Oil Palm Plantations and Deforestation in Indonesia. What Role Do Europe and Germany Play?

An update of the 1998 "Lipsticks from the Rainforest" report

A Report by WWF Germany in collaboration with WWF Indonesia and WWF Switzerland, November 2002

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Summary

This report is an update of an earlier study made in 1998, "Lipsticks from the Rainforest", which analysed, for the first time, the role of the rapidly expanding oil palm sector in Indonesia's devastating forest fires of 1997-98. Because of the international dimensions of this sector – its dependence on international capital flows and the global market for palm oil products – trade and capital relations with consumer countries were examined, with particular emphasis on Germany. In the light of all the changes in Indonesia's political, economic and social situation in recent years, it was decided that an update on the issue would be timely.

Forest cover in Indonesia has fallen from 162 million hectares in 1950 to around 98 million hectares today. The country is experiencing one of the highest rates of tropical forest loss in the world and this rate is increasing as a result of legal and illegal logging, clearance for plantations and agricultural estates, and fires. Official statistics show that the forest destruction rate is now between 2 million and 2.4 million hectares a year. At this rate, lowland dipterocarp forests are predicted to disappear from Sumatra by 2005 and Kalimantan by 2010.

For the past 30 years, timber has provided Indonesia with much of its non-oil export earnings. Now timber resources from its natural forests, rich in biodiversity, are beginning to become exhausted. Nevertheless, the process of overlogging and clear-cutting the remaining natural forests and converting them into estate crop plantations continues.

The forest fires that have affected Indonesia since 1997 have been a truly man-made environmental disaster. The underlying causes are found in Indonesia but are also rooted in the development of global markets. Donor countries did not react adequately when earlier fires occurred, limiting their official efforts at assistance to fighting symptoms and often following a purely technical approach. Instead of fighting the fires, more emphasis should be put on their prevention, along the lines proposed by the WWF/IUCN's Project FireFight South East Asia (PFFSEA). Another form of assistance by donor countries should address one of the root causes: there should be effective mechanisms to regulate the activities of big corporations from those same donor countries, where these corporations operate in international trade chains that depend on the unsustainable exploitation of natural resources in developing countries. In the case of Indonesia, this includes the timber, paper and pulp, and palm oil industries.

Of the estimated five million hectares of former forest lands in Indonesia's lowlands that have already been converted to estate crop plantations, three million hectares are covered with oil palms. Plantations are usually established after natural forests are logged and then burned to clear the land for planting. In some cases, fires run out of control, either "accidentally" or deliberately, and destroy extensive areas beyond the plantation concession area, as happened with most of forest fires in Indonesia in 1997-98.

A changing political and economic context

Since 1997, Indonesia has faced enormous economic and political challenges: an unprecedented economic crisis, the building of democratic institutions after three decades of autocratic rule, and the implementation of a far-reaching decentralisation programme. When the financial crisis struck Asia in mid-1997, Indonesia was hardest hit and slowest to recover.

Under Suharto's three successors since 1998, many institutional, legal and policy reforms have been announced and sometimes adopted. These reforms, with decentralisation of powers to provinces and districts among the most prominent, provide a unique opportunity for reversing the destructive trends in Indonesian forests. However, after more than four years of reforms, the net results are mixed.

The breakdown of government control gives actors in the international trade chain – investors, traders and consumers – a greater responsibility and considerable leverage over what happens to Indonesia's forests because of their links with companies that depend on raw materials from those same forest lands.

Forest fires since the 1997-98 crisis

The total area in Indonesia damaged or destroyed by the 1997-98 fires has been estimated at nearly 10 million hectares, an area three times the size of the Netherlands. The Asian Development Bank (ADB) estimated the overall economic cost of fire and haze in the region at $9 billion. The massive fires have had dramatic impact on wildlife (including orangutans and elephants) and several protected areas, among them Kutai and Tanjung Puting National Parks.

Drought caused by the 'El Niño' climatic phenomenon was a major factor in creating the conditions for Indonesia's devastating forest fires in 1997-98. In the next few years, the annual round of burning, smoke and haze has continued, although at a smaller scale and with less intensity than in the years before. For 2002, climate experts see another 'El Niño' year, and in the past few months fires and haze have indeed been worse than average, although some reports say drought conditions will not be as severe as in 1997-98.

In September 2002, satellite information revealed that more than 75 percent of the hot spots recorded in West and Central Kalimantan during August occurred in oil palm plantations, timber plantations and forest concessions. This indicates that the pattern which became evident in previous years is repeating itself in 2002: logging and estate companies clear land by setting fire to natural forests on their concessions after removing valuable timber and leaving fire-prone debris. This would mean that the reforms in Indonesia's political system and its forestry policy over the last five years have had little effect in halting conversion and deforestation. This was acknowledged in September by In-

donesia's Environment Minister who stated that the country's weak judiciary and law enforcement system were still a major constraint in controlling the fires.

Sanctions against plantations that initiate forest fires have been rare. Only in a few isolated cases have NGOs and local communities successfully challenged plantation companies in court for environmental damage caused by deliberately starting fires that burned out of control.

Underlying causes

Widespread unsustainable logging and large-scale land clearance by agro-industrial companies with little regard for local communities' land and rights to the use of resources have been identified as the more immediate causes of forest fires. The expansion of forest-based industries has resulted in social conflicts over land ownership and natural resource use, with arson being used as a weapon by companies and local communities. An international fire prevention project (FFPCP) concluded that the main permanent solution to Indonesia's fire problem lies in improved local level landuse planning with the participation of local communities. Such land-use planning should also focus on fire prevention. The breakdown of law enforcement and widespread corruption further compound any attempt to address the root causes of forest fires and to move towards more sustainable forest management in general.

Indonesia has come under mounting international criticism for not doing enough to control forest fires. Several pledges and promises have been made, such as the adoption of a 'zero-burning policy', the establishment of a "Haze Prevention Group" by the forestry and plantation industry, and a binding anti-haze treaty between Indonesia and fellow ASEAN countries. Although most of these commitments and initiatives seem well intended, their effectiveness so far has been doubtful and verification in the field is poor.

Oil palm expansion in Indonesia continues

Predictions are that about 50 percent of the new plantation land – three out of six million hectares – that is needed world-wide to supply the global palm oil market by 2020 will be established in Indonesia. It is expected that Sumatra will absorb most of this expansion (1.6 million hectares), Kalimantan would account for another one million and West Papua for 0.4 million hectares. For economic reasons and due to the lack of government control, oil palm estates continue to be expanded by converting natural forests instead of using degraded lands which are now widely available.

Between 1997 and 2001, Indonesian palm oil and meal production increased from 6.6 million to 9.5 million tonnes and the planted area reached over three million hectares in 2000, starting from about 600,000 hectares in 1985.

By law, plantations can be established only on forest land that has been designated as Conversion Forest, not on Permanent Forest land. Since there are many more applications for the release of forest land to plantation crops than the available Conversion Forest lands can accommodate, so-called 'Conversion Forest deficits' are the result. The government responds by re-allocating Permanent Forest land to Conversion Forest, yielding to company pressure on national, and increasingly, on provincial authorities.

Indonesia's oil palm industry is dominated by some of the same domestic conglomerates that control the logging, wood-processing and pulp and paper industries. Examples are the Salim Group, the Raja Garuda Mas Group and the Sinar Mas Group. Other examples are state-owned forestry companies such as Inhutani that have been allowed, since 1998, to convert up to 30 percent of their concession to estate crops.

Indonesia and Germany in the international palm oil trade

The world demand for palm oil is expected to increase from its present 22.5 million tonnes a year to 40 million tonnes in 2020. Malaysia and Indonesia have slightly increased their dominant position on the global production and export market for palm oils and meal since the previous WWF report in 1998. In 2001, 90 percent of global exports was accounted for by these two countries.

Germany ranks seventh among the world's palm oil importing countries. The country even occupies the number one global position for imports of palm kernel oil (PKO), used mainly for industrial purposes.

The biggest importers of Indonesia's crude palm oil (CPO) in 2001 were India (29 percent), China (11 percent), Netherlands (eight percent) and Germany (five percent). As regards PKO, Germany ranks number one, importing 28 percent of Indonesia's exports, and Indonesia supplies 85 percent of all German PKO imports. Germany's imports of all three palm oil categories from Indonesia rose from 602,000 tonnes in 1997 to 655,000 tonnes in 2001 (for 2001: 268 kT crude palm oil, 164 kT palm kernel oil, 223 kT palm kernel meal).

Germany's crude palm oil imports directly from Indonesia doubled from 1993 to 1997, dropped in 1998 and in 1999, and have since then picked up to regain the lead. Germany is the only country among the big importers which imports more crude palm oil from Indonesia than from Malaysia.

Germany's domestic market

Germany's consumption of vegetable oils has been rising steadily over the past five years, from 2.2 million tonnes in 1996 to 2.8 million tonnes in 2001. Almost one quarter refers to palm and palm kernel oil, making palm oils by far the most imported vegetable oil in Germany.

Inquiries among processing companies in Germany indicate that only in exceptional cases can palm oil be traced back to its port of origin, and tracing it to the original plantation is considered impossible. However, similar international initiatives in other sectors show that chain-of-custody mechanisms can be developed provided there is the will among all commercial actors. The Migros retail chain in Switzerland represents a pioneer case of a company that has adopted sustainability criteria in its palm oil business practices.

A survey was conducted among 32 companies operating on the German consumer market for palm oil products. The purposes of this survey were to gather information on the volume and origin of the companies' raw materials, and to find out to what extent companies had changed their palm oil purchasing policies since the 1997-98 fires in Indonesia.

The survey found large discrepancies between imported and consumed volumes. Several companies (Nestlé, Cognis, Unilever) claim to apply environmental guidelines in their purchasing and production policies. However, most guidelines and criteria have a general character, and usually refer to processing aspects at the end of the chain and not so much to what happens in the country of origin.

Unilever is one of the biggest global company players in the palm oil trade chain. , Unilever has worked with WWF for the past two years on economic, social and environmental criteria for sustainable oil palm agriculture. This case may serve as an example to other companies, but even for Unilever, there is still a long way to go before the palm oil production and trade chain can really be considered sustainable. The survey also shows that no German company has changed its supply policy as a result of Indonesia's forest fires in 1997-98. It can be concluded that without public pressure, company policies will not change. As far as mobilising consumers is concerned, palm oil has the disadvantage of becoming "invisible" in the end product because it is mixed with other ingredients and a declaration on the product's composition is not obligatory in Germany.

German development cooperation

Indonesia is a priority country in German development cooperation. In view of the dramatic loss of Indonesia's forests, the emphasis has in recent years been on support for sustainable forestry. Because of inadequate reforms by successive Indonesian governments and continuing corruption, the German ministry (BMZ) now follows a restrictive policy in the Indonesian forest sector. New forest-related proposals are no longer encouraged. On the other hand, the German Investment and Development Society (DEG) promotes the oil palm sector in Southeast Asia and, in Indonesia, the DEG currently finances three oil palm projects. Ecological sustainability is an important criterion for DEG financing, committing project beneficiaries to adhere to social and ecological guidelines, including a 'zero-burning' policy. Furthermore, since May 2002 new German development cooperation guidelines for the forest sector prohibit conversion of any primary forests or High Conservation Value Forests (HCVF)[1] by German development projects.

International finance

The fast expansion of the oil palm sector has been financed to a large extent by foreign financial institutions from Europe, North America and eastern Asia. More recently, the oil palm sector has lost popularity among foreign banks, as the loans extended in the mid-1990s have not generated the expected returns and many Indonesian oil palm companies ran into painful debt trouble. At the same time, foreign banks were faced with criticism from NGOs on their role in converting Indonesian forests into oil palm plantations.

Yet financial links still exist. The influence which foreign financial institutions could exert on oil palm companies has increased because of the financial crisis the companies are in. This situation provides excellent opportunities for leverage in the social and environmental practices of the banks' clients. A case in point is the successful campaign by NGOs which led four Dutch banks in 2001 to adopt a more responsible policy in their financial services to the Indonesian oil palm sector. Through their financial links to plantation companies, European institutions have considerable potential influence on Indonesian oil palm plantations. Among them are several German financial institutions.

Apart from banks, a major role is played by Indonesia's public creditors, led by the IMF. They have set a course for economic recovery which requires Indonesia to sell off state assets and generate revenues by exploiting natural resources.

International action

In February 2002, WWF adopted a position paper with the key ingredients for a sustainable oil palm industry. A key element in WWF's oil palm strategy is to target 'levers of change', i.e. mobilise those key actors that have influence in international markets and investment flows. These include major European banks, international financial institutions (IMF, World Bank), the European consumer market, European companies that process palm oil products and produce consumer goods, and institutions (EU, national governments) that determine development, trade and aid policies.

The 1998 report by WWF Germany and other publications fuelled campaigns by WWF, Greenpeace and Friends of the Earth directed at the general public, retailers and the financiers behind plantation expansion. Apart from increased general awareness of the oil palm issue, these campaigns have generated 'early adopters' of more responsible trade and investment practices, both in the retail (Migros in Switzerland) and the financial sectors (four banks in the Netherlands).

The report concludes with a series of recommendations for action and policy change, directed at the Indonesian government, financial institutions and donor agencies, companies in the trade chain and consumers. NGOs have assumed an active role, catalysing processes to encourage the sustainable management of oil palm plantations and stop the conversion of any more high conservation value forests.

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1. Introduction

1.1 Masks, deaths and smog

At least three people died and hundreds have been suffering from respiratory problems as thick haze from forest fires burning out of control since July 2002 continued to engulf Palangkaraya, one of the worst hit cities and the provincial capital of Central Kalimantan. The haze had also forced airport authorities to close the airport over the past few weeks and most schools remained closed. Deputy governor Nahson Taway from Central Kalimantan said he was powerless in facing the fires and could only hope for heavy rains to put out the peat land fires across the province. The central government in Jakarta sent 30,000 masks and medical teams to deal with widely reported respiratory problems throughout the province.[4]

The choking smoke caused health problems and disrupted transport services in other parts of western Indonesia and neighbouring Malaysia as well, just as in previous years. On August 18, satellite images showed around 4,000 fire hot spots in West and Central Kalimantan. A few days later, visibility was as low as 10 to 20 meters in many parts of Sumatra and Kalimantan and concentration of smoke and dust particles in the air far exceeded safety limits.[5]

This situation persisted until late October, with Central Kalimantan as one of the worst hit provinces. In this province alone, the number of hot spots even increased to almost 1,000 around mid-October.[6] Mainly due to changes in the weather pattern, the number of fire hot spots has declined considerably since then.[7]

Indonesia: Forest data and trends

Although Indonesia comprises only 1.3 percent of the earth's land surface, it harbours a disproportionately high share of its biodiversity, including 11 percent of the world's plant species, 10 percent of its mammal species, and 16 percent of its bird species. The majority of these species are found in the country's forests. Many millions of people dwelling in the forest or dependent on it also rely on Indonesia's forests for their livelihoods.

Estimates of Indonesia's current total forest area range from 105 million (1997 FAO estimate) to 98 million hectares (Global Forest Watch estimate for 1997), while in 1950 this figure still stood at 162 million hectares. About 19 percent of the remaining forest area is officially protected. More than half the country's forests, some 54 million hectares, are allocated for timber production (although not all are being actively logged), and a further two million hectares of industrial wood plantations have been established, supplying mostly pulpwood.

The country is experiencing one of the highest rates of tropical forest loss in the world and the rate keeps accelerating because of legal and illegal logging, clearance for plantations and agricultural estates, and fires. On average, about one million hectares per year were cleared in the 1980s, rising to about 1.7 million hectares per year in the first part of the 1990s. Since 1996, deforestation appears to have increased to an average of two million hectares per year. State Ministry of Environment statistics show the forest destruction rate is now between 2.0 and 2.4 million hectares a year, with the rate having been at its highest in the past two years.[2] In terms of percentage, estimates for the annual loss in forest cover in the country for the period 1990-2000 range from about 1.2 percent (FAO) to 1.7 percent (Global Forest Watch). This dramatic trend is reflected in the state of Indonesia's biodiversity: it now has the world's longest list of species threatened with extinction.

The most recent and authoritative survey of the country's forest cover predicts that lowland dipterocarp forests – the richest tropical habitat of all – will have vanished from Sumatra by 2005 and Kalimantan by 2010 if current trends continue.[3]

1.2 The return of El Niño

In 1997 and 1998 the globe was hit by a severe 'El Niño', a periodic climate phenomenon which is the result of a change in warm water currents across the Pacific Ocean. This brings warm water from the western Pacific (Indonesia and Australia) to the east (western part of the Americas), reversing the normal pattern. It sparks serious drought in Indonesia, such as in 1997-98, but causes heavy rainfall in the western part of South America.[8] The drought in 1997-98 was a major factor in causing Indonesia's devastating forest fires of that period.

Climate experts agree that 2002 is another 'El Niño' year, although the climatic phenomenon is not as strong this time. The Meteorology and Geophysics Agency (BMG) announced in early September that half of Indonesia would have a prolonged dry season this year, meaning that crop failures and forest fires were likely to continue threatening the country. The BMG's statement came less than a week after a disaster mitigation team warned that the drought would prevail until the end of this year, urging the government to take steps to prevent and mitigate the effects of forest fires.[9]

Early in November, the Singapore Meteorological Services confirmed that inter-monsoon conditions had started, with the dry southwest monsoon leaving and the wetter northeast monsoon expected to set in by December.[10]

1.3 What caused the 2002 forest fires?

In September 2002, CIFOR compared satellite information from the U.S. National Oceanographic and Atmospheric Agency with Indonesian land-use maps. CIFOR data clearly show that more than 75 percent of the hot spots recorded in West and Central Kalimantan during August occurred in oil palm plantations, timber plantations and forest concessions. Burning peat land contributed

up to 90 percent of the smoke haze experienced during the catastrophic fires in 1997-98, and CIFOR staff stated they are seeing the same thing happening again in 2002.[11]

This indicates that the pattern which became evident in previous years may be repeating itself in 2002: logging and estate companies clear land by setting fire to natural forests on their concessions after removing valuable timber and leaving fire-prone debris. This would mean that the reforms in Indonesia's political system and in its forestry policy over the last five years have had little effect in halting the conversion and deforestation process. Land clearance by fire is also an annual tradition among small farmers around the tropics and Indonesia is no exception, but such fires are usually small-scale and have less impact.

Indonesian environmentalists as well as the Malaysian authorities have again criticised the government of Indonesia, just as they have done over the past five years, for doing too little to cope with forest and ground fires. Indonesia's Environment Minister recently acknowledged that the country's weak judiciary and law-enforcement system still contributed to its inability to control the fires, which are basically man-made. Other Jakarta officials stated they were unable to do much to stop the fires because of a lack of funds and personnel.[12]

The Environment Minister recently said that provincial and local authorities had the responsibility to take action against offenders. He referred to both forest concessionaires clearing areas to convert the land into plantations, and to forest squatters and traditional farmers. The chain of causes and effects does involve both plantation companies and small farmers again this year, but the picture is very complex and it is too early to draw definitive conclusions.

1.4 WWF's early warnings

In October 1998, WWF Germany published Brandrodung fuer Margarine, an analysis of the relations between Indonesia's forest fire crisis in 1997, the expansion of oil palm plantations and the international palm oil trade, focusing on the German market. The report was targeted at consumers and industry in Germany, asking them to assume their indirect responsibility for the loss of Indonesia's rainforests through conversion to plantations and to help influence the process as actors in the palm oil trade chain.

The report has been widely discussed within the WWF network, and WWF Germany has reiterated the study's main conclusions in talks with the private sector. But apart from occasional expressions of good intention, manufacturing companies and retailers have so far made no attempt to modify their purchasing policies.

Since 1999, forest fires have remained a recurrent phenomenon in Indonesia, although at varying intensity. Now, in the dry season of 2002, fires have again run out of control and destroyed even more forests, peatlands, agricultural lands and people's houses while creating a thick haze that affects human health throughout Southeast Asia.

As part of the Project FireFight South East Asia (PFFSEA), WWF and IUCN have issued a range of reports on the underlying causes of forest fires in the region (see Chapter 2.2).

Clearly, Indonesia needs all the help it can get to stop fires and forest destruction, although the government this year has not yet asked the international community for fire fighting assistance. Sending masks, water bombers and other costly fire fighting equipment will not help since so many of Indonesia's forest fires are set intentionally and occur in great number and on a vast scale.

Since global and German demand for palm oil steadily rises, large areas of forest land in Indonesia continue to be cleared to expand the country's oil palm estates. This process goes on with little regard for the forest, the environment or indigenous communities' interests.

1.5 Time for an update

This report is an update of WWF Germany's 1998 report. It seeks to answer the following questions:

What has happened in Indonesia in the past few years? What changes have gone on within its political system, economy, forests and among the population?

How has Germany's palm oil consumption changed? Have there been any meaningful efforts to assist Indonesia in stopping the fires or to influence the rate of conversion of rainforests into estate crop plantations, promoting the more responsible management of palm oil estates?

What has been done in other countries? What can Germany learn from these efforts?

Main conclusions from the 1998 WWF Germany report

- The booming oil palm plantation economy is one of the sectors, besides timber and pulp, that controls forest land and plays a key role in forest destruction.
- Palm oil plantations also play a key role in rural social conflicts related to land rights and access to forest resources.
- A large part of the 1997-98 fires were started by estate concessionaires to accelerate the conversion of tropical forests into oil palm and other industrial plantations.
- Tropical forests make way for oil palm plantations because the demand for palm oil on the international market steadily rises. In Germany, imports of crude palm oil (CPO) alone increased 37 percent between 1993 and 1997, with palm oil imports from Indonesia in particular increasing very rapidly.
- The political, financial, social and environmental crisis in 1997-98 offered good opportunities for re-thinking policies on plantation expansion and moving towards more sustainable forest management in Indonesia. in Indonesia.

How will Germany respond to this new fire crisis? Will the German government simply release millions of euros for fire monitoring programmes or fire fighting equipment, or will more sustainable answers be sought by the German government, and the private sector and consumers in seeking to address root causes?

2. Background on forest fires, reforms and the oil palm boom in Indonesia

This chapter provides some background on the problem – the recurrent fires – and examines to what extent the political and institutional reforms made since 1998 have been used or missed as an opportunity for starting to deal with the forest fire issue. The chapter proceeds with an update on the development of Indonesia's oil palm sector since the previous 1998 report, and then briefly discusses the role of this sector in the fires.

2.1 Looking back at the 1997-98 fires

In the peak months of June to October 1997, there were up to 300 times more fires, especially on Sumatra and Kalimantan, than during the same months in 1996, an average to wet year. In southern Sumatra, there was no effective rainfall for six months[13]. Estimates put the total area in Indonesia damaged or destroyed by the 1997-98 fires at nearly 10 million hectares, an area three times the size of the Netherlands. This includes 300,000 hectares of plantations, about 3.3 million hectares of lowland rainforest and another 1.5 million hectares of peat and swamp forest.[14] The fires caused a thick cloud of air pollution over Southeast Asia that persisted for several months. WWF estimated that the haze affected the health of 70 million people in Southeast Asia[15] while the Asian Development Bank (ADB) estimated the overall economic cost of fire and haze in the region at $9 billion.[16]

Burning by plantation companies

The international donor community committed substantial funds and equipment for fire fighting campaigns, but fire fighting efforts were ineffective because most fires were lit deliberately. Many fires were set by large-scale plantation owners to clear land; among them were commercial oil palm companies which saw the 1997-98 drought caused by the El Niño climatic phenomenon as a window of opportunity for implementing extensive expansion programmes.

Until 1994, so-called 'controlled burning' was legal and was common practice. When a company applied to the bank for credit, burning was even included as a cost component at about one- tenth of land clearing costs[17]. Plantation companies have a preference for using fire for land clearing because:

- burning is perceived by many as cheaper than other ways of clearing land (however, recent fire studies have shown that, even from an economic point of view, burning is not the cheapest land clearance option).[18]
- banks tend to promote burning practices because this will open up concession areas faster and reduce the time until the first harvest, allowing their clients to pay back debts earlier.[19]
- plantation companies and land clearing contractors are simply not accustomed to other means of land preparation.[20]

Table 1 shows the percentages of land within each land-use category that were burned in 1997-98, taking East Kalimantan as an example, where 5.2 million of its almost 20 million hectares burned. Forest plantations and crop estates were worst affected: of the total forest plantation area, 64 percent was burned, of the total estate crop area, 51 percent.

Land Use Status	Percent Burned
Natural Forest Concession area	24
Forest Plantation Area	64
Estate Crop Area	51
Total protected area	10
Undefined Land Use (e.g. farmland)	36

Table 1: Burned area of East Kalimantan 1997/98 in relation to land use status

Source: http://www.iffm.org/ (GTZ/KfW supported Integrated Forest Fire Management Project)

Large-scale land clearance by estate companies, which followed the extraction of timber, caused numerous, large and persistent fires in the Sumatran provinces of Riau and Jambi. Here, up to 80 percent of the bigger fires occurred in plantations. In southern Sumatra, where conversion of primary forest is almost completed, fires were smaller and shorter-lived, being mainly related to land preparation for the growing season by small farmers.[21]

Many of the new estates in Sumatra lie within its 11.5 million hectares of wetlands, often on peat soils. Migration programmes and estate crop companies moved into these swamps despite their low soil fertility, poor infrastructure and history of agricultural failure, but they were driven by the shortage of dryland areas and by the opportunity for extracting valuable commercial swamp timber species. Peat forests and drained wetlands, however, are particularly sensitive to dry-out and burn in El Niño years because the initial fire set to clear the residual wood debris enters the peat, which continues to smoulder and emit dense smoke haze long after the surface fire has died[22] . An estimated 80 percent of the total smoke haze in 1997-98 originated from the wetlands of eastern Sumatra and southern Kalimantan.[23]

The massive fires have had dramatic impact on wildlife and protected areas. The boxes give examples of the effect on some well-known endangered mammals and on two of Kalimantan's protected areas. It is because of the devastation caused by the fires to Indonesia's forests and its wildlife that WWF since 1998 has sought to mobilise the public and influence companies and financial institutions in industrialised countries that consume, trade and process products coming from Indonesia's plantations, and finance the plantations' operations

The following years

While the devastating fires of 1997-98 did not return at the same scale in the following years, the annual round of burning, smoke and haze continued. The general consensus on 1999 and 2000 was that, while serious, the fires were not as extensive as in the years before. This was due more to heavier rains than usual than it was to any government measures[31]. Nevertheless, nearly

THREATENED MAMMALS AND THE FIRES

Orangutan

Orangutans are found only on the islands of Borneo and Sumatra. Their populations have declined more than 90 percent in the past century and they have now become an endangered species in Borneo and a critically endangered species in Sumatra[24]. Total population estimates range from around 36,000 individuals as of 1996 to fewer than 25,000 now.[25] In the past 10 years alone, the orangutan population has declined by as much as 50 percent as a result of forest loss, poaching for bush meat and the pet trade. In Sumatra, an estimated 1,000 orangutans are lost each year, according to the UK-based Orangutan Foundation.

Illegal logging, illegal starting of fires and the conversion of forests to timber and oil palm plantations have resulted in a loss of over 80 percent of orangutan habitat over the past two decades. Devastating forest fires have played a major role.

Approximately 40 percent of the total fire hot spots in Kalimantan in 1997 and 1998 occurred in orangutan habitats (for Sumatra, the estimate is five percent). Up to one-third of Borneo's orangutans are estimated to have died during the forest fires of 1997-98. Others were taken into captivity for the illegal pet trade, either directly or after they tried to escape the burning forests. Today, there may be less than 15,000 orangutans left in the whole of Borneo.[26]

The total population of officially protected orangutans is probably around 8,300 individuals, but this population is highly fragmented and far from securely protected: approximately 95 percent of lowland forest within Kutai National Park, which has an orangutan population now estimated at no more than 300 individuals, burned in 1998.

Without the possibility of migration through safe corridors between fragments, there is a high probability of the local extinction of orangutan populations. Due to the particular population biology of orangutans, a loss of only five adults per year per 1,000 individuals will lead to extinction within approximately five decades. Orangutans prefer feeding in fruit trees which have large food crops, such as wild durian and fig trees; this argues strongly for the protection of old growth forest with an intact forest canopy for orangutans.

Sources: www.panda.org/species/orang; orangutan campaign page of www.eia-international.org; Yeager, C. [Ed], 1999.

Sumatran rhino

Fewer than 2,900 rhinos survive in the wild in all of Asia. The most critically endangered rhino, the Sumatran, has declined from an estimated 600 animals in 1994 to around only 300 today. The species is now restricted to small populations scattered through its former range and persists in peninsular Malaysia, Sabah/Borneo and Sumatra. Its status in other parts of the region (Thailand, Myanmar, Laos, Kalimantan, Sarawak) is unknown. Expansion of oil palm, wood pulp and coffee plantations into rhino habitats must be sharply curtailed and natural forest cover maintained if the species is to have a future.

The 1997 and 1998 fires spread to protected areas where both orangutans and Sumatran rhinos occur. Poaching poses another immediate threat to this species. Reports indicate that poachers have attempted to take advantage of the tragic situation by hunting fleeing rhinos.

Source: www.panda.org/species/asian_rhino

Asian elephant

Asian elephants, which also occur in Sumatra and Borneo, may face extinction on the islands if the mixture of grassland and forest which is their preferred habitat continues to be destroyed. The remaining population in Sumatra is estimated at between 2,500 and 4,000. Conflicts between human and elephant populations are most marked in Riau and Lampung where habitats are rapidly being converted to farmland, rice paddies, and oil palm plantations to earn export income.

When locked up in isolated pockets of forest, elephants are known to become aggressive and often end up running amok in villages and oil palm estates. In the city of Bandar Lampung (Sumatra) the continuing destruction of resin trees for oil palm plantation projects has even driven wild elephants to rampaging in residential areas. According to local farmers, these elephants lost their habitat to an oil palm plantation, started to destroy crops and killed two people[27]. In Lampung, 40 wild elephants are captured each year[28]. Experts already consider such confrontations to be the leading cause of elephant deaths in Asia.

The situation is particularly pressing in Riau, a province that has about 40 percent of Sumatra's total elephant population (1,100 - 1,700 individuals), but also harbours the second largest oil palm area in Sumatra. As human populations increase, conflicts between elephants and humans rise. Damage caused by elephants (trampling down houses, injuring and killing people and damaging small and large-scale plantations) in and around Tesso Nilo is estimated at $1.1 million annually. [29] There are also reports of poisoning, including one dramatic case in Riau in 1996 where an oil palm company poisoned 12 elephants all at one time. During the past four years, at least 10 people have been killed and 76 others wounded in attacks by wild elephants in areas adjoining the South Bukit Barisan National Park.[30]

A combination of conversion to oil palm and pulpwood plantations, and of fires, seriously threatens the Tesso Nilo forest, Riau's last remaining natural forest that could sustain a sizeable elephant population. WWF Indonesia, supported by various other national WWF offices, has been fighting hard to save Tesso Nilo. In 2002, there were finally signs that efforts were beginning to produce results, with the possible establishment of Asia's first Elephant Conservation Area and commitments that should stop destructive practices.

Although no specific reports on elephant casualties due to fires have been found, the role of fires in reducing their already dwindling natural habitat is an obvious one.

Sources: www.panda.org/species/eleph_asian; Forests, People and Rights, Down to Earth Special Report: June 2002; Jakarta Post, 14 Feb.2002; Wakker, 2001.

PROTECTED AREAS AND FOREST FIRES

National Parks are important strongholds for endangered species. Yet forest fires are known to have spread to at least 19 of Indonesia's protected areas, including a World Heritage site (Ujung Kulon in Java), Ramsar wetland (Berbak in Sumatra) and Biosphere Reserve (Tanjung Puting in Kalimantan). Although mature forest is known to be much more fire-resistant than degraded forests or plantations, these protected areas have been affected because considerable areas had been cleared illegally.

TANJUNG PUTING

The 400,000-hectare Tanjung Puting National Park is located in the south-western part of Central Kalimantan Province and is Kalimantan's most famous national park. Tanjung Puting is listed as a Man and the Biosphere (MAB) Reserve.

Tanjung Puting National Park owes its fame to two primates: the orangutan and the proboscis monkey. Of this second species, which is endemic to Borneo, Tanjung Puting harbours the largest protected population. The species is estimated to number not more than about 5,000 individuals. Tanjung Puting has suffered increasingly from illegal logging and gold mining, and – on top of this – was severely damaged by fire in 1997-98.

Source: http://www.nature-conservation.or.id/kaliman.html

KUTAI

The Kutai National Park covers an area of almost 200,000 hectares and is located in East Kalimantan province. In 1936, 300,000 hectares were declared a Game Reserve to protect species such as the Sumatran rhino (now extinct in the area), banteng (wild cattle relative) and orangutan. This protection did not prevent the forest being cut down in subsequent years and by 1980 large parts of the reserve had been heavily damaged by logging, developments in oil and agricultural clearance. It took until 1995 before the area was actually gazetted as a national park.

Great forest fires destroyed 60 percent of the forests during the 1982-83 and 1997-98 El Niño years. In the first three months of 1998, around 50,000 hectares were destroyed by fires and approximately 95 percent of lowland forest burned down. The vegetation is now so badly damaged that it is almost a savannah. Anywhere from 50 to 95 percent of the trees have been lost. Direct and indirect losses to orangutan populations and their habitat appear to be severe.

Sources:http://www.nature-conservation.or.id/kaliman.html; Down to Earth No. 37, May 1998; /Down to Earth No. 45, May 2000 ; Yeager, 1999.

Oil palm company prosecuted

There has never been much legal action against the plantation companies who use illegal burning methods to clear land in their concessions. One of the few successful prosecutions was against PT Adei, an oil palm plantation developer from Malaysia in Riau. The owner was sentenced to eight months imprisonment and fined 100 million rupiahs ($10,000) in August 2002, for ground fires that occurred at his palm oil plantation in the province in 1999. The sentence was lighter than the verdict of the Pekanbaru District Court, which sentenced the defendant to two years imprisonment. The defendant was found guilty of setting fires in his plantation in contravention of Law No. 23/1997 on the environment. A total of 17 fires were found when a team from the local environmental control office conducted an investigation at the plantation. Four other companies are also close to being brought to court, according to the government.[33]

23,000 fire hot spots were detected in Sumatra in 1999. Of these, 95 percent were small, controlled fires that caused little smoke haze. Of considerably more importance were the five percent of fires set by estate crop companies to burn the remnants of clear-felled forests on peat soils.[32]

Even if prevention and control are organised more seriously and have more resources than until now, fires may reach large dimensions more easily than in the past, given the amount of degraded land and the vast amount of standing deadwood from past fires.[34]

2.2 Underlying causes of the fires

Successive forestry ministers have used Indonesia's critical economic condition as an excuse for the lack of effective action over the past five years. Each year, Jakarta has called for more money and technology, such as planes capable of water bombing the fires.[35] However, the government has showed little recognition of the need for fundamental changes in the logging and plantation system itself, or in the social and political framework for land use and tenure.

In the Forest Fire Prevention and Control Project (FFPCP), a bilateral initiative between the EU and Indonesia, a series of studies has been conducted on the complex relations between actors, causes and effects in Indonesia's forest fires. The project identified the more immediate causes as[36]:

- widespread logging using irresponsible techniques;
- large-scale land clearance by agro-industrial companies;
- land clearance for major migration schemes;
- land acquisition by companies and government with little consideration for the rights of local communities.

Fundamental issues that all four factors have in common are:

1) the legitimacy of land right claims and access to natural forest resources;

2) the mixture of incentives and disincentives in government and legislation that determine how sustainably or unsustainably the forest is exploited.

Project FireFight South East Asia

Project FireFight South East Asia (PFFSEA) is part of a global initiative by WWF and IUCN, funded by the European Commission. The project seeks to secure essential policy reform through a strategy of advocacy using syntheses and analysis of existing information and new outputs. PFFSEA works at national and regional levels across Southeast Asia to support and advocate the creation of legislative and economic bases for mitigating harmful man-lit forest fires. The model provided by PFFSEA will be extended to South and Central America, Russia, the Mediterranean and sub-Saharan Africa as funds and capacity become available.

The project focuses on three areas:
- ▶ community involvement
- ▶ economics of fire use
- ▶ legal aspects of forest fires

Findings and insights

On community involvement:
- Local people are often in the best position to manage or prevent fires on a local scale and local communities can and do manage fires in many situations and for many different reasons.
- Communities cannot provide the complete solution to dealing with harmful forest fires, therefore other stakeholders, including the government and the private sector, must also play a substantial role, particularly in preparing for and fighting extensive or threatening fires.
- It is important to differentiate between harmful and beneficial fires.

On the economics of fire and fire use
- Fire use may be based more on habit and historical practice than business or ecological principles.
- Data on the economics of fire use is not readily available and there is little or no consideration of the entire suite of costs, benefits and externalities, even though in all cases the use of fires has financial and economic consequences (for example the relatively low costs of zero-burning as against the high costs of fires).
- Alternative methods of fire use have been developed on a commercial scale in Southeast Asia but have been suited mainly to clearing low volumes of biomass, where zero-burning methods are not more expensive – and may actually be more cost effective – than burning. For the clearing of high-volume forest, burning remains cheaper. Smallholders are at present not able to make the investment necessary for zero-burning.

From a legal perspective
- No country in Southeast Asia has complete and coherent laws, but each country has some elements of legislation that are positive and sound.
- In Indonesia, forest law enforcement is inadequate due to confusion and conflict within and between laws and objectives for forest management, as well as to a lack of bureaucratic capacity and lack of support for the rule of law.

The way forward

The project's findings reinforce the importance of a holistic and balanced approach to fire management involving all stakeholders. Efforts to address fires must take into account the five components of fire management (analysis, prevention, preparedness, suppression and restoration) and embed fire management efforts in a comprehensive and balanced land-use strategy with adequate attention being paid to the underlying causes of forest fires.

See: www.pffsea.com

The breakdown of law enforcement and widespread corruption further compound any attempt to move towards more sustainable forest management.

Arson is a weapon used by both sides in the social conflict over land ownership and use. There have been cases where plantation companies stake their claims by burning community lands and embittered local people take their revenge by destroying camps and plantations that have been established without their consent.[37]

The FFPCP concluded that the main permanent solution to Indonesia's fire problem lies in much improved local level land use planning and strengthened local management, the latter including fire prevention. The project found that village-level views on natural resource management vary from place to place but are generally in line with 'wise use'. A continuation of the top-down, bureaucratic approach to fire management that only focuses on fire suppression will fail during the next El Niño drought as it did in 1997.[38]

In August 2002, Project FireFight South East Asia (PFFSEA; see box) launched four new reports[39] on the legal and economic aspects of fires and community-based fire management as a contribution to preventing the recurrent disastrous forest fires in Indonesia and choking haze in Southeast Asia. Very briefly, the reports call for:

• legal and institutional reforms based on clear responsibilities and accountability;

• the private-sector to assume its responsibility in fire management, since it manages large areas of land and has the necessary resources and expertise;

• stronger incentives for rural communities to manage local fires, with an emphasis on clear, secure land rights

The current El Niño will show whether any progress has been made with respect to dealing with these underlying factors, or whether national and international fire-fighting efforts

will be limited to throwing water at the flames again.

2.3 Reform and decentralisation: opportunities for future fire control?

Since 1997, Indonesia has faced enormous economic and political challenges: an unprecedented economic crisis, building democratic institutions after three decades of autocratic rule by General Suharto, and implementing a far-reaching decentralisation programme. At the same time, decades of nepotism, corruption, poor financial management and unsustainable forest land use had resulted in the over-exploitation of Indonesia's forests. When the financial crisis struck Asia in mid-1997, Indonesia was hardest hit and slowest to recover. In 1998, Indonesia's state banks suffered losses that were equivalent to one-fifth of the country's GDP. The crisis brought a four-fold increase in poverty, with half the population now below the poverty line[40].

In May 1998, General Suharto was forced to resign the presidency and handed over to his vice-president. Political euphoria and much talk of reforms followed. Since Suharto's fall there have been greater political freedoms that have helped civil society groups gain greater access to decision-makers in the government and publicly raise politically sensitive issues. Hopes were high that this freedom would lead to widespread reforms, including reform in the forest sector.

Under Suharto's three successors since 1998, Mr Habibie, Mr Abdurrahman Wahid and Mrs Megawati Sukarnoputri, many reforms were announced, debated and sometimes adopted. After more than four years, the overall picture is rather mixed[41] :

Positive and negative effects

Reforms and signals from the government since 1998 that are potentially favourable for Indonesia's forests:

• Logging concessions due to expire in 1999-2000 would not be renewed or extended.

• Regional autonomy laws, passed in 1999 and implemented as of 2001, have made regional governments more responsive to environmental and social concerns in areas where strong action in the interests of civil society has been taken.

• The government imposed a moratorium on further natural forest conversion in May 2000.

• Megawati has appointed two respected forestry reformers in key positions in the Ministry.

• A total ban on log exports was declared as from October 2001.[I]

• Logging operations would have to obtain a government-approved certificate of sustainable forest management by 2003.[II]

• The current Minister of Forestry, Mohammad Prakosa, stated that the future of Indonesian forestry must be based on small-scale community-based operations, not on large-scale commercial logging.[III]

• In November 2001, Indonesia's highest legislative body for the first time passed a comprehensive decree providing a legal framework for the reform of laws relating to natural resource management. The decree's principles and directives recognise the need to protect customary rights and cultural diversity in natural resource use.

• In 1998, the Ministry of Forestry decided to revoke conversion permits for estate crop companies that had failed to develop their plantations and were only interested in logging valuable timber.

• 1999 saw new regulations aimed at encouraging new plantation companies to involve cooperatives of local farmers in the ownership and operation of oil palm plantations.

It should be borne in mind that many promising reforms have often been poorly implemented or challenged by provincial and district governments.

Reforms that have turned out disadvantageous to natural forests, and constraints on positive reforms:

• The logging concessions that would not be renewed or extended in 1999-2000 were supposed to be auctioned, as part of the IMF's 1997 'rescue package', instead of reverting to resident communities or being reallocated for protection or conservation.

• Late in 2000, the Forestry Minister issued new logging concessions to private companies, just before the expiry deadline.

• Since 1998, state forestry companies have been allowed to use 30 percent of their concession areas for estate crops such as oil palms (see section 2.5).

• In 1999, plantation companies were given the right to establish tree crops and timber plantations in 'non-productive production forests' formerly allocated to logging companies (see section 2.5).[IV]

• Regional autonomy laws are believed to have accelerated deforestation in areas where civil society was weak, and where local politicians joined forces with powerful local business elites to extract as much short-term profit from forests as possible.

• In November 2000, a decree permitted local governments to issue "100 hectare" logging permits, resulting in hundreds of logging licences in some areas.[V] In 2001, the new minister Prakosa cancelled the decree, banning governors and district heads from issuing any further licences, but this second decree is widely ignored.

• Lack of political will, administrative capacity and resources have led to a generalised breakdown of law enforce-

[I] The ban has led to a large decline in log exports but is far from effective, considering the ships with illegal Indonesian logs that still arrive in Malaysian harbours (confidential sources). Apart from illegal exports, ITTO even reports 300,000 m3 exported log volume in 2000 (FWI/GFW, 2002)).

[II] Certifiers have been designated, but NGOs have questioned several of them as being linked to former timber tycoons The Jakarta Post, Sep.12 and Sep.26, 2002).

[III] Statement to UK NGOs during a ministerial visit to London in April 2002.

[IV] This particularly threatens existing licences, since the 2000 moratorium on forest conversion (theoretically) applies to new concessions only.

ment which has in turn resulted in increased illegal logging (see box) and encroachment on protected areas. Several decrees – such as the 2000 ban on forest conversion – aimed at stopping the downward trend in the state of Indonesia's forests have been widely disregarded in the provinces.

A number of positive developments have the potential to help slow down further forest loss and to establish more control over forest exploitation. At the same time, these reforms may help to address some underlying factors that are driving large-scale forest burning each year. Other reforms, however, are meant as incentives to the plantation sector and are potentially dangerous for natural forests.

As long as the capacity to put positive reforms into practice, to find the right balance between central and decentralised levels of government and to enforce laws in the field is lacking, the prospects remain alarming and, worse, the negative trend is likely to continue.

The reduced central government control as a result of the decentralisation process implies that actors in the international trade chain – investors, traders and consumers – have greater responsibility and more leverage over what happens to Indonesia's forests because of their links with companies that depend on resources from those same forest lands.

2.4 Pledges and promises for future fire control

Indonesia has come under mounting international criticism for not doing enough to control forest fires. Several pledges and promises have been made:

• Efforts to address the issue made by the Association of South East Asian Nations (ASEAN), the region's main diplomatic grouping, have so far proved ineffective. For Indonesia's ASEAN neighbours, the problem is the smoke rather than the fires themselves. In 1998, Indonesia pledged commitment to the ASEAN to follow Malaysia[43] in implementing a 'zero-burning policy' that would prevent forestry and plantation companies from using fire to clear land from mid-1999 onward. Experience to date shows little success with its implementation.

• Several individual plantation companies, such as PT SMART, have stated that they would adhere to no-burning policies. WWF Indonesia is working with SMART towards an agreement on the independent verification of such a policy.

• In June 2002, Indonesia signed a binding anti-haze treaty with fellow ASEAN countries. The treaty sets out the obligations of member states and details the preventative measures and responses expected of ASEAN's 10 member countries. However, the agreement does not specifically identify large companies as the main cause of the fires, referring only to the need for "legislative, administrative and/or other relevant measures to control open burning and to prevent land clearing using fire." There is scepticism both within Indonesia and among its neighbours that Jakarta has the required political will to clamp down on the annual burning. The agreement has yet to be ratified.

• International and national environmental pressure groups are now exerting their demands on the companies by making use of fire location data and satellite images to persuade banks and financial institutions to curb lending to companies.

• In 2001, companies from the forestry and plantation industry in Indonesia established the "Haze Prevention Group" (HPG).[44] Working in close cooperation with the government of Indonesia and surrounding countries, WWF, the UN, EU, ADB and World Bank, the HPG pretends to "strive to reduce and, if and whenever possible, eliminate forest and plantation fires and burnings". However, the HPG also states its long-term objective to "be able to operate healthy plantation and forestry business", raising questions as to what it understands by 'healthy'. Furthermore, an effective mechanism to verify even legal compliance and a minimum level of standards has not been

The enforcement challenge: illegal logging[42]

An issue that is now high on national and international political forest agendas, after years of sometimes uneasy silence or denial, is illegal logging. Indonesia is a case in point, where an estimated 73 percent of wood and timber exports in the 1990s were of illegal origin.

Despite legislation, reforms and improved planning the reality is often different. Control and enforcement are too weak to stop illegality, fraud and corruption. In 1994, the Indonesian government admitted that 84 percent of concession holders violated logging laws. Legal restrictions have been ignored to clear natural forests and establish fast-growing plantations. Villagers have reported being subjected to violence by the army and by company guards when protesting against forest clearance on their lands. Economic losses due to illegal logging were estimated to be $600 million a year.

Awareness is growing that all forestry reforms in Indonesia have to take the crucial step from theory to practice although they face enforcement problems. An interesting initiative is the bilateral Memorandum of Understanding (MoU) which was signed between the Indonesian and the UK governments. The ambition of the UK, an important customer of Indonesian timber, is to buy only legally logged timber. In order to achieve this, the UK will help to build up enforcement capacity in Indonesia.

[v] However, evidence is mounting that the effects of large numbers of small-scale permits can be as damaging as the old-style large concessions, and that they are generating conflicts between villages and between logging companies and communities.

foreseen, not to mention the fact that the group does not address the root causes of the problem.

Although most of these commitments and initiatives have been well-intended, their effectiveness so far has been doubtful. One of the bottlenecks is the lack of co-ordination or an integrated approach among Indonesian government departments.

> "As with any other crop, the problem is not the oil palm itself but the industrial model in which it is being implemented. There are numerous examples --particularly in Africa-- to show that this palm can be grown and harvested in an environmentally-friendly manner and that it can serve to fulfil the needs of the local populations in a sustainable and equitable manner. However, it is usually the industrial and not the small-scale diversified model which is being promoted".
>
> *From: WRM Bulletin # 47, June 2001 (World Rainforest Movement)*

2.5 The oil palm boom continues

Since the expansion of the oil palm sector is one of the driving forces behind forest conversion and the big fires in Indonesia, this section will take a closer look at how the oil palm boom has developed since the previous WWF report in 1998.

Growth trends in Indonesia

According to Oil World, the leading market research institute for the palm oil sector based in Germany, the world demand for palm oil is forecast to increase from its present 22.5 million tonnes a year to 40 million tonnes in 2020.[45] If this demand is to be met, producer countries will have to plant 300,000 hectares of new estates annually until 2020. In general, the economic reason for the expansion of oil palm plantations is that it is a lucrative crop for investors. Labour and land costs are often low, credit is easily available and the market has shown steady growth. The fact that it is a typical export crop makes it an attractive commodity for countries with a large external debt burden, pressured by international financial institutions to increase their exports.[46]

The FFPCP predicts that about 50 percent of new plantation land will come from within Indonesia where labour and land are considered to remain plentiful. The project expects that Sumatra, with its relatively well-developed infrastructure and skilled labour force, will absorb most of this expansion (1.6 million hectares). It is inevitable that most new oil palms will be planted in the wetlands, as the more desirable 'drylands' of the island are now occupied. Kalimantan would account for another one million and West Papua for 0.4 million hectares.[47]

The palm oil sector is a relatively labour-intensive agro-industry, which in 1998 employed over two million people.[48] With downstream processing and service industries added, the total number of people that rely on oil palm estates in Indonesia is at least 4.5 million. Palm oil sales contributed $1.7 billion to the Indonesian economy in 2000, with $1.4 billion in the case of Sumatra.[49] These figures were expected to rise sharply as prices recovered from a 15-year low. This is confirmed by the estimated $3 billion sales for 2002.[50] In conventional economics, these facts are often put forward as the positive part played by the palm oil sector in Indonesia's development process, ignoring however all that the conversion of forests and wetlands to large-scale, single-crop agriculture implies in terms of impact on the environment and rural people's livelihoods.

Thirty-five years ago, the total area planted with oil palm in Indonesia was only 100,000 hectares. Figure 1 shows the phenomenal growth in the total oil palm area planted in the country in the 1980s and 1990s. Starting from about 600,000 hectares in 1985, the planted area reached over three million hectares in 2000.[51] This was not as over-ambitious as Suharto's 5.5 million target for 2000 which he had set in 1996, half of which was to be allocated to foreign-owned private estate companies[52].

Around 60 percent of those three million hectares are located in Sumatra and Kalimantan, but the islands of eastern Indonesia (primarily Sulawesi and

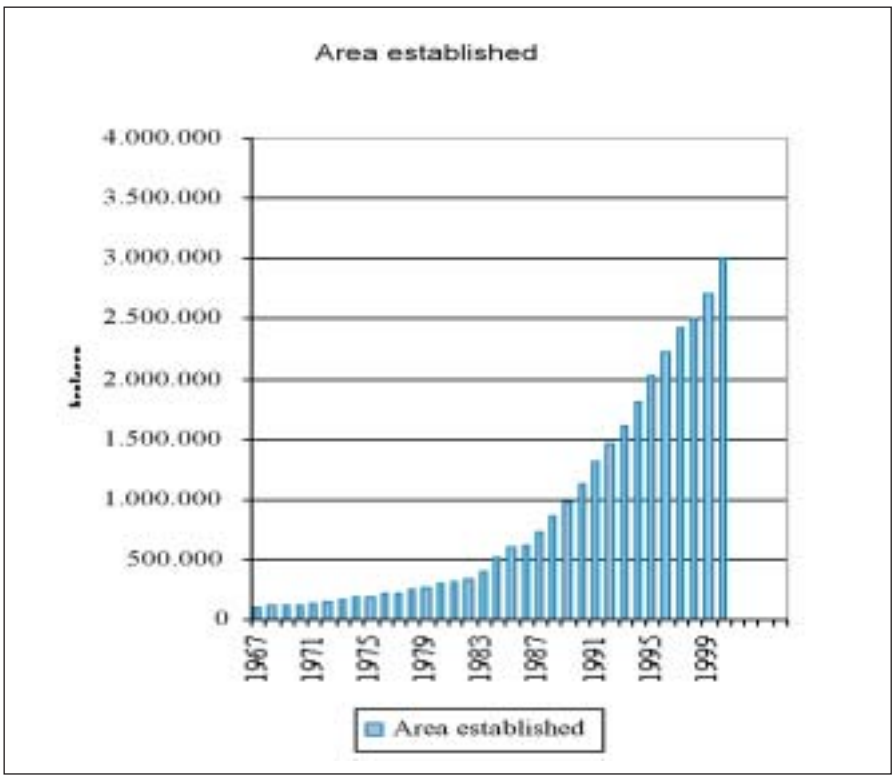

Fig. 1: Total area of oil palm plantations established in Indonesia *From Wakker, 2000.*

West Papua) have been targeted by the government as the new growth centres.[53] Nevertheless, companies have so far been reluctant to establish plantations in the east since they prefer the better infrastructure, proximity to the markets and more skilled labour force in the western islands.[54]

Key factors which made Indonesian oil palm plantations an attractive prospect for domestic and foreign investors were[55]:

- high temperature and rainfall ensure high growth rates;
- large tracts of land have suitable soils;
- Indonesian laws and regulations relating to land and forests could be easily manipulated, so land was cheap;
- Indonesian labour was cheap, particularly where plantations were coupled with migration schemes;
- companies could benefit from selling timber from any remaining forest before clearing the land for planting;
- there was relatively little room for further expansion of oil palm in peninsular Malaysia;
- the Indonesian government was keen to promote exports, particularly outside the oil and gas sector.

In spite of these favourable factors, Casson (2000) found that oil palm companies had temporarily reduced their planting targets in 1997. The main reasons for this decline were:

- low international palm oil prices;
- massive debts owed by Indonesian plantation companies;
- the government's export tax policy;
- the above mentioned reform policies targeted at the sector;
- social conflicts;
- great uncertainty and constant changes in government plans regarding privatisation of state owned oil palm plantations;
- drought and fires resulting from the 1997-98 El Niño weather phenomenon;
- higher than expected production costs.

As Figure 1 shows, the overall expansion of oil palm plantations has picked up rapidly in the past few years.

The slowdown in planted area has also had little effect on production growth, which has rocketed from 6.6 million tonnes in 1997 to 9.5 million tonnes in 2001.[56] Factors that are stimulating renewed expansion are lower interest rates, incentives for foreign investments and other regulatory changes that facilitate oil palm development, the availability of land cleared through the El Niño drought and related forest fires, a growing global demand for palm oil, the government's drastic reduction of export tax and cooperation between Indonesian and Malaysian producers to push up world market prices.

Who owns the plantations

The palm oil industry in Indonesia knows three forms of ownership:

- state-owned
- (large) private companies
- smallholders

During the 1970s, most estates were developed and owned by state companies, whereas the 1980s saw an expansion of smallholder estates, in both cases as a result of government and World Bank policies. Large-scale private plantations have grown since the late 1980s, stimulated by a range of government incentives (see Table 2). Smallholders are farmers who own a few hectares after a company has planted them with oil palm. The company supplies fertiliser and pesticides and buys the fruit bunches. This dependence makes the smallholders economically vulnerable. They pay back their debts with the first harvests and have to accept the price dictated by the company. Although they are able to make a basic living, the social and economic costs and benefits of the smallholder model are complex and the subject of heated debate.[57]

Behind these statistics lies the sensitive issue of land rights, since oil palm plantation development remains a major cause of conflict over land and resources. One of the social impacts of the expansion is the appropriation of large areas of land used by indigenous and peasant communities who, in most tropical countries, have not owned the land they traditionally occupy. In boom sectors where economic stakes are high, such as the oil palm sector, plantation companies may be awarded concessions or land titles to that land and receive government support to repress the opposition they may face from local communities.

Indonesia's oil palm industry is dominated by some of the same domestic conglomerates that control the logging, wood-processing and pulp and paper industries. Examples are the Salim Group, the Raja Garuda Mas Group (RGM timber companies, APRIL/RAPP pulp mill, Inti Indosawit oil palm company) and the Sinar Mas Group (logging companies, the APP paper and pulp company, Matrasawit oil palm company). Among these are the state-owned forestry companies such as the Inhutani groups that are allowed – according to a decree from 1998 – to convert up to 30 percent of their concession to estate crops to achieve quicker returns on investments than is possible in the timber industry. There is also considerable foreign investment, with 50 foreign firms having been involved in the sector by the end of 1998, representing a total investment of $3 billion.[58]

The government seems less willing to protect corporate interests than it once did, but neither does it appear to have any coordinated plan for dealing with the problem. Reformist politicians have called for local communities to be allowed to play a larger role in economic development.

Year	State-owned	Smallholders	Private companies
1970	65%	0%	35%
1980	68%	2%	30%
1990	33%	26%	41%
1999	17%	33%	50%

Table 2: Palm oil production percentages by owner type *Based on: Casson, 2000.*

"The 1990s were a boom period for the Indonesian oil palm industry. This 'development' promised land, employment opportunities and greater prosperity – for small-scale farmers and for the Indonesian economy. Indonesian environmentalists now see the expansion of large-scale oil palm plantations as the third massive blunder in Indonesian forestry policy, following hard on the heels of the logging concession system and the establishment of industrial tree plantations to feed the pulp and wood industries.

The rapid spread of oil palm plantations became a major direct cause of deforestation and social conflict in Indonesia. Companies took adat land without consultation or adequate compensation; local people whose livelihoods once depended on the forests were tied into sharecropping schemes (PIR) which led to indebtedness, loss of independence and poverty.

The palm oil industry was, until the economic crisis, increasingly dominated by giant conglomerates which controlled an integrated process from plantation to palm oil processing and the manufacture of cooking oils."

From: Forests, People and Rights, Down to Earth Special Report: June 2002.

2.6 Forest conversion and clearance for plantations

The analysis of the role of oil palm plantations in forest conversion in Indonesia in this report follows the model which is described and depicted in Appendix 1. It shows the complexity of land-use dynamics, where forest conversion is often the result of a chain of decisions. The model applies to what is happening in Indonesia. Apart from being driven by the forestry sector, the conversion process is driven by actors from the national and international agro-industry. Many of them have close ties with politicians.

In Indonesia, nearly seven million hectares of forest had been approved for conversion to estate crop plantations by the end of 1997, and this land has almost certainly been cleared. But the area actually converted to oil palm plantations since 1985 is about 2.6 million hectares, while new plantations of other estate crops probably account for another one to 1.5 million hectares. The implication: three million hectares of former forest land are lying idle.[59]

By law, plantations can only be established on forest land that has been designated as Conversion Forest, i.e. not on Permanent Forest land. However, it seems from the latest revisions of permanent forest lands, not officially published, that conversion forest has increased from eight million hectares in 2000 to 14 million hectares in 2002, mainly by the re-allocation of permanent forest land in Maluku and West Papua[60].

Such re-allocations show how the authorities may respond to the so-called Conversion Forest deficits. There are many more applications for the release of forest land to plantation crops than there is land available classified as Conversion Forest. Table 3 presents figures on the deficits that will arise if the outstanding applications for conversion projects are approved, per island and for the whole of Indonesia.

Provincial governments largely determine the allocation of forest land through their five year provincial plans for land use. The ministry has agreed to their requests provided that evidence was available that the forest was degraded. After decades of heavy logging and forest fires, degraded forests have become widely available in Indonesia. Government officials themselves acknowledge that timber companies leave over 60 percent of logged forest in a poor and degraded shape. Where the forest is still in good shape, ways of degrading it are to log and burn it before applying for a plantation concession[61].

As a result of conversion forest deficits, many companies put pressure on the national and, increasingly, provincial governments to release permanent forest land for conversion to plantation estates, because[62]:

1. there is not much conversion forest available any more in the better developed western islands, which are also closer to the markets.

Province / region	Permanent forest status (ha)	Actual forest cover (ha)	Conversion forest (ha)	Applications approved (ha)	Surplus/deficit of applications approved and conversion forest available (ha)
Sumatra	22,451,907	16,632,143	1,559,583	4,080,530	- 2,520,947
Kalimantan	35,342,638	31,512,208	847,958	2,056,300	- 1,208,342
Sulawesi	11,792,212	9,000,000	618,419	366,890	251,529
Java, Bali, Nusa Tenggara	6,691,298	2,406,675	352,667	---	352,667
Maluku	4,959,775	5,543,506	2,034,932	---	2,034,932
Irian Jaya	32,737,449	33,160,231	2,671,275	292,780	2,378,495
TOTAL INDONESIA	**113,975,279**	**98,254,763**	**8,084,834**	**6,796,500**	**1,288,334**

Table 3: Conversion Forest deficits resulting from applications vs. availability

Source: FWI/GFW, 2002

Note: the abovementioned latest revisions of permanent forest land are not included in the table

Oil palm threatens protected forest in East Kalimantan

In response to Malaysia's crackdown on illegal Indonesian workers, the East Kalimantan administration is considering opening up one million hectares of oil palm plantations to provide employment for tens of thousands of returning workers.

East Kalimantan Governor Suwarna Abdul Fatah said in Yogyakarta over the weekend his administration was looking into the possibility of opening an oil palm plantation near the province's border with Sabah, Malaysia, in a bid to create jobs for workers currently stranded in Nunukan. "If we are able to open, let's say, 500,000 hectares of oil palm plantations, we will be able to create jobs for all the returning workers. And that's just for the plantation. By including all the downstream industries, I'm sure we will be able to create jobs for a million workers," Suwarna said. He said he had reported the plan to Vice President Hamzah Haz and a number of ministers, but was told the area where his administration wanted to open an oil palm plantation was a protected forest.

"The East Kalimantan governor's idea of opening up one million hectares of oil palm plantations is a very good idea. It could absorb a huge number of workers. However, forestry regulations would seem to be in the way," said State Minister for Eastern Indonesian Development, Manuel Kaiseipo.

Source: The Jakarta Post, 16 September 2002

2. converting permanent natural forest allows them to harvest large amounts of wood, either for timber production or to supply the pulp industry, thus gaining fresh capital for subsequent investments.

Such pressures have often proved successful. In the whole of Indonesia, over 750,000 hectares of forest land that had not been classified as conversion forest had nevertheless been converted to oil palm plantations by 1999, 75 percent of this area on Sumatra and 20 percent on Kalimantan[63].

Pressure may also come from leading authorities as a recent example in East Kalimantan illustrates (see box).

Domestic concerns and the government's response

Apart from export and foreign exchange considerations, the oil palm expansion is also driven by the fact that palm oil is considered a strategic commodity as a raw material for the main cooking oil consumed by Indonesians. In 1997, after East Asia's financial crisis had also hit Indonesia, the domestic supply situation for palm oil became critical and prices soared as a result. The government reacted by banning palm oil exports in early 1998. In a move that was criticised sharply by environmental NGOs, the IMF then gave Indonesian palm oil exports another boost, insisting on the removal of 'export quotas and punitive taxes' as a condition of its economic 'rescue package'.

The Indonesian government was forced to lift the temporary ban on palm oil exports and dollar hungry producers exported as much of their output as possible, triggering another domestic shortage. Raising export taxes of crude palm oil (CPO) from 40 to 60 percent did little to slow down exports. Illegal palm oil exporters also profited. At the time, hundreds of thousands of tonnes of palm oil are thought to have been smuggled from Sumatra across the Malacca Strait. However, conglomerates like the Astra and Salim groups lost some of their political clout after Suharto fell and were soon struggling to pay their banking debts.

There have been several other reform initiatives affecting the oil palm sector[64]:

• in 1998, the ministry decided to revoke conversion permits of estate crop companies that were only interested in cutting timber from their concessions and that failed to develop their plantations. Later that year, the ministry took another step by deciding to stop issuing new licenses to open up conversion forest for plantations.

• In 1999, maximum sizes of new concessions for estate crops became limited per company, both per province (20,000 hectares) and for the whole country (100,000 hectares), in an attempt to prevent the expansion of monopolies. Palm oil companies might respond by establishing numerous small companies, but political uncertainty and the introduction of yet another bureaucratic process have discouraged them so far.[65]

• Complicated regulations decreed in 1999 are meant to encourage new plantation companies to involve cooperatives of local farmers in the ownership and operation of oil palm plantations.

Reality checks of the effectiveness of these reforms are not available. Casson (2000) concluded that these regulations have kept investors away from the oil palm sector and existing companies have cancelled or frozen expansion plans until the overall land-use policy of the Indonesian government becomes clearer and more favourable to their interests.

One of the most alarming regulatory changes was that since 1998 state forestry companies have been allowed to use 30 percent of their concession areas for estate crops such as oil palms. These companies usually have concessions in permanent production forests and not in conversion forest lands. Previously, establishing crop plantations was only allowed in the latter category. In West and Central Kalimantan, one of the state companies quickly announced its conversion of 60,000 hectares of forestry concessions into oil palm plantations.

Another quite worrying new regulation, issued in August 1999, gives plantation companies the right to establish tree crops and timber plantations in 'non-productive production forests' (containing less than 20 m_ of timber per hectare) formerly allocated to logging companies. Forty percent of these areas can be allocated to estate crops and the rest is to be planted with timber plantations (or even the entire 100 percent may be used for rubber plantations). Not only does this regulation imply a direct link between plantation ex-

pansion and deforestation, it also represents a disincentive for sustainable forest management since logged forests can now easily be converted to plantation lands.

Regional autonomy, introduced in 2001, provided a stimulus for further oil palm expansion with local authorities desperate to increase their revenues from export revenues and taxes on plantation companies. Applications for plantation permits now cover a huge area; an unconfirmed source quotes a figure as high as 32 million hectares in 2000, but accurate figures are hard to obtain. Investors are now lobbying hard to cut down the bureaucracy faced by the palm oil industry for obtaining plantation licenses, a measure which will also speed up deforestation.

2.7 Oil palm plantations and the forest fires

Since 1995, Indonesian law has expressly forbidden the use of fire to clear land for plantations. This ban was strengthened under the 1999 Forestry Act. Law enforcement could therefore make a much more significant contribution to the prevention and control of forest fires. Company staff found guilty of clearing land with fire can now be sentenced to a maximum 15-year jail term and a fine of up to five billion rupiahs (approx. $500,000). The courts, however, remain very reluctant to prosecute and convict companies that burn.

When the 1997 fires continued, the Ministry of Forestry and Estate Crops published a list of 176 plantation and forestry companies whose concessions were affected by fire and who used illegal burning methods to clear land in their concessions. These companies were required to submit evidence that they had not started the fires in their areas and possessed adequate fire-fighting equipment. In October that year, the Ministry of Forests and Estate Crops revoked 151 permits. Of the 176 companies accused, 133 of which were oil palm plantation companies, the government ended up prosecuting only five[66]. In a few cases, NGOs and local communities have successfully challenged plantation companies in court for causing environmental damage by burning. However, a handful of prosecutions is unlikely to put off the big companies, who are used to government protection.

Ironically, many oil palm companies also benefited from the fires because the haze caused a hike in Crude Palm Oil (CPO) prices and because the Ministry of Forestry and Estate Crops indicated it would release burned lands for further plantation development. This is what happened in East Kalimantan, where estates destined for planting with softwoods for pulp and paper production suffered enormous losses, and many timber companies left the province. As is happening in other provinces in Kalimantan, a new area of one million hectares of burned and degraded land has been released for planting with oil palm.

The creation of Sawit Watch

Indonesian NGOs are very concerned about trends in the palm oil sector and have conducted activities during the last six years to empower indigenous people and local communities to fight for their rights in their regions. Given the need to work and develop plans together, some Indonesian NGOs initiated Sawit Watch on July 25, 1998.

Sawit Watch, a network of NGOs throughout Indonesia, is concerned about the expansion of oil palm plantations and forest conversion. Today around 40 NGOs, including WALHI (Friends of the Earth Indonesia), INFID, Telapak, Biofo-rum, ELSAM, KpSHK, LATIN, Tanah Merdeka Foundation, IDRD, LBBT, Citra Mandiri Foundation and Plasma Foundation, have joined the Sawit Watch network.

Sawit Watch is currently focusing its work on large-scale oil palm plantation regions including Aceh, North Sumatra, Riau, West Sumatra, Jambi, South Sumatra, Bengkulu, Lampung, West Kalimantan, South Kalimantan, Central Kalimantan, East Kalimantan, South Sulawesi, Central Sulawesi, Southeast Sulawesi and Papua.

The Sawit Watch campaign is directed at halting the expansion of large-scale oil palm plantations in Indonesia by undertaking the following activities:

- monitoring the support international financial institutions give to the oil palm sector;
- policy research;
- investigating environmental and social problems;
- raising public awareness by disseminating information;
- facilitating lobby activities by representatives of affected communities.

http://www.sawitwatch.or.id

2.8 Conclusions

The forest fires that have hit Indonesia since 1997 have been and continue to be a truly man-made environmental disaster. The underlying causes are found in Indonesia but are also rooted in the development of global markets. Donor countries did not react adequately when earlier fires occurred, limiting their official assistance efforts to fighting symptoms and following a purely technical approach. Instead of fighting the fires, more emphasis should be put on their prevention.

Another form of assistance would make an even greater difference: there should be effective mechanisms to regulate the activities of big corporations from those same donor countries that operate in a globalised market, and to regulate the trade chains that depend on the unsustainable exploitation of natural resources in developing countries. In the case of Indonesia, this means the timber, paper and pulp, and palm oil industries. Such mechanisms are not enough in themselves; more fundamental changes are needed, including

changes in government policy frameworks. There is a need for active involvement by conscious consumers and pioneers among financiers, traders and retailers. Fortunately, we can now report on initial experience here.

3. Europe and Germany in the palm oil trade

The global demand for palm oil keeps growing. Indonesia has some comparative advantages, in the form of cheap land and labour and a number of government incentives, over other countries operating in the global palm oil market. The country badly needs hard currency to recover from a severe economic crisis. This chapter focuses on palm oil production, trade and consumption, taking a closer look at Indonesia and Germany. In this update, more attention is given to the role of the international financial sector, discussed only briefly in the 1998 report.

Note: *The 2002 Oil World Annual is the source of most figures used in this chapter. It is the most reliable source, although some figures may seem inconsistent, generally because Oil World uses different methods and criteria for different components of its annuals. However, observable trends are more important than the strictly technical aspects of statistical figures: different tables with different figures show the same development. Consumption world wide and in Germany is growing.*

Introducing oil palm and palm oil

The oil palm *(Elaeis guineensis)* originally comes from West Africa, where it is a traditional source of food, medicines and woven material. Portuguese explorers first described the oil palm in 1435. Large-scale commercial growing in plantations did not start until early in the 20th century. In 1848, the Dutch introduced the first four oil palms to Indonesia[67]. Within the last 50 years, no other oil crop has expanded throughout the tropics as much as the oil palm and today Elaeis is the world's most profitable palm in terms of its crop's value.

The oil palm is particularly valued for the highly edible oil content of its red fruit. Both fruit pulp and seeds are used for production purposes:

- **Crude Palm Oil (CPO)** is the primary product derived from fruit pulp. CPO is used for a wide range of food and non-food products. Harvested fruits must be processed locally because they start to decompose quickly. The advantages of CPO compared to other vegetable oils are its high melting point and the solid state of its olein fraction (used for industrial purposes) at room temperature. In the main producing countries, one hectare of oil palms generally yields between two and four tonnes (in Nigeria and Colombia, respectively[68]), but maximum yields of up to 10.6 tonnes of CPO have been recorded[69].
- **Palm Kernel Oil (PKO)**, obtained from the seeds, can be used for similar purposes as CPO. Palm kernel oil contains about 80 percent fatty acids, against 50 percent for CPO. The seeds can be stored for longer periods and therefore transported over long distances and be processed elsewhere. One hectare of oil palms may produce 0.9 tonnes of PKO.
- **Palm Kernel Meal (PKM)** is made from ground and dried seeds. It is used primarily for animal feed. Although PKM is considered a by-product of PKO production, its importance to the animal feed sector is considerable.[70]

3.1 The global picture

Planted areas and production

Over the past 30 years, the global area planted with oil palm has tripled (see Fig. 2). The main reasons for this explosive growth are[71]:

• strong prices for crude palm oil and palm kernel oil on the world market, especially due to consumption increases in Europe, India and China;

• absence of unmanageable pest and disease problems, at least in Southeast Asia;

• favourable physical characteristics that have enabled a diversification of palm oil-derived products in the food and oleochemical sectors;

• very high oil yield per hectare in comparison with other vegetable oil crops (e.g. six times larger than rape seed yields), and very high resource use efficiency (in terms of inputs of solar energy, water, nutrients, pesticides and fertilisers per unit of oil produced).

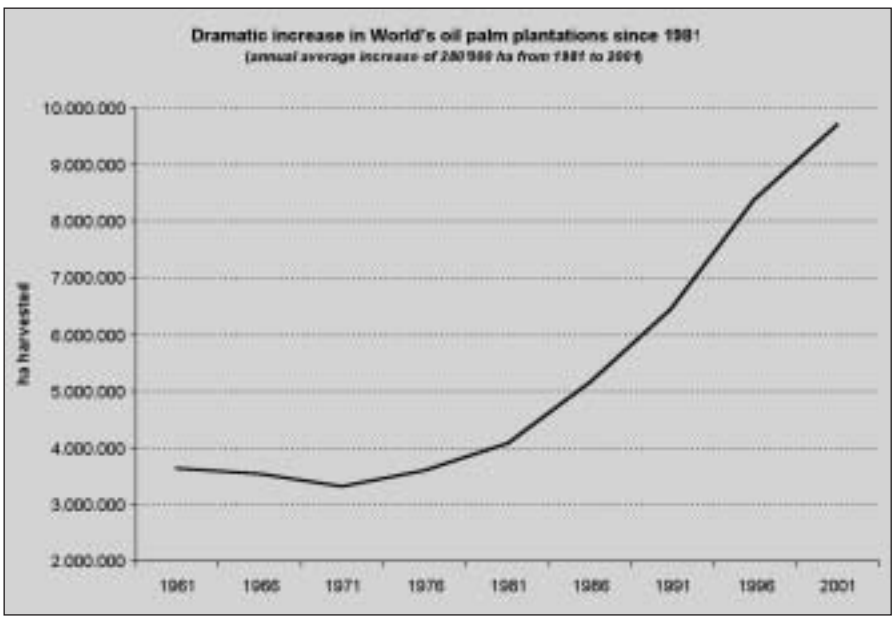

Fig. 2: Growth in global oil palm plantations, 1961 – 2001 *Source: FAOSTAT 2002*

Due to these characteristics, oil palm now produces 22 percent of the world's vegetable oil on only two percent of the land planted with vegetable oil crops[72]. Further plantations are either being implemented or promoted in almost every southern country where soil, water and solar energy meet the requirements for growing oil palm. In the long term, Oil World forecasts a rise in world demand for palm oil to 40.5 million tonnes by 2020.[73]

Consumption and trade

From 1997 to 2001, global palm oil consumption grew by 34 percent, from 17.6 million tonnes to 23.6 million tonnes[74] , which is considerably higher than the 22 percent growth for the period 1994-98 stated in the previous WWF report. Global consumption of palm oil and palm kernel products combined grew by 32 percent from 1997 to 2001.

Booming consumption resulted in skyrocketing global imports from 12.2 million tonnes in 1997 to 17.5 million tonnes in 2001 (+43 percent), reflected in rising global exports from 12.5 million tonnes to 17.6 million tonnes in the same period. Since 1998/99, palm oil exports surpassed the combined exports of its closest competitors – soy, sunflower and rape oils – which remained at around 13 million tonnes. In 2002, palm oil and palm kernel oil will account for almost half of total oils and fats exports (soybean remains the number one in production).[75]

India, China and Pakistan, the countries where palm oil is the traditional cooking oil, continue to be the world's largest importers, with India having overtaken China in a strong first position (Table 4). The Netherlands, the United Kingdom and Germany follow the three Asian countries and remain Europe's main palm oil importers.

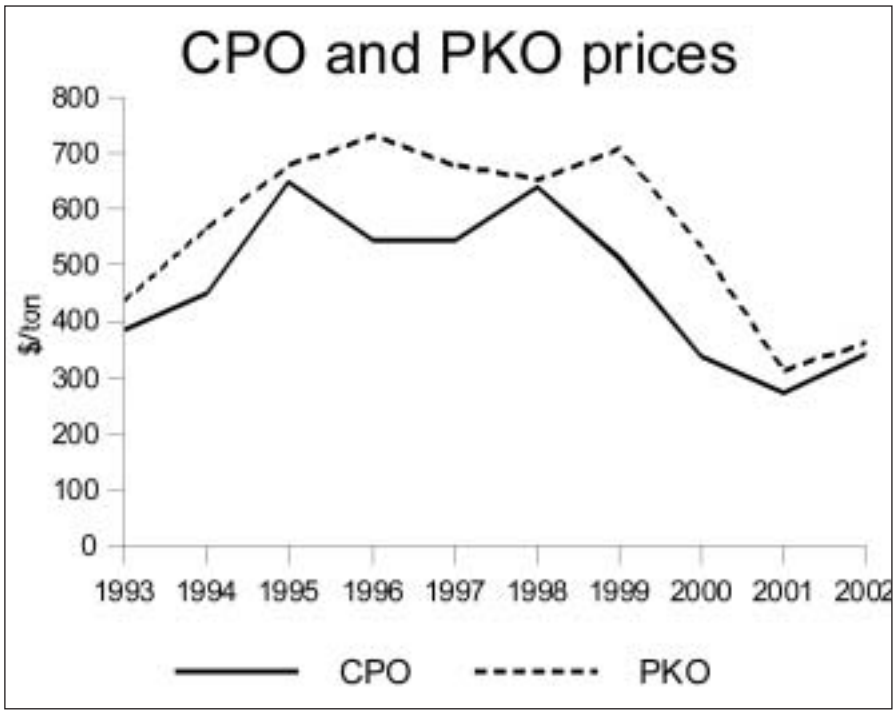

Fig. 3: Global CPO and PKO prices 1993 – 2002 *Source: Van Gelder, 2002.*

One plantation hectare of oil palm produces about 82 percent crude palm oil (CPO), 10 percent palm kernel meal (PKM) and eight percent palm kernel oil (PKO). PKO prices are considerably higher than CPO prices. Comparing the import figures for palm kernel products with palm oil reveals some interesting differences. The EU has a much more dominant position in the global market for kernel products than in the palm oil market (65 percent vs. 17 percent) (see Tables 4 and 5). Especially striking is the dominance of PKM (80 percent in 2001), mainly used for animal feed. South Korea has a 10 percent share in global PKM imports, the remaining 10

	Import per capita (in kg)					
Countries	1997	1998	1999	2000	2001	2001
1. India	1,469	1,672	3,257	3,651	3,433	3.3
2. PR China	1,860	1,373	1,347	1,764	2,055	1.6
3. Pakistan	1,144	1,114	1,052	1,107	1,325	9.1
4. Netherlands	606	693	748	776	985	61.8
5. United Kingdom	456	474	542	572	612	10.2
6. Egypt	367	408	511	524	525	7.6
7. Germany	**420**	**389**	**394**	**445**	**503**	**6.1**
8. Japan	370	357	365	373	394	3.1
11. Singapore	427	328	400	367	333	81.0
24. USA	135	116	143	165	171	0.6
Others	4,996	4,594	5,185	5,490	7,187	
Total	**12,250**	**11,518**	**13,944**	**15,234**	**17,523**	**2.9**
EU percent of total	17				17	

Table 4: World palm oil imports, 1997-2001 (in 1000 tonnes).

(gross imports of crude and processed oil, excluding palm kernel oil and palm kernel meal)

Source: 2002 Oil World Annual

Countries	Total PK 1997	Total PK 2001	PKO 1997	PKO 2001	PKM 1997	PKM 2001
Netherlands	909	997	94	78	815	919
Germany	**670**	**719**	**154**	**191**	**516**	**528**
United Kingdom	443	379	40	46	403	333
EU total	2,475	2,693	416	443	2,059	2,250
World total	**3,393**	**4,144**	**1,054**	**1,348**	**2,339**	**2,796**
EU percent of world total	*73*	*65*	*39*	*33*	*88*	*80*

Table 5: World palm kernel imports by country, 1997 and 2001 (in 1000 tonnes). *Source: 2002 Oil World Annual*

percent is divided among the rest of the world. Growth in global oil meal demand (especially soybean meal, but also PKM) has increased significantly since 2001 due to relatively low prices and the ban on meat and bonemeal resulting from the BSE epidemic.

Germany is the world's leading importer of PKO, mainly used for industrial purposes. The USA is the second largest importer of PKO, with 149 kT in 2001. Several palm oil importing giants that imported insignificant percentages of PKO in 1997 have increased their PKO import shares in the past four years by at least 1000 percent (Pakistan, China and India).

Prices

After the Asian financial crisis broke out late in 1997, CPO prices on the world market plummeted, reaching lows in 1999 and 2000. As said before, palm oil supplies declined in recent years. In the meantime, global demand for palm oil kept rising. As a consequence, CPO and PKO prices have started to go up again since early 2001, with a 29 percent rise in CPO prices between July 2001 and June 2002. Taking the most influential price-making factors into consideration, Oil World expects sharp price rises for the second half of 2002 and 2003 in the vegetable oil group, with palm oil as one of the leaders with a 50 percent increase[76]. Higher prices will act as an incentive to invest in new plantations.

Focus on Malaysia and Indonesia

Figures for 2001 show that Malaysia and Indonesia have even slightly increased their dominant position on the global production and export market since WWF published its previous report in 1998. In 2001, 83 percent of global palm oil production (19.5 million tonnes) and 89 percent of global exports (15.7 million tonnes) were accounted for by these two countries[77] (for 1997, these percentages were 81 percent and 86 percent, respectively).

Table 6: Global production and exports: Malaysian and Indonesian shares in palm oil and palm kernel products (1000 T)

		Production 1997	Production 2001	Exports 1997	Exports 2001
Palm oil	World	**17,934**	23,575	12,469	17,611
	Malaysia	9,057 (51%)	11,804 (50%)	7,747 (62%)	10,733 (61%)
	Indonesia	5,380 (30%)	7,700 (33%)	2,982 (24%)	4,940 (28%)
Palm kernel oil and meal	World	4,975	6,364	3,354	4,155
	Malaysia	2,602 (52%)	3,314 (52%)	1,833 (55%)	2,461 (59%)
	Indonesia	1,235 (25%)	1,750 (27%)	1,171 (35%)	1,392 (34%)
TOTAL	World	22,909	29,939	15,823	21,766
	Malaysia	11,659 (51%)	15,118 (50%)	9,580 (61%)	13,194 (61%)
	Indonesia	6,615 (29%)	9,450 (32%)	4,153 (26%)	6,332 (29%)

Source: Oil World Annual 2002

The pattern for palm kernel products is similar to palm oil. Indonesia managed to increase its market share for all products, whereas Malaysia remained stable.

Indonesia itself is one of the world's largest markets for palm oil, with 12 percent of total global consumption in 2001, the equivalent of 35 percent of its national production. Domestic consumption of PKO and PKM represent only 10 percent and 0.8 percent of Indonesia's production quantities[78]. Demand for CPO within Indonesia was about 60 percent of total production in 1997[79]. This shows that the share of Indonesia's palm oil production that is exported has risen considerably as a result of trade liberalisation, confirming the expectation given in the 1998 WWF report, although not as dramatically(84 percent of production was the export expectation for 1998).

The biggest importers of Indonesia's CPO in 2001, based on statistics from the importing countries[80] , are India (29 percent), China (11 percent), Netherlands (eight percent) and Germany (five percent). For 1997, these percentages were 16, 16, 13 and 10, respectively. This shows a relative reduction in importance of the two largest EU importers for Indonesia, although the absolute volumes have still increased; this is more a reflection of the dramatic growth in demand in India and China. The EU in 2001 as a whole imported around 22 percent of total Indonesian palm oil exports. As regards PKO, Germany imported 28 percent of Indonesia's exports, Netherlands eight percent, China 10 percent and India nine percent.[81]

3.2 Germany's share in the palm oil trade

By far, the highest imports of vegetable oil to Germany are in palm oil. Germany remains the fourth largest importer of Indonesian crude palm oil and the second largest inside the EU, after the Netherlands. Germany's crude palm oil imports from Indonesia doubled from 144,000 tonnes in 1993 to 288,000 tonnes in 1997, dropped dramatically in 1998 and 1999 to 145,000 tonnes (ceding the first rank to Malaysia again), and then picked up to

Table 7:
Germany's main palm oil suppliers from 1995-2001 (in 1000 tonnes)

Crude palm oil		***Indonesia***		***Malaysia***		***Other***	
	Total	*Volume*	*Share*	*Volume*	*Share*	*Volume*	*Share*
1995	412.3	188.6	46%	107.2	26%	116.5	28%
1996	445.7	218.2	49%	108.2	24%	119.3	27%
1997	497,8	288.1	58%	114.4	23%	95.3	19%
1998	475,8	183.1	38%	169.9	36%	122.8	26%
1999	463.2	145.3	31%	215.0	46%	102.9	22%
2000	504.7	236.3	47%	177.9	35%	90.5	18%
2001	610.5	267.7	44%	194.7	32%	148.1	24%
Palm kernel oil		***Indonesia***		***Malaysia***		***Other***	
	Total	*Volume*	*Share*	*Volume*	*Shar e*	*Volume*	*Share*
1995	110.2	85.5	78%	14.6	13%	10.1	9%
1996	136.4	101.0	74%	24.9	18%	10.5	8%
1997	156.5	115.6	74%	21.5	14%	19.4	12%
1998	121.5	93.1	77%	21.3	18%	7.1	5%
1999	210.7	148.4	70%	47.9	23%	14.4	7%
2000	180.0	151.9	84%	17.3	10%	10.8	6%
2001	192.6	164.2	85%	20.7	11%	7.7	4%
Palm kernel meal		***Indonesia***		***Malaysia***		***Other***	
	Total	*Volume*	*Share*	*Volume*	*Share*	*Volume*	*Share*
1995	499.3	100.4	20%	381.9	76%	17.0	17%
1996	472.0	110.6	23%	352.3	75%	9.1	8%
1997	531.5	198.2	37%	309.4	58%	23.9	5%
1998	538.1	125.0	23%	371.1	69%	42.0	8%
1999	555.5	236.7	43%	251.0	45%	67.8	12%
2000	573.3	199.0	35%	337.3	59%	37.0	6%
2001	559.1	222.7	40%	304.6	55%	31.8	5%
All three product cat e gories		***Indonesia***		***Malaysia***		***Other***	
	Total	*Volume*	*Share*	*Volume*	*Sh are*	*Volume*	*Share*
1995	1,021.8	374.5	37%	503.7	49%	143.6	14%
1996	1,054.1	429.8	41%	485.4	46%	138.9	13%
1997	1,185.8	601.9	51%	445.3	37%	138.6	12%
1998	1,135.4	401.2	35%	562.3	49%	171.9	16%
1999	1,229.4	530.4	43%	513.9	42%	185.1	15%
2000	1,258.0	587.2	47%	532.5	42%	138.3	11%
2001	1,362.2	654.6	48%	520.0	38%	187.6	14%

Source: 1998 and 2002 Oil World Annual

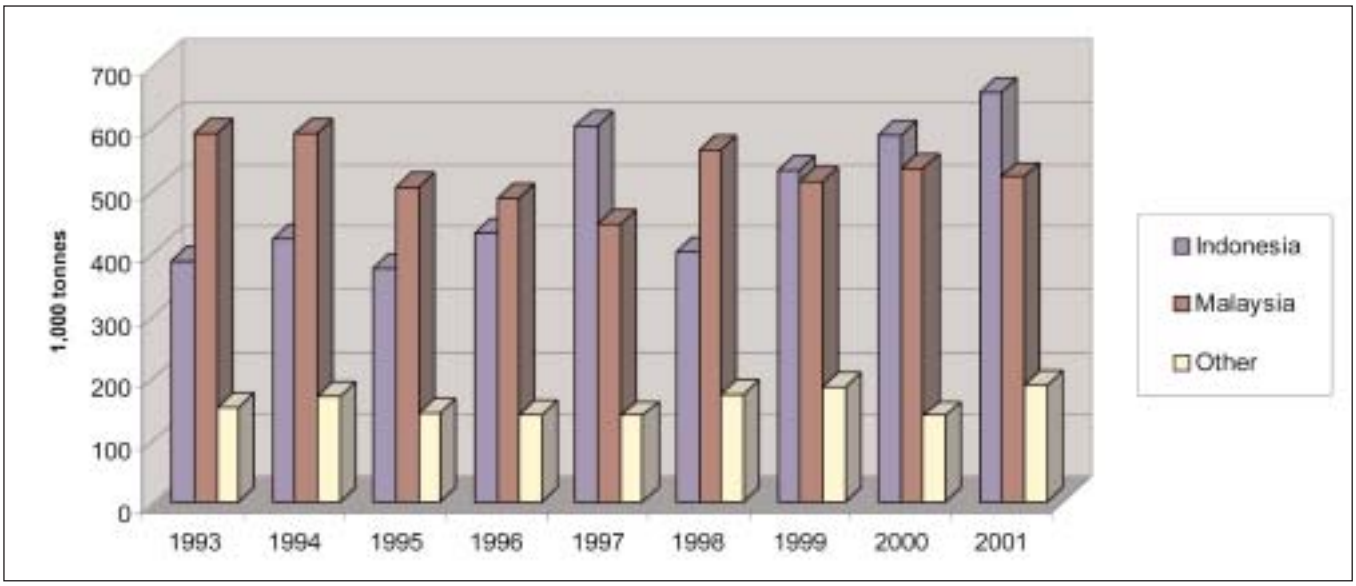

Fig. 4 Trends in German palm oil imports, 1993-2001 (CPO, PKO and PKM)

Source: 1998 and 2002 Oil World Annual

regain the lead (Table 7 and Fig 4). German imports from Indonesia now stand at 268,000 tonnes. Germany is the only country among the big importers which imports more palm oil from Indonesia than from Malaysia.

Comparing 2001 with 1997, Indonesia increased its market share of CPO and PKO in Germany, in spite of having temporarily lost terrain in 1998-99. Indonesia dominates the German import market for PKO, having increased its share from 74 percent in 1997 to 85 percent in 2001. Country shares in the imports of palm kernel meal (PKM) into Germany follow a similar pattern as with CPO.

Note that not the entire oil palm product volume that is imported by Germany is actually consumed by the German market. Part of Germany's imports are re-exported (see Table 8).

As shown in Table 4 (section 3.1), gross per capita imports are excessively high in Singapore and the Netherlands, countries which evidently re-export most of their imported palm oil. In 2001, about 13 percent of CPO (77 kT), five percent of PKM (30 kT) and a negligible quantity of PKO (0.4 kT) was imported from the Netherlands to Germany. In fact, the Netherlands are the main source of imported palm oil products in the "Other" column in Table 7, especially for CPO (for instance, of the 24 percent from "other" countries in 2001, the Netherlands accounted for 13 percent, Papua New Guinea for six percent, and other EU countries for the remaining five percent).[82]

3.3 Germany's palm oil consumption

Germany's consumption of vegetable oils has been rising steadily over the past five years, from 2,158 million tonnes in 1996 to 2,785 million tonnes in 2001[83]. Almost one quarter refers to palm and palm kernel oil (Fig. 5).

Germany in 2001 consumed 503,000 tonnes of palm oil and 191,000 tonnes of palm kernel oil. This makes palm oil the second most highly used vegetable oil after rape oil (imports into Germany minus re-exports).

Figure 6 shows the main types of use and users of vegetable oils in Germany. About two-thirds of all vegetable oils and fats are processed in the food industry, producing ingredients for margarine, bakery products, sweets, cooking oil, soups, sauces, coffee whitener, chocolate fillings, snacks and other food products. Whereas domestic margarine consumption decreased in recent years (from 6.9 kg per person in 1998 to 6.2 kg per person in 2001), the food processing industry experienced a growing demand for vegetable oils and fats.

Compared to most other vegetable oils, palm oil has the advantage of having a higher melting point and of being solid at room temperature. Therefore, it doesn't need a hardening process, which is not only technically elaborate but also harmful to human health. Hardening produces so-called trans-fatty acids, which are suspected of playing a role in cardiovascular diseases. The margarine industry also welcomes the fact that palm oil does not contain linolic acids, which oxidate easily and affect the flavour of the product.

Additionally, palm oil and palm kernel oil are used in the chemical industry, in the production of washing and cleaning liquids, cosmetics and body lotions. All palm kernel and palm fruit residues are used to produce animal feed, especially for pigs.

3.4 Use of palm oil by German industry

The production chain between an oil palm plantation and the consumer includes various branches of industry that use large quantities of palm oil. One business group can be active in more than one of these branches; Unilever is in all three. These listings do not pretend to be complete, nor do they rank companies according to the palm oil volumes they use:

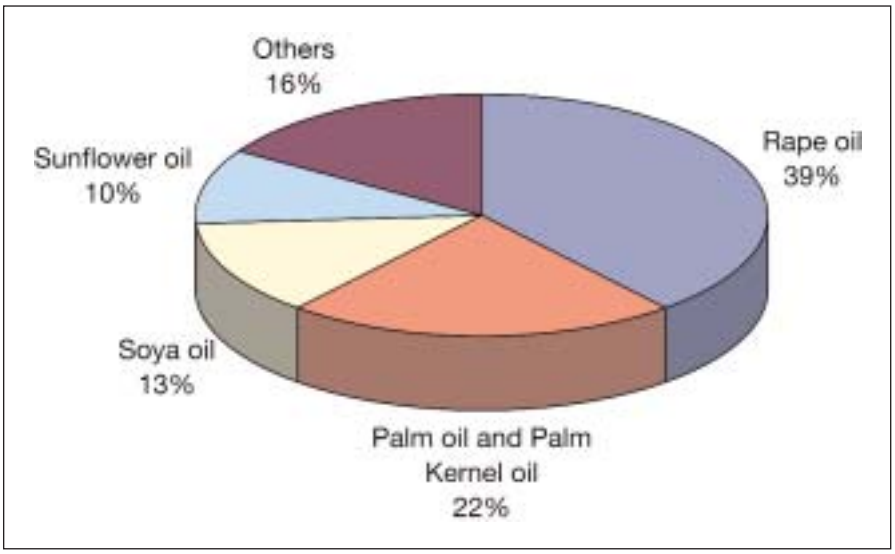

Fig. 5: Main vegetable oils used in Germany *(source: VDOE, 2001)*

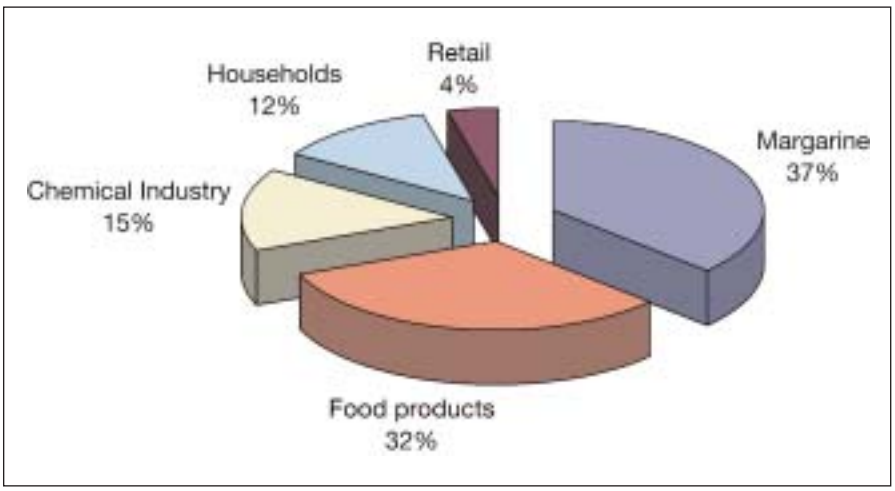

Fig. 6: Use of refined vegetable oils in Germany *(source: TransGen WebMaster, 1997)*

1. Processing industries, which buy and refine crude palm oil, include Noblee & Thörl GmbH, Walter Rau Neusser Öl und Fett AG, Deutsche Cargill GmbH Oel und Fettveredelung, Unilever;

2. Food industries, that use refined palm oil to produce food stuffs, include Nestlé Deutschland, Intersnack Vertriebs GmbH, Agrarfrost GmbH & Co, Friba Pommes Frites GmbH, Lorenz-Bahlsen Snack World GmbH & Co KG, Unilever;

3. Chemical industries, that use refined or chemically modified palm oil (palm kernel fatty acids), include Cognis Deutschland GmbH & Co KG, Oleo Chemicals GmbH, Procter & Gamble, L'Oréal, Beiersdorf, Henkel, Avon Cosmetics, Unilever.

Crude palm oil from Malaysia and from Indonesia is often mixed in big tanks in Rotterdam's transit harbour. This mixture of crude oil goes to processing industries where it is refined and passed on to consumer product industries. Mixing also occurs at several other points in the supply chain as a result of economies of scale in handling palm oil. Because of this mixing, many companies, especially those that use limited quantities of palm oil, do not know the origin of the crude oil. According to the Verband Deutscher Oelmühlen (VDOE), a German umbrella organisation, tracing a shipment of palm oil back to its original port of departure is possible only in exceptional cases. Tracing it back to the plantation where the palm fruits were harvested is completely impossible.

However, this information is incomplete. Big companies buy part of their palm oil directly in the country of origin and often have joint ventures with Malaysian or Indonesian companies. Unilever, for example, has both plantations and processing facilities of its own, though it does not use the oil from its Malaysian operations itself but sells it on the open market. Unilever has just decided to sell its Malaysian plantations and has already sold some of its processing operations. Unilever has no plantations in Indonesia. The share of Unilever's palm oil supplied by its own plantations unknown.The same lack of knowledge about the volume of own-sourcing holds true for other big companies.

The fact that smaller companies claim not to know the origin of the palm oil they use does not necessarily mean that they could not know this. The palm oil sector lacks transparency. It is also very difficult to determine what share is imported directly and what comes through the Netherlands. Yet, some companies claim to know that they import only small volumes or none at all from Indonesia. This contradicts earlier VDOE statements.

Company survey

As part of a company survey by WWF Germany, questionnaires about the use of palm oil were sent to the above mentioned companies and several others. The purpose was to obtain information on palm oil volumes and origin, and also to find out to what extent companies had changed their palm oil purchasing policies since the 1997-98 forest fires in Indonesia, or were willing to do so in the future.

The table in Appendix 2 summarises the responses. Of the 33 companies that were approached, 12 responded individually and in detail. Three companies referred to the VDOE umbrella organisa-

tion's standard response, but this response did not really answer the survey's questions. Three other companies referred to the Verband der Deutschen Margarineindustrie, the margarine manufacturers' umbrella organisation , but this association did not respond. Five promised to respond but did not do so; 10 companies did not respond at all. In effect, only 12 of the 33 companies did respond to the survey, which hardly provides a picture of a transparent and open sector.

In general, a large discrepancy was detected between the volume of palm oil that was imported and the volume actually used. This is partly due to the fact that several companies did not want to provide this information because of competitive considerations. The discrepancy is presumably also caused by the fact that palm oil is mixed with other oils and fats in the processing of many products.[84]

The information provided in the following section is based on company responses that have not been verified by WWF.

1) The Nestlé company

Nestlé annually processes around 6,000 tonnes of palm oil. About half of this quantity comes from Indonesia, probably as direct supplies. It is used in the production of soups, instant sauces, ready-made meals, pastries and ice cream. The importance of palm oil is very limited for the company in terms of raw material volume, in contrast to its use of coffee and cocoa beans.

Nestlé referred to a set of very general environmental guidelines when asked about its ecological criteria for supply policies,. These guidelines do not take the issue of rainforest deforestation for plantation development into consideration. This is a pity as Nestle has just declared that it has joined a Sustainable Agriculture Initiative that would lead to the adoption of the same standards as those used by Unilever for palm oil.

2) The Cognis company

Cognis is a global leader in special chemical products for the washing and cleaning industry, cosmetics, food and health items, as well as paints and varnishes. The oleochemical division processes world wide about one million tonnes of vegetable and animal oils a year. Palm kernel oil is used in larger quantities than palm oil (Cognis declined to give data on volumes). Indonesia is one of the main suppliers, and Cognis buys palm oil on the world market without investigating its origin. Purchase decisions are based on prices, seasonal influences and quality. Cognis also emphasises that environmental and social aspects are taken into account in its supply policy. How this is done and what criteria are used is not clear. The issue of rainforest conversion into plantations is not taken into account in these criteria. In light of the 1997-98 forest fires in Indonesia, the company decided to join a government-supported research project (ECOPOP) on the sustainable management of oil palm plantations in Indonesia.[85]

3) The Unilever company

The Unilever case shows that possibilities do exist for companies to develop palm oil supply policies that take ecological criteria into consideration. The Anglo-Dutch Unilever corporation is one of the main global buyers of palm oil, buying more than one million tonnes a year, equivalent to 4-5 percent of global production. The major share is from Malaysia. A share of this volume comes from Indonesia, but Unilever also owns plantations in Malaysia and West Africa. In Indonesia, Unilever owns one margarine plant that uses palm oil.

As part of a "Sustainable Agriculture Project", Unilever has begun to address the issue of rainforest destruction to establish oil palm plantations. Together with WWF, the company has been working for the past two years on the development of ecological, economic and social criteria for sustainable practices in oil palm agriculture. On the rainforest conversion issue, Unilever declared that no primary rainforest will be cleared any more to establish new plantations on forest land owned by the company (i.e. in Malaysia and Ghana), and this position will be incorporated in its future sustainability criteria. Unilever has made a clear and unambiguous commitment to WWF that it will examine the High Conservation Value Forest principle as an improved criterion for protecting the rainforest from company plantation expansion. It has made a clear endeavour to work with WWF on a case study to identify High Conservation Value Forest area in Sabah, Malaysia. Some doubts have been cast on this last undertaking by Unilever's decision to dispose of its Malaysian palm oil plantation subsidiary, but WWF and Unilever very much hope they will be able to continue this joint effort.

The company policy aims at "sourcing all palm oil from sustainable suppliers in the long term". Its concerns about the social impact of its purchasing policy on smallholder agriculture in Indonesia, the desire to carry the industry with it, and the lack of an agreed definition of High Conservation Value Forest are reported to WWF as preventing Unilever from moving to an environmentally sound purchasing policy in the short term.

Unilever has pointed out to WWF that throughout the development of its work on sustainable palm oil it has consulted stakeholders, made its standards available to all, and continues to make clear its commitment to sustainable sourcing, particularly in the institutionally challenging conditions of Indonesia. It is not known what percentage of the total palm oil volume used by Unilever comes from the company's own plantations, but the proportion of Unilever's own plantation palm oil used in Europe is negligible. The origin of the remaining volume is also unknown, but it comes mainly from Malaysia and Indonesia. It is still too early to determine the real effects of Unilever's policy on production and supply practices in the field. The Unilever initiative, however, shows that there is a way in the right direction, at least on its own, well-managed plantations. An essential element of such a policy concerns its transparency: can the origin of the product be traced and verified? It would be a step forward if other companies would

follow Unilever's example, even if Unilever can still be criticised for the fact that the origin of probably the largest share of its raw material is undeclared.

Conclusions

Since the forest fires in 1997-98, no company operating on the German market has changed its palm oil purchasing policy. The results of the survey lead to the conclusion that without public pressure, there will be little interest in the future to change company policies.

Indonesian palm oil is more competitive in the global market than Malaysian oil because land clearance practices and cheaper labour allow for lower prices. If Indonesia would apply more sustainable techniques, then this would push up the costs which would be reflected in higher consumer prices. The fact that palm oil does not reach the market as an end product, but as an "invisible" component of numerous food and chemical products, puts palm oil in a different position as compared with other tropical products such as timber, coffee and tea. With these latter commodities, it is much easier to make consumers aware of ecological and social production aspects. A considerable number of consumers are prepared to pay a higher price for products that have been produced in a sustainable manner. It is considered questionable, however, whether a market can be created for "ecological" palm oil products. Therefore, the Migros supermarket in Switzerland is an interesting test case.

The Ophir Project

From 1981 to 1996, the German government supported the NESP-Ophir oil palm project in western Sumatra, in the framework of a joint KfW/GTZ cooperation initiative. The project was supposed to contribute to increased income generation for small farmers and to the larger production of palm oil products. In the target group were 2,400 small farmers who had come from Java and parts of Sumatra as migrants. The basic idea of the NESP model (Nucleus Estate with Smallholder Participation) was to involve the P.T. Perkebunan VI plantation company as a development agent for the smallholder plantation sector.

The plantation company served as a "nucleus", with an oil mill for its own plantations and the smallholders. The company was also in charge of marketing for both types of producers. In the context of the project, 6,000 hectares were planted with oil palms, 1,200 for the plantation and 4,800 for the smallholders (2 hectares per family). Furthermore, KfW financed a processing facility, a network of all-weather roads for the transport of palm fruits to the mill, the construction of houses for the farmers and an infrastructure for the settlements. Technical support by GTZ focused on the development of a community organisation.

An evaluation carried out in 2000 confirmed that the income of small farmers had experienced a steep increase.[86] Also, after the price of palm oil went down in 1998, the average income of small farmers in the project in July 1999 was still three times higher than the Indonesian average.

However, the project also had negative social impact on the population within the project area. Apart from the well-paid settlers, there is now a category of poorly paid wage labourers, whose income equals only one-tenth to one-fifth of the income of the smallholders. This has led to envy among the labourers. Two village communities living near the Ophir project consider themselves the losers of the project. After they declined plots that were offered on the Ophir plantation, a considerable number of villagers were pushed back into marginal lands when Ophir did its new plantings. They now cultivate plots with an average of 0.5 hectares.

3.5 German development projects in Indonesia

Indonesia is a priority country in German development cooperation. In view of the dramatic loss of Indonesia's forests, the emphasis in recent years has been on supporting sustainable forestry. As a response to the fires in 1997, the KfW, Germany's development bank, and the GTZ, the technical assistance agency, initiated a community project for integrated forest fire management in East Kalimantan. Prospects for the success of these projects are poor because of inadequate legal and policy reforms by successive Indonesian governments and a lack of effective action against corruption. The German Ministry for Scientific Cooperation and Development (BMZ) has drawn its conclusions and now follows a restrained policy in the Indonesian forest sector. New forest-related proposals are no longer initiated by the German government. Among all current bilateral forest projects, only the advisory work to the Indonesian Ministry of Forestry will be continued until the overall policy framework significantly improves.

BMZ's new concept "Forests and Sustainable Development" considers "forest conversion by the intensive plantation economy", often stimulated by European subsidies, to be an essential problem in the richly forested countries of Southeast Asia. The BMZ's concept does not, however, address this problem by means of relevant interventions.

The German Investment and Development Society (DEG) promotes oil palm plantations in various Southeast Asian countries. In Indonesia, the DEG currently finances three oil palm projects. Muko, a project association in Western Sumatra, an Indonesian-European joint venture, is a combined oil palm and rubber plantation with processing facilities. In Kalimantan, the DEG financed the construction of a palm oil mill for the Taipan company which runs an oil palm plantation with similar facilities. The crude palm oil from this plantation is processed into cooking oil in this same mill and then sold under its own brand name. The KSP project, also in Kalimantan, consists of an oil palm plantation with an extensive associated programme for small farmers.

In selecting suitable projects, DEG concentrates on strengthening existing oil palm projects and using abandoned or idle agricultural land. Ecological sustainability is an important criterion for DEG financing, and its financing agreements include clauses that explicitly commit the project participants to a 'zero-burning' policy and to respecting other social and ecological guidelines. Before deciding whether to finance a project or not, the DEG carries out environmental assessments.

3.6 European finance and the Indonesian oil palm sector

Recent trends

The expansion of the Indonesian oil palm sector requires huge investments. Developing a new plantation often involves building a processing mill for crude palm oil as well, and it takes a number of years before the plantation starts producing. On average, developing a new plantation costs between $2,500 - 3,500 per hectare.[87] Many billions of dollars were invested in this sub-sector in Indonesia.

The fast expansion of the oil palm sector has been financed to a large extent by foreign financial institutions from Europe, North America and eastern Asia. Since 1998, expansion of the Indonesian oil palm sector has slowed down. As many oil palm groups have run into financial trouble, funds are scarce for investing in the expansion of existing plantations and opening up new ones. The slowdown in oil palm expansion has hardly been visible in CPO production figures, as it takes three years after planting before an oil palm starts producing and another five years before it reaches its full production capacity. The large number of oil palms planted before 1998 can therefore still result in strongly growing production figures in the coming few years.[88]

The oil palm sector is not very popular at this moment with foreign banks, as the loans extended in the mid-1990s have not generated the expected returns. Many Indonesian oil palm companies were not able to pay interest and repay their debts on time, and have entered into a painful debt restructuring process, which often forced foreign banks to accept write-offs on their outstanding loans. At the same time, foreign banks were faced with criticism by NGOs on their role in converting Indonesian forests into oil palm plantations. All these factors have greatly reduced the appetite of foreign banks to lend to Indonesian oil palm companies.

As a result, the amount of fresh foreign financing has gone down. However, existing financing relationships have been extended by foreign financial institutions (voluntarily or involuntarily), and in fact the influence which foreign financial institutions could exert on oil palm companies has increased as a result of the weak financial situation of the oil palm sector. This situation provides foreign financial institutions with excellent leverage opportunities to influence their clients' social and environmental policies and performance. Chapter 4 presents an interesting case of successful campaigning by NGOs which set a unique precedent; several Dutch banks in 2001 decided to adopt a more responsible policy in their financial services to the Indonesian oil palm sector.

Who is who

The study by Van Gelder (2001) identifies and analyses which financial institutions in the United Kingdom, Denmark, the Netherlands, Germany, Switzerland and Sweden are financing the Indonesian oil palm and pulp and paper sectors, and what level of influence they have on specific companies in these sectors.

Seventeen Indonesian oil palm groups were identified which had obtained financial services from European financial institutions in the past 10 years. These groups include all major private groups in this sector in Indonesia. This proves that European banks did not differentiate between private groups as far as their records on forest fires and social or environmental conflicts were concerned.

The study also identified a total of 61 financial institutions in six countries that provided financial services to business groups in the Indonesian oil palm and pulp and paper sectors. These include 24 British, four Danish and 13 Dutch financial institutions, and 19 financial institutions in Germany, four in Sweden and seven in Switzerland.

The following table shows that institutions in the UK, Germany and the Netherlands occupy the most prominent positions.

The first table in Appendix 3 provides the names of the 17 business groups that have been identified, and the total concession area each group has access to. The table also lists the European financial institutions which, according to Van Gelder's assessment, at this moment have a strong influence on one or more of the oil palm companies in each business group.[VI] The second table in the Appendix gives more details on the companies, their concession areas and production, as far as known. Put together, European institutions have strong influence on a total of around three million hectares of oil palm plantations (and lesser, but still existing degrees of influence on a much larger area).

Table 9: European financial institutions and Indonesian oil palm business groups

Country	Number of institutions	Number of Indonesian business groups to which financial services are provided
United Kingdom	24	12
Denmark	4	1
Netherlands	13	12
Germany	19	13
Sweden	4	1
Switzerland	7	9
Total	61	17

Table 10 ranks ten financial institutions in four European countries which could be seen as most influential regarding the Indonesian oil palm plantation sector. The key criterion for this ranking is the number of Indonesian oil palm groups over which the financial institution can exert strong influence. No correction is made for the relative size of each of these business groups. Also, some other foreign financial institutions in countries not covered in this report (notably France, the United States and Japan) as well as some Indonesian financial institutions could be equally or even more important.

Focus on German institutions

Appendix 4 lists the German financial institutions identified in Van Gelder's study that had stakes in oil palm companies. Table 11 indicates the level of influence that banks have over their clients. The following four banks are seen as having strong influence:

Financial institution	Country	Level of influence over Indonesian oil palm plantation groups		
		Strong	Moderate	Minimal
Rabobank	Netherlands	5	2	3
Crédit Suisse	Switzerland	3	2	0
DEG	Germany	3	1	0
UBS	Switzerland	3	0	1
HSBC	United Kingdom	2	3	4
Deutsche Bank	Germany	2	0	2
CDC	United Kingdom	2	0	0
Bayerische Hypo -und Vereinsbank	Germany	1	3	1
Commerzbank	Germany	1	0	1
Aberdeen Asset Management	United Kingdom	1	0	0

Table 10: Most important European financial institutions with regard to the Indonesian oil palm plantation sector

German financial institution	Indonesian oil palm Company	Relationship
Bayerische Hypo- und Vereinsbank	SMART	Trade financing
Commerzbank	LonSum	Loan 1996
Deutsche Bank	Bakrie Sumatera	Loan and shareholding
	LonSum	Notes
Deutsche Investition- und Entwicklungs-Gesellschaft (DEG)	Kalimantan Sanggar	Loan
	Tapian Nadenggan	Loan

Table 11: German FI's whose influence in the Indonesian Oil Palm Sector is assessed as strong (see Annex 4 for complete table)

[VI] The following levels of a financial institution's influence on an oil palm company have been distinguished, using three criteria (directness, currency and importance) (see Van Gelder, 2001):

Strong influence
The financial institution has such a stro-ng financial relationship with the company that it can influence the company's policies on its own.

Moderate influence
The nature and extent of the financial relationship between the financial institution and the company is such that the financial institution can assert a certain influence on the company's policies, especially when the institution joins forces with other banks or stakeholders.

Minimal influence
The financial relationship between the bank and the company theoretically gives the financial institution some influence on the company's policies, but this influence is not of practical use because of the extent and nature of the financial relationship.

Finished influence
The ability of the financial institution to influence the company's policies no longer exists.

4. International action

4.1 Some initial success _ but much more is needed

Since 1998, when WWF Germany published its previous report on oil palm in Indonesia, little has changed in Germany itself but there have been some interesting developments in other consumer countries.

The 1998 report and other publications fuelled campaigns by WWF, Greenpeace and Friends of the Earth directed at the general public, retailers and the financiers behind plantation expansion. Apart from increased general awareness of the oil palm issue, these campaigns have generated 'early adopters' of more responsible trade and investment practices, both in the retail (Migros in Switzerland) and the financial sector (ABN AMRO and Rabobank in the Netherlands) (see boxes).

Appendix 5 presents a series of recommendations directed at financial institutions and donor agencies, taken from Wakker (2001), that provides valuable guidelines to these actors for becoming serious about sustainable development.

At the government level, much work remains to be done. The Indonesian government has done little but is coming under increasing pressure from ASEAN countries to stop forest fires. In the Netherlands, members of parliament submitted questions to the government on the role of Dutch financiers in Indonesia's oil palm expansion, but apart from a token reply this was not followed by any definite action. In Germany and elsewhere in the EU, governments and politicians have not done anything.

A responsible supermarket: MIGROS

MIGROS, Switzerland's largest supermarket chain, has become the first European retailer to commit itself to buying palm oil exclusively from ecologically sound sources. The company, which has annual sales of around $12 billion a year, announced last January that it had set itself the goal of modifying the production of palm oil in such a way that it will no longer pose a threat to tropical forests. The company, which uses 3,000 tonnes of palm oil a year, wants to ensure its supplies do not come from plantations created from recently converted natural forest. It has also set down criteria to ensure cultivation follows ecologically sound principles, conserves resources, and supports social working conditions.

MIGROS will retain independent auditors to assess annually whether its suppliers are meeting the criteria and its products will carry a sticker confirming that they "protect tropical forests". As a first step, MIGROS has begun to develop a brand of margarine with palm oil from a sustainable source in Ghana.

In conjunction with WWF Switzerland, MIGROS has drawn up a set of minimum environmental and social criteria for its palm oil products that can be summarised under four headings:

1. Transparency and independent verification: identified suppliers (company group) and identified plantations (estate level) and a secured chain of custody. Plantations agree on independent verification of compliance with the criteria.
2. Legal compliance: producer companies whose plantation management adheres to national and regional laws.
3. Environmental standards: plantation and processing plants minimise environmental impacts on soil, water, wildlife and natural forests.
4. Social standards: producer companies actively address social impacts and have a policy that ensures that working and safety conditions are in line with national laws and international agreements. The companies communicate and consult with social stakeholders.

The pioneer role of MIGROS received international recognition at the recent World Summit on Sustainable Development in Johannesburg, when MIGROS was honoured with the **World Business Award**.

Awakening banks

Three of the biggest banks in the Netherlands – ABN AMRO, Rabobank and Fortis – agreed in February 2002 to stop or substantially restrict financing for oil palm development in Indonesia on environmental and social grounds. A fourth bank, ING, joined them later in the year. This is the result of a joint campaign by Sawit Watch, the Indonesian oil palm advocacy network, Milieudefensie (Friends of the Earth NL) and Greenpeace Netherlands. Oil palm and pulp plant feeder companies are seen as among those responsible for devastating forest fires and for deforestation in general. Dutch banks have financial ties to several major plantation groups in Indonesia.

NGOs confronted the banks with these issues and pressed them to limit their investment in the oil palm sector to plantation companies which adhered to the following basic requirements:

- No destruction of tropical rainforest
- No forest burning
- Acting within the legal framework
- Respecting the rights and wishes of the local communities.

The NGOs campaigned and negotiated; in the end, four leading banks agreed to adopt sustainability criteria for investments in the oil palm sector. In the case of ABN AMRO, the bank's new policy goes even further; it will apply to all investments that might affect forests, including logging, pulp and paper, mining and oil and gas development. Additionally, ABN will not invest in plantation projects where forests were cleared fewer than five years ago. Sawit Watch, campaigning against the large-scale expansion of oil palm plantations, is calling for financing agencies all over the world, including Indonesian banks, to follow the steps taken by the Dutch banks.

Source: Down to Earth 52, February 2002

4.2 WWF's position and strategy

WWF's approach to forest conservation

WWF is working to provide solutions to the threats facing the world's forests which could potentially undermine forest conservation.

WWF acts through a combination of field and policy work involving more than 300 projects in almost 70 countries. WWF projects integrate conservation with social and economic elements; these projects also examine national or international policies that affect life on the ground.

In order to halt, and eventually reverse, the loss of forest landscapes world-wide, WWF is promoting the **protection, management** and **restoration** of forests as the means to achieve a lasting and sustainable diversity of forest types on all of the world's continents.

Of particular concern to WWF are **illegal logging** and forest crime, conversion of forests to plantation crops of palm oil and soy, **forest fires** and **climate change**.

WWF in 2002 developed a series of position papers[91] on key forest issues, including one on oil palm. It focuses on what WWF sees as the key elements of sustainability within the oil palm industry.

WWF recognises that palm oil is a basic foodstuff with high consumer demand, and that the industry generates foreign exchange earnings and employment in tropical producer countries. At the same time, WWF is concerned about the high environmental and social costs that oil palm plantations have imposed in the form of indiscriminate forest clearing, uncontrolled burning with related haze, and a disregard for the rights and interests of local communities. WWF therefore calls upon the industry, regulators, financiers, buyers and other stakeholders to work collectively to make the oil palm industry ecologically, socially and economically sustainable.

WWF believes that key elements of sustainability within this industry are that:

- plantations do not replace forests that have high conservation value;
- any incentives that promote conversion of such forests should be eliminated;
- sound environmental management practices are adopted (such as minimising forest fires and human/wildlife conflicts);
- customary rights of local communities and indigenous peoples to own, use and manage their lands and natural resources are respected;
- the long-term social and economic well-being of plantation workers and local communities is ensured;
- regulatory frameworks are respected at a minimum, but higher standards of performance which exceed local/national laws should be sought;
- industry participants should make their policies and practices related to environmental and social performance publicly transparent, and should involve local stakeholders in the development of standards and performance monitoring.

In addition, a key element in WWF's oil palm strategy is to target the 'levers of change', i.e. mobilise those key actors that have influence on international markets and investment flows. These include major European banks, international financial institutions (IMF, World Bank), the European consumer market, European companies that process palm oil products and produce consumer goods, and institutions (EU, national governments) that determine development, trade and aid policies.

WWF's Forest Conversion Initiative (currently focusing on palm oil and soy), together with relevant WWF offices in producer and consumer countries, is implementing a coordinated set of activities to achieve the common goal: to *secure that High Conservation Value Forests are no longer threatened by the expansion of oil palm and soy plantations.*

4.3 The donor community

The CGI and forests

Indonesia's multilateral and bilateral creditor group, the Consultative Group on Indonesia (CGI), meets annually to set levels of financial assistance. It is chaired by the World Bank and includes the IMF, the Asian Development Bank, the European Commission and UN agencies as well as bilateral lenders like the USA, Britain and Japan.

During the Suharto era, this group largely ignored human rights and the environment in its discussions but, post -Suharto it has started to broaden its demands to include progress on 'governance' and forest management. Whereas before it was seen as political meddling, 'good governance' is now at the top of the donor agenda. This change of perspective has had a knock-on effect on the forest policy debate. The new emphasis on law enforcement, anti-corruption measures and stakeholder participation reflects this change.

The CGI in 2000 held its first meeting specifically on forestry issues and came up with eight action points for the Indonesian government to implement. Illegal logging has been the main focus of concern within the international lending community since then.

NGOs in Indonesia and overseas have been highly critical of the CGI agencies for failing to take a share of the responsibility for Indonesia's economic crisis. They have consistently called for debt reduction and cancellation of corrupt debt amassed during the Suharto era. In November 2001, at a meeting in Jakarta, Indonesian NGOs in the Coalition for Forests and Debt called on the CGI to stop financing deforestation in Indonesia. The NGOs' demands presented to the CGI included calling for a moratorium on large-scale commercial logging in natural forests and for a stop to the involvement of Indonesian security forces in forest exploitation[92].

IMF

During the East Asian financial crisis, the IMF stepped in with a bail-out package of $43 billion dollars in October 1997, followed by a 'rescue package for the rescue' in February 1998. A structural adjustment programme and its conditionalities also had important effects on natural resource use. Indonesia's creditors, led by the IMF, have set a course for economic recovery which requires Indonesia to sell off state assets and generate revenues by exploiting natural resources. The costs in terms of lost forests and biodiversity, and degraded environmental functions, have not been taken into account. Forestry policy reform was included in the conditionalities of the IMF and World Bank loans. In 1998, the IMF insisted on the removal of "export quotas and punitive taxes" on Indonesian palm oil exports as a condition of its economic 'rescue package'. This measure further strengthened the economic incentive to expand the production of palm oil and the area of plantations.

5. WWF's recommendations

5.1 Recommendations to governments

General recommendation to governments of consumer and producer countries

All concerned governments should actively facilitate the process to make the oil palm industry sustainable, and create the necessary incentives and regulatory framework to influence the private sector. They should support NGOs as key watchdogs to monitor what happens on the ground, and also help NGOs assist companies that are ready to work towards true sustainability. Governments should also promote minimum standards for transparency in the production and trade chain.

Specific recommendations to the Indonesian government

This update to the 1998 report does not provide much reason for optimism about the state of Indonesia's forests and the role of oil palm plantations. Discrepancies remain large between forest land-use planning and policies, and the actual situation on the ground.

The Indonesian government is in the unique position to change things for the better and take specific action to preserve and develop one of the country's most important natural resources for future generations. Therefore the following examples of measures and reforms needed in Indonesia to place the country's oil palm sector on a more sustainable footing are recommended to the Indonesian government for consideration. They include:

• socially and environmentally sound land-use planning, involving the local population, local governments and civil society groups. The aim should be to restore a sound balance between allocating forest land to forest, small-scale agriculture and agroforestry, plantations and settlements. This process also requires capacity-building among local community organisations and authorities.

• a moratorium on new concessions for oil palm on forest lands until a national inventory of the permanent forest estate is completed. Exceptions to this moratorium could be areas that have been severely degraded in the past, by fires or otherwise, that do not show any potential of high conservation value, be it social, ecological or otherwise.

• elimination of perverse incentives that promote the expansion of oil palm plantations at the cost of natural forest (see section 2.6 for examples).

• legal protection as permanent forest estate to all remaining forested areas in Indonesia.

• strengthened rules and penalties against clearing plantations with fire as well as the institutional capacity to enforce them.

• legal protection of forest ownership and use by local communities dependent on the forest ecosystem, implementation of land reforms and assistance to local communities in sustainable forest management.

• effective mechanisms for the independent monitoring and early warning of trends and threats to forest lands related to the oil palm industry. This includes early warning systems in the field and greater transparency throughout the trade chain.

• standards of best practice (benchmarking) for oil palm plantation establishment and management, as well as palm oil production.

At the level of individual plantations, the recommendations made to plantation owners in the previous WWF report are still valid:

- within plantations, conserve forest areas that have a particular value for watershed protection, biodiversity, faunal migration, and erosion protection; keep NTFP reserves for local use.

- restore forest that has an environmental function back to certain parts of exploited plantations (see previous point).

- enforce zero-burning land clearing and waste removal methods.

- develop and introduce integrated pest management techniques in oil palm plantations.

- introduce nutrient recycling techniques (mulching).

5.2 Recommendations to the private sector

Plantation companies in the oil palm sector should adhere to the following basic guidelines:

• do not convert High Conservation Value Forests.

• do not initiate uncontrolled forest burning.

• act in accordance with international best practices in countries with poor governance or ambiguous regulatory systems.

• respect the land and resource use rights of local communities.

Financial institutions and private banks should:

• screen investments in the oil palm sector and other forest-related activities against measures of social and environmental responsibility.

• adopt these same basic guidelines in financial service policies.

• transparently and openly cooperate with an independent verification process that measures how well these guidelines have been applied.

If companies from consumer countries want to have a share of the benefits in the oil palm trade (or any other sector), they should develop clear and verifiable investment and purchasing policies based on sustainable criteria. They should discuss these with local stakeholders and rigorously implement the policies. They could also fund activities related to forest conservation.

Companies operating in the producer countries should also develop and implement sustainability policies and engage local stakeholders in the process.

Furthermore, all companies in the trade chain should be fully transparent regarding the origin of their raw palm oil materials. Transparency is a key condition for gaining credibility on sustainability claims made by commercial companies and their financial service providers. Transparency is thus a precondition for any 'license to operate'.

NGOs

Through research, advocacy, campaigning and creative support work, NGOs play a key role in catalysing action taken by the private sector, governments and consumers. But their role needs to move beyond simply calling for boycotts, to working with the private sector and governments to come up with workable solutions. This implies developing specific recommendations for relevant industries which set higher standards of environmental performance, and which are adapted to local aspirations for development.

Consumers

Consumers should be informed about the story behind the product they are consuming. It should be made clear that they can make a real difference by pressuring others into action, by requesting proof of transparency from retailers and processing companies in their sourcing and purchasing policies. They can help to build on positive examples such as the Swiss Migros and the Dutch banks to set benchmarks and persuade mainstream industry to raise its standards.

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[1] *High Conservation Value Forests* (HCVF) are defined by the Forest Stewardship Council (FSC) as "forests of outstanding and critical importance due to their high environmental, socio-economic, biodiversity or landscape values". WWF is extending the HCVF concept to comprise the crucial forest areas and values that need to be maintained or enhanced in a landscape, using it as a tool in more general conservation planning including the design of representative networks of protected areas and buffer zones.

[2] see Down to Earth's Update on forestry on http://dte.gn.apc.org/cfprs.htm.

[3] FWI/GFW, 2002.

[4] Three die as haze cloaks Kalimantan, The Star, 5 September 2002.

[5] Various Jakarta Post reports. Also: WWF-Indonesia, pers.comm.

[6] see Fire Bulletin no.8, via WWF Indonesia's web site (www.wwf.or.id)

[7] See e.g. Straits Times of 8 Nov. 2002 (referring to data from the Singapore Center for Remote Imaging, Sensing and Processing, CRISP)

[8] BMG predicts prolonged dry season, Jakarta Post, 6 September 2002.

[9] BMG predicts prolonged dry season, Jakarta Post, 6 September 2002.

[10] Straits Times of 8 Nov. 2002

[11] CIFOR press statement by Luca Tacconi on Sep.13

[12] The Jakarta Post, 24 August 2002.

[13] Anderson et al., (FFPCP), 1999

[14] FWI/GFW, 2002.

[15] Glover, D. and T. Jessup, 1999.

[16] ADB in: Dennis, R. 1999. A Review of Fire Projects in Indonesia (1982-1998). CIFOR.

[17] Waluko, J. Smoking Gun. Inside Indonesia. No. 53 January-March 1998. Note: investments per hectare tend to vary significantly and may be as high as Rp 8 million per hectare.

[18] Representatives from the Agro Indomas company claim that mechanical clearing of forests is 2.3 times more expen-sive than non-mechanical clearing with burning. However, according to the Fire Prevention Control Project (FFPCP), there is no compelling reason to use fire to clear land for new plantations. The cost of establishing an estate from the first step of government approval through to full production is identical whether the land is cleared by purely mechani-cal means with no burning, or is first cleared mechanically, and the debris then burned. Several leading companies al-ready recognise this and favour a zero-burn land clearance policy, although such a policy does not always translate into a 'no-burn' practice (Sargeant, FFPCP, 2001).

[19] Wakker, 2000

[20] Simorangkir and Gouyon (www.pffsea.com)

[21] Anderson et al., (FFPCP), 1999

[22] Bompard & Guizol (FFPCP), 1999; Sargeant, (FFPCP), 2001

[23] Anderson et al., (FFPCP), 1999

[24] IUCN Red List of Threatened Species at www.redlist.org, viewed 23rd October 2002

[25] 36,000 is an authoritative estimate by Rijksen & Meijaard (1999). WWF's species web site now estimates the total at less than 25,000 (http://www.panda.org/species/orang/population.cfm).

[26] Orangutan Numbers Plummeting World-wide: Species may Vanish in the Next Ten Years, Study Says. Wildlife Conservation Society. February 26, 2001; Our Vanishing Relative. The Status of Wild Orang-Utans at the Close of the Twentieth Century. Rijksen, H.D. and E. Meijaard 1999.

[27] Tree Cutting Angers Elephants. Jakarta Post 5 April 1997

[28] Wild Elephants Caught and Tamed. Jakarta Post, 29 July 1998.

[29] WWF Riau, 2001.

[30] Source: Antara, September 16, 2002. The survey on encounters between human beings and wild elephants inside and around the national park was conducted by a local environmental agency (Watala) and the Wildlife Conservation Soci-ety-Indonesia.

[31] The worst affected areas were central and southern Sumatra and Kalimantan; there were few reports from other parts of Indonesia.

[32] Anderson et al., (FFPCP), 2000

[33] Jakarta Post, 31 August 2002; Down to Earth 553-54, August 2002. This case and another are the subject of case studies being prepared by PFFSEA to determine the elements and aspects that were critical in a successful and an un-successful prosecution.

[34] Potter & Lee, 1999.

[35] A review of the effectiveness of aircraft in fire suppression is being conducted by PFFSEA – preliminary analysis indicates this approach is ineffective and inappropriate (Peter Moore, PFFSEA, pers.comm.).

[36] Gouyon, (FFPCP), 1999

[37] Special Report from Down to Earth on "Forests, People and Rights", from June 2002.

[38] Bowen et al., (FFPCP), 1999

[39] See www.pffsea.com. The four new reports are:
"Review of Legal, Regulatory and Institutional Aspects of Forest and Land Fires in Indonesia"
"Review and Analysis of Legal and Regulatory Aspects of Forest Fires in South East Asia"
"The Economics of Fire Use in Agriculture and Forestry – A Preliminary Review for Indonesia". *This is a compre-hensive economic analysis of the fire problem. In a first part this report examines the state of knowledge about fires and their associated costs and benefits. The second part analyses the costs of being a responsible fire user; if and under what circumstances zero burning is an option for large-scale commercial plantations and small-scale farmers. The last part analyses the costs of being ir-*

*responsible: Who pays the bill? The economic impact of fires."**Community Involvement in and Management of Forest Fires in South East Asia"*

40 Special Report from Down to Earth , from June 2002.
41 Most of this section is based on a Special Report from Down to Earth , from June 2002, on forest reforms in the post-Suharto era, and on Casson's report published by CIFOR in 2000.
42 Toyne c.s., 2002.
43 SeeWWF Germany, 1998.
44 See *www.hazeprevention.com*
45 Oil World 2020, 1999. ISTA Mielke GmbH.
46 Carrere, 2001.
47 Sargeant, (FFPCP), 2001
48 Casson, 2000.
49 Sargeant, (FFPCP), 2001
50 WWF Indonesia, pers.comm.
51 FWI/GFW, 2002 (p.43), based on Ministry of Forestry statistics.
52 Casson, 2000.
53 Wakker, 2000.
54 FWI/GFW, 2002.
55 Forests, People and Rights, Down to Earth Special Report: June 2002
56 Oil World Annual 2002.
57 Wakker, 2000 and Wakker, pers.comm.
58 Barber & Schweithelm, 2000.
59 FWI/GFW, 2002.
60 down from 33 million in 1981, the decrease mostly as a result of actually concluded conversion. The recent increase is based on unpublished Ministry of Forestry data. Source for this section: FWI/GFW, 2002.
61 WWF Germany report, 1998.
62 FWI/GFW, 2002.
63 Casson, 2000.
64 Most of this section is based on Casson (2000) and the Down to Earth Special Report from June 2002.
65 Casson, 2000.
66 See Wakker, E. 1998.
67 Pamin, K. A Hundred and Fifty Years of Oil Palm Development in Indonesia: From the Bogor Botanical Garden to the Industry. IOPRI. 1998 International Oil Palm Conference. September 23-25, 1998.
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69 Oil Palm – Fact File in Better Crops International, 1999.
70 See for details on oil palm uses e.g.: Pocketbook of Palm Oil Uses. Palm Oil Research Institute of Malaysia. Ministry of Primary Industries. March 1997.
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72 Fairhurst & Mutert, 1999.
73 Oil World Annual 2001
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75 Oil World Annual 2002
76 Oil World Annual 2002
77 Oil World Annual 2002
78 Oil World Annual 2002
79 Mielke 1998.
80 This is because export statistics from Indonesia include re-exports to third countries; we therefore believe that import statistics are more realistic.
81 however, PKO export statistics for Indonesia and the import statistics of the importing countries show enormous differences.
82 Compare Oil World Annual 2002. Butter fat does not exclusively contain palm oil.
83 Verband Deutscher Oelmühlen, 2002
84 VDOE, pers.comm.
85 The ECOPOP research project comprised a number of German universities, private companies and WWF Germany as partners. After two years of intensive (and costly) preparations the whole project was rejected by the German Federal Ministry for Research and Education (BMBF) as the main donor, allegedly because "the different research sub-projects were not enough harmonized".
86 GTZ und KfW, 2000
87 Potter and Lee, 1998.
88 Casson, 2000.
89 PT SMART Annual Report 1998; Sinar Mas Libatkan 75,000 KK Penduduk Kaltim Untuk Kembangan Sawit. Suara Pembaruan. February 12, 1999.
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Appendix 1 – The forest conversion process

Source: Kessler, Wakker, Richert and Dros (november 2001). RETRAC – Resource Trade Cycle analysis. Application to Tropical Forest Conversion. AIDEnvironment Amsterdam.

Defining forest conversion

Forests are defined by FAO as "ecosystems with a minimum of 10% crown cover and not subject to agricultural practices". Deforestation according to FAO involves "the complete clearance of tree formations (closed or open) and their replacement by non-forest land uses". 'Forest conversion' is defined as the transition from closed forest to agro-industrial plantations (tree plantations, also including oil palm, rubber, coconut etc.).

This definition does not capture the intermediate phases of the forest conversion process, from logging, clearing, planting to early establishment and maturation of a non-forest plantation.

Yet, a definition of deforestation needs to reflect the more complex and dynamic reality. In most available literature on deforestation the term forest conversion generally refers to the gradual transition from forest to man-made forest (plantations) or non-forest land-use. The final stage is generally characterised by:

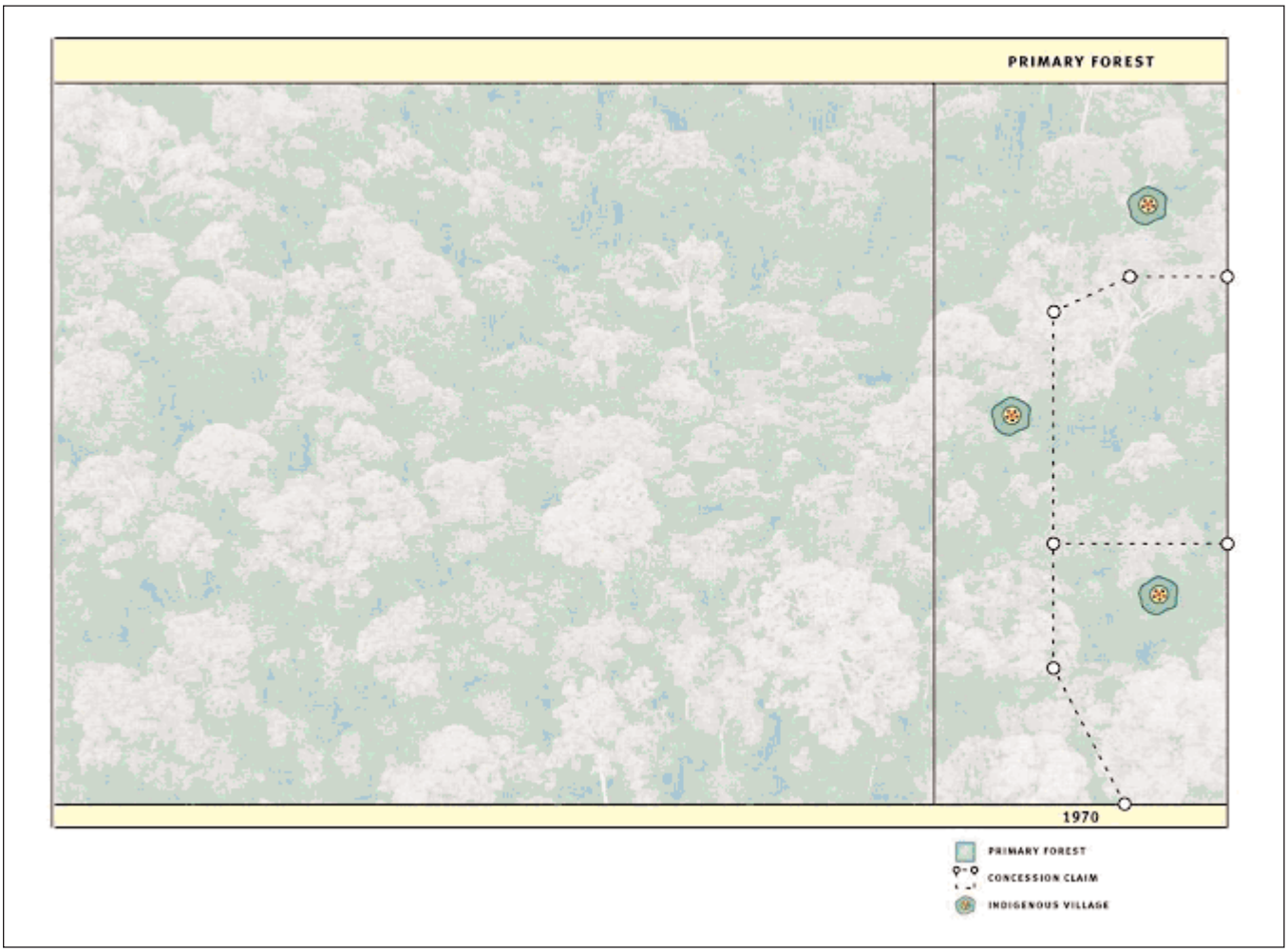
AIDEnvironment defines forest conversion as a continuous process of declining forest functions, with intermediate stages of forest degradation, forest fragmentation and deforestation. The forest conversion process thus captures the range of extractive and forest clearing activities that ultimately leads to a landscape dominated by man-made monocultures, and is characterised by the loss of key forest functions and socio-economic benefits for local people.

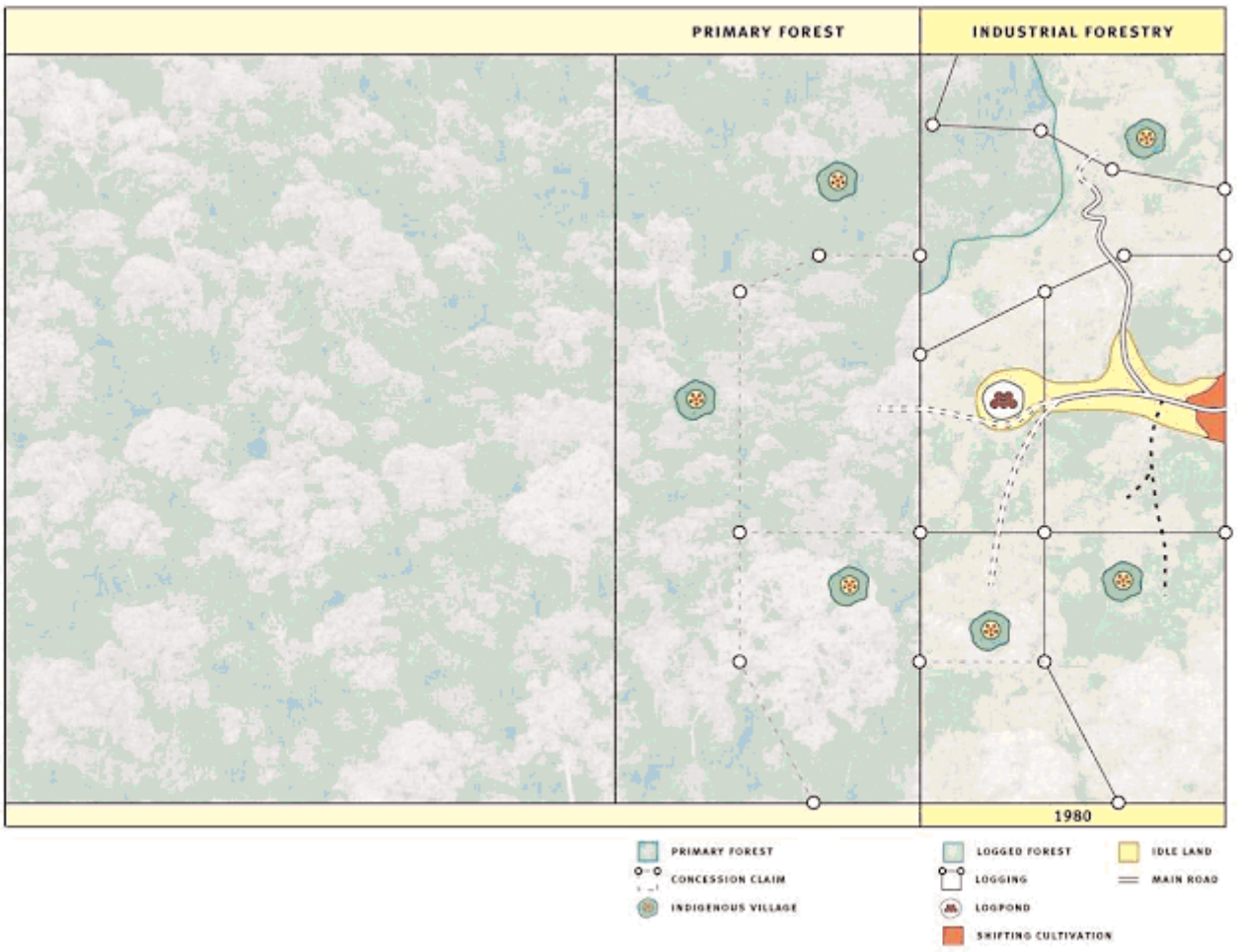
Critical aspects of the process of forest conversion are: the transition of natural forests to man-made monocultures through progressive frontiers, the scale involved and the rapid speed, the connections with global commodity markets and the loss of forest functions (often of an irreversible character). In line with this definition, plantations of perennial crops such as oil palm and agricultural monocultures, e.g. of soybeans, meet these criteria of forest conversion.

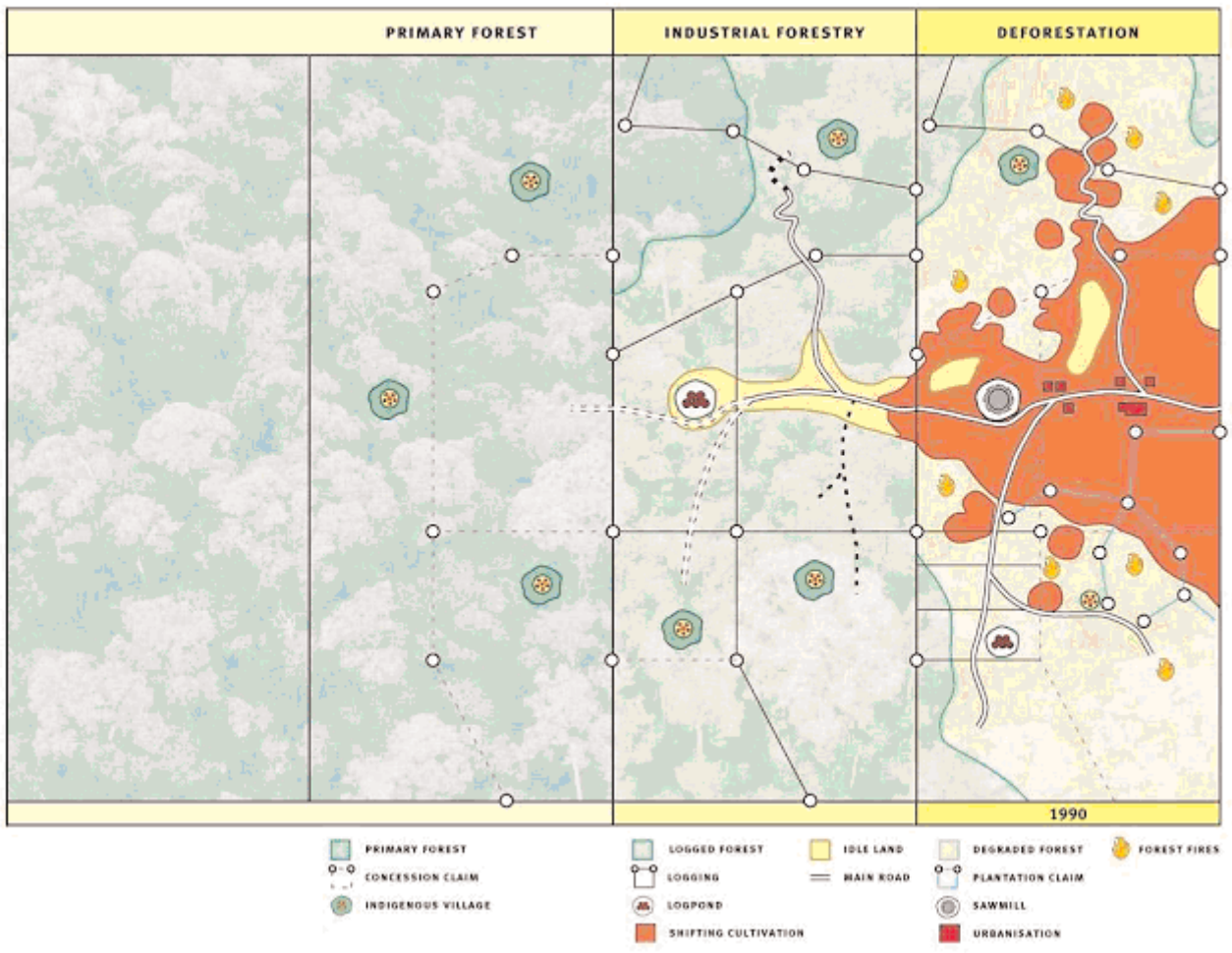
Forest conversion as a continuous process of forest degradation

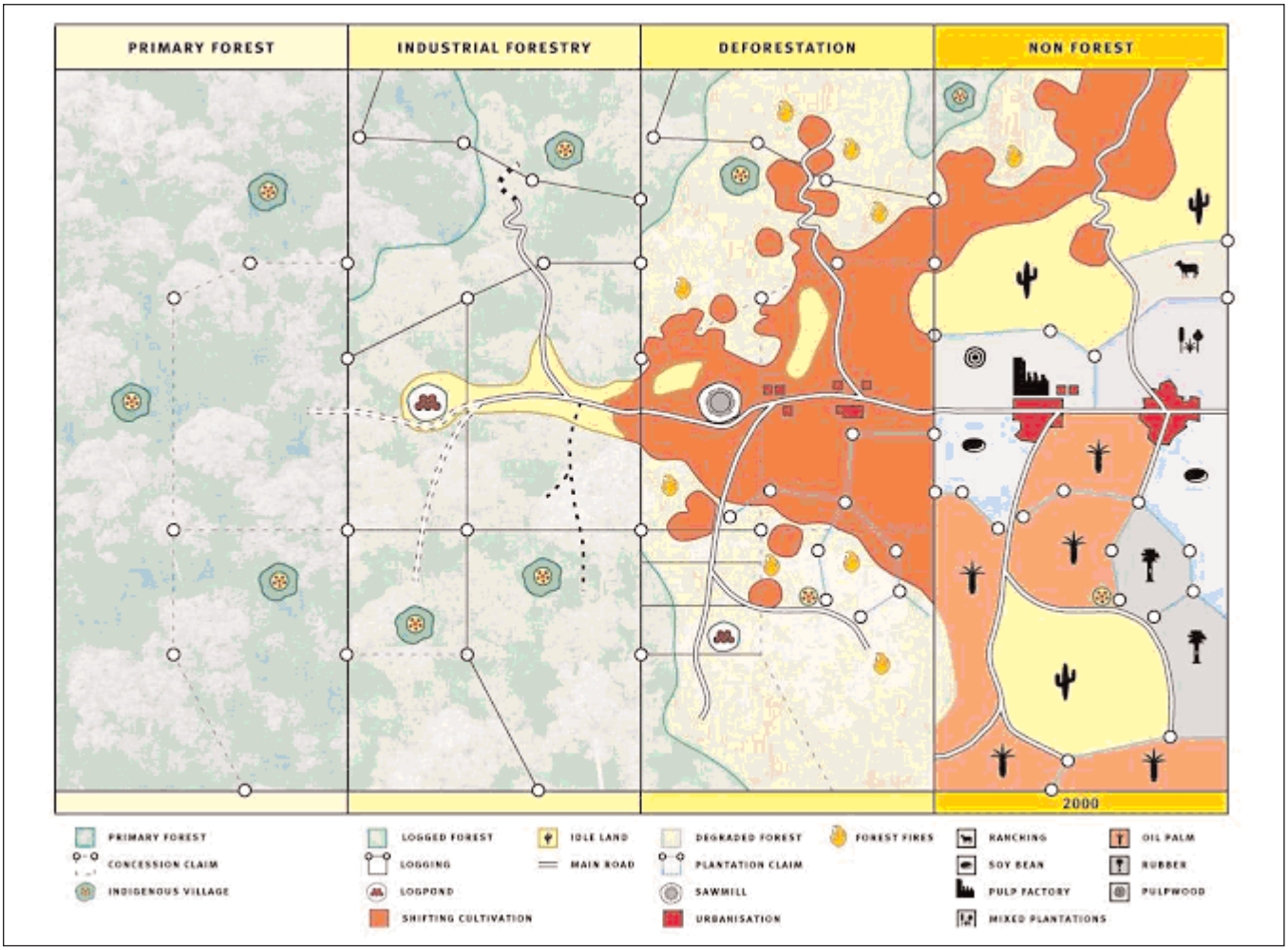
Forest conversion can be considered as a continuous process of forest degradation characterised by four different stages. The four figures below show these stages and the dynamics.

The four stages of the forest conversion process leading to deforestation




PRIMARY FOREST
INDUSTRIAL FORESTRY
1980
PRIMARY FOREST
CONCESSION CLAIM
INDIGENOUS VILLAGE
LOGGED FOREST
LOGGING
LOGPOND
SHIFTING CULTIVATION
IDLE LAND
MAIN ROAD


PRIMARY FOREST
INDUSTRIAL FORESTRY
DEFORESTATION
1990
PRIMARY FOREST
CONCESSION CLAIM
INDIGENOUS VILLAGE
LOGGED FOREST
LOGGING
LOGPOND
SHIFTING CULTIVATION
IDLE LAND
MAIN ROAD
DEGRADED FOREST
PLANTATION CLAIM
SAWMILL
URBANISATION
FOREST FIRES



Primary (natural) forest. This stage is characterised by closed canopy cover, little human influence, possibly low intensity / extensive use by indigenous communities, e.g. exploitation of non-timber forest products. There are no significant changes in forest functions and forest regeneration capacity is optimal. Concessions for selective logging may be allocated but are not yet operational.

Logged (natural) forest. Road construction is often the first industrial activity in the primary forest, followed by selective logging with variable intensity, depending upon the presence of commercial tree species and accessibility of the terrain. This stage provides the bulk of timber production in the tropics, much of which is export oriented. Net capital flows are outward oriented. After logging, a partially degraded logged over or residual forest remains. Natural restoration processes are still largely intact, although the regenerating capacity of valuable timber species might be endangered. Secondary forests provide little commercial timber, but still provide many forest products, have a high biodiversity and sequester large amounts of carbon. Hunter-gatherer communities tend to move deeper into the primary forest while some community members may be hired by logging companies. Commercial hunting pressure tends to increase significantly. Along logging roads total forest clearance, soil erosion and the first signs of shifting cultivation may be observed.

Degraded forest. This stage is a second wave of forest degradation as a result of (unsustainable) logging. A rapid influx of migrant settlers (e.g. unemployed logging crews) may occur, using the infrastructure left behind. The logging companies move deeper into the primary forest but sawmills often also obtain logs produced in the conversion area, often for local markets. Investments in sustaining the forest resource are minimal. Governmental interference is absent. Conversion forests have been cleared and burned for small-scale subsistence agriculture. Commercial agriculture is increasingly introduced, possibly after legal reclassification of logging concession areas to other land use categories. In this stage, logging is highly unsustainable and often considered illegal. Wildfires are more widespread and contribute to further forest degradation. In this stage, relatively stable semi-traditional subsistence agricultural and mixed agropastoral systems with various degrees of integration of trees and forest functions may consolidate for a longer period of time. Natural restoration processes are still intact to some extent. In this stage the area does not generate substantial export revenue.

Converted forest or non-forest stage. In the final stage, the last remaining forests are completely cleared/deforested. Significant loss of biodiversity occurs and most natural forest functions are affected temporarily (during conversion) or permanently (e.g. biodiversity). The landscape transforms from patchy small-scale agriculture to large-scale agro-industrial monocultures. This might include land-use for ranching, tree-crop plantations, annual crops, pulp wood plantations, etc. which may be introduced within a certain sequence as well (e.g. rubber being converted into oil palm, ranches being converted to soybean). Landless workers are thus pushed into the conversion forest or to urban areas. Like in stage 2, the area

generates substantial export revenue. Major capital and management inputs are required to develop and maintain the productivity of the large-scale monocultures, though land use is labour extensive compared to the former stage. Natural restoration processes have been largely destroyed; shifting back to (natural) forests requires major investments.

Frequent travellers in the tropics may recognise the geographic pattern of these four stages from the air while flying from an urban centre to a forest rich region. There are several frontiers characterising the transitions from one stage to another: the logging frontier (from stage 1 to 2), a colonising frontier with mixed activities (stage 2 to 3) and an industrial agricultural frontier (from stage 3 to 4).

Of course the forest conversion process does not always follow this pattern of all four stages. For example the agro-industry drives the forest conversion process in at least three possible ways:

- By clearing natural primary forests (stage 1) directly, thereby possibly also benefiting from the valuable timber, and thereby skipping the intermediate stages;
- By occupying logged land and land previously allocated to permanent forestry (stage 2), thus forcing timber exploitation to penetrate deeper into the primary forest. This is the most common form of expansion for the oil palm sub-sector in Southeast Asia.
- By occupying land used for small-scale agriculture and ranching (stage 3), thus forcing farmers and ranchers to clear secondary or primary forest. This is probably the most common form of expansion for the soybean expansion in Brazil.

No matter which of these transitions is most important, due to the interrelations between the different stages and the cumulative effect of various pressures on scarce (forest) land, land occupied for agro-industrial purposes directly or indirectly pushes the forest frontier zones further into the primary forest.

It is important to recognise the profitability of agro-industrial monocultures as a key driving force behind the forest conversion process. The role of international industry is often underestimated, while the logging and colonisation frontiers and their interaction are generally recognised.

Conclusions

The AIDEnvironment model of the forest conversion process leads to three main insights:

(1) The land-use dynamics including forests are complex. Thus, the ‘success’ of one policy measure depends upon a range of other contextual and policy factors.

(2) Forest conversion is often the result of a chain of decisions made at different spatial levels. Solution strategies should therefore engage actors at multiple-levels (from local to international).

(3) Apart from the forestry sector, actors and factors outside the forestry sector are very important players in the dynamics of forest conversion. A multi-sectoral approach is an indispensable condition for success.

Appendix 2 – Summary of the company survey in Germany

Company name	Observation
Oleo Chemicals (formerly AKZO Nobel)	Imports finished palm kernel fatty acids from Malaysia; joint venture with a Malaysian company
Walter Rau Neusser Öl und Fett AG	Uses palm oil, does not want to inform on volumes; claims that no Indonesian palm oil is used
Nestlé Deutschland	See Text
Unilever GmbH	see Text, wants to respond in more detail later
Lever Faberge GmbH	Owned by Unilever, for response referred to Unilever
Vand e Moortele (formerly Meylip)	in Germany only sells products, not involved in production
Cognis	See Text
Colgate Palmolive GmbH	in Germany only sells products, not involved in production
Henkel KG a.A.	Only uses processed product
Johnson & Johnson	No significant production in Germany
Beiersdorf GmbH	Does not buy palm oil, only processed product
Vortella Lebensmittelwerke	Refers to German Margarine association for response
Münsterländische Margarinewerke	Refers to German Margarine association for respo nse
Westfälisches Margarinewerk	Refers to German Margarine association for response
Homann Feinkost GmbH & Co KG	Does not use palm oil
Noblee & Thörl	Has promised to respond
Meistermarken-Werke	Refers to common response by VDOE association; promised additional individual response
Deutsche Cargill GmbH	Refers to common response by VDOE association; promised additional individual response
C. Thywissen GmbH Ölfabrik	Refers to common response by VDOE
Procter & Gamble GmbH	Will provide general response from USA head office
Agrarfrost GmbH & Co	Has promised response
Intersnack Vertriebs GmbH	Has promised response
L'Oréal	French head office said to respond
Avon Cosmetics	No response
Dresdener Margarinewerke	No response
Fauser VITAQUELLWERK KG	No response
Heinrich Hamker Lebensmittelwerke GmbH	No response
Pflanzenfett Velten GmbH	No response
Dommitzscher Pflanzenfett GmbH	No response
Otto Aldag GmbH & Co	No response
Jb. Schmidt Söhne GmbH & Co KG	No response
Gebr. Smilde GmbH Im- und Export	No response

Appendix 3 – European financial institutions with links to Indonesian oil palm companies

Notes:
1) The total figure for the concession areas includes a considerable amount of double counting, as many plantations are owned by more than one plantation group.
2) In some company cases no FI has been mentioned. They do have European financial stakeholders, but their influence in the company has not been assessed as 'strong', but as 'moderate' or 'minimal'.

European financial institutions with strong influence on Indonesian palm oil business groups
(Source: Van Gelder, 2001)

Group	Concession area (ha)	Financial institution	Country
Anglo-Eastern	35,087	HSBC	United Kingdom
Astra	298,621		
Bakrie	100,000	Rabobank	Netherlands
		Deutsche Bank	Germany
		Crédit Suisse	Switzerland
Barito Pacific	29,000		
Carson Cumberbatch	17,500	CDC	United Kingdom
		Rabobank	Netherlands
CDC	69,900	CDC	United Kingdom
Incasi Raya & Metro	134,304		
Johor	18,563		
Kumpulan Guthrie	325,000		
LonSum, Napan & Risjadson	355,424	HSBC	United Kingdom
		Rabobank	Netherlands
		Commerzbank	Germany
		Deutsche Bank	Germany
		UBS	Switzerland
		Crédit Suisse	Switzerland
Lyman	193,750	DEG	Germany
Oriental	22,000	Rabobank	Netherlands
Raja Garuda Mas	453,000	DEG	Germany
		Rabobank	Netherlands
		UBS	Switzerland
Rowe Evans	33,491	Aberdeen Asset Management	United Kingdom
Salim	227,207	Crédit Suisse	Switzerland
		UBS	Switzerland
Sinar Mas	591,000	FMO	Netherlands
		Bayerische Hypo- und Vereinsbank	Germany
		DEG	Germany
Sipef	53,000		
Total	**2,956,847**		

Indonesian Palm Oil Groups with European financial links *(Source: Van Gelder, 2001)*

Group	Concession area (ha)	Planted area (ha)	Annual CPO production (tons)
Anglo -Eastern	35,087	17,754	52,300
Astra	298,621	185,608	435,189
Bakrie	100,000	19,425	55,401
Barito Pacific	29,000	?	?
Carson Cumberbatch	17,500	13,800	?
CDC	69,900	?	?
Incasi Raya & Metro	134,304	?	?
Johor	18,563	?	0
Kumpulan Guthrie	325,000	?	400,000
LonSum, Napan & Risjadson	355,424	85,506	?
Lyman	193,750	?	?
Oriental	22,000	?	?
Raja Garuda Mas	453,000	130,000	600,000
Rowe Evans	33,491	23,583	?
Salim	227,207	?	800,000
Sinar Mas	591,000	272,800	850,000
Sipef	53,000	29,241	122,764
Total	**2,956,847**	**777,717**	**3,315,654**

Note: Total figures include a considerable amount of double counting, as many plantations are owned by more than one plantation group.

Appendix 4

Influence assessment of German FIs in the Indonesian Oil Palm Sector *(Source: Van Gelder, 2001)*

German FI	Indonesian Oil Palm Co.	Relationship	Influence Assessment
Bayerische Hypo- und Vereinsbank	Bakrie & Brothers	Shareholding	Minimal
	Bakrie Sumatera	Shareholding	Moderate
	LonSum	Loan 1996	Moderate
	PLSP	Loans 1996	Finished
	SMART	Trade financing	**Strong**
	Golden Agri-Resources	Principal banker	Moderate
Bayerische Landes bank Girozentrale	Bakrie Sumatera	Loan	Moderate
	Kulim (Malaysia)	Loan	Finished
	Gunung Maras	Loan	Moderate
Commerzbank	Sumalindo Lestari	Loan	Minimal
	Kulim (Malaysia)	Loan	Finished
	LonSum & PLSP	Loans 1994	Finished
	LonSum	Loan 1996	**Strong**
	PLSP	Loans 1996	Finished
	LonSum	Shareholding	Moderate
	SMART	Loan	Finished
Deutsche Bank	Anglo-Eastern	Banking	Minimal
	Bakrie & Brothers	Loans	Finished
	Bakrie & Brothers	Shareholding	Minimal
	Bakrie Sumatera	Loan	Finished
	Bakrie Sumatera	Loan & shareholding	**Strong**
	LonSum	Notes	**Strong**
Deutsche Investition - und Entwicklungs Gesellschaft (DEG)	Kalimantan Sanggar	Loan	**Strong**
	Agro Muko	Loan	Moderate
	Tapian Nadenggan	Loan	**Strong**
Dresdner Bank	Sumalindo Lestari	Loan	Minimal
	Bakrie & Brothers	Shareholding	Minimal
	Bakrie Sumatera	Shareholding	Moderate
	Incasi Raya	Loan	Finished
	Kulim (Malyasia)	Loan	Finished
	Nawa Panduta	Loan	Finished
Westdeutsche Landesbank Girozentrale (WestLB)	Sumalindo Lestari	Loan	Moderate
	Bakrie & Brothers	Shareholding	Minimal
	Bakrie Sumatera	Shareholding	Moderate

Appendix 5 – Recommendations for foreign financing institutions and banks

FOREST FIRES

Financiers may insist that their clients:
- Adhere to strict implementation of well-planned and ecologically appropriate land clearing techniques.
- Develop programmes for the conservation and restoration of ecologically valuable forests (these can also include burned forest!) and forests that are important to local people inside and near plantation areas.

DEFORESTATION

Plantation companies and their financiers can at least partially make up for deforestation in the past and, especially, avoid deforestation in the future considering that a substantial area of land not under forest cover is available in Indonesia. Financiers can insist that their clients:
- Provide independently verified evidence that no natural forests are converted for plantation development by any of the subsidiaries within a company group.
- Develop forest retention and forest restoration programmes in their concession areas. Financial incentives can help to compensate for the opportunity cost of forest retention, crop damage by wildlife and the cost of integrated pest control.
- Avoid hasty (mechanical) land clearing to minimise soil erosion.

ILLEGAL LAND CLEARING

Banks are keen to assure that their clients are not involved in illegal practises since because prosecution can seriously impede the company's ability to pay back debt. Financiers can insist that their clients:
- Provide evidence that all required permits are secured before land clearing operations commence(d).
- Restore or mitigate damage caused to forests and other vegetation along riversides and lakeshores.

POLLUTION

In order to minimise the environmental impact of investments in the oil palm industry, financiers can insist that their clients:
- Adopt and install appropriate wastewater processing technologies.
- Avoid heavy application of agro-chemicals in plantation areas and adopt integrated pest management approaches.
- Do not develop plantations in areas that require heavy agro-chemical inputs (e.g. peat).

SOCIAL CONFLICTS

Social conflicts often come at great cost to the plantation company and may thereby impede the company's ability to pay back debt. Financiers can insist that their clients:
- Provide independently verified evidence that local communities are fully informed about the project before project proposals are submitted. Consultations should include non-governmental organisations with expertise on the local situation and the needs of local communities.
- Assure no estates are developed in areas where communities resist this kind of development.
- Settle existing conflicts.
- Contribute to improved smallholder schemes and promote better labour conditions in private estates.

ECONOMIC EXPOSURE

The disappointing benefits of oil palm schemes on the livelihoods of local people and estate workers are a source of social unrest and reduce the productivity of smallholder schemes. Rather than to force an alien model of economic development upon local communities, financiers can:
- Assist in the development of production and markets of non-timber forest products such as illipe oil, rattan, rubber and other products based on indigenous forest and land use strategies.
- Assist oil palm producers to improve existing smallholder schemes, allowing farmers to opt for diversification of the cropping system.

CORRUPTION, COLLUSION AND NEPOTISM (KKN)

Considering that it is generally felt that the new government under president Wahid is serious in its efforts to fight KKN-practises, financiers to the plantation sector can assist the Government of Indonesia in its efforts by:
- Being reluctant to write off further bad debts that will allow a debtor to continue unsustainable practices.
- Taking into full account the KKN-record of the managers and owners of joint-venture companies and debtors in investment decisions and avoiding financial transactions with companies whose KKN-record has not been cleared.

source: Wakker, 2001

Forest Fires

Fire, depending on where, when and why it occurs, can be either an essential factor in the ecological cycle of the forested landscape and the survival of associated plants and animals, or a destructive unnatural threat. Fire is a natural disturbance factor in boreal and temperate forest regions, but all too frequently has been introduced or encouraged in other forest types. Suppressing or encouraging fire must start with an understanding, at the landscape or regional level, of how it can maintain, restore or undermine the ecological integrity of forest ecosystems, as well as its impacts on human activities. Today we are causing major disturbances to natural fire regimes around the world: sometimes by increasing rate of fires and by setting fires in forests that would seldom burn under natural conditions; sometimes by suppressing natural fires, causing ecological damage and leading to infrequent, catastrophic fires due to a build-up of inflammable material. Some analysts think that destructive fires cause as much forest loss and degradation as poor logging practices and agricultural conversion. In many areas people now deliberately or accidentally cause most of the fires. Harmful forest fires are a symptom of the underlying causes that drive other forms of forest loss, such as: misuse of economic incentives; inequitable land tenure; failure to recognise or respect customary law; and weak government institutions. Forest removal, by cutting or burning, frequently simplifies forest landscapes, by e.g. truncating age distributions and reducing diversity. A fire strategy should be consistent with goals to maintain or restore forests' ecological integrity, by understanding how management creates conditions that deviate from natural benchmarks and developing responses that help to maintain or restore ecological processes.

WWF believes that, where fires are a problem, inadequate attention is paid to their underlying causes and to preventing a downward spiral of recurrent catastrophic fires and consequent degradation. Effective and efficient fire strategies are needed on a case-by-case basis, addressing three elements: prevention, response and restoration. **Prevention** includes social and physical strategies for minimising the risks of destructive fire through education, management and by addressing underlying causes. **Responses** range from rapid fire-fighting tactics to longer-term management changes in forested landscapes. **Restoration** is required when repeated mismanagement of the fire regime causes serious ecological damage. Effective management also needs the **participation** of stakeholders (governmental, NGO, community and private sectors) in planning and implementation.

WWF will work with governments, international organisations and communities to address underlying causes of forest fires and reduce impacts of harmful forest fires, by:

- Working on forest fire policy as an ecological integrity issue, and crafting policy responses that return fire regimes to their historic frequency and intensity levels so as to restore natural forest types and conditions
- Supporting research to improve the understanding of forest fires and their associated costs and benefits, causes and management options
- Building awareness amongst policy-makers, the public and the media as to the underlying causes of catastrophic forest fires, their associated societal and economic costs and the importance of addressing these in a systematic fashion
- Mandating and equipping managers to implement integrated fire management plans
- Involving key stakeholders (especially local communities and land managers) in management planning and, where appropriate, implementation, assisting them to obtain the knowledge, skills and resources needed to participate effectively
- Developing and enforcing compatible and mutually reinforcing land-use laws that provide a legal basis for the ecologically-appropriate use of fire but discourage misuse, and that take account of social equity, welfare and human rights issues
- Discouraging land management practices that predispose forests to harmful fires
- Promoting management strategies to mimic natural fire regimes, where their ecology is known, including techniques such as prescribed burns and wildfire management
- Avoiding manipulating natural or well-established fire regimes as a means of meeting international climate change obligations
- Establishing reliable fire monitoring systems that provide early warning of high fire risk and fire occurrence, and include evaluation of ecological and human impacts of fire.
- Preventing further forest loss and degradation from recurrent catastrophic fires, and reduce fire risk in forested landscapes, through ecologically appropriate restoration
- Incorporating considerations of fire management when planning to maximise forest resilience and land use adaptability to climate change

Position Paper

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One of a series of position papers produced as WWF's response to the WWF/IUCN Forests for Life strategy and WWF's current five-year target-driven programme on forests
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Forest Conversion

During the last twenty years of the twentieth century, 300 million hectares of tropical forests were converted to non-forest land-uses worldwide. The conversion of forests to other land uses imposes severe environmental and social costs due to the ecological impacts of clearance, uncontrolled burning, and disregard for the rights and interests of local or indigenous communities. Without significant changes in policy and practice, the process of forest conversion is likely to continue at a rapid rate and pose a major threat to High Conservation Value Forests (HCVF – see separate position paper), freshwater ecosystems, livelihoods of forest dependant peoples and habitats of endangered species such as elephants, rhinos, tigers and great apes. Reduction of wildlife habitat leads to increased human-wildlife interaction and conflict.

WWF defines forest conversion as a continuous process of forest degradation, leading from natural forests over one or several steps to the replacement of forests by other forms of land use, such as plantations, agriculture, pasture, mining and urbanization. The driving forces behind forest conversion vary and are often interrelated. Among the most important are: the fact that forests are not valued for the long-term benefits that they provide, and that conversion often costs very little money. This creates incentives to log and sell the valuable timber out of forests and then convert the degraded forest land to more profitable land uses rather than to undertake sustainable forest management. Non-existent or insufficient landscape planning procedures and lack of guarantee of land ownerships and tenure rights often set the ground for uncontrolled and unwanted forest conversion processes.

WWF believes that forests are amongst the most diverse and valuable ecosystems around the globe. They provide a wide range of products and benefits for humans and nature that can rarely be substituted through other means. Therefore in general every effort should be made to prevent any forest, but especially HCV Forests from, being converted. WWF recognizes that under certain conditions planned and targeted conversion can be beneficial or necessary to reach specific goals of public interest without endangering the overall functionality of forests. Where conversion is planned the following conditions shall be fulfilled:

- Identified High Conservation Value Forests should not be affected by any forest conversion
- At a minimum, conversion must not contribute in any way to the extinction of species, or to the loss of significant subpopulations of an endangered species
- The total forest cover within a country or region should not be below an agreed long-term goal described in a National Forest Programme or planning documents developed through a multi-stakeholder process
- There should be proven and agreed public interest and benefits from the new land-use, that surpasses public interest in forest conservation
- There should be a transparent planning process on a landscape level, involving all relevant stakeholders
- Independent environmental and social impact assessments should be conducted and the necessary measures to prevent negative impacts of the conversion implemented

WWF will work together with governments, public and private institutions and other partners towards the elimination of unplanned and damaging forms of conversion to safeguard biodiversity and social values by:

- Calling for transparent planning processes to achieve an optimal distribution of natural forests, plantations, agricultural areas, urban areas and other land-uses in a given landscape. This includes well-informed negotiations among a wide range of stakeholders to balance ecological, social and economic dimensions of natural resource use across the landscape

- Enforcing adequate safeguards that recognize and guarantee the legal and customary rights of indigenous peoples and rural population to own, use and manage their lands, territories, and resources

- Engaging with financial institutions and market actors in forest conservation and lobbying for the elimination of policy incentives that contribute to forest conversion and forest destruction

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Oil palm

According to the WWF Living Planet Index, the tropical forest species index declined by 25% in the last thirty years. Worldwide, 300 million hectares of tropical forest were converted to non-forest land-uses during the last two decades of the twentieth century. Most of the world's oil palm plantations are within these converted hectares.

Oil palm plantations have often imposed environmental and social costs due to indiscriminate forest clearing, uncontrolled burning with related haze, and disregard for the rights and interests of local communities. Without significant changes in policy and practice, the expansion of oil palm plantations poses a major threat to high conservation value forests, freshwater ecosystems, livelihoods of forest dependant peoples and habitats of endangered species such as elephants, rhinos, tigers and orang-utans.

WWF recognizes that palm oil is a basic foodstuff with high consumer demand. The industry generates valuable foreign exchange earnings and employment opportunities for tropical producer countries. WWF is, however, deeply concerned at the prospect of the industry continuing to expand and operate in an unsustainable manner. WWF calls upon the industry, regulators, financiers, buyers and other stakeholders to work collectively to develop and promote adoption of environmentally appropriate, socially beneficial and economically viable practices in the oil palm industry.

WWF believes that key elements of sustainability within the oil palm industry are:

- **Maintenance of high conservation value forests**: Oil palm plantations should not replace high conservation value forests (see separate position paper). This will normally require well-informed negotiations among a wide range of stakeholders to achieve optimal integration of oil palm plantations with the mosaic of other land-uses in a given landscape or ecoregion.
- **Sound environmental management practices**: Industry participants should adopt management practices to minimize environmental impacts such as air and water pollution, forest fires, soil erosion, pest invasion, human/wildlife conflict and biodiversity loss.
- **Respect for rights of local communities and indigenous peoples**: Industry participants should recognise the legal and customary rights of local communities and indigenous peoples to own, use and manage their lands, territories, and resources. Plantation development should not proceed in areas over which there are unresolved tenure disputes.
- **Positive social impacts**: The industry should maintain or enhance the long-term social and economic well being of plantation workers and local communities. In many cases this will include the strengthening and diversification of the local economy to avoid dependence on a single plantation product.
- **Proficient regulatory frameworks**: Regulatory frameworks should encourage practices that will achieve the desired environmental, social and economic outcomes described above. At a minimum, industry participants shall respect all applicable laws of the country in which their plantations and mills are sited. However, responsible behaviour will often require standards of performance that exceed the requirements of local and national laws, especially where regulatory frameworks are underdeveloped or governance is weak.
- **Transparency**: Industry participants should adopt and make public their policies, practices and implementation plans pertaining to their social and environmental performance. They should encourage independent monitoring of their performance and make public their findings. They should involve local stakeholders both in the development of standards and performance monitoring.

WWF will work with governments, private companies, financial institutions and civil society organizations to:

- Develop and promote adoption of policies and practices consistent with this position
- Eliminate incentives for oil palm plantations to replace high conservation value forests

Position Paper

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One of a series explaining the WWF/IUCN Forests for Life strategy and WWF's current five-year target-driven programme on forests. For further details contact

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High Conservation Value Forests

High Conservation Value Forests (HCVFs) are defined by the Forest Stewardship Council as forests of outstanding and critical importance due to their high environmental, socio-economic, biodiversity or landscape values. WWF is developing and extending the HCVF concept in its wider protect-manage-restore programme. HCVFs comprise the crucial forest areas and values that need to be maintained or enhanced in a landscape. HCVFs are found across broad forest biomes (tropical to boreal), within a wide range of forest conditions (largely intact to largely fragmented), and in ecoregions with complete or under-represented protected area networks. HCVFs could be old-growth forests in Siberia, habitats of threatened orang utans in Southeast Asia or the sacred burial grounds of a North American first nations people. Although originally designed as a tool to help certification, the HCVF concept is being extended to more general conservation planning including the design of representative networks of protected areas and buffer zones.

The identification of HCVFs requires a multi-scale approach. First a rapid assessment and mapping of *potential* HCVF areas is made at a global or continental scale, based on indicators of biologically or environmentally important forest values that can be mapped at this broad scale. Next, these areas are further refined within ecoregions and a more detailed investigation within a given landscape delineates *actual* HCVFs, including local stakeholder consultation to identify forests that meet community needs and maintain cultural identity, and scientific research to identify biologically important forest stands and those critical for maintaining ecosystem functions and populations of endangered species.

WWF believes the first priority is to ensure that HCVFs are adequately represented in protected area systems. In practice, many HCVFs will continue to be managed outside protected areas and here approaches will vary – e.g. enhanced management or long-term "no-cut" reserves – but should always aim to maintain HCVF values. In regions where the forest is largely degraded, HCVF management should be consistent with a forest landscape restoration strategy (see separate position paper) that addresses ecological, social and economic objectives. Two principles are paramount: (1) HCVFs are managed to *maintain the attributes that are of high conservation value*, and (2) management employs the *precautionary principle*, which requires that where the effects of extraction and other management are unknown, values are insured through a cautious approach.

WWF calls on producers, retailers and investors in the forestry, agricultural, mining and petroleum sectors and governments to ensure that their business activities do not promote the clearing or degradation of HCVFs.

WWF will work with partners to identify and protect HCVFs by:

- Developing tools for identification of HCVFs that are applicable around the world, particularly through pilot projects and dissemination of the lessons learned
- Developing tools and activities for the adequate protection of HCVFs that are applicable around the world
- Working with the Forest Stewardship Council in developing detailed guidance on the application of FSC's Principle 9 that covers HCVF
- Co-ordinating with other organisations, so that a HCVF approach can integrate conservation agendas
- Working to ensure, where appropriate, that development of the HCVF concept is coordinated between interested organisations
- Further developing the concept of HCVFs as a useful guide for fulfilling ecologically friendly procurement policies for forest products
- Promoting and helping to apply the HCVF concept with forest managers and forest management certifiers in selected ecoregions

Position Paper

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WWF is the world's largest and most experienced independent conservation organization. It has 4.7 million regular supporters and global network active in 96 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

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