THE NATIONAL FOREST MONITORING SYSTEM

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Forest Cover Monitoring Unit

National Plan for Forest Cover Monitoring

ACTO
Amazon Cooperation Treaty Organization

SBB

Establishment of the ***Forest Cover Monitoring Unit***

Forest Cover Monitoring Unit
(FCMU)

Operational in 2012; Launch in 2013

Overall Goal: "To contribute to the strengthening of the National Forest Monitoring System (NFMS) by **generating information about changes in forest cover** for Suriname that is **reliable, up-to-date, accessible, understandable and transparent**, serving multiple purposes amongst others optimized policy, policy implementation (e.g. national land use planning, sustainable management of the forest, REDD+) and law enforcement in the field (e.g. gold mining, mangrove forest)."

"Monitoring the Forest Cover in the Amazon Region"

National Forest Monitoring System (NFMS)

NFMS

SFISS
Sustainable Forestry Information System Suriname

NFI
National Forest Inventory

SLMS
Satellite Land Monitoring System

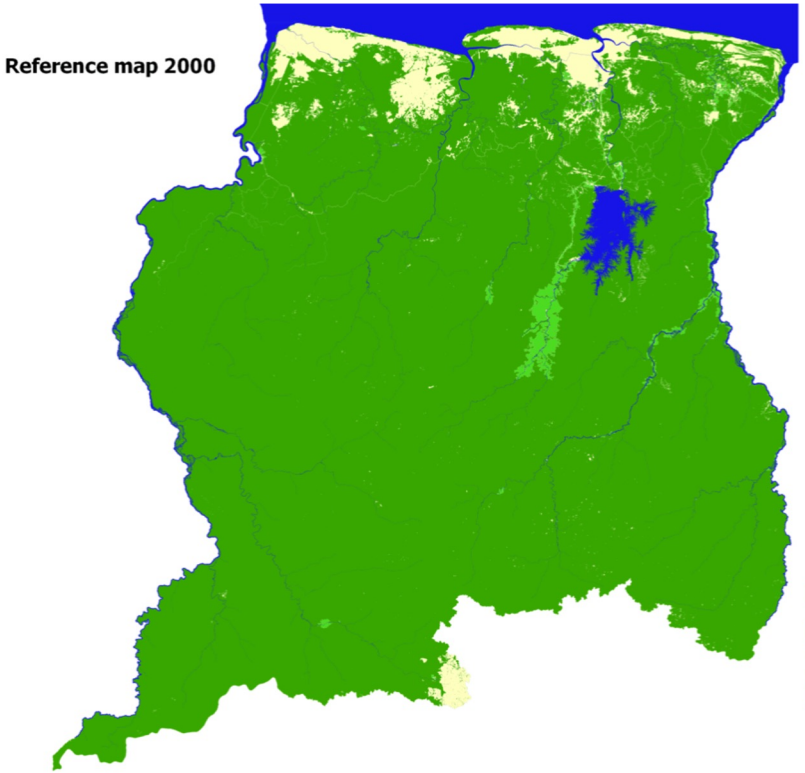
NRTM
Near Real Time Monitoring

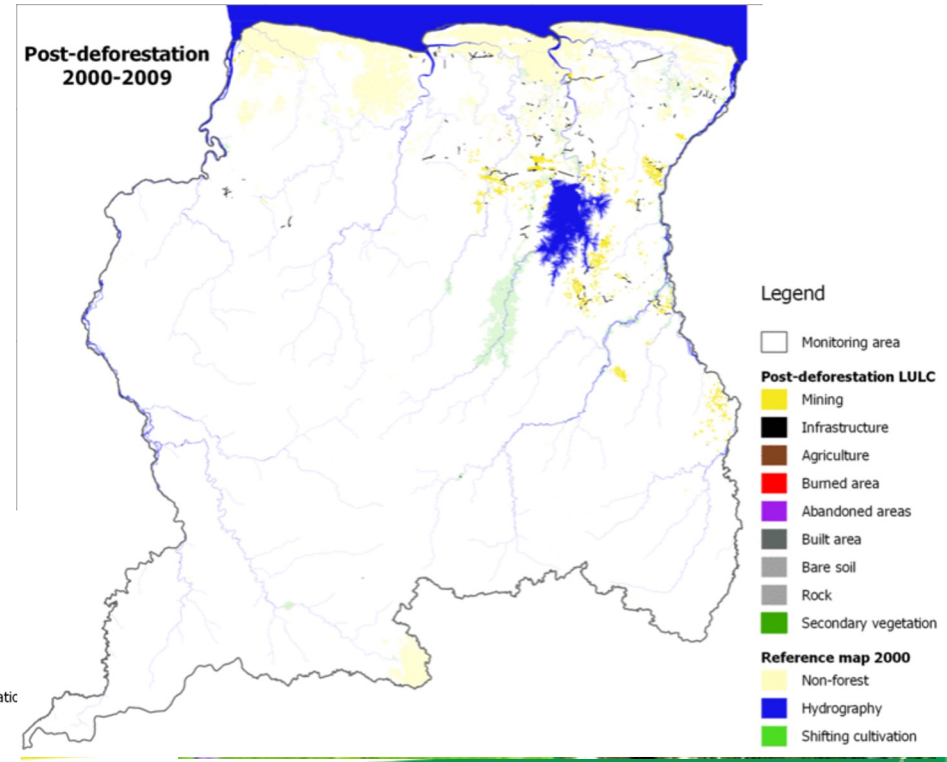
CBM
Community Based Monitoring

Reporting
(Inter)national reporting commitments such as: FRA, Environmental statistics (ABS), BUR, GHG

- Transparent and actual data
- Tools to support sustainable forest management and effective control
- Input for the REDD+ financing mechanism

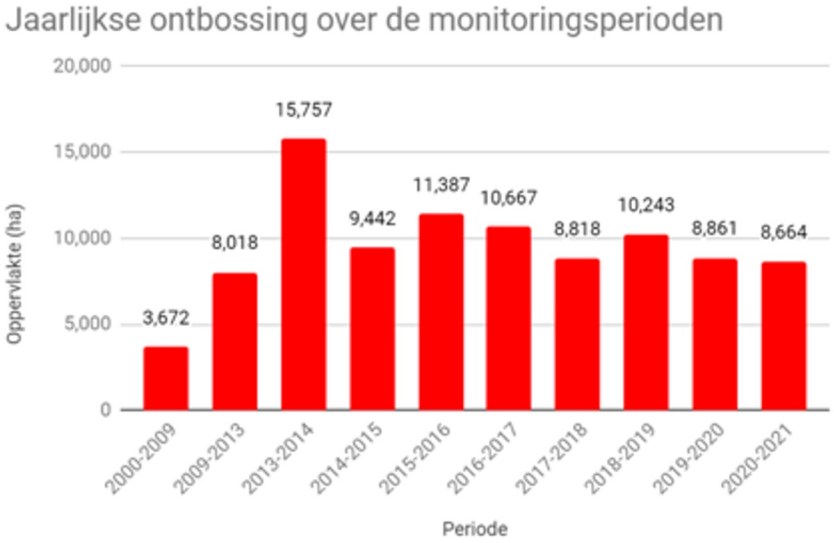
Satellite Land Monitoring System(SLMS)



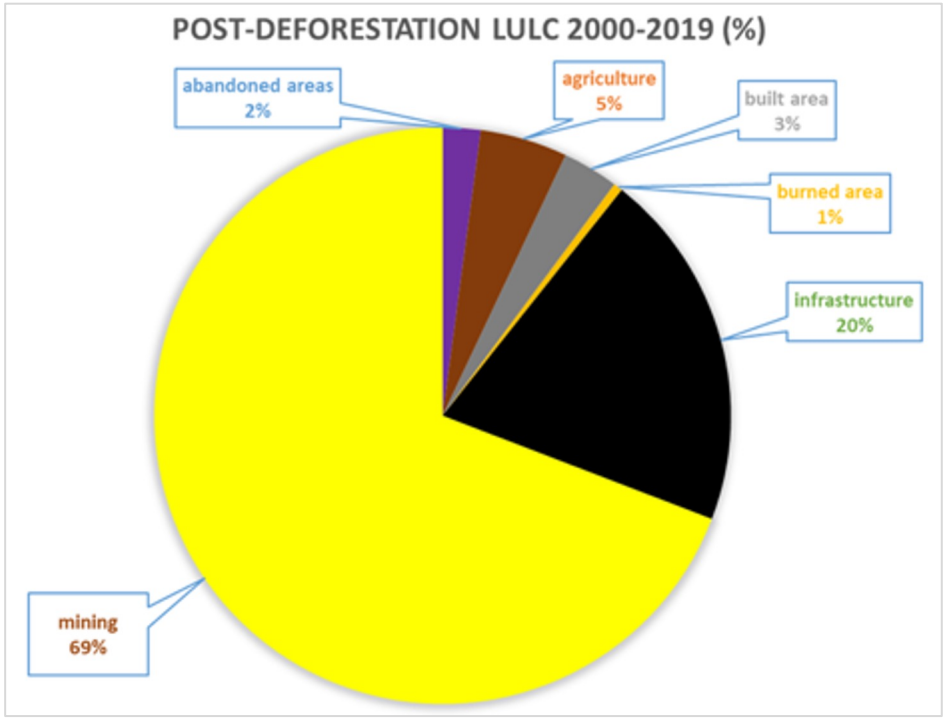


Results

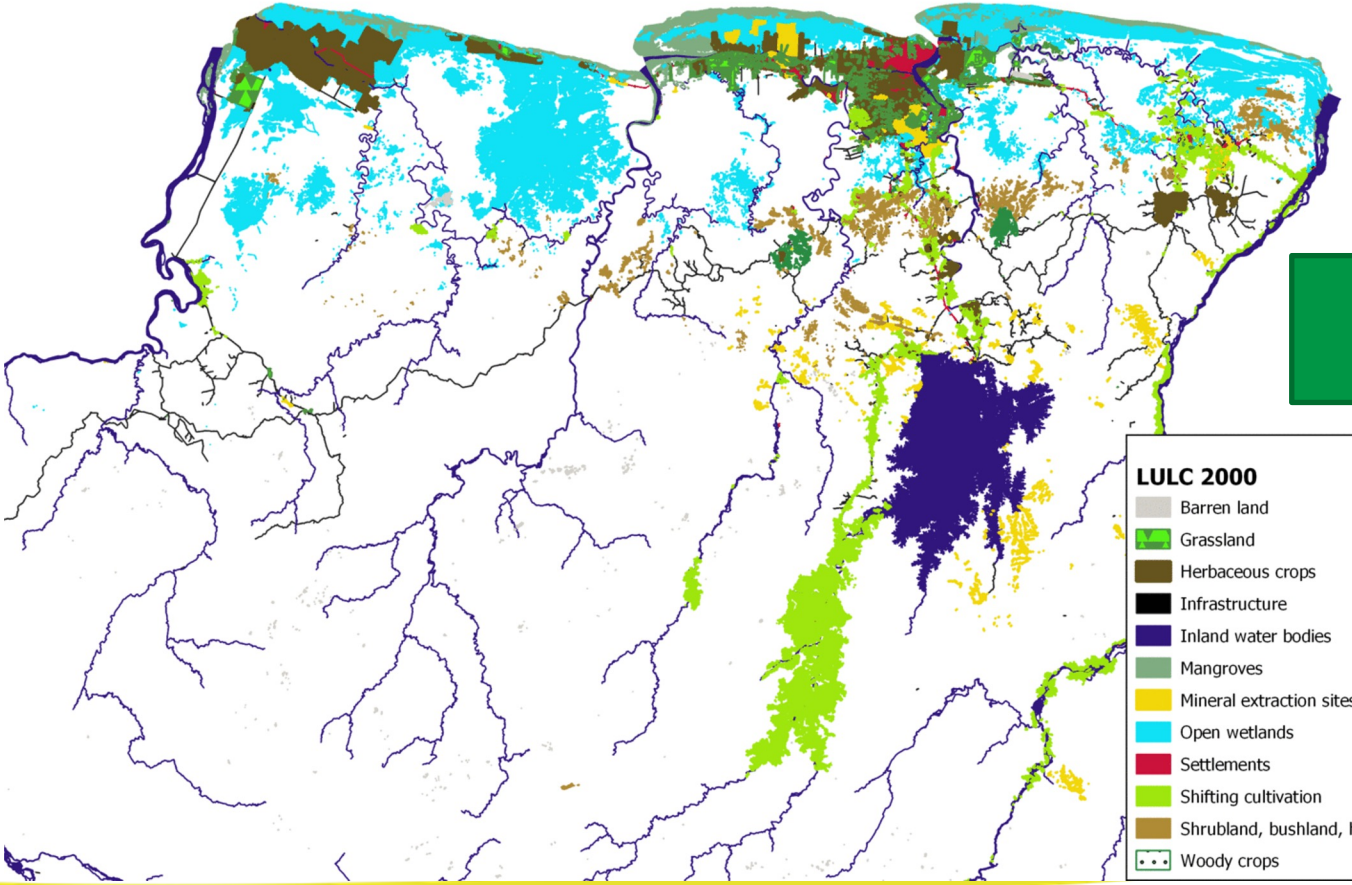
Deforestation: 2000-2021



Drivers of deforestation: 2000-2019

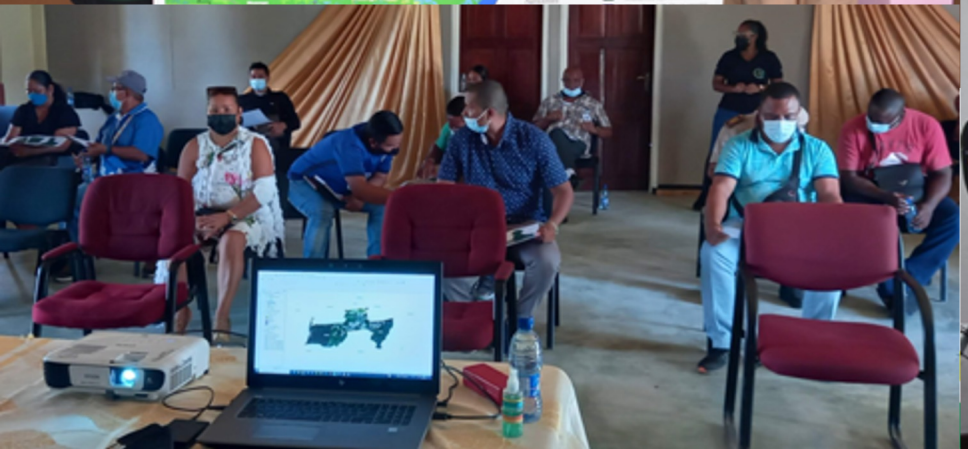


LULC 2000



LULC 2020
Loading…

Alone we go fast, together we go FAR

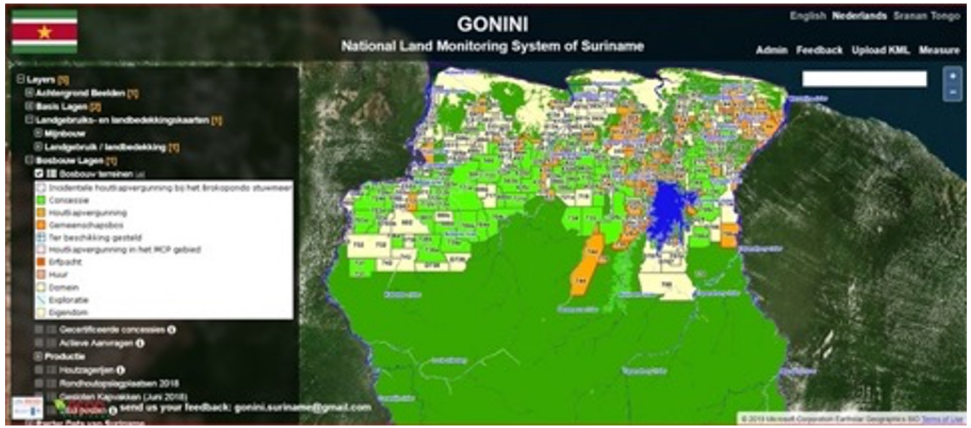


Field visits and drone usage for validation

Online NFMS Platform

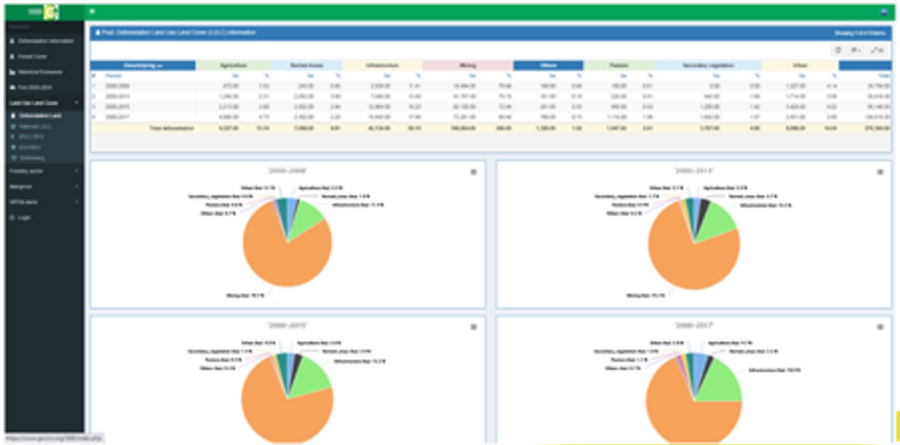
Online NFMS platform for data sharing and transparency.

Gonini Geoportaal launched in December 2016



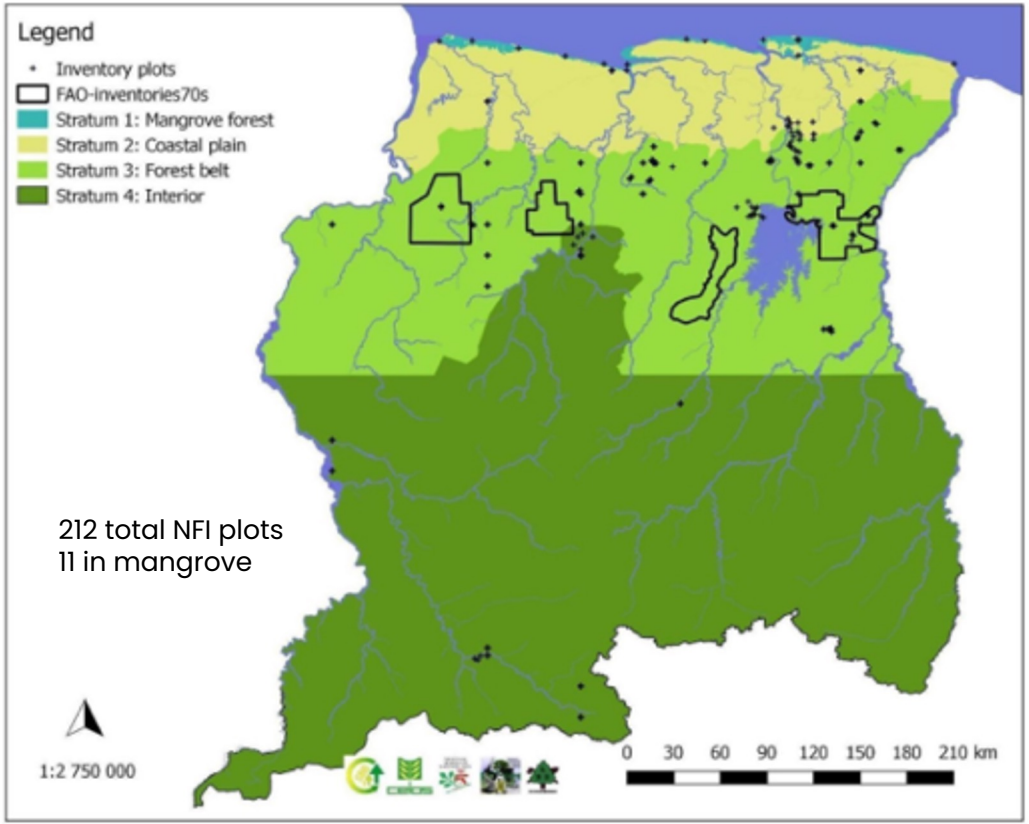
WWW.GONINI.ORG

KOPI, Statistic portal launched in March 2021



https://www.gonini.org/SBB/index.php

National Forest Inventory



212 total NFI plots
11 in mangrove

Mangrove NFI → GCCA+

GCCA+ Suriname adaptation program project:

“setting up a mangrove biodiversity monitoring system”

- 11 Sampling Units

Biomass assessment

- Above ground biomass
  - Trees with DBH ≥ 10 cm
  - total height, commercial height, decay status and the stem quality
- Soil organic carbon
  - thickness of the organic litter
  - soil sampling

Biodiversity Assessment

- Floristic assessment
- Birds






Mangrove NFI → GCCA+ 2

- Re-measurement of the mangroves to estimate the growth rate
- Adding new mangrove NFI plots
- Use of Terrestrial Lidar Scan (TLS) to estimate biomass

Sustainable Forestry Information System Suriname

SFISS launched in mid-2019

- Improve the service to the sector
- Stimulate sustainable logging
- Reducing illegal logging
- Increased transparency

www.sbbsur.com/SFISS

Community Based Monitoring

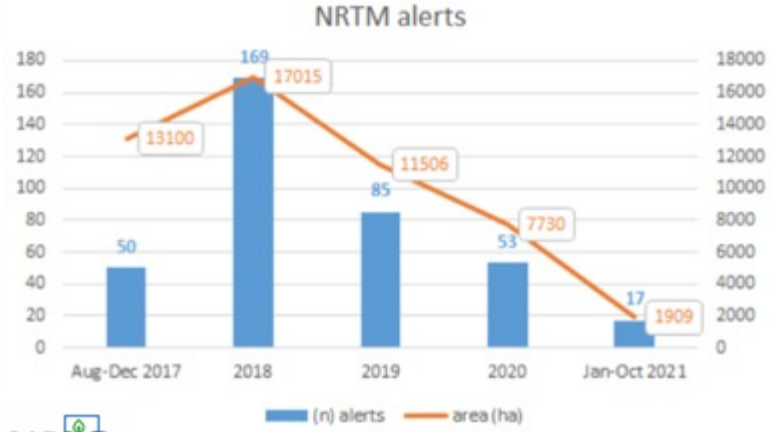
Information sharing sessions

Trainings

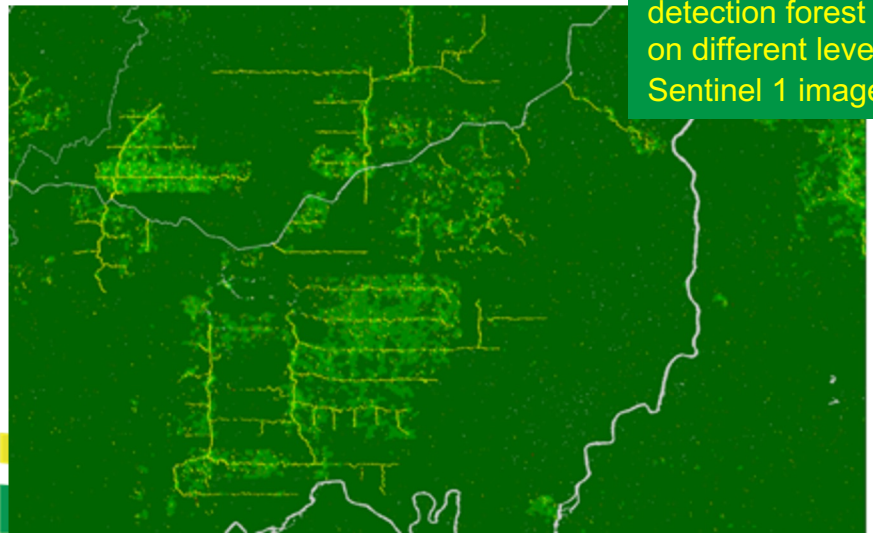
Near Real Time Monitoring

NRTM

Detect unplanned logging using recent satellite images



Early Warning System: detection forest degradation on different levels using Sentinel 1 images



SAR SENTRY

No Data
Non Forest
Forest
Deforestation
Degradation 1
Degradation 2
Degradation 3
Degradation 4

Note: The maps tentatively show 4 degradation classes: (1) >15%; (2) >20%; (3) >26%; (4) >34%. These values can be adapted by the user, and are used for fast evaluation. Accurate forest/biomass loss calculations are not based on these (discrete) degradation classes, but on the underlying (continuous) data and LC maps.

Moving towards automated degradation detection

National and international reporting

- GHG reporting (UNFCCC)
- UNFF reporting
- CBD National reporting
- Environmental statistics (ABS)
- Forestry sector analyses (SBB)
- .....

NFMS in place

Next:

- Moving towards receiving carbon credits
- Moving towards REDD+ results-based payments

FREL's submitted to the UNFCCC

FREL 2018

Deforestation:
- Anthropogenic activities such as Mining, Agriculture etc.
- Forest fires

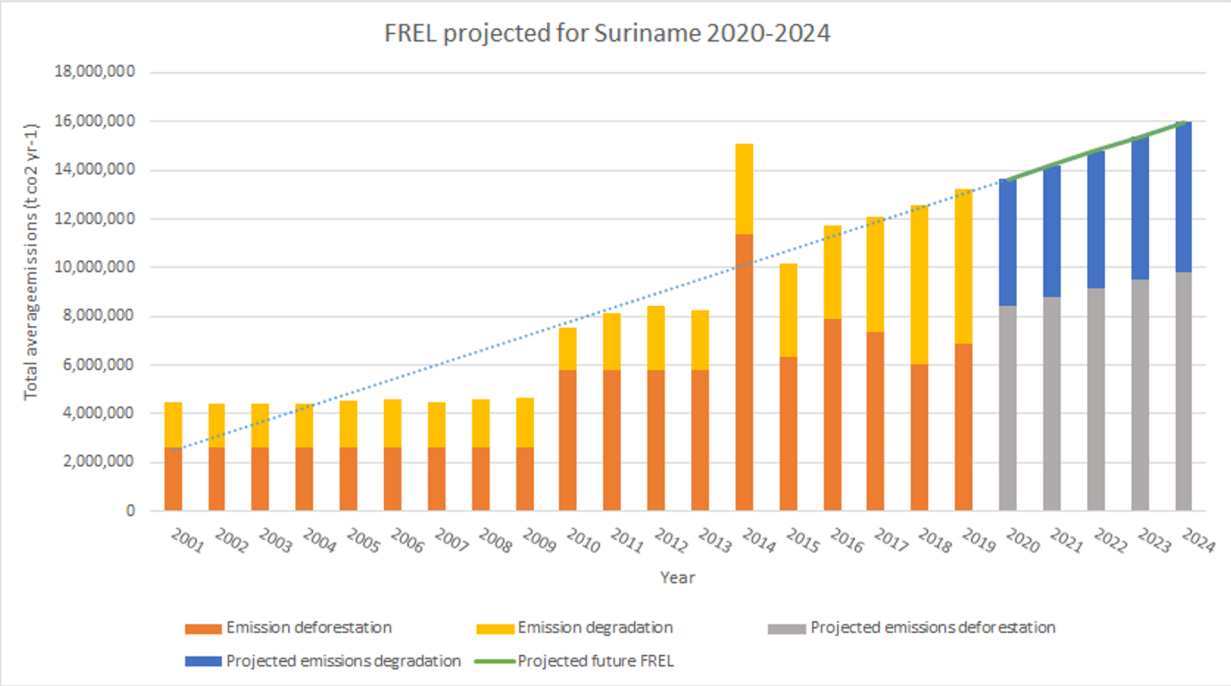
Forest degradation:
- Roundwood production

FREL 2021

Deforestation:
- Anthropogenic activities such as Mining, Agriculture etc.
- Forest fires
- Conversion of traditional agriculture to deforestation

Forest degradation:
- Roundwood production
- Fuelwood
- Conversion from forest to traditional agriculture

2nd FREL to the UNFCCC



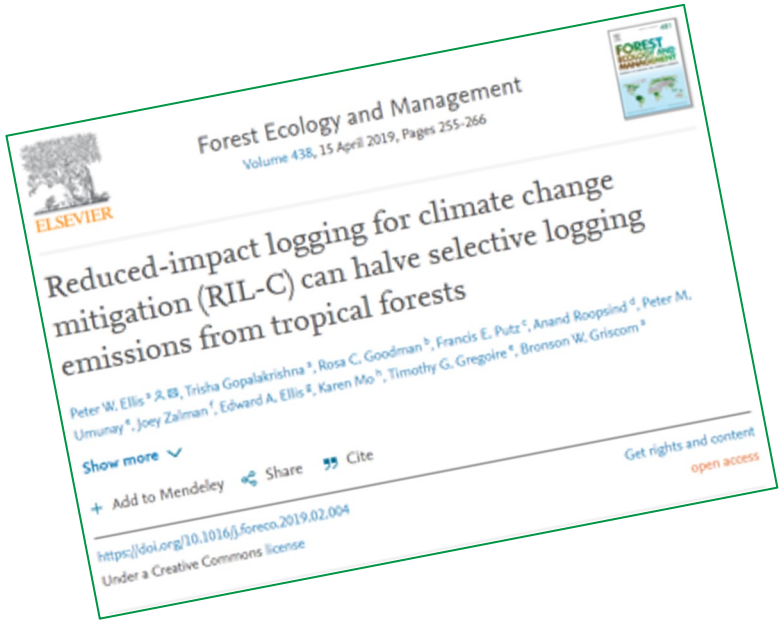
- Based on historical data of 2000-2019
- Projection for the period: 2020-2024

This modified second FREL predicts the following annual CO_2-Emissions (t CO_2-eq per year) based on the selected projection methods:

- 2020: 13,631,401 t CO_2
- 2021: 14,216,717 t CO_2
- 2022: 14,802,032 t CO_2
- 2023: 15,387,347 t CO_2
- 2024: 15,972,662 t CO_2

Climate Smart Forestry(CSF) program

- Reducing CO2 emissions from the forestry sector
- Based on previous research by J. Zalman in 2017


Forest Ecology and Management
Volume 438, 15 April 2019, Pages 255-266

ELSEVIER

Reduced-impact logging for climate change mitigation (RIL-C) can halve selective logging emissions from tropical forests

Peter W. Ellis [a], Trisha Gopalakrishna [a], Rosa C. Goodman [b], Francis E. Putz [c], Anand Roopsind [d], Peter M. Umunay [e], Joey Zalman [f], Edward A. Ellis [g], Karen Mo [h], Timothy G. Gregoire [e], Bronson W. Griscom [a]

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https://doi.org/10.1016/j.foreco.2019.02.004

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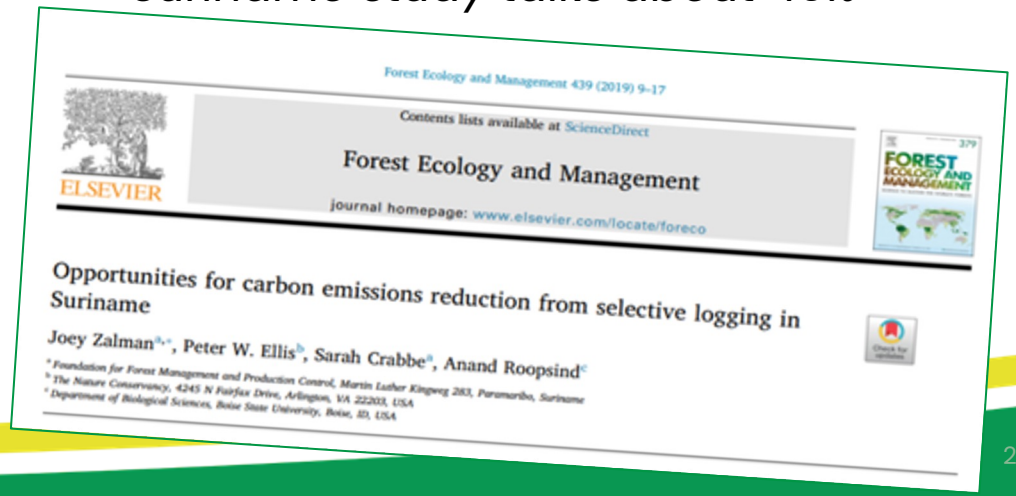
Global study indicates that CSF can reduce emissions with 50%

Suriname study talks about 40%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ELSEVIER

Opportunities for carbon emissions reduction from selective logging in Suriname

Joey Zalman[a,*], Peter W. Ellis[b], Sarah Crabbe[a], Anand Roopsind[c]

[a] Foundation for Forest Management and Production Control, Martin Luther Kingweg 283, Paramaribo, Suriname
[b] The Nature Conservancy, 4245 N Fairfax Drive, Arlington, VA 22203, USA
[c] Department of Biological Sciences, Boise State University, Boise, ID, USA

Climate Smart Forestry(CSF) program

Reduce damage to the environment

Leave less trees behind in the forest and at the log yards

How to reduce emissions?

Haul roads and log yards

More efficient skid trail planning

Submit ER to VERRA to get carbon credits

Next steps

1. Setting up a MRV system to get results-based payments
2. Build capacity in automated detection of deforestation and forest degradation
3. Study forest regrowth to include removals for carbon credits
4. Strengthen institution(s), private sector and forest-based communities in the CSF process

Thank you!
Alone you can go far, but together we can go further!

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Facebook: Stichting voor Bosbeheer en Bostoezicht

Geoportaal: www.gonini.org

https://kopi.sbb.sr/