The Tropical managed Forest Observatory: A Research Tool to Address the Future of Logged Forests

Bonn, FTA Management Meeting, December 18th, 2017
Tropical pristine forests are no more dominant in the landscapes

- 75% of tropical forests are disturbed (Laurance et al. 2014)
- 400 millions ha of tropical production forests to be managed for commercial harvesting by 2050 (Blaser et al. 2011)
- Managed and disturbed tropical forests are the forests of the present and of the future
The Issues to be Addressed for the future of Tropical Production Forests

- What are the general responses of tropical forests to logging?
- How do those responses vary across regions and continents?
- What are the trade-off between timber production and environmental services?
- Most of our knowledge on tropical forests is from studies carried out in primary forests
- No continental, nor regional network dedicated to managed forests like for primary forests (Rainfor, CTFS)
A Pan Tropical Network

- Started in Mid 2012
- 3 continents, 9 countries, 18 Research Institutions, 40 researchers
- 24 experimental sites, 539 Plots (1274 ha)
Above Carbon Stock Recovery in the Amazon Basin

- Above Ground Carbon recovery time mainly depends on logging intensity
- **Mean recovery time** 32 yrs
- Within the logging intensities occurring in the Amazon (10-30 m³/ha), biomass will recover in 7 to 21 years
Different ACS recovery rates in the Amazon basin

Predicted net ACS recovery over the first 10 year after losing 40%
Mean recovery rate 1.7 TC ha$^{-1}$/yr$^{-1}$

Predicted contribution of annual ACS changes in ACS recovery

Piponiot et al. 2016
Important Steps Forward

- **Institutional**
  - MoU signed this year with the 18 institutions involved
  - Representative field basis for ESA Biomass Project

- **Fundings**
  - Remafor 100,000€, 2 years
  - APFNet (CN approved, full proposal submitted 500,000 USD 2 years)
  - ESA 50,000 € 3 years
  - Proposal from Wageningen Dutch Science Foundation (1 m€)

- **Science**
  - Publications on TmFO network, Biomass recovery time and recovery rates +++ (5 papers)
  - Timber recovery rate (submitted)
  - Impact of logging on Biodiversity
Important Limitations

- No long term significant fundings
- No funding support from FTA since 2015
- Human resources capacity limited while huge data bases are available
- Small part of the so-called « degraded » forests

[Image of TmFO and forest areas]