

greenpeace.org

# A Future for Forests

Action that must be taken to halt  
deforestation and illegal logging,  
preserving both forests and climate

**AN AMAZON  
CASE STUDY**

THIRD EDITION  
PUBLISHED APRIL 2008

**GREENPEACE**

**Protecting the World's Forests and Climate**

## Contents

<b>Introduction</b>	<b>3</b>
<b>The Amazon Scene</b>	<b>4</b>
<b>Why is illegality so prevalent in the sector?</b>	<b>8</b>
<b>Fuelling deforestation and illegal logging – the EU's involvement</b>	<b>10</b>
<b>The Brazilian Government's response so far – limited successes</b>	<b>12</b>
<b>Illegal logging – and the Federal Government's ineffective response</b>	<b>14</b>
<b>The EU response so far – falling short of the mark</b>	<b>16</b>
<b>The Way Forward</b>	<b>18</b>
<b>Appendix: Illegal logging in Santarém district, Pará State – the repeat offenders</b>	<b>22</b>

For more information contact:  
[enquiries@int.greenpeace.org](mailto:enquiries@int.greenpeace.org)

Printed on 100% recycled  
post-consumer waste with  
vegetable based inks.

JN 115

THIRD EDITION  
Published in April 2008  
by Greenpeace International  
Ottho Heldringstraat 5  
1066 AZ Amsterdam  
The Netherlands  
Tel: +31 20 7182000  
Fax: +31 20 5148151

[greenpeace.org](http://greenpeace.org)

COVER PIC: ©GREENPEACE/DANIEL BELTRÁ



## Introduction

Tropical deforestation is responsible for about one-fifth of global greenhouse gas emissions, more than the emissions of the world's entire transport sector.<sup>1</sup> Although tropical forests cover only 7% of the Earth's land surface, they store vast amounts of carbon. This makes them a crucial buffer against climate change - the more of this carbon lost into the atmosphere, the more severe the impact on the global climate; the loss of even a small fraction could be devastating.<sup>2</sup> In addition, forests, especially those in the tropics, provide habitat for half or more of the world's known terrestrial plant and animal species.<sup>3</sup>

Amazonia is home to the world's largest tropical forest, and so is a key battleground in the fight against climate change and manmade mass extinction. In Brazil alone, the 'Legal Amazon'<sup>4</sup> has lost some 700,000 square kilometres of its original forest cover in the last four decades, an area bigger than France.<sup>5</sup> Deforestation is the main source of Brazil's greenhouse gas emissions<sup>6</sup>, making it the most important contributing factor to the country's position as the world's fourth-largest climate polluter.<sup>7</sup>

There are a number of drivers of deforestation in the Amazon<sup>8</sup>, but the starting point in most cases is illegal logging. Loggers open up areas of ancient forest in search of high-value timber, degrading the forest. A network of illegal roads is left behind, allowing access to land-grabbers and farmers who then burn the remaining trees to clear the land. In other cases, farmers arrive first, demarcate land, and then finance their new farms by selling the standing timber to loggers who clear-fell it; in these cases, it is the financial rewards of illegal logging that drive deforestation by enabling the settlers to establish their new farms.

Just as illegal logging drives Amazon deforestation, so in turn global demand for timber, and the lack of national and international controls on its market and trade, drive illegal logging. As the importer of almost half of the Brazilian Amazon's timber output, the European Union bears an especially heavy responsibility.<sup>9</sup> To stop fuelling the ongoing devastation of the Amazon, the EU must adopt legislation to ensure that all timber placed on its market is from legal sources and well-managed forests. This legislation should contribute to halting deforestation and ensuring sustainable and fair use of forest resources globally.

Other than attempts at voluntary measures, which at best have had only a modest impact, the EU has done little to halt the flow of illegal timber into its territory and reduce its ecological footprint on the forests of Brazil and elsewhere.

In this report, Greenpeace highlights the extent of this scandal. We show how the EU and its Member States, in collaboration with the Brazilian authorities, could work to turn the situation around by means of tough legislation and improved governance and enforcement, and international financing for reducing deforestation. It is a matter of the greatest urgency that they do so – not just for the sake of the Amazon, but also for the world's climate.

# The Amazon Scene



© GREENPEACE/DANIEL BELTRÁ

**image** The Amazon rainforest is one of the most bio-diverse regions on Earth. Illegal logging is a huge threat as it is often the starting point for deforestation.

“It is estimated that up to 90% of timber coming from the Amazon is logged in no sustainable way.”

Brazilian Federal Government (2004)  
National Action Plan for the Prevention and Control of  
Deforestation in the Legal Amazon, page 14

**image** Most of Brazil's greenhouse gas emissions result from deforestation, with the majority coming from the clearing and burning of the Amazon rainforests. This places Brazil as one of the top climate polluters in the world. Tropical forest destruction is responsible for up to one fifth of global greenhouse gas emissions.



## The Amazon Basin

The Amazon basin holds the largest tropical forest in the world, covering, across nine countries, 7 million square kilometres (an area the size of the continental USA).<sup>10</sup> Some 60% of the basin is in Brazil.<sup>11</sup> In addition to its sheer size it is the most diverse and valuable ecosystem on Earth. Its flora and fauna represent at least 20% of the world's known species.<sup>12</sup> Many areas remain unexplored, and countless new species of plants and animals undoubtedly await discovery.

The forest is crucial to the balance of the world's climate. The intact Amazon forests act as a regulator of rainfall, and the combined effect of its deforestation with other important tropical regions affect global patterns of precipitation.<sup>13</sup> As a key carbon sink, forest ecosystems globally store about one-and-a-half times as much carbon as is present in the atmosphere.<sup>14</sup> They act as a brake on further acceleration of climate change. However, these natural buffers are rapidly being destroyed by industrial logging and deforestation, and the resulting greenhouse gas emissions are leading to a disaster for the climate. Estimates of carbon density in the Amazon vary, each hectare of burnt forest liberates between 100 and 300 tonnes of carbon into the atmosphere.<sup>15</sup>

The Amazon basin contains the biggest river network in the world, containing one-fifth of the planet's fresh water.<sup>16</sup> The forest consequently plays a vital role in ensuring Brazil's water supplies. The region is also home to more than 20 million people – among whom, over 200,000 indigenous people, belonging to 180 different groups.<sup>17</sup> The rainforest provides them with everything - from food and shelter to tools and medicines - and is central to the spiritual life of the indigenous peoples.

## The threat

While the Amazon rainforest is the world's largest remaining reserve of tropical timber, industrial logging takes more than 8 million trees a year from the Brazilian portion alone – enough, if placed end to end, to go around the Earth four times.<sup>18</sup> Every year, approximately 24.5 million cubic metres of timber is extracted from the Brazilian Legal Amazon to be sawn and laminated. With an average processing efficiency of only 42%,<sup>19</sup> well over half of this amount is thrown away or burnt, releasing more carbon into the atmosphere and further contributing to climate change on top of the loss of the trees' potential to absorb carbon dioxide from the atmosphere.

Despite efforts by a few (i.e. 13 to date) logging companies in the Amazon (~0.5% of all companies operating in the Amazon) to achieve a high standard of forest management certified by the Forest Stewardship Council, the certified account for only 1.2 million hectares<sup>20</sup>, rogue logging companies involved in illegal logging are undermining these efforts. Illegal logging continues to be a rampant problem in the Amazon. Some 63% to 80% of trees logged are felled illegally.<sup>21</sup> Moreover, for each tree illegally logged, 27 more are damaged, around three times the figure for legal logging operations.<sup>22</sup>

In addition to the direct damage it causes, the greater menace of illegal logging is that, by building roads into ancient forest, it opens the door to wider deforestation by farmers and land speculators – the key driver of the ongoing devastation and biodiversity loss in the region. Deforestation, usually by burning, emits millions of tonnes of greenhouse gases into the atmosphere every year while further destroying the forest's ability to absorb carbon dioxide from the atmosphere.

## Land-grabbing and deforestation – the reasons

Land distribution is a major social problem in Brazil. Huge tracts of agricultural land are owned by a small number of wealthy individuals. It has traditionally been hard for poor farmers to gain access to land they can settle. For successive governments, incapable of implementing agrarian reform projects in the most populated regions of the country, the Amazon region<sup>23</sup> - where 76% of land<sup>24</sup> is still in public ownership<sup>25</sup> - has become an escape valve for the social tensions caused by inequitable land distribution.

There is little control over the influx of people onto the land, and hardly any registers of rural properties showing the legitimate owners of land in the Amazon. This omission has allowed widespread abuse. Land-grabbers (*grileiros*) occupy and demarcate areas of forest, backing up their 'claim' with fake documentation.

In many cases, because of the shortage of private land, ostensibly legitimate logging companies have been attracted to public land – to meet timber demand, because of the laxity of the authorities' control of land titles, and due to the possibility of obtaining land and land titles, even though corruptly. Until 2003, authorisations to exploit timber could be obtained on the basis of any of a huge variety of land ownership documents – some very insubstantial, such as the register of a request for the 'regularisation' of land that had been seized (whether peacefully or violently).

From 2003, it became more difficult to approve forest management plans without legitimate proof of ownership. As a result, the supply of 'legalised' timber for a time began to diminish. However, the logging sector has quickly adapted itself to the new situation and has begun to launder illegal timber through the settlements set up under INCRA's land reform policies and initiatives.

## Land settlement – the logging industry's latest ploy

In January 2007, Brazilian authorities claimed that the National Plan of Land Reform (instituted in 2003) was only 5% away from achieving its target for President Lula's first term in government – 381,419 out of an intended 400,000 families had been granted access to land. Half of these families have been settled in the Legal Amazon. INCRA, the Brazilian National Institute of Colonisation and Agrarian Reform, is responsible for creating settlements, and has chosen to locate many of them in rainforest areas of high value to the timber industry.<sup>26</sup>

In 2006, for example, INCRA created 97 land settlements for 33,700 families in the Santarém region of Pará state, covering an area of 22,000 square kilometres. Evidence uncovered by Greenpeace confirms that most were set up in areas of high timber value and, in five cases, inside the fully protected area of the Amazonia National Park. Moreover, some have clearly been created solely to facilitate logging, since they exist only on paper, with nobody actually living within the demarcated areas.

Even where settlements genuinely exist, INCRA's agents in the Santarém region have been facilitating their exploitation for timber by encouraging commercial links between the logging companies and the land settlers' associations. Each settler can ask for deforestation permits for up to three hectares per year (equivalent to at least 90 cubic metres of timber), until they have cleared a maximum of 20% of their lot. They can also ask for the approval of forest management plans for the remaining 80% of the area.

Logging companies, who can negotiate with the settlers the use of their deforestation permits, then use these permits to launder ('legalise') timber that has been logged illegally elsewhere. In return, loggers build roads and schools in the settlements. Even though this is supposed to be the sole responsibility of INCRA, allowing the logging companies to take charge of these operations helps it reach its targets for the number of families settled – one reason why the agency is so keen to involve the logging companies. The logging companies involved (including Pena Agro - Florestal, Madesa and Estancia Alecrim – see appendix) have a long history of destructive activities in the region.



©GREENPEACE/ALBERTO CESAR

**image** Truck loaded with Amazonian timber. Greenpeace investigation revealed that the Brazilian land agency, INCRA, has been facilitating the laundering of illegal timber by logging companies in Santarém on public lands intended for sustainable use for local communities.

# Why is illegality so prevalent in the sector?

## 2



©GREENPEACE/BANDEIRA

**image** One of three Estância Alecrim's sawmills in the Santarém region, Amazon. Its wood supply has at times included timber sourced from both its own illegal logging activities and from deforestation by third parties. The majority of timber exported by Estância Alecrim's is destined to the European market.

**image** Timber from Estância Alecrim, a company involved in illegal logging in the Amazon destined for Europe. Santarém port, Pará, Amazon, February 2008.



## Lack of governance

IBAMA, the federal environmental agency responsible for monitoring and controlling the Amazon, has about 800 officers covering the Legal Amazon,<sup>27</sup> an area of around 5 million square kilometres where more than 3,200 sawmills operate.<sup>28</sup> This means one officer to control, on average, 6,250 square kilometres – amid widespread corruption and with next to no financial or material resources. For its special operations, the agency brings in more officers, but their number is usually limited. State-level officers are almost non-existent.

## Impunity

The problem of IBAMA's lack of resources is compounded by the weakness of the sanctions it is able to impose when it does detect illegality. Although the cutting, transporting, storing and marketing of timber illegally logged or with no documentary proof of origin are crimes in Brazil,<sup>29</sup> the penalties incurred do not offer a powerful disincentive. Such an infraction can generate two processes: an administrative one, which in turn may lead to a judicial one. Within the administrative process, in which penalties are imposed directly by IBAMA, only around 3–5% of all fines are paid.<sup>30</sup> Due to a system which allows up to four successive appeals, companies can delay payment of fines for years. If a fine remains outstanding for more than five years with minimum official attempt at enforcement, it will expire.

Within the judicial process, sentences usually involve compensation to communities (such as buying them food) rather than the other available options, e.g. requiring the restoration of the logged forest or a jail term. There is almost no enforcement of stronger penalties when they are imposed. To make matters worse, many judicial processes resulting from investigations remain stalled within the judicial system because of lack of capacity or will to proceed with them, exacerbated by the prolonged appeal process.<sup>31</sup>

Items such as trucks, bulldozers and barges are sometimes confiscated, but are generally returned to their owners – usually external contractors whose equipment is rented by the logging company to transport the timber. The person transporting the timber claims to have acted in good faith, stating they had no knowledge of the illegality of the timber being carried, and the machinery is given back to them.<sup>32</sup>

## Lack of investment

There is no significant investment or incentive policy, such as credits, subsidies or tax reductions, for companies willing to work under strict forest management plans. However, there are several long-established credit lines financing agribusiness (including cattle ranching), which has the effect of driving deforestation.<sup>33</sup>

## Corruption

From 2005 on, the Brazilian Federal Police, together with IBAMA carried out many large-scale operations in the Amazon states that resulted in the dismantling of gangs responsible for falsifying logging and transport authorisations in the region for decades. More than 200 people were arrested or placed under investigation, including IBAMA agents and loggers. In just one operation, 48 government and administrative officials were charged with corruption - however, they have not yet been tried, and some even continue to work for IBAMA and INCRA.<sup>34</sup>

# Fuelling deforestation and illegal logging – the EU’s involvement



©GREENPEACE/ANGEL C.

**image** The Galina III carrying timber from rogue companies, Pena Agro-Florestal Madeireira, Madeireira Rancho Da Cabocla and Estancia Alecrim, which operate in the Amazon, arrives in the Portuguese port of Leixoes in March 2008. The timber onboard is also destined for the Spanish port Villagarcia, the French port Caen and the Dutch port Flushing.

**image** The EU is a major consumer of timber from a number of areas where illegal logging is rampant – including the Brazilian Amazon.



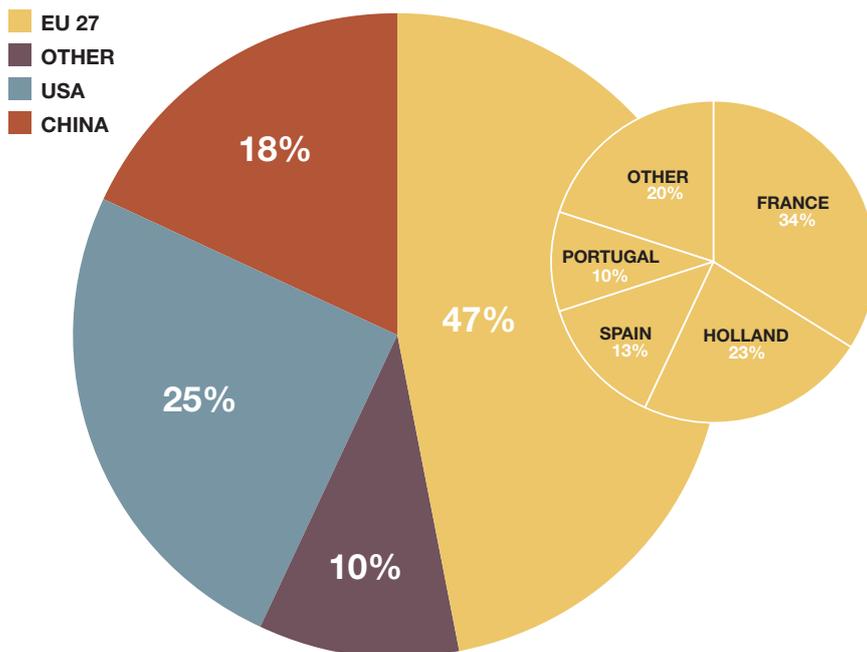
While the factors mentioned above are all conducive to an uncontrolled illegal logging industry, and to the agricultural deforestation that goes hand-in-hand with it, that logging industry as a whole would not exist were its timber not in demand. While much of the timber logged in Brazil is used domestically, 36% is exported.<sup>35</sup> Almost half of this exported timber goes to the EU (the countries of the EU-27<sup>36</sup> collectively account for 47% of timber exports from the Brazilian Amazon by value and 49% by weight<sup>37</sup>), meaning that the EU bears a heavy responsibility for the ongoing degradation and deforestation of the Amazon.

The high levels of economic development and consumption prevalent in the EU are dependent upon the use of natural resources such as timber from other parts of the world, in particular some of the world's poorest countries. According to WWF, the post-enlargement EU has 7% of the world's population but relies on 17% of the world's resources,<sup>38</sup> and accounts for 13.51% of the world's greenhouse gas emissions<sup>39</sup> – in other words, a footprint almost two-and-a-half times the size of its equitable entitlement according to its own biological capacity. Moreover, the EU is a major consumer of timber from a number of areas where illegal and destructive logging is rampant – including South-East Asia, Central Africa and Russia as well as the Brazilian Amazon.

Apart from restrictions on the trade in threatened species imposed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora, there is no system in place to control the legality of wood products traded onto the EU market. Large volumes of sawn and processed timber arrive in EU ports every day, much of it from illegally logged and deforested areas. Once the illegal timber has crossed the porous borders of one EU Member State, it can be sold in any one of the 26 other Member States with no further control as to its legality. Because of this laxity, consumers in these countries have been made unwitting accomplices of forest crime.

Despite repeated calls from Greenpeace for timber legislation and the adoption of a credible green procurement policy by EU Member States, countries such as France, Spain, Portugal and the Netherlands are still allowing illegal timber to flood onto the EU market. Since February 2008, Greenpeace investigations confirmed that timber exported by Madesa, Rancho da Cabocla and Estância Alecrim (three firms with a history of illegality – see appendix), and purchased by one of the world's largest timber wholesalers, the Danish-owned group DLH, had been offloaded in Spain, France and the Netherlands and was destined for DHL group companies based in Denmark, Poland and France. Timber from the same firms was also purchased by several other wholesalers, including Guillemette and Maderas Del Umia, to be imported into France and Spain respectively.

**World Exports of Timber from Brazilian Amazon in 2007 (by value)**



**Exports of Timber from Brazilian Amazon into the EU-27 in 2007 (by value)**

France, Portugal, the Netherlands and Spain are the main timber importers and retailers of wood products on the European market, both in global terms<sup>40</sup> and in terms of timber imported from the Brazilian Amazon.<sup>41</sup>

The total value of Exports of Timber to EU-27 is US\$ 572,699,505.00<sup>41</sup>

# The Brazilian Government's response so far – limited successes



GREENPEACE/RODRIGO BALEIA

**image** A chain is pulled by tractors to remove the remains of wood and trees in the Amazon rainforest, a common practice in the deforestation process to clear land for soya farming.

**image** A dead, burned toad which has been killed by the fires set in the forest to clear the land. This illustrates the fate of many other animals when these forest fires occur.



During President Lula's first term in office, the Ministry of Environment developed proposals for the decentralisation of forest management. At the same time, there was pressure from states and from some parts of the Federal Government to transfer responsibilities to state environmental institutions – with the states hoping to gain more control over their resources, and the idea's supporters within the Federal Government keen to hand over accountability. However, because this was not considered to be a political priority, the Federal Government as a whole failed to ensure an effective transition of power.

The decentralisation of forest management only really got under way after the approval in March 2006 of Law 11284<sup>42</sup> on the Management of Public Forests, which introduced the legal concept of forestry concessions in national and state forest land and provided a legal framework for the management of forest on public land outside strict protected areas. Essentially, the law transferred all aspects of forest management – promotion, licensing, monitoring, control – to the nine Amazon states, limiting the responsibilities of the Federal Government.

This decentralisation was added to the Law on the Management of Public Forests at the last minute, with very little discussion and before any minimum requirements or obligations had been established for the states which were to assume these responsibilities. Authorities were nominated as being responsible for the environmental licensing of rural properties, and a system of authorisation for land clearance and forest management was created, along with a few other measures regulating the transfer of powers to state-level bodies.

In the face of criticism from NGOs -regarding the lack of proper operational and governance structures, administrative transparency, and a role for civil society organisations, all of which are generally quite limited in the Amazon - the Federal Government agreed to regulate part of the process of decentralisation and established national criteria to control the movement of forest products.

However, forest protection has never been a long-term priority for state governments in Brazil (partly because they have previously been able to let the Federal Government bear full responsibility for it). Therefore, the level of investment continues to be inadequate. At state level, environment authorities tend to be compromised by loyalty to the political elite, who are often close to the logging industry and may gain popular support by encouraging it to invest in their region. They are therefore reluctant to introduce or enforce measures that will hamper logging activity. For example, in Prainha region, Pará State, the state government is authorising extractive management plans for public forests, despite the fact that these same plans were cancelled by the Federal Government in 2003.<sup>43</sup>

In this context, decentralisation of forest management threatens to facilitate further destruction of the Amazon forest unless there is a radical change in the outlook and policies of individual states.

# Illegal logging – and the Federal Government’s ineffective response



©GREENPEACE/DANIEL BELTRÁ

**image** A burnt Brazilian nut tree (*Bertholletia excelsa*) in the Amazon killed during the burning season. Illegal logging opens ancient forests up allowing access to land-grabbers and farmers who then burn the remaining trees to clear the land. Each hectare of burnt forest in the Amazon emits between 100 and 300 tonnes of carbon into the atmosphere further fuelling climate change.

“I still do not believe in coincidences. These are regions with an important economic dynamic, of activities such as agribusiness and irregular timber exploitation. This is not a generic accusation, but it cannot be denied that there are people within these sectors promoting illegal activities.”

Environment Minister, Marina Silva  
(O Globo, 31 January 2008)

Since 2003, the Federal Government has implemented a range of initiatives intended to address illegal logging, such as cancelling a large number of authorisations previously granted to logging companies with a history of illegality, and approving new legislation (still being implemented) to regulate logging companies' access to forests on public lands.<sup>44</sup>

However, the more strict forest management legislation becomes, the more it provides an impetus for illegal logging, in order to feed the market's insatiable demand for timber. The sector has shown itself able to adapt to get round new legislation and evade enforcement, which is still insufficient in the Amazon. In this, it is often aided by the half-hearted way in which the proposed solutions to illegality are implemented. This is well illustrated by the example of the laundering of timber in transit, and the illegal loggers' response to the introduction of a new high-tech control system intended to prevent such abuse.

In Brazil, there have traditionally been two ways of laundering ('legalising') timber that has been illegally logged: obtaining a fraudulent logging or deforestation authorisation, or passing the timber off as legally logged by means of fake, illegally obtained or fraudulently used transportation documents (in particular Forest Products Transport Authorisations (ATPFs) – legally required transportation documents used until September 2006), taking advantage of the weaknesses of the timber monitoring system.

In September 2006, the ATPFs were replaced by a partly electronic system, the Forest Origin Document (DOF), which has enormous potential – but, unfortunately, the transition between the systems has been badly mismanaged, serving if anything to increase the scope for fraud.

Several Amazon states (Mato Grosso, Pará, Maranhão and Rondônia) have adopted their own electronic timber control system, SISFLORA, which is not totally compatible with the federal system and thus causing further confusion. A year after the adoption of DOF, the agreed procedures enabling the two systems to communicate with each other were still not being fully applied.

To make matters worse, IBAMA and the state environmental agencies are using the two systems without having prepared control measures to verify in real time the paper documentation that still accompanies the thousands of timber cargoes passing through the Amazon. Laptops and palmtops promised by the Federal Government and IBAMA have not materialised. So, for the moment at least, the new system of control is largely illusory.

In June 2007, for example, agents from the Mato Grosso Environment Agency discovered that companies in the north of the state were moving logs within the SISFLORA system, allegedly from areas authorised for logging although no logging was actually taking place in those areas. The timber was, in fact, coming from other areas, with no authorisation and being laundered via the SISFLORA system.<sup>45</sup>

## Deforestation: under control?

In March 2004, the Federal Government also launched an action plan to combat deforestation (as distinct from illegal logging) in the Amazon<sup>46</sup> – an initiative which, at least on the face of it, seems to have met with some success. Deforestation in the Amazon<sup>47</sup> rose from 1997 until 2004, when it reached a peak of 27,400 square kilometres, with only 30% of this total being authorised.<sup>48</sup> For the next three years, however, annual deforestation rates fell, reaching a mere 11,200 square kilometres in the year to July 2007 – probably for the greater part as a result of falling prices of agricultural commodities such as soya and beef.<sup>49</sup>

However, President Lula took credit for the decrease and boasted of the Government's effectiveness in addressing and reducing deforestation – even though many of the measures proposed in the action plan had been implemented only partly or not at all.<sup>50</sup> What the Government did not emphasise was that, for example, less than 10% of the deforestation that took place between August 2006 and July 2007 was authorised – in other words, over 90% was still illegal.<sup>51</sup>

Fears of a renewed rise in overall deforestation levels received confirmation early this year, when preliminary data from INPE (Brazil's National Institute of Space Research) was released. The data revealed an increase in deforestation between August and December 2007 compared to the same period in the previous year.<sup>52</sup> These preliminary figures suggest that total annual deforestation may be about to start increasing again – Greenpeace has been warning of this possibility since October 2007.<sup>53</sup>

The Government responded to this prospect in December 2007, with a Presidential Decree introducing a series of further measures to curb deforestation including a moratorium on new deforestation permits for those Amazon municipalities with the worst rates of destruction. Nevertheless, the situation remains precarious; especially given that 2008 is an electoral year and state authorities are likely to turn a blind eye to forest clearance to secure votes.

One of the most promising initiatives in terms of halting illegal logging and deforestation is the 2006 federal law on forest concessions on public land, intended to drive the industry away from deforestation and illegality in public forests to a new, supposedly compulsory scheme to ensure better forest management. Logging under this scheme can only be carried out selectively, with high level management, and with no further deforestation or land ownership transfers. The intended result of this legislation is that, as of March 2006, it will no longer be possible to get title to public forests, so they can no longer be grabbed for logging and then later turned into cattle ranches or soya plantations with the help of false paperwork. In this way, logging will no longer open the door to deforestation and land-grabbing of areas of public forest. However, the success of the law still depends on enforcement of the entire system, including and especially decentralisation.

# The EU response so far – falling short of the mark



© GREENPEACE/PHILLIP REYNERS

**image** Greenpeace activists display a banner reading 'STOP ILLEGAL TIMBER' to highlight illegal Indonesian plywood used in construction at Economic and Social Committee (ECOSOC) and Berlaymont European Commission buildings in Brussels.

Following this action, the European Commission confirmed on 1 December 2006 that its newly renovated headquarter contain 1,000 square metres of uncertified wood from Indonesian tropical forest.

In Indonesia it is estimated that up to 76-80% of logging is illegal. (Greenpeace, Sharing the Blame, 2006. Calculation based on NRM-MFP-BAPPENAS 2004)

“December finally saw a momentous deal in Bali to pursue a global agreement on greenhouse gas emission reduction by end 2009. So there is a stronger global consensus than ever before. But we cannot just talk about the importance of this issue. Public opinion demands that we take decisive action.”

José Manuel Barroso, President of the EC, 21 January 2008<sup>54</sup>

The EU has committed itself to halting deforestation as part of its plans to fight climate change. In support of the European Commission (EC) proposal to limit global warming to no more than 2°C above pre-industrial temperatures, Environment Ministers, including Nelly Olin (France), Francisco Nunes Correia (Portugal), Cristina Narbona Ruiz (Spain) and Pieter Van Geel (the Netherlands), have acknowledged “the need to develop concrete policies and actions [...] to halt emissions from deforestation in developing countries and reverse them within the next two to three decades, [...] maximising co-benefits, in particular with regard to biodiversity protection and sustainable development.”<sup>55</sup>

This political imperative is beginning to be acknowledged by the international community. At the Climate Summit talks in Bali, December 2007, governments agreed to start a two-year negotiation on an action plan to reduce emissions from deforestation by promoting forest policies and providing funding for forest protection.

To date, however, the EU commitments appears to be lacking implementation and political leadership, as illegal and destructively logged timber continues to pour onto the EU market.

As far as specific action on illegal logging is concerned, the EC announced in May 2003 an initiative known as the Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT). FLEGT addresses illegal logging and the trade in illegal timber on the European market, and supports the development of sustainable forest management practices globally. Among the cornerstones of the action plan are voluntary partnership agreements (VPAs) between the EU and tropical timber-producing countries. These agreements aim to help the signatory countries improve their forest governance and management and to implement a licensing system ensuring that they only export legal timber. So far, negotiations have officially started with Indonesia, Malaysia, Ghana and Cameroon.

However, VPAs have serious loopholes<sup>56</sup> and by themselves will not be sufficient in curbing illegal and destructive logging significantly at a global level. It is very likely that timber from deforested, degraded and/or illegally logged areas will continue to come into the EU, even from countries with which VPAs are concluded.

There is currently no EU legislation prohibiting the import and marketing of illegally harvested timber products, beyond the small number of individual tree species which are listed in the Appendices of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). Recognising this fact and the general shortcomings of VPAs, the EC is analysing further options, including the feasibility of legislation, to strengthen the EU's stance against illegal logging and related trade.

On 22 December 2006, the EC initiated public consultation on the following additional measures:

- 1) strengthening VPAs
- 2) strengthening voluntary industry schemes
- 3) implementing an import ban
- 4) two legislative options:
  - (a) legislation which prohibits the trading and possession of timber and timber products harvested in breach of the laws of the country of origin
  - (b) legislation which requires that only legally harvested timber and timber products be placed on the EU market.

Options 4a and 4b differ as to which party would carry the burden of proof. According to option 4a, the marketing of products of illegal origin would constitute an offence. Thus operators would have to ensure that their products were legal and the burden of proof would rest on the complainant. In option 4b, only legally harvested timber could be placed on the market. Evidence of legality would have to be produced either automatically or on request. Failure to produce this evidence of legality would constitute an offence.

A report on stakeholder input to this consultation related that a significant proportion of the respondents firmly expressed a wish for the EU to put an end to ‘business as usual’ and introduce legislation, with legislative option B having the most support.<sup>57</sup>

Additional demand-side measures proposed in the EU action plan include the implementation in Member States of green public procurement policies for wood products. So far, five Member States (Denmark, the Netherlands, the UK, Germany and France) have adopted such a policy, and consultations have started in two others (Spain and Sweden) to develop one.

The EU and its Member States are at a crossroads. In the coming months, the EC is set to announce the contents of a ‘forest package’. In this, it will have to decide whether to go forward with the obvious solution of legislation to protect the climate and forests, reward responsible business and foster sustainable development; or whether to continue on its present laissez-faire course with irreversible consequences including increased greenhouse gas emissions, biodiversity loss and advancing poverty.

# The way forward



©MARKUS MAUTHE/GREENPEACE

**image** Ancient forest protection is crucial to preserving biodiversity and the global climate.

**image** Nilsson collected fruit from the Brazilian nut tree (*Bertholletia excelsa*) that he sells as a way of living. His livelihood and that of millions of others who depend on the forest are threatened by illegal logging and deforestation.



Greenpeace strongly supports the adoption of EU legislation that would require companies to implement a chain of custody to ensure that only timber products from legal and well-managed sources are placed on the EU market.

The implementation of such legislation would complement VPAs, which are a useful tool but will not be sufficient alone to control trade in illegal timber on the EU market. It could also reward those companies who have been investing in best practice in recent years, such as the forest certification programme accredited by the Forest Stewardship Council (FSC).

### Legislation makes good business sense

Adopting further legislation is the only way to create a level playing-field in the timber market and to reward the efforts undertaken by environmentally and socially progressive companies. This opinion is shared by close to 90 companies and trade organisations worldwide, including B&Q, the UK Timber Trade Federation and Habitat (UK), Castorama (France), IKEA and Skanska International (Sweden), Unital (the Union of Italian Industries of Wood Furniture), JYSK Nordic (Denmark), VVNH (the Netherlands) and Puertas Luvipol (Spain). These companies and bodies have signed a joint statement REF calling on the EC to introduce legislation that will lead to clear EU rules on fair competition and sustainable markets.

### Halting deforestation to preserve both forests and climate

The EU needs to take full responsibility for the part it is playing in deforestation and should act without delay to stop the import of illegally logged timber from the tropics. To this end, it must regulate timber and timber products sold on its markets in order to encourage sustainable and fair use of the planet's forest resources.

The EU has no choice but to be ambitious. Adopting legislation on illegal timber would represent its first significant contribution to its stated goal of reducing greenhouse gas emissions and biodiversity loss caused by deforestation, while at the same time promoting sustainable development.

In addition to the adoption of such legislation, Greenpeace advocates other actions. In particular, we are asking the EU and Brazil to do their utmost in diplomatic terms to ensure successful negotiations within the Framework Convention on Climate Change. As part of this, a permanent international funding mechanism should be put in place to reward countries and populations that are successfully fighting the destruction of their forests. Such a system should help to discourage illegal logging and deforestation by recognising the global economic value of forest ecosystem services, for example the storage of carbon, the preservation of genetic resources and the regulation of regional climate.

Greenpeace has developed *Forests for Climate*, a landmark proposal for an international funding mechanism to address the urgent need to protect tropical forests. If countries commit to this proposal, billions of euros for capacity-building and emission-reduction activities could be made available as early as 2009.

## Call to Action

### The EU and its Member States must:

- adopt effective legislation to ensure that all timber and its products placed on the EU market are from legal sources and well-managed forests. This legislation should contribute to halting deforestation and ensuring a sustainable and fair use of forest resources globally.

### In addition, they should:

- swiftly develop and implement green public procurement policies for wood products, which support the purchasing of products sourced from environmentally responsible and socially just forest management systems such as those certified by the FSC, and work towards the rapid conclusion of the negotiation of FLEGT partnership agreements with interested timber-producing countries.

### The Brazilian Federal Government must:

- consolidate definitively the provisional act on the Forest Code, which stipulates that no more than 20% of any private land holding in the Amazon can be cleared.
- enforce the decentralisation of forest management and regulate the transfer of responsibilities to state-level bodies. Minimum requirements or obligations for the states which are to assume responsibility for public forest management – such as proper operational and governance structures, administrative transparency, and civil society oversight and participation, all of which are generally quite limited in the Amazon – must be established. The Federal Government must intervene when the level of commitment and efficiency shown by a state is inadequate to fight forest destruction.
- implement and integrate the new electronic timber tracking systems (FOD and SISFLORA), allowing verification in real time of the documentation accompanying the thousands of timber cargoes passing through the Amazon.
- together with state governments, adopt chain-of-custody systems allowing the final consumer to verify the origin of timber products.
- strengthen the monitoring and control systems of IBAMA, federal and state police, etc – essential to ensure effective governance in the Amazon. Official agents must be present throughout the region on a permanent basis, and corruption must be eradicated. Violations must be recognised and penalised, with judicial proceedings carried to a conclusion rather than being allowed to lapse.

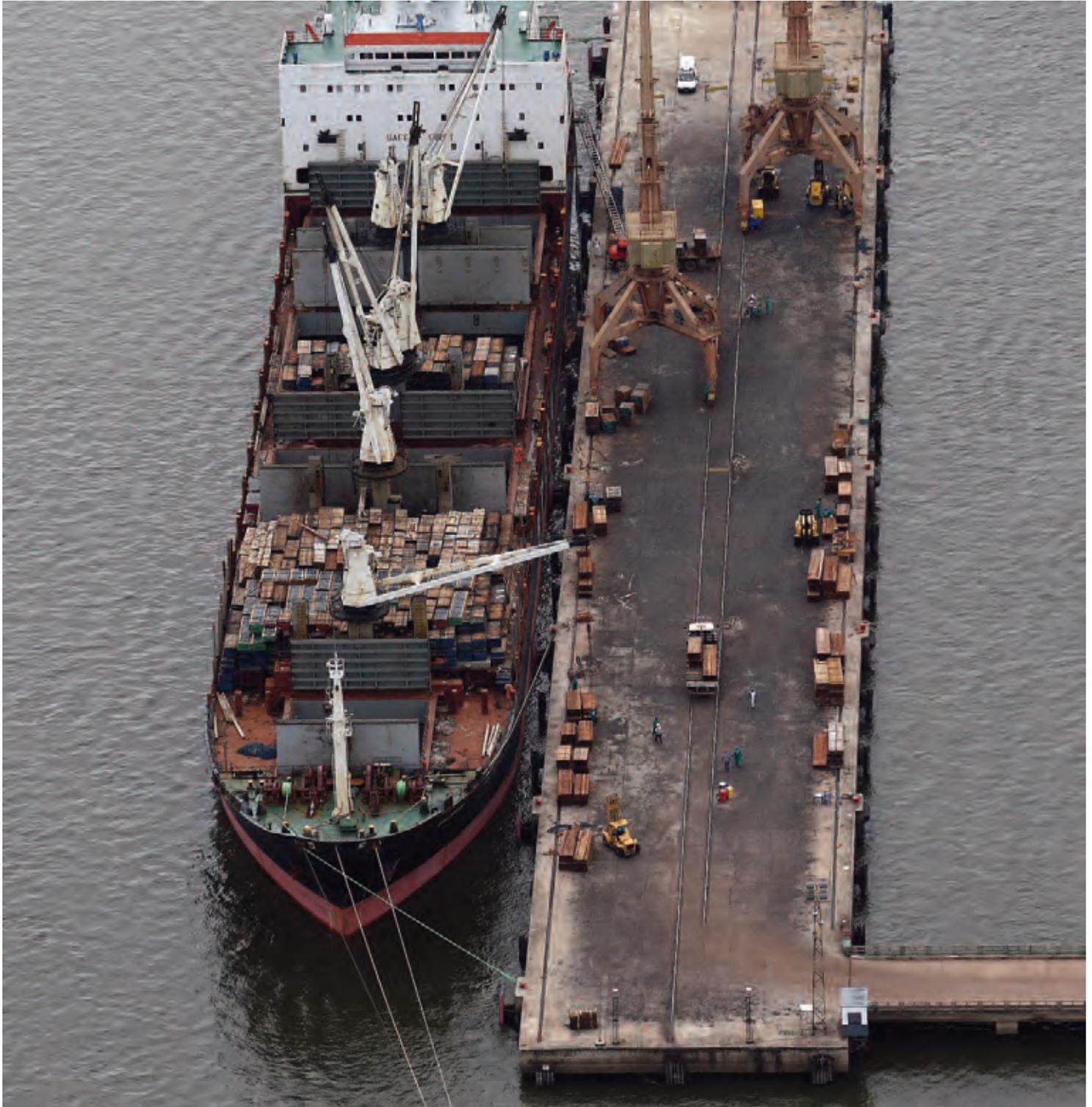
- ensure revision by a federal auditor of all forest management plans approved in the last 10 years.
- regulate the public procurement system, throughout the whole governmental (at municipal, state and federal level) so that native wood and all products derived from deforestation are prohibited.

### Brazil and the EU must:

- support Forests for Climate, Greenpeace's proposal for an international funding mechanism that would protect biological diversity and the global climate, while respecting the rights of local indigenous peoples. The proposal is a market-linked hybrid approach which combines market opportunities with funding for policies to protect the world's remaining tropical forests. See [www.greenpeace.org/forestsforclimate](http://www.greenpeace.org/forestsforclimate)
- take joint action at bilateral, global and regional levels towards strengthening forest governance and law enforcement, as well as agreeing standards for environmentally responsible and socially just timber harvesting practices, and mechanisms for timber tracking and licensing intended to combat illegal logging and promote responsible use of forest resources.

### Companies must:

- Stop buying timber from rogue companies including Madesa – Madeira Santarém Ltda, Estância Alecrim, Pena Agro-Florestal Madeira Ltda, Madeira Rancho da Cabocla Ltda, Industrial Madeira Curuatinga and Tradelink Madeiras Ltda until they can prove that their timber comes from legal and well managed sources.
- Support the adoption of credible legislation and chain-of-custody systems to allow the end consumer to verify timber products on the market are legal and from responsibly managed forests.



©RODRIGO BALEIA/GREENPEACE

**image** The ship Galina III being loaded with Amazon timber at the port of Santarém, Pará State in February 2008. The cargo included timber from the rogue logging companies: Pena Agro-Florestal Madeireira, Madeireira Rancho Da Cabocla and Estancia Alecrim.

The timber onboard is also destined for Portugal, Spain France and The Netherlands.

# Illegal logging in Santarém district, Pará State – the repeat offenders

## Appendix

There are five main logging companies involved in illegal logging, deforestation and land-grabbing in the Santarém district of Pará state. Between 1999 and 2005, **Pena Agro- Florestal, Rancho da Cabocla, Madesa, Estância Alecrim** and **Curuatinga** exported around 181,500 cubic metres of timber from Santarém – 59% of the total exports from the port over that period. Some 95% of that total was exported to Europe – mainly to France, the Netherlands, Spain and Portugal.<sup>58</sup>

As a result of IBAMA's lack of enforcement capacity (see page 9) relatively few penalties are imposed on these companies, and they are frequently able to avoid paying fines. Nevertheless, despite their near-impunity, they exemplify the lawlessness of the logging sector in the region.

This appendix summarises the scale of each of these company's activities, and also those of a sixth company, **Tradelink Madeiras**, in the Santarém district and elsewhere in the west of Pará State and lists the illegal activities in which they are known to have been involved since the 1990s.

### **Pena Agro-Florestal Madeireira Ltda**

Pena owns a sawmill in Prainha, the neighbouring city to Santarém, processing a declared capacity of 21,600m<sup>3</sup> of logs annually, and operating under licence number 463/2007, issued by the Environmental Agency of the State of Pará.<sup>59</sup>

The company began operating in Santarém in October 1994.<sup>60</sup>

Value of declared annual exports: between US\$10 million and US\$50 million (2006/07).<sup>61</sup>

Between 1999 and 2005, Pena exported 20,396m<sup>3</sup> of timber, 99.5% of it to the EU and the remainder to the USA.<sup>62</sup>

The company's wood supply has at times included illegal timber sourced both from its own logging activities and from logging at settlements established under the National Plan of Land Reform.

#### **Illegal logging and deforestation**

Since 2000, Pena has been fined six times by IBAMA, to a total of US\$76,786.00, for illegal logging and for transport and processing of illegal timber.

To date, according to IBAMA's records, only one fine of US\$2,910.13 has been paid.<sup>63</sup>

The company takes advantage of the possibility of multiple appeals (see page 9) to delay the payment of fines, sometimes by several years. If the authorities take no action on a case for a period of five years, the fine expires (as happened with a fine of some US\$27,600 imposed on Pena for illegal logging in ancient forest in Prainha<sup>64</sup>).

#### **Land-grabbing and logging on public lands**

In 2007, as Greenpeace research has revealed,<sup>65</sup> Pena obtained wood from areas with high-value timber which had been allocated as settlements under the National Plan of Land Reform. No logging was permitted in these areas, as the settlements had never received the required environmental licensing.

The Curuá settlement project is located on the border between Prainha and Santarém, adjacent to land which Pena claims to own. INCRA created the settlement on public land, however the logging company claims part of this area too. However, the president of the Curuá community association, Valdecí dos Santos Gomes, maintains that the land is not actually owned by Pena but was illegally grabbed by the company.<sup>66</sup>

Pena has accessed high-value timber at Curuá Settlement by building houses for settlers who pay with timber from their personal lots, even though the settlement has never been licensed.<sup>67</sup> Settlers also claim that Pena has made death threats against them when requests to transfer their small-scale harvest rights<sup>68</sup> to it have been rejected and has threatened community leaders found close to or within the land it claims to own.<sup>69</sup>

## Madeira Rancho da Cabocla Ltda

The company owns at least two sawmills with a total declared annual processing capacity of 19,200m<sup>3</sup> of timber. Its main sawmill, with a declared annual capacity of 18,000m<sup>3</sup>, operates in Santarém under licence number 577/2007, issued by the Environmental Agency of the State of Pará. The second sawmill's declared annual capacity is 1,200m<sup>3</sup>, and it operates under licence number 397/2007.<sup>70</sup>

The company began its activities in Santarém in 1981.<sup>71</sup>

Between 1999 and 2005 Rancho da Cabocla exported more than 71,000m<sup>3</sup> of timber, 94.4% of this to the EU and 4.2% to the US.<sup>72</sup>

Value of declared annual exports: between US\$10 million and US\$50 million (2006/07).<sup>73</sup>

Rancho da Cabocla's wood supply has at times included illegal timber sourced from its own operations. It has both logged illegally in land-grabbed areas, and used these areas to obtain documentation to launder illegal timber logged elsewhere.

### Illegal logging and deforestation

IBAMA's official internal registers show that between 1996 and 2007 Rancho da Cabocla was fined 16 times (totalling over US\$1.1 million) for illegal logging and for transporting, storing and/or processing illegal timber.<sup>74</sup>

In 2007 Rancho da Cabocla was ranked by IBAMA as its biggest offender, receiving over one million dollars in fines for environmental crimes.<sup>75</sup>

According to IBAMA's registers, to date the company has paid only one fine of just one thousand dollars, and it is appealing against at least two of the other fines.<sup>76</sup> There is no information on the status of the remaining fines.<sup>77</sup>

In 1997, the Federal Public Prosecutor and Greenpeace found field evidence confirming that Rancho da Cabocla's logging operations in Santarém were in breach of the law, as the company was not following forest management regulations.<sup>78</sup> A subsequent investigation by the Federal Prosecutor concluded that these illegal operations were taking place on public land (see below).

In 2001, IBAMA cancelled one of the company's forest management plans.<sup>79, 80</sup>

### Land-grabbing and logging on public lands

In 2004, the owner and director of Rancho da Cabocla, Moacir Ciesca, was arrested for involving the company in land-grabbing in order to obtain documentation to launder illegally logged timber. Reports confirmed his involvement in the so-called 'mafia' of land-grabbers prevalent all over Pará state.<sup>81</sup> He and other land-grabbers were released by the Federal Justice because they handed over classified documents from INCRA (showing potential evidence of corruption) and agreed to collaborate with the land-grabbing investigations.<sup>82</sup> Moacir Ciesca is still the owner of Rancho da Cabocla.<sup>83</sup>

## Madesa – Madeira Santarém Ltda

Madesa owns three sawmills, the main one operating under licence number 418/2007 issued by the Environmental Agency of the State of Pará, with a declared processing capacity of 10,800m<sup>3</sup> of logs annually.<sup>84</sup>

Madesa began its activities in Santarém in 1987.<sup>85</sup>

Between 1999 and 2005, the company exported more than 30,000m<sup>3</sup> of timber from the port of Santarém, destined mainly for France, the Netherlands and the USA.<sup>86</sup> The main buyer (23% of the total volume exported) was the Danish group DLH Nordisk.<sup>87, 88</sup>

Value of declared annual exports: between US\$ 10 million and US\$ 50 million (2006/07).<sup>89</sup>

Madesa's wood supply has at times included illegal timber sourced from both its own illegal logging activities and from deforestation by third parties.

### Illegal logging and deforestation

IBAMA's official internal registers show that, between 1990 and 2007, it fined Madesa 25 times (totalling US\$ 470,000) for illegal logging and for transporting, storing and/or processing illegal timber. To date, Madesa has paid only four of these fines, totalling almost US\$ 46,000; the company is currently appealing against another seven fines. The status of the other fines is unknown.<sup>90</sup>

To give two recent examples, in August 2007 Madesa was fined US \$3,200 for transporting 36m<sup>3</sup> of illegal timber.<sup>91</sup>

In 2006, the company was fined over US\$ 234,000 for storing around 2,369m<sup>3</sup> of illegal timber and a similar sum for selling around 1,000m<sup>3</sup> of illegal timber. The company has appealed against both of these fines.<sup>92</sup>

### Land grabbing and logging on public land

In 1997, the Federal Public Prosecutor and Greenpeace found field evidence confirming that Madesa's logging operations in Santarém were in breach of the law, as the company was not following forest management regulations.<sup>93</sup>

In 2001, IBAMA cancelled one of Madesa's forest management plans because the company had grabbed 2,500ha of public land and log in it. This was only discovered after the timber had been logged and placed on the market.<sup>94</sup> In the same year, the company was also found liable, in a civil case filed by the Federal Public Prosecutor, for illegally extracting timber from three other areas of public land, totalling 7,500ha.<sup>95</sup>

In August 2006, the company was caught by a team of INCRA inspectors illegally logging within the area of the Renascer II Sustainable Development Project, a settlement created on public land for local communities and small farmers who depend on small-scale activities and subsistence agriculture. According to INCRA's agents,<sup>96</sup> Madesa claims to own 40% of the total settlement area, within which most of the extraction and removal of the timber was taking place by night. According to IBAMA's register of fines, no action has yet been taken against the company.<sup>97</sup>

## Appendix

### Estância Alecrim

The firm of Milton José Schnorr ME, better known under its trading name of Estância Alecrim, owns three sawmills with an annual processing capacity of 16,200m<sup>3</sup>, and operates its main sawmill under licence number 827/2007, issued by the Environmental Agency of the State of Pará.<sup>98</sup>

Estância Alecrim began its activities in Santarém in 1994.<sup>99</sup>

Estância Alecrim officially exported 26,274m<sup>3</sup> of timber between 1999 and April 2005, of which 96% was exported to Europe.<sup>100</sup>

Value of declared annual exports: between US\$ 1 million and US\$ 10 million (2006/07).<sup>101</sup>

Alecrim's wood supply has at times included illegal timber sourced from both its own illegal logging activities and from deforestation by third parties.

#### Illegal logging and deforestation

IBAMA's official internal registers show that between 1997 and 2007 Alecrim was fined four times for its involvement in deforestation and another 21 times for transporting, storing and/or processing illegal timber. Its fines over the period totalled over US\$ 623,000. To date, however, the company has paid only six fines, totalling under US\$ 7,000; and it is appealing against four verdicts from previous appeals which went in IBAMA's favour.<sup>102</sup> The status of the other fines is unknown.<sup>103</sup>

Data from IBAMA reports<sup>104</sup> on the company's 2000 timber input and output volumes shows that its wood supplies came from two types of source: internal, in the shape of three forest management units and 26 deforestation licences that, altogether, contributed 11,247m<sup>3</sup> of timber; and external, in other words via third parties such as small sawmills, three of which were non-existent 'ghost' companies<sup>105</sup> who sold Alecrim at least 521m<sup>3</sup> of laundered illegal timber.<sup>106</sup>

#### Land-grabbing and logging on public land

In 2005, Estância Alecrim land-grabbed forest in the Santarém region designated by INCRA for the Renascer II Sustainable Development Project, originally created as one settlement encompassing 42,500ha. The settlement was unofficially divided into two parts because Estância Alecrim was competing with another logging company for the area's timber resources. Alecrim starting logging one of these parts in 2005, claiming that it had gained access to the land by transfer from settlers, even though no families settled the area until the middle of 2007.<sup>107</sup>

### Industrial Madeireira Curuatinga (Brasil Pisos Ind. de Artefatos de Madeira Ltda.)

In 2006, Curuatinga operated under licence #689/2006, issued by the Environmental Agency of the State of Pará.

Curuatinga began its activities in Santarém as IMASA, which in 1990 split into Madesa and Curuatinga.<sup>108</sup>

Value of declared annual exports: between US\$ 1 million and US\$ 10 million (2006/2007).<sup>109</sup>

Between 1999 and April 2005, Curuatinga exported 44.4 thousand m<sup>3</sup> of timber, 88% of it to France and the remainder to other EU countries.<sup>110</sup>

The company's wood supply has at times included illegal timber sourced both from its own logging activities, which has included logging in public land, and from illegal logging carried out by third parties.

#### Illegal logging and deforestation

IBAMA's official internal registers show that between 1996 and 2006 Curuatinga was fined six times (totalling over US\$ 60,000) for deforestation and for transporting, storing and/or processing illegal timber.<sup>111</sup> It is appealing against at least one of the fines.<sup>112</sup> There is no information on the status of the remaining fines.<sup>113</sup>

In spite of the company's claim to only work with FSC-certified timber<sup>114</sup>, the company has no FSC-certified management plans, and in 2008 its wood supplies came from third parties that included at least three companies<sup>115</sup> with a history of being fined by IBAMA for transporting, storing and/or processing illegal timber.<sup>116</sup>

#### Land Grabbing and Logging in public areas

Between 2000 and 2003, the company logged in public land in Porto de Moz, Pará, an area that was requested by local communities to be made into an extractive reserve, which was officially created as such in 2004.<sup>117</sup>

## **Tradelink Madeiras Ltda**

Tradelink controls a timber processing facility near Belém, and has a branch office in Breves (Pará State).

The company began operating in Brazil over 10 years ago.<sup>118</sup>

Value of declared annual exports: between US\$ 10 million and US\$ 50 million (2006/07).<sup>119</sup>

Between 2002 and 2005, Tradelink exported more than 20 thousand m<sup>3</sup> of timber to the EU.<sup>120</sup>

The company's wood supply has at times included illegal timber sourced from companies involved in deforestation and illegal logging.

### **Illegal logging and deforestation**

IBAMA's official internal registers show that between 1996 and 2007 Tradelink was fined ten times (totalling US\$ 77,000) for deforestation, failure to provide documents to the relevant authorities on time, and for buying, transporting, storing and/or processing illegal timber.<sup>121</sup> According to IBAMA's registers, to date none of these fines have been paid, and there is no further information on their status.<sup>122</sup>

In 2006 the Federal Public Prosecutor in Pará commenced criminal proceedings<sup>123</sup> against the company. Following investigation by the Federal Prosecutor, the company is accused of crimes against nature and the environment (contrary to Federal law no. 9.605/98), using fake documents, and crimes against the public interest and falsification of public documents (contrary to Federal law 8.212/91).

## References

- 1** IPCC WGIII, 2007: Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds), Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA . 10 'Figure 1.2: Sources of global CO2 emissions, 1970-2004 (Only direct emissions by sector)'
- 2** IPCC WGII, 2007: Climate Change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds. Cambridge University Press, Cambridge, U.K.44 Technical Summary: Box T5.5 'The main projected impacts for systems and sectors'; IPCC WGI, 2007: Climate Change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change Solomon, S., D.Qin, M. Manning, Z.Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 543-544.
- 3** Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being. Volume1: Current State and Trends. World Resources Institute, Washington, DC.
- 4** The Brazilian Legal Amazon is an administrative region covering the states of Acre, Amapá, Amazonas, Mato Grosso, Pará, Rondônia, Roraima and Tocantins (formerly the northern part of the state of Goiás), and most of Maranhão: 24% is private land, 42% public land (plus another 8% of protected areas), 20% indigenous lands and 6% settlement areas. Serviço Florestal Brasileiro (2007) Gestão das Florestas Públicas, Relatório 2006. Brasília, MMA
- 5** Greenpeace analysis on INPE (Brazilian National Institute of Space Research) Estimativas Anuais desde 1988 até 2007, Taxa de desmatamento anual (km2/ano) [http://www.obt.inpe.br/prodes/prodes\\_1988\\_2007.htm](http://www.obt.inpe.br/prodes/prodes_1988_2007.htm). March 2008.
- 6** Between 1988 and 1994, up to 75% of Brazil's greenhouse gas emissions resulted from deforestation, while 59% of those emissions from deforestation resulted from Amazon deforestation, in 1994. Brazilian Ministry of Science and Technology (2004) Primeiro Inventário Brasileiro de Emissões Antrópicas de Gases de Efeito EstufaWorld Resources Institute (2007) Climate Analysis Indicators Tool (CAIT) Version 4.0.
- 7** World Resources Institute (2007) Climate Analysis Indicators Tool (CAIT) Version 4.0.
- 8** Unless otherwise specified, from this on point on, "Amazon" in this report refers to the Amazon biome – the bio-geographical term for the area recognised as forming the Amazon rainforest ecosystem, as mapped by the Brazilian Institute of Geography and Statistics (IBGE) in 2005.
- 9** Brazilian Ministry of Development, Industry and Trade (2007) Timber exports from the Brazilian Amazon, byweight– <http://aliceweb.desenvolvimento.gov.br/> . Last accessed Feb 2008
- 10** IBGE (2004) IBGE lança o Mapa de Biomas do Brasil e o Mapa de Vegetação do Brasil, em comemoração ao Dia Mundial da Biodiversidade – [www.ibge.gov.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=169](http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=169)
- 11** IBGE (2004) IBGE lança o Mapa de Biomas do Brasil e o Mapa de Vegetação do Brasil, em comemoração ao Dia Mundial da Biodiversidade – [www.ibge.gov.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=169](http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=169)
- 12** Brazilian Ministry of Environment (1998) First National Report for the Convention on Biological Diversity – BRAZIL, Chapter I, Brazilian Biodiversity – [www.cbd.int/doc/world/br/br-nr-01-p1-en.pdf](http://www.cbd.int/doc/world/br/br-nr-01-p1-en.pdf)
- 13** Avissar, R. & Werth, D. 2005. Global hydroclimatological teleconnections resulting from tropical deforestation. *Journal of Hydrometeorology* 6: 134-145
- 14** IPCC (2000):4 'Land use, land-use change, and forestry: Special report of the Intergovernmental Panel on Climate Change' Robert T. Watson, Ian R. Noble, Bert Bolin, N.H. Ravindranath, David J. Verardo and David J.Dokken (Eds.) Cambridge University Press, UK Table 1: 'Global stocks in vegetation and soil carbon pools down to a depth of one metre give atmospheric carbon storage as 760T and forests including forest soils as 1,146Gt.'
- 15** Ramankutty et al. (2007) Challenges to estimating carbon emissions from tropical deforestation, *Global Change Biology* 13: 51-66; Saatchi et al. (2007) Distribution of aboveground live biomass in the Amazon basin. *Global Change Biology* 13: 816-83; Salati, E. (2001) Mudanças climáticas e o ciclo hidrológico na Amazônia, in: V. Fleischesser (ed.), *Causas e Dinâmica do Desmatamento na Amazônia*, 153-172.
- 16** IBGE (2004) IBGE lança o Mapa de Biomas do Brasil e o Mapa de Vegetação do Brasil, em comemoração ao Dia Mundial da Biodiversidade – [www.ibge.gov.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=169](http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=169)
- 17** Coordenação das Organizações Indígenas da Amazônia Brasileira (2006), *História*.
- 18** Greenpeace estimation based on the figure of 24.5 million cubic metres of timber given below (and assuming logs of average 5 metres length and volume of 3 cubic metres).
- 19** Lentini, M. et al. (2005) *Fatos Florestais 2005*. Belém, IMAZON.
- 20** FSC (2008) Lists of FSC certified forests - [http://www.fsc.org.br/arquivos/2008.02.08\\_-\\_Florestas\\_certificadas\\_FSC.xls](http://www.fsc.org.br/arquivos/2008.02.08_-_Florestas_certificadas_FSC.xls)
- 21** Veloso, J. (2006) Estimating legality in timber production in the Amazon. Presentation given at seminar 'Aplicação da legislação florestal no manejo de florestas naturais.' Belém, Brazilian Ministry of the Environment, National Forest Plan.
- 22** Vidal, E. (2004) *Dinâmica de florestas manejadas e sob exploração convencional na Amazônia*. Doctoral thesis, Universidade Federal de São Carlos.
- 23** Legal Amazon
- 24** which includes indigenous land, protected areas and land reform settlements.
- 25** Serviço Florestal Brasileiro (2007) *Gestão das Florestas Públicas*, Relatório 2006. Brasília, MMA.
- 26** Satellite images studied by the Brazilian NGO Imazon (Amazon Institute of People and the Environment) show that around 106,000 square kilometres within settlements inside the Brazilian Amazon (49% of the area of settlements mapped) had been deforested by 2004, representing 15% of Amazon deforestation. The state of Pará had the largest area of settlements (32% of the total within the Brazilian Amazon), followed by Rondônia (17%) and Mato Grosso (15%). The remainder of the settlement area (36%) was distributed in the other states of the Legal Amazon ([www.imazon.org.br/publicacoes/publicacao.asp?id=408](http://www.imazon.org.br/publicacoes/publicacao.asp?id=408)).
- 27** Personal communication with an employee from Environmental Protection Directory at IBAMA, whom oversees all officers. 2007.
- 28** Lentini, M. et al. (2005) *Fatos Florestais 2005*. Belém, IMAZON.
- 29** Under the Brazilian Forest Code (4771/65) and the Federal Law on Environmental Crimes (9605/99).
- 30** Brito, B. and Barreto, P. (2005) Challenges for the Environmental Crimes Law in Pará. In: *State of the Amazon*, issue 4, July. Belém, IMAZON.
- 31** Brito, B. and Barreto, P. (2005) Challenges for the Environmental Crimes Law in Para. In: *State of the Amazon*, issue 4, July. Belém, IMAZON.
- 32** Greenpeace field research, 2007.

- 33** Brazilian Federal Government (2004) National Action Plan for the Prevention and Control of Deforestation in the Legal Amazon. Plano de ação para a prevenção e controle do desmatamento na amazônia legal - <http://www.planalto.gov.br/casacivil/desmat.pdf>
- 34** Newspaper *redação 24HorasNews* (2005): Juiz federal acata denúncias contra 193 da "Máfia da Madeira"
- 35** Lentini, M. et al. (2005) *Fatos Florestais 2005*. Belém, IMAZON.
- 36** The EU-27 comprises Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.
- 37** Brazilian Ministry of Development, Industry and Trade (2007) Timber exports from the Brazilian Amazon, by weight. Available at <http://aliceweb.desenvolvimento.gov.br/> Accessed February 2008.
- 38** Wackernagel, M., Moran, D., Goldfinger, S., Monfreda, C., Welch, A., Murray, M., Burns, S., Königel, C., Peck, J., King, P. and Ballesteros, M. (2005) *Europe 2005: The Ecological Footprint*. Brussels, WWF. Available at [www.panda.org/downloads/europe/europe2005ecologicalfootprint.pdf](http://www.panda.org/downloads/europe/europe2005ecologicalfootprint.pdf)
- 39** Total GHG Emissions in 2004. Climate Analysis Indicators Tool (CAIT), World Resource Institute. <http://cait.wri.org/cait.php?page=yearly>
- 40** Global Timber (no date) The EU's FLEGT Initiative. Available at [www.globaltimber.org.uk/FLEGT.htm](http://www.globaltimber.org.uk/FLEGT.htm). Accessed March 2008.
- 41** Brazilian Ministry of Development, Industry and Trade (2007) Timber exports from the Brazilian Amazon, by weight. Available at <http://aliceweb.desenvolvimento.gov.br/> Accessed February 2008.
- 42** In Portuguese, Lei de Gestão de Florestas Públicas.
- 43** Departamento de Polícia Federal (2007) *Resumo das operações em 2006*. Available at [www.dpf.gov.br/web/informa/relat\\_anual/RA%202006%20-%20Internet.pdf](http://www.dpf.gov.br/web/informa/relat_anual/RA%202006%20-%20Internet.pdf)
- 44** The law stipulates that all non protected public forests must be registered with the National Register of Public Forests and cannot be resold or given away. Industrial-scale activities – such as selective logging, ecotourism, etc – are allowed under a system of concessions, which can last for up to 40 years. Deforestation for agriculture or cattle is not allowed and the concessions are opened to public scrutiny. As the immense majority of the Brazilian Amazon forest, which is not yet protected or legally designated to indigenous people or traditional communities, belongs to the Federal Government or the Amazon states, in theory this law will strongly reduce land grabbing (grilagem) and deforestation.
- 45** Ministério Público Estadual of Mato Grosso (2007) *Operação Guilhotina, 'Justiça Estadual expede 75 mandatos de prisão'* <http://www.tj.mt.gov.br/conteudo.aspx?IDConteudo=3458> - last accessed March 2008.
- 46** Brazilian Federal Government (2004) - Brazilian Federal Government (2004), Plano de ação para a prevenção e controle do desmatamento na amazônia legal - <http://www.planalto.gov.br/casacivil/desmat.pdf>
- 47** Annual deforestation rates are based on data from the INPE (National Institute of Space Research) systems Deter (the Government Programme for Deforestation Detection in Real Time) and Prodes (Programme for Deforestation Assessment in the Brazilian Legal Amazon, which uses remote sensing images and digital image processing techniques), with an error margin of 10%. <http://www.obt.inpe.br/prodes/index.html>
- 48** The highest annual deforestation rate ever measured was 29,059 square kilometres between August 1994 and July 1995. INPE (Brazilian National Institute of Space Research) *Estimativas Anuais desde 1988 até 2007, Taxa de desmatamento anual (km<sup>2</sup>/ano)* [http://www.obt.inpe.br/prodes/prodes\\_1988\\_2007.htm](http://www.obt.inpe.br/prodes/prodes_1988_2007.htm) March 2008 and Greenpeace (2008) *O leão acordou, Uma análise do Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal*.
- 49** Greenpeace (2008) *O leão acordou, Uma análise do Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal*.
- 50** Almost 70% of the activities foreseen in the action plan have not been carried out as expected. Of the 32 strategic directions, 10 (31%) were completed or almost completed by 2007, 11 (34%) were partially completed and 11 (34%) were not completed or barely started. Of the 10 activities completed, only three (30%) were executed within the planned deadlines, which suggests that the government underestimated the efforts required for their completion. To give one example, the Action Plan foresaw 19 IBAMA field bases in key regions of the Amazon aimed at supporting and promoting inspections, as well as monitoring deforestation and illegal logging activities. By 2007, only eight of these bases were effective, the majority of them for only part of the year. Some bases have been closed due to lack of resources. Greenpeace (2008) *O leão acordou, Uma análise do Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal*.
- 51** Greenpeace (2008) *O leão acordou, Uma análise do Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal*.
- 52** The Deter system has estimated a deforestation rate of 7,000km<sup>2</sup> between August and December 2007. INPE (2008) INPE estima que Amazônia perdeu cerca de 7 mil km<sup>2</sup> de floresta entre agosto e dezembro de 2007. Press release, 24 January. Available at [www.inpe.br/ingles/news/noticia.php?Cod\\_Noticia=1318125](http://www.inpe.br/ingles/news/noticia.php?Cod_Noticia=1318125)
- 53** Greenpeace (2007) *Amazon Bulletin – Newsletter Issue 2 – October 2007 – Deforestation trends: new challenges ahead* [www.greenpeace.org](http://www.greenpeace.org)
- 54** Barroso, José Manuel (2008) *Europe's Climate Change Opportunity*. Speech delivered at Lehman Brothers, London, 21 January. Available at <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/26&format=HTML&aged=0&language=EN&guiLanguage=en>
- 55** Council of the European Union (2007) Press Release: Environment, 20 February. [www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/envir/92864.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/envir/92864.pdf)
- 56** The major shortcomings of the current VPAs include the following:
- Risk of circumvention: Timber and wood products imported by the EU via a third-party country such as Brazil, China or Russia, are not addressed under the VPAs, despite these three countries currently being the main suppliers of timber products to the EU market
  - Limited product coverage: Secondary processed products such as paper and furniture, which represent about 55% of the total trade in timber products, will not be covered by the voluntary FLEGT licensing scheme, at least not initially. A Dutch study (AidEnvironment (2006) *Effectiviteit van de FLEGT Vrijwillige Partnerschappen (VPA's) Factsheet*) has shown that even if all countries that have shown interest in VPAs entered into one, these agreements would cover only 4% of all direct timber imports into the EU.
  - Risk of laundering: If the partner country has no national legislation to control the import and sale of timber and timber products from non-partner countries, any illegal timber imports could be mixed with the legal domestic production of the partner country, and then exported to Europe with a valid legality licence.
  - Geographical scope: The EU is currently considering only high-risk countries in tropical regions for VPAs, although illegal and destructive logging is also a problem in the Northern Hemisphere, especially in Russia.
  - Time frame: First ratifications of VPAs are not expected before 2009/10, with an implementation process that may take several more years.
- 57** European Commission (2007) *Public Consultation on "Additional Options to Combat Illegal Logging": Analysis and Report*. Available at <http://ec.europa.eu/environment/forests/pdf/addloptionssynthfinal.pdf>
- 58** IBAMA (2007) *Registers of exports via Santarém port*.

## References

- 59** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 60** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 61** Ministério de Desenvolvimento, Indústria e Comércio Mercadoria (MDIC), 2007 [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (accessed on 14 November 2007)
- 62** IBAMA (2007) Registers of exports via Santarém port.
- 63** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007).
- 64** IBAMA (2007) Case number 02048.000488/2002-24 Fine Number 155939 – Fine imposed on Pena on 26.08.2002 for logging in 156has. of native forest, without IBAMA's approval.
- 65** Greenpeace Brazil (2007) Assentamento de Papel, Madeira de Lei (The report describes how INCRA's policies benefit logging companies through the creation of 'paper settlements'.)
- 66** Deposition by Valdeci dos Santos Gomes and Raimundo Nonato Ferreira da Silva, made on 27 February 2007 to the Federal Public Attorneys of the Attorney General's Office in Santarém, within Public Civil Action (case number 2007.39.02.000887-7). Material made available by the plaintiffs.
- 67** Deposition by Valdeci dos Santos Gomes and Raimundo Nonato Ferreira da Silva, made on 27 February 2007 to the Federal Public Attorneys of the Attorney General's Office in Santarém, within Public Civil Action (case number 2007.39.02.000887-7). Material made available by the plaintiffs.
- 68** In the case of the Curuá Settlement project, each settler receives around 100ha and a permit to clear 3ha per year (equivalent to rights to log at least 90m<sup>3</sup> per lot per year) until 20% of the lot has been cleared.
- 69** Deposition by Valdeci dos Santos Gomes and Raimundo Nonato Ferreira da Silva, made on 27 February 2007 to the Federal Public Attorneys of the Attorney General's Office in Santarém, within Public Civil Action (case number 2007.39.02.000887-7). Material made available by the plaintiffs.
- 70** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 71** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 72** IBAMA (2007) Registers of exports via Santarém port.
- 73** Ministério de Desenvolvimento, Indústria e Comércio Mercadoria (MDIC), 2007 [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (accessed on 14 November 2007).
- 74** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 75** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 76** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 77** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 78** Marcelo Marquesini/Greenpeace (1997) Parecer técnico sobre projetos de manejo florestal sustentado na região de Santarém/PA.
- 79** Management plan 217/1994
- 80** IBAMA (2001) Relatório sobre a situação dos projetos de manejo florestal no Pará.
- 81** Jornal da Globo (2004) Suspeita de grilagem, 7 December. Available at <http://jg.globo.com/JGlobo/0,19125,VTJ0-2742-20041207-69889,00.html> (accessed on 26 November 2007).
- 82** Federal Public Ministry, Pará (2004) – 'Presos acusados de participar de quadrilha de grilagem de terras' - [http://66.102.9.104/search?q=cache:9TNY\\_7w4noYJ:www.prpa.mpf.gov.br/noticias/2005/presos-acusados-de-participar-de-quadrilha-de-grilagem-de-terras/+Moacir+Ciesca+-+preso+em+2004&hl=pt-BR&ct=clnk&cd=1](http://66.102.9.104/search?q=cache:9TNY_7w4noYJ:www.prpa.mpf.gov.br/noticias/2005/presos-acusados-de-participar-de-quadrilha-de-grilagem-de-terras/+Moacir+Ciesca+-+preso+em+2004&hl=pt-BR&ct=clnk&cd=1)
- 83** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 84** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 85** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 86** IBAMA (2005) registers of exports via Santarém port.
- 87** DLH Nordisk Inc and DLH Nordisk A/S
- 88** IBAMA (2007) Registers of exports via Santarém port.
- 89** Ministério de Desenvolvimento, Indústria e Comércio Mercadoria (MDIC) [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (accessed 14 November 2007).
- 90** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007). [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007).
- 91** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007). [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007).
- 92** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007).
- 93** Marcelo Marquesini/Greenpeace (1997) Parecer técnico sobre projetos de manejo florestal sustentado na região de Santarém/PA. – Technical report produced for the Public Ministry.
- 94** IBAMA (2001) Relatório sobre a situação dos projetos de manejo florestal no Pará
- 95** Federal Regional Tribunal (2001) Judicial process 2001.39.02.000799-0.
- 96** INCRA (2006) Relatório de vistoria técnica, Santarém, Pará.

- 97** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007). [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007)
- 98** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 99** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 100** IBAMA (2005), registers of exports via Santarém port.
- 101** Ministério de Desenvolvimento, Indústria e Comércio Mercadorias (MDIC) - [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (accessed 14 November 2007).
- 102** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007). [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007)
- 103** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007). [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) (accessed on 25 November 2007)
- 104** IBAMA (2000) Relatórios Mensais de entrada e saída de madeira em toras.
- 105** J.S.Madeiras/Madeplacas, ZENO Industrial and ITAMEX/Madeira do Gareira.
- 106** Greenpeace Amazon (2001) Empresas fantasmas e madeira ilegal em Santarém – relatório técnico.
- 107** Greenpeace Brazil (2007) Assentamento de Papel, Madeira de Lei (The report describes how INCRA's policies benefit logging companies through the creation of 'paper settlements').
- 108** Environmental Agency of the State of Pará (2007), Sistema Integrado de Monitoramento e Licenciamento Ambiental - Modulo Publico (SIMLAM Publico) <http://monitoramento.sema.pa.gov.br/simlam/>
- 109** Ministério de Desenvolvimento, Indústria e Comércio Mercadorias (MDIC), 2007 [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (acesso em 14 November 2007)
- 110** IBAMA (2007) Registers of exports via Santarém port K
- 111** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007
- 112** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007
- 113** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007
- 114** Curuatinga (2008), Environment, <http://www.curg.com.br/index4.htm> - last accessed March 2008.
- 115** Grão Pará Madeiras Ltda (fined in 2006), Industrial Madeireira Santa Catarina Ltda (fined in 2004) and Madeireira Cedrolândia Ltda.(fined between 2000 and 2004). Source: Sisflora/Governo do estado do Pará/Brasil (2008).
- 116** IBAMA (2008) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed March 2008.
- 117** Greenpeace, 2003. Report: State of Conflict – An investigation into the landgrabbers, loggers and lawless frontiers in Pará State. Amsterdam. And federal decree for the creation of the Extractive Reserve, 2004; and Diário oficial da União, number 215, 9 November 2004, Federal Decree for the creation of Porto de Moz extractive reserve
- 118** IBAMA (2007) - Cadastro Técnico Federal
- 119** Ministério de Desenvolvimento, Indústria e Comércio Mercadorias (MDIC), 2007 [https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index\\_expo.jsp&inIdioma=pt\\_BR](https://www.exportadoresbrasil.gov.br/g36157/servlet/serpro.siscomex.cadexp.servlet.ChamaPaginaServlet?nmPagina=/JSP/index_expo.jsp&inIdioma=pt_BR) (accessed on 14 November 2007).
- 120** IBAMA (2007) Registers of exports via Santarém port
- 121** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 122** IBAMA (2007) Administrative procedures resulting from fines imposed by IBAMA for each company (from 1990 to 2007) – [www.ibama.gov.br/protocolo](http://www.ibama.gov.br/protocolo) - accessed on 25 November 2007.
- 123** Tribunal Regional Federal in Pará (2006) Case n. 2006.39.00.008394-9 at First Região Seção Judiciária Pará

# GREENPEACE

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.

Greenpeace International  
Ottho Heldringstraat 5  
1066 AZ Amsterdam  
The Netherlands  
Tel: +31 20 7182000  
Fax: +31 20 5148151

[greenpeace.org](http://greenpeace.org)