Forestry: a sectoral response to climate change

OECD Conference

Wilton Park

Sussex, UK

21 – 23 November 2006

Carbon sequestration as a forestry opportunity in a changing climate

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Marine, geological, terrestrial and silvicultural carbon sequestration

EcoSecurities Group Plc

EcoSecurities is a leading company in the business of sourcing, developing and trading carbon credits in the global carbon market.

Founded in 1997, EcoSecurities' project portfolio today comprises of:

- 22 offices over 20 countries, 190 employees
- Registered world's 1st CDM project in 2004
- Structured the 1st project to have carbon credits issued - La Esperanza, October 2005
- Its consulting division was voted "the world's leading greenhouse gas advisory firm", by readers of Environmental Finance Magazine, 2001/02/03/04/05

ROLE OF FORESTS
- ECONOMIC -

- Timber production
- Reconstituted wood
- Chemical products
- Energy/wood/charcoal/fluid
- Animal fodder and forage
- Human food, medicinals
- Carbon sequestration/storage

Imports to the UK
Leading industries £ millions in 2002
(Office of National Statistics)

Industry	£ millions
Road vehicles	28,394
Clothing	9,792
Petroleum and products	8,838
Metal manufactures	4,481
Beverages	3,021
Wood products	2,649
Toilet preparations	2,490
Footwear	2,363
Tobacco products	1,447
Coal, gas, electricity	1,005

ROLE OF FORESTS

- SOCIAL-

- National economic development
- Standing capital
- Employment generation
- Income generation and diversity
- Risk reduction
- Counter seasonality
- Gender equality
- Diet diversity and human health
- Animal health
- Reduction of artificial inputs

ROLE OF FORESTS
- ENVIRONMENTAL -

- Soil conservation and improvement
- Water quantity, quality and flood control
- Climate and weather amelioration
- Site rehabilitation and restoration
- Biological diversity conservation

The Changing Face of Forestry

1950s	Industrial wood volume
1960s	Industrial wood quality
1970s	Industrial pulp/paper quality
1950-90s	Non-wood products
1980-90s	Support agriculture and human welfare
2000s	Environmental impacts and benefits

George Hartig
1785

“All wise forest management must…have woodlands valued…and endeavour to utilize them as much as possible but in such a way that later generations will be able to derive at least as much benefit from them as the present generation claims for itself.”

Carbon reduction and coping with change

Reduction at source

Capture and storage

Adaptation

Reduction at source

Efficiency - industry, transport and domestic

Cleaner technologies

Efficient and conservative use

Subsidies, taxes and credits

Capture and storage

- Marine and subterranean pumping, adsorption and mineralization
- Photosynthesis and storage in vegetation, litter and soil
- Reduction of deforestation and fire; reduced impact logging; conservation
- Evaluation of “avoided deforestation” – (compensated reduction) – UNFCCC CoP Nairobi November 2006
- Fuel substitution

Reducing emissions from deforestation

Direct – protected areas

Indirect – increase agric. productivity
- agroforestry
- markets
- recycling

Social and economic aspects

Reducing emissions from forestry practices

Reduced impact logging

Fire management and suppression

Fuel and material substitution

Adaptation

Silvicultural treatment

Exploration /conservation of genetic variation

Genetic evaluation (species/provenance)

Exotics

Changes in site, environment, pests and diseases, invasives, management, markets and uses

Selective improvement of traits and adaptability within populations

The Kyoto Protocol

- The Kyoto Protocol puts the UN Framework Convention on Climate Change (UNFCCC) into operation.
- Legally binding commitment for 39 developed countries to reduce their greenhouse gas emissions by an average of 5.2% relative to 1990 levels.
- 'First commitment period'. Annex 1 countries to achieve reduction in emissions target by 2008-2012.
- 'Flexibility Mechanisms' allow developed countries to achieve their targets in different ways: Emissions Trading, Joint Implementation (JI), and the Clean Development Mechanism (CDM)

Kyoto Protocol

Emissions Trading

- Allows countries to trade parts of their allowed emissions
- Assigned Amount Units (AAUs

Joint Implementation

- Project investment crediting
- Emission Reduction Units (ERUs)

Clean Development Mechanism

- Credits for investments in developing countries that contribute towards sustainable development and reduction of GHGs
- Certified Emission Reductions (CERs)

The Clean Development Mechanism (CDM)

CDM has 2 key goals:

To assist developing countries who host CDM projects to achieve sustainable development.

To provide developed countries with flexibility for achieving their emission reduction targets, by allowing them to take credits from emission reducing projects undertaken in developing countries.

Certified Emission Reductions (CERs)

Each CDM project will be quantified in standard units (CERs), expressed in tons of CO_2 emissions avoided.

These ‘carbon credits’ will be traded as a commodity in a new environmental market.

CDM and forestry

The role of forestry in meeting the objectives of the Climate Change Convention has been contentious throughout the negotiations.

Bonn, July 2001: decision that afforestation and reforestation are the only eligible land-use activities in the CDM. These may be large or small-scale; single or multiple species; pure forestry or on farm systems.

Avoided deforestation – CoP, Nairobi, November 2006

Eligible land-uses for the CDM

- Establishment of woodlots on common lands
- Reforestation of marginal areas with native species
- New large-scale industrial plantations
- Establishment of biomass plantations
- Small-scale plantations by landowners
- Agroforestry
- Rehabilitation of degraded areas through tree planting or assisted natural regeneration

CDM Rules and Conditions

- Only areas that were not forest on 31 December 1989 are likely to meet the CDM definition of afforestation or reforestation.
- Projects must result in real, measurable and long-term emission reductions, as certified by a third-party agency. Carbon stocks generated by the project need to be secure over the long term and any future emissions that might arise from these stocks need to be accounted for.
- Emission reductions or sequestration must be additional to any that would occur without the project.
- Each CDM project's management plan must address and account for potential 'leakage'.

CDM projects - opportunities

- Identify promising project types
- Develop baselines which can also be used in the future
- Establish rules and conditions for investment
- Establish requirements for project development
- Link conditions for CDM investments with the country's regulations and incentives for foreign direct investment and trading
- Prepare CDM programme or investment plan
- Establish clear focal point for foreign investors to learn of CDM opportunities
- Advertise through trade fairs, exhibitions, and websites of national institutions

Non-Kyoto systems

EU Emissions Trading Scheme January 2005

UK Energy White Paper 2001

UK Renewables Obligation and Non-Fossil Fuel Orders

Voluntary schemes

Quantifying Greenhouse Gas Projects

- Definition of the boundaries of the project
- Description of the baseline and additionality
- Quantification of baseline emissions and crediting period
- The emissions and uptake of carbon by the project
- Adjustment for leakage and risk

Carbon Trading and Currencies

National Emissions Trading - Assigned Amount Units (AAU)

Joint Implementation Market - Emission Reduction Units (ERU)

Clean Development Mechanisms Market - Certified Emission Reductions (CER)

Land use, land use change and forestry (LULUCF) - Removal Units (RMU)

Business

(New Oxford Dictionary of English, Clarendon Press, Oxford, 1998)

A person's regular occupation, profession or trade

The practice of making one's living by engaging in commerce

Drivers, incomes and costs

Market driven drivers and income streams:-

Timber, other products, biomass, carbon storage

Non-market drivers and costs:-

Government regulation, recreation/tourism, biodiversity

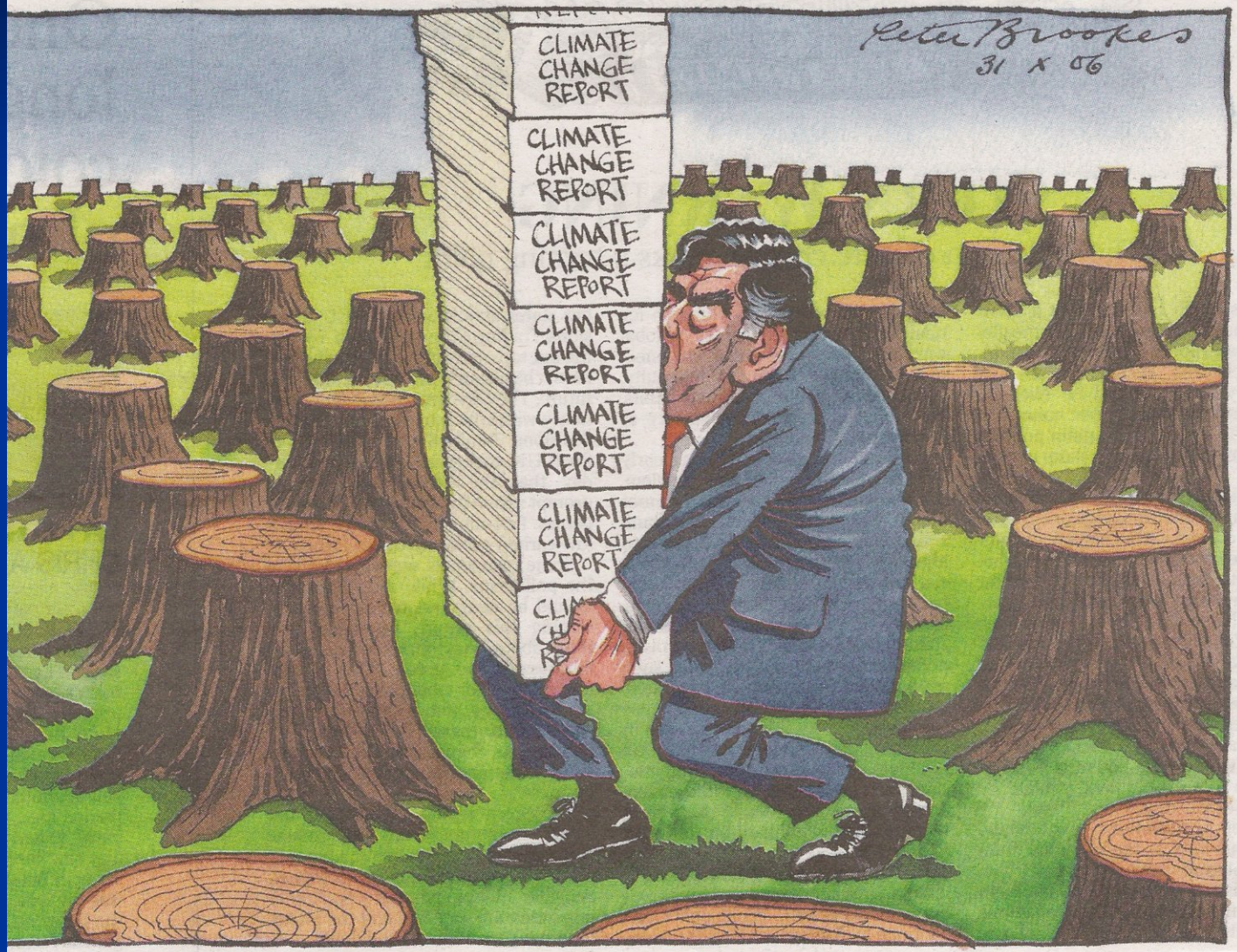
Ten pounds per tree or per ton?

Activities – advise/consult; prepare/manage; certify/monitor; educate/train

Business

(New Oxford Dictionary of English, Clarendon Press, Oxford, 1998)

A series of events, typically a scandalous or discreditable one.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