MEMORANDUM

‘ISSUES SURROUNDING THE DEVELOPMENT OF LARGE-SCALE MONOCULTURE PLANTATION PROJECTS IN SARAWAK

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I INTRODUCTION

This memorandum is written to highlight a select group of issues linked to the development of large-scale oil palm and pulpwood plantation schemes in Sarawak.

We understand that up to 2007, the Sarawak Forests Department has issued some 40 large plantation licences (Licence for Planted Forests – LPF) encompassing an area of 2.8 million hectares, while the Sarawak Lands and Surveys Department is overseeing hundreds of licences smaller than 5,000 hectares totalling up to at least 500,000 hectares in all. This approximately amounts to around 23 percent of Sarawak’s total land area, larger than the size of the state of Perak.¹

Large scale monoculture plantations in developing countries are designed to provide secure, stable and cheap raw materials to the markets of powerful and developed economies. While some have argued that such ventures will give beneficial economic gains to our country, in truth most of the profits are captured by private corporations at the expense of local communities and the environment. Such ventures are usually funded by low-interest loans, tax exemptions, tax investment credits and infrastructure subsidies given by the government, the burden of which will be passed to our taxpayers. Further, the advent of large monocultures also puts into question the sustainability of Sarawak forestry practices and the depletion in its timber resources.

II NATIVE CUSTOMARY RIGHTS, SARAWAK

The advent of plantation projects in Sarawak is especially worrying given the fact that issues surrounding Native Customary Rights (NCR) land conflicts have yet to be adequately addressed by the Sarawak State Government. As such, we would like to seek clarifications on the following issues pertaining to the NCR from both the State and Federal Governments.

1. Judicial decisions

In our view, the Sarawak State Government’s position on the NCR, which refuses to recognise these rights in their entirety in the manner in which the people have developed and maintained them based on their customs and traditions, is incompatible with several judicial decisions.² In light of these decisions, we believe the legality of the monoculture licences, even if they have been issued by the state in accordance to its administrative procedures, is still open to question. We must bear in mind that the failure of the state to respect judicial decisions has grave legal implications to our governance system.

In relation to this, we urge that the recent SUHAKAM report on the NCR, Legal Perspectives on Native Customary Land Rights in Sarawak, authored by esteemed law academician Professor Ramy Bulan with Amy Locklear, is studied in detail by all the authorities concerned.³

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As judicial decisions are part of the law, we thus would like to seek further response from the Sarawak State Government and the Federal authorities on their adherence to the following judicial decisions:


This decision affirms that indigenous peoples will continue to have rights over their customary land, even if their traditional territories have yet to be gazetted. As such, only Orang Asli as defined in the Aboriginal Peoples Act 1954 have the right to forest produce (including timber) in Orang Asli areas and reserves, even if they have not been gazetted yet as such. The court then ruled that a logging company that had been legally issued with a logging licence in the area had no rights to carry out their operations within the plaintiffs’ traditional territorial boundaries.

(ii) Kerajaan Negeri Selangor & Ors v. Sagong Tasi & Ors, Court of Appeal, 2005

This decision affirms that indigenous communities have native title under common law over their land, with proprietary interest, which is an interest in and to the land. As such, compensation over loss of their land must be paid to affected peoples in accordance with the Land Acquisition Act 1960. On May 22, 2009, the Selangor State Government announced its withdrawal from the Appeal.4

(iii) Borneo Pulp Plantation & Ors v. Nor Nyawai & Ors, Court of Appeal, 2004

This decision affirms that NCR do extend to both cultivated areas and non-cultivated areas, specifically in communal forests where hunting and gathering activities take place. The High Court affirms the meanings ascribed to the exercise of such rights through native terms like pemakai menoa (distinct territorial domain held by a longhouse village where customary rights to land and resources were created by pioneering ancestors) which includes temuda (farmland), pulau galau (preserved communal forest) for hunting and gathering activities, along with other sites like pendam (cemetery plots) and tembawai (old longhouse sites).

Although the decision of the Court of Appeal cites Sagong Tasi in defining the limits to aboriginal rights and its proprietary interest to the area that forms their settlement, and not to the jungles at large where they used to roam to forage for their livelihood in accordance with their tradition as otherwise it may mean that vast areas of land could be held under native customary rights simply through assertions by some natives that they and their ancestors had roamed or foraged the areas in search for food, the size of the area of the settlement is a question of fact in each case.

The Court of Appeal neither disputed the validity of the aforementioned customary land rights descriptions nor took issue with the respondents’ assertion of customary rights on the disputed area through the claims that their ancestors had cleared [it] for cultivation, accessed [it] for fishing, hunting and to gather forest produce but instead it ruled that unfortunately credible supporting evidence was lacking for such an assumption,

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and that the people had failed to show that the disputed area was in fact under continuous occupation by them and their ancestors.

(iv) Superintendent of Lands & Surveys, Miri Division & Anor v. Madelli Salleh, Federal Court, 2007

The decision affirms its agreement with the decisions in Adong Kuwau, Nor Nyawai and Sagong Tasi, which asserted that the principles of common law do respect the pre-existence of the NCR under native laws and customs. It ruled that native rights owe its existence to native customary laws or adat and not to modern statute or legislation. The Federal Court further agreed with the Court of Appeal that there can be occupation without physical presence on the land, provided sufficient measures of control are in existence in order to prevent strangers from interfering and evidence is clearly established that there is continuation in the exercise of control over the land.

Equally important, there is also affirmation that individual and communal native rights have equal legal force.

We note with great urgency that the Sarawak State Government’s application to the Federal Court for a review of this decision was dismissed on May 5, 2009.

2. Governance

Apart from the above, the Sarawak State Government also appears to have a political priority of protecting business interests from logging to dam construction, at the expense of the NCR. There is a lack of good governance in this matter and the rights have been systematically compromised over the years. The following are our concerns:

(i) Throughout the years, there has been a progressive circumscription of native rights through the various amendments made to the Land Code 1958 and Forests Ordinance 1954 and the introduction of new statutes and legislation. Some these legal developments tend to promote the concentration of power at the executive level and in the case of the Sarawak Land Survey Ordinance 2001, particular sections of the law had the effects of usurping the functions of the judiciary.

All amendments and new laws that violate and compromise on the full rights of our indigenous communities are in essence contradictory to our Constitutional provisions. The protection of the rights of indigenous communities in the country, including their right to land and property is guaranteed under the Federal Constitution, and must be complied with by all Federal and State laws and regulations.

The following are the provisions concerned:

Articles 5 & 13
Right to life and property

Article 160
Native Customs and Usage having the force of Law
Articles 8(5), 153, 161A
State to protect rights and interests of natives and aborigines and fiduciary duty of the State.

In addition, Article 39 of the Sarawak State Constitution also provides for the protection of the rights of its native communities.

(ii) The Sarawak State Government has not been diligent in consulting the people to determine the extent of their NCR claims and in documenting their communal boundaries and the land use patterns within these boundaries. As a result, there is a lack of harmonisation between the land classification as delineated by the state records and the people’s actual land rights claims on the ground.

Demarcating NCR claims based on colonial aerial photographs in order to distinguish forested areas from cultivated farms does not constitute a participatory process; the photographs themselves will not be able to demonstrate ground conditions accurately. Equally important, the state’s policy of regarding that the people have no rights to their communal forest (pulau galau) is at best a legal fiction, given our judicial decisions on the matter, as described above.

To date, there is no proper participatory mechanism instituted to demarcate the traditional territorial boundaries of indigenous communities so as to ensure that licensed activities such as logging and plantation development can only be carried out in such areas with the people’s written and explicit Free, Prior and Informed Consent.

Establishing the proper procedures to demarcate such communal boundaries within a multi-stakeholder process that seeks to verify claims on oral history, geographical familiarity, community migration and ancestry as well as those related to hunting, gathering and cultivation activities and other occupation rights can in fact be readily done. Further, such a process can also utilise the latest in satellite and information technology widely available today. If carefully planned, such a process will enable communities to support their claims with corroborative evidence and prevent occurrences of self-serving claims from being made.

(iii) The land and forest laws of Sarawak have been given increasing power to extinguish the NCR without meaningful consultations and full information disclosure to affected peoples. All existing processes allocate an inadequate duration of time for notification, consultation, objection and corrective procedures. This is highly prejudicial to the people living in remote areas. Apart from that, there is no Free, Prior and Informed Consent process instituted, and in some instances, it is not even compulsory to personally serve extinguishment notices to affected communities. Specifically, we would like to refer to Sections 3-24 and 25-39 of the Forests Ordinance 1954 for the gazetting of Forest Reserves and Protected Forests, and their counterpart sections in the National Parks and Nature Reserve Ordinance 1998 and Wild Life Protection Ordinance 1998, as well as Sections 5(3) and 5(7) of the Land Code 1958.
The practice of issuing logging and monoculture licences outside of the Permanent Forest Estate, in what is termed as State Land Forests where NCR can still exist if no specific termination pronouncement has been made, is also a practice plagued by legal ambiguity.

The lack of information disclosure on development plans, including logging and plantation licences, as well as other administrative records for affected peoples and public interest groups.

All of the above concerns require urgent attention from both the Federal and Sarawak State Governments. The inadequacies and arbitrariness of forestry and land governance in Sarawak imply that the advent of large-scale plantation schemes will most likely aggravate existing land conflicts.

III DEFORESTATION & UNSUSTAINABLE FORESTRY MANAGEMENT

It is a fact that the advent of plantation concessions in Sarawak is causing massive deforestation. The conversion of forests into plantations, even those that have been logged over, is deforestation. From satellite pictures to concession maps, the Malaysian Federal and Sarawak State Governments must stop denying the facts on paper and on the ground.

Recently our publication has detailed the extent of concessions held under the Planted Forests Licence. We thus would like to highlight the following to both authorities:

(i) If logging operations in Sarawak are indeed sustainable, Sarawak should be able to produce a continuous supply of timber in the future. Today, some timber concessions should already be in their second cycle of harvesting based on the 25-year selective logging system that is apparently employed in the Permanent Forest Estate. If this is the case, then certainly there is no need to convert such forests into plantations, since sufficient conservation measures would have ensured adequate forest regeneration and hence, future timber yields. Clearly this has not been the case – the forestry management practices in Sarawak are far from sustainable. In the past 30 years, timber extraction rates have been excessively high and incompatible with the 25-year cycle on which the selective harvesting system is based on.

(ii) Clarification is needed on the status of Forest Reserves and Protected Forests under the Permanent Forest Estate that overlaps with plantation concessions. Such areas cannot be deemed as part of a permanent forest if they have been converted into other land uses.

IV MONOCULTURE PLANTATION LICENSING PROCESS IN SARAWAK

The following are some of our concerns on the manner in which plantation concessions are established and developed in Sarawak.

1. **Non-transparent land and forest governance framework**

As the case with logging licences, the issuance of plantation licences by the Sarawak Forests Department and the Lands and Surveys Department is highly non-transparent. The process is carried out without public scrutiny – the state government is not compelled to publicise information on the demarcation of concessions, the terms of their contract and the justification for the choice of concessionnaires. Further, the Environmental Impact Assessment (EIA) process also lacks mandatory public participation. The level of transparency is so poor that even our repeated attempts of requesting information and maps of the Permanent Forest Estate in the state has failed.

2. **Weakness in the concession system**

In a World Bank commissioned-study conducted by John A. Gray, an examination of common key issues on tropical forest concession systems was carried out. Below are some of the considerations that Gray has raised, which can be used to analyse the corresponding issues in Sarawak.6

(i) **Concession size and forest fees**

Enormous concessions granted over vast areas tend to encourage wasteful use of land and poor resource management. In Sarawak, some of the most powerful timber corporations have been known to get away with 1.5 million hectares of logging areas, which translates into more than 17 percent of the total areas held under concession.7 The LPF concessions in Sarawak are equally excessively large, averaging 70,000 hectares per concession with the largest, LPF 1 covering nearly half a million hectares. Further, concessionnaires are not significantly charged for their land, which should be set at significant levels to encourage them to relinquish excess forest areas. It appears that the state has no clear policy on the limits of concession size.

(ii) **Bidding on concessions and transparency in concession allocation**

The Sarawak plantation licensing process, like its logging issuance process, is not based on a competitive and open tender system. As such, the public has no information on the terms of licensee selection. This opens the system to abuse and unlawful influences, including wasteful rent-seeking behaviours, and does not promote a more efficient system for managing forestry concerns.

(iii) **Concession management incentives and performance incentives**

Agreements must provide sufficient incentives for responsible forest management and these must include measurable performance requirements. Interim concession licences and performance bonds can provide incentives for compliance, as can level and structure of forest fees.

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(iv) Inspection, monitoring and auditing forest management

It has been pointed out many years ago that the Sarawak Forests Department was very much understaffed, limiting its inspection and monitoring capacities.\(^8\) With the corporatisation of the department, we believe the issue of insufficient and inefficient human resource has only worsened. The authorities need to provide clear answers to several enforcement issues, from large open burning for land clearing to recently, allegations on the illegal intrusions into Indonesian territories by Malaysian private plantation companies.\(^9\)

(v) Local community’s customary territorial claims

Forest concession agreements in Sarawak and their EIA studies do not sufficiently address issues of concession licences that overlap with NCR territories. There are no participatory measures that incorporate the Free, Prior and Informed Consent process to identify and demarcate such areas and there is procedural ambiguity as to how the people are to be consulted in order to address their claims within the concession boundaries. The EIA process also often fails to adequately report on socio-economic population and data.\(^10\)

V KONSEP BARU & ‘DEVELOPMENT AREAS’

The conversion of the remaining forests into plantations in Sarawak is also facilitated by the amendments made to the Sarawak Land Code in 1997 with the insertion of Section 18(a). This particular section empowers the state to declare an area as a Development Area and to issue a lease over such land for as long as 60 years to any corporate body approved by the Minister, including statutory bodies that are categorised as Native by the Land Code. On the expiry of the lease, the people whose land had been included in a Development Area must apply to the state if they wish to re-establish their land rights.

Another parallel development is the establishment of the Konsep Baru in the management of NCR land, with the details spelt out in handbook published by the state. The basic mechanism of the Konsep Baru is to turn “unorganised” and “fragmented” NCR land into an economic asset by pooling and mobilising the resources of the people into an NCR Land Bank, on which large scale development projects can take place. An NCR Land Bank with areas exceeding 5,000 hectares is regarded as viable for private investments without the assistance from any form of state funds.

We view both the Konsep Baru and the gazetting of Development Areas as inherently problematic. The financial ownership and arrangement of the Konsep Baru for instance does not entail clear economic benefits to participating communities. The following are some of the issues that need to be responded to by the authorities:

(i) Section 18(A) of the Land Code that allows for the establishment of Development Areas in reality has the effect of permanently terminating the

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\(^10\) Please see #5 for further information.
peoples’ rights on their traditional land. There are no clear guidelines as to what will happen 60 years after the declaration of an area. Although there are some recommendations that the land be sub-divided and given titles to the respective owners or that further joint ventures are undertaken with the consent of the landowners, the law must be more specific than this.

(ii) Development Areas devoted to monocultures will cause the permanent and total loss of forest and land resources of the people. As such, even if the land is returned to its respective owners after the expiry of its status, future options of utilising the land will be severely limited for them.

(iii) The Konsep Baru guarantees only a little cash payment for the people which would be 10 percent of the total land value. The rest of the financial benefits will have to be based on profit-sharing results and the management of the people’s money held in trust by the state, which as we will argue below, may result in other problems.

(iv) Business arrangements as proposed by the Konsep Baru may actually expose the people to the risks of being dominated and even deceived by their corporate partners that will most likely be the party that holds accounting and management rights. Profit-sharing ventures between private companies and rural villagers often entail an unbalanced partnership in which the former tend to have more dominance and control over business decision-making processes and operations. Hence, such commercial undertaking may not necessarily translate into demonstrable improvements in the people’s livelihoods and income levels. We also have a cause to worry given the fact that many of the plantation companies involved tend to belong to the same timber business groups that for years have been accused of encroaching into the people’s land, without entering into any meaningful negotiation process with the people while being generally reluctant to meaningfully compensate the people’s loss of resources, unless there are aggressive and continuous protests from affected villages. Some have also been alleged to resort to legally questionable tactics to intimidate and mislead affected communities.

(v) The development of “land banks” in Sarawak which imitates land settlement programmes from Peninsular Malaysia may bound to be a mistake. Similar efforts of government-managed land schemes with a share-ownership system had in fact been attempted in the 1980s by the state, and they resulted in failure and the loss of public funds due to among others, the failure to recognise the differences in the ethnic and cultural contexts between Peninsular Malaysia and Sarawak.¹¹

VI COMMUNITY PROTESTS

In Sarawak, plantation projects have been a cause of anxiety to affected communities. Besides voicing their protests through soft approaches like letter writing, some

communities have taken legal actions against the project proponents and the state authorities, while violent clashes with company personnel and the law are not unknown.

In the mid 1990s, two Iban longhouse communities from Ulu Niah in the Miri Division began to protest against the encroachment of an oil palm plantation into their traditional territories. After lodging seven police reports and receiving no response, the communities’ protests resulted in a tragic clash in 1999 which claimed the lives of four of the plantation company staff. The most unfortunate outcome of this was a nearly blind 80-year old man from the community who was also suffering from hearing impairment was eventually sentenced to twelve years imprisonment. Meanwhile, in Bakong, an Iban man died from a gun-shot wound from paramilitary police force during his attempt to defend the communities’ homeland from an oil palm scheme.

Communities from Long Lama and upper Baram (Miri Division), Plieran and Penyuan, Koyan and lower Belaga (Kapit Division) to those nearer to urban centres such as Bintulu have all began to voice their opposition against the development of plantations on their land, as with their opposition against logging and dam-building activities. Since 1995, there have been at least 135 number of legal actions initiated by affected communities on the violations of their customary land rights.

We would like to caution the authorities that this aggressive assault on the continuity of the traditions, customs and rights of the people will certainly have grave implications to the people’s livelihoods, social and cultural fabric, mobility, health and quality of life as well as increasing the already sky-high poverty level in the communities.

VII ADVERSE ENVIRONMENTAL IMPACTS OF LARGE SCALE MONOCULTURES

The ecological problems that arise with large scale monocultures are multifaceted. They can be caused by the exotic species of trees farmed as well as the manner in which the plantations themselves are maintained by the heavy use of chemical inputs and later compounded by the processing of pulp or fats in the nearby factories. However underlying all the problems is by virtue of its size, huge monoculture farms are bound to alter local ecology originally made of a natural system of complex biological interactions, no matter the species planted in the farms.

Soil preparation, fertilisation, herbicide use, clearing of undergrowth, elimination of diseased trees, thinning, persecution of animals which can damage trees and periodic logging in the case of pulpwood plantations, can cause profound changes to local ecosystem. In addition, problems may also arise as a result of increased shade, accumulation of leaf litter and dead branches on the ground, competition for water and nutrients, cumulative effects of certain changes in soil and the allelopathic effects of some species which produce chemical substances. In short, large scale plantations are inherently bad for themselves, possessing the natural ability to self-destroy.

The recent unusual mass deaths of fish in Sarawak inland rivers including in Bakun, Mukah, Kapit and in Baram are one such cause for concern. It has been reported that the deaths are believed to be caused by siltation triggered by logging, plantations and land-clearing projects, according to the Sarawak's Ministry of Environment and Public Health itself.

Below are the further descriptions on the adverse environmental impacts of large scale monocultures.

1. Water cycle

The following impacts of plantations to the local ecology of water cycle may lead to the reduced availability of water, discontinuity in the flow of watercourses in low periods, increased impacts of droughts and the modification or destruction of natural ecosystems like wetlands.

(i) Changes in the ratio between the amount of water intercepted by the foliage and the amount of water reaching the ground

The foliage of a plantation differs from that of a natural forest in biomass, height, form of cover and shape and distribution of leaves and branches. In addition, plantations also lack undergrowth. Thus these traits significantly change the normal quantity of water intercepted and evaporated by the soil.

(ii) Changes in the ratio between the amount of water which runs off the surface and the amount of water which infiltrates the soil

This is affected by the type of humus generated by the plantation and the quantity of accumulated leaf litter, which may facilitate or complicate the absorption and infiltration of water which reaches the surface. The volume of water which crosses the canopy also affects this ratio. Soil compacted by heavy machinery also impedes infiltration, encouraging evaporation.

(iii) Changes in the ratio between the amount of water evapotranspired and the amount of water which infiltrates through to the subsoil water supply

This ratio depends largely on how water is used by the species planted. Growth rate is directly related to water consumption. In plantations that use the fastest-growing genotypes of fast-growing species, water consumption tends to be extremely high.

2. Flora and fauna

(i) Uncontrollable reproduction of planted species

Some plantation species may reproduce beyond the plantation and become pests to the local vegetation.

(ii) Imbalances in natural animal population

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For most local animals, plantations devastate their food sources, shelter and reproduction opportunities. For some species however, plantations may provide both food and shelter from predators and this can lead to a sharp decline in predator population and uncontrolled breeding of prey populations. In Chile, plantations have caused a drastic reduction in fox numbers and an increase in rodent and rabbit populations, which in the end affected the pine plantations.

(iii) Disturbance to soil microrganism and insects

The enormous variety of life forms existing within the soil (including bacteria, viruses, small insects and worms) can suffer large impacts from the combination of changes in leaf litter and other decomposing vegetable matter and changes in the chemical composition and structure of soil.

(iv) Disease and pest proliferation

Pulpwood trees like the acacias are commonly known to be affected by the *thelephora* fungus, wood borers and the heart rot and pink diseases. In addition, they are consumed by many leaf insects such as the *hemipteran*, white flies, mites, caterpillars, termites and carpenter ants. Seedlings may be defoliated by *hypomeces squamosus* and scale insects and mealy bugs are also common problems in such plantations. Frequently, one-third of acacia mangium in some plantations is affected by a rot that causes hollow boles, making the timber of no use for any purpose but wood chipping and pulping, and adding to the danger when felling. In Uruguay, the species *Pinus radiata* eventually failed because the trees were attacked by the pine shoot moth. Similar fates of abandoned plantations can be found from Brazil to the Philippines.

The new diseases or pests that resulted from the introduction of large monocultures can also attack native vegetation. In India, a fungus which developed on an exotic pine is now threatening the survival of native pines. In Kenya and Malawi, an aphid which began by attacking the exotic cypress moved on to two local trees.

Local life forms can also learn to adapt slowly — and when a certain species becomes successful in utilising what is essentially a food desert to others, their population can rise exponentially and cause severe damage to whole plantations.

The susceptibility of large plantations of exotic species to diseases and pests are often amplified by the narrow genetic base of the trees. For instance, it is widely acknowledged that the whole stock of *acacia mangium* in Sabah comes from a single Australian parent.

3. Soil erosion and changes in nutrient cycle

(i) Erosion

Erosion caused by land clearing increases topsoil run-off, disturbs stream-flow and increases sediment loads in rivers and streams. Soil erosion, for example, is five to seven times greater during clearance, while sediment loads in rivers increase by a factor of four. Whereas some of these impacts are temporary, the pressure on riverine and coastal ecosystems remains significant in many areas because land clearing and
development is continuously taking place in different areas in the same watershed. Soil erosion is especially problematic when oil palms are planted on steep slopes and at high altitude.

(ii) Disruption in the nutrient cycle

Soil imbalances in plantations arise between the nutrients taken up by the roots and those given back to the system by dead organic matter. Trees such as eucalyptus and pine tend to reduce the action of decomposing agents such as fungi and bacteria because nutrients contained in the leaf litter are not freed up in a form that would allow them to be taken easily by roots.

Chemical changes such as acidification of the soil and the introduction of new chemical compounds make life more difficult for many decomposers, and changes in humidity, temperature, and light have an additional impact. Some decomposers can also simply disappear.

The leaf litter of pulpwood trees contains tannin, lignin, oils, waxes, and other substances that are difficult to digest or even toxic for soil flora and fauna, tends to accumulate on the soils, and leaves from exotic pines have been known to take up to three to four years to decompose.

For pulpwood plantations, the soil becomes poorer in direct relation to growth rates and felling rotations. Fast growth combined with slow litter decomposition means that trees are extracting nutrients faster than they are replacing them.

4. Threats of fire

Plantations also burn very easily due to the accumulation of dry, leathery leaf litter and the drier local climate caused by monoculture farms as opposed to natural rainforest ecology. Acacia and eucalyptus plantations are particularly susceptible to fire as their leaves are high in oil content. Trees that are three years of age or younger are the most vulnerable, as their thin bark is not yet fire resistant. Moreover, the proliferation of low-level branches often helps to carry fire from grassy understorey to the crowns of the trees. This frequently gives added intensity to a fire, turning what may start as a low-level burn into a high-intensity blaze once it enters a plantation site.

In 1997 and 1998, fires raged throughout rural Indonesia, affecting no less than six percent of the country's total landmass. The damage inflicted by such fires and haze is catastrophic. Wildlife, natural habitats, and ecosystems in the worst affected areas were devastated beyond recovery. There were also heavy losses felt more directly by the public, including damage to health from months of breathing heavy smoke-haze, losses to businesses forced to shut down for weeks or months by the haze and interruption to transport, air-breathing machines and destruction of other economic and social resources.

A report by the Centre for International Forestry Research (CIFOR) tagged the economic cost of the 1997/98 Indonesian fires and the subsequent haze to have cost somewhere between US$ 2.3-3.5 billion, not including the costs of carbon release which may have amounted to as much as US$ 2.8 billion. CIFOR further estimated that the fires affected
11.7 million hectares of land, half of which was forestland and 447,000 hectares were estate cropland.\textsuperscript{16}

Assessments showed that, depending on the region and time of year, between 46 and 80 percent of larger Indonesian fires in 1997-1998 occurred in plantation concessions, around three-quarters of which were oil palm plantations. Of the 176 companies listed by the Indonesian government as potential culprits behind the fires, 133 were alleged to be oil palm plantation companies.\textsuperscript{17}

Although it is notoriously difficult to prove, it is still possible that within such areas, some fires were lit by company staff or locals hired by the company. Land clearing accounts for almost 20 percent of the costs of preparing an oil palm plantation and burning forests and debris from clear felling, as opposed to mechanical clearing and stacking, is still widely considered to be the most practical, quickest and cheapest clearing technique. So-called “zero-burning techniques” are US$50-150 per hectare more expensive than burning.\textsuperscript{18}

\textbf{5. Agrochemical pollution}

Use of chlorine in pulp bleaching has caused the paper industry to be the third largest source of dioxin and its related compounds in the world today. About 300 chemical compounds have been identified in pulpwod mill effluents including organic pollutants and suspended solids, chlorophenolics and their transformation products, acidic compounds and organochlorines. Air emissions include dioxins and furans, carbon dioxide, hydrogen sulphide, oxides of sulphur, oxides of nitrogen and chloroform.

For oil palm, palm oil mill effluents (POME) have been a major pollution source. POME is a waste mixture of water, crushed shells and a small amount of fat residue. Most crude palm oil mills have outdoor basins in which POME is stored and somewhat detoxified by adding oxygen but these basins easily overflow during heavy rain or intensive production. The high Biological Oxygen Demand (BOD) content of POME is highly polluting to waterways and has significant negative effects on aquatic life downriver. In addition, since the Fresh Fruit Bunches (FFB) of palm oil need to be processed within 24 hours of harvest, a processing mill is usually built for about every 4,000 - 5,000 hectares of plantation. This means that numerous new processing facilities will be operating in rural Sarawak.

Up to 25 different pesticides may be used by the oil palm plantation sector, but because usage is not controlled or documented, monitoring is very difficult. The most commonly used weed killer in Southeast Asia's oil palm plantations is paraquat dichloride. This herbicide is very toxic, may be fatal if inhaled, ingested or absorbed through the skin and


its effects are irreversible. There is no known antidote to paraquat poisoning. Paraquat is persistent and accumulates in the soil with repeated applications.

Agricultural workers are regularly exposed to this toxic substance during handling and mixing, spraying and working in freshly-sprayed fields. Women, who due to their physiological makeup are more vulnerable to the harmful effects of agrochemicals than men, are predominantly responsible for mixing, handling and spraying pesticides on palm oil plantations.

The fertilisers, herbicides and pesticides can also be carried by wind or water and create impacts far beyond the plantation areas. These chemicals will contaminate soil, waterways and the atmosphere and affect plants, animals and human health.

VIII ECONOMIC VIABILITY CONCERNS

The economic benefits of large scale plantations have often been grossly overestimated while their management costs are downplayed so as to create the financial justification for such environmentally and socially unsound projects. With the diversion of public funds by tax breaks and subsidisation seized by the industry and other associated ecological and social costs incurred in the development and maintenance of the plantations and in the processing and production of the end products, the distribution of the economic risks of such ventures is often unfairly distributed across different stakeholders.

The ecology and economics of large plantations is inherently fragile. The larger the monoculture farms, the higher their risks of ecological failure will be. Other long-term pressures may include irrational land, water and energy resource utilisation, fire and other environmental impacts as mentioned in the previous section. In addition, rapid expansion of large monocultures will also reduce the diversity of our agricultural production and increase the vulnerability of our economy since the commodities concerned are subject to global price fluctuations and market manipulation.

Further, it has often been pointed out that much of Sarawak soils are highly unsuitable for large scale commercial agriculture. Briefly, the hilly terrain of the interior, where most of the proposed monoculture farms are planned, covering some 68 percent of the state’s total land area, and the generally poor soils, mean that only a relatively small portion of the total area is easily accessible to human settlement or agriculture. A recent study on the agricultural potential of the state estimated that only some 28 percent of the total land area, or about 3.5 million hectares is suitable for agriculture. In fact, almost half of this is considered “marginal”, with the remainder classified as either “moderately suitable” or “suitable” for commercial agriculture. Thus in total, only about 207,000 hectares are considered to be free of major limitations to agriculture.

In a similar tone, while other sources may estimate that as much as 2.5 million hectares of Sarawak land to be suitable for agricultural development, it is admitted that such land is mainly on hilly or steep terrain or peat swamps.


Likewise, while another survey conducted by the state sponsored body, Palm Oil Research Institute of Malaysia (PORIM) in 1995 indicated that about 599,000 hectares of Sarawak land is suitable for oil palm cultivation and a further 3.4 million hectares are classified as marginally suitable, 46 percent of these are made up of peat soil. The survey also showed that 89 percent of the peat swamp is under deep peat.\textsuperscript{21} Utilisation of peat soil land for oil palm is more challenging as it requires more intensive inputs in respect of infrastructure, resulting in higher costs of its development which can stretch up to 50 percent higher than on ideal mineral soil.\textsuperscript{22}

The following section deals with specific concerns on the two types of monocultures planted in Sarawak.

1. Pulpwood Plantation\textsuperscript{23}

For pulpwood plantations, the overestimation of their profits are often based on the unsubstantiated assumption that their yields will not decline during second and third rotations and that management costs will not increase during the second and third rotations.

For instance, the replanting target of the proposed Sino-Malaysia Joint Venture Forest Plantation in Kalabakan and Gunung Rara in Tawau is between 20,000 and 30,000 hectares per year. This figure itself is highly ambitious as the best Malaysian replanting effort has been only around 6,000 hectares per year.

This belief that harvest and sale volume and maintenance costs would remain constant throughout the rotations is very misleading. These assumptions ignore inherent biological limitations of growing foreign species like \textit{acacia mangium} for instance, where the nutrient demands of the tree simply do not allow for consistent yields and maintenance costs over the long-term.

There is ample evidence to show that plantation productivity is often low or declines in the second rotation due to poor site fertility and the lack of good management. Growth of a single rotation of \textit{acacia mangium} in Indonesia resulted in the depletion of more than 60 percent of two vital soil nutrients — potassium and calcium — within a soil depth of 40 cm. All these will surely have impacts on the profitability of the plantation.

Investment calculations which assume constant site productivity over several rotations are often proven wrong for the majority of tropical plantation sites given the continuous nutrient loss and the subsequent decline in site productivity.


\textsuperscript{22} According to Abang Helmi (1998) [please see #20], the Sarawak Government is making efforts to improve the infrastructure (roads and drainage) in the coastal belt which is mainly under peat swamps. The plan involves the construction of trunk drainage networks in Lower Saribas, Balingian and in Lawas, which when completed would make about 30,000 hectares of peat swamps available for oil palm cultivation. He views that the higher costs of development and the greater demands for agronomic and management inputs, the planting of oil palm on peat should be considered a marginal proposition as the concerned area is too large.

\textsuperscript{23} For further details please see #14, Carrere, R. & Lohmann. (1996).
In addition, in order to sustain plantation productivity in subsequent rotations, fertilisers will have to be applied on a larger scale than in the first rotation and this will consequently result in increasing costs and decreasing profitability. The costs of the fertilisation programme used during the second and third rotations could be at least 2.5 and as much as 13 times higher.

(ii) Palm Oil for Agrodiesel

The push for oil palm cultivation is especially worrying given the recent promotion of palm oil methyl ester by our National Biofuel Policy (NBP), which was launched in 2005, along with recent developments in the European Union where agrofuels are being heavily endorsed as a substitute to petroleum, in particular to fuel its ever-growing transport sector. In our view, this promotion of palm oil agrodiesel for export is not an economically efficient way of utilising our natural resources.

Firstly, the economic efficiency of agrodiesel production has been questioned by many prominent scientists and concerned groups. It has been argued that it will take more energy to grow the crop intended to produce agrofuels than we can get out of agrofuels when we burn it, as well as energy which will be used in its production, transport and delivery. This is a question of "energy balance". Thus it will be certainly unwise for us to devote our resources to participate in such an inefficient economy, which will also produce other negative consequences.

Secondly, the promotion of palm oil agrodiesel from dedicated plantations will create a fierce competition between the rights and livelihood security of the native communities in Sarawak and that with the unsustainable demand of energy for the transport sector in affluent countries. Such a trend will surely spell disaster to the native communities who have yet to secure full recognition on their land rights claims. Further, the loss of the ecological functions of forests will not only directly compromise the quality of life of local communities who claim rights to them but it may also disrupt the ecological services provided by forests to the public at large, potentially resulting in gross economic losses for the country.

Thirdly, the intention of the NBP to consider incentives for projects related to the promotion of agrofuels including those for strategic or high technology projects and the commercialisation of research and development findings of the public sector in resource-based industries may well block the eligibility of the development and production of other sources of renewable energies to tax reduction. Such a policy ensures that instead of giving other renewable energy sources a chance to become competitive, they are in effect excluded for tax exemptions altogether. In short, this push for palm oil agrodiesel will divert funds which can be used to promote other more sustainable and renewable sources like solar power. This accompanying monetary loss incurred by the state means that less money will be available for other government tasks as well, for instance for the costly measures required for carbon dioxide savings, among others. As such, growing oil palm for the energy export can be equated to subsidised food burning.

24 Please see Cornell ecologist's study finds that producing ethanol and biodiesel from corn and other crops is not worth the energy. Available at http://www.news.cornell.edu/stories/july05/ethanol.toocostly.ssl.html; Biofuels not as green as they sound. Available at http://www.eeb.org/publication/2002/EEB-POSITION-PAPER-ON-BIOFUELS-FINAL-21-May.pdf
Finally, such a venture of producing palm oil for affluent countries will certainly promote irrational land-use patterns with other grave implications on our agricultural production diversity and stability. Although we may believe that palm oil agrodiesel may contribute to our economy and will do no harm to our food security, we must acknowledge the political structure of the present global free market where there exists highly unbalanced purchasing power between nations and communities. We must also recognise that the present global petrol-energy economy is not at all benevolent. This fact can easily be observed in the political chaos that has characterised Middle East since the discovery of petroleum in the region. There is reasonable ground to believe that instead of economic advancement, we may well be subjecting ourselves to future political domination by consumer countries if we so choose to be a major global agrofuel producer. Feeding into the dependence of northern nations on agrofuels for their transport sector will eventually require enormous, irrational and unachievable areas of agriculture, and its environmental impacts would in the end outweigh its economic benefits.

VII UNRESOLVED PLANTATION LABOUR ISSUES

In Malaysia, some 400,000 people are directly employed by the palm oil sector. Besides health problems faced by plantation workers due to heavy and repeated exposure to agro-chemicals as discussed above, the terms of plantation labour are still very poor in this country.

The guaranteed minimum wage for plantation workers is still unacceptably low and it has often been pointed out that plantation developers reek huge profits by keeping the wages of their field workers low. In some instances, the workers’ children may still need to assist their parents who may have to collect 1.5 to 2 tons of palm fruit each day.

A significant share of the current plantation workforce in Malaysia also comprises legal and illegal foreign workers, mainly from Indonesia, in particular in Sarawak and Sabah, who are subjected to harsher working conditions and other forms of labour exploitation. The widespread use of foreign labour also puts into the question the argument that oil palm will increase employment opportunities for local people.

The accident rate in the plantation sector is also higher than in other sectors in Malaysia. In 1999 and 2000, the plantation sector alone contributed 14 percent (or 12,753 cases out of 92,704 cases in 1999) of industrial accidents. The reason for this high accident rate is the nature of the fieldworkers' working environment. Accidents often occur because of sharp thorns, branches and the fruit of the oil palm and/or by use of the long-handled implements or by exposure to pesticide.25

Further, plantation labourers are also often deprived of the commonly acceptable standards of employment security and the protection of their rights. They may be subject to higher income fluctuations, live in substandard housing conditions provided by the plantation developers and have little access to clean water, quality healthcare and education. The problem of alcoholism has also often been documented among plantation workers in the country.

25 Takayama G. & T. Matsubara. 2001. The Oil Palm Plantation Worker in Peninsular Malaysia: Trends and Problems. Writers were M.S. candidate at the School of Natural Resources & Environment, University of Michigan & M.A. candidate at the Institute of East Asian Studies, Universiti Malaysia Sarawak.
In addition, the aforementioned problem on the high level exposure of hazardous chemicals to plantation workers has never been resolved. In 2002, Pesticide Action Network (PAN) Asia/Pacific and Tenaganita, in collaboration with the National Poisons Centre, published a study of women plantation workers confirming widespread pesticide poisonings and significant problems associated with paraquat. Approximately 30,000 women work daily as pesticide sprayers in Malaysia; many have shown acute paraquat poisoning symptoms, including nosebleeds, eye irritation, contact dermatitis, skin irritation and sores, nail discoloration, nail loss and abdominal ulceration. Although in August 2002 the Malaysian government announced its intention to ban all production of paraquat through a two-year phase-out process, due to pressure from the pesticide industry, the ban will be lifted by the middle of 2007.

IX RECOMMENDATIONS

We would like both the Federal and Sarawak State Governments to provide adequate responses on all the issues that have been raised above. Further, both authorities must also look into the following recommendations:

(i) Recognise the full nature and stature of Native Customary Rights (NCR) of Sarawak indigenous peoples as accorded by the law, including the fundamental principles of natural justice, in the Federal and State Constitutions, federal, state and local legislation and provisions, and the common law. Amongst others, the executive agencies of the state and federal governments must recognise that native territorial boundaries are comprised of farms and communal forested land and that the principles of common law respect the pre-existence of native laws and customs, which do not owe their existence to modern statutes or legislation; further, that positions and obligations committed internationally through conventions and treaties are honoured and reflected locally. Both authorities must implement the recommendations made by SUHAKAM in its Sarawak Report 2002 concerning the rights of the indigenous communities in the state and take heed of the legal analysis in SUHAKAM’s Legal Perspectives on Native Customary Land Rights in Sarawak published in 2008;

(ii) Implement the principles contained within the United Nations’ Declaration on Indigenous Peoples as a matter of policy response, which Malaysia has ratified. This implementation must be reflected by ensuring that all policies, legislation and governance procedures are in line with the Declaration;

(iii) Establish a consultative system of joint-boundary demarcation with native communities within a multi-stakeholder process to demarcate native territorial boundaries and claims, which uses mechanisms that will enable people to demonstrate corroborative evidence of their rights and which include fair arbitration procedures and the Free, Prior and Informed Consent process;

(iv) Ensure that licensed access and rights to the resources within demarcated native territorial boundaries, including Provisional Leases for the purpose of establishing monoculture plantations in Sarawak, can only be obtained with
the written Free, Prior and Informed consent of affected communities that is preceded by inclusive consultations. All provisional lease agreements on plantation concessions must be standardised to incorporate the mandatory consultative boundary demarcation and the Free, Prior and Informed processes;

(v) Cease the issue of provisional leases for NCR land currently under dispute in the court of law, with immediate effect or suspend the status of the same and bring about a lasting solution to the more than 135 pending cases in the Sarawak court;

(vi) Plantation companies must be strictly monitored to ensure their strict compliance to all policies, laws and contractual commitments and conditions. These include laws that address international border controls and the minimisation of environmental and social impacts through good management practices on land-clearing, pesticide use and waste management and suchlike, incorporating mandatory procedures on concession management incentives and performance-related incentives. A zero burning policy for commercial plantation development must be enforced;

(vii) Acknowledge the sustainability challenges in the Malaysian palm oil sector and engage in open and meaningful dialogue with all stakeholders, including local communities and local, national and international NGOs;

(viii) Put in place a moratorium on the conversion of forests and peat land, including those that have been logged before, into oil palm and tree plantations;

(ix) Establish mandatory public participation in Environmental Impact Assessment process; and

(x) Improve information-disclosure and transparency in forestry and land governance including those on licensing of plantation concessions and other related information.

X CLOSING

The development of monoculture plantations at such a scale is likely to create disastrous impacts on the environment and local communities, and unlikely to be financially viable and sustainable in the long run. Additionally, we also must address as to whether the shift from logging to plantation development in Sarawak has largely been contributed by the depletion in timber resources in the state as a result of unsustainable forestry management. For all these reasons, we call all the authorities concerned to seriously consider all the issues raised in this memorandum.