



**THE CD PROMOTES INDONESIAN  
CLEAN ENERGY MARKETS**



## THE CD WORKED IN ASIA, AFRICA, AND THE MIDDLE EAST SINCE 1983



- ❑ **Financed over 5000 Small & Medium Enterprises backed by business counselling & vocational training, alongside banks.**
- ❑ **Supported rural energy projects including windmills, solar energy, biogas, fuel efficient stoves, and agro-forestry linked to energy including wood fuel production.**
- ❑ **Worked alongside major private state and sector companies including PDVSA (Venezuela) ; Fyffes (Belize) ; and with the sugar industry (Swaziland & Jamaica).**



## CD FOCUS ON RENEWABLE ENERGY SECTOR AND INDONESIA 1998-2008



- ❑ **CDI helped start up ASEAN Centre for Energy and EU Asian Energy Facility (EAEF) with €22m budget.**
- ❑ **CDI evaluated COGEN II. Set up ASEAN COGEN III on waste to energy with €25m EU budget.**
- ❑ **We promoted energy from waste from rice husks ; oil palm ; sugar ; and municipal waste.**
- ❑ **Also from industrial waste, wood waste & waste water.**
- ❑ **These technologies, plus mini-hydro, wind & solar cover most renewable energy options.**
- ❑ **Latest activities on biofuel promotion therefore fit in with past activities.**



Wood-waste fired boiler

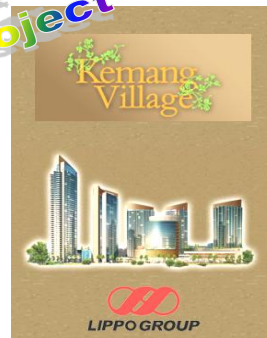
## CD RECENT PROJECTS :-



- Small Power promotion with ASEAN Centre for Energy
- Major study on restructuring Jamaican sugar industry.
- Monitoring of PLN Power Purchase Agreements
- Financing model for gas power station (10 -35 Mwe).

Small  
Power  
Project

Power  
Purchase  
Agreement



## CURRENT PROJECTS, BEING IMPLEMENTED OR DEVELOPED :



- Biofuel road map for Indonesia including :
  - economic & social models for small producers
- ASEAN energy subsidy reform road-map
- Selected IPP development





SUSTAINABLE  
BIOFUEL DEVELOPMENT  
RESEARCH WORKSHOP

2. Introduction to main issue

February 4-5 2009

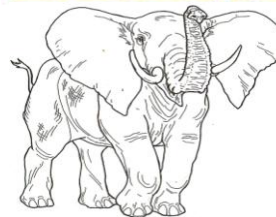
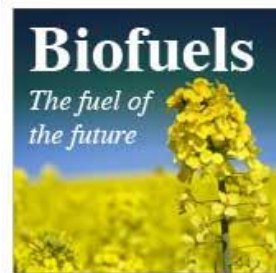
by Dr Terry Lacey



**BIOFUELS – GREAT WHITE HOPE  
OR GREAT WHITE ELEPHANT ?**



- ❑ **2007 GOI targeted 17% of all energy to come from Renewables by 2025**
- ❑ **Business Watch said by 2007 - 60 agreements with 14 foreign & 26 domestic investors for US \$9-10 billion plus \$3 bn. from local banks. www. Asia Sentinel**
- ❑ **Compares to \$12.4 bn in Jakarta Post 4.2.08**
- ❑ **By January 2008 at least 17 biofuel companies had postponed projects**



## NEW ROAD MAP NEEDED FOR BIOFUEL INDUSTRY



- ❑ **ABG. Linking researchers with business and government**
- ❑ **Needs more integrated applied research concepts that include economics**
- ❑ **Socio economic models for large plantations and SMEs**



## MAIN MARKETS FOR SUSTAINABLE BIOFUEL :



- ❑ **FUEL FOR TRANSPORT**
- ❑ **FUEL FOR POWER**
- ❑ **FUEL FOR LOW LEVEL VILLAGE DEVELOPMENT**



**PROBLEM IS HOW TO STRUCTURE THEM :**

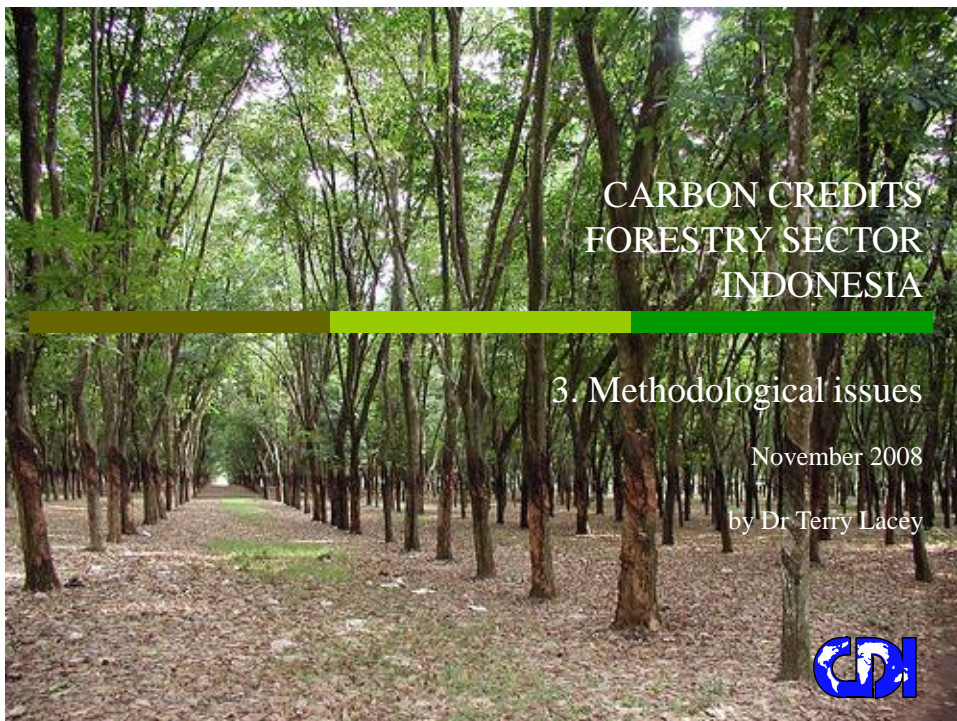
- ❑ **LARGE SCALE**
- ❑ **MEDIUM SCALE**
- ❑ **SMALL SCALE & VILLAGE LEVEL**



## EMERGING MARKETS HAVE TO BE CONSTRUCTED :-



- **REGULATORY FRAMEWORK**
- **PRICING MECHANISMS**
- **This feeds into Kyoto II**



## PROBLEMS FOR INDONESIA



- ❑ Indonesia and Brazil excluded from the first experimental Forest Carbon Partnership Facility FCPF \$82m program but Nepal , Laos and Vietnam included.
- ❑ Follow up to COP 13 at Bali in Indonesia dominated by Ministry of Forestry coalition via FORDA with Indonesia Forest Climate Alliance (IFCA) in coalition with World Bank, UK DFID, Germany GTZ and Australia
- ❑ Australia taking active steps to Central Kalimantan (ex Mega Rice peatland) plus NGO initiatives in Eastern Indonesia and Papua,
- ❑ What we need is more independent research projects looking at baselines and methodologies to help influence regulatory framework.



## GENERAL RESEARCH REQUIREMENTS



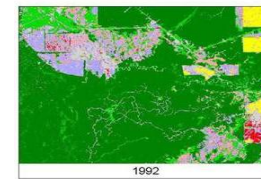
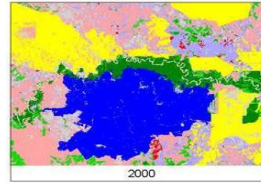
- ❑ Available data on Carbon stocks and land use change
- ❑ Identify key drivers for deforestation and degradation
- ❑ Mechanisms for carbon markets, management of REDD payments, legal and policy framework changes needed



## SPECIFIC RESEARCH REQUIREMENTS



- Detailed expertise on land use change.
- Rules of existing schemes for forestry VERs and identification of VER generators, sellers, buyers.
- Positioning on niche markets for REDD generators, sellers, buyers.



## BASIC CARBON CREDIT CONCEPT APPLIED TO FORESTRY



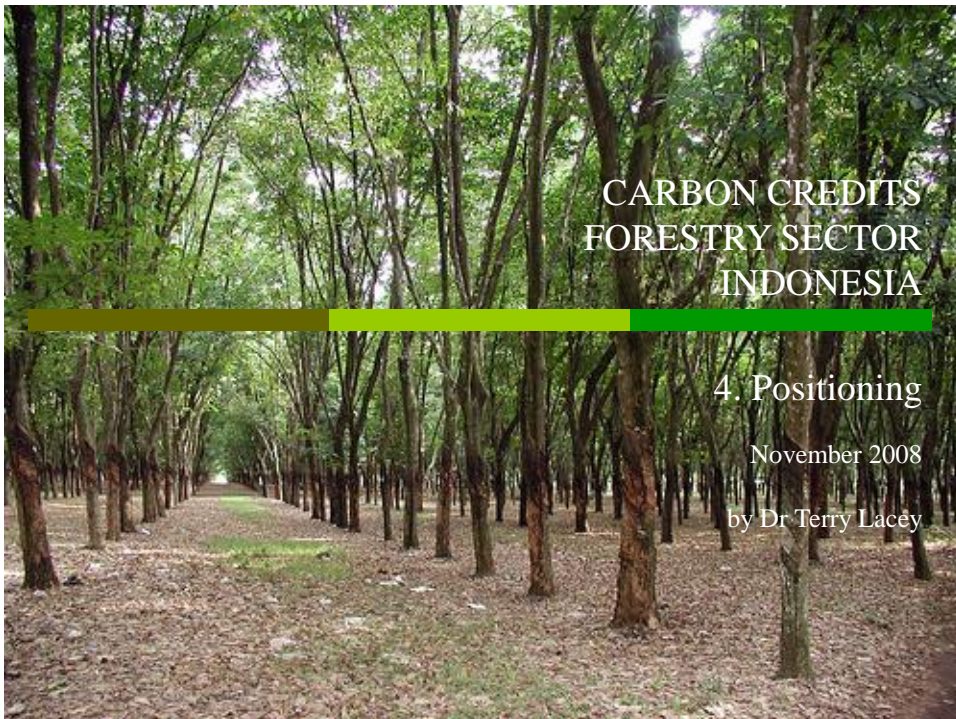
- Baseline data
- Calculation of BAU – Business as Usual
- Negative impact of BAU
- Benchmarks
- Emissions reduction strategies
- Monitoring
- Certification
- Selling REDD carbon
- Managing carbon payments



## ROLE OF CORPORATE SOCIAL RESPONSIBILITY



- Many carbon off-set VER purchasers prefer to buy from local projects under the umbrella of CSR projects or NGOs.
- A commercial consultancy or VER broker can position as advisor or broker for such schemes.



### CARBON CREDITS FORESTRY SECTOR INDONESIA

#### 4. Positioning

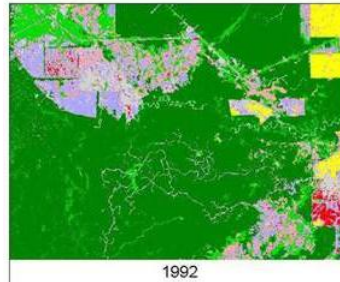
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## OPTIMUM POSITIONING



- To do detailed research using Government & donor research funds
- To combine funded research with promotional activities to influence the regulations
- To do pilot projects using research funding and selling VERs while preparing for REDD CERS



### Legend

- High density forest
- Low density forest
- Timber plantation
- Oil Palm plantation
- Mosaic of shrubland and small holder plantation
- Mosaic of grassland and cultivation
- Bare Soil
- Burn Scar

## TARGET TYPES OF FORESTRY



- PRIMARY FOREST
- SECONDARY FOREST
- PEATLAND RECOVERY SCHEMES
- PLANTATIONS
  - RUBBER
  - SUGAR
  - CPO



## FINANCING PROJECT DEVELOPMENT



- Initial positioning costs money
- CD will set up grant applications
- CD (and any partners) will need some core funding to generate R&D budget
- 12-18 months to generate first VER
- 4-5 years to generate first REDD



PT. NEWMONT  
PACIFIC  
NUSANTARA

**PT INCO**



## STRATEGIC CONCEPT FOR CARBON CREDIT FORESTRY MARKET



- Start with NGO research programs
- Advocacy and dissemination on regulatory framework
- Move from transitional grant based and VER carbon-offset program to CERs and REDD.



## PARTNERSHIP PROSPECTS

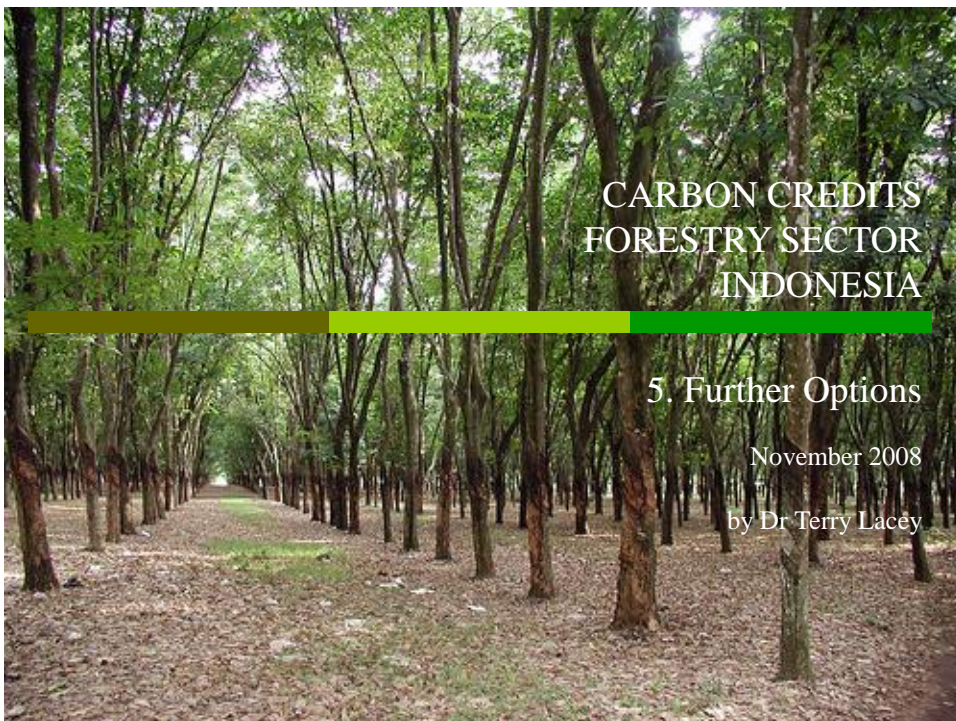


### CD ALREADY HAS :-

- ❑ **NGO status and can build non profit coalitions**
- ❑ **We are already funded to build research clusters, but not enough (yet)**
- ❑ **Some links with central & regional government, NGOs, private sector & communities**

### CD NEEDS :-

- ❑ **Front up finance to help cover structuring costs & development costs – but without them we can still manage...tighter**
- ❑ **Over stretched but can fund bigger teams by Q1 and Q2 2009**
- ❑ **Joint venture vehicle later for forestry sector and can contribute finance 2009-2010**



## CARBON CREDITS FORESTRY SECTOR INDONESIA

### 5. Further Options

November 2008

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## PARTNERSHIP PROBLEMS



### DISADVANTAGES OF PARTNERSHIP :-

- ❑ Risk giving information away and get nothing back
- ❑ Well positioned, why share ? Why not sit tight ?
- ❑ Dont need to divert attention unless good reason

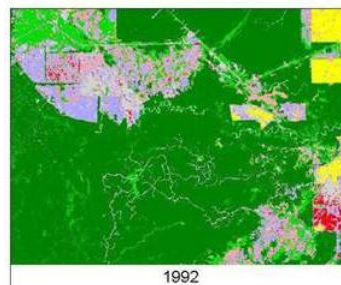
### WHAT CAN A PARTNERSHIP BRING THAT WE NEED :-

- ❑ Cash in the bank , help finance start up of R&D
- ❑ Deliver main thrust to forestry research cluster
- ❑ Guarantees, assurances , risks ?

## FUNDED RESEARCH TRACKS



- ❑ FORESTRY CARBON PARTNERSHIP FACILITY
- ❑ INDONESIA FORESTRY CLIMATE ALLIANCE – MOF AND NGOs ETC
- ❑ TRACK THREE



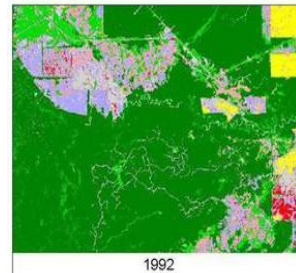
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## AGENDA

- Introduction
- Government road map
- Biofuel & climate change
- Biofuel and social policy
- Biofuel finance & investment
- Main policy problems
- Conclusions



## AGENDA

### BIOFUEL & CLIMATE CHANGE

- Introduction to REDD
- REDD (COP 13 to Kyoto 2)
- Establishing the base line
- Impact on land use change
- Organization of market

