Making Forests Competitive
Insurance Solutions for Permanence?

UNEP FI at CoP 14 of the UNFCCC in Poznan, Poland 9 December 2008
Agenda

1. ForestRe
   - Who we are & our mission
   - Global experience

2. Project Risks
   - Trends
   - Insurable risks
   - Nature of natural catastrophic risk
   - Modelling risk & Buffers
   - Monitoring the forest

3. A carbon delivery insurance?

4. Next steps
1. Dedicated Forestry Insurance

- Established to bring knowledgeable underwriting to global forestry
- Lloyd’s policies are issued (A+ rated)
- Consults with other reinsurers to risk profile and design insurance policies
- To insure:
  - Commercial timber & Natural forest
  - Pulp & paper plantations
  - Timberland investment & schemes,
  - Industrial tree crops (rubber, oil palm etc.)
  - Ecosystem services
Global Forest Risk Experience
Forestry carbon projects ...

- operate in immature 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 a definable role for insurance to de-risk investment

Key= Insurable risks
The Risk Trend is Global

Fire:
Spain 1996 – 2006
`The trend is global having significantly more fire events’,

Wind storm losses are expected to increase with more volatile climate

This is the nature of catastrophic risk, the 50 year or 100 year event – beyond the time line of most forest managers...but carbon?
Infrequent
- Insurers now estimate exposure up to a 250 year return period for accurate risk pricing (data dependent)
- Losses due to 20 - 50 yr events add significantly to the average value of losses and are important for carbon permanence.

Severe
Example Australia
Pre-2002 annual mean
= 1.17% of area lost
Post-2002 annual mean
=4.92%
Called the ‘Loss cost’
Plan for the ‘Cat’ Event.
Determining the Risk/Buffer

- Insurers can model some natural hazard and some other risk to assess buffer capacity required

- Using Monte Carlo simulations with appropriate adjustments for largest losses and catastrophe event loadings – a fire example:

<table>
<thead>
<tr>
<th>Risk Class</th>
<th>Buffer Range</th>
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<tbody>
<tr>
<td>High</td>
<td>40-60%</td>
</tr>
<tr>
<td>Medium</td>
<td>20-40%</td>
</tr>
<tr>
<td>Low</td>
<td>5-20%</td>
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</tbody>
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Source: Voluntary Carbon Standard Guidance for Agriculture, Forestry and Other Land Use Projects
3. Project Insurance – A Wish List

Objectives include

- Insure against multi-perils (political, credit, natural hazard, theft, pest and disease etc.)
- Guarantee the delivery of a forestry carbon credit at a given time in the future. i.e. true indemnity or ‘carbon for carbon’ (permanence)
- Long term policies (50 years)
- Pay premiums with carbon credits

Benefits

- Enable projects to have smaller buffers so improving early cash flows
- Raise value of forestry carbon due to fungibility with carbon in trading systems
Current Insurance Possibilities

Realities are... 

- A guarantee the delivery of a forestry carbon credit within a possible rolling 5 year term
- Limited initial peril cover: natural hazards + political, credit (if major project investor)
- Maximum initial policies 5 years?
- Pay premiums with carbon credits at pre-insured values
- Premiums loaded for catastrophic combination of events at 1:100 to 1:250 year occurrence
- Limited data will push up uncertainty & costs
- Insurers have options on project carbon buffers
- Insurer-risk can not be ignored (failure)
4. Next Steps: Conditions Precedent

**Insurers require**

- All locations, areas, boundaries, carbon stocks and base lines (reference emissions rates if REDD) and boundaries
- Management details and risk mitigation plans
- Community involvement details
- Relevant local loss and growth data for the forest areas
- An initial critical mass of forestry to provide a sufficient buffer pool
- To monitor the forest for all forest disturbance and to provide evidence of stock changes and when insurable event occurs (Satellite monitoring)
- To build a portfolio
Monitoring Forests

Source: Eyre Consultants / sarmap
How to Contact FRe

Phil Cottle
Managing Director
phil.cottle@forestre.com
+44 (0) 207 347 5736
+44 (0) 776 989 5048

Gordon Steward
Business Development Director
gordon.steward@forestre.com
+44 (0) 207 347 5733
+44 (0) 0788 292 5680

www.forestre.com