



# Argentina

Julieta Bono

*Secretariat for Environment and Sustainable Development - Native Forest Division*

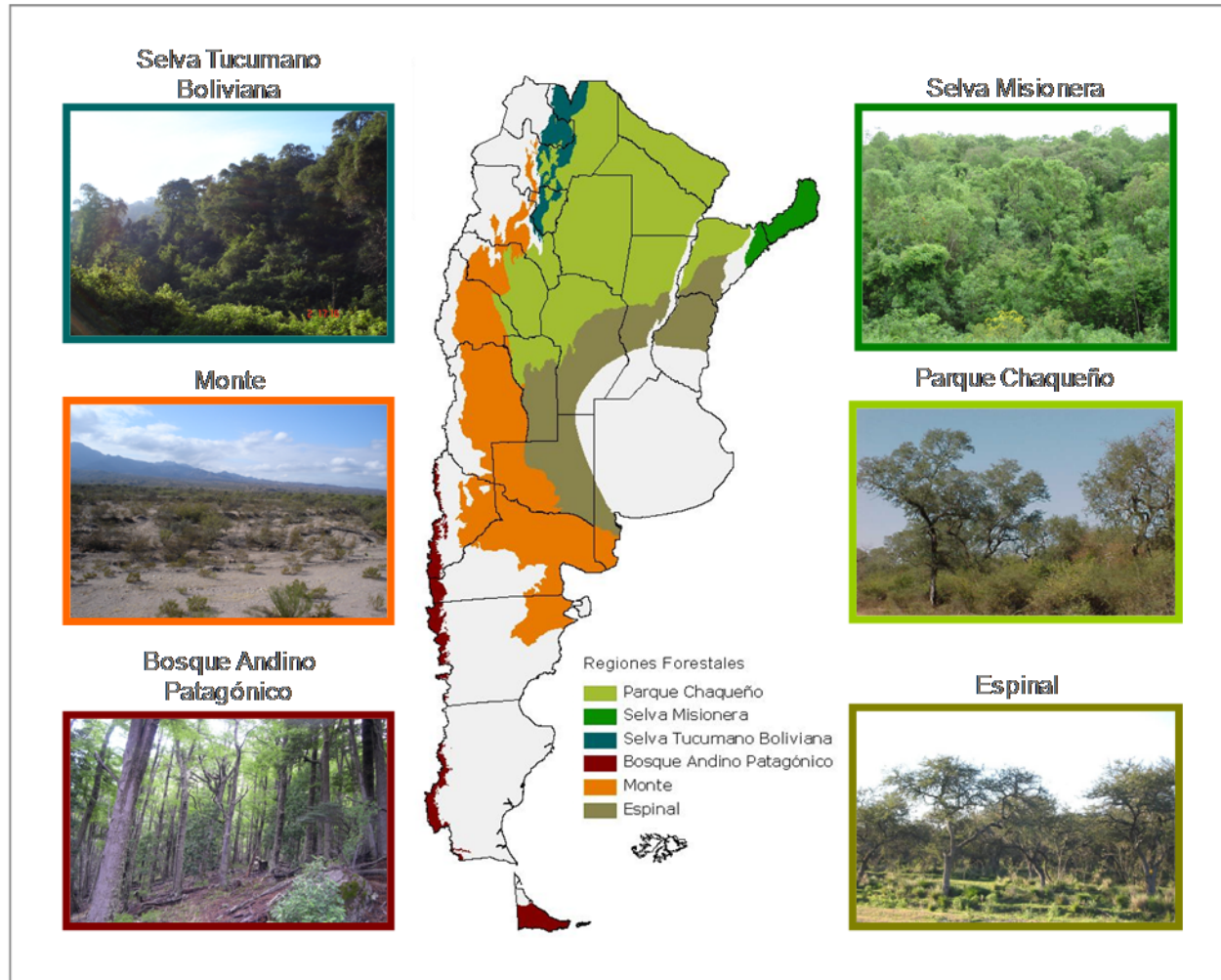
**Global Expert Workshop on Biodiversity Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+)**  
Nairobi, Kenya, 20-23 September 2010

# Argentina in the world



- Continental area **2.791.810 km<sup>2</sup>**
- Distance from North to South **3.694 km**
- Federal Country that includes 24 jurisdictions
- Population **40 million inhabitants** concentrated mostly in big cities

# Native Forests in Argentina

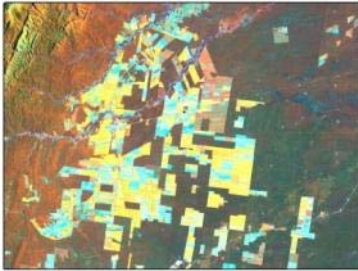


- High diversity of subtropical and temperate forests that cover 10% of the country (30 million ha)
- Forest region with a characteristic type of forest which is under different natural and human pressures

# Native Forest Monitoring System

## *Remote sensing and GIS*

Year I



Year II

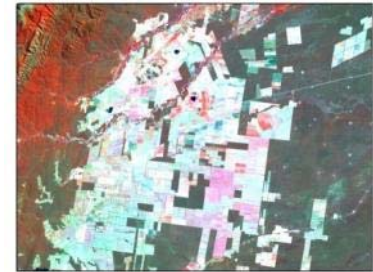


Image acquisition and preprocessing



Information extraction



Land cover generation



Land cover change detection

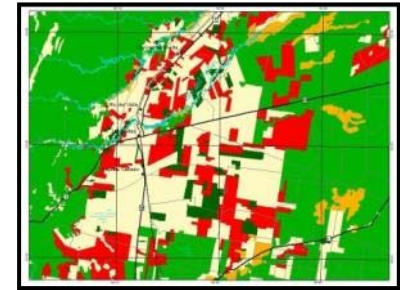
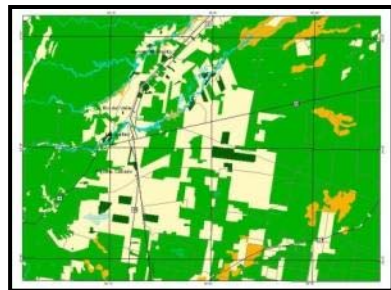
*Deforestation*

*Degradation*

*Others*



Area calculation

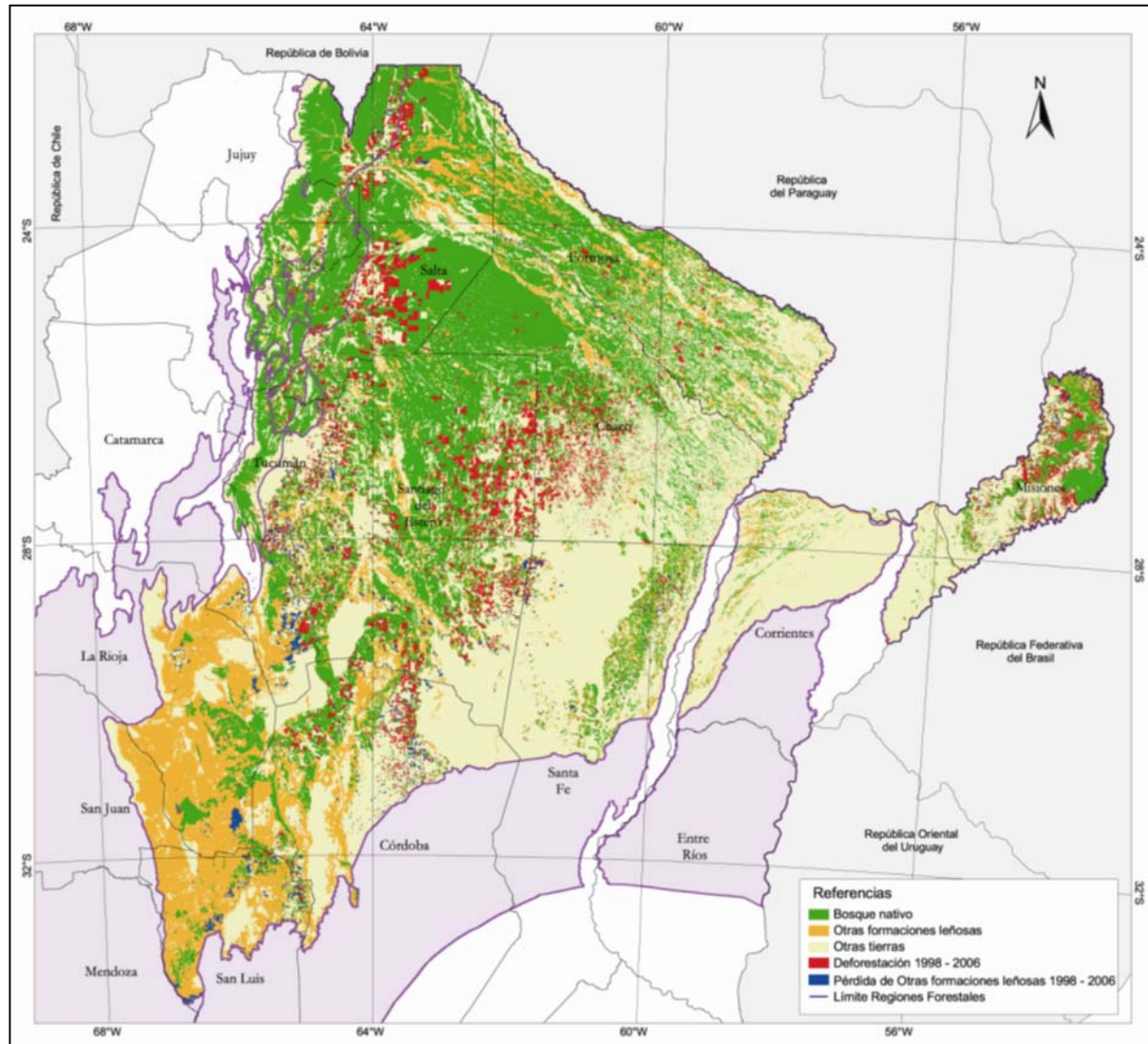


**Start point: 1998**

First National Native Forest Inventroy

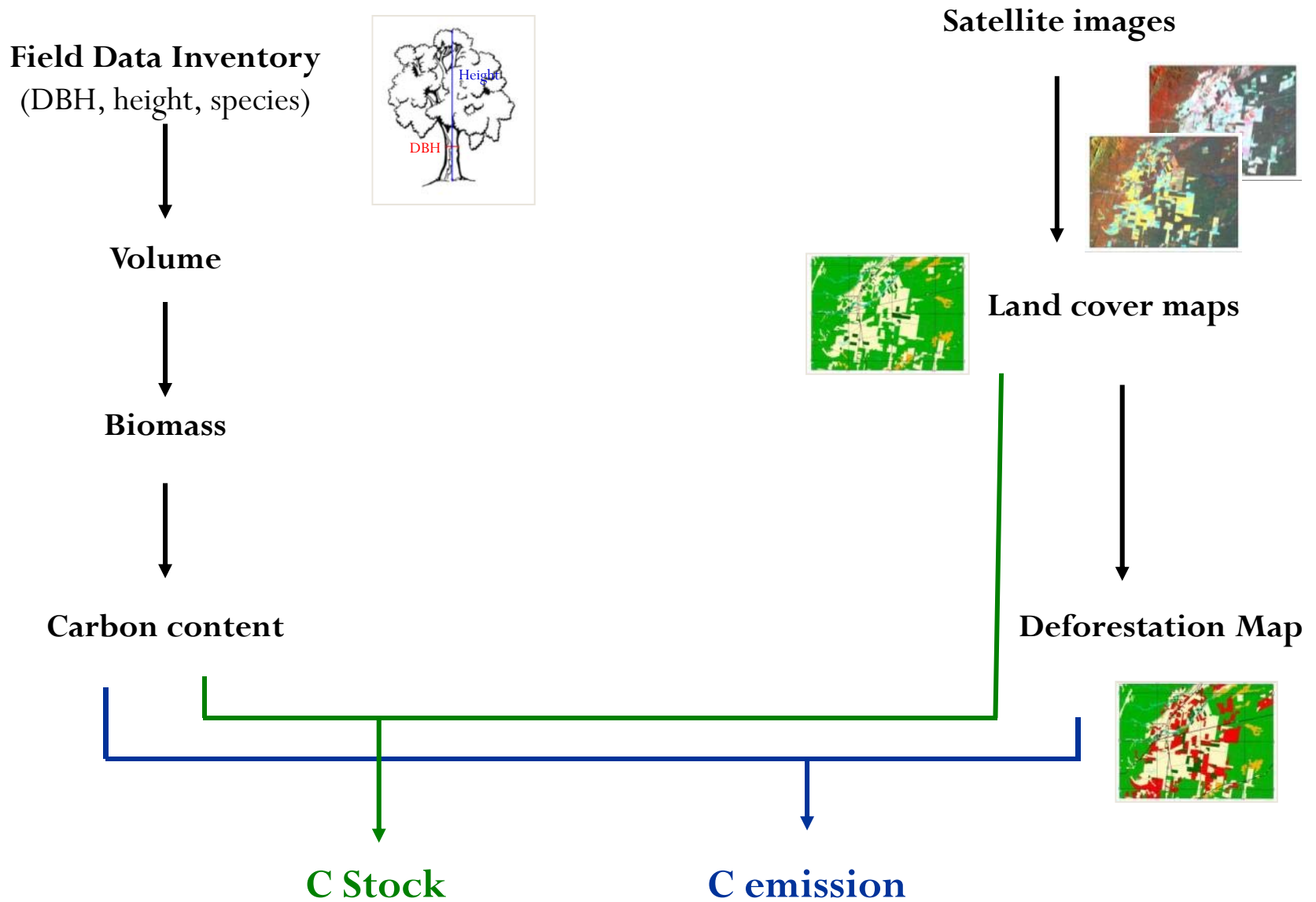
- 1998-2002
- 2002-2006
- 2006-2010 (in progress)

# Loss of forest in Argentina



Deforestation 1998-2006: 2.250.000 ha

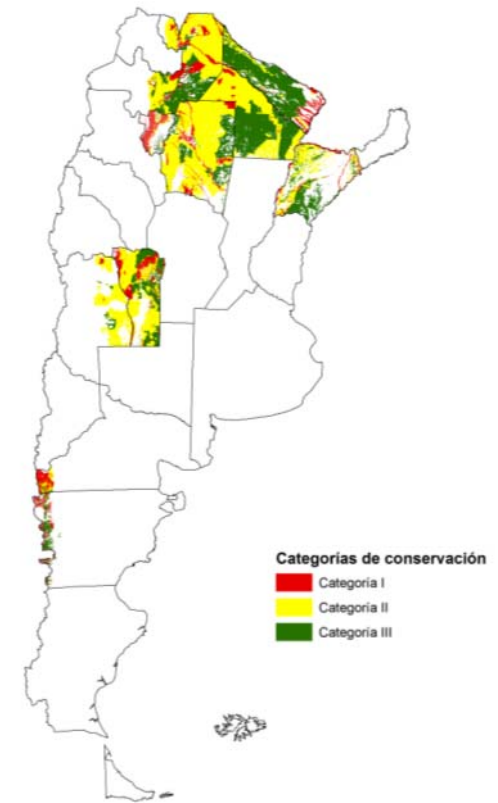
# Estimates of carbon stock and emission



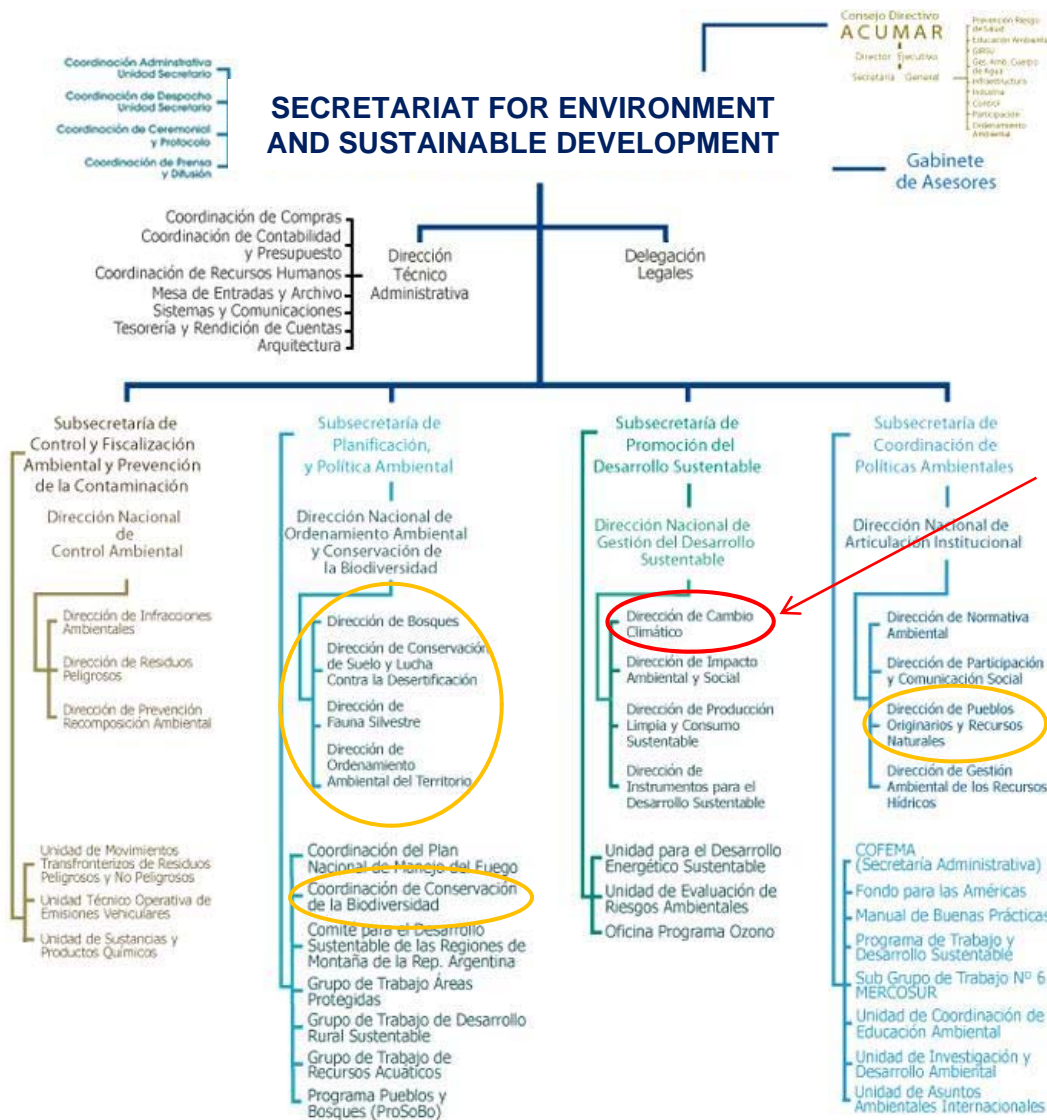
# ACT 26.331

## Minimum Provisions for the Environmental Protection of Native Forests

- Passed in the Session Room of the Argentine Congress in November 2007.
- All jurisdictions shall carry out the **Land Planning of the Native Forest** located in their territory through a participative process, according to sustainability criteria, setting forth the different preservation categories in relation to the environmental value of native forests units and the environmental services they render (I - High, II - Medium and III - Low value). Allowed activities depend on the categories (Preservation, Sustainable Development, Forest replacement).
- The National Fund for the Enrichment and Preservation of Native Forests is established, with the purpose of compensating those jurisdictions which preserve native forests for the environmental services they provide.



# National structure for REDD planning



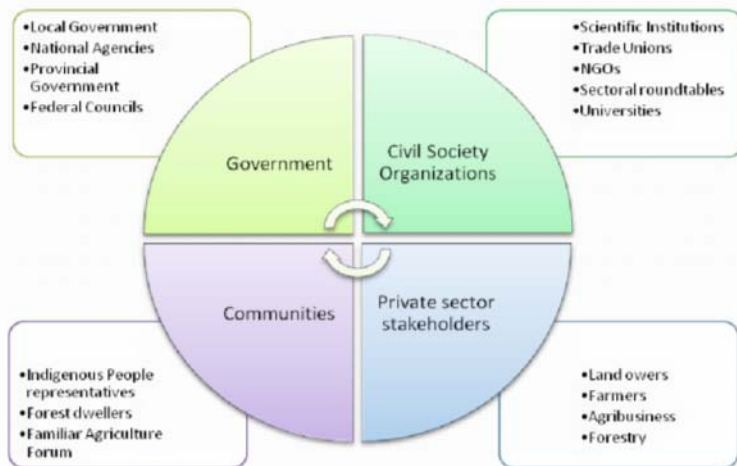
REDD focal point:  
Climate Change Division

Many other divisions of the Secretariat for Environment and Sustainable Development are participating in the development of the National REDD Strategy



# National structure for REDD planning

Key institutions are consulted for the readiness plan implementation



## Governmental institutions



# Local and indigenous community participation

- In accordance to International Labour Organisation (ILO) Convention 169, ratified by Argentina, the National government is working to acquire the free, prior and informed consent of indigenous peoples or local communities
- Through the Directorate of Indigenous People and the Institute of Indigenous Affairs
- Specific training courses for indigenous organizations on climate change and REDD+

# Multiple benefits of REDD+

## Learned experience

Carbon, biodiversity and ecosystem services:  
Exploring co-benefits

## Argentina

Results of a working session at UNEP-WCMC  
19-30 July 2010

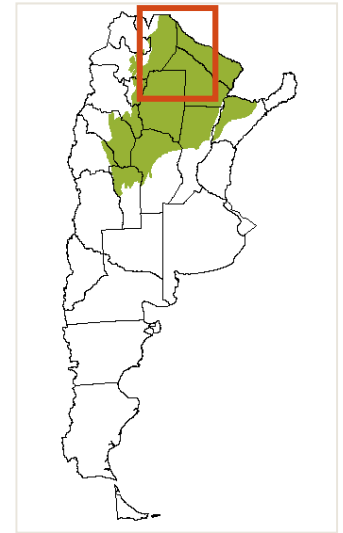


# The sub-regional biomass carbon map

## *Pilot analysis*

### Chaco Region - Dry Chaco Sub-region

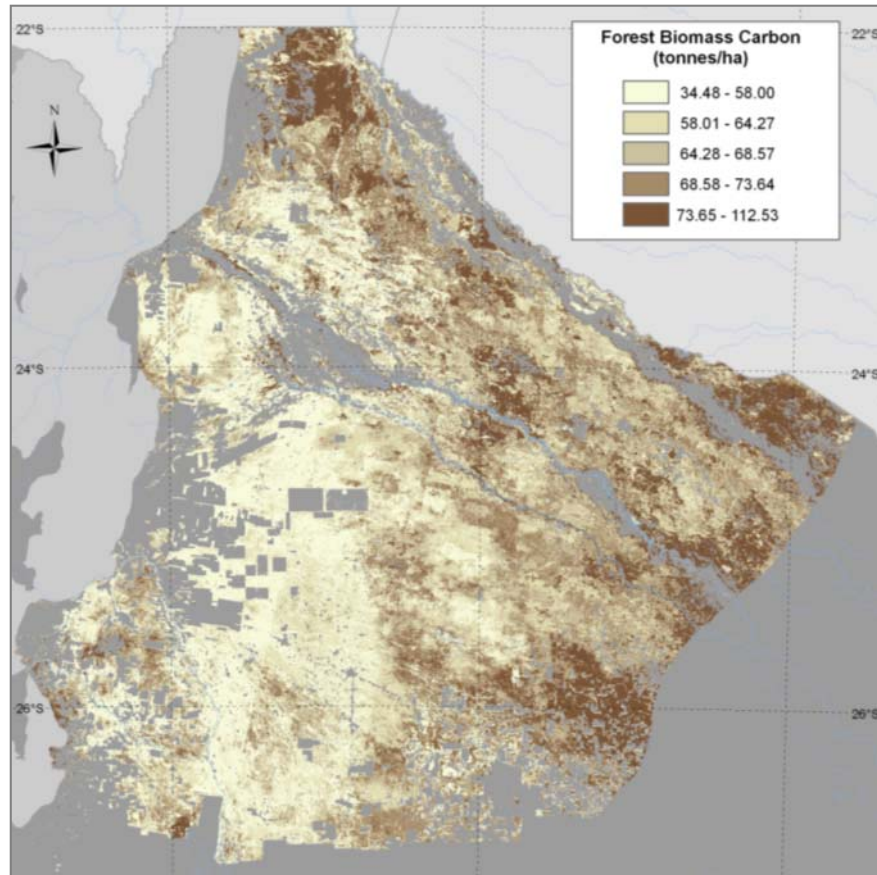
Under heavy pressure from deforestation and forest degradation



- Source: Gasparri, N.I., 2010, PhD Thesis
- Raster data, 250 m resolution
- Based on MODIS data
- For forest and shrubland covers

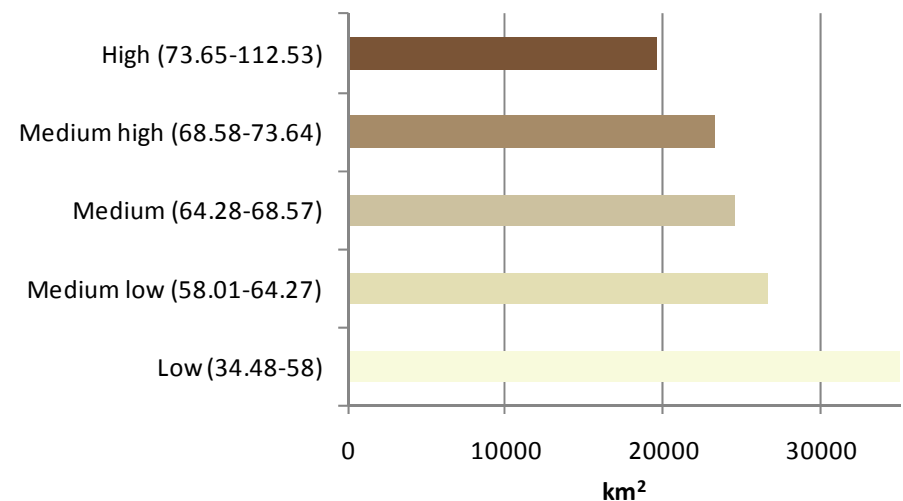


# Biomass carbon map Dry Chaco sub-region



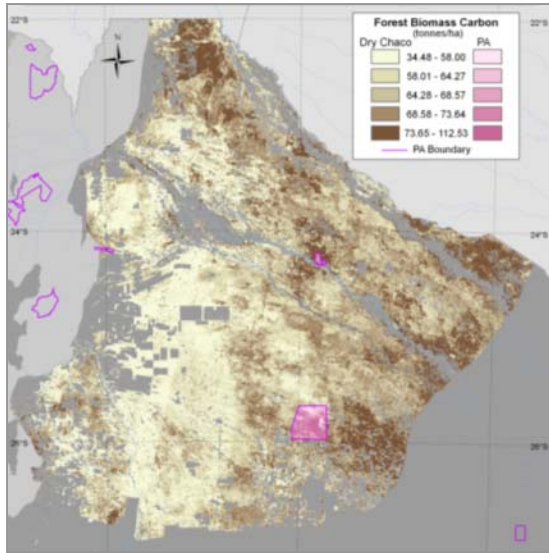
- The Dry Chaco Forest covers almost 130 000 km<sup>2</sup>
- It stores about 821 Mt of carbon in its biomass
- The area classified as of high carbon density stores 20% of the biomass carbon while covering 15% of the area

## C density (t/ha)

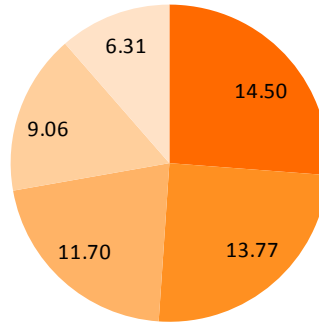


# Overlays

## Protected Areas

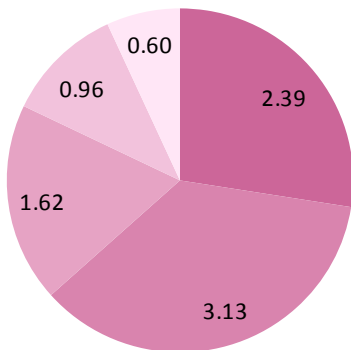
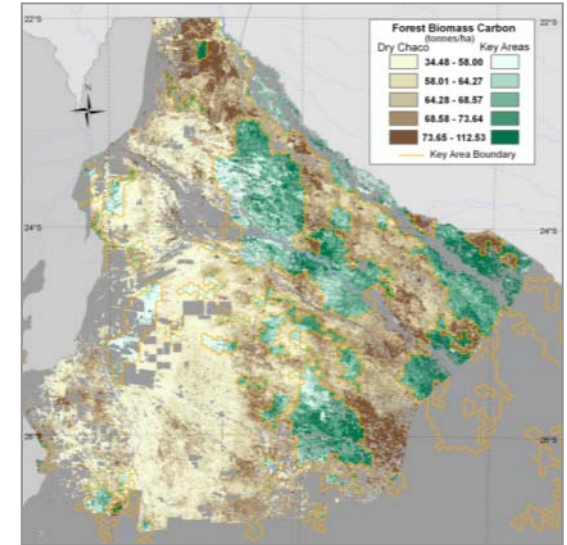


## Important Bird Areas

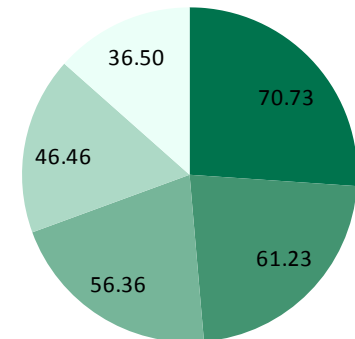
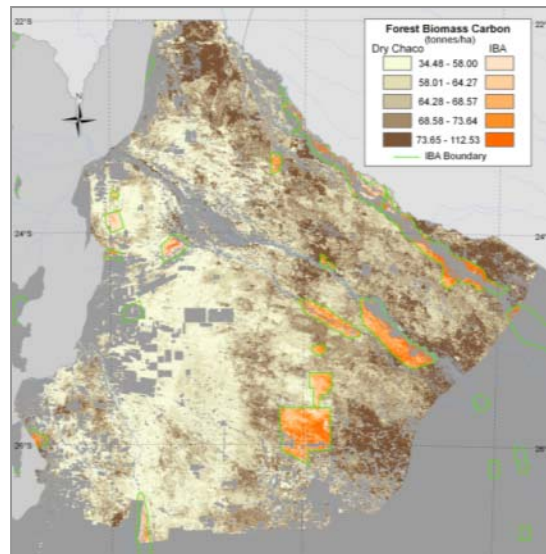


Total biomass carbon in these IBAs:  
55.34 Mt ~ 6.7% of the total biomass C

## Key Priorities Areas for Conservation



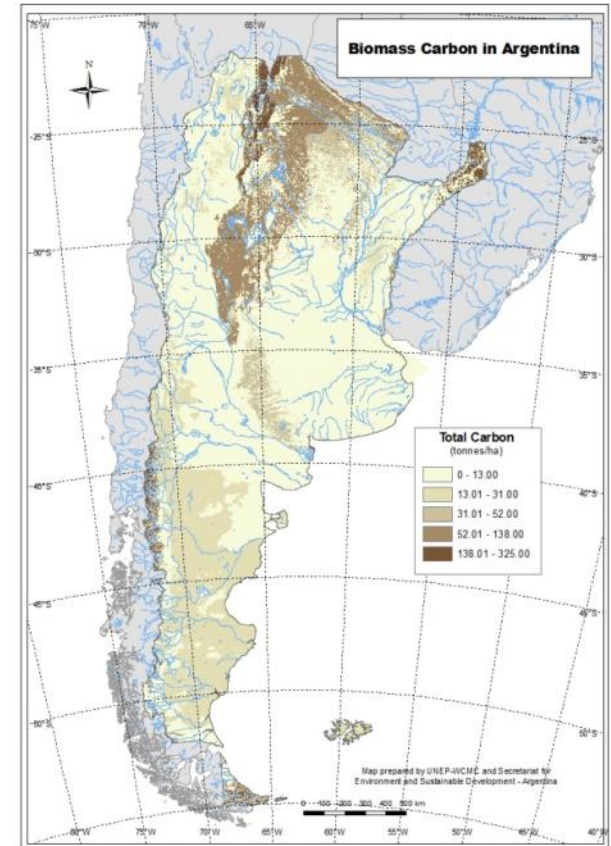
8.7 Mt = 1.06% of the total  
forest biomass C of the Dry  
Chaco Forest



KPACs store ~ 271 Mt of carbon

# The national biomass carbon map

- Combination of 3 different data sources:
  - INTA (2007)
  - First National Native Forest Inventory (1998 or 2005)
  - UMSEF Updates 2006
- Challenge: detail of land cover classes and finding biomass carbon estimates for all these classes
- Soil: national soil dataset didn't include all necessary information, use of Global Soil Database.
- Overlays in progress



Preliminary version

# Conclusions

What are main lessons learned regarding multiple benefits?

- Usefulness of national and regional map in order to take informed decisions
- Information gaps: need of spatial information at national level (ecosystem services, biodiversity and social and economic variables)
- Usefulness of overlapping information to identify areas where there is synergy between REDD and multiple benefits interests
- Difficulty to monitoring co-benefits at national level. Countries should start a monitoring process at local scale after exploration of co-benefits.





UN-REDD  
PROGRAMME



# Thank you

Julieta Bono

[jbono@ambiente.gob.ar](mailto:jbono@ambiente.gob.ar)

[www.ambiente.gob.ar/bosques](http://www.ambiente.gob.ar/bosques)