

**Instituto Nacional de Bosques**

**NATIONAL FOREST INSTITUTE**  
**PLANNING AND INFORMATION UNIT**  
**DEPARTMENT OF FOREST INFORMATION SYSTEMS**  
**FOREST STATISTICS**

**NATIONAL FOREST INVENTORY**

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Kotka, June 2, 2006.

**Guatemala**


Diversity of climates

Wide range of altitudes


Three types of forests



Broad leaved




Coniferous



Mixed

**Guatemala**

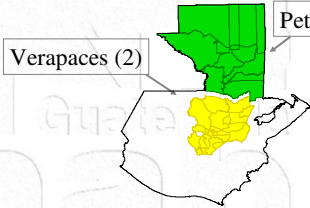
- ❖ Pluricultural y multilingual
- ❖ 23 spoken languages
- ❖ Economy based on agriculture
- ❖ Large rural estate and small holding
- ❖ Poor decentralization
- ❖ High immigration



Forest cover map 2001

**Initiative NFI 2002-2003**

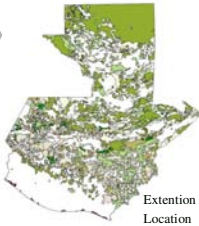
- No forest inventories at a National level
- 4 regional forest inventories



**Initiative NFI 2002-2003**

Previous actions to generate information

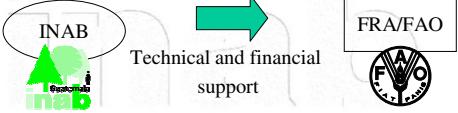
- Forest Cover Map 1999
- Forest Ecosystems Map 1999
- Forest Dynamics Project
  - Forest Cover Map 2001
  - Analysis of Forest Dynamics 1991-2001



Extent  
Location  
Dynamics

**Initiative NFI 2002-2003**

- Necessity of a National Forest Inventory to produce the base line of information, focused on:
  - Potential of forest production, to introduce the country on national and international process
  - State of quality of the forests of the country
  - Knowledge of the dynamics of the forest ecosystems



INAB

Technical and financial support


FRA/FAO

## Objectives of FRA support to Guatemala

- Analyse, adapt and establish to national interests the methodology proposed by FAO
- Establish a national net of permanent plots that allows the recopilation of periodic information.
- Make a data base to archive, process and manage information constantly.
- Make national capacity building of methodology, process, analysis and dissemination of the information.



## Reach and Limit

Reach	Limit
• Information at a "big scale" focused on strategic planning at a national level	• The first NFI (2002-2003) does not gives information at a regional level
• Multidimensional information	• Low auxiliary information
• Periodic information, it has to be actualized every 5 years trough permanent plots	• Stability and costs

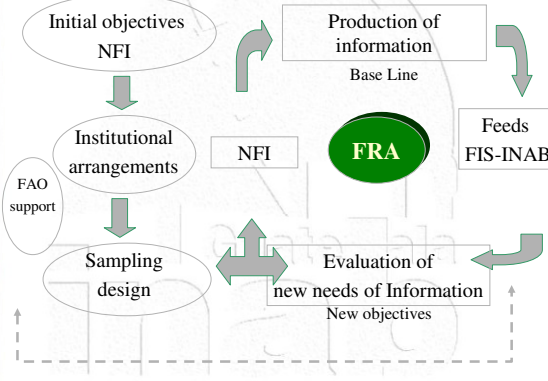


## Users

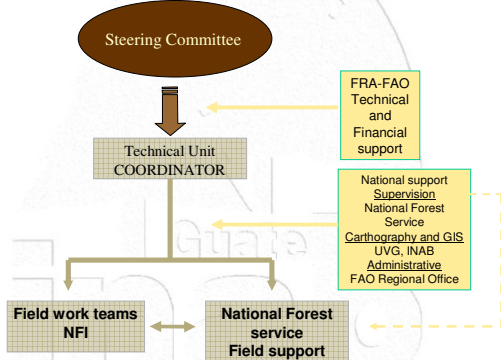
Users
Planners
Legislators
Managers
Directors and coordinators
Mayors
Community leaders

## Strategy



## Organization



## General Objective

Create a periodic system of collecting forest information at a national level, to generate key information about tree and forest resources, focused on persons and institutions in charge of decision making

**Specific objectives**  
**NFI**

Generate forest information focused on:

- Extension of forests
- Productive potential of forests
- Productive potential of 3 non forest wood products
- Productive potential of trees outside of forest
- State and management of the forest
- Use of products and services of the forest

**Sample design**

**Characteristic:**

- Low intensity sample
- Stratified systematic sample
- Different sampling intensity by strata

**Data collection**

- 108 SU
- 432 plots

**Sample design**

Sample units and plot design

**Vegetation classifying system**

**Results**

1. Methodology for collecting periodic information
2. Institutionalization of the process
3. Establishment of 108 permanent plots
4. Data base
5. Institutional strengthening

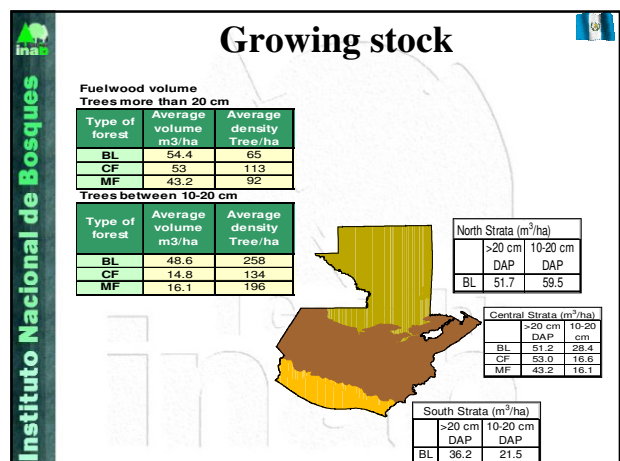
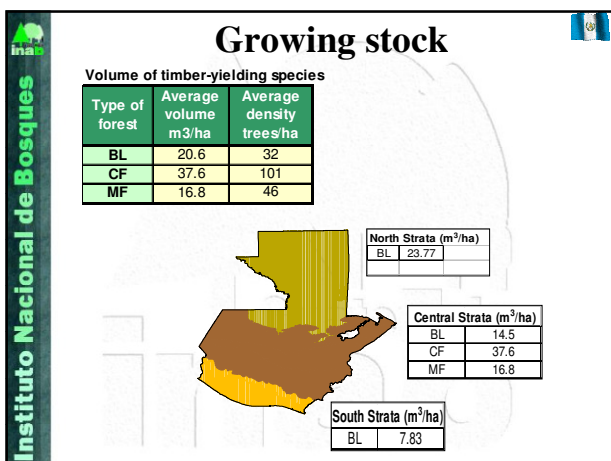
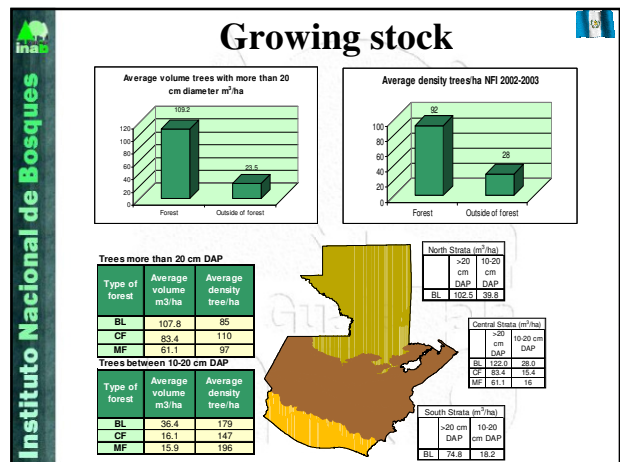
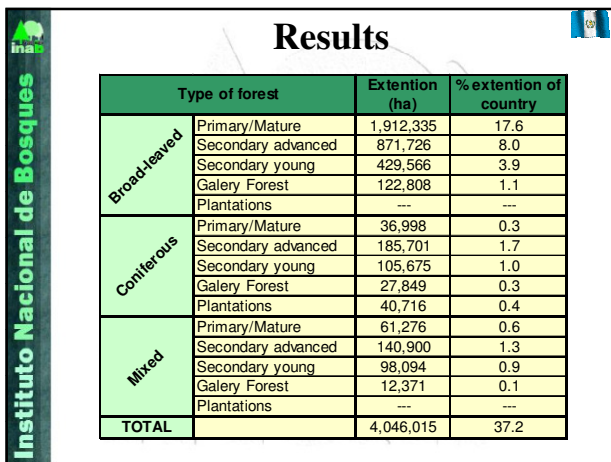
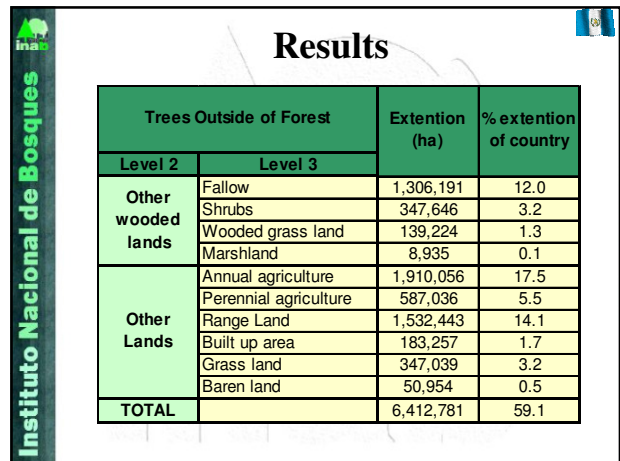
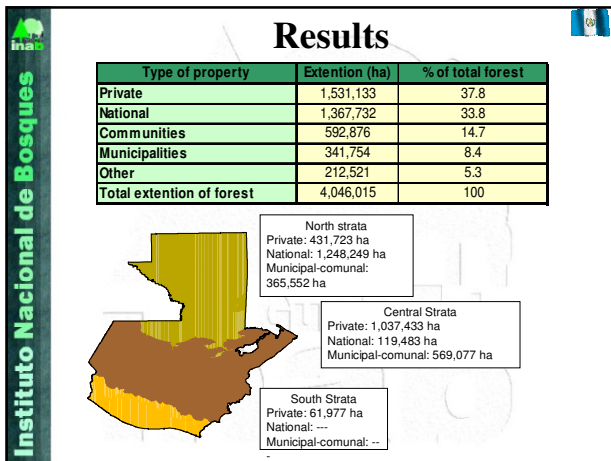
12 forest engineers  
36 field assistants  
28 forest technicians from forest service  
5 forest teachers  
60 students

**Results**

**Extention by type of forest**

Broad-leaved: 82.47 %  
Coniferous: 9.81 %  
Mixed: 7.72 %

FRA 2005/Land Use	Has
Forest	4,046,015.23
Other Wooded Land	1,801,995.98
Other Land	4,610,784.28
Inland Water	207,838.47
Unknown	222,340.41



## Productive potential of areas outside of forest

Land use	Vol m <sup>3</sup> /ha
Fallow	6.7
Perennial agr.	3.5
Range land	3.2
Annual agr.	3

Land use	Vol m <sup>3</sup> /ha
Perennial agr.	21
Fallow	11.9
Range land	7.9
Annual agr.	6.2

## Products and services of forest

Main products that are obtained from forest

Product	Percentage
Fuelwood	20%
Wood	11%
Rural construction	10%
Plants	7%
Wild animals	6%
Vegetal food	3%
Handicrafts	3%

## Products and services of forest

Main services obtained from forest

Service	% gives the service
Biodiversity refuge	18.63
Hunt for subsistence	17.90
Soil protection	17.81
Water protection	14.11
Tourism/recreation	11.69
Religious or spiritual	10.96
Scientific	8.9

## Information about Forest Sector

Company	%
Informal	97
Formal	3

Destiny	%
Commercial	32
Domestic use	68

Company	%
Informal	89
Formal	11

Company	%
Informal	72
Formal	28

Fuelwood commerce

Wood commerce

Law knowledge

## Other information

List of wild animals and its uses, National Forest Inventory 2002-2003

Common Name	Scientific Name	Meat	Skin	Pel
Tepezcutink	( <i>Agouti paca</i> )	X		
Wild pig	( <i>Tayassu tajacu, T. pecari</i> )	X		
Deer	( <i>Odocoileus virginiana, Mazama americana</i> )	X	X	
Squirrel	( <i>Sciurus sp.</i> )	X		
Armadillo	( <i>Dasypus novemcinctus</i> )	X		
Pajal	( <i>Crax rubra</i> )	X		
Mono aullador	( <i>Alouatta pigra, A. aullata</i> )	X	X	
Rabbit	( <i>Sylvilagus spp.</i> )	X		
Parrot	( <i>Amazona spp.</i> )			X
Poso	( <i>Nasua narica</i> )	X		
Tacuazán	( <i>Didelphis marsupialis</i> )	X		
Cajilla	( <i>Penelopina nigra</i> )	X		
Cituna	( <i>Dasyproscta punctata</i> )	X		
Jaguar	( <i>Felis concolor</i> )		X	
Mazacuata	( <i>Bon constrictor</i> )	X	X	
Zorra gris	( <i>Urocyon georgianus</i> )		X	
Coral	( <i>Micurus spp.</i> )		X	
Perica	( <i>Aratinga nana</i> )			X
Tigrillo	( <i>Leopardus wiedii</i> )	X		
Other birds		X		

## Contribution of NFI 2002-2003 information to FRA 2005

Theme	RESPOND	Comments
	YES	NO
Extent of forest and other wooded land	X	
Ownership of forest and other wooded land	X	
Designated function of forest and other wooded land	X	
Characteristics of forest and other wooded land	X	
Growing stock	X	
Biomass and carbon stock	X	X
Disturbances affecting health and vitality	X	X
Diversity of tree species	X	
Growing stock composition	X	X
Wood removal	X	
Value of wood removal	X	
Non wood forest products removal	X	
Value of Non wood forest products removal	X	
Employment in forestry	X	



Instituto Nacional de Bosques



Thank You

