Forestry Climate Change & Selling Carbon

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Topics

- Introduction to Environmental Services
- Forestry and Climate Change
- Land Economics, Forestry & Agriculture
- Values of GHG
- Selling Carbon
- Additionality
- Leakage
Trees!
Looking closer
Environmental Services

- Resource services
- Ecological services
- Amenity services
- Social services
- Biospheric services
Biospheric services

- Habitat
- Climate protection
  - Albedo
  - Evaporation
  - GHG
  - Carbon sequestration
Forests have four major roles in climate change:

- they currently contribute about one-sixth of global carbon emissions when cleared, overused or degraded
- they react sensitively to a changing climate
- when managed sustainably, they produce wood products as a benign alternative to high imbed carbon products and fossil fuels
- they have the potential to absorb about one-tenth of global carbon emissions projected for the first half of this century into their biomass, soils and products and store them - in principle in perpetuity.
Agriculture & Forestry

Farm
• Sale of produce
• Subsidy
• Investment (land)
• Rent
• Taxation
• Philosophy
• Sport

Forest
• Sale of produce
• Grants
• Investment
• Taxation
• Sport
Comparisons (NPV 3% @ 10yrs)

Farm business as usual

- Arable farm £1,400/ha
- Beef farm £1,500/ha
- Hill Sheep farm £140/ha
- Hill Sheep farm £140/ha

Change to forestry

- Broadleaf wood - £680/ha
- Incl. land values - £4660/ha
- Conifer wood £530/ha
- Incl. land values - £730/ha
- Conifer wood £1140/ha
- No land value change
- Native wood £860/ha
- No land value change
# Values of Green House Gasses

<table>
<thead>
<tr>
<th>Code</th>
<th>Species</th>
<th>YC Range</th>
<th>Trade Value £/tCO²</th>
<th>PV traded £/tCO²</th>
<th>Purchase value £/tCO²</th>
<th>Purchase £/tCO²/ha</th>
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<tr>
<td><strong>Treasury</strong></td>
<td>n/a</td>
<td>n/a</td>
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<td>1</td>
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<td>YC 4 - 6</td>
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<td>NS/SP/EL</td>
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<td>£2.82</td>
<td>£2.26</td>
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<td>4</td>
<td>NMBL/EL/SP/DF</td>
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<td>NK</td>
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<td>NK</td>
<td>£2.36</td>
<td>£512**</td>
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<td>6</td>
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<td>£2.36</td>
<td>£414</td>
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Selling Carbon

- Who buys?
- What are they looking for?
- Can you deliver it?
- Security?
Consider

- Site
- Climate
- Species
- Rotation
- Accuracy
- Risk
Making an Application

- Client details
- Project details
- ESC
- Yield predictions & future management
- Standard incomes & expenditures
- Additionality
- Models
Additionality

- Financial Additionality
- Environmental Additionality
- Legal & Regulatory Additionality
This presentation was funded by the Scottish Government as part of its Public Good Veterinary and Advisory Services