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Palm Oil as a Transnational Crisis in South-East Asia

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This paper discusses the recent palm oil expansion as a multiple crisis of climate change, biodiversity loss, and (failed) development. It draws on recent research on the Malaysian “Palm Oil Industrial Complex” and on transnational campaign coalitions around palm oil to explore the transnational dimensions of the palm oil crisis. It argues that a new campaign coalition around the issue of agrofuel policies in the European Union has emerged that links social and environmental struggles in Indonesia and Europe. This new transnational activism not only rejects the palm oil development paradigm, but also points to possible alternative development futures.

Keywords: *Palm Oil, Climate Change, Agrofuels, Transnational Activism, Indonesia & Malaysia*

Dieser Beitrag analysiert die gegenwärtige Palmölexpansion in Südostasien als multiple Krise von Klimawandel, Biodiversitätsverlust und (gescheiterter) Entwicklung. Forschungen zum malaysischen “Palmöl-industriellen Komplex” und zu transnationalen Kampagnenkoalitionen um das Thema Palmöl werden herangezogen, um die transnationalen Dimensionen der Palmölkrise zu skizzieren. Es wird gezeigt, dass eine neue Kampagnenkoalition gegen die Agrotreibstoffpolitik der Europäischen Union entsteht, die soziale und umweltbezogene Bewegungen in Indonesien mit europäischen Netzwerken verbindet. Diese transnationale Kampagne lehnt das Palmöl-Entwicklungsparadigma ab und zeigt mögliche Alternativen auf.

Schlagworte: *Palmöl, Klimawandel, Agrotreibstoffe, transnationale Kampagnen, Indonesien & Malaysia*

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Introduction

Over the last couple of years, palm oil has become a widely and controversially discussed topic in Europe. This is not so much because of the plant itself, which is actually quite useful, but because of the rapid expansion of oil palm plantations across South-East Asia which is seen as causing the destruction of rainforests (Buckland, 2005; Goossens et al., 2006; Nellemann, Miles, Kaltenborn, Virtue, & Ahlenius, 2007), as well as a lot of social problems (Wakker, 2005; Marti, 2008). The really contentious issue, however, is the idea that burning palm oil for energy and for fuel can be part of the solution in combating global warming (Hoijer, Silvius, Wösten, & Page, 2006; Greenpeace, 2007).

In this paper, I will attempt to analyze these issues as a multiple crisis of capitalism, one in which the crisis of climate change is connected to that of biodiversity loss but also to a crisis of development. I am using the term crisis in the sense of a deep and prolonged problem of catastrophic proportion to which currently adopted answers provide no solution. The climate crisis, therefore, is the combination of the problem of global warming that is progressing towards a tipping point² that could lead to rising sea levels, substantial changes in weather patterns, drought etc. (Intergovernmental Panel on Climate Change [IPCC], 2007, pp. 44-54) with the fact that the rate of growth of global emissions (as the primary cause) has *increased* between 1995-2004 (IPCC, 2007, p. 14), i.e. since the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, which aimed to reduce emissions. Similarly, the biodiversity crisis is a combination of the extinction of species³, with the fact that the “threats to biodiversity are generally increasing” (Secretariat of the Convention on Biological Diversity [SCBD], 2006, p. 3), despite the Convention on Biological Diversity (CBD) being in place for seventeen years. As I will argue below, although palm oil is promoted as a development strategy in South-East Asia, the current expansion is creating new poverty, leading to a development crisis in which the pursued model is undermining development.

At the same time, I will try to analyze palm oil as a *transnational* crisis. I am

² Commonly associated with a Greenhouse Gas concentration of 450ppm of CO₂-eq. (IPCC, 2007, p. 67).

³ For example, for South-East Asia, Sodhi and Brook (2006, p. 143) predict the loss of 24 to 63 percent of endemic species within the next century if current trends continue.

using transnational not in the colloquial sense of global or international, but in the more specific sense developed by (among others) Basch, Schiller, & Szanton Blanc (1994), Castles (2004), Pries (2001; 2008) and Vertovec (1999; 2009). Rather than using the “national container state” (Pries, 2001, pp. 3-33) as the term of reference, the transnational approach looks at the reconfiguration of and changing relation between spatial, economic, social, cultural and political spaces in which transnational communities are “based in two or more countries and engage[d] in recurrent and significant transactions, which may be economic, political, social or cultural over long periods” (Castles, 2004, p. 25).

Accordingly, I will try to very briefly identify the transnational economic, social and political spaces that shape the palm oil crisis.

Global Warming, EU Climate Policy and Agrofuels

At the heart of the multiple crisis is the failure of capitalism to deal seriously with climate change. In order to stabilize Greenhouse Gas (GHG) concentrations at 450 ppm CO₂-eq., an 80 percent reduction in global emissions will be necessary (IPCC, 2007, p. 67). This requires a shift towards a low-carbon economy in the key sectors responsible for emissions (energy, transport, industry, agriculture, forestry), i.e. an end to fossil fuel use (responsible for 56 percent of emissions), a fundamental shift in agriculture and an end to deforestation. The necessary change is deepest in the industrialized North (particularly the USA and Europe) where per capita emissions stand at sixteen tonnes compared to four tonnes in the Global South (IPCC, 2007, p. 37).

However, not only are the emission reduction targets (8 percent compared to 1990 levels) set out in the Kyoto protocol wholly inadequate to even slow down global warming, the mechanisms adopted – in particular emissions trading and the Clean Development Mechanism (CDM) – ensure that the necessary break with the fossil fuel economy does not take place. As Lohmann (2006, pp. 101-136) conclusively argues, emissions trading, by awarding the largest emitters the most emission permits and by treating every emission cut as the same, “locks in” existing technologies rather than encouraging structural changes which would accelerate the shift away from fossil fuels. In addition, the offsets involved in CDM projects in the Global South prevents

changes in the North (instead of cutting emissions in the North, the projects cut emissions in the South), and, in many cases, contribute directly and indirectly to increased emissions (Lohmann, 2006, pp. 219-328).

Inaction on climate change is not a technical problem. Already, we have at our disposal the technology that could usher in a solar, low-carbon era. The energy from the sun “provides 15,000 times more energy a day than the earth consumes” (Scheer, 2006, p. 1), and the potentially harnessed 1 percent of that would still provide six times the current level of energy consumption (Greenpeace & European Renewable Energy Council [EREC], 2007, p. 60). Leaving wind, wave and geothermal energy and autonomous photovoltaic units aside, areas as small as 11,000 km² (in Europe) and 6,000 km² (in South-East Asia) covered with solar thermal power stations could be sufficient to provide all energy needed by these two regions (Greenpeace & EREC, 2007, p. 63).

At issue are rather the specific “social relations of nature” (*gesellschaftliche Naturverhältnisse*) (Görg, 1999) involved in the way energy production is organized in late capitalism. On a fundamental level, the basic dynamics of capitalist production, i.e. the drive towards capital accumulation, market competition and the rate of profit, work against introducing solar energy. The amount of investment required means that – in competition with other energy sources such as coal – solar energy is more expensive and that the rate of return on investment is lower. Despite the huge future costs that societies will have to bear because of climate change, for a private energy company, it is still cheaper to dig up coal and burn it than to invest significant amounts in solar thermal power stations (Greenpeace & EREC, 2007, p. 33).

In addition, the particular historical development of capitalism has led to fossil fuel industries dominating the commanding heights of industry. This leads to a concentration of capital and of political power in industrial conglomerates which have an inbuilt interest to resist a shift away from fossil fuels, as their business is in selling more oil, cars etc.⁴ This can also be seen by the way in which oil- and coal, automotive, energy and mining corporations form coalitions to prevent climate

4 See for example Lohmann (2006, p. 121): „Major oil corporations such as BP and Shell, both enthusiastic initiators of internal trading schemes, have never voiced any serious intention to curb their main activities of oil exploration or production at any time. Although it has changed its name to ‘Beyond Petroleum’, BP committed itself in 2002 to expand its oil and gas output by 5.5 percent per year over the succeeding five years. Its emissions in 2001 were equivalent to almost two years’ carbon dioxide emissions from the UK.“

policies which could restrict future profits.⁵ In Germany, industry lobbying led to the (cost-free) allocation of emission permits of 44 million tonnes above the total emissions of the industries involved in the emissions trading scheme (Brunnengräber, 2009, p. 410).

These interests are then reflected in the negotiating positions of national states within the climate negotiations of the UNFCCC and in their national policies. For example, Germany, although rhetorically in favour of measures to mitigate climate change, resisted attempts within the European Union (EU) to impose more restrictive emission targets for newly built cars and responded to the financial crisis by introducing the so called *Abwrackprämie*, which subsidises car-owners to trade-in their old car and buy a new one. A visionary and carbon-neutral transport strategy is something else, as the *Abwrackprämie* is not based on CO₂ emission rates of cars. Rather than using the economic crisis and state investment to encourage the conversion of the automotive industry towards electric cars or public transport, the government is thereby “unnaturally” extending the lifeline of the car industry. The bottom line of climate change policies corresponds to the role as “national competition states” (Hirsch, 1995).

These three inter-related dynamics explain the emergence of the “biofuels agenda” in Europe leading us to the first transnational connection to South-East Asia. In December 2008, the European Parliament agreed upon a new Renewable Energy Directive (European Parliament, 2008), in which a mandatory target of 10 percent renewable energy for the transport sector was adopted. Although the definition of “renewable energy” has been broadened, most of the 10 percent target will be met by so-called “biofuels”⁶, i.e. petrol made from alcohol (i.e. from sugar cane or maize) or diesel made from vegetable oils (including palm oil).

The agrofuel agenda was developed by a corporate-dominated commission that was initiated by the EU: the *Biofuels Research Advisory Council* (BIOCRAF). In 2006, BIOCRAF put forward a report which called for an expansion of “biofuels” to 25

5 One example is the dominant influence of the Australian Industry Greenhouse Network (AIGN), a group of coal, oil, chemical, mining and automotive companies, on Australian climate change policy. The group gave itself the name “Greenhouse-Mafia” (Mazure, 2009).

6 The critics of biofuels, to whom I belong, use the term “agrofuels” which captures the large-scale industrial agriculture nature of petrol and diesel made from food crops better than the term “biofuels,” which has ecologically sustainable connotations that are unjustified. In this article, therefore, I use the term agrofuels, unless I am referring to statements by proponents of agrofuels, in which case I use biofuels in inverted commas.

percent of transport sector fuel by 2030. The commission (which has subsequently been reformed as the *European Biofuels Technology Platform*) was made up of three automotive companies (Peugeot, Volkswagen and Volvo), three oil companies (Neste Oil, Shell and Total), representatives of the biotechnology and food industries, and various associated research institutes (Corporate Europe Observatory [CEO], 2007). For these fossil fuel industries, agrofuels offer a way of reaching EU emission reduction targets whilst continuing with the same basic transport system (combustible engines, petrol, roads). Agrofuels are simply added to the 90 percent standard diesel or petrol, thereby ensuring that oil production, refineries, petrol stations, car manufacturing etc. can all remain in place. Rather than scaling down and ultimately breaking with the fossil fuel transport system, therefore, agrofuels contribute to expanding its life expectancy.

Furthermore, the political creation of a huge and politically guaranteed market for agrofuels is having repercussions around the world, particularly in South-East Asia. The palm oil industry calculates that the 10 percent target could translate into a volume of nine million tonnes⁷ of “biofuels” which would need to be imported, and is keen to fill the gap with biodiesel from palm oil (Basiron, 2008a, p. 14). EU climate policy is thereby contributing to an unprecedented expansion of oil palm plantations across South-East Asia.

The Palm Oil Industrial Complex and the Double Environmental Crisis

Even before the advent of a “biofuels” market, the palm oil industry had seen enormous growth. In Malaysia, the area devoted to oil palm doubled during the pre-1997 boom to nearly three million hectares. Since the economic crisis of 1997, the key area of expansion has been Sumatra and Kalimantan in Indonesia, with plantations expanding from 2.5 to nearly 6 million hectares in 2005. The prospect of agrofuel markets in the pre-2009-crisis years induced a frenzy of investment and mergers and to predictions of a further expansion of up to 25 million hectares for the region by 2020 (Colchester et al., 2006, pp. 24-26).

The expansion of oil palm plantations is driven by two distinct groups of companies

⁷ A considerable amount, when compared to a total Malaysian production of 17 million tonnes.

in Indonesia and in Malaysia, in which transnational corporations play a leading role. In Indonesia, these tend to be large-scale conglomerates which were formerly involved in logging as well as pulp and paper plantations, and for whom palm oil is a relatively simple continuation of the business of cutting down forests and replacing them with industrial tree plantations. For this reason, the Indonesian corporations tend to focus more on the “upstream” side of production, with plantations and palm oil mills, refineries and the production of Crude Palm Oil (CPO).

Key Indonesian players include Astra, Sinar Mas, Raja Garuda Mas, Musim Mas, and the Salim Group/Indofood, many of which had close links with former Indonesian president Suharto and his family, leading one analyst to write of „palm oil nepotism“ and of „Suharto’s palm oil oligarchy“ (Aditjondro, 2001). According to Aditjondro (2001), these political-economic linkages also extended to Malaysian and Singaporean corporations who formed joint ventures with “companies controlled by four Suharto siblings, namely Bambang Trihatmodjo, Tommy Suharto, Titiék Prabowo, and Siti Hutami Adiningsih.” Ten years after the overthrow of Suharto, a similar oligarchy (minus the Suharto clan) controls the production and trade of palm oil through the state corporation PTPN I-XIII (the largest plantation company with over 600.000 hectares of plantations) and private plantations.

After the Asian economic crisis in 1997 and the International Monetary Fund (IMF)-prescribed liberalisation of investment in the palm oil sector (Ginting, 2005), the transnational regional expansion of palm oil accelerated. A key role is played by Malaysian palm oil corporations. Casson (2000, pp. 41-43) lists 45 Malaysian investors who, together with their Indonesian partners, already controlled 1.3 million hectares – nearly half of the total area at that time – in 1998. Currently, the share of Malaysian companies in the Indonesian palm oil plantation area is estimated at between 30 and 40 percent.

Key Malaysian players are the state corporations Sime Darby and the Federal Land Development Agency (FELDA), and the private corporations IOI⁸, Kuala Lumpur Kepong Berhad and the Ganteng Group (Asiatic Development Berhad). The Malaysian palm oil corporations have a longer and slightly different history than their Indonesian counterparts. In contrast to Indonesia, the Malaysian industry emerged from the

⁸ IOI derives its acronym from Industrial Oxygen Incorporated, when the company was founded as a distributor of industrial gas, but is now just known as IOI.

colonial rubber plantation industry which was nationalized during the “New Economic Policy” of the late 1970s. They also tend to have a much deeper control of transnational production chains: apart from their regional investment in plantations in Indonesia (and more recently in Africa and Latin America) they also dominate “downstream” production, for example in oils and fats, oleochemicals and cosmetics.

The palm oil industry is a key plank in Malaysia’s development strategy and the influence of the state surpassed the kind of corrupt nepotism found in Indonesia. The state not only controls significant investment and some of the biggest companies directly, it has also actively intervened to forge a kind of “Palm Oil Industrial Complex,”⁹ linking state and private corporations, ministries and palm oil sector organizations in the national interest. Under the Ministry for Plantation Industries and Commodities, the Malaysian Palm Oil Board (MPOB) not only regulates the industry, but it is also heavily involved in research and development with hundreds of scientists working on improved plant material, processing technology and pioneering work in the “biofuels” industry (Malaysian Palm Oil Board [MPOB], n.d.). Another key institution is the Malaysian Palm Oil Council (MPOC), which was set up in response “to a campaign against tropical oils in the USA in the 1980s” (Teoh, 2002, p. 106) in order to “promote the positive image of Malaysian palm oil in order to maximize returns to the Malaysian palm oil industry” (Malaysian Palm Oil Council [MPOC], 2007, p. 2). The MPOC embodies the global reach of the Malaysian Palm Oil Industrial Complex (with offices in Beijing, Cairo, Chicago, Dhaka, Durban, Lahore, New Delhi, Sao Paulo and Vienna,) and the close nature of this “public-private-partnership”: board members include Haji Sabri Amad (the former chairman of Golden Hope), Carl Bek-Nielson (United Plantations) and Lew Yeow Chor (IOI Corporation) (MPOC, 2007, p. 6). Its chairman is Lee Oi Hian, the owner of Kuala Lumpur Kepong Berhad and one of the richest men in Malaysia.

Epitomizing the Palm Oil Industrial Complex is the recent merger of the three biggest state palm oil corporations – Golden Hope, Kumpulan Guthrie and Sime Darby – to form one of the two biggest palm oil corporations in the world. The merger was politically instigated and had the backing of the Ministry for Plantation Economics

9 The term is an adaptation of President Eisenhower’s “military-industrial complex.” In his farewell address to the US nation in 1961, Eisenhower warned against “the grave implications” of the “conjunction of an immense military establishment and a large arms industry” whose “total influence (economic, political, even spiritual) is felt in every city, every state house and every office of the federal government”, arguing that “we must guard against unwarranted influence, whether sought or unsought, by the military-industrial complex” (Eisenhower, 1961).

and Commodities and of the then Prime Minister Abdullah Ahmad Badawi, who gave the key-note speech at the ceremony at which the new name of the company – Sime Darby – was revealed (Sime Darby Plantation, 2008, p. 3). The new Sime Darby has assets of around ten billion USD and produces around 6 percent of global palm oil. Over half of its 545,000 hectares of oil palm plantations are in Indonesia. It also owns the former Unilever oils and fats processing plant Unimills B.V in Holland and the oleochemical company Cognis.

An important role in the emergence of a transnational palm oil industry is played by Singapore, which functions as a financial and trading hub for the sector. The Singapore-based corporation Wilmar is a good example. Wilmar was formed in 2007 as a merger between the palm oil operations of the powerful Malaysian agribusiness Kuok Group, the Indonesian millionaire Martua Sitoris, and the US corporation Archer-Daniels-Midland (ADM). Aside from its 570,000 hectares (the greater part of which are in Indonesia [Milieudefensie, Lembaga Gemawan, & KONTAK Rakyat Borneo, 2007, p. 15]) it can process around 10 million tonnes of crude palm oil in its 33 refineries. In the financial year 2007, Wilmar accounted for one quarter of global trade in crude palm oil (Wilmar International, 2008, p. 19).

The symbiosis of economic and political power located within the Palm Oil Industrial Complex has important ramifications for the way in which palm oil expansion is conducted across the region. State and corporate interests are combined in such a way that environmental or social concerns are subjugated beneath a general strategy of development and accumulation linked to a continuous growth of the sector. So, although both Malaysia and Indonesia have ratified the CBD and the UNFCCC, the expansion of the palm oil sector usually overrides the goals of both conventions, exacerbating the double environmental crisis of climate change and biodiversity loss.

The contribution of palm oil to global warming is primarily connected to the conversion of peatland forests. Peatland, which can reach a depth of up to 12 metres in South-East Asia, is a huge carbon sink. When drained for conversion to plantations, peat is exposed to aerobic decomposition, and burning drained peatland can lead to smouldering fires that can last for days. An influential report by Wetlands International, Wageningen University and Delft Hydraulics (Hoiijer et al., 2006, p. 29) estimated the total area of peatland in South-East Asia at over 20 million hectares and the total amount of carbon stored at 42,000 megatons. The report calculated

a total annual carbon emission rate from draining and burning peatlands of 2,000 megatons, putting Indonesia “in 3rd place (after the USA and China) in the global CO₂ emission ranking” (Hoijer et al., 2006, summary). Rather than reducing carbon emissions, agrofuels from palm oil therefore contribute to increased emissions. A recent report (Danielson et al., 2008, p. 353) calculated that it would take 75 to 93 years for the emissions caused by converting rainforest into palm oil plantations to be compensated by avoided emissions from fossil fuels. In the case of peatland forest, this would take up to 600 years.

In addition to contributing to climate change, the conversion of forests to palm oil plantations is worsening the biodiversity crisis. Despite claims by the Malaysian palm oil industry that oil palm is only established on former rubber and coconut plantations, much of the more recent expansion in Sabah and Sarawak has converted rainforests. According to a report by Friends of the Earth (2008, p. 29) on Sarawak, “the new area opened up for oil palm plantations in the 1990-2005 period (929,000 ha) nearly matches the reported natural forest cover loss in Malaysia over the same period (913,000 ha).” The planned expansion of up to 15 million hectares of additional plantations in Indonesia will invariably take place by converting forestland.

Even though much of this forestland has been logged and is degraded, the biodiversity implications are still tremendous. Research has shown that the conversion of formerly logged or degraded forest into oil palm plantations can lead to a reduction of bird and butterfly species by 60 to 80 percent (Danielsen & Heegaard, 1995; Wilcove, 2008). The impact of many and large plantations in changing the totality of a landscape and the resulting fragmentation of forests has even more severe effects on the long-term viability of populations of larger mammals such as the orang-utan (Buckland, 2005; Goossens et al., 2006; Nellemann et al., 2007).

The transnational nature of the palm oil industry is often neglected, particularly in the discussion of the environmental consequences of the palm oil boom. This is evident in the way the recurring problem of forest fires and haze is framed. Although haze is seen as a transboundary problem this is understood as a regional or *inter-national* problem, i.e. the fires occur mainly in Indonesia but affect Malaysia and Singapore (e.g. Quadri, 2001). The role of transnational corporations is not acknowledged, with the result that mitigation efforts are expected from the national policies and measures of Indonesia (albeit with regional support), and this could be one reason why Indonesia

has not ratified the Association of Southeast Asian Nations' (ASEAN) Agreement on Transboundary Haze Pollution. The role of Malaysian and Singaporean companies in forest burning has been documented. For example, a recent police investigation into three Wilmar subsidiaries in Landak, West Kalimantan, found that they "were guilty of burning land intentionally and systematically with the intent to clear land for plantation development" (Milieudefensie, Lembaga Gemawan, & KONTAK Rakyat Borneo, 2007, p. 26).

Palm Oil and the Development Crisis

The Malaysian Palm Oil Industrial Complex is particularly proactive in responding to environmental criticisms firstly by comparing palm oil with other oils (i.e. palm oil compares favourably with soy and rape seed because it has a longer life-span and is more productive) and secondly by asserting the right to development. At a recent conference on "sustainable palm oil," the CEO of the Malaysian Palm Oil Council, Yusof Basiron, claimed that "attacks from overzealous NGOs on palm oil may damage the oil that has served the world to provide food oil and income for the poor in producer countries" (Basiron, 2008b, p. 10). At the same conference, S. Paramanathan (2008), a retired official from the Ministry of Agriculture, argued that the development of peatland was necessary in order to eradicate rural poverty and to uplift the standard of living of indigenous peoples. The right to development is often framed in an anti-colonial discourse.

In contrast, many NGOs criticise oil palm plantations for worsening rural poverty, and agrofuels in particular have been linked to the food security crisis. In 2008, a World Bank report linked speculation around agrofuels to 75 percent of the increase in food prices (Mitchell, 2008, p. 17). In her detailed study of three Dayak communities in Central Kalimantan, Orth (2007) shows a significant reduction of food sovereignty for those villages in the vicinity of a recently established oil palm plantation.

The expansion of oil palm plantations is frequently accompanied by land conflicts. Small-scale farmer groups organized in the *Serikat Petani Indonesia* (SPI) oppose large-scale plantations because of food sovereignty issues. Indigenous groups organized in the *Aliansi Masyarakat Adat Nusantara* (AMAN) reject the further expansion of oil palm plantations because they encroach on their forestlands. In a recent conflict

in West Kalimantan, for example, one indigenous group issued a declaration which stated “the Semunying Jaya community call upon you to respect the sovereignty of our land, the protection of our water and forest resources as we inform you that we still refuse any oil palm plantation in our area, in whatever form or shape it may be” (Marti, 2008, p. 50).

At the same time, many local communities accept oil palm plantations to their area because they hope that they will be able to generate a higher income as smallholders and because of the promise of new jobs. In theory, subsistence and forest-based livelihoods are exchanged for higher income through cash crop production and for salaried positions, and this is the development paradigm that is being offered by government and the palm oil industry. However, many of these expectations are not met. In 2006, smallholders formed a union called the *Serikat Petani Kelapa Sawit* (SPKS) because of ongoing problems of indebtedness, low prices paid by the company and land issues (Serikat Petani Kelapa Sawit [SPKS], 2006, pp. 16-17). Since the collapse of palm oil prices at the end of 2008 these problems have become more severe.

As for the jobs created by the new industry, the low wages are not conducive to eradicating rural poverty but rather to cementing it. According to Marti (2008, p. 79), workers doing back-breaking work as harvesters or health-impairing work spraying herbicides usually earn the minimum wage or less, i.e. in 2006, 66 percent earned less than 400,000 Indonesian Rupiah or around 30 Euros a month. Although official wages in Malaysia are significantly higher at around 70 to 180 Euros a month (Malaysian Palm Oil Association [MPOA], 2005), official figures have been contradicted by the Indonesian Consulate, who claimed that Indonesian workers were often receiving less than two Euros a day (Marti, 2008, p. 83).

Indonesian plantation workers and their networks contribute to the formation of a transnational social space made up of migrant workers from (predominantly) Indonesia in the Malaysian plantations. Foreign workers now make up the bulk of the 500,000 plantation workers (MPOA, 2005, pp. 16-17), because local Malaysians do not want to work there. The main reason is that although the wages are attractive from an Indonesian perspective, they hardly provide for a decent living wage in Malaysia.

But low wages are not the only problem faced by the migrants. They have the status of “guest workers,” i.e. they are supposed to work for a period of three years (with an employer option to extend twice with a one-year contract) and then go

back home. Accordingly, they have no rights as a citizen, cannot organize, and are dependent on the employer who owns their work permit and who in some cases retains their passport as an additional measure to stop them “absconding” (Daud, 2006, p. 46). The newly amended Immigration Act of 2002 prohibits family members from joining the workers, leading to intense loneliness. When workers do bring their families (often in quiet agreement with management who see this as a stabilizing influence) they now face the problem that their children are now prohibited from going to Malaysian schools.

It is ironic that the palm oil industry uses an anti-colonial rhetoric to justify a development strategy that was introduced by colonialists. Indeed, many practices in the industry today are reminiscent of colonial times, from the recruitment strategy of workers through agents (under the British, this used to be called the *kangany* system), to their temporary status and limited political rights through to the “primitive accumulation” involved in taking land – often by force – from indigenous peoples. Scepticism towards this kind of development strategy seems justified. Serge Marti, for example, who has conducted research into the labour conditions of plantation workers in Indonesia, asks “whether Indonesia’s policy-makers intend to keep a large labouring class in low-paid, low-skill jobs as the rest of the country develops, or whether the country anticipates inviting millions of workers from even less fortunate countries to work on their plantations in future” (Marti, 2008, p. 84).

A Crisis of Legitimacy

The double environmental crisis of climate change and biodiversity loss and the development crisis connected to palm oil have all given rise to various social movements and NGO campaigns. Because of the specific links between South-East Asia and Europe, economically along the global supply chains and politically because of the EU’s agrofuel policy, these activities occur in a transnational political space in which the palm oil controversy takes centre stage. Important protagonists in this transnational political debate are the Palm Oil Industrial Complex, large European end-users of palm oil such as Migros, Sainsburys and Unilever, large international environmental NGOs such as the WWF, Greenpeace and Friends of the Earth, the European Commission’s Directorate-Generals for Energy and Transport (DG TREN)

and for Environment (DG ENV), and a wide range of local and transnational activists from both South-East Asian and European countries.

Two key transnational campaigns have emerged. The first was initiated by the larger environmental NGOs such as the WWF who used consumer awareness campaigns to put pressure on the larger brands and banks in Europe, who then negotiated with the palm oil suppliers in Malaysia to develop more sustainable management practices. The result was the foundation of the “Round Table on Sustainable Palm Oil” (RSPO) in 2002 as a stakeholder initiative dedicated to propagating “sustainable palm oil.” As a stakeholder initiative, the RSPO was singularly successful in integrating a large part of the industry and a few NGOs around a set of principles and criteria embedded within the paradigms of sustainable development and corporate social and environmental sustainability. The criteria include the commitment to “zero-burning,” the conservation of “High-Conservation-Value Forest,” the respect of land rights and the right to union representation.

However, lack of implementation of RSPO criteria and the fact that the RSPO supported the agrofuels agenda has undermined the legitimacy of the RSPO and given rise to a second campaign called the “Campaign Coalition for a Moratorium on Agrofuel Targets in the EU” (Econexus, 2007). Rather than targeting companies in the hope that they could become sustainable, the campaign focused on the political decision at the European level to set a mandatory target for agrofuels in order to stop a demand-driven further expansion of oil palm plantations.

This new coalition is not led by NGOs but involves a large number of different social movements, networks and local initiatives. In South-East Asia, most of the local initiatives and struggles arise from the social issues connected to palm oil expansion, particularly land rights but also labour conditions etc. and are therefore mainly located in Indonesia. As mentioned above, local groups of indigenous peoples, small scale farmers and workers are organized in national federations, some of which are members of Transnational Social Movement Organizations (TSMOs, see Smith, 1997, pp. 42-58) such as *La Via Campesina* and the *International Union of Food Workers* (IUF) which are important in the controversy surrounding palm oil.

Despite the palm oil industry’s depiction of the environmental NGOs as a kind of neo-colonial (protectionist) intervention from the North, forest destruction and biodiversity loss are key concerns in South-East Asia, and the Indonesian

environmental network *Wahana Lingkungan Hidup Indonesia* (WALHI) plays a central role in the transnational campaigning around palm oil. WALHI operates as a network of different local NGOs and activists but is at the same time a member of Friends of the Earth International, and has direct links with sister organizations in the Netherlands, Germany and the UK.

On the European side, Friends of the Earth member organizations are also important, but there is a whole number of smaller forest NGOs such as the Brussels-based FERN, or the German *Rettet den Regenwald* involved as well. The environmentalists are joined by citizen initiatives such as the *Bürgerinitiative „Kein Strom aus Palmöl!“* in Saarlouis-Dillingen or the *Arbeitskreis Heckenschutz* in Lüchow Dannenberg, by various North-South solidarity groups and by local chapters of the *altermondialist* network attac. The European groups were quite successful in influencing public opinion, with media coverage shifting against agrofuels within a two-year period¹⁰. However, although some of the modifications in the European Directive might be a result of campaigning work, the coalition did not manage to stop the 10 percent target.

Interestingly, however, the range of actors involved in the campaign brings together different paradigms, combining concerns over biodiversity loss and a critique of the fossil fuel economy with the demand for climate justice and food sovereignty. This has politicized the debate around palm oil beyond the single concern for the rainforest and orang-utans. Whereas the RSPO is firmly within the dominant paradigm of Global Environmental Governance, sustainable development, stakeholder initiatives and corporate responsibility, the new campaign coalition rejects it. Indeed, it has even given birth to a new declaration criticizing the RSPO for “greenwashing” the palm oil industry (“International Declaration,” 2008).

The key role played by environmental activists in WALHI and Friends of the Earth ensure that the forest issues are not framed in terms of conservation project management but within a frame that stresses social issues and human rights. The involvement of small-scale farmer organizations and *La Via Campesina* ensure that

10 Media was particularly critical in the United Kingdom and in Germany. For example, German television aired a whole series of palm oil-critical films by Altemeier and Hornung in 2007 and 2008, including “Hier Bio - dort Tod: Vom Sterben des Orang Utans”, NDR, Phoenix; “Der Palmöl-Skandal - Wie Stromkunden Umweltvernichtung finanzieren”, BR Report München; “Der letzte Wald der Orang Utans”, ARD - W wie Wissen 2007, “Umweltsünde Biosprit”, ORF - Weltjournal; “Mogelpackung Biodiesel”, ARD - Monitor; “Ohne Rücksicht - Brandrodung für Biodiesel”, ARD-Tagesthemen 13.12.07; “Die Biosprit-Falle”, SWR-Auslandsreporter (see <http://www.globalfilm.de>). The negative publicity was seen as a serious threat by the Malaysian palm oil industry. For example, Errol Oh (2009) argued in the Malaysian tabloid *Star*, that “Fuelled by a cocktail of environmental issues, the anti-palm oil lobby in the West is gaining traction, and failure to counter this well can be costly.”

a perspective of food sovereignty (small-scale production for subsistence and local and regional markets rather than industrial production for a global market) is part of picture. Organizations involved in the globalization-critical movement such as attac bring their critique of corporate-led neoliberal globalization into the campaign. As these movements fuse together, they could lead to a crisis of legitimacy for the current model of action – or lack of it – regarding climate change.

Conclusion

The palm oil boom in South-East Asia represents a multiple crisis, linking the crisis of climate change to that of biodiversity loss, of development, and ultimately, of legitimacy. This multiple crisis unfolds in South-East Asia through a number of transnational processes. Firstly, the rapid expansion of palm oil across the region is fuelled in part by European climate policy and particularly the role that agrofuels are hoped to play in reaching Kyoto and post-Kyoto emission reduction targets. Secondly, transnational corporations (TNCs) from Malaysia, Singapore and Indonesia have created global supply chains that link plantations with refineries and manufacturing. These TNCs are driving the spatial expansion of palm oil in the region. Thirdly, migrant networks of Indonesian palm oil workers are creating a new transnational social space between Indonesia and Malaysia. And fourthly, the controversies surrounding the rapid expansion of palm oil plantations have given rise to a political space connecting South-East Asia to Europe in which transnational campaign alliances intervene.

These transnational linkages are important for an assessment of the controversy surrounding the palm oil boom. Rather than resulting from conflicting interests between nation states, with a contradiction between conservation goals of Europe versus development goals of South-East Asia, two *transnational* alliances have emerged which unite protagonists in both Europe and South-East Asia around opposite agendas. The first alliance, linking TNCs in Europe (i.e. BIOCRAF) and South-East Asia (i.e. the Palm Oil Industrial Complex) promotes palm oil based agrofuels as a solution to the crisis of climate change, and as a viable development model. The second alliance, linking civil society groups in both regions, sees agrofuels as exacerbating climate change and the related expansion of palm oil as underwriting a development model which undermines indigenous land rights and which is based on a low-wage flexible

labour regime.

The renewed politicization of palm oil in connection with the agrofuel agenda shows that the attempt to incorporate criticism of the practice of palm oil production into a governance model based on corporate social and environmental responsibility – in the Roundtable on Sustainable Palm Oil – has failed to defuse the conflict. In the run-up to the Conference of Parties of the Climate Convention in Copenhagen, the transnational campaign alliances around palm oil are using the experience from South-East Asia to challenge the “false solutions” put forward by the European Union. In turn, this is contributing to the formation of a global movement around the paradigm of “climate justice” which links the double environmental crisis of climate change and biodiversity loss to the dominant development model of the North, and its repetition in the South. Alternatives being explored within this movement, around concepts such as food sovereignty, decentralized renewable energy, indigenous rights, negative growth etc. could provide a different and more viable solution to the multiple crisis represented by the current palm oil boom.

References

- Aditjondro, G. J. (2001). Suharto's Fires. Suhartos Cronies Control an ASEAN-wide Palm Oil Industry with an Appalling Environmental Record. *Inside Indonesia*, 65. Retrieved 21 April, 2009, from <http://insideindonesia.org/content/view/492/29/>
- Basch, L., Szanton Blanc, C., & Glick Schiller, N. (1994). *Nations Unbound: Transnational Projects, Postcolonial Predicaments, and Deterritorialized Nation-States*. Amsterdam: OPA.
- Basiron, Y. (2008a). Renewable Fuels in Emerging Markets: Gearing Global Biodiesel Production Through Malaysian Palm Oil. Retrieved 21 July, 2008, from <http://www.mpoc.org.my/download/tswirec.pdf>
- Basiron, Y. (2008b). *The Way Forward Towards Branded Malaysian Palm Oil*. Paper delivered at the “International Palm Oil Sustainability Conference”, 13-15 April, 2008, Sutera Harbour Resort, Kota Kinabalu, Malaysia.
- Biofuels Research Advisory Council. (2006). *Biofuels in the European Union. A Vision for 2030 and Beyond*. Retrieved 15 April, 2009, from http://food.gate2finance.com/sites/food.gate2finance.com/files/Biofuels_in_EU_vision_2030.pdf
- Buckland, H. (2005). *The Oil for Ape Scandal. How Palm Oil is threatening Orang-Utan Survival*. London: Friends of the Earth.

Brunnengräber, A. (2009). Prima Klima mit dem Markt? Der Handel mit dem Recht, die Luft zu verschmutzen. *PROKLA*, 156, 407-424.

Casson, A. (2000). *The Hesitant Boom: Indonesia's oil palm sub-sector in an era of economic crisis and political change*. CIFOR Occasional Paper Nr. 29. Bogor, Indonesia.

Castles, S. (2004). The myth of the controllability of difference. Labour migration, transnational communities and state strategies in the Asia-Pacific region. In B. S. A. Yeoh & K. Willis (Eds.), *Perspectives on Transnationalism in the Asia-Pacific* (pp. 16-36). London: Routledge.

Corporate Europe Observatory. (2007). *The EU's agrofuel folly: policy capture by corporate interests*. Briefing Paper. Retrieved 22 September, 2008, from <http://www.corporateeurope.org/agrofuelfolly.html#appendix>

Colchester, M. & Jiwan, N. (2006). *Ghosts on our Own Land: Indonesian Oil Palm Smallholders and the Roundtable on Sustainable Palm Oil*. Bogor, Indonesia: Forest Peoples Programme & Perkumpulan Sawit Watch.

Colchester, M., Jiwan, N., Andiko, Sirait, M., Firdaus, A. Y., Surambo, A., et al. (2006). *Promised Land: Palm Oil and Land Acquisition in Indonesia - Implications for Local Communities and Indigenous Peoples*. [Monograph]. Retrieved 27 July, 2008, from http://www.forestpeoples.org/documents/prv_sector/oil_palm/promised_land_eng.pdf

Danielsen, F. & Heegaard, M. (1995). Impact of Logging and Plantation Development on Species Diversity: A Case Study from Sumatra. In O. Sandbukt (Ed.), *Management of tropical forests: towards an integrated perspective* (pp. 73-92). Oslo, Norway: University of Oslo.

Danielson, F., Hendrien, B., Burgess, N. D., Parish, F., Brühl, C. A., Donald, P. F., et al. (2008). Plantations on Forested Lands: Double Jeopardy for Biodiversity and Climate. *Conservation Biology*, 23(2), 348-358.

Daud, A. (2006). Labour Constraints in the Plantation Industry. *Oil Palm Industry Economic Journal*, 6(2), 37-48.

Eisenhower, D. (1961). *Farewell Radio and Television Address to the American People, 17 January 1961*. The American Presidency Project. Retrieved 4 December, 2009, from <http://www.presidency.ucsb.edu/ws/index.php?pid=12086&st=military-industrial+complex&st1=>

Exonexus. (2007). *Call for an immediate moratorium on EU incentives for agrofuels, EU imports of agrofuels and EU agroenergy monocultures*. Retrieved 19 February, 2009, from http://www.econexus.info/pdf/agrofuels_moratorium.pdf

European Parliament. (2008). *Standpunkt des Europäischen Parlaments festgelegt in erster Lesung am 17. Dezember 2008 im Hinblick auf den Erlass der Richtlinie 2009/.../EG des Europäischen Parlaments und des Rates zur Förderung der Nutzung von Energie aus erneuerbaren Quellen*. Retrieved 5 February, 2009, from <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2008-0609+0+DOC+XML+V0//DE&language=DE#top>

Friends of the Earth. (2008). *Malaysian palm oil - green gold or green wash? A commentary on the sustainability claims of Malaysia's palm oil lobby, with a special focus on the state of Sarawak* [Monograph]. Retrieved 15 June, 2009, from <http://www.foei.org/en/publications/pdfs/malaysian-palm-oil>

Ginting, L. (2005). Indonesia: IMF and Deforestation. *WRM Bulletin*, 95.

- Goossens, B., Chikhi, L., Ancrenaz, M., Lackman-Ancrenaz, I., Andau, P., & Bruford, M. W. (2006). Genetic signature of anthropogenic population collapse in orang-utans [Electronic Version], *PLoS Biol* 4(2), 0285-0291.
- Görg, C. (1999). *Gesellschaftliche Naturverhältnisse*. Münster, Germany: Westfälisches Dampfboot.
- Greenpeace. (2007). *How the Palmoil Industry is Cooking the Climate* [Monograph]. Retrieved 9 November, 2007, from <http://www.greenpeace.org/raw/content/international/press/reports/cooking-the-climate-full.pdf>
- Greenpeace & European Renewable Energy Council. (2007). *Energy (R)evolution. A Sustainable World Energy Outlook* [Monograph]. Retrieved 15 June, 2009, from http://www.greenpeace.de/fileadmin/gpd/user_upload/themen/energie/energyrevolutionreport_engl.pdf
- Hirsch, J. (1995). *Der nationale Wettbewerbsstaat: Staat, Demokratie und Politik im globalen Kapitalismus*. Berlin: Editon ID-Archiv.
- Hooijer, A., Silvius, M., Wösten, H., & Page, S. (2006). *PEAT-CO2, Assessment of CO2 emissions from drained peatlands in SE Asia*. Delft Hydraulics report Q3943.
- International Declaration Against the 'Greenwashing' of Palm Oil by the Roundtable on Sustainable Palm Oil (RSPO). (2008). Retrieved 6 February, 2009, from <http://www.biofuelwatch.org.uk/docs/15-10-2008-RSPO-Ingles.pdf>
- Intergovernmental Panel on Climate Change. (2007). *Climate Change 2007: Synthesis Report* [Monograph]. Retrieved 18 March, 2009, from http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf
- Lohmann, L. (2006). Carbon Trading. A Critical Conversation on Climate Change, Privatisation and Power [Electronic Version]. *Development Dialogue*, 48, 1-362.
- Malaysian Palm Oil Association. (2005). Foreign Workers in the Plantation Sector: Issues and Prospects. In Malaysian Palm Oil Association (2005). *Annual Report 2004*, 16-17, Retrieved 27 February, 2008, from <http://www.mpoa.org.my/pdf/ar2004.pdf>
- Malaysian Palm Oil Board. (n.d.). *MPOB ... the Steward of Malaysian Palm Oil Industry*. Kuala Lumpur, Malaysia.
- Malaysian Palm Oil Council. (2007). *Annual Report 2006*. Retrieved 20 July, 2008, from http://www.mpoc.org.my/mktstat_annualreport_2006.asp
- Marti, S. (2008). *Losing Ground. The human rights impacts of palm oil expansion plantation in Indonesia*. London, Edinburgh, UK, & Bogor, Indonesia: Friends of the Earth, LifeMosaic, & Sawit Watch.
- Mazure, L. (2009, May 8). Die grünen Hunde (Uta Rüenauer, Trans.). *Le Monde diplomatique*, 8879, 4-5.
- Milieudéfense, Lembaga Gemawan, & KONTAK Rakyat Borneo. (2007). *Policy, practice, pride and prejudice. Review of legal, environmental and social practices of oil palm plantation companies of the Wilmar Group in Sambas District, West Kalimantan (Indonesia)* [Monograph]. Retrieved 27 July, 2008, from <http://www.milieudéfense.nl/globalisering/publicaties/rapporten/policy-practice-pride-and-prejudice.pdf>
- Mitchell, D. (2008). *A Note on Rising Food Prices*. Policy Research Working Paper 4682. New York: The World Bank.

- Nellemann, C., Miles, L., Kaltenborn, B. P., Virtue, M., & Ahlenius, H. (2007). *The Last Stand of the Orangutan. State of Emergency: Illegal Logging, Fire and Palm Oil in Indonesia's National Parks* [Monograph]. Retrieved 4 November, 2007, from http://www.unep-wcmc.org/resources/PDFs/LastStand/full_orangutanreport.pdf
- Oh, E. (2009). Failure to counter new anti-palm oil tactics will be costly to Malaysia. *StarBiz*. Retrieved 15 September, 2009, from <http://www.palmoilhq.com/PalmOilNews/failure-to-counter-new-anti-palm-oil-tactics-will-be-costly-to-malaysia/>
- Orth, M. (2007). *Subsistence Foods to Export Goods. The impact of an oil palm plantation on local food sovereignty. North Barito, Central Kalimantan, Indonesia* [Monograph]. Retrieved 19 June, 2008, from <http://www.biofuelwatch.org.uk/docs/foodsovereigntyindonesia.pdf>
- Paramanathan, S. (2008). *Tropical Lowland Peats: To Conserve or Develop Them?* Paper delivered at the "International Palm Oil Sustainability Conference", 13-15 April 2008, Sutera Harbour Resort, Kota Kinabalu, Malaysia.
- Pries, L. (2001). The approach of transnational social spaces: responding to new configurations of the social and the spatial. In L. Pries (Ed.), *New Transnational Social Spaces* (pp. 3-33). London: Routledge.
- Pries, L. (2008). *Die Transnationalisierung der sozialen Welt*. Frankfurt a. M, Germany: edition suhrkamp.
- Quadri, S. T. (2001). *Fire, Smoke and Haze. The ASEAN Response Strategy*. Manila, The Philippines: Asian Development Bank.
- Scheer, H. (2006, June). The Post-Fossil Future. *Le Monde diplomatique*, June 2006. Retrieved 3 December, 2009, from http://www.hermannscheer.de/en/index2.php?option=com_content&do_pdf=1&id=133
- Secretariat of the Convention on Biological Diversity. (2006) *Global Biodiversity Outlook 2 [Electronic Version]*. Montreal, Canada.
- Sime Darby Plantation. (2008). Dawn of a New Era [Electronic Version]. *Seedlink*, 1, 6, 3.
- Smith, J. (1997). Characteristics of the Modern Transnational Social Movement Sector. In J. Smith, C. Chatfield, & R. Pagnucco (Eds.), *Transnational Social Movements and Global Politics. Solidarity Beyond the State* (pp. 42-58). Syracuse, USA: Syracuse University Press.
- Serikat Petani Kelapa Sawit. (2006). Declaration of Serikat Petani Kelapa Sawit, Sanggau District, West Kalimantan, Indonesia. Wisma Tabor, Pusat Damai, 9 June 2006. In M. Colchester & N. Jiwon (Eds.), *Ghosts on our Own Land: Indonesian Oil Palm Smallholders and the Roundtable on Sustainable Palm Oil* (pp. 16-17). Bogor, Indonesia: Forest Peoples Programme & Perkumpulan Sawit Watch.
- Sodhi, N. S. & Brook, B. W. (2006). *Southeast Asian Biodiversity in Crisis*. (Cambridge Tropical Biology Series 5). Cambridge, UK: Cambridge University Press.
- Teoh, C. H. (2002). *The Palm Oil Industry in Malaysia. From Seed to Frying Pan* [Monograph]. Retrieved 27 July, 2008, from http://www.rspo.org/resource_centre/OP_Chain_Part%20A_new.pdf
- Vertovec, S. (1999). Conceiving and researching transnationalism. *Ethnic and Racial Studies*, 22(2), 448-462.
- Wakker, E. (2005). *Greasy Palms. The social and ecological impacts of large-scale palm oil plantation development in Southeast Asia* [Monograph]. Retrieved 18 June, 2007, from http://www.foe.co.uk/resource/reports/greasy_palms_impacts.pdf

Wilcove, D. S. (2008). *Biodiversity and Oil Palm: Understanding the Conflicts and Finding Opportunities for Cooperation*. Paper delivered at the "International Palm Oil Sustainability Conference", 13-15 April 2008, Sutera Harbour Resort, Kota Kinabalu, Malaysia.

Wilmar International Limited. (2008). *Asia and Beyond. A Leading Agribusiness Group. Wilmar Annual Report 2007*. Retrieved 2 June, 2008, from <http://www.wilmar-international.com/investor/2007%20-%20AR.pdf>