The Forest Dialogue
“Intensively managed plantation forestry”

A Business View on the road towards sustainable “best practice”

Peter Gardiner (Mondi)
China 2006
To avoid any confusion and to highlight some of the real issues the view is essentially aimed at the “far right” i.e. “intensively managed plantation forestry using exotic species for commercial gain”

Acknowledge the danger of general comments about a subject that can only be adequately addressed on a “site specific” basis

If there is any bias it is in favour of forestry in its widest sense.
Plantation Stepping Stones

- <100 yr history
- Wood production the only early objective
- Yields exceed “traditional” forestry norms
- Rapid expansion in S-hemisphere
- Socio-environmental issues surface
- Production and socio-environmental gains
- WSSD, SD, MDG and MEA add issues
- 2nd generation IMP forestry – quo vadis?
1. Important historical aspects

- A mere 100yrs compared to IMA crops
- Craib et. al. credited with first IMPF in S. Africa
- Substantial plantings from the 1939 depression
- IMPF well established in South Africa and New Zealand in the 1960’s
- Latin American countries (Brazil in particular) import seed and technology from SA, Aus and NZ and become “global” leaders
- 50 years of widespread global use
2. Wood Production the only initial objective

- Wall to wall plantations
- Little or no regard to ecosystem functions
- Overuse of some ecosystems
- Site species matching only vaguely understood = planting failures
- Areas of special interest ignored
- Maximize wood/fibre production
3. Yields

- Early Yields far exceed traditional European Norms (1-6 MAI vs. 10-20 MAI)
- Wide genetic base and sound breeding programs support hybrid programmes and clonal propagation
- GIS mapping and Site Species Matching
- Consistent gains in yield (cellulose essentially a product of light, water and C0²) for minimal inputs of agricultural chemicals (15-35 MAI +)
- On 4% (FAO) of global forest area plantations produce 34% of global wood
- IMPF – a high tech, high yielding business
4. Rapid expansion in S hemisphere in particular

- Early plantings - SA, NZ, Brazil <1980’s
- Later - LatAm, Indonesia, Australia
- Recently - LatAm, tropics, China
- Latest – Global companies invest in the South
5. Environmental and Social issues surface (Yin)

- Water use of plantations in South Africa and others
- Biodiversity issues
- Impact on ecosystems – natural forests, grasslands and wetlands in particular
- Mono-cultures
- Alien invasive species
- Green islands in a sea of poverty
- Capacity of rural people
6. Production and Socio-environmental gains

- Increasing yields – earlier slide
- Plantations produce 34% of global wood
- Mosaic forestry with approximately 30% set aside for conservation in SA, Brazil and other areas
- Wetland/riparian areas protected. In SA with-drawl of commercial trees and rehabilitation of significant wetlands
Fifteen vegetation classes
South Africa is a World Biodiversity Hotspot - with 3 of the World’s 33 Global Hotspots

- Rich in endemic species
- But with many Globally and Nationally Red-listed species
We Need to Harmonize Components

- Economic production (plantation forestry)
- Maintain ecosystem services (structural, compositional and functional attributes)
- Ecosystem health and integrity, including biodiversity
- Participation by local communities
The Forestry Debate - Confusion of Spatial Scales

- Plantation patch (esp. Pine) indeed impoverishing
- The important scale is that of the whole land mosaic

Can ecosystem services be maintained at the spatial scale of landscape?

Sponsored by WWF(SA)
Habitat webs

Sacrifice at the Patch level

Gain at the landscape level

Maintains evolutionary potential as well as ecological status quo
To test this question a series of studies were undertaken using;

- Butterflies (nectarivores)
- Grasshoppers (herbivores)
- Arthropods & flowers (interactions)
Arthropods on Flowers:

Berkheya speciosa, Watsonia densiflora & Kniphofia linearifolia.

Arthropod-plant interactions intact throughout network of corridors.

Even narrow corridors (20 – 100m wide) deep within afforested mosaic had high biodiversity value.
In a Nutshell:

- Quality biodiversity reaches the centre of the web
- Narrow linkages (20m) are still penetrated
- Disturbance (loss of plant structural and compositional diversity through overgrazing) is the main problem
Habitat webs in practice?

- Brazil 3.1m ha Eucalypt plantations and 1.7m ha conservation area
- Indonesia <55% plantation area – balance is conservation and community areas
- South Africa 1\textsuperscript{st} gen 70\%, 2\textsuperscript{nd} gen 55-60\%
- Supports Prof Samways rule of thumb for 2/3 intensive land use 1/3 “habitat web”
- Plantations areas and associated conservation areas - increasing contribution to global biodiversity
7. WSSD, SD, Stakeholders, MDG, MEA add more issues

- Water-Energy-Health-Agriculture (Forestry)-Biodiversity. WEHAB
- Dow Jones SD Index
- Footsie 4 Good
- World Bank/IFC sd constraints
- Certification
- Community Assertiveness
How far do we go on Social Issues?
Key Focus Areas

Health – *HIV/AIDS and community health*
“The aim of this group is, and will remain, to make profits for our shareholders, but to do it in such a way as to make a real and lasting contribution to the communities in which we operate”

Anglo American founder,

Sir Ernest Oppenheimer
Social progress a real challenge!

- Anglo American SEAT - a transparent public process
- Storo-Enso UNDP Environment and Social Impact Assessment in QuangXi
- Mondi stakeholder engagement includes “Community Engagement Facilitator” in each operational area as part of SHE team (17 CEFs for 500 000 ha)
- NWFPA freshwater agreement multi-stakeholder agreement securing local community rights
- South Africa Forestry Charter: transfer of 35% of plantation land to BEE (local people?)
- Sappi and Mondi small grower schemes
Key Focus Areas

- Community needs analysis (PRA)
- Education and skills (capacity) development
8. Partnerships: the way forward

- Aracruz and Storo-Enso – Veracel
- WWF-WBCSD Framework Agreement
- The Forest Dialogue
- SiyaQhubeka
- Multi-stakeholder HCVF process in Komi using a local NGO (Silver Taiga) as implementing agent
- Wetland delineation procedure for South Africa lead by the Forest Industry and local NGO
- China Stora Enso – Government – NGOs -community?
- Weyerhaeuser – Canadian local committees
KZN BioBase

Wattled Crane and Blue Swallow sites overlayed on Mount Shannon Plantation
Shareholding

- MONDI: 51.0+(10.8%)
- GOVERNMENT: 25.0%
- IL: 13.2%
- COMMUNITIES:
  - AMAKOSI: 5.4%
  - KHULANATHI: 5.4%

2004
Ecoboundary between plantations and the GSWP World Heritage Site
Delineation of Wetlands that feed Lake St Lucia (critical freshwater for the estuary)
Conclusion
What do plantations offer society (Yang)

- Sustainable products
- Profits
- Jobs
- Skill development
- Taxes
- Sustainability
- Stewardship of land and freshwater systems
- Global/national influence
- Rural stability/development
Sustainability
comparisons with ?

- Cash crops
- Other plantations –
- Sugar
- What land based industry is the “benchmark”
Thank You