

# The 'Monitoring' function of NFMS for REDD+: Going beyond MRV

## Bangkok

15<sup>th</sup> October 2013



## NATIONAL FOREST MONITORING SYSTEM

MONITORING

MRV

Satellite Land Monitoring System

Web Interface

Community Monitoring

Other Forest-Related  
Monitoring Systems

National Forest  
Inventory

GHG Inventory

For  
monitoring  
and reporting  
on **REDD+**  
activities

For assessing  
national area  
change over  
time (**Activity  
Data**)

System to  
provide  
information on  
Safeguards  
(SIS)

# The Monitoring function, in contrast with MRV...



- Is crucial to establishing what particular activities (policies/measures) are effective at addressing drivers of Deforestation and Degradation
- Draws on a wide range of potential elements:
  - Satellite Land Monitoring System
  - Forest inventory for community forests and commercial forest management units
  - Management activity records
  - Records of use/sale of forest products and services
  - Social, economic and biodiversity assessments



# In contrast with MRV...

- Generates information that is necessary for good forest management, regardless of REDD+. Well managed and regulated forest sectors already generate such information
- Information generation often falls to forest rights-holders and managers, including Indigenous Peoples and Local Communities, where applicable



# 1. Open access database on forests and REDD+ activities



- National Forest Inventory plot data
  - generally fully or partially restricted. All NFI data should be made available for REDD+
- Land classification
  - maps showing land use, as interpreted from SLMS and ground truthing, must be readily accessible
- Forest management plans and activities,
  - including those under national REDD+ programme, voluntary projects
- Open channels for feedback and correction
- Information technology
  - makes transparency cheaper and easier (and makes restriction of information harder)



National Forest Monitoring System  
Democratic Republic of the Congo



2010

Feedback

English

Français





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Layers Selected layers

- Base Layers
- Administrative Areas
- REDD+ Initiatives
- REDD+ Registry
- Forest area and forest area change
- Other
  - Plots
  - Protected Areas
  - Logging Concessions
  - Hydrography
  - Ecoregions
  - Roads
  - Settlements



Legend





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Information note Satisfaction survey Disclaimer



English Français

Legend

Scale = 1 : 2M

## 2. Monitoring implementation of REDD+ activities



- Voluntary REDD+ projects, REDD+ demonstration activities and, later on, implementation of REDD+ activities under phase 3,
  - all based on plans available on the open-access database
- This does not guarantee that these plans are followed
- Potential causes for failure to implement:
  - poor enforcement, insufficient resources, poorly designed plan, lack of consultation etc
- Continuous monitoring of implementation
  - allows identification of problems, and delivery of solutions
- Maintenance of physical records,
  - audits, site visits, SLMS

# Forest Monitoring for REDD+: Deter (2004)

UN-REDD  
PROGRAMME



Empowered lives.  
Resilient nations.

DETER - Sistema de Detecção de Desmatamentos em Tempo Real - Microsoft Internet Explorer

Arquivo Editar Exibir Favoritos Ferramentas Ajuda Endereço http://www.obt.inpe.br/deter/ Ir

Coordenação-Geral de Observação da Terra - OBT

Ver/View Recompôr Imagens Satélite Base Cartografica Mapas Temáticos Tamanho da Tela

Modis 08 junho 2004/Rios Principais S05:00:00 O53:42:00

**DETECÇÃO DO DESMATAMENTO EM TEMPO REAL NA AMAZÔNIA LEGAL - DETER**

**Parâmetros Básicos**

Data Primeira Observação: 2004-06-22  
Data Última Observação: 2004-06-22  
Estado: PA  
Base Operativa/Ibama: TODAS  
Satélite: MODIS 01  
Faixa de Área: Maior que 25 ha  
Mostrar queimadas: Não

**Por Região (opcional)**

Norte: 8.0  
Oeste: -74.0 Leste: -44.0  
Sul: -18.5

Clique em "Ver/View"

**Gráficos**

Tipo: Político  
Histograma

**Procurar Município**

Nome:   
Estado: TODOS  
Ordenar: Alfabeticamente  
Procurar

Ajuda...

S05:18:00 O54:06:00

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Modis 22 junho 2004 Rios Principais

S05:00:00 O53:42:00

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# Forest Monitoring for REDD+: Deter (2004)

UN-REDD  
PROGRAMME



Cadastro - Microsoft Internet Expl...

Arquivo Editar Exibir Favorit >> Endereço

| VALOR                       |  |
|-----------------------------|--|
| Lat                         | -5.1366                                |
| Long                        | -53.9210                               |
| LatGMS                      | S 5 8 11.89                            |
| LongGMS                     | O 53 55 15.73                          |
| Area Km2 / Ha               | 62.4 / 6238.5                          |
| ra/Date-Time/Fecha-Hora     | 2004-06-22                             |
| Satélite/Satellite/Satélite | MODIS-01                               |
| Município/City/Localidad    | Altamira                               |
| Estado/State/Provincia      | PA                                     |
| Unit/Area de Conservación   |  |
| ho arquivo/formato Shape    | 0.71 MBytes                            |
| Download                    | <a href="#">Deter_20040622_shp.zip</a> |

Internet

Tempo Real - Microsoft Internet Explorer

Endereço <http://www.obt.inpe.br/deter/>

Coordenação-Geral de Observação da Terra - OBT

Recompôr Imagens Satélite Base Cartografica Mapas Temáticos Tamanho da Tela

22 junho 2004 Rios Principais S05:00:00 O53:42:00

S05:18:00 O54:06:00



# Forest Monitoring for REDD+: Deter (2004)

UN-REDD



Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) Field Control Document

Estado/State/Provincia PA

Unidade/Unit/Area de Conservación

Arquivo/Formato Shape 0.71 MBytes

Download [Deter\\_20040622\\_shp.zip](#)

Internet

Clique em "Ver/View"

Gráficos

Tipo:

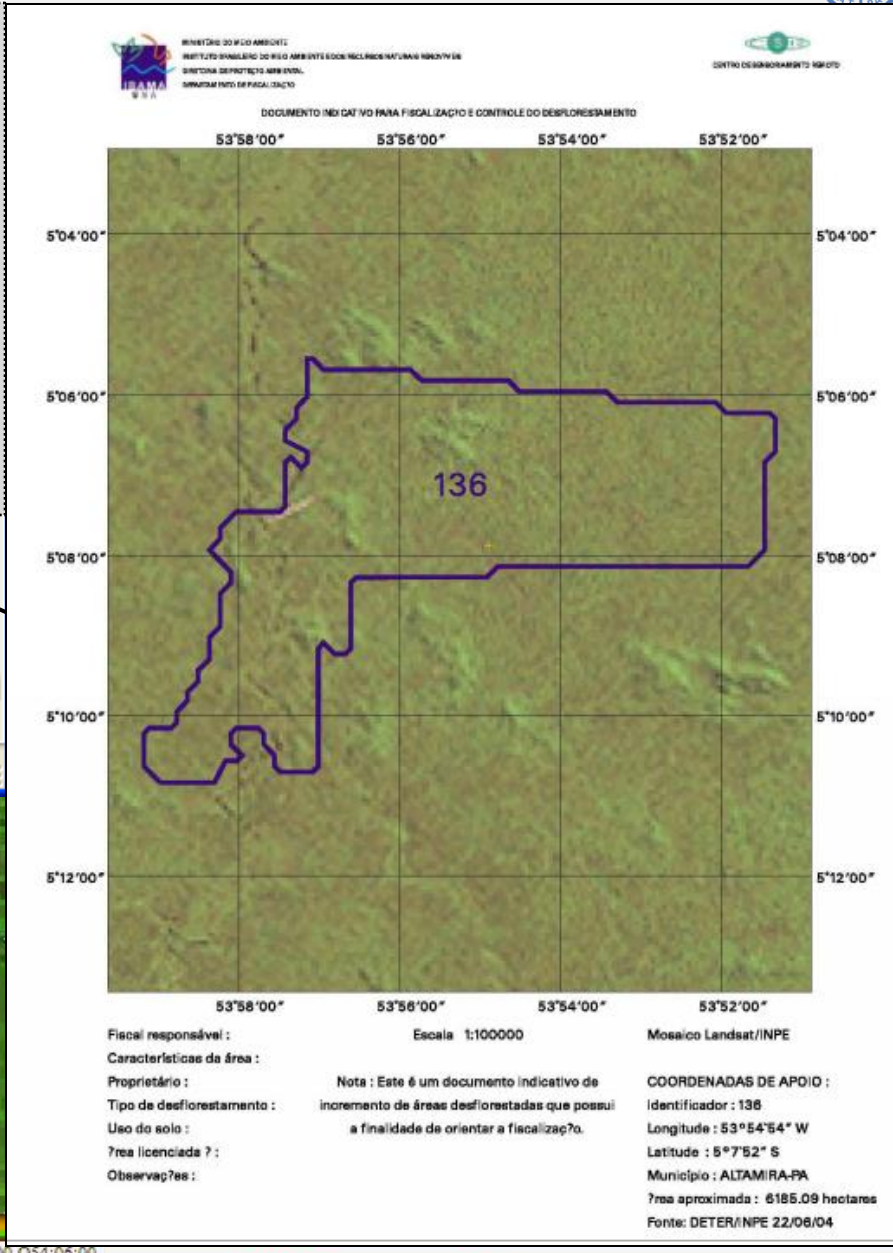
Procurar Município

Nome:

Estado:

Ordenar:

[Ajuda...](#)



da Tela

05:42:00

rio Novo

rio Novo

rio Novo

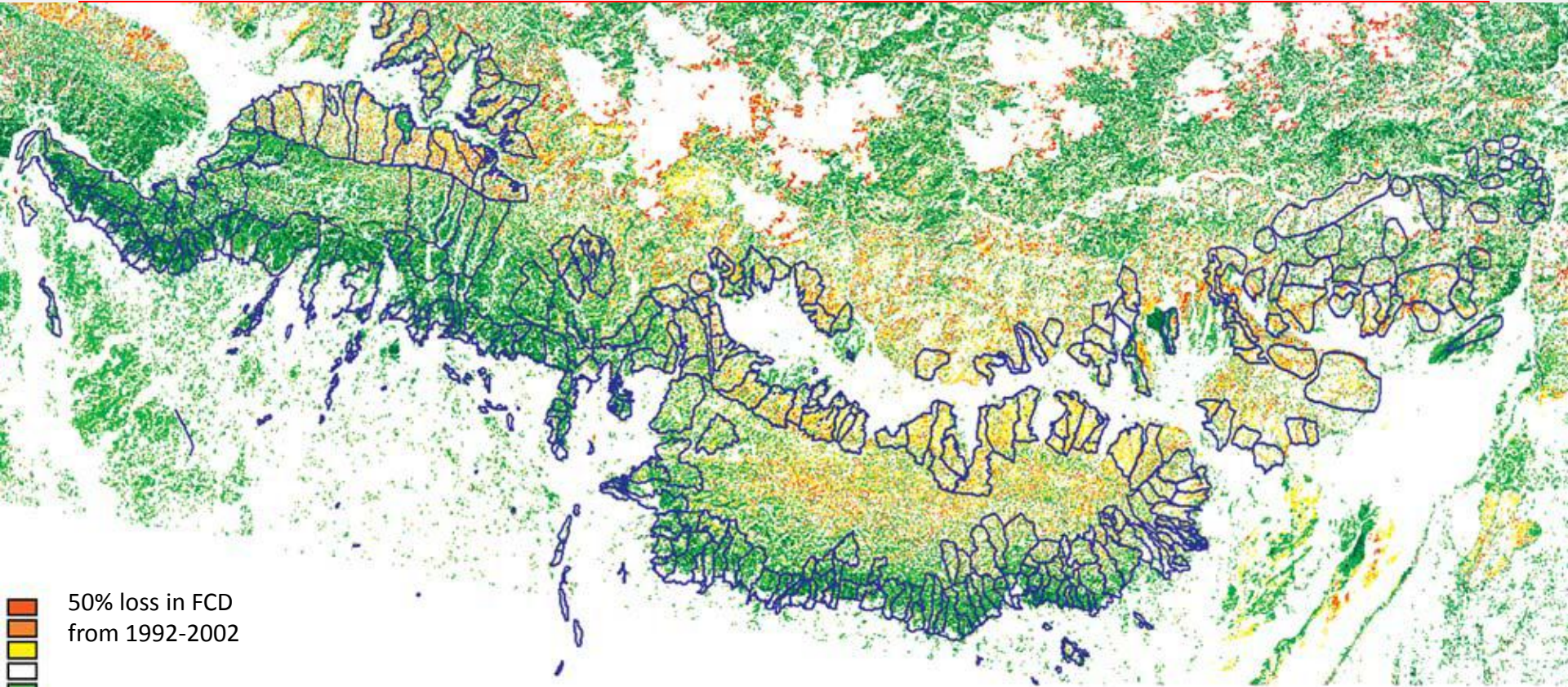
rio Encravado

## 3. Monitoring the impact

# of REDD+ activities on biomass

- NFI under the MRV function does not necessarily include plots covering all specific strategies for implementing REDD+ activities
- SMF activities, for example, could include sustainable fuelwood/timber extraction in community-managed forest and in state-managed forest.
- Which strategy is more effective for REDD+, in terms of emission reductions?
- Which strategy is more cost effective for forest officials and managers (including IP/LCs) to invest in?
- Regular forest inventory by FMU; SLMS





50% loss in FCD  
from 1992-2002

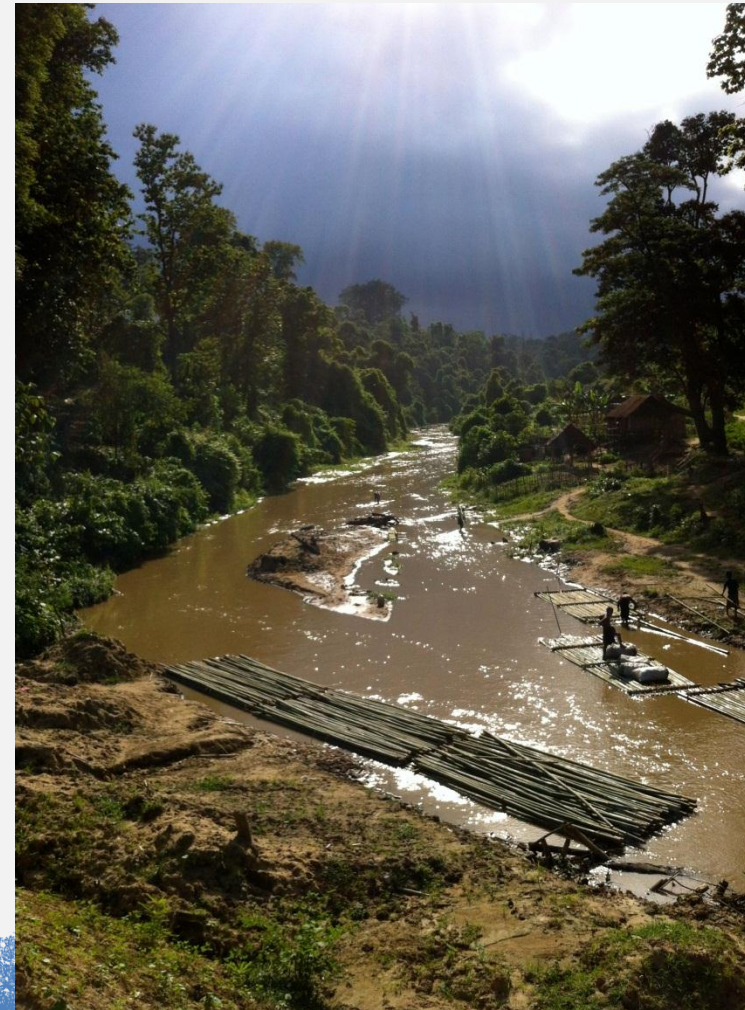
50% gain

“Return of the Churia Forests”, Vickers and Rana, 2005

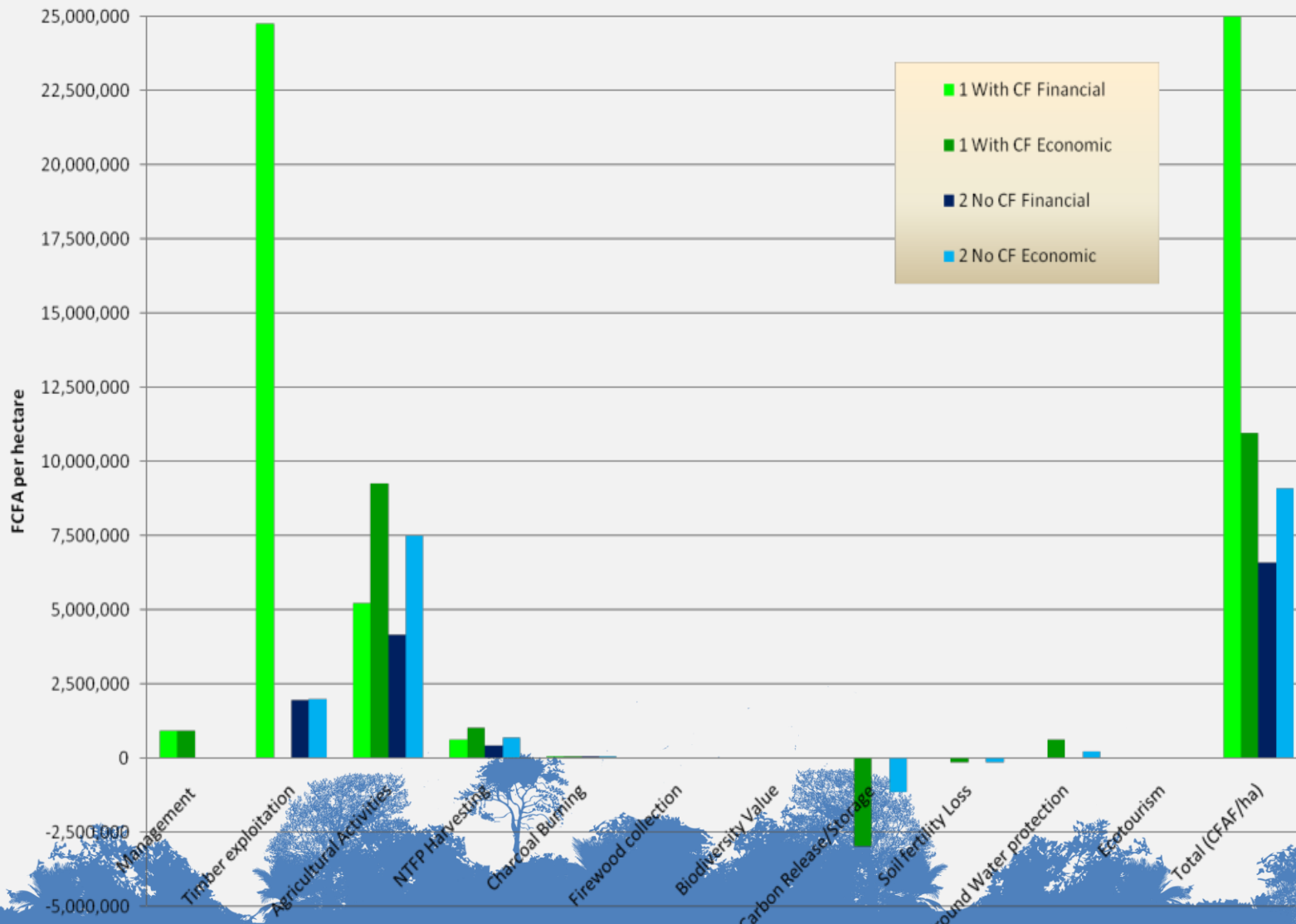




- REDD+ activities will only be viable and sustainable in the long term if they have a neutral or net positive impact on local livelihoods
- Collection of data on such impacts, though not obligatory, is crucial to assessment of demonstration activities and to design of effective REDD+ strategies
- Records of use/sale of forest products and services, socio-economic surveys
- Data may also be of use for Safeguard Information Systems



Sum cost -benefit scenarios : With CF and Without CF



# Methods for Cameroon CB study

- random household questionnaires (25% village population), semi-structured interviews stakeholders & beneficiaries, market surveys, observation
- Financial, economic and environmental cost and benefit analysis
- 2 scenarios extrapolated to 25 year CF period:
  - Scenario 1 = Current exploitation activities
  - Scenario 2 = “Without community forest’ situation
- Distinction between **financial** and **economic costs and benefits**:
  - **Financial**: market priced costs and revenues from activities
  - **Economic**: Includes non-marketed incomes (incl. household consumption) & opportunity costs of activities: Biodiversity value, Carbon Release/Storage, Soil fertility Loss, Ground Water protection

« Costs, Benefits and Impacts of Community Forestry in Cameroon »,

V. Ingram, E. Beauchamp, G. Lescuyer, M. Parren, C. Njomgang, A. Awono, CIFOR, 2010



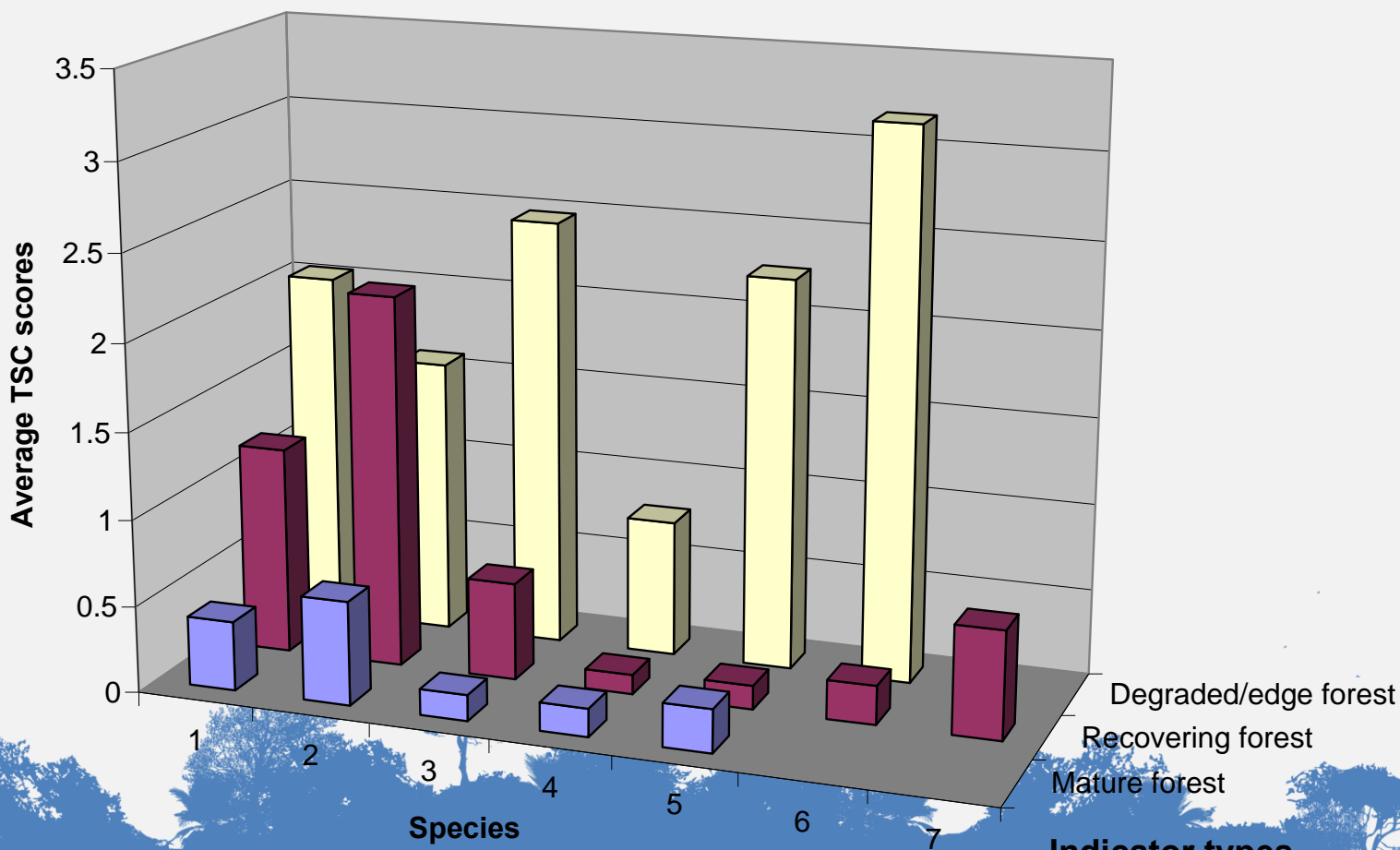
# Monitoring impact of REDD+ activities on biodiversity indicators

- When biodiversity conservation is a stated objective of forest policy
- Expensive, intensive work
- Incorporate BD indicators into NFI, or conduct FMU/CF-specific monitoring
- Participatory monitoring including:
  - CF/FMU inventory
  - Indicator species surveys e.g. Timed Species Counts of birds
  - Sale/use records of products
  - Participatory mapping

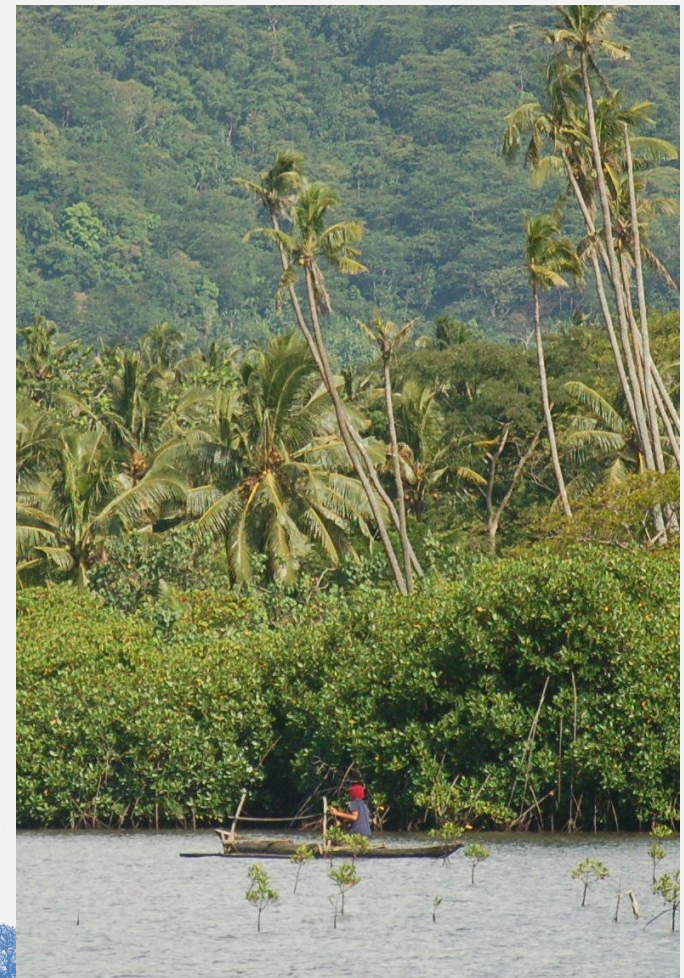


# Timed Species Counts of 18 forest birds in Nepal

Observations of indicator bird species in ChFDP area: June-Dec '05



- National circumstances
- Not prescriptive
- Acquire information for designing, and improving, effective REDD+ strategies
- SLMS and community-based monitoring
- Generate information of relevance to SIS



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**Thank You**

Website: <http://www.un-redd.org>

