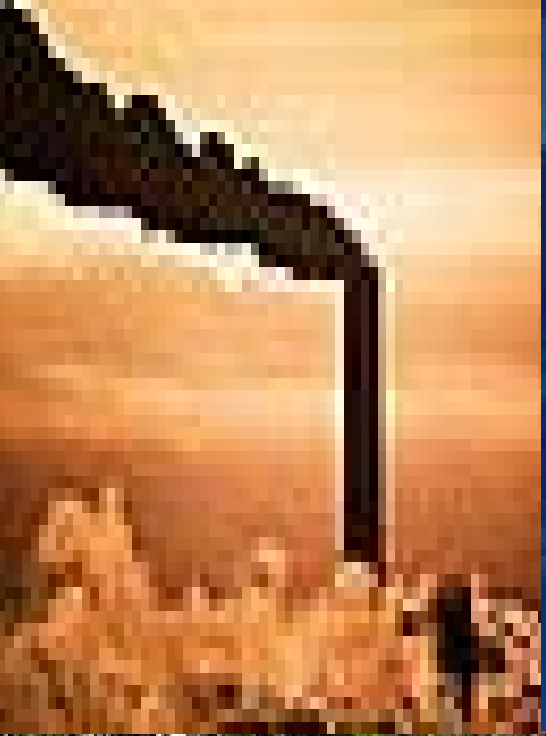
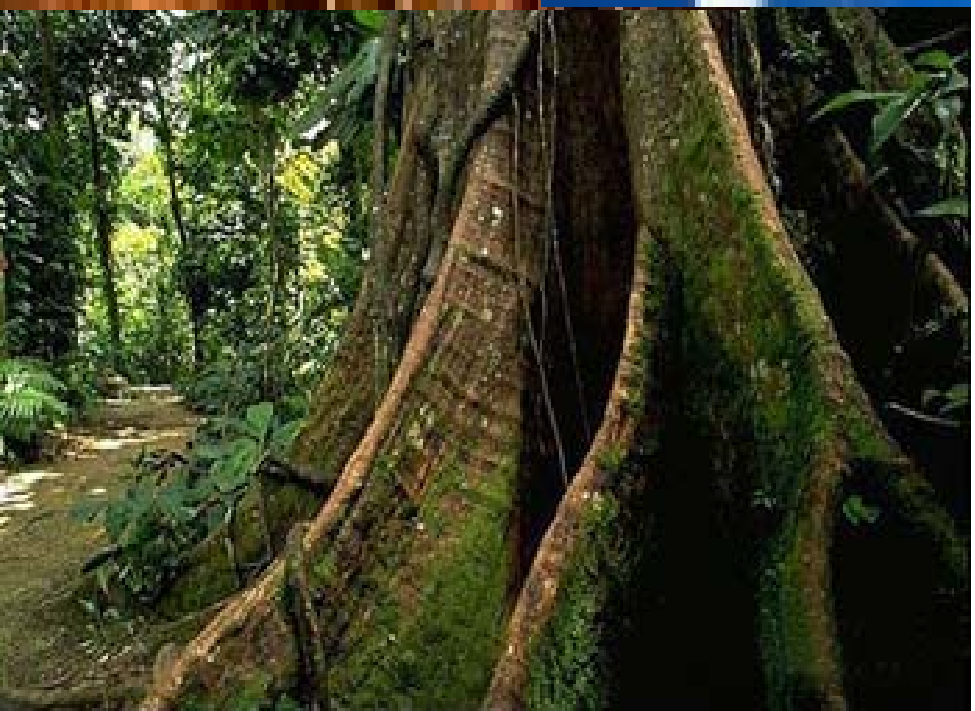




ECO SECURITIES

Canadian Forest Service Plantation Investment Forum

"Private Sector Investment into Plantations – the Case of Greenhouse Gas Mitigation"

22 March 2005
Toronto, Canada

Robert Tippmann

EcoSecurities Ltd., UK

Key Points

1. **Why Investing in Carbon Forestry or Buying Carbon Credits - The Policy Framework**

2. **Current Trends in the GHG Markets, Particularly in View of Carbon Credits from Land use, Land-Use Change and Forestry**

3. **How Does Investment in Carbon Forestry Work?**

4. **Investment Options and Models for Carbon Forestry – Examples**

5. **What Drives Private Sector Investment into Plantations – The Case of Carbon Credits**

ECO SECURITIES

1. Why Investing in Carbon Forestry or Buying Carbon Credits - The Policy Framework

United Nations Framework Convention on Climate Change (UNFCCC)

- The UNFCCC deals with the developments caused by the anthropogenic greenhouse gas (GHG) emissions leading to the phenomena described as climate change.

Ultimate objective of the UNFCCC

- Art. 2: “Stabilization of GHG concentrations”.
- Reductions of GHG emissions to 1990 levels until 2000.

The Conference of the Parties (COP) at its 3rd meeting in Kyoto, Japan, in 1997 decided on:

- Binding commitments to reductions in emissions of 6 GHGs (CO2, CH4, N2O,and 3 CFCs) for industrialized countries (Annex-I countries).
- Meeting targets by either domestic measures or through supplementary use of flexible mechanisms abroad.

1. Why Investing in Carbon Forestry or Buying Carbon Credits - The Policy Framework

The three flexible mechanisms of the Kyoto Protocol:

- **Emissions Trading (ET) under Art. 17:** Exchange or trade of surplus emission reduction credits (AAUs) between Annex B countries or entities (industrialised countries or economies in transition).

- **Joint Implementation (JI) under Art. 6:** Annex B Party or entity invests in or buys emission reduction credits (ERUs/RMUs) from an emission reduction/removal project in another Annex B country.
  - Afforestation, reforestation, and forest and land-use management activities

- **The Clean Development Mechanism (CDM) under Art. 12:** An Annex B Party or entity invests in or buys emission reduction credits (CERs) from an emission reduction/removal project in a developing country (Non-Annex I/B country).
  - Only afforestation and reforestation

1. Why Investing in Carbon Forestry or Buying Carbon Credits - The Policy Framework

Domestic activities or projects under the Kyoto Protocol:

- **Art. 3.3 and 3.4:** Generation of RMUs through an Annex I Party (or entity?).
  - Afforestation, reforestation, or (avoided) deforestation, revegetation, forest/cropland/grazing land management activities.

- **National Projects in Annex B countries:** Basically a unilateral JI project in an industrialised country or an economy in transition through Art. 3.3 or 3.4 activities that would generate NRUs/RMUs.
  - Governments will have to decide approval of such project.

Non-Kyoto compliant or voluntary projects

- All projects that do not fit the (Kyoto-)bill but do comply with internationally agreed standards.

2. Current Trends in the GHG Markets, Particularly in View of Carbon Credits from Land use, Land-Use Change and Forestry

Current trends in the GHG markets:

- **EU Emissions Trading System (ETS) started in 2005:** Increasing interest in and development/implementation of CDM and JI projects (cost-effective) to comply with emission reduction targets or sell carbon credits.
  - Utilisation of land use, land-use change, and forestry (LULUCF) credits to be decided during review in 2006. However, certain governments can and will buy LULUCF credits independently from this decision.

- **Canada and Japan are also expected to introduce emission reduction measures and policies:** Canada wants to introduce an emissions trading system in 2008 with companies being allowed to use AAUs, CERs, ERUs. Japan starts with voluntary measures for the private sector, followed by binding commitments with the utilisation of CERs and ERUs. Japan also starts to purchase credits directly through a fund.

- **Voluntary, non-Kyoto compliant markets have emerged in the US and Australia:** In both countries initiatives have emerged at state-level that allow for the utilisation and trading of VERs.

2. Current Trends in the GHG Markets, Particularly in View of Carbon Credits from Land use, Land-Use Change and Forestry

Where are the known foci for LULUCF activities and credits on the demand and supply side?

- **Canada** (i.e., the Government and the private sector) is known to be in favour of using LULUCF activities (domestically and abroad).

- **Japanese Government plus private sector** will use (as well as generate) LULUCF credits to the extent possible (domestically and abroad).

- **Italy** is proactively trying to purchase also LULUCF credits through its Carbon Fund. This requires Italian (private sector) participation.

- **Further EU members** that are far behind their targets such as **Spain or Portugal** (Greece?) are expected to engage in LULUCF activities (domestically and abroad), and will allow the private sector to do so.

- **Countries with a traditionally strong forestry sector** (e.g., in Scandinavia), **plus others** when demand for credits (CERs/ERUs) is expected to further increase later on.

2. Current Trends in the GHG Markets, Particularly in View of Carbon Credits from Land use, Land-Use Change and Forestry

- **The Carbon Finance Group of the World Bank**, in particular the BioCarbon Fund and the CDCF, purchase carbon credits from LULUCF activities (Kyoto-compliant and non-Kyoto compliant).

- **The US** (non-Kyoto compliant): The California Climate Registry allows for the utilization of carbon offsets from forestry activities. The Chicago Climate Exchange does buy carbon credits from forestry projects in Brazil.

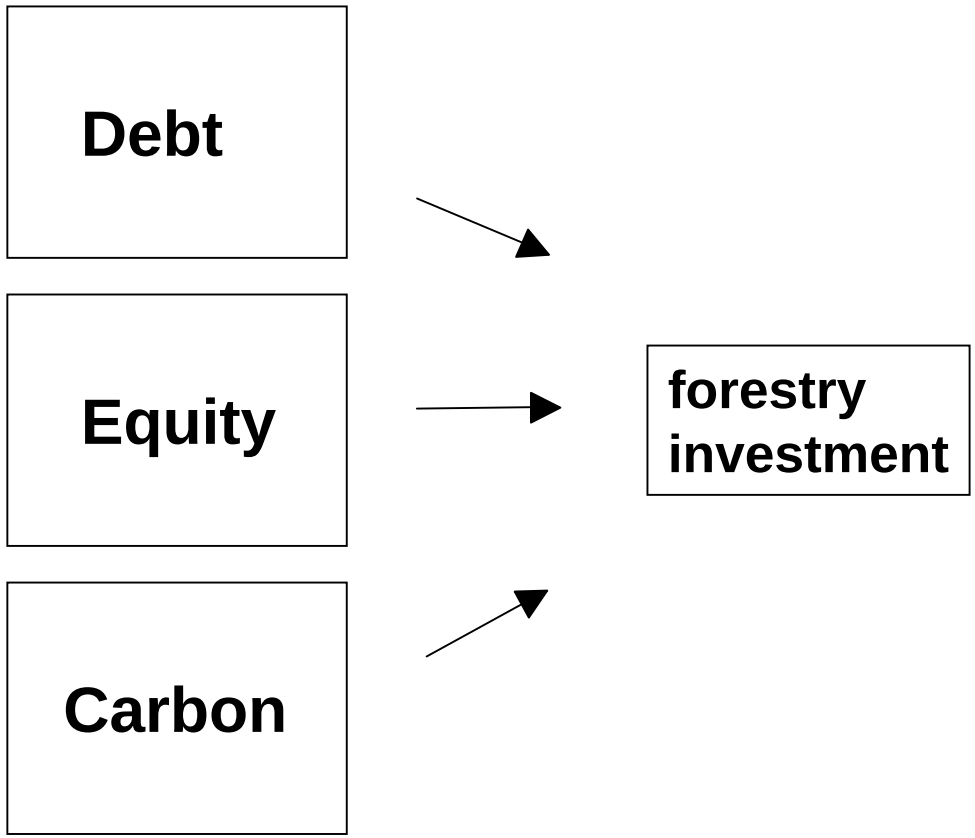
- **Australia**: The New South Wales scheme already attracted first investments into its plantation scheme from abroad (Japanese, Italian and US companies).

- In a lot of **developing countries** is a strong interest in the land use and forestry sector in CDM/carbon forestry projects, as well as the first ones are already underway.

- In **Russia** and some other countries in **Central and Eastern Europe**, and **Asia** is also a strong interest in generating and selling carbon credits from forestry activities.

3. How Does Investment in Carbon Forestry Projects Work?

Sources of capital for project finance



- Only a few projects are funded entirely on carbon credit sales only, because it is very difficult to develop a project purely based on carbon revenues.
- Most projects are based on a combination of sources of capital.
- However, it needs to be a good investment.

3. How Does Investment in Carbon Forestry Projects Work?

Additional value from "clean" land use sector projects

Forestry Investment

→ **Sales of forest products**

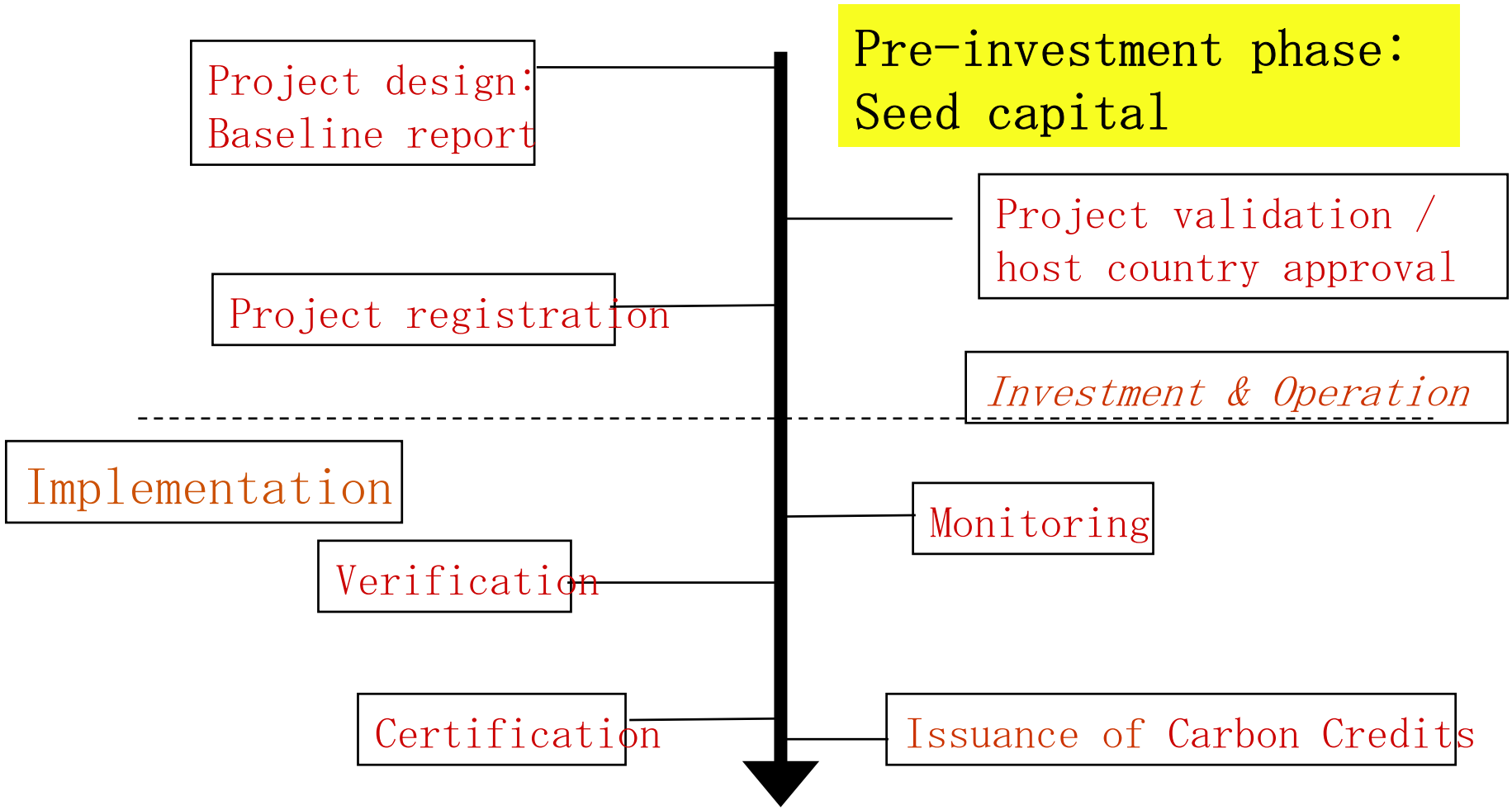
→ **Carbon Credits (and other environmental services)**

Investors require projects to be (almost) viable without carbon

ECO SECURITIES

3. How Does Investment in Carbon Forestry Projects Work?

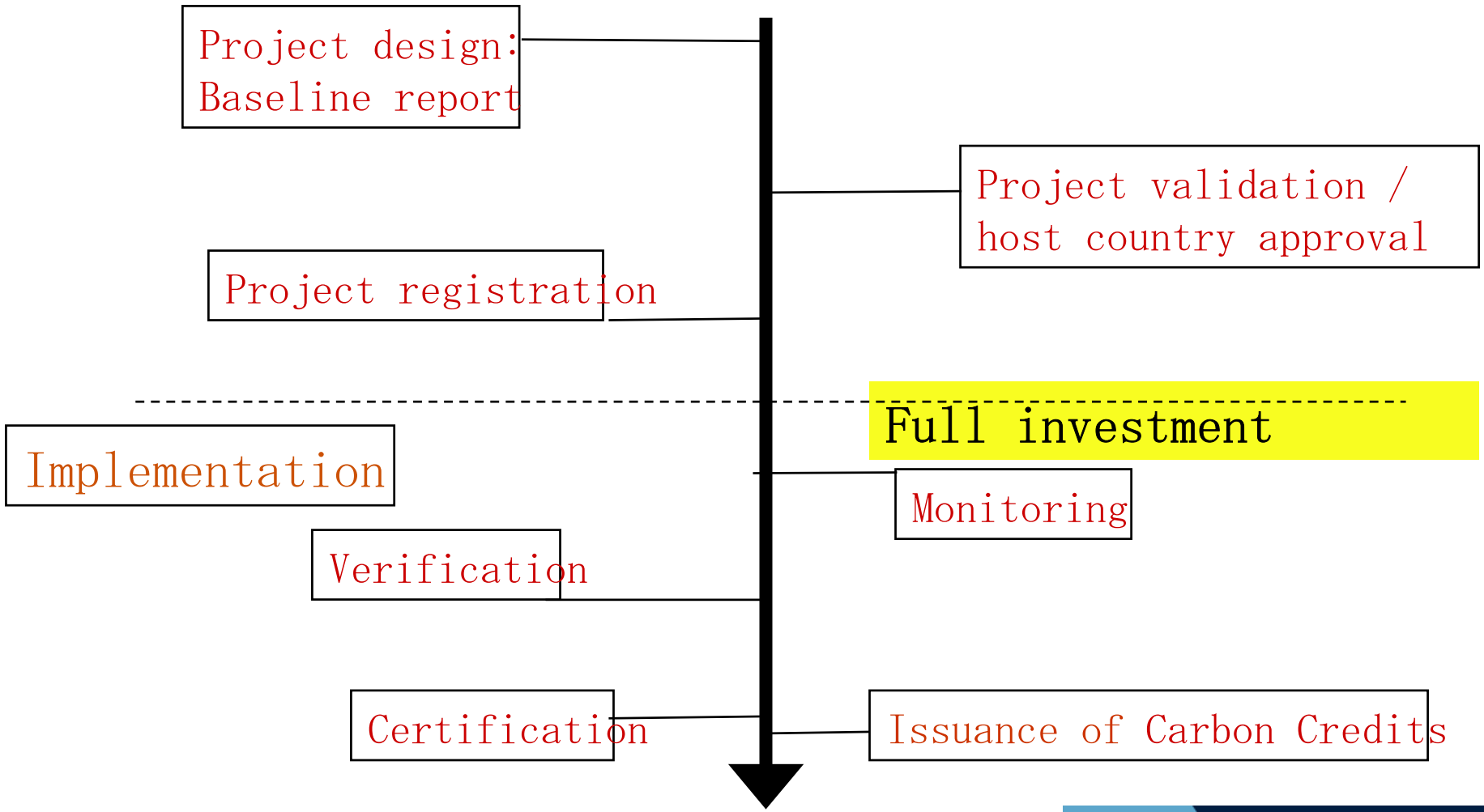
Seed capital for project preparation



ECO SECURITIES

3. How Does Investment in Carbon Forestry Projects Work?

Full investment for implementation



ECO SECURITIES

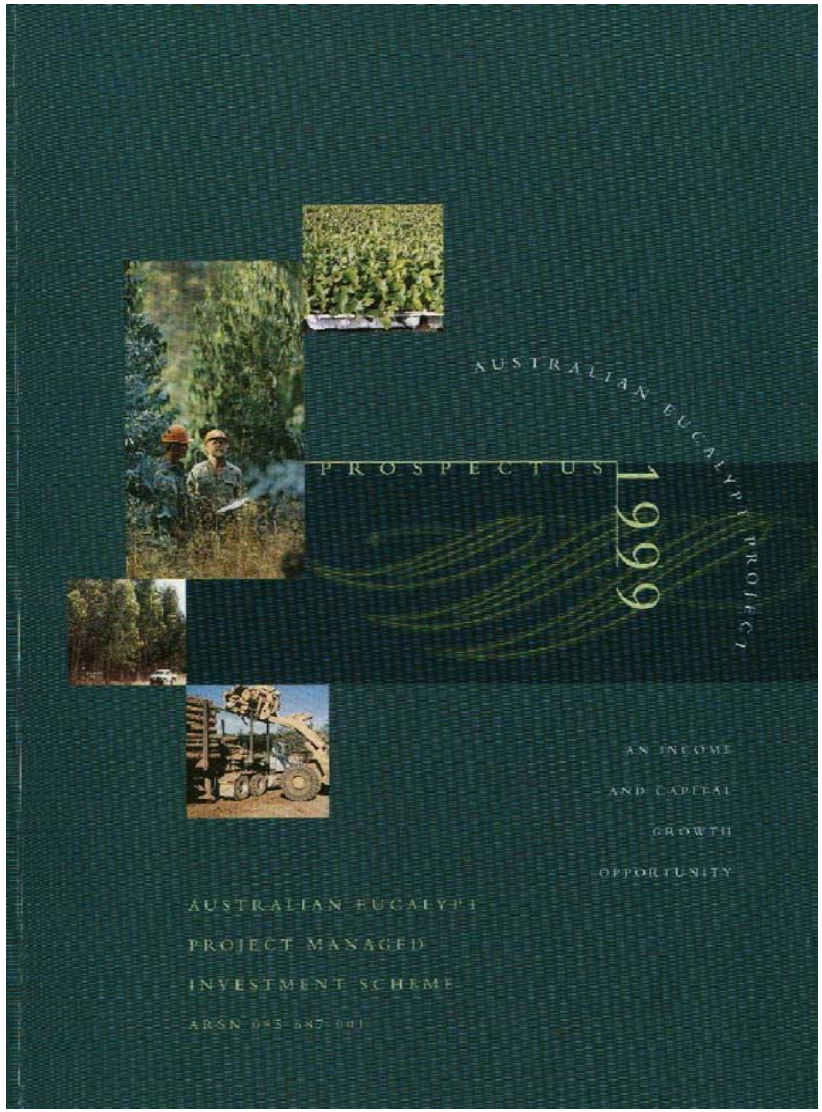
3. How Does Investment in Carbon Forestry Projects Work?

However, is LULUCF a good source of carbon credits?

Carbon and financial returns from U$1 million investment in the following activities:

	IRR (no C) %	t CO_2 generated	Cost carbon (U$/t$CO_2$)	Add. benefits
Forest conservation	0	500,000 to 7,500,000	$0.13 to 2.00	++++
For. rehabilitation and agroforestry	0-6%	180,000 to 750,000	$1.30 to 5.55	+++
Commercial plantations	6-13%	250,000 to 370,000	$2.70 to 4.00	+
Hydroelectric power plant	10-25%	50,000 to 100,000	$10 to 20.00	+

4. Investment Options and Models for Carbon Forestry – Examples



Unilateral Model

-

Western Australian Investment Fund

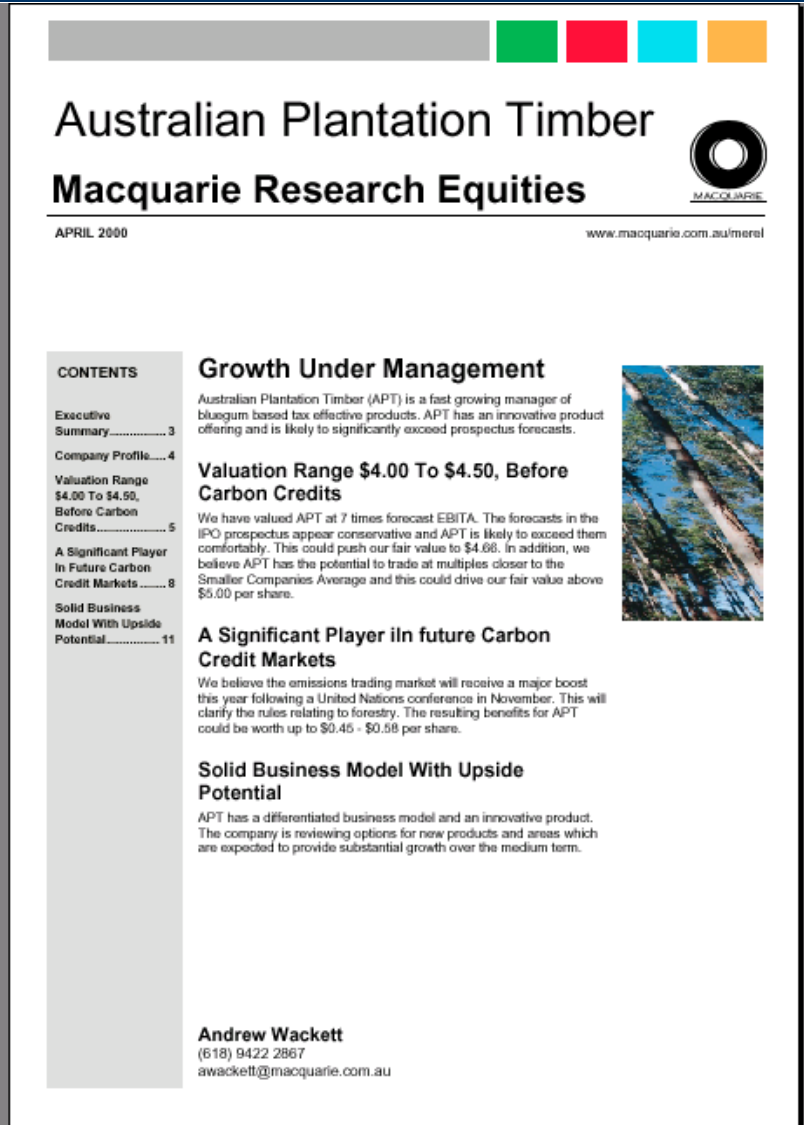
EcoSecurities

4. Investment Options and Models for Carbon Forestry – Examples

Financial structure

- A$ 140 M prospectus-based forestry investment fund, filed in the ASIC. A$ 12.5 M pre-subscribed; fully capitalized.
- Individual investors get 7.4% return tax free (equivalent to 14.5%), plus proceeds of sales of the carbon credits.
- Carbon sold as “rights to carbon credit streams” from parcels within project area. Project to be independently verified.

4. Investment Options and Models for Carbon Forestry – Examples



Australian Plantation Timber

Macquarie Research Equities

APRIL 2000

www.macquarie.com.au/mresl

CONTENTS

Growth Under Management

Australian Plantation Timber (APT) is a fast growing manager of bluegum based tax effective products. APT has an innovative product offering and is likely to significantly exceed prospectus forecasts.

Valuation Range $4.00 To $4.50, Before Carbon Credits

We have valued APT at 7 times forecast EBITA. The forecasts in the IPO prospectus appear conservative and APT is likely to exceed them comfortably. This could push our fair value to $4.66. In addition, we believe APT has the potential to trade at multiples closer to the Smaller Companies Average and this could drive our fair value above $5.00 per share.

A Significant Player iIn future Carbon Credit Markets

We believe the emissions trading market will receive a major boost this year following a United Nations conference in November. This will clarify the rules relating to forestry. The resulting benefits for APT could be worth up to $0.45 - $0.58 per share.

Solid Business Model With Upside Potential

APT has a differentiated business model and an innovative product. The company is reviewing options for new products and areas which are expected to provide substantial growth over the medium term.

Andrew Wackett
(618) 9422 2867
awackett@macquarie.com.au

The company raised more than A$ 100 m.

The first time an equity analyst includes carbon value in a stock analysis: “An additional $ 0.50 to the value of each share”.

Project structured by EcoSecurities, 1999.

4. Investment Options and Models for Carbon Forestry – Examples

The bilateral model - Sustainable Forestry Management Ltd (SFM)

- London-based global forest investment company;
- invests in a portfolio of forestry projects around the world, incorporating carbon finance;
- investments through joint ventures with local partners;
- offers investors investment returns based on forestry and carbon revenues.

4. Investment Options and Models for Carbon Forestry – Examples

- Forestry activities to be included:
  - Commercial reforestation;
  - rehabilitation of degraded lands;
  - sustainable forest management of tropical forests.
- SFM also plans investments in processing facilities and eco-tourism.

4. Investment Options and Models for Carbon Forestry – Examples

CER transactions within the own "family" – (new) opportunities for global players

- Development of a new project type under the CDM for pulp and paper forestry operations in a CDM country.
- Other operations of the group are exposed to emission reduction targets under the EU ETS.
- The forestry operations in the CDM country will feed the European operations with CERs through an internally structured transaction.
  - This is certainly subject to the rules to how and what extent forestry CERs (tCERs and lCERs) will be included in the EU ETS.
- A second option to be considered is to sell the CERs on the open market.

4. Investment Options and Models for Carbon Forestry – Examples

Using carbon credits to keep plantations for conservation purposes or shifts in the management

- Projects have been brought forward where carbon credits have been used or proposed to be used to set aside certain areas for
  - conservation purposes; or
  - the introduction of more sustainable forest management practices.

4. Investment Options and Models for Carbon Forestry – Examples

An Alternative Financing Model for the Sustainable Management of the

San Nicolas Forests

Libertad y Orden
Ministerio de Ambiente, Vivienda y Desarrollo Territorial
República de Colombia

ITTO

EMPA

Cornare

EcoSecurities

4. Investment Options and Models for Carbon Forestry – Examples

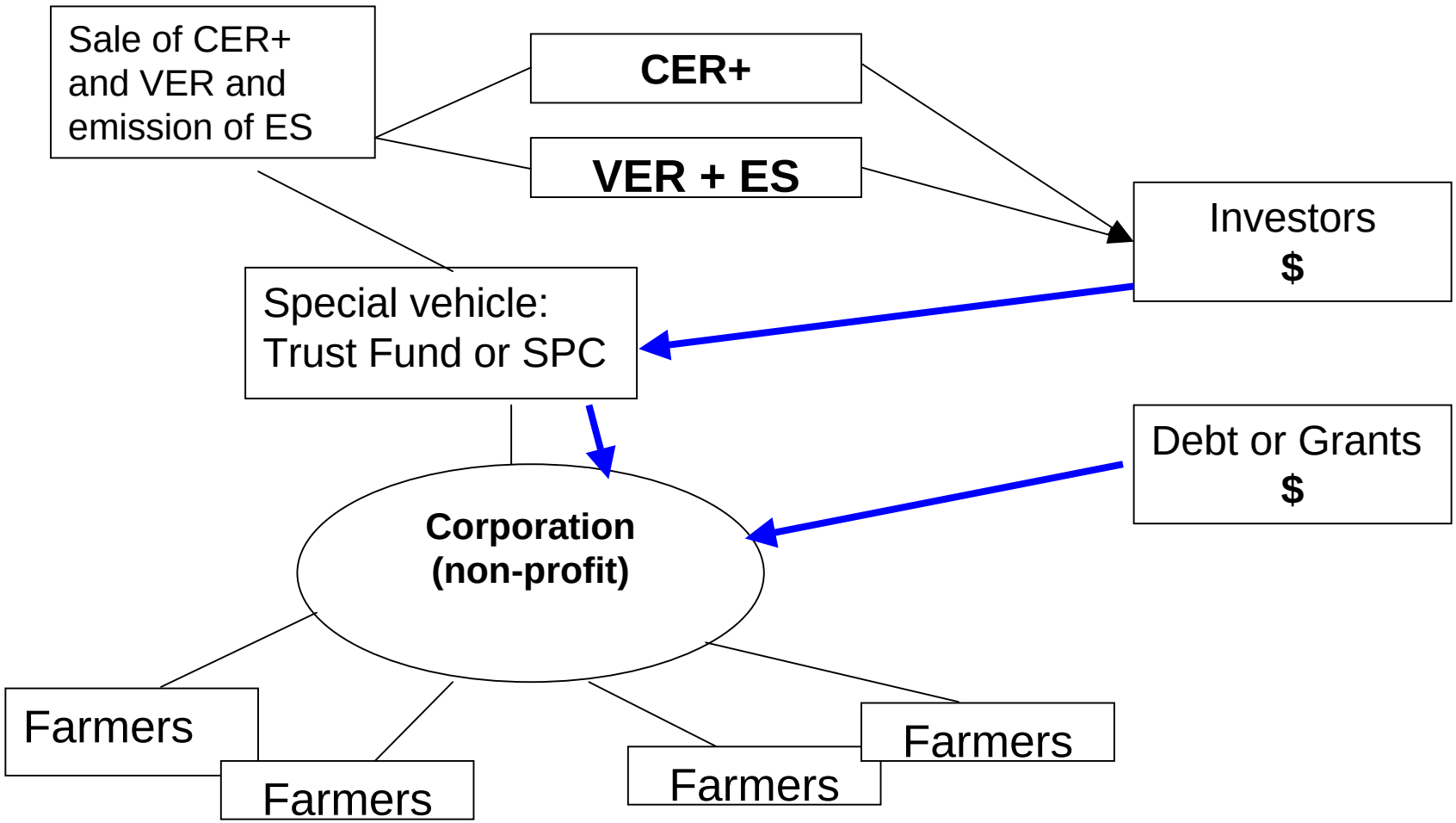
Financial instruments for the commercialisation of forest environmental services

- ✓ **Certified Emission Reductions (CER);**
- ✓ **Verified Emission Reductions (VER);**
  - ➢ voluntary market ($2 per tCO_2e);
- ✓ **Environmental shares (ES);**
  - ➢ represent all forest environmental services apart from water production and carbon sequestration;
    - quantified as 1 ES per tCO_2e;
    - added value to CERs ($CERs^+$), added on VER (VER + ES);
    - provide possibility to obtain ESRs.
- ✓ **Environmental and Social Recognition (ESR).**

ECO SECURITIES

4. Investment Options and Models for Carbon Forestry – Examples

Project structure

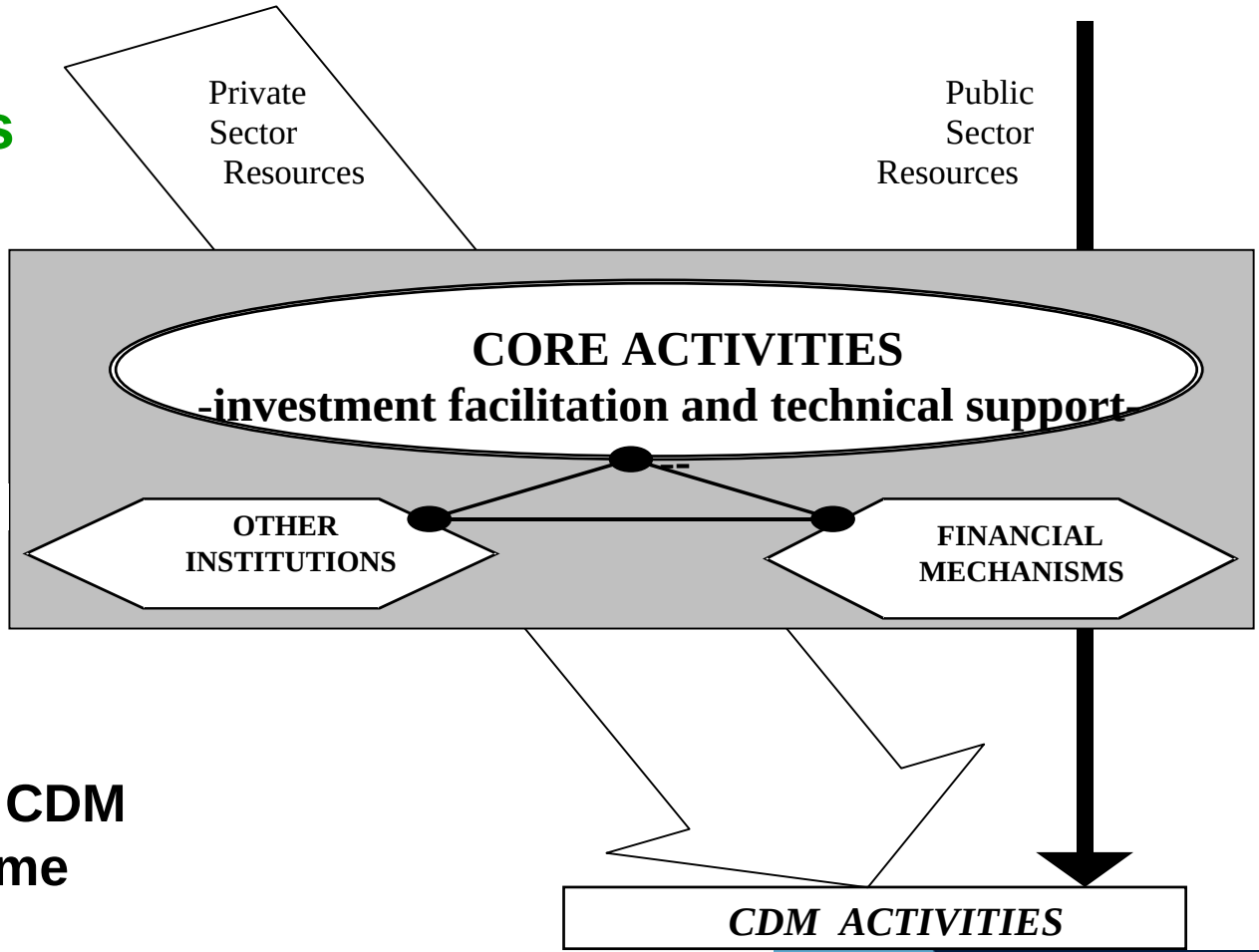


4. Investment Options and Models for Carbon Forestry – Examples

The facility-fund model - a land-use change (CDM) investment promotion and facilitation programme

2E **Carbon** **Access**

EcoSecurities-Standard Bank
Carbon Facility



Austrian Small-Scale CDM Purchase Programme

ECO SECURITIES

5. What Drives Private Sector Investment into Plantations – The Case of Carbon Credits

What is the use of carbon credits in view of private sector investment into plantations?

- Cost-effective measure to comply with binding emission reduction targets or to show voluntary commitment (companies with traditional links to forestry, as well as others).
- Make an almost viable forestry operation viable, expand current/planned new plantations, or simply try to increase revenues.
- Compensate for losses caused by shifts in management systems towards a more sustainable forest management, for example.
- Open the door to engage in ‘different’ or new project types in collaboration with others that would not have been considered before (e.g., collaborations with communities or NGOs and/or multi-component projects with other components in addition to commercial plantation activities) .

For more information please visit our website

www.ecosecurities.com

or contact:

Robert@ecosecurities.com

Tel: +44-1865-297488, Fax: +44-1865-251438

ECO SECURITIES