

- **State, Provincial & National Governments**
  - Japan, Mexico, Canada
New Forestry Financial ‘Environments’

✧ Environmental services
  ✧ Salinity
  ✧ Down stream liabilities (soil stability, avalanche and landslide)
  ✧ Renewable Energy
  ✧ Carbon sequestration directly or indirectly (Steel)
  ✧ Reserves & parks
  ✧ Biodiversity / biochemistry

✧ Rural Development
  ✧ Social forestry, community forestry, group action

✧ Traditional commercial forestry operations

Partner Reinsurance Company Ltd.
Issues We Must Address in Environmental Projects

Forestry environmental projects ...

- operate in immature, opaque & fragmented markets
- investor funds operating in unfamiliar sectors (forestry)
- perceived risk profile is very high - financiers are risk-averse
- sustainability requirements conflict with traditional financial hurdle rates/expectations.
- thus absence of J.V. money in forestry as require high hurdle rates
Can Reinsurers (R/I) Provide an Investment Catalyst?

✧ So that...
- secure investors’ / banks’ funds in the projects
- reduce risk of failure
- increase viability of lower IRR projects
- raise project market profile and quality
- raise security of environmental products & services
- hence raise liquidity

✧ Yes if...
- assess & model risk profile for probability of achieving targets
- comprehensive project overview linked to enhanced management capacity
- a multi-line, multi-year approach
Assess Risk Profile Directly or On Basis of SFM type Certification (e.g. FSC)

**POLITICAL**
- sovereign risk on international trades / concession rights etc.
- forestry policy

**CLIMATIC**
- natural hazard risk profile, frequency, severity and catastrophe planning…
- natural variability, attritional loss and interaction with projected climate trends

**SOCIO-ECONOMIC**
- property rights to land, and crops etc.
- local equitable stakeholding established
- understanding, royalties, employment, guardianship, sustainability / SFM certification?

**TYPE & MANAGEMENT**
- eligibility for insurance?
- pre-feasibility - secure data and analysis? (robustness relies on technical analysis of productive capacity)
- projected product output calculations
- implementation & management skills
- Certificate of Project Design?

**FINANCIAL**
- does the project make economic sense - otherwise moral hazard?
- how strong is the operator’s credit profile i.r.o. long term provision?
- Legal ownership of non-timber products / credits

**PROJECT ENVIRONMENT RISKS**

Risk Frequency Quantum & Profile
What Benefits Accrue if Insurers Provide Long Term Protection?

SFM, certification and insurance can together deliver significant economic benefits given the current nature of the forestry sector & can provide a catalyst for long term sustainable rural development.

FINANCIAL FLOWS

Countries → Sectors → SFM Project → Certification → Insurance protection → Markets

Risk Management
What are the benefits required?

- Guaranteed performance (fibre yields, Carbon CERUs)?
- Project performance risks (fire, earthquake etc.)
- Financial returns
- Unbudgeted costs
- Delivery of carbon credits (CERU) 2008-2012 to buyer?
- Down stream liability (water quality, land slide, infrastructural damage)
- Catastrophy events (hurricanes, earthquake)
- Loss of access to markets following loss of Certification?
PRe Require Projects to Test Need and Service

- Currently have quoted for 10 year product yield guarantee as support for bank finance for potential CDM
- Working on substantial US forest investment fund protection
- Looking at forestry wind protection and wind farm generation capacity in Ireland
- Would like to develop a global sustainable forestry facility
Contacts

Partner Reinsurance Company Limited
phil.cottle@partnerre.co.uk
Ignacio Murtagh (pras@arnet.com.ar)

PartnerRe works with all brokers but in particular:
Aon Carbon
justin.mundy@aon.co.uk