

The Amazon's Silent Crisis: Night Terrors

GREENPEACE

FOREST CRIME FILE
OCTOBER 2014

Night after night, logging trucks smuggle illegal timber out of the Amazon rainforest to sawmills that supply global markets.

In August and September 2014, Greenpeace used covert GPS locator beacons to monitor logging trucks in the Brazilian state of Pará. This is the first time that Greenpeace has used GPS tracking to document illegal logging in the Amazon rainforest.

Our investigation revealed how the timber industry in Pará is laundering illegal timber. During the day, empty logging trucks travel deep into the rainforest. When night falls, they travel from illegal logging camps to sawmills in Santarém, the centre of the logging industry in the Amazon. These sawmills use official paperwork obtained through fraud to launder the timber for export. Timber from these sawmills is regularly exported to Europe, China, Japan and the United States – in spite of laws in some of these markets that prohibit the sale of illegal timber.



A truck loaded with timber travels on the BR-163 highway towards Santarém. Trucks carrying illegal timber often travel at night to avoid surveillance. 30 August 2014. © Otávio Almeida / Greenpeace

Destructive logging is destroying the Amazon



The Amazon rainforest is the largest rainforest on earth. It covers 5% of the world's surface area and reaches into nine South American countries.¹ Just under two-thirds lies inside Brazil.² To date, 700,000 km² of Brazil's Amazon rainforest has been deforested.³ Nearly a fifth has been lost within the last three decades.⁴ The Brazilian government has made some progress in slowing down the rate of forest loss. But recent data show that deforestation in the Brazilian Amazon is now getting worse.⁵

Deforestation normally starts with logging. Loggers build roads deep into the rainforest to extract high-value hardwood trees. Intact forest becomes degraded and vulnerable to fragmentation. Settlers subsequently clear the forest alongside these roads for farmland and cattle ranches. These frontier regions are renowned for poor law enforcement and widespread corruption. Illegal logging is endemic. In Pará, which produces and exports more timber than any other state in Brazil, more than three-quarters of logging is estimated to be illegal.⁶

In 2006, the Brazilian government responded to the logging crisis with a programme of legislative reforms and new laws. This included electronic control systems that are supposed to track and record sales of timber. Logging estates submit a forest management plan to the government. This includes a breakdown of the amount of timber they intend to log each year. Once approved, they receive credits commensurate with the volume of harvestable timber. All timber sales and shipments must be accompanied by the corresponding amount of credits. Timber that has been logged illegally, i.e. outside of a permitted area or in excess of the permitted harvest volume, should not have access to these credits. It should therefore be impossible to sell it.

The Greenpeace report, *Logging: The Amazon's Silent Crisis*, published in May 2014, revealed how loggers were exploiting weaknesses in the control systems to generate additional credits.⁷ These are used to launder illegal timber. For example, loggers routinely submit applications to exploit land that they have no intention to log. Instead, they apply the credits they receive to timber stolen from elsewhere. This gives illegal timber a fake point of origin. Once laundered in this manner,

illegal timber becomes indistinguishable from timber that has been harvested legally.

This crime file looks at a network of sawmills in Pará centred around a sawmill and exporter called Rainbow Trading. Using electronic surveillance, Greenpeace monitored trucks travelling back-and-forth between public forests, where no logging has been authorised, and Rainbow Trading and its suppliers. According to official records, Rainbow Trading acquires its timber from legal, privately-owned logging estates.⁸ Yet satellite analysis revealed no evidence of logging at three out of five of these estates and irregularities commonly associated with illegal activity were found at the other two. By contrast, the trucks supplying Rainbow Trading and the other sawmills were visiting illegal logging camps with piles of logs stacked beside well-used access roads.

Rainbow Trading appears to be receiving and laundering illegal timber. Publicly available information shows that the sawmills that supply it are operating without the licences required by Brazilian law.⁹ This is itself illegal.¹⁰ One of the mills is even under an injunction from the federal government.¹¹ This is supposed to stop it trading timber. Rainbow Trading exports timber to countries and regions with trade laws that prohibit the importation of illegal timber. The sawmills supplying Rainbow Trading provide logs and sawn wood to other exporters as well. At best, anyone buying timber from these companies is taking a huge risk. Companies in Europe or the US that place this timber on the market may well be breaking the law.

This crime file confirms that weaknesses in the timber control systems enable and sustain high levels of illegality in the Brazilian Amazon logging industry. It shows, once again, that fraudulent paperwork is readily available. Timber buyers cannot justify placing Amazon timber on the market when their evidence that it was harvested legally is predicated on documents issued by the Brazilian government. To comply with trade laws that demand timber is of legal origin, such as the European Timber Regulations or the Lacey Act, buyers in Europe or the United States will need to obtain further evidence that proves conclusively that the timber they are placing on the market is legal.



Left: A sawmill, owned by Comercial de Madeiras Odani Ltda, in Placas, Pará. Greenpeace monitored trucks travelling between this sawmill and illegal logging camps in the heart of the rainforest. 3°28'21.36"S 54°24'33.05"W
Top: 30 August 2014 © Lunae Parracho / Greenpeace, Bottom: 28 September 2014 © Lunae Parracho / Greenpeace

Investigation



A truck drives on a unpaved road between Santarém and Uruará, Pará, close to where Greenpeace discovered illegal logging camps.

01 September 2014

3° 11' 0.018" S
53° 44' 35.436" W

© Otávio Almeida / Greenpeace

Our investigation centred on the municipalities of Uruará, Placas and Santarém in the state of Pará. Santarém is in the heart of the Amazon and the centre of the timber industry in Pará state. During August and early September 2014, we placed GPS locator beacons on logging trucks operating in the vicinity of Santarém. The GPS signals these beacons emitted revealed the methods that the logging industry uses to smuggle illegal timber out of the Amazon rainforest. The trucks drive to remote areas of forest during the day. They only leave the forest at night, travelling under the cover of darkness to sawmills in the port city of Santarém.

We cross-referenced the trucks' movements against government maps that record land use and logging permits. The forests that they visited are owned by the federal government and classified as public forest.¹² No authorisation to log these areas had been granted. Logging in such circumstances is illegal under Brazilian law. Yet reconnaissance overflights of these areas revealed logging camps, access roads and clearings full of log piles.

Suspicious truck movements like this are not unusual. The PA-370 highway links Santarém to the Curuá-Una dam, hundreds of kilometres into the rainforest. Every night, approximately eighty trucks on the PA-370 highway take the ferry across the Curuá-Una river. Traffic heading towards Santarém on the PA-370 is heaviest between 23:00 and 01:30.¹³

Our investigation led us to three sawmills: Rainbow

Trading Importação e Exportação LTDA, Comercial de Madeiras Odani LTDA and Sabugy Madeiras LTDA. Between 29 August and 12 September 2014, the GPS trackers showed logging trucks making regular trips between illegal logging camps and sawmills owned by Rainbow Trading and Odani. Odani's sawmill is deep in the forest, far from major roads or the authorities. It was supplied by one of the logging trucks up to four times a day. That truck also made regular nightly trips between Odani's sawmill and Sabugy's sawmill in central Santarém. Odani and Sabugy supply timber to Rainbow Trading, as well as other exporters in Santarém.

Greenpeace analysed official documents from the System for the Commercialisation and Transportation of Forest Products (*Sistema de Comercialização e Transporte de Produtos Florestais* – SISFLORA), the electronic control system that records all timber sales and deliveries in Pará and Mato Grosso. Rainbow Trading claims to have been supplied by five logging estates in 2014. Over 90% of its timber supply is claimed to have originated from these estates.

Greenpeace conducted geo-referenced analysis of satellite imagery of all five estates. As of 30 July 2014, three showed no sign of logging, which suggests that their primary purpose is to provide the sawmill with the paperwork it needs to launder illegal timber logged elsewhere. The other two showed some evidence of logging. Field assessments of these estates would be needed to identify whether the marginal loss in forest cover that was detected is

commensurate with the volume of timber Rainbow Trading claims to have received.

Taken together, the suspicious movements of the trucks supplying the sawmills and the lack of logging at three out of five of the estates supplying Rainbow Trading present compelling evidence that this sawmill is receiving illegal timber stolen from the Amazon rainforest and laundering it with documents obtained through fraud.

Repeat offenders

Rainbow Trading and its suppliers are not strangers to illegality. Over the past decade, they have been fined almost R\$1,700,000 (€558,270) by the federal environmental police, IBAMA. Information on these fines is freely available on the IBAMA website.¹⁴ Rainbow Trading alone has been fined R\$479,941 (€156,000) since 2007.

In addition to the five logging estates, SISFLORA records Rainbow Trading buying logs from two sawmills: Odani and Schmitt & Schnorr Ltda. Records also show Sabugy supplied them sawn timber. None of these sawmills can trade timber legally. The federal environment agency, IBAMA, has suspended their Cadastro Técnico Federal (CTF) – the environmental registration number needed to buy and sell timber using the federal Forest Origin Document (Documento de Origem Florestal – DOF) electronic control system. It is illegal for timber companies to buy or sell timber when their CTF has been suspended. Timber supplied by Odani, Sabugy and Schmitt & Schnorr is therefore illegal, even if felled with the relevant harvesting permits. In June 2013, IBAMA also obtained a separate legal injunction banning Odani from processing or selling timber. That injunction is still in place.

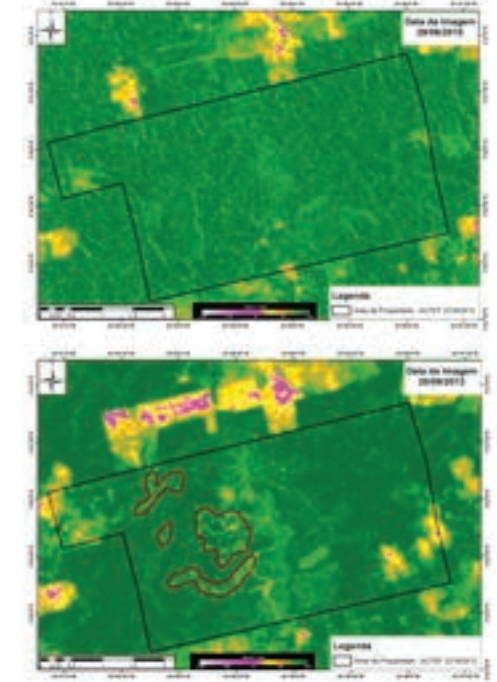
Trade laws, such as the EU Timber Regulation, require compliance with the applicable legislation in the country of harvest for timber to be considered legal. The requirement for companies to have an active CTF is a key component of the legislation governing the forestry sector in Brazil.¹⁵ It ensures that timber within the supply chain is felled, traded and processed in accordance with the law and can then be legally exported. Timber from these sawmills cannot be traded legally in Brazil and is therefore not suitable to be exported and then placed on the EU market.

Laundering for export

Despite the Brazilian government's attempts to keep them out of the market, Odani, Sabugy and Schmitt & Schnorr are still able to sell their timber to exporters. Rainbow Trading received wood from Schmitt & Schnorr in March, Sabugy in July and multiple deliveries from Odani in August.¹⁶ In recent years, Rainbow Trading has exported to companies in Europe, China, India, Japan and the United States.

In addition to Rainbow Trading, Odani supplied jatoba, ipê, garapa and maçaranduba to four timber exporters in 2014. During that time, these companies exported timber of the same species to Belgium, China, Denmark, France, Guadalupe, Italy, Japan, Spain and the USA.¹⁷ How have companies placing timber from these Brazilian exporters on the market mitigated the risk that the timber they were buying was illegal?

Landsat analysis, Reijane Celeste Moura Rebelo estate



These satellite images of one of the estates supplying Rainbow Trading, taken in June 2010 and September 2013, suggest trace levels of logging activity. As credits equivalent to 93% of the harvestable timber in this estate have been traded, a field audit would be needed to rule out any irregularities.

Out of control

Since 2006, all timber transactions in Brazil must be recorded in an electronic control system. This records the buyer, the seller, how the timber was transported and how much has been sold. Most Brazilian states use the federal control system, DOF, run by IBAMA. But Pará and Mato Grosso elected to use their own system, SISFLORA, run by each state's State Environmental Secretariat (Secretaria Estadual de Meio Ambiente – SEMA). Sales of timber recorded in SISFLORA must be accompanied by Guia Florestal (GF) transport documents. SISFLORA runs alongside the DOF system.

Any company involved in a potentially polluting activity must register with IBAMA's Federal Register of Potentially Polluting Activities (Cadastro Técnico Federal de Atividades Potencialmente Poluidoras – CTF). Companies receive a unique registration number. Timber companies need this number to trade timber within the DOF control system. A CTF can be suspended if companies break the law. Odani, Sabugy and Schmitt & Schnorr have had their CTF suspended by IBAMA. It is illegal to trade timber without a CTF or with a suspended CTF.

Information about sanctions and penalties is supposed to be shared between DOF and SISFLORA. But this is often not the case. For example, the SISFLORA system takes no account of the IBAMA injunction that prohibits Odani trading or processing timber. At a practical level, sawmills and timber traders are not asked to prove they have an active CTF when trading timber using SISFLORA. So Odani, Sabugy and Schmitt & Schnorr can still use SISFLORA to obtain the GF3 paperwork needed to trade sawn timber. However, timber supplied by these companies remains illegal, since they do not have the active CTF required by Brazilian law and Odani is additionally under a federal injunction.¹⁸ The availability of GF3 paperwork does not change the fact that timber from these companies (or any company without an active CTF or under an injunction from IBAMA) is illegal.

Truck 1

29–30 August 2014

Make: Mercedes Benz
 Model: Axor 2831 6x4
 Colour: White
 Registered: 2011/12
 Licence plate: OCA 4058
 Chassis: ...27972

Scale 1:500,000



SANTARÉM



00:40
Arrives at
Rainbow
Trading sawmill

00:02
Entering
Santarém

09:27
Leaving
Santarém on
highway PA-370

22:05
Approaching
Curuá-Una
ferry crossing

19:41
Driving back
to Santarém

13:20
Arrives at an
illegal logging
camp



2° 48' 18.534" S 54° 18' 26.976" W
28 August 2014

A logging truck on the PA-370 highway waits to take the ferry across the Curuá-Una river.

Rainbow Trading Importação e Exportação Ltda

CTF: Active

Operating licence: 8884/2014 valid until 09/09/2016

Ceprof: Active

Rainbow Trading is a medium-sized sawmill and a timber wholesaler and exporter based in Santarém. Its sawmill has an annual production capacity of 32,850 m³. It has been fined twelve times in the past seven years by IBAMA for operating illegally. Those fines total R\$479,941 (€156,000).

Rainbow Trading sells sawn wood throughout Brazil. It also frequently exports timber to international markets. Official export data shows that between 2008 and 2013, Rainbow Trading exported Amazon timber to companies in Belgium, China, Denmark, France, Germany, India, Italy, Japan, The Netherlands, Spain, the United Kingdom and the United States. In 2014, between January and August, Rainbow Trading sold timber to companies based in Portugal, Belgium, Sweden, France and The Netherlands (see p.11).

According to the SISFLORA control system, Rainbow Trading supplied the market with 8,000m³ of timber between January and August 2014. Over 90% of this timber was accompanied by credits from five private logging estates:

ACORQE (Traditional Quilombolas Association, AUTEF 2124/2012): 3,463.3 m³

Reijane Celeste Moura Rebelo (AUTEF 2218/2012): 3,207.9 m³

João Da Silva Campos (AUTEF 1836/2013): 969.9 m³

Elisario Moraes De Lima (AUTEF 1868/2014): 570.7 m³

Gilson De Oliveira Brandão (AUTEF 2198/2014): 76.9 m³

Geo-referenced satellite analysis of the estates supplying Rainbow Trading detected logging at the Reijane Celeste Moura Rebelo estate. A field visit would be needed to identify whether the amount of logging was commensurate with the significant volume of timber (over 28,000m³) from this estate that has been placed on the market since December 2012. The same applies to ACORQE, which is supposed to have provided

almost 3,500m³ of timber in 2014 to Rainbow Trading and a total of 40,000m³ to the market since 2012. A reconnaissance overflight of the ACORQE estate on 14 October 2014 uncovered active movements of timber – logging – even though the logging permit for this estate expired in August 2014.

In addition to these suspicious results, no logging was detected at the three other estates up to August 2014. This suggests that paperwork from these estates is being used to launder timber logged illegally elsewhere.

Rainbow Trading bought logs from two sawmills in 2014:

Schmitt e Schnorr Ltda, Santarém (CTF #587069; CEPROF #642)

Comercial De Madeiras Odani Ltda, Placas (CTF #33006; CEPROF #851)



Map showing that the logging camps uncovered by this investigation are in public forests. Land bordered in orange has been recorded in the government's rural land use registry.



3°25'16.87"S 54°14'10.64"W
01 September 2014

Illegal logging camp in the rainforest. A truck monitored by Greenpeace made two trips between this camp and the Rainbow Trading sawmill in Santarém.

Truck 2

10 September 2014

Make: Mercedes Benz
 Model: Axor 2831 6x4
 Colour: White
 Registered: 2011/12
 Licence plate: NTC 2321
 Chassis: ...71723

Scale 1:500,000



Sabugy is a sawmill in Santarém. It ceased exporting timber in 2012. However, it still supplies three export companies with sawn wood, including Rainbow Trading. Since 2008, Sabugy has accumulated fines from IBAMA totalling R\$460,000 (€149,500).



Sabugy Madeiras LTDA

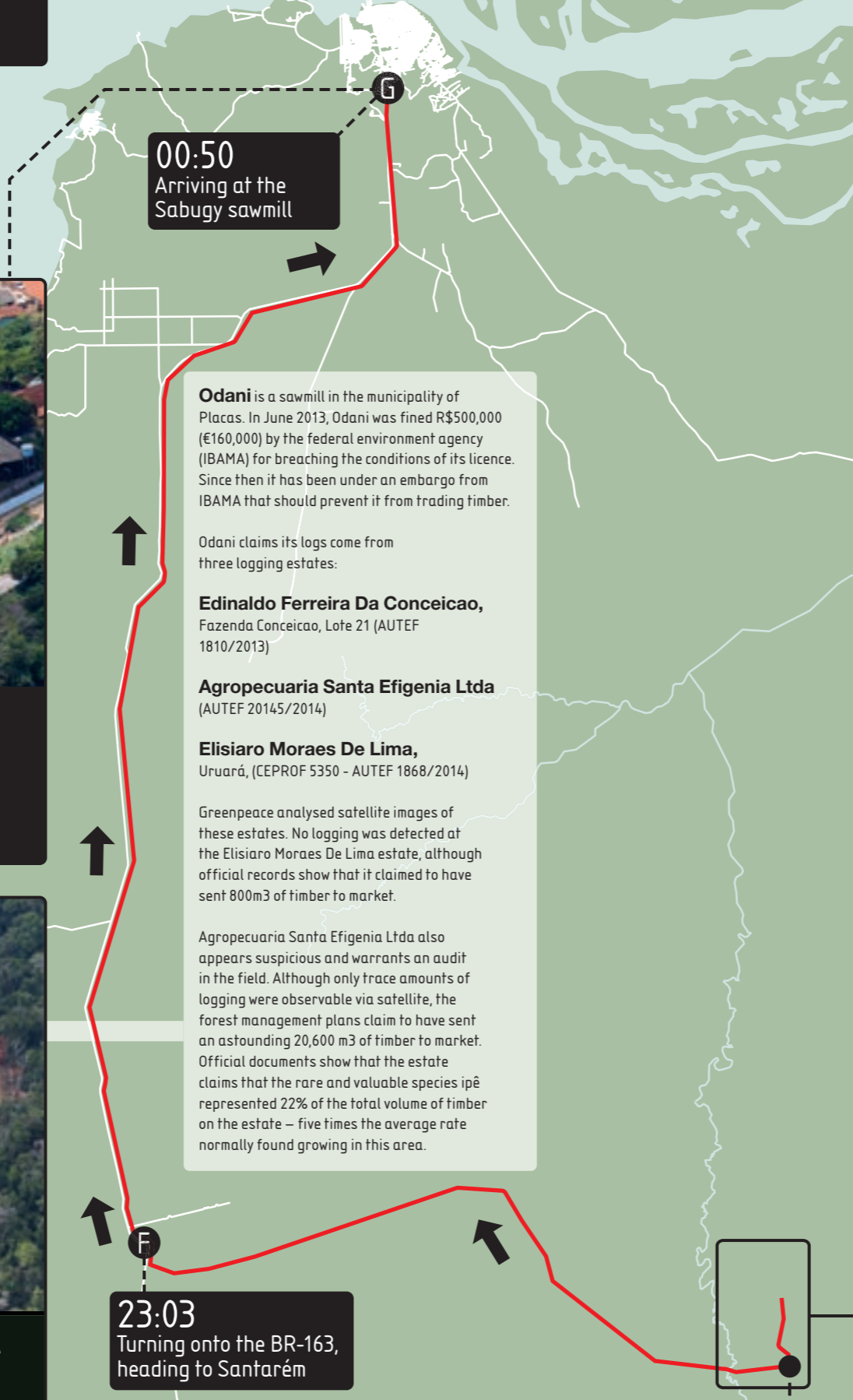
CTF: #85545 - suspended
 Ceprof: Active
 Operating licence: awaiting renewal



Comercial de Madeiras Odani LTDA

CTF: #33006 - suspended
 Ceprof: Active
 Operating licence: 8825/2014
 valid until 20/07/2016

SANTARÉM



00:50
 Arriving at the Sabugy sawmill

Odani is a sawmill in the municipality of Placas. In June 2013, Odani was fined R\$500,000 (€160,000) by the federal environment agency (IBAMA) for breaching the conditions of its licence. Since then it has been under an embargo from IBAMA that should prevent it from trading timber.

Odani claims its logs come from three logging estates:

Edinaldo Ferreira Da Conceicao,
 Fazenda Conceicao, Lote 21 (AUTEF 1810/2013)

Agropecuaria Santa Efigenia Ltda
 (AUTEF 20145/2014)

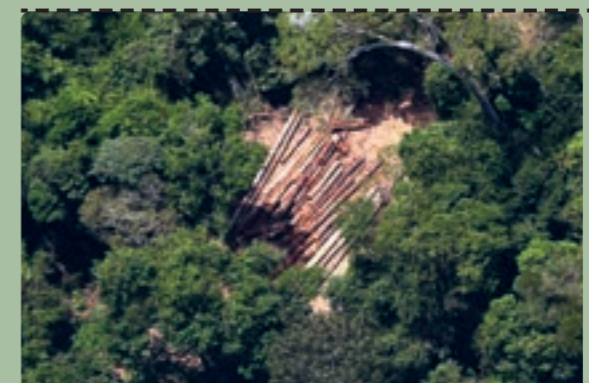
Elisario Moraes De Lima,
 Uruará, (CEPROF 5350 - AUTEF 1868/2014)

Greenpeace analysed satellite images of these estates. No logging was detected at the Elisario Moraes De Lima estate, although official records show that it claimed to have sent 800m3 of timber to market.

Agropecuaria Santa Efigenia Ltda also appears suspicious and warrants an audit in the field. Although only trace amounts of logging were observable via satellite, the forest management plans claim to have sent an astounding 20,600 m3 of timber to market. Official documents show that the estate claims that the rare and valuable species ipê represented 22% of the total volume of timber on the estate – five times the average rate normally found growing in this area.

23:03
 Turning onto the BR-163, heading to Santarém

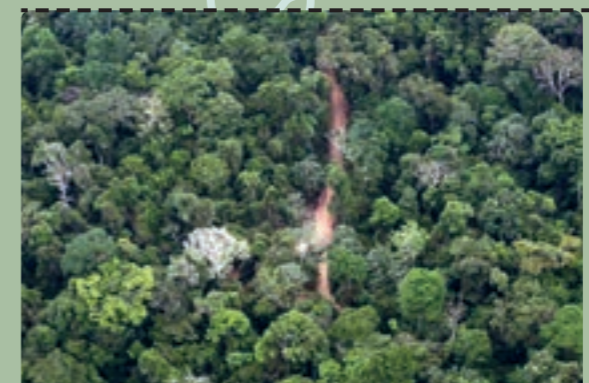
Photographic evidence of illegal logging and timed movements of truck 2



3°21'42.76"S 54°25'18.85"W
 28 September 2014



3°21'42.76"S 54°25'18.85"W
 28 September 2014



3°21'42.76"S 54°25'18.85"W
 28 September 2014

17:03
 Returning to the Odani sawmill

14:24
 Driving to an illegal logging camp

12:16
 Parked in the Odani sawmill

19:04
 Driving from Odani sawmill to the BR-163

17:42
 Parked in the Odani sawmill

Importing timber from Brazil, a risky business

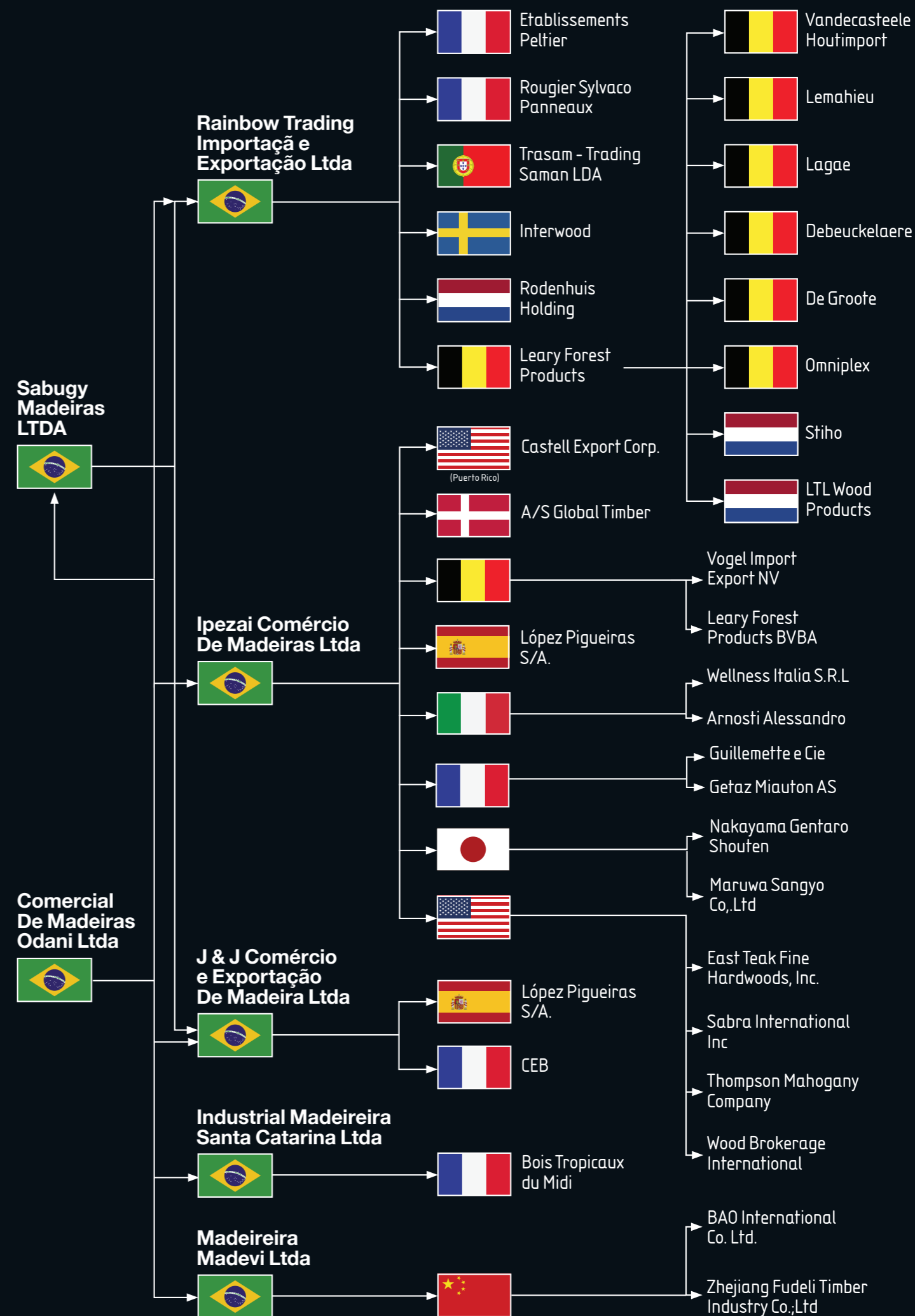
Greenpeace's previous report, *Logging: the Amazon's Silent Crisis*, showed why buying timber from the Brazilian Amazon was extremely risky. This crime file provides further proof that the timber industry in the Brazilian Amazon is operating outside the law. Trucks carrying illegal timber move freely at night between illegal logging camps and sawmills at the centre of the region's logging industry. Companies that are banned from trading timber are free to use the control systems established to regulate the trade. Loggers routinely launder timber through fraudulent logging estates where no logging takes place. Nor are these isolated instances. The combination of weak law enforcement and flaws in the electronic systems set up to control the timber industry has fostered a culture of illegality that pervades the entire sector.

In August and September 2014, Greenpeace examined over one thousand GF3 documents issued by the SISFLORA control system. GF3 documents record sales of sawn timber in Pará and Mato Grosso. Since the start of 2014, Rainbow Trading is known to have sold timber to six companies in five European countries. One company, Leary Forest Products, supplied timber from Rainbow Trading to eight other companies. Odani supplied sawn wood to five Brazilian exporters, including Rainbow Trading. Sabugy supplied timber to Rainbow Trading and one other exporter. These exporters have sold timber of the same species to companies all over the world.

This raises many questions for the government authorities tasked with enforcing laws that prohibit the trade in illegal timber, both inside and outside Brazil. These sawmills operate illegally and mostly handle illegal timber. They have a steady supply of official paperwork obtained through fraud. Information regarding their previous fines and suspended licences is publicly available. Authorities could not reasonably conclude that companies placing timber from Rainbow Trading or its suppliers on the market had complied with the EUTR or the Lacey Act. Yet timber from these sawmills is regularly exported to Europe and the USA.

Given the structural flaws in the timber control system in Brazil, the high probability of illegality and that the majority of forest management plans have yet to be verified, official documentation is not sufficient to provide assurances of legality or of origin. Companies that are not willing to take these challenges seriously must stop buying timber from this high-risk region altogether.

Right: How timber from the sawmills exposed in this report enters international markets. Timber transactions that took place between January and August 2014, as recorded in the SISFLORA control system used in Pará state. Further market transactions in Europe, based on Greenpeace's investigation in August and September 2014.



Demands

The Brazilian government must:

- immediately investigate the companies identified in this crime file, and take appropriate enforcement action to ensure that illegal timber is not entering the market.
- undertake an immediate review of all forest management plans (FMP) approved in the Amazon since 2006.
- draw up and implement new, more stringent rules to ensure effective assessment and approval of forest management plans.
- create and implement a more robust governance, monitoring and enforcement system for Amazon timber extraction which is transparent and standardised nationally.
- review all sawmill licenses and create a new regulatory system for their operation.
- increase the capacity of state and federal environmental agencies by improving infrastructure and increasing funding for surveillance, monitoring and enforcement, and enforce the penalties for those convicted of forest crimes.
- make the development and implementation of an ambitious plan for effective functioning of community forest management a priority.

Companies must:

- stop buying timber from the Brazilian Amazon unless their suppliers can provide credible assurances that it is legal – which includes compliance with relevant trade and customs legislation and requires a standard of proof beyond current official documentation – and has not contributed to deforestation, forest degradation, biodiversity loss, or negative social impacts.
- immediately classify Brazilian Amazon timber as high risk, given the chronic problems with the Brazilian Amazon timber management, monitoring and enforcement, and take them into account when complying with the regulations or legislation to which they are subject.
- implement strong procurement policies to ensure the timber they purchase is from legal sources and has not contributed to deforestation, forest degradation, biodiversity loss or negative social impacts.
- support reform of the Brazilian system of timber industry management, monitoring and enforcement to ensure that timber from the Amazon is produced legally and has not contributed to deforestation, forest degradation, biodiversity loss, or negative social impacts.

Government authorities in importing countries must:

- investigate the companies identified in this crime file, ascertain what steps, if any, they have taken to mitigate the risk that illegal timber from the Brazilian Amazon was placed on the market, and take appropriate enforcement action against any that have failed to adhere to the relevant legislation.
- treat any company as having failed to meet its due diligence requirement under the EUTR if it cannot supply credible information demonstrating risk mitigation measures that go beyond official documentation, and penalise the company accordingly.

GREENPEACE

FOREST CRIME FILE
OCTOBER 2014

Greenpeace Brasil, Rua Fradique Coutinho
352, Pinheiros, Sao Paulo, CEP 05416-000, Brasil
www.greenpeace.org/brasil/pt/
Email: relacionamento@greenpeace.org

Printed on FSC recycled paper,
100% post consumer waste

Endnotes

- 1 Mittermeier, R.A., Mittermeier, C.G., Gil, Pilgrim, J. P.R. Fonseca, G., Brooks, T., & Konstant, W.R. 2003. *Wilderness: Earth's Last Wild Places*. Conservation International, Washington D.C., USA.
- 2 Instituto Brasileiro de Geografia e Estatística (2004) IBGE lança o Mapa de Biomas do Brasil e o Mapa de Vegetação do Brasil, em comemoração ao Dia Mundial da Biodiversidade. http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=169
- 3 Ibid
- 4 Ibid
- 5 Coordenação-Geral de Observação da Terra (undated) Projeto PRODES: monitoramento da floresta Amazônica Brasileira por satélite, web page. <http://www.obt.inpe.br/prodes/index.php>
- 6 Imazon (2013). *Forest Management Transparency Report - State of Pará (2011 to 2012)*. <http://www.imazon.org.br/publications/forest-management-transparency/forest-management-transparency-report-state-of-para-2012-to-2013>
- 7 Greenpeace Brazil (2014). *Logging: the Amazon's Silent Crisis*. http://www.amazoncrisis.org/doc/EN-INT/amazon_silent_crisis_all.pdf
- 8 Greenpeace investigation, August – October 2014.
- 9 Política Nacional de Meio Ambiente, Art. 17, Lei nº 6.938, de 31 de Agosto de 1981 http://www.planalto.gov.br/ccivil_03/leis/l6938.htm. See also SEMA (2013). *Comunicado Importante: Obrigatoriedade De Cadastro No Ctf e Pagamento Da Tcfa*. <http://www.sema.pa.gov.br/2013/12/06/comunicado-importante-obrigatoriedade-de-cadastro-no-ctf-e-pagamento-da-tcfa/>
- 10 https://servicos.ibama.gov.br/ctf/publico/certificado_regularidade.php
- 11 Comercial de Madeiras Odani Ltda. Embargo issued on 05/06/2013. <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php>
- 12 Greenpeace analysis of INCRA's land settlements, SEMA's licenced forest management plans and Environmental Rural Register (CAR) and GPS monitoring of the trucks' movements.
- 13 Greenpeace investigation, August – October 2014
- 14 Fines and embargoes issued by IBAMA are recorded on its website. Background checks on fines and embargoed areas for Brazilian timber companies: <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php>. Further details on the reason for the sanctions is available here: <https://ibamanet.ibama.gov.br/docibama/publico/publico/>
- 15 Política Nacional de Meio Ambiente, Art. 17, Lei nº 6.938, de 31 de Agosto de 1981 http://www.planalto.gov.br/ccivil_03/leis/l6938.htm. See also SEMA (2013). *Comunicado Importante: Obrigatoriedade De Cadastro No Ctf e Pagamento Da Tcfa*. <http://www.sema.pa.gov.br/2013/12/06/comunicado-importante-obrigatoriedade-de-cadastro-no-ctf-e-pagamento-da-tcfa/>
- 16 Greenpeace investigation, August – October 2014
- 17 Ibid
- 18 Art. 18 do Decreto 6.514/2008. IBAMA. <https://www.ibama.gov.br/phocadownload/category/44-p?download=1101%3A6.514-08>
- 19 Brazilian Ministry of Development, Industry and Trade (2014) www.aliceweb.desenvolvimento.gov.br