

## WHAT IS AT STAKE?

Millions of hectares of Indonesia's rainforest habitats and carbon-rich peatlands remain at risk from clearance for pulp and palm oil plantations, despite the recent partial, weak government moratorium on new expansion into some forest and peatland areas. Clearance of these areas will drive climate change and push endangered wildlife one step closer to extinction.

- Indonesia's peatland areas alone hold as much carbon as the Amazon rainforest.
- The Indonesian government identifies the pulp and palm oil sectors as the leading drivers of deforestation.
- Government data indicate that more than 30 million hectares of rainforests and peatland, as well as nearly half of all remaining orang-utan habitat, are contained within existing industrial concession areas.

## INDONESIA'S RAINFORESTS AND PEATLANDS ARE CRITICAL FOR CLIMATE, WILDLIFE AND FOREST PEOPLES

The Indonesian government estimates that its peatland areas (including forested peatlands) hold as much carbon as is stored in the Amazon rainforest.<sup>1</sup> It estimates this at ~36Gt of carbon.

Indonesia is the site of one of the world's largest remaining areas of rainforest, as well as carbon-rich peatlands. Protecting Indonesia's rainforests and peatlands is critical if we are to maintain climate stability and ensure the survival in the wild of endangered species such as the Sumatran tiger and the Sumatran and Bornean orang-utan. Forest peoples' way of life also depends upon the health of the forests.

According to official government data, in 2006 (the most recent year for which official data are available), forest covered nearly 100 million hectares.<sup>2</sup> According to Wetlands International, peatland covered about 21 million hectares,<sup>3</sup> with more than half of these forested.<sup>4</sup> Forested Bornean orang-utan habitat covered nearly 8 million hectares, forested Sumatran tiger habitat about 11.5 million hectares and forested elephant habitat 2.2 million hectares.<sup>5</sup>

Current development plans for key sectors such as pulp and palm oil leave millions of hectares of rainforest habitat and carbon-rich peatland at risk for development, despite the recent partial government moratorium on the issuance of new concessions on primary forests and peatlands.<sup>6</sup>

There is currently an absence of real incentives for industry to support low-carbon development through business models that avoid deforestation and promote high land-use efficiency through improved yields. Without these incentives, there is a significant risk that Indonesia's economic development will be based on ongoing natural forest loss, high emissions and poor industry practice.

That is not a model of development anyone should promote. Failure to take action to stop deforestation and peatland degradation will have both national and global consequences. High greenhouse gas (GHG) emissions will increase climate change, loss of forest habitat will drive biodiversity loss and the business-as-usual business growth model will derail the movement towards a genuine low-carbon economy in Indonesia.

## THE PULP AND PALM OIL SECTORS ARE DRIVING RAINFOREST DESTRUCTION

The Indonesian government identifies the chief drivers of deforestation as the pulp and palm oil sectors.<sup>7</sup>



In November 2010, Greenpeace published 'Protection Money', the findings of an investigation into the potential impact on Indonesia's forests and peatlands of Indonesia's national development plans and the business development models pursued by key land-use sectors.

As the report detailed, government economic expansion plans for big industry reveal slated expansion in the pulp, palm oil, agriculture, biofuel and coal sectors that could bring an additional ~63 million ha into production by 2030:

- Timber plantations including pulpwood: 28 million ha<sup>8</sup>
- Estate crops including oil palm: 9 million ha (total land-use demand not forecast)<sup>9</sup>
- Agriculture: 13 million ha of forested land (total land-use demand not forecast)<sup>10</sup>
- Biofuel plantations including palm oil: 9 million ha<sup>11</sup>
- Mining: 4 million ha within the Forest Estate (total land-use demand not forecast)<sup>12</sup>

This would equate to all land in areas zoned as available for such expansion that is not already under identified economic use.<sup>13</sup>

Ministry of Forestry data show that the area earmarked for expansion by these sectors includes 40% of Indonesia's forest area – some 37 million ha,<sup>14</sup> an area the size of Norway and Denmark combined<sup>15</sup> – as well as 80% of Indonesia's peatland – some 16 million ha<sup>16</sup> – and 50% of forested orang-utan habitat.<sup>17</sup> Government figures suggest the forest and peatland carbon at risk amounts to 38GtC – four years' worth of global GHG emissions.<sup>18</sup>

An additional 23 million ha of Forest Estate land is available exclusively for selective logging.<sup>19</sup> Ministry of Forestry regulations dictate that logging concessions that have been heavily logged may then be made available for further clearance and development as pulpwood plantations. This progressively diminishes the area of natural forest in Indonesia.

Indonesia's pulp mills cannot meet current fibre needs through existing pulpwood plantations and continue to rely on deforestation. Forest clearance provides raw materials at minimal cost to feed the pulp mills – deforestation by the pulp sector subsidises company expansion.

Current operations in the pulp and palm oil sectors are typified by poor governance – with apparent widespread disregard for regulations on permits, environmental impact assessments and protection of deep peatland – poor land management and poor yields.

Plantation expansion in Indonesia's pulp and palm oil sectors accounts for more than half of future planned deforestation.<sup>20</sup> Both of these sectors have been gearing up for massive expansion, with government plans for a trebling of pulp and paper production by 2025<sup>21</sup> and a doubling of palm oil production by 2020.<sup>22</sup> Additional expansion targets have also been set for biofuel production.

### **Sinar Mas Group: does it stand for industry best practice or business-as-usual deforestation?**

The business-as-usual approach to economic growth in Indonesia is based on deforestation-dependent expansion. However, yield potentials claimed by one division of the Sinar Mas Group – the leading player in both the pulp and palm oil sectors – show that, using best practice, no increase in current total area allocated for pulpwood concessions is needed to meet its ambitions for economic growth.<sup>23</sup>

Recent policy announcements made by the pulp and palm oil divisions within the Sinar Mas Group show that one is taking the business-as-usual approach, while the other is pursuing an approach based on having 'no deforestation footprint'.

Asia Pulp & Paper (APP), Sinar Mas's pulp division, has announced that it will need to remain dependent on clearance of Indonesia's rainforests until the end of 2015.<sup>24</sup> APP's business development strategy is based on the ongoing expansion of its suppliers into rainforest areas.



Golden Agri Resources (GAR), Sinar Mas's palm oil division, introduced a new forest conservation policy in 2011 'to ensure that its palm oil operations have no deforestation footprint'<sup>25</sup> and pledged to end development on peatlands.

## **THE MORATORIUM FAILS TO CHECK GOVERNMENT PLANNED DEFORESTATION**

Deforestation and peatland degradation are the primary sources for 85% of Indonesia's GHG emissions.<sup>26</sup>

The Indonesian government claims to pursue a green economy vision based on achieving 7% economic growth and 26% reduction of GHG emissions from business as usual by 2020.<sup>27</sup>

In an attempt to meet these economic and GHG emissions targets, at the end of April 2011 Indonesian President Susilo Bambang Yudhoyono announced that Indonesia had more than 30 million hectares of 'degraded land' available for the expansion of the palm oil and forestry sectors.<sup>28</sup> In May 2011, he issued a presidential instruction (Inpres) establishing a two-year moratorium on the granting of new concessions on primary forests and peatlands.

Initial Greenpeace mapping analysis<sup>29</sup> based on best-available government data indicates the real limitations of the moratorium and the values at risk within the so-called 'degraded land' that remains available for expansion. Government plans for the expansion of the pulp and palm oil sectors mean that the new measures will fail to deal with these two chief drivers of deforestation. By effectively rebranding the expansion activities of these two deforestation-dependent sectors as part of Indonesia's sustainable economic growth, the government avoids tackling business-as-usual deforestation-related emissions or habitat loss.

### **The bottom line – millions of hectares of rainforest and peatland are at risk, despite the moratorium**

Despite the moratorium, many millions of hectares of rainforest habitat, critical to the survival of tigers and orang-utans in the wild, are being rebranded as 'degraded lands' at risk from industrial expansion.

Of this area, about 35 million hectares of rainforest and peatland lie within existing identified pulp, palm, coal, agriculture or selective logging concession areas, including nearly half of all forested orang-utan habitat.<sup>30</sup>

### **The assumptions behind our analysis**

Greenpeace mapping and data analysis is based on the following legal and governance assumptions:

- Indonesian law already protects peatland >3m deep, thus areas >3m deep are not counted as being granted 'additional protection' in terms of moratorium numbers.
- All peatland, regardless of depth, within existing concessions is at risk because of lack of governance.
- Peatland datasets chronicle peatland depth into band ranges of 0–2 metres, 2–4 metres, etc. The analysis is based on the bands >4 metres and thus is likely to overstate the 'additional protection' offered by the moratorium.
- Not all concession data are in the public domain; thus, the 'additional protection' underestimates the area of existing or in-principle concessions.

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<sup>1</sup> DNPI (2010a): 14 gives Indonesian peatland as storing 132GtCO<sub>2</sub>e below ground and 4.2GtC above ground.

<sup>2</sup> MoFor (2009c) gives a figure of 98 million ha of forests, but this includes about 1.9 million ha of industrial forest plantations. Source: MoFor (2007b): Tables I.1.1 & I.1.2.

<sup>3</sup> MoFor (2009a), Wahyunto (2003, 2004, 2006)

<sup>4</sup> 12 million hectares

<sup>5</sup> Greenpeace mapping analysis 2011

<sup>6</sup> Government of Indonesia (2011)

<sup>7</sup> DNPI (2010a)

<sup>8</sup> MoFor/FORDA (2009). Although this source gives the 2025–2050 horizon, the Indonesia Climate Change Sectoral Roadmap (ICCSR) synthesis report from March 2010 assumes ‘a constant effort of 1.4 million ha per year of new plantations’ through to 2029 and adjusts the plantation rates accordingly in order to be able to achieve the full scheme within the stated period. Source: BAPPENAS (2010).

<sup>9</sup> DNPI (2010a): 22

<sup>10</sup> DNPI (2010a): 19

<sup>11</sup> Legowo (2007): 21

<sup>12</sup> MoFor (2010g)

<sup>13</sup> Greenpeace analysis based on Gol data. For details see main report.

<sup>14</sup> Greenpeace analysis based on MoFor (2009a) & MoFor (2010d)

<sup>15</sup> Norway: 32.4 million ha; Denmark: 4.3 million ha. Source: CIA World Factbook [www.cia.gov/library/publications/the-world-factbook/rankorder/2147rank.html](http://www.cia.gov/library/publications/the-world-factbook/rankorder/2147rank.html)

<sup>16</sup> Greenpeace analysis based on MoFor (2010d) & Wahyunto et al (2003, 2004, 2006)

<sup>17</sup> Greenpeace analysis based on MoFor (2010c,d), MoFor (2009a) and Meijaard et al (2004) orang-utan habitat maps

<sup>18</sup> 2005 global emissions including land-use change and forestry and international bunkers: 34GtCO<sub>2</sub>e. Source: CAIT. 38GtC is equivalent to 140GtCO<sub>2</sub>.  $140/34 = 4.1$

<sup>19</sup> The Limited Production Zone covers just over 23 million ha; some 17 million ha of this had forest cover in 2006. Source: Greenpeace mapping analysis 2011 based on MoFor (2010d) and provincial provisional planning documents.

<sup>20</sup> DNPI (2010a)

<sup>21</sup> Based on the projection that the production of the pulp and paper industry will increase to 55 million tonnes in 2025, or about 3.24 times the production in 2007. Source: DNPI/UNFCCC (2009).

18.75 is equal to 34% of 55 million. Share of pulp production from total paper production between 2000 and 2006 – the only period for which complete data are available – was 34%, with paper accounting for 51% and waste paper recovery for 15%. Leaving out waste paper recovery would increase targeted pulp production to 22 million tonnes. However, without waste paper recovery included, multiplying 2007 production by 3.24 would likely yield not 55 million tonnes, but 51 million tonnes. Including waste paper recovery, the targeted figure would be ~55.6 million tonnes. Figures for 2007 are not available, as the Indonesian Pulp and Paper Association (APKI) has not yet released any data more recent than 2006.

<sup>22</sup> Media Indonesia (2010)

<sup>23</sup> see Greenpeace (2010c): 43 for full figures

<sup>24</sup> Greenbury (2011)

<sup>25</sup> GAR (2011): 4

<sup>26</sup> DNPI (2010b): 5 gives net deforestation emissions as 763Mt, peat decomposition as 300Mt and peat fire as 550Mt in 2005. DNPI (2010a): 12, 13 gives the same total but divided as 772Mt from peat and 838Mt from other LULUCF sources.

<sup>27</sup> Yudhoyono (2011)

<sup>28</sup> Yudhoyono (2011)

<sup>29</sup> Mapping analysis using 2006 forest cover data (MoFor 2009a) and best available data on existing and allocated concession areas yields 48.3 million ha. Some forest will already have been cleared, with the DNPI assuming a rate of 1.1 million ha/yr on average (DNPI 2010a). By contrast, it is likely that concession data fail to include several million hectares of unidentified concessions or in-principle permits.

<sup>30</sup> 31.6 million ha rainforest: Primary Forest 12 million ha, Secondary Forest 19.6 million ha inside concessions; 6.9 million ha peatland (5.7 million ha <4m; 1.2 million ha > 4m); 3.7 million ha forested orang-utan habitat.

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