


Timber Regulation Enforcement Exchange, FAO, Rome, 6 April 2017

Application of Latest Remote Sensing Technology for EUTR Law Enforcement

Mohammad Abdel-Razek, Dr. Peter Hawighorst

GRAS
Global Risk Assessment Services

Content

1	**What is the GRAS tool?**
2	How can GRAS support EUTR law enforcement?
3	Conclusions

Initiated by an article in an influential magazine, there is an ongoing discussion on the German implementation of the EUTR


DER SPIEGEL

Tropenholzstämme bei Mandalay, Burma: Unabhängige Expertisen fehlen bis heute

HOLZHANDEL

Auf der falschen Seite

Die Bundesanstalt für Landwirtschaft und Ernährung soll illegale Holzimporte bekämpfen. Doch statt kompromisslos zu kontrollieren, kooperieren ihre Beamten gern mit der Industrie.

Wer Geschäfte mit illegalem Holz machte, hatte lange wenig zu befürchten. Inzwischen aber drohen drastische Strafen: 13,2 Millionen Dollar musste ein amerikanischer Laminatbodenhersteller im vergangenen Jahr zahlen, weil er illegal importierte Hölzer aus Russland bezogen hatte.

DER SPIEGEL, 50/2016

- German magazine “DER SPIEGEL” published a report on illegal timber / EUTR – “On the wrong site”. The article is:
  - critical with German implementation of the EUTR
  - gets NGOs a word charging the competent authority to be “passive” fighting against illegal timber
  - deeming the competent authority to support operators in their business rather than fighting illegal timber

Can innovative technology support operators and competent authorities fighting illegal timber?

Against this background, GRAS has been developed….

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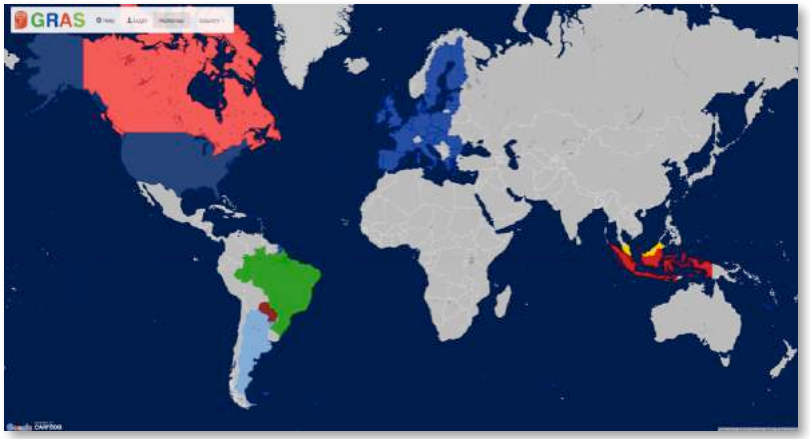
Partnership for
nature and people

GRAS is an independent and comprehensive web-tool offering a one-stop-shop solution providing geo-referenced sustainability information

GRAS Services

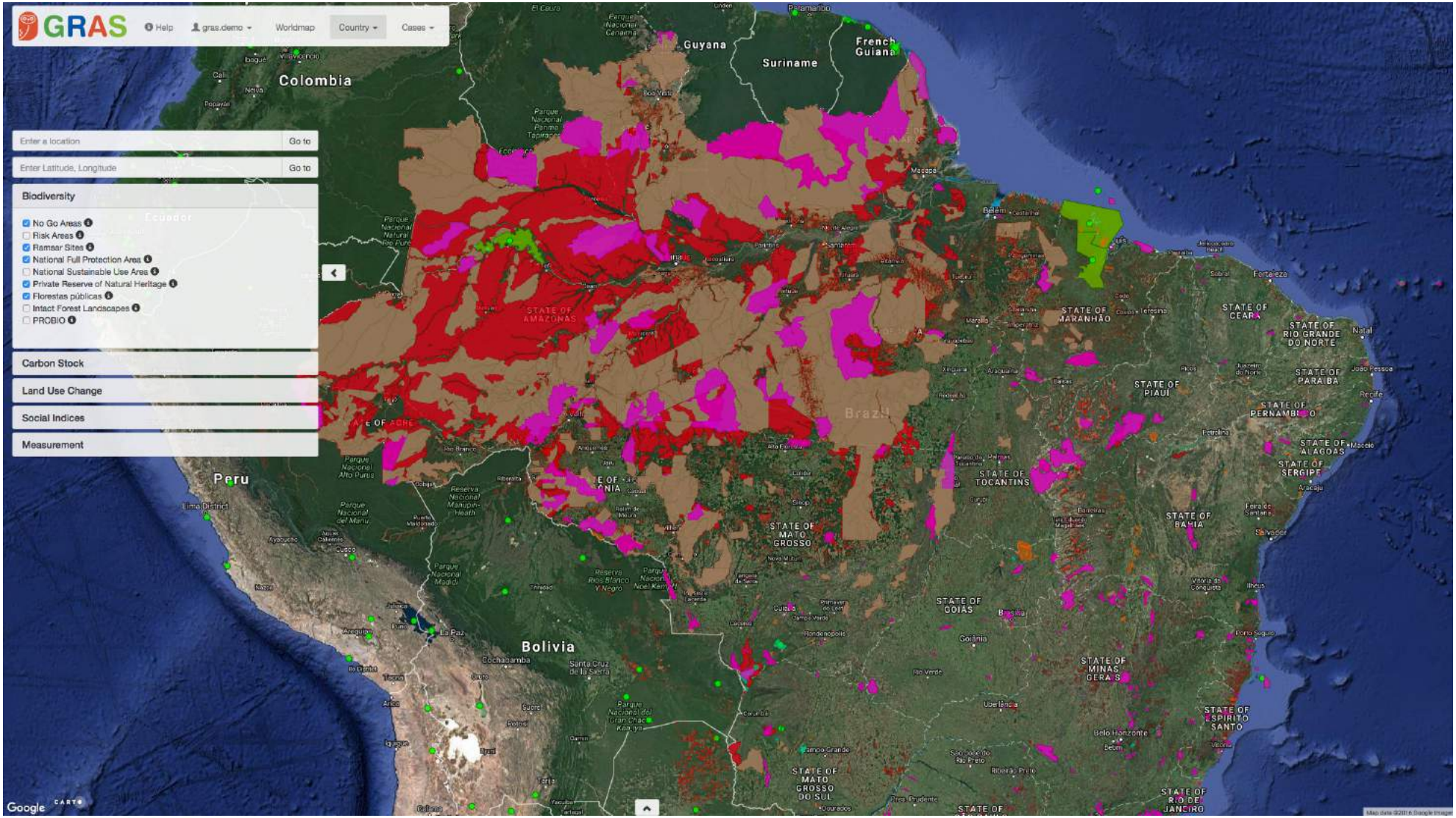
- **Mapping** of:
  - Supply chains (e.g. wood, palm oil or soy)
  - Biodiversity and protection areas
  - Carbon stocks (e.g. peatlands)
  - Harvesting/ Land Use Change (LUC)
  - Social indices
- Calculation of **sustainability risk factors and** sustainability **rankings**
- **Monitoring of sourcing areas**
- **Certification support**
- Provision of sustainability **assessment reports**
- **Customized solutions** (e.g. supply chain mapping)



The GRAS Tool currently covers 35 countries.
More countries are offline available

GRAS
Global Risk Assessment Services

GRAS is an interactive and easy-to-use online tool providing many different layers to show sustainability information



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2	**How can GRAS support EUTR law enforcement?**
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2.2	Risk Assessments and Verification of Harvesting Areas or Regions of Interest
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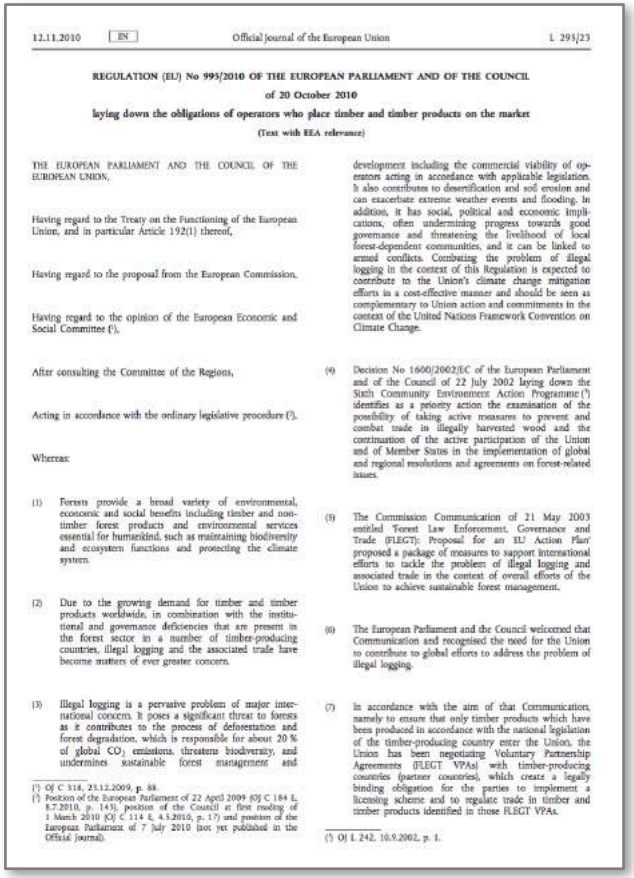
EU regulation laying down the obligations of operators who place timber and timber products on the market (No 995/2010)

EU Regulation 995/2010



12.11.2010 EN Official Journal of the European Union L 295/23

REGULATION (EU) No 995/2010 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 20 October 2010
laying down the obligations of operators who place timber and timber products on the market
(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Economic and Social Committee (1),

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure (2),

Whereas:

(1) Forests provide a broad variety of environmental, economic and social benefits including timber and non-timber forest products and environmental services essential for humankind, such as maintaining biodiversity and ecosystem functions and protecting the climate system.

(2) Due to the growing demand for timber and timber products worldwide, in combination with the institutional and governance deficiencies that are present in the forest sector in a number of timber-producing countries, illegal logging and the associated trade have become matters of ever greater concern.

(3) Illegal logging is a pervasive problem of major international concern. It poses a significant threat to forests as it contributes to the process of deforestation and forest degradation, which is responsible for about 20 % of global CO_2 emissions, threatens biodiversity, and undermines sustainable forest management and development including the commercial viability of operators acting in accordance with applicable legislation. It also contributes to desertification and soil erosion and can exacerbate extreme weather events and flooding. In addition, it has social, political and economic implications, often undermining progress towards good governance and threatening the livelihood of local forest-dependent communities, and it can be linked to armed conflicts. Combating the problem of illegal logging in the context of this Regulation is expected to contribute to the Union's climate change mitigation efforts in a cost-effective manner and should be seen as complementary to Union action and commitments in the context of the United Nations Framework Convention on Climate Change.

(4) Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme (3) identifies as a priority action the examination of the possibility of taking active measures to prevent and combat trade in illegally harvested wood and the continuation of the active participation of the Union and of Member States in the implementation of global and regional resolutions and agreements on forest-related issues.

(5) The Commission Communication of 21 May 2003 entitled 'Forest Law Enforcement, Governance and Trade (FLEGT): Proposal for an EU Action Plan' proposed a package of measures to support international efforts to tackle the problem of illegal logging and associated trade in the context of overall efforts of the Union to achieve sustainable forest management.

(6) The European Parliament and the Council welcomed that Communication and recognised the need for the Union to contribute to global efforts to address the problem of illegal logging.

(7) In accordance with the aim of that Communication, namely to ensure that only timber products which have been produced in accordance with the national legislation of the timber-producing country enter the Union, the Union has been negotiating Voluntary Partnership Agreements (FLEGT VPAs) with timber-producing countries (partner countries), which create a legally binding obligation for the parties to implement a licensing scheme and to regulate trade in timber and timber products identified in those FLEGT VPAs.

(1) OJ C 318, 23.12.2009, p. 88.
(2) Position of the European Parliament of 22 April 2009 (OJ C 184 E, 8.7.2010, p. 145), position of the Council at first reading of 1 March 2010 (OJ C 114 E, 4.5.2010, p. 17) and position of the European Parliament of 7 July 2010 (not yet published in the Official Journal).

(3) OJ L 242, 10.9.2002, p. 1.

The EU regulation requires risk assessment procedures as part of a due diligence system to evaluate the risk of illegally harvested timber or timber products.

Therefore the following aspects are relevant:

- Frequency of illegal logging in a country/ region
- Corruption
- Frequency of armed conflicts
- International sanctions by the UN related to wood exports, etc.
- Complexity of supply chain
- Recognized certification systems or verification through third parties

Minimizing the risk / consequences of verification

→ Additional information required or rather wood can not be imported

The main aim is to address the problem of illegal logging of timber

GRAS Global Risk Assessment Services

GRAS is an efficient tool to conduct risk assessments according to the EU Regulation 995/2010

How can be ensured that no illegal logging took place?

GRAS
Global Risk Assessment Services

GRAS helps to conduct efficient and reliable risk assessments on concession level according to the requirements of the EU Regulation 995/2010:

- Verify the proof of wood origin
- Identify protected areas within the sourcing region
- Trace back supply chains to supplier
- Display information about conversion in the sourcing region
- Identify cut-off dates
- Display e.g. High Conservation Value Forest
- Show information about illegal logging
- Provide information about potential corruption in the sourcing region

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GRAS Global Risk Assessment Services

GRAS can adjust its „GRAS Social Factor“ methodology with additional data sources focussing on relevant risk assessment criteria for EUTR

Example

Security Council
United Nations

THE GLOBAL SLAVERY INDEX

Example

TRANSPARENCY INTERNATIONAL
the global coalition against corruption

ILO International Labour Organization

GLOBAL HUNGER INDEX

Human Development Index

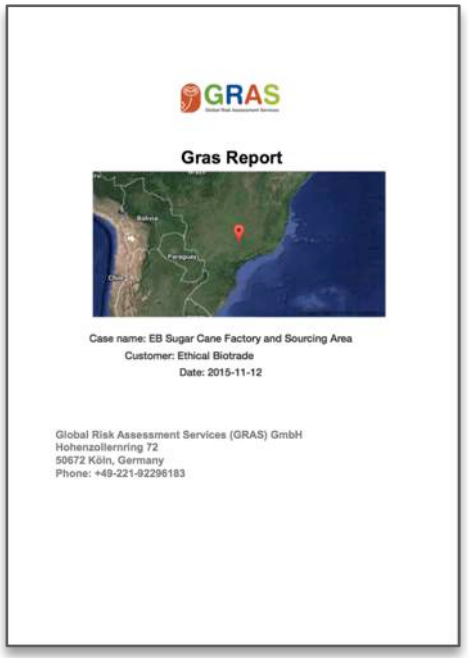
WORLDWIDE GOVERNANCE INDICATORS

GRAS
Global Risk Assessment Services

GRAS Social Factor

The innovative GRAS Index compiles all relevant sustainability criteria into an overall factor

$Factor_{Biodiversity}$		0.21
$Factor_{Illegal\ Logging}$		0.38
$Factor_{LUC}$		0.05
$Factor_{Social}$		0.43
$Factor_{Indigenous}$		0.11
$Factor_{Sust.\ Forestry}$		0.18
GRAS Index	GRAS Global Risk Assessment Services	**0.23**


GRAS

Gras Report

Case name: EB Sugar Cane Factory and Sourcing Area
Customer: Ethical Biotrade
Date: 2015-11-12

Global Risk Assessment Services (GRAS) GmbH
Hohenzollernring 72
50672 Köln, Germany
Phone: +49-221-92296183

Low Risk GRAS Index: < 0.2

Medium Risk GRAS Index: 0.2 to 0.4

High Risk GRAS Index: > 0.4

GRAS Global Risk Assessment Services

GRAS uses a multi-step approach to conduct sustainability risk assessments

Conducted steps

1. Risk assessment of sourcing areas → **2. Calculate risk factor of assessed sourcing areas** → **3. Calculate risk factor of FMU*** → **4. Detailed analysis**

According to:

- Illegal logging
- Biodiversity
- Carbon stock

Calculation of risk factor for sourcing areas based on a defined radius

Coordinates of sourcing area known

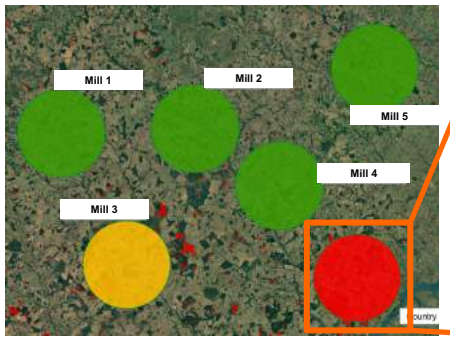
Calculation of risk factor for FMU within sourcing areas with a high risk

Addresses of FMU known

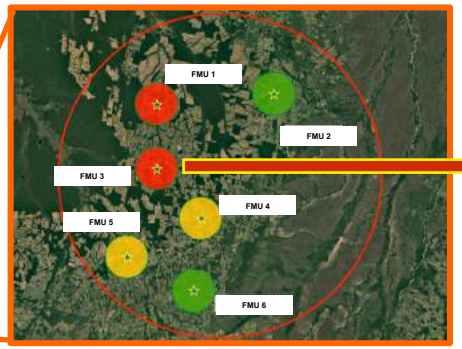
For FMU with high risk a detailed verification of Land Use Change based on Landsat EVI possible

FMU boundaries needed

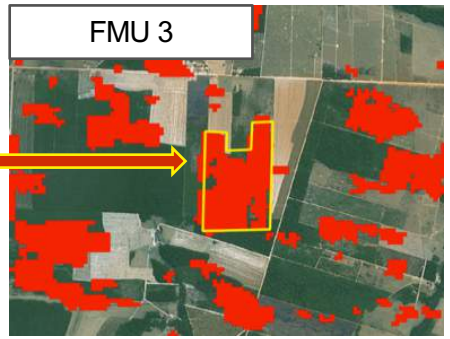
Risk assessment



Risk factor per sourcing area



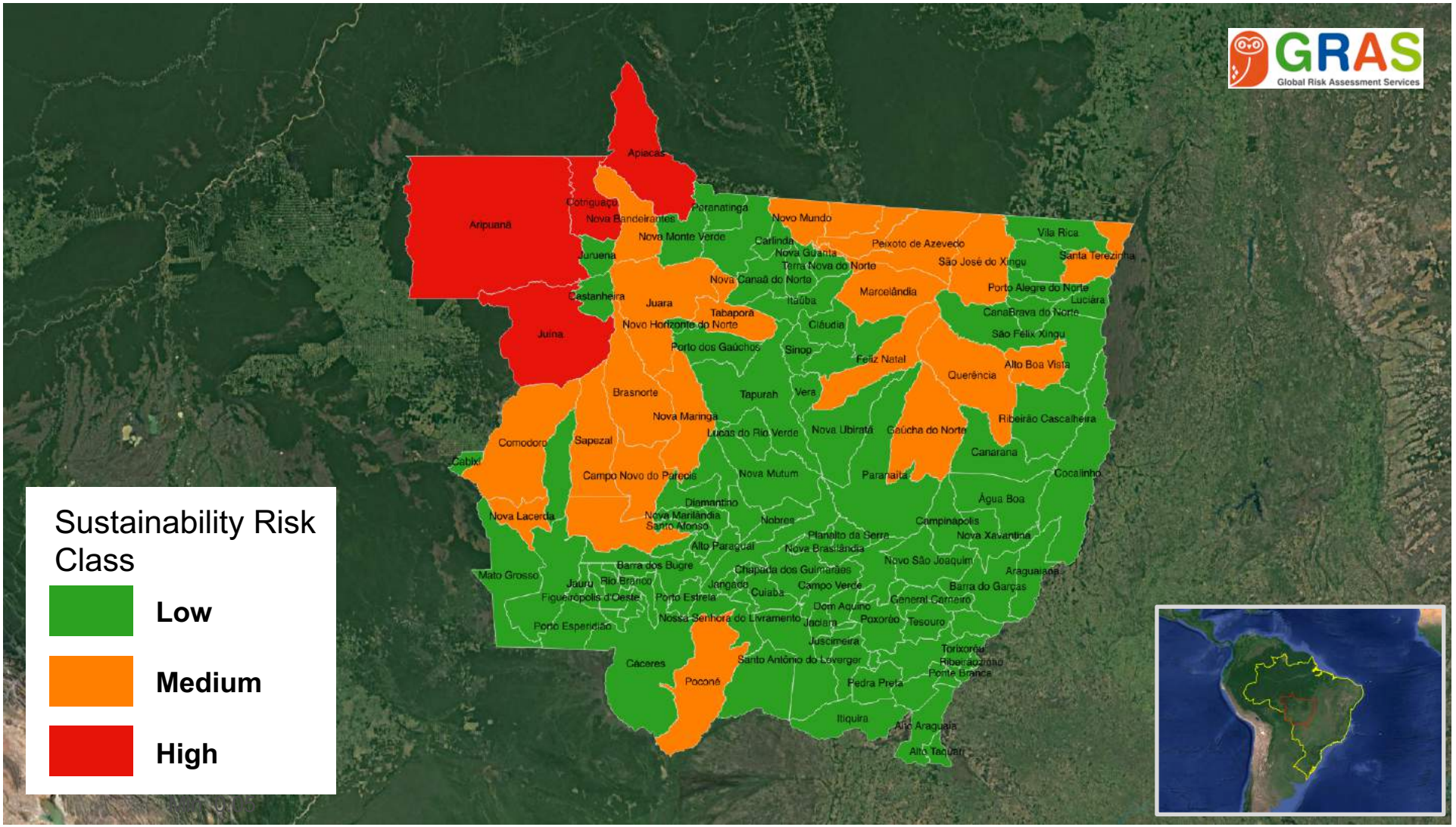
Risk factor per FMU



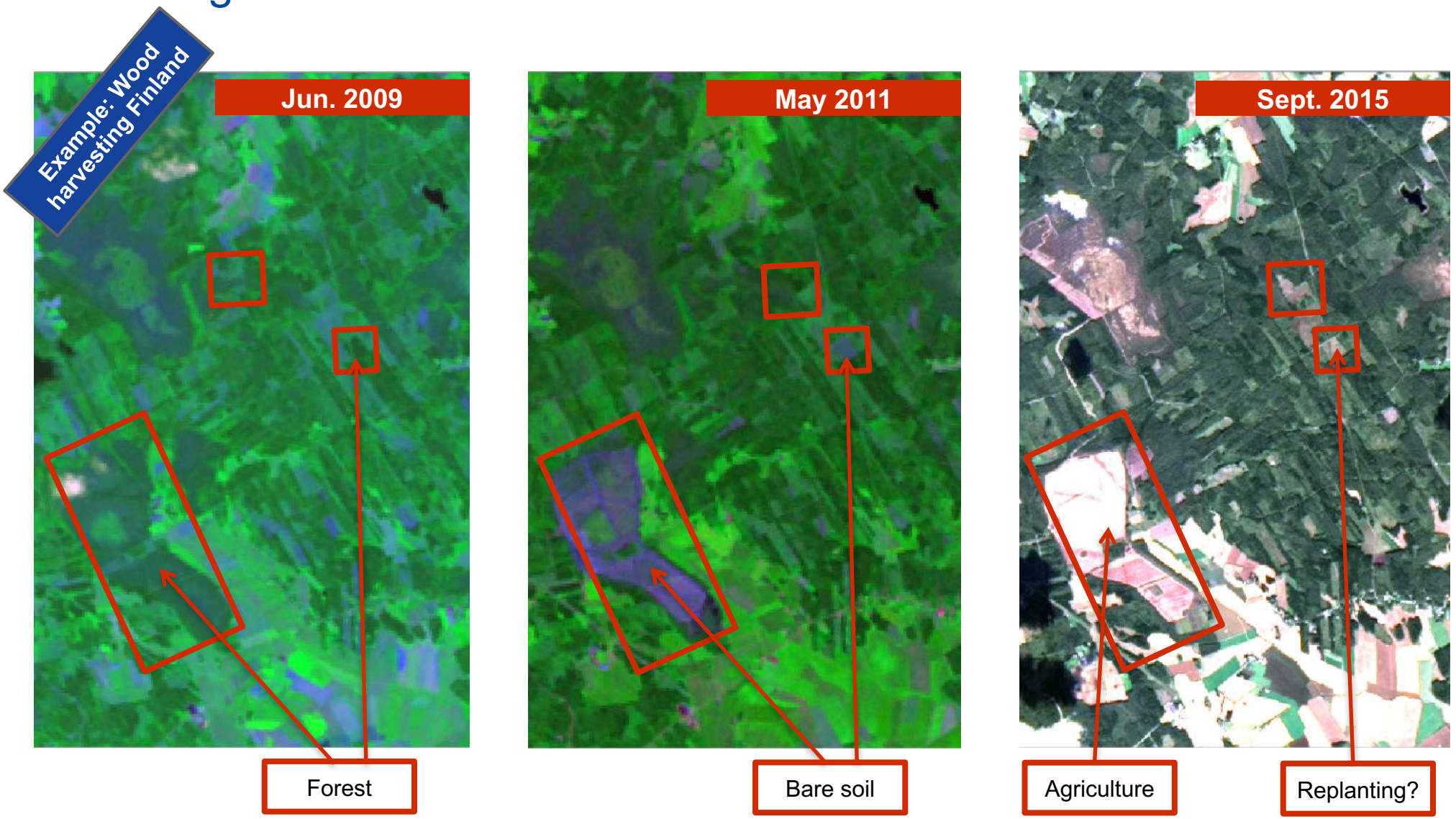
FMU analysis

*FMU = Forest Management Unit

GRAS risk assessment is also applied to any administrative unit, e.g. Municipality level in Mato Grosso, Brazil



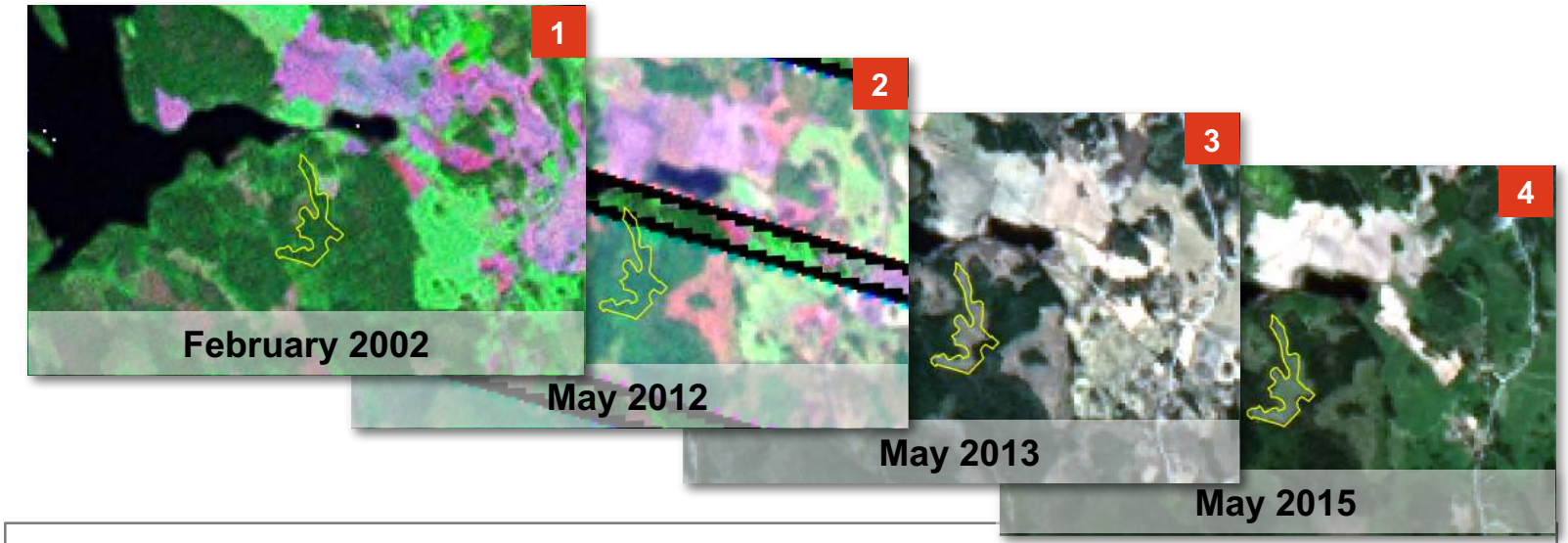
GRAS can identify harvesting activities by using remote sensing technologies and…

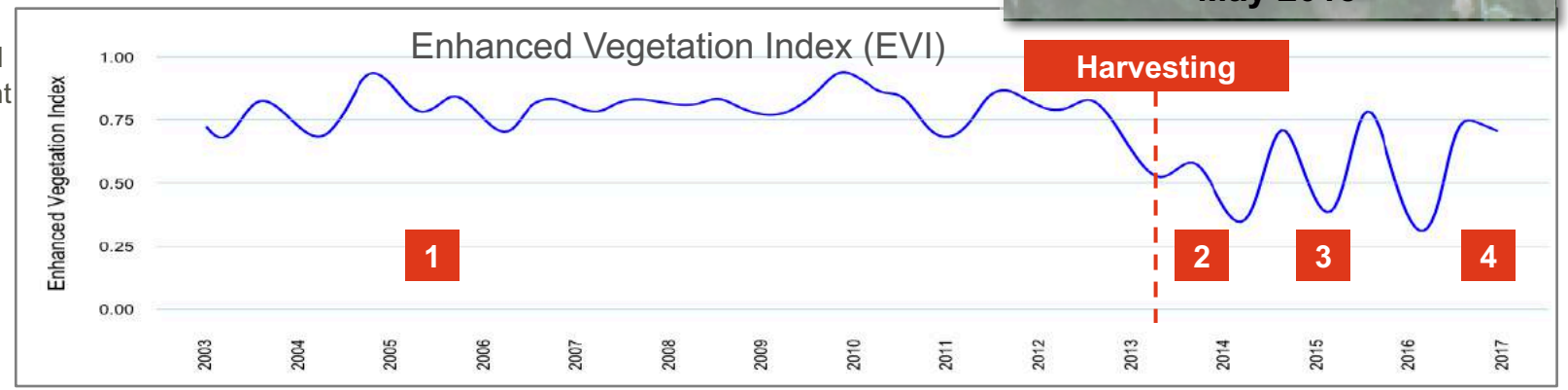


…EVI analysis. The information can be used verifying proofs of wood origin documentation

- The Enhanced Vegetation Index (EVI) is based on MODIS and Landsat data and can be used for the verification of land management actions
- Changes in the EVI timeline show when land management actions took place
- Currently, more than 70 countries are included
- In addition, improved Landsat pictures are used to verify land management actions (e.g. land use change from forest to agricultural land)

➢ **Verification of proofs of wood origin**





Harvesting of wood end of 2012/ early 2013

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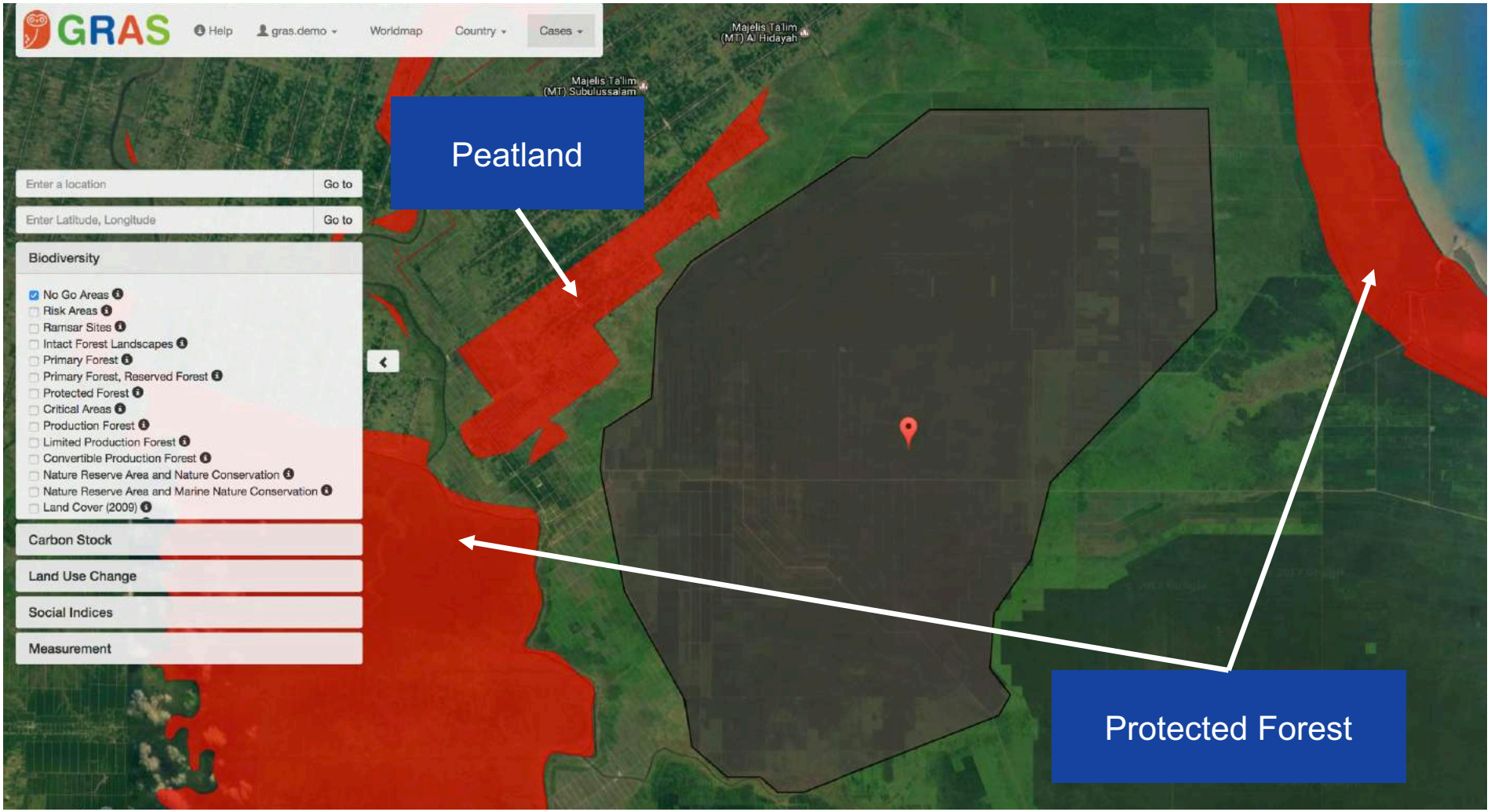
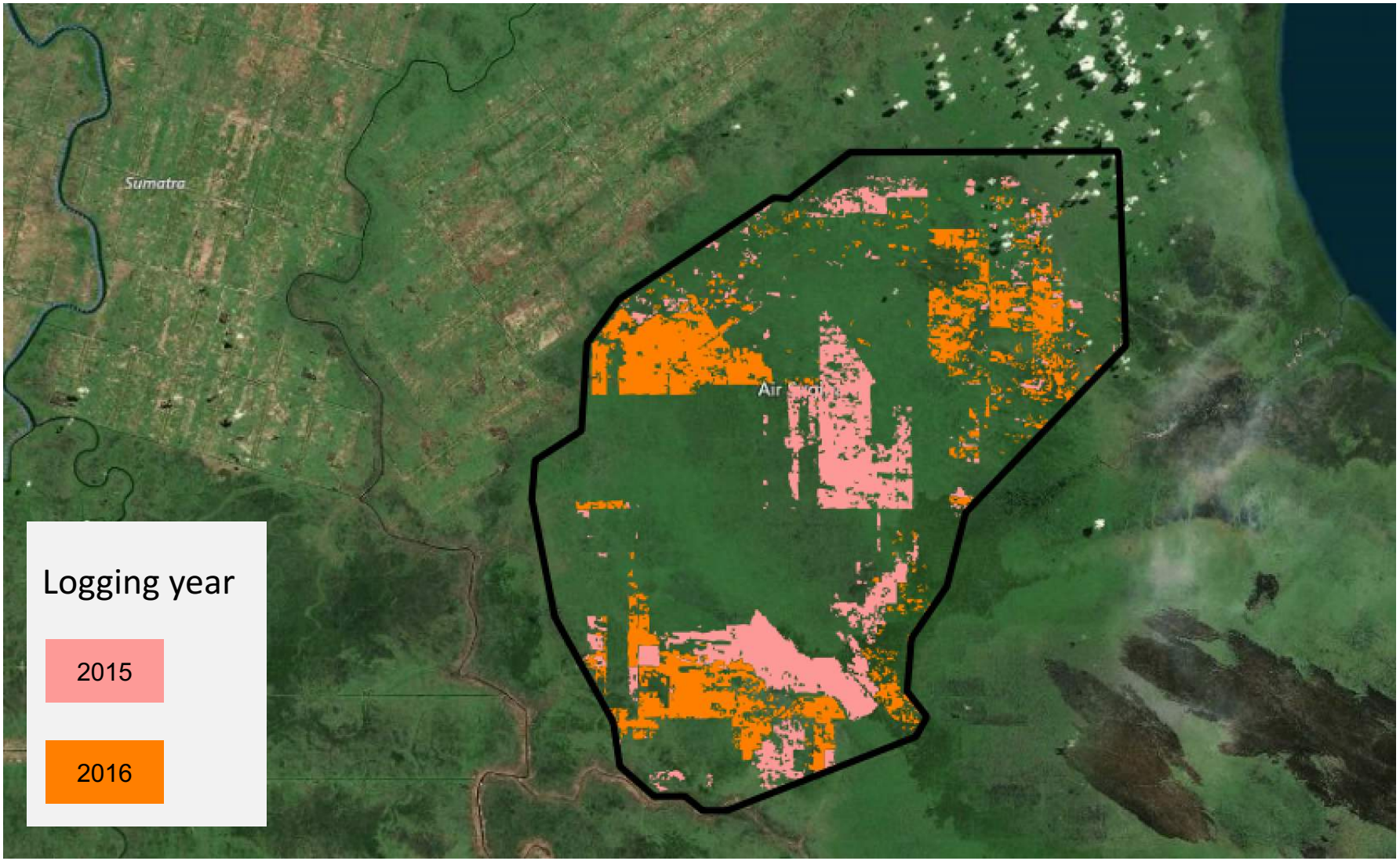
An example is given here for a forest management unit in Sumatra, Indoneia

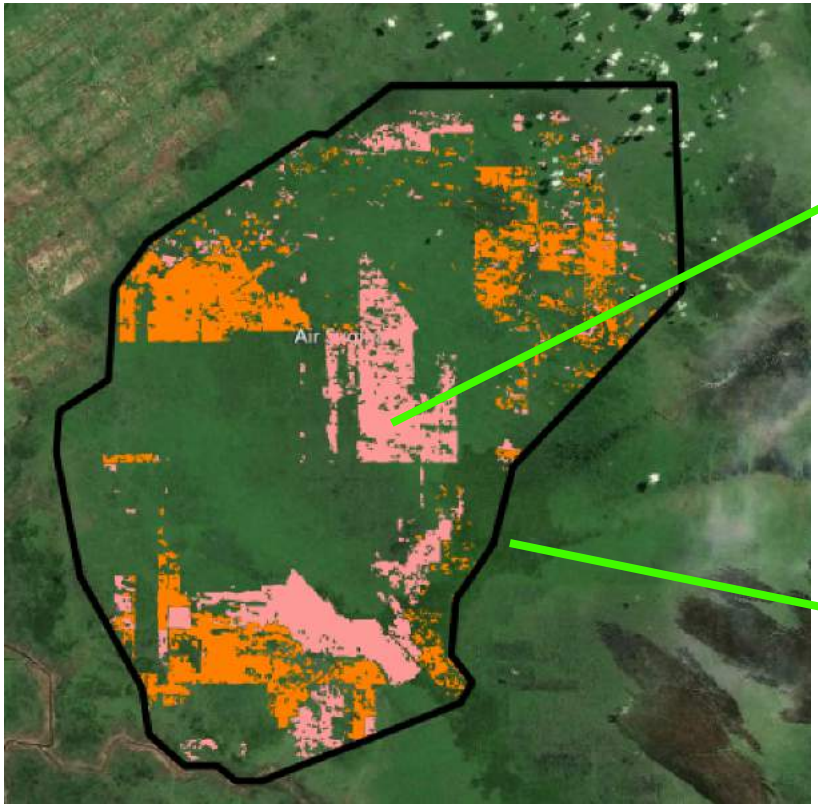
The FMU does not lie within a protected area or carbon rich soil

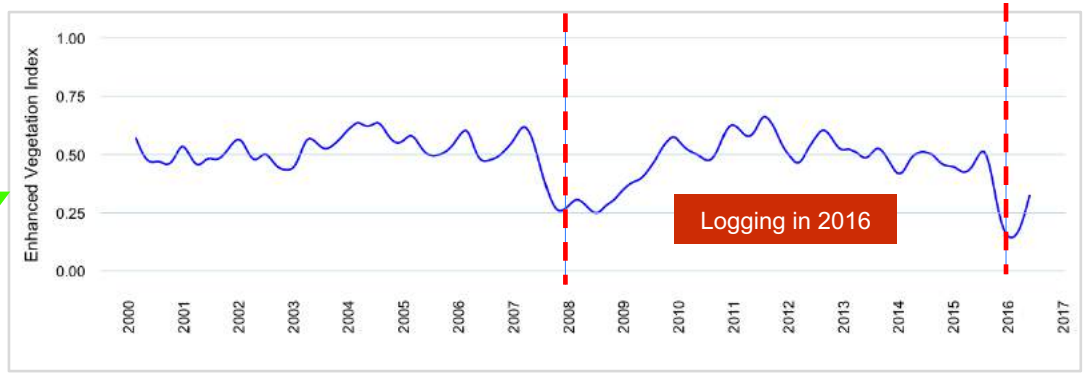


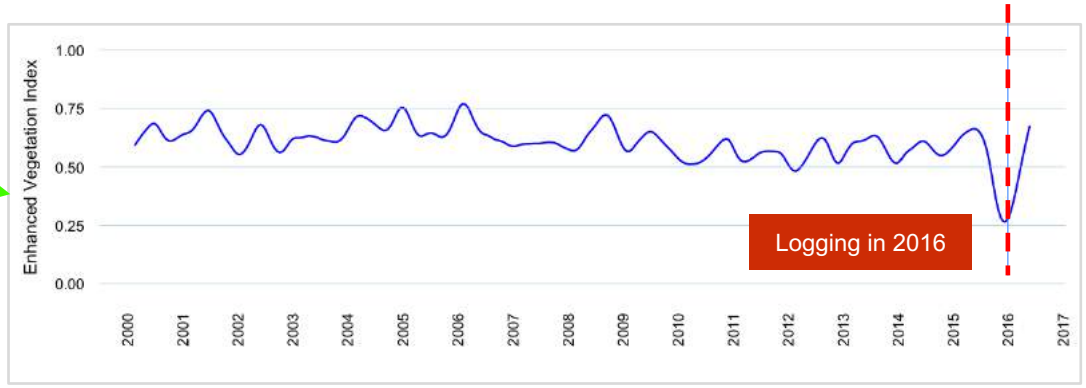
GRAS has mapped the recent logging activities within the FMU



EVI also shows recent logging in 2016 in the south east of the site

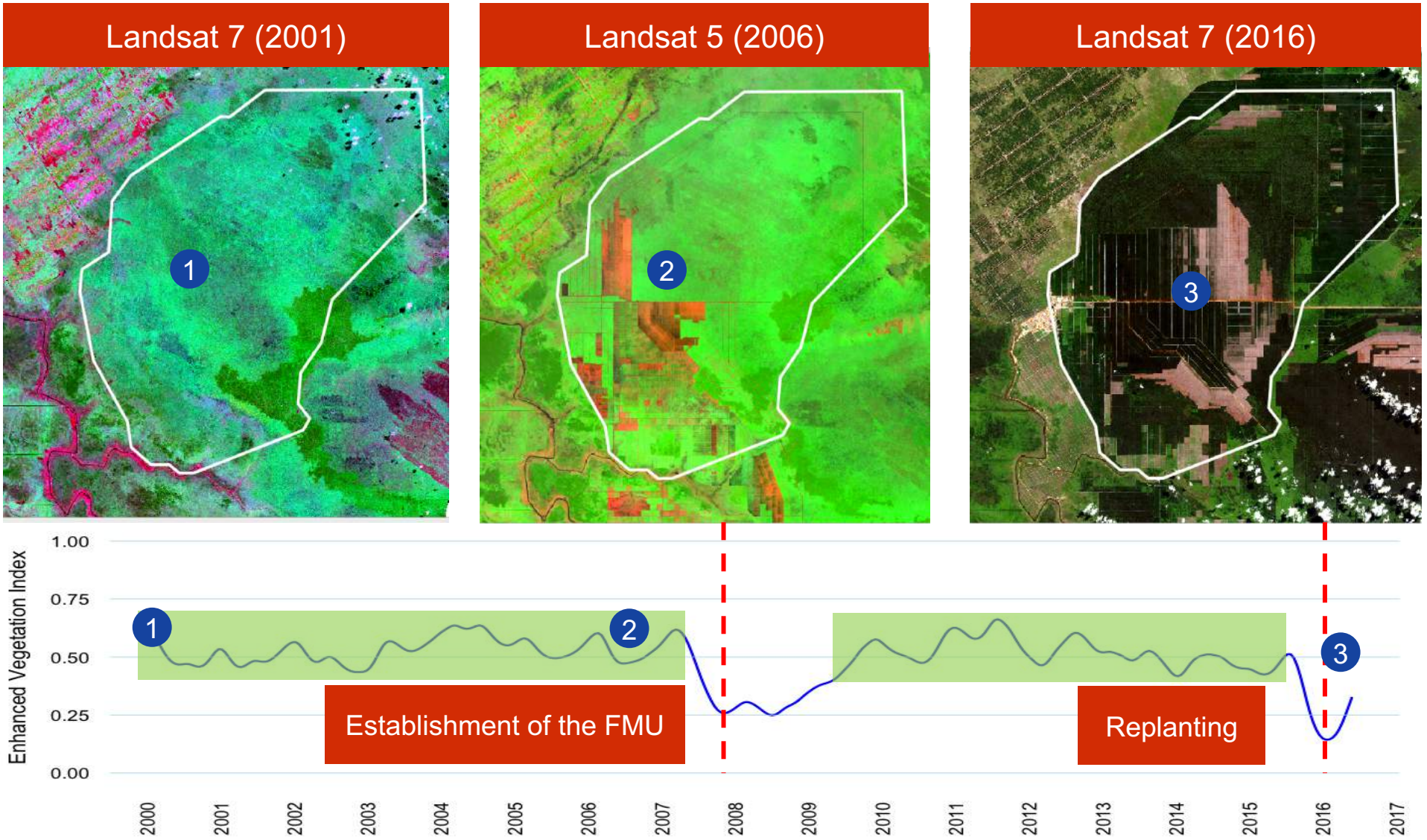






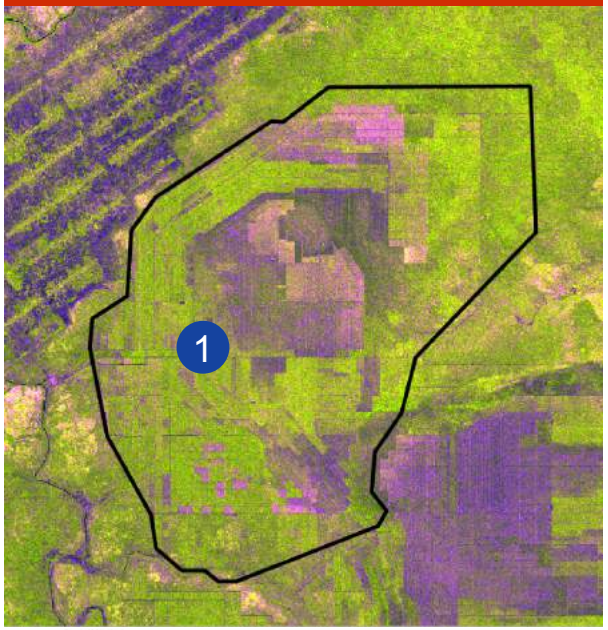
Logging activities have been talking place at least starting from 2007

Satellite imagery confirmed the establishment of the FMU starting from 2006-2007

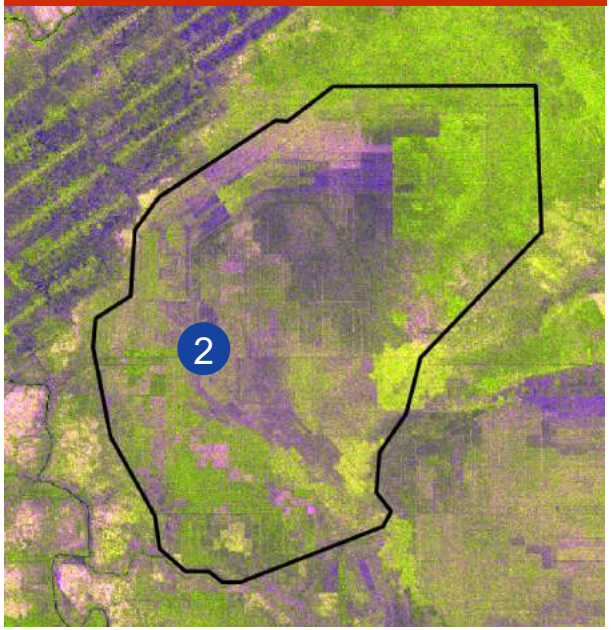


High resolution Radar data (SAR) can also help unrevealing the history of the FMU. The whole FMU area is managed since 2009

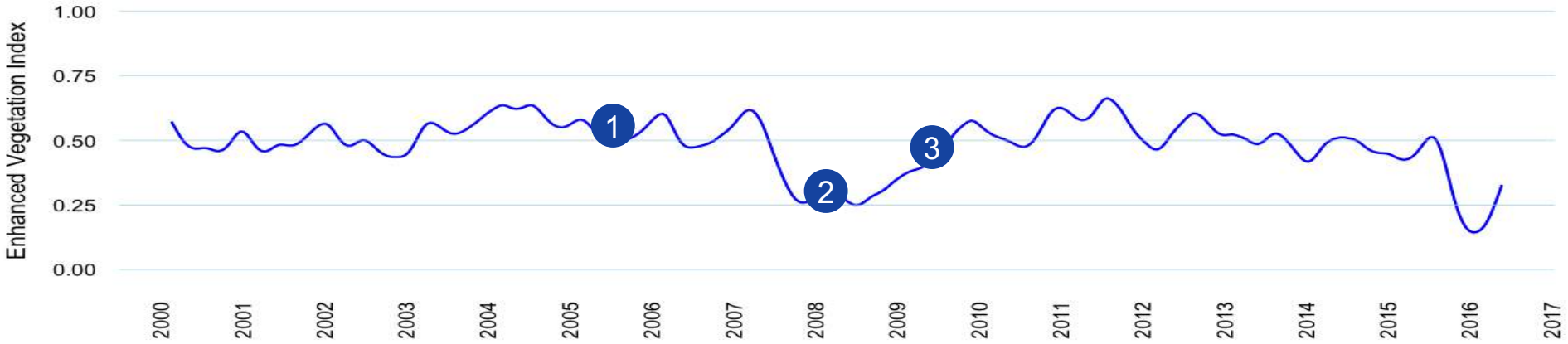
PALSAR (2007)



PALSAR (2008)



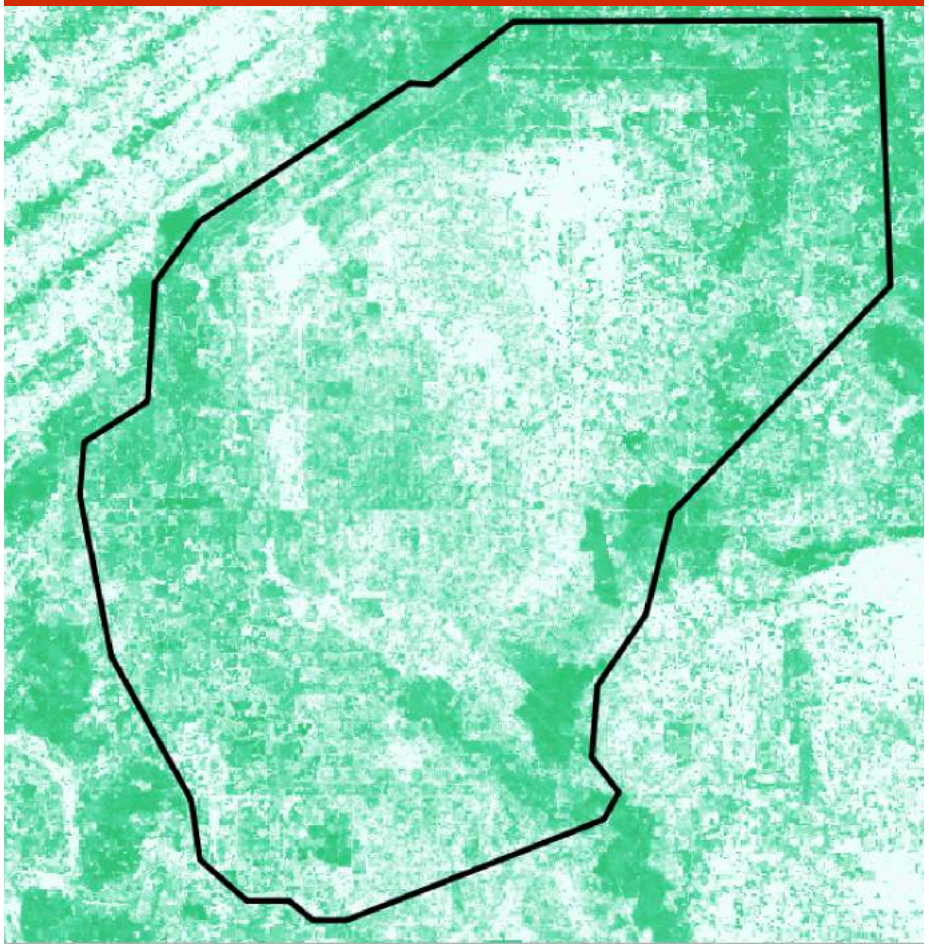
PALSAR (2009)



GRAS Global Risk Assessment Services

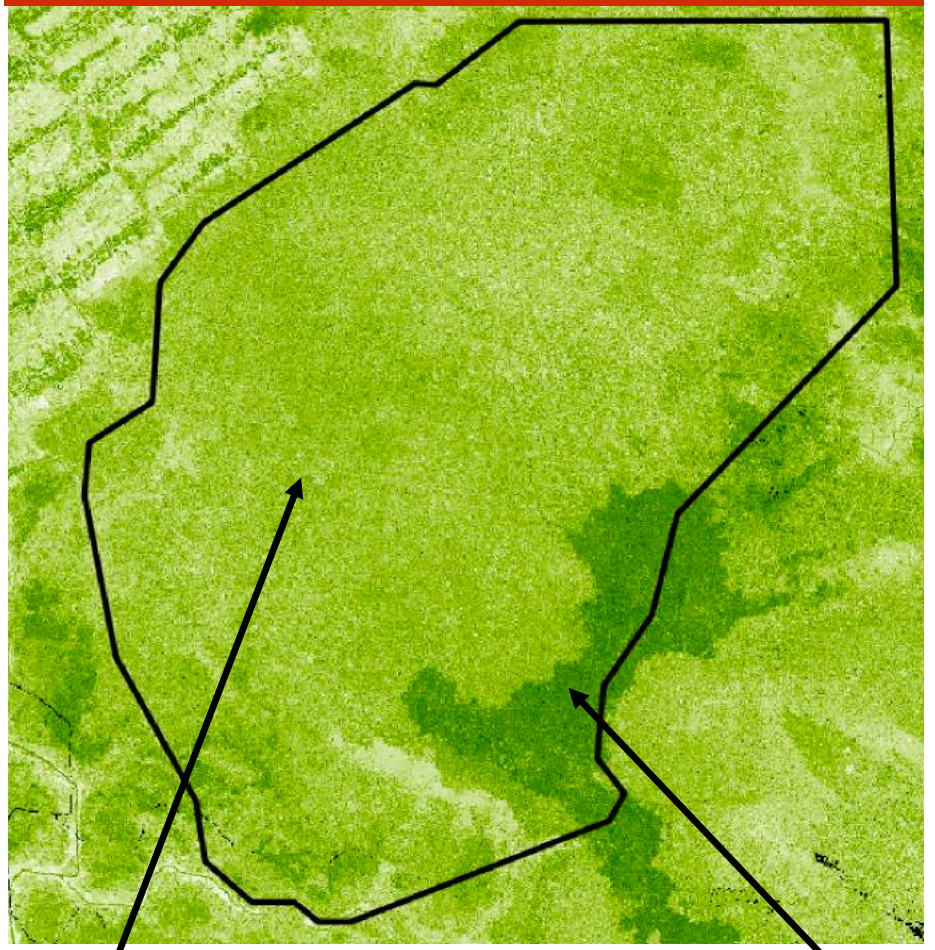
Was the area primary forest before the establishment of the FMU?

Tree Height in the year 2000 (m)

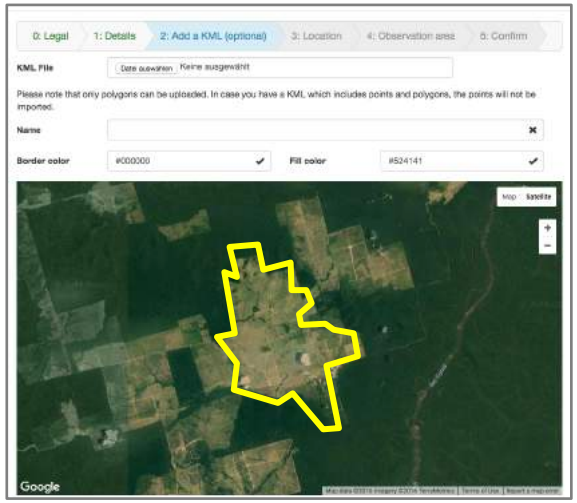


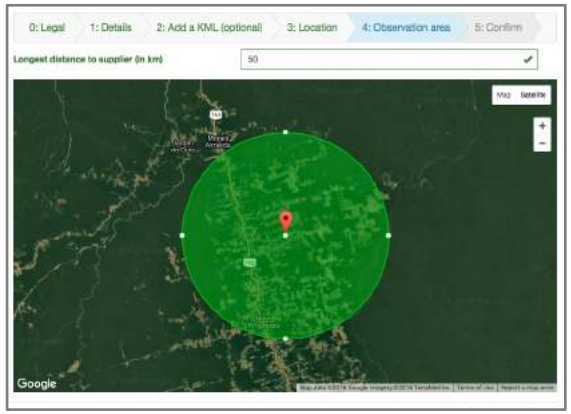
<5m 5—10m >10m

Tree Cover in the year 2000 (%)



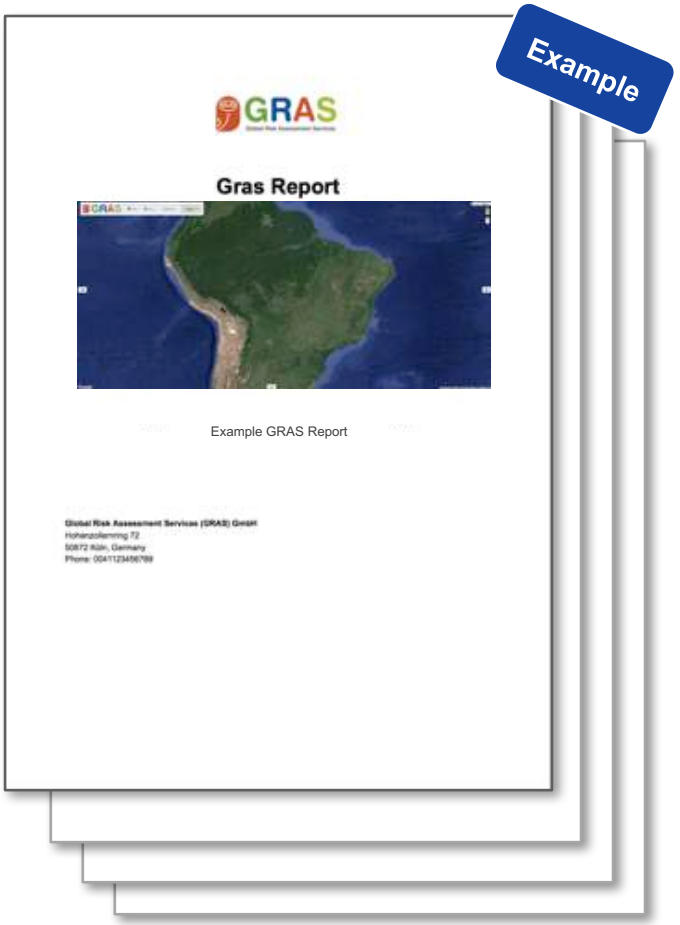
Already today, GRAS is producing Risk Assessment Report for certain regions/ areas documenting the calculated risk in a transparent way





Steps for automated GRAS analysis:

1. Open a new case within the online tool
2. Polygons can be uploaded
3. Sourcing radius can be defined
4. GRAS Sustainability Index will be created automatically for the defined sourcing region
5. Automated GRAS report can be created



Option: Automated analysis of sourcing areas or regions based on EUTR relevant risk factors

Content

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Conclusions

- GRAS can be used for the verification of proofs of wood origin checking information on wood harvesting in a certain area
- GRAS includes geo-referenced information on protected areas (e.g. biodiverse areas, indigenous areas) and social criteria. The mapped information can be used verifying illegal harvesting of wood
- GRAS allows individual analysis for areas of interest (e.g. polygon upload possible)
- GRAS can further develop an easy-to-use online tool specifically adapted to conduct risk assessments in the forest sector according to EUTR relevant information
    - Build up a system to monitor volumes of wood taken logged per forest area or municipality and compare it to the legally permitted volumes
    - Build up a customized tool to control and manage own forest areas and suppliers with respect to sustainability risks and set up a reporting

GRAS
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