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# Pathways through the Plantation: Oil Palm Smallholders and Livelihood Strategies in Sarawak, Malaysia

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# PATHWAYS THROUGH THE PLANTATION: OIL PALM SMALLHOLDERS AND LIVELIHOOD STRATEGIES IN SARAWAK, MALAYSIA<sup>1</sup>

R. A. Cramb and Patrick S. Sujang

The dominant view among policy-makers in Sarawak, a resource frontier state in Malaysian Borneo, is that the only viable way to involve smallholders in the oil palm boom that has transformed the agricultural economy of that island is to consolidate them into larger production entities with externally provided management and finance. However, despite lack of government support, the area of smallholder oil palm has increased dramatically in the past decade in those regions with access to roads and palm oil mills. We argue that, once processing infrastructure is in place, oil palm smallholders can readily take advantage of this infrastructure to pursue a profitable livelihood option, with lower cost and greater flexibility than large-scale operations. In this paper we explore the characteristics of oil palm smallholders in Sarawak and the complex and varied processes by which they have inserted themselves into the rapidly expanding landscape of large-scale plantation development. We develop a typology of oil palm smallholders and present a case study based on a questionnaire survey of 72 farm-households in five longhouse-communities in northern Sarawak. The analysis shows the economic viability of independent oil palm smallholders and identifies appropriate means of support that could raise incomes and spread benefits more widely.

**Keywords:** smallholders, estates, livelihood strategy, land policy.

## Introduction

*One day, Mouse Deer wanted to cross the river. He wanted to eat tasty fruit on the other side. But he didn't want Crocodile to eat him first! Mouse Deer had an idea. He called out, 'Crocodile!' Crocodile rose from the water. 'Hello, Mouse Deer. Have you come to be my breakfast?' 'Not today, Crocodile. I have orders from the Rajah. He wants me to count all the crocodiles.' 'The Rajah!' said Crocodile. 'Tell us what to do.' 'You must line up from this side of the river to the other side.' Crocodile got all his friends and family. They lined up across the river. Mouse Deer jumped onto Crocodile's back. 'One.' He jumped onto the next crocodile. 'Two.' And the next. 'Three.' Mouse Deer kept jumping till he jumped off on the other side of the river. 'How many are there?' called Crocodile. 'Just enough!' said Mouse Deer. 'And all stupid!' Then he went off singing his song.<sup>2</sup>*

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<sup>1</sup> An earlier version of this paper was presented to the panel on 'Cultures of Oil Palm' at the 17th International Symposium on Society and Resource Management, 13-17 June 2011, Kota Kinabalu, Sabah, Malaysia. The current version has been submitted to the *Journal of Peasant Studies*. Our thanks are extended to participants in that panel and two anonymous referees for helpful comments. The research was funded by an Australian Research Council Discovery Grant.

<sup>2</sup> Shepard, A., 2005. *The Adventures of Mouse Deer: Tales of Indonesia and Malaysia*. Friday Harbour WA: Skyhook Press (<http://www.aaronshp.com/stories/R01.html#2>, 13 May 2011).

The capacity of smallholders to adopt agricultural improvements and generate a process of rural development, relative to that of large-scale forms of agriculture such as landed estates or corporate plantations, has been the subject of a fluctuating debate for several centuries (Dewey 1974; Netting 1993; Hayami 1998, 2010; Ellis and Biggs 2001; Eastwood et al. 2010). This debate has taken on renewed significance in the context of what has come to be called the ‘global land grab’ – the escalation of transnational investment in large-scale land acquisition for agricultural commodity production, primarily in countries with sparse populations and weak ‘land governance’ – a phenomenon driven by rapid economic growth in East and South Asia in particular, coupled with recent turbulence in global food-grain, commodity, and energy markets (Borras et al. 2011; Deininger 2011; Deininger and Byerlee 2011; Li 2011). In Southeast Asia both national and transnational capital is being deployed, particularly for the expansion of rubber, oil palm, sugarcane, and pulpwood production in the ‘frontier zones’ of Cambodia, Laos, and the ‘outer islands’ of the Indonesian archipelago (Sumatra, Borneo, Sulawesi, Papua), with mixed but often unfavourable implications for the smallholder populations in those zones (McCarthy and Cramb 2009; Baird 2010; So 2010; Deininger 2011; De Koninck et al., 2011; Li 2011; Hall et al. 2011).

At the same time, smallholder production of tree crops and other perennials has been widely advocated as a basis for the agricultural commercialisation that the World Bank sees as a significant ‘pathway out of poverty’ for large numbers of rural households, especially in upland environments (World Bank 2007; Snelder and Lasco 2008). As Li comments, however, ‘smallholder farming has its own problems, not least the new inequalities that arise through the “everyday” processes of accumulation and dispossession among smallholders that roll on relentlessly, despite efforts to prevent them’ (Li 2011: 285, n. 3). The belief that the adoption of commercial tree crops can lift whole rural populations out of poverty ignores both the initial diversity within these communities and the disequalising processes involved in such a transition. Li (2009) and Rachman et al. (2009) explicitly criticise the World Bank’s (2007) failure to appreciate the ways in which technical interventions to help farmers commercialise their operations can be systematically linked to the impoverishment of other farmers, through the loss of access to land and other resources. This has been observed in relation to a diversity of smallholder tree crops, including cocoa (Li 2002), rubber (Manivong and Cramb 2008), and teak (Newby and Cramb 2011). Approaches that attempt to link smallholders to agribusiness firms through various forms of intermediation such as contract farming, though offering a potential middle way between small-scale production and large-scale post-harvest operations (M4P 2005; Hayami 2010; Eastwood et al. 2010), also have their pitfalls, particularly in the early stages of agricultural commercialisation (Zola 2008; Walker 2009; Wright 2009; Li 2011), including ‘backwash’ effects on those who miss out on or fail to meet the contracts.

The widespread expansion of oil palm planting in Sarawak – a resource-rich state in Malaysian Borneo – provides an opportunity to research both the smallholder versus estate question (including the ‘land grab’ dimension) and the smallholder differentiation question in the context of a rapidly growing, middle-income economy. Sarawak is regarded as the last frontier for oil palm expansion in Malaysia, following the effective closure of the frontier in Peninsular Malaysia and in Sabah to the north (Fold 2000; Sutton 2001; McCarthy and Cramb 2009). From 23,000 ha in 1980, the

area planted with oil palm in Sarawak had increased thirtyfold to 840,000 ha by 2009 (Department of Agriculture 2011). Oil palm now accounts for about 7 per cent of the total land area and two thirds of the area under agricultural crops. The official target was to plant one million hectares by 2010, including 400,000 ha of Native Customary Land.<sup>3</sup> While these targets have had to be revised and extended (in particular, the Ministry of Land Development now aims for 380,000 ha of Native Customary Land to be planted by 2020), well over a million hectares have already been allocated to 'land banks' for oil palm development and the rate of expansion continues to be around 10 per cent per year.

As described elsewhere (Cramb 2011a,b; McCarthy and Cramb 2009; Hall et al. 2011), the Sarawak Government under its powerful and enduring Chief Minister, Abdul Taib Mahmud, has in the past three decades pursued a policy that favours large-scale estates over smallholder production, articulating a dualistic vision that has rapidly become an empirical reality. Thus Sarawak's agricultural sector, once almost exclusively in the hands of smallholders, has been transformed by politico-legal means into one that is dominated by private estates. Hence most oil palm plantations (80 per cent) have been established by private companies (or privatised government agencies) holding long-term leases over State Land (though claims to customary ownership are being pursued in perhaps a quarter of these). As the profitable opportunities for developing State Land have been taken up, attention has increasingly turned to the development of areas officially recognised as Native Customary Land.

The Taib Government's view is that the only viable way to involve smallholders in the oil palm boom is to consolidate their land into larger production entities with externally provided management and finance, whether following the 'managed smallholder' approach typified by the Sarawak Land Consolidation and Rehabilitation Authority's (SALCRA) schemes, or the 'joint venture' approach as managed by the Land Custody and Development Authority (LCDA) (Ngidang 2002; Cramb 2011a; Cramb and Ferraro, in press). The Chief Minister stated in 1984: 'My vision for the next twenty years is to see modern agricultural development along the major trunk road with rows of plantations and villages well organised in centrally managed estates with a stake of their own in them.'<sup>4</sup> His government has been remarkably persistent in pursuing this vision, particularly since the launch of its *Konsep Baru* (New Concept) policy in the mid-1990s which promoted the joint venture approach (Ngidang 2002). This overt push to incorporate Native Customary Land in joint ventures with plantation companies has been associated with covert pressure on various agencies to curtail measures to assist smallholders directly, in order to leave as much land as possible for the private sector to develop (Cramb 2011a).<sup>5</sup>

However, the area of smallholder oil palm has increased dramatically in the past decade, from 9,000 ha in 2001 to 36,000 ha in 2009 (Fig. 1), an average annual

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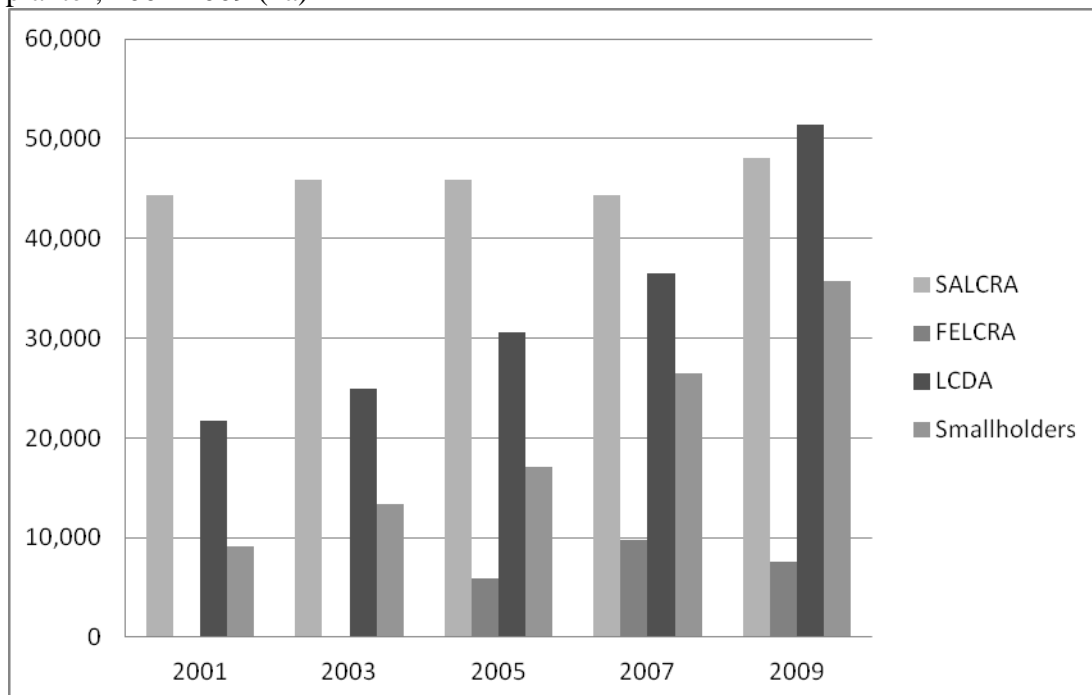
<sup>3</sup> Native Customary Land is narrowly defined in the Sarawak Land Code (1958) as untitled land held by licence from the state, primarily on the basis that it had been cultivated by traditional means before 1958. However, several landmark cases in the High Court of Sabah and Sarawak have challenged this narrow interpretation of customary rights, especially as it has been applied in recent government policy and practice (Cramb 2007).

<sup>4</sup> Quoted in *Sarawak Tribune*, 9 December 1984.

<sup>5</sup> With characteristic irony, local critics of the joint venture approach have interpreted LCDA to mean 'Let's Chase the Dayaks Away' and 'Let the Chinese Develop the Area'!

growth of 36 per cent (albeit from a low base). This compares with negligible growth in SALCRA's planted area (largely due to a policy decision to consolidate SALCRA's operations in southern Sarawak) and growth of around 17 per cent in the area under LCDA's joint venture schemes (Fig. 1). In absolute terms, the annual increment in area planted by independent smallholders is similar to that planted in joint venture schemes (3-4,000 ha per year). In 2006 there were around 3,418 oil palm smallholders in Sarawak with an average planted area of just over 5 ha, slightly more than the average of 4 ha contributed by households participating in SALCRA or LCDA schemes. These included 'independent smallholders' and various types of 'supported (or subsidised) smallholders' described below, but not the 'managed smallholders' in SALCRA schemes. It is noteworthy that supported smallholdings accounted for only 2,040 ha or 12 per cent of the total smallholder area. Hence the growth in smallholdings has occurred with little government assistance compared to the concerted political campaign in support of the joint venture approach – indeed, as noted above, it has occurred in the face of active discouragement (Cramb 2011a; Ngidang 2002).

Fig. 1. Growth in area of Native Customary Land planted with oil palm by category of planter, 2001-2009 (ha)



Source: Ministry of Land Development, Sarawak

Thus we have a modern-day version of the Malaysian fable of the mouse-deer and the crocodile. The 'rajah' of the modern Sarawak state has favoured the voracious crocodiles of the plantation sector in making available land for oil palm development (and is indeed interested to monitor their numbers). Unlike the fable, however, these crocodiles are by no means stupid, having successfully manouvered themselves into a very strong position and carving out the 'crocodile's share' of the state's land bank – exemplifying a domestic 'land grab' of major proportions. Nevertheless, the canny mouse-deer, epitomising smallholder strategising and resilience, has successfully ridden on the crocodiles' backs to improve his situation against the odds. Moreover,

this has occurred without the smallholder differentiation that has been observed in other contexts.

In this paper we explore the characteristics of oil palm smallholders in Sarawak and the complex and varied processes by which they have inserted themselves into the rapidly expanding landscape of large-scale plantation development. In the next section we present a history and typology of oil palm smallholders in Sarawak as a whole. This is followed by a case study of a cluster of Iban longhouse-communities that have been among the pioneers of oil palm planting in Miri Division in northern Sarawak. The case study includes an historical account of the shifting circumstances that led to the success of oil palm planting in this site, and an analysis based on a questionnaire survey of 72 farm-households conducted in 2009 to obtain a picture of their circumstances, production practices, and output. The penultimate section discusses the findings, with particular attention to the question of appropriate means of support for oil palm smallholders. A concluding section returns to the themes outlined in this introduction.

## **Oil Palm Smallholders in the Sarawak Context**

### *Definition and history of oil palm smallholders in Sarawak*

The term ‘smallholder’ is often used without precise definition but is usually taken to imply both a small land area and reliance on family labour and management, with varying degrees of engagement with agricultural markets. This is consistent with Ellis’s definition of ‘peasants’ as ‘households which derive their livelihoods mainly from agriculture, utilise mainly family labour in farm production, and are characterised by partial engagement in input and output markets which are often imperfect or incomplete’ (1993: 13).<sup>6</sup> However, it is broader than Netting’s detailed characterisation of smallholders as rural households practising ‘intensive, permanent, diversified agriculture on relatively small farms in areas of dense population’ (1993: 2). This would exclude most farmers in Sarawak, where rural population density is low (and declining) and shifting cultivation has been the dominant mode of agriculture until recently, even though intensively managed crops have been incorporated in the overall land-use system (Cramb 1993).

Rather, it is the primary reliance on household labour (instead of hired labour or machinery) that is the distinguishing element, restricting the scale of cultivation. Thus what constitutes a small area in the Sarawak context depends very much on the land/labour ratio of the crop in question – for pepper, a two-person family work-team can manage only about 0.5 ha; for cocoa, 1-2 ha; for rubber, 2-3 ha; for oil palm 4-6 ha; and for hill rice, 15-20 ha (including cropped and fallowed land), all assuming a diversified farming system. Some family farms allocate somewhat larger areas of their land to these cash crops, utilising local hired labour (from other smallholders) to supplement family labour, but these can still be considered family-operated smallholdings.

The intended contrast is with ‘estates’, which occupy a larger area (arbitrarily taken to be 40 ha or more in Malaysia) and, crucially, operate with a paid (or self-employed)

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<sup>6</sup> The term ‘peasant’ is considered anachronistic and derogatory in the contemporary Malaysian context, whereas ‘smallholder’ is a well-established term.

manager and a dedicated workforce of hired labour. This contrast can be clearly seen in the oil palm sector in Sarawak, with the estate mode of organisation extending from relatively small operations of a few hundred hectares to multi-estate operations of 5-10,000 ha or more under a hierarchy of managers, with the workforce housed in barracks on the estates.<sup>7</sup>

The unassisted adoption of oil palm by smallholders in those regions with access to roads and palm oil mills is an unsurprising extension of Sarawak's long history of autonomous smallholder development. The history of smallholder rubber and pepper over the past century not only demonstrates responsive and dynamic economic behaviour but that customary land tenure has not been an obstacle to the adoption and expansion of smallholder cash crops (Cramb 1990, 2007, 2011b). It is true that, unlike rubber or pepper, oil palm cultivation displays economies of scale in first-stage processing, and the harvested product is not storable, hence there is a need for a minimum planted area within a maximum distance from a mill to ensure an efficient level of throughput of fresh fruit bunches (ffb). This is the technical basis of the argument for large-scale, centrally managed production systems (Deininger 2011: 234).<sup>8</sup> However, it has long been recognised that, once processing infrastructure is in place (mills, roads, transportation), oil palm smallholders can readily take advantage of this infrastructure to pursue what is a profitable livelihood option, with lower cost and greater flexibility than large-scale operations (Barlow 1985, 1986; Zen et al. 2005; Hayami 2010).

Indeed, the comprehensively researched Miri-Bintulu Regional Planning Study (MBRPS) of the early 1970s recognised this in recommending the allocation of land in northern Sarawak for both oil palm estates and independent settlers, who would benefit from the 'sites and services' provided by government agencies and the processing infrastructure established by private estates in what was, at that time, still a sparsely populated and little developed region (Hunting Technical Services/Hoff and Overgaard, 1974). The problems and ultimate failure of the pioneering Danau Smallholder Oil Palm Scheme (SHOPS), implemented from 1968 by the Department of Agriculture in neighbouring Limbang Division to the north, underscored the importance of the strategy recommended by the MBRPS, as the Danau scheme suffered from being isolated from any large-scale plantation or mill (Wee and Ngui 1980). But the main concern of the MBRPS consultants was to avoid the 'sociological ills associated with plantation monoculture' in other parts of the world.<sup>9</sup>

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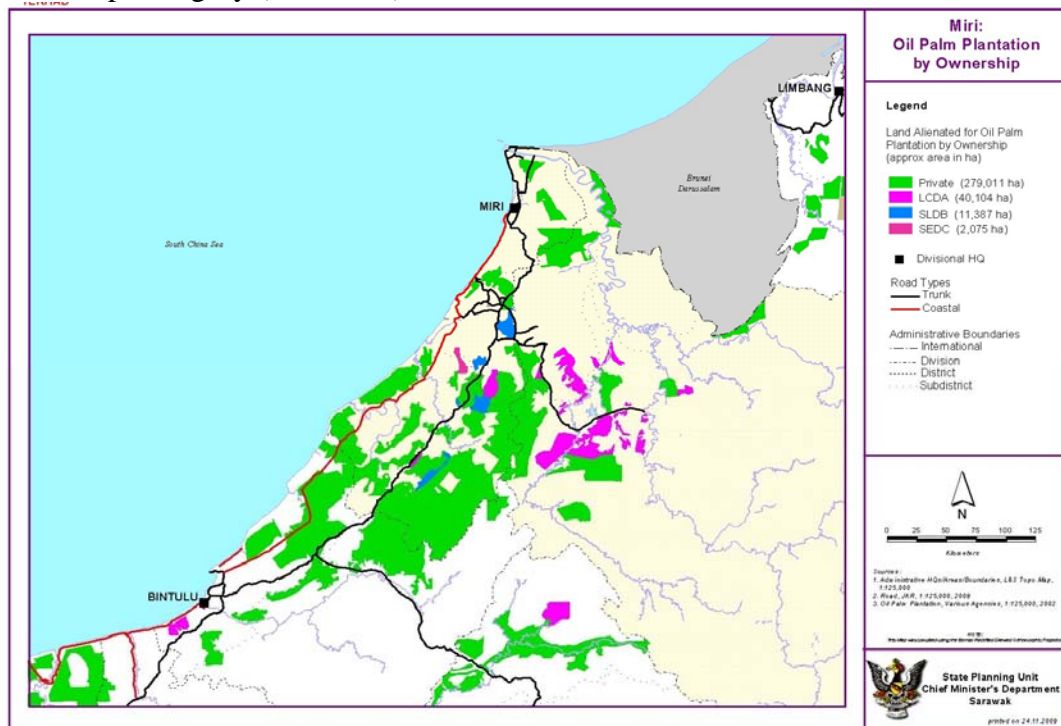
<sup>7</sup> However, even here the contrast is becoming somewhat blurred. There is now an increasing number of intermediate cases, where an absentee landowner (often an urban-based professional with rural roots) employs labour (not necessarily full-time) to develop and manage a relatively small area (say 20-30 ha), while providing all inputs and intermittent direction. These are smallholders in terms of area but not in terms of the mode of labour and management – perhaps 'absentee' or 'part-time' smallholders would be an appropriate term.

<sup>8</sup> Nevertheless, small-scale processing technology has been utilised in some countries (Potter 2011) and small- to medium-scale oil palm production has been the dominant mode in Thailand.

<sup>9</sup> Clifford Sather, personal communication, 31 May 2011. Sather, an anthropologist who has completed detailed research on Iban and Bajau societies, was a consultant for the MBRPS, along with the late Stephen Morris, the foremost ethnographer of the Melanau. The Iban and Melanau were the major ethnic groups in the area considered by the MBRPS.

This variant of the ‘nucleus estate and smallholders’ approach was never adopted, however, for reasons to do with ethnic politics.<sup>10</sup> Thus a significant opportunity for the planned resettlement of land-constrained farmers from southern Sarawak (where historically population density has been greater) was foregone. Instead, the Miri-Bintulu region has now largely been alienated to private plantation companies. These include major Sarawak-based companies such as Sarawak Oil Palm, Naim Cendera, Rimbunan Hijau, Shin Yang, and Sarawak Plantations,<sup>11</sup> and a host of smaller companies with connections to the political elite that were set up for the purpose of acquiring a lease of state land to log the forest and plant oil palm. In addition, long-established plantation companies from Peninsular Malaysia, including Sime Darby, IOI, and Boustead, have taken up extensive holdings in northern Sarawak (Fig. 2). These estates do not require the labour of local farm families as they can draw on cheaper and more easily disciplined indentured labour from impoverished districts in Indonesia (Li 2011) – there are over 50,000 Indonesian workers in Sarawak, a proportion of them illegal immigrants, comprising about 20 per cent of the agricultural workforce (Cramb 2011a).

Fig. 2. Land Alienated for Oil Palm Estates in Miri-Bintulu Region, Sarawak, by Ownership Category (2002 data)



Source: State Planning Unit, Sarawak

<sup>10</sup> The government envisaged it as a multi-ethnic settlement project but the targeted Malay and Chinese populations in southern Sarawak refused to move; among the Dayaks, only the highly mobile Iban were keen to take up the opportunity (Cramb 2011b).

<sup>11</sup> Sarawak Plantations Berhad was set up to acquire the oil palm assets of the Sarawak Land Development Board (SLDB), which was to have been the vehicle for settling smallholders in northern Sarawak (Cramb 2011a).

Nevertheless, the recent expansion of smallholder oil palm has occurred mainly in this region, giving rise to an unplanned ‘nucleus estate and smallholder’ landscape along the lines envisaged in the MBRPS – though with an outsized ‘nucleus’ and a highly attenuated ‘plasma’ (the term used to refer to the smallholders surrounding a nucleus estate). In 2009, Miri Division had 258,000 ha planted with oil palm (30 per cent of the Sarawak total), of which 90 per cent was in estates and 10 per cent in smallholdings. The 25,000 ha of oil palm smallholdings in the Division represented 56 per cent of the total area of smallholder oil palm in Sarawak; the remaining area was scattered across the other 10 divisions, with 1-3,000 ha in each, except for the remote Kapit Division with only 390 ha (Department of Agriculture, 2011). It is important to note that the relationships between the ‘nucleus’ and the ‘plasma’ in this landscape are entirely contractual, being largely confined to the voluntary delivery of smallholder fruit to privately-owned mills, established by the estates in the first instance to process their own output; there are no flows of capital or technical support from estates to smallholders, and negligible provision of estate labour by local villagers, as envisaged in the Indonesian nucleus estate and smallholder (NES or PIR) model (McCarthy and Cramb 2009; Li 2011).<sup>12</sup>

### *Types of oil palm smallholder in Sarawak*

Smallholders in Sarawak have been divided in the past into ‘independent’ and ‘village-based’ smallholders to distinguish between households that are living and operating quite independently of each other on separate holdings, as has been the pattern for farmers of Chinese descent, and those living and operating within a village territory, typically centred on a longhouse, which has been the practice of most Dayak farmers (T’ien 1953; Cramb 1983b, 2011b).<sup>13</sup> The distinction is important to the extent decisions about allocating and managing land are subject to the customary rules and procedures of a local community, and labour-exchange groups are regularly mobilised to coordinate farm activities and speed operations like planting and harvesting rice. However, increasingly, village-based smallholders are operating their holdings independently of village procedures such as the Iban farm meeting (*aum umai*), and with minimal resort to labour exchange (*bedurok*), so this distinction is becoming less important. Even residence patterns are changing towards households occupying discrete farmsteads most of the time, only coming back to the longhouse for meetings, celebrations, and ritual events.

The term ‘independent smallholders’ is also used in another and more important sense in the present context to refer to farmers (whether of Chinese or Dayak descent) who are planting oil palm on their own land using their own labour and capital, without assistance from a government agency (Table 1). Some have obtained credit from local traders to establish their plantations, and in some cases wage labour is employed, occasionally including Indonesian workers. Some of this planting is clearly pre-emptive, that is, to prove to government agencies who may seek to allocate the land

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<sup>12</sup> Some smallholders have purchased oil palm seedlings from larger estates.

<sup>13</sup> Netting (1993: 2-3), though emphasising that smallholders have ‘ownership or other well-defined tenure rights’ and a significant ‘measure of autonomy and self-determination’, adds that ‘they are also members of communities with common property and accompanying institutions for sharing, monitoring, and protecting such resources’. While this is generally the case in Sarawak, the presence of numerous independent Chinese farm homesteads producing rubber, pepper, vegetables, and livestock requires a broader view (T’ien 1953; Cramb 1983a).

for a private or joint venture estate that it is being productively used – appropriately termed ‘strategic agriculture’ by Majid-Cooke (2002). However, as demonstrated below, in most cases, smallholder expansion is self-financed, involves family labour, and is undertaken because it is seen as a profitable source of livelihood. That is, oil palm planting is part of a diversified ‘livelihood strategy’ (Ellis 2000; Scoones 2009) and not merely a way of defending land claims.

Table 1. Types of oil palm smallholder in Sarawak and modes of government support

| Type of smallholder                   | Agency         | Case study    | Features   |
|---------------------------------------|----------------|---------------|--|
| <b>Independent smallholders</b>       | N/A            | Sungai Bok    | Little or no technical or financial support  |
| <b>Supported smallholders</b>         |                |               |  |
| Smallholder Oil Palm Planting Program | DA             | Sungai Jaong  | Subsidised inputs and advice to individual smallholders; discontinued                    |
| Oil Palm Mini Estates                 | DA             | Rapak         | Area developed for group of landowners; entirely subsidised up to maturity; discontinued |
| Oil Palm Smallholder Support Program  | MPOB           | Miri Division | Subsidised inputs provided to individual smallholders; discontinued                      |
| Smallholder Buying Groups (KBT)       | MBOB, FO       | Subis         | Inputs provided on credit; output sold to mill; repayments deducted; on-going            |
| <b>Managed smallholders</b>           | SALCRA, FELCRA | N/A           | Land pooled, ownership retained; managed as estate; local and foreign labour; on-going   |

Notes: DA, Sarawak Department of Agriculture; MPOB, Malaysian Palm Oil Board (Sarawak Branch); FO, Sarawak Farmers Organisation (a government agency); SALCRA, Sarawak Land Consolidation and Rehabilitation Authority; FELCRA, Federal Land Consolidation and Rehabilitation Authority.

‘Subsidised’ or ‘supported’ smallholders, on the other hand, are those who plant on individual lots, perhaps in a contiguous area, with varying degrees of support from government agencies. Table 1 summarises the major modes of support and some brief case studies are presented in the appendix. Under the Eighth Malaysia Plan (2001-2005) the Sarawak Department of Agriculture (DA) ran two schemes for smallholders: the Smallholder Oil Palm (SHOP) Planting Program, providing subsidised inputs for up to 5 ha per participant along the lines of previous subsidy schemes for rubber, pepper, and cocoa; and Oil Palm Mini Estates (OPME), centrally managed in a contiguous block and fully subsidised up to the time of the first harvest.

Only 130 ha were planted under the former scheme and 1,525 ha under the latter. It was proposed to expand these schemes under the Ninth Malaysia Plan (2006-2010) to a total of 8,000 ha. However, both schemes were blocked higher in the state bureaucracy because it was seen to be in competition with potential large-scale joint venture projects under the *Konsep Baru* policy.<sup>14</sup>

In 2005 the Malaysian Palm Oil Board (MPOB), a Federal Government agency within the Ministry of Plantation Industries and Commodities, also introduced a scheme to support smallholders in the vicinity of existing mills, mainly in northern Sarawak (Table 1). This involved the provision of good quality planting material, fertiliser, and technical advice, very similar to the DA's SHOP Program, though with more specialised extension. Where the land was Native Customary Land, verification of ownership had to be provided by the community headman. The Board was overwhelmed with applications. By February 2006 it had received 8,970 applications, of which 94 per cent were for Native Customary Land. The average area per application was just over 4 ha, giving a total area of about 36,000 ha – more than the total area of smallholder oil palm at that time. However, only 161 applications had been approved, covering 390 ha, all titled land. The issue of verifying Native Customary Land claims proved too difficult and controversial for the Board. In addition, many of the applications came from within areas that had been 'earmarked' by LCDA for joint venture projects. Hence there was again pressure not to undermine the consolidation of Native Customary Land for large-scale development.<sup>15</sup>

A more successful initiative of the MPOB has been the establishment of smallholder buying groups (*Kelompok Baja Terkumpul*, KBT) to improve access to fertiliser and credit (Table 1). The concept is that a commercial agent supplies fertiliser on credit to the participating farmers, who agree to deliver their fruit to a specified mill, which in turn agrees to deduct the cost of the fertiliser and repay the supplier. MPOB's role is to oversee the arrangement and to supply good quality planting material and technical advice to the farmer group. As the case study of the Subis KBT shows, the uptake of this scheme has been rapid and the results in terms of increased yields and incomes impressive (see appendix).

For completeness, we include a final category, 'managed smallholders', referring to participants in SALCRA schemes (as well as a much smaller number managed by the Federal Land Consolidation and Rehabilitation Authority, FELCRA) (Table 1). SALCRA operates by declaring a tract of land (typically from 1,000 to 5,000 ha) to be a 'development area', thereby giving it powers to develop the land on an estate basis, though the owners must be in agreement and eventually are issued with full titles to their individual lots. SALCRA borrows public and donor funds for the capital costs of development on concessional terms. The costs are charged to the participants, who progressively pay back the debt as their palms are harvested, leaving them with the net proceeds from the sale of their fruit, which SALCRA disburses, usually twice-yearly. In the 1970s and 1980s the term 'managed smallholders' was certainly appropriate as the plantation labour was entirely provided by the landholders

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<sup>14</sup> Interviews with officials of the Department of Agriculture, 2008-9.

<sup>15</sup> Interview with General Manager, Sarawak Branch, Malaysian Palm Oil Board, Kuching, 15 August 2008.

themselves, who were employed on a daily wage but usually worked on their own lots.<sup>16</sup>

Since the 1990s, however, participants are effectively wage labourers and/or merely contributing landholders in a centrally managed estate. In fact, most of the labour for SALCRA schemes is now provided by Indonesian contract workers (*Tenaga Kerja Indonesia*, TKI). Indonesians are paid MYR 12-15 per day, or MYR 20-25 per ton for harvesting, yet are widely acknowledged to perform the same task much more efficiently than locals, as well as being willing to work longer hours and a six-day week while living in simple barracks on the estate.<sup>17</sup> Most participants in SALCRA schemes choose to work in other farm or non-farm pursuits and to collect their share of the net proceeds from the estate.<sup>18</sup> Thus SALCRA schemes are increasingly seen by landholders as a way of capitalising surplus land to generate a supplementary cash flow rather than a 'managed smallholder' operation as such.

### **A Case Study of Independent Smallholders in Miri District**

Few studies have been undertaken of oil palm smallholders in Sarawak. Wee and Ngui (1980) undertook a comprehensive analysis of the problems bedevilling the Danau Smallholder Oil Palm Scheme in Limbang Division in the 1970s, recommending its closure. The Department of Agriculture (1985, 1997) compiled extant information on the agronomy and economics of smallholder oil palm on both mineral and peat soils, at a time when there were relatively few smallholders planting the crop. Majid Cooke (2002) described how many farmers in Miri Division, faced with the prospect of having their land incorporated in private estates or joint venture schemes, planted oil palm as a form of 'strategic agriculture' to reinforce their claims to the land. Majid Cooke et al. (2006) conducted a survey of 284 independent smallholders (defined as having planted up to 20 ha of oil palm) in four sites in Miri Division – including Iban longhouses along the Niah, Bakong, and Tinjar Rivers and the large Kayan longhouse of Long Laput on the Baram River (Fig. 2). The data reported provide a useful profile of smallholder practices and motivations in the early 2000s.

The study reported here was conducted in 2009. It focuses on a cluster of five Iban longhouses in the Sungai Bok region of Beluru Sub-District in Miri District (Fig. 3).<sup>19</sup> The Iban constitute the largest ethnic group in Sarawak and are numerically dominant in the oil palm zone of Miri District. The study involved interviews with key informants to reconstruct the history and context of oil palm planting in this location and a questionnaire survey of 72 households, including both oil palm planters and non-planters and regardless of the area planted. The findings indicate a significant shift from 'strategic agriculture' to a major commitment to oil palm as a source of livelihood. Nevertheless, there is significant scope for well-targeted forms of external support.

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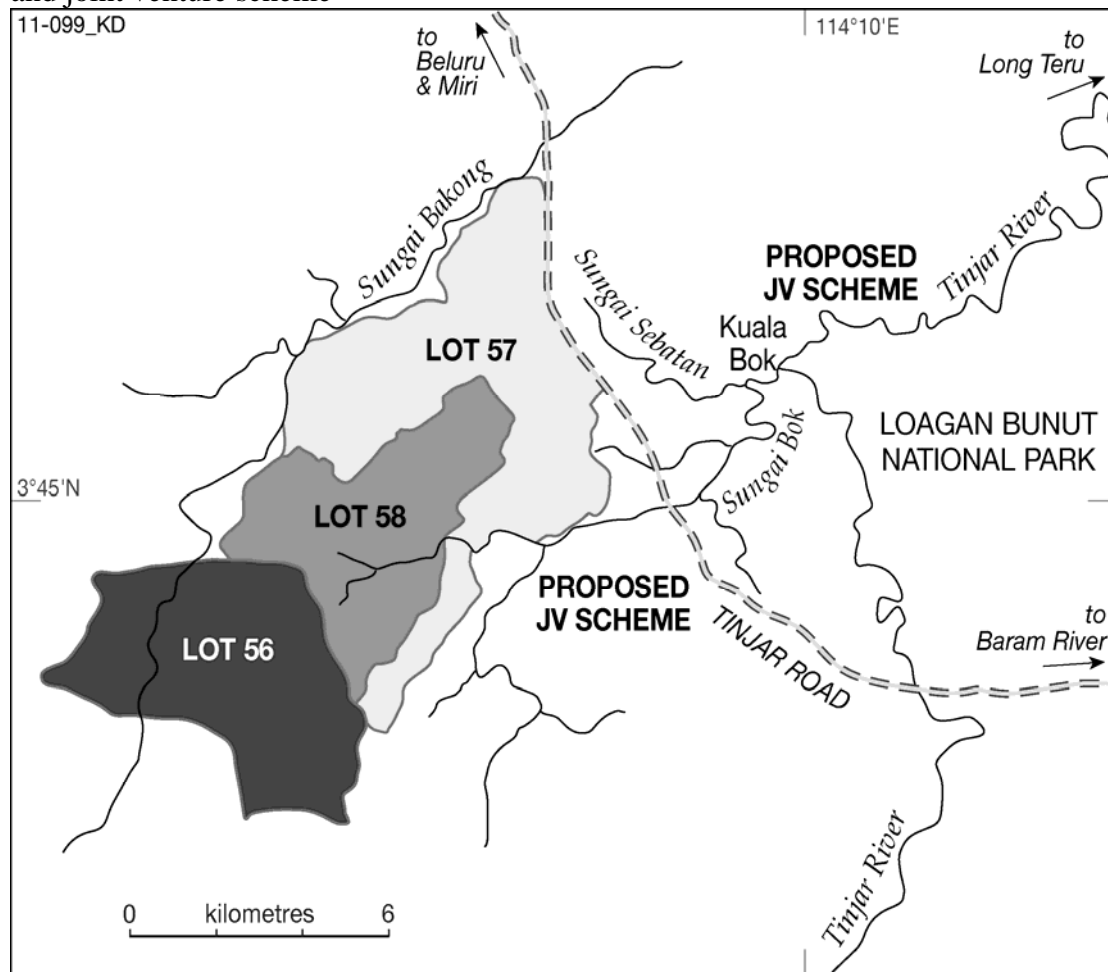
<sup>16</sup> Except in the Lemanak Oil Palm Scheme, where the land was traditionally held in common (*tanah saum*) and so the members of each participating longhouse worked on the land communally.

<sup>17</sup> 1 USD = MYR 3.20 on 28 November 2011.

<sup>18</sup> Information from interviews and personal communications with SALCRA staff, Kuching, April 2008.

<sup>19</sup> The second author originates from one of these longhouses.

Fig. 3. The Sungai Bok lands showing areas allocated for private estate, smallholders, and joint venture scheme



### *Historical context*

The Sungai Bok longhouse communities originated in the 1930s when a group of Iban families was sponsored by the Brooke Government to migrate from the long-settled Lemanak River in the south-west of Sarawak to the sparsely populated Tinjar River in the north-east, to alleviate population pressure and poverty in the former region.<sup>20</sup> The migrants were allocated land to the west of the Tinjar River along the north bank of its tributary, Sungai Bok, totalling about eight square kilometres (Fig. 3). The new community settled first at Kuala Bok at the mouth of the river and proceeded to clear the nearby forest for hill rice farming. In subsequent decades the community moved and split several times, but by 1970 was largely consolidated back at Kuala Bok in a substantial longhouse (Rumah Pagon) accommodating 25 households (*bilek*), with a smaller group (Rumah Radin) living along a tributary. By this time, much of the forest in the allocated territory that was accessible by river had been brought into the shifting cultivation cycle and thus converted to secondary forest (*temuda*), subject to customary ownership by individual households. In addition, rubber smallholdings had been established along Sungai Bok and its tributaries, some with the assistance of the

<sup>20</sup> A fuller version and analysis of the history of the Sungai Bok communities is given in Cramb and Sujang (2011).

British Colonial Government's Rubber Planting Scheme (RPS), implemented by the Department of Agriculture.

Then, in 1976, the Tinjar road, linking the major north-south Miri-Bintulu road through Beluru to Long Lapok on the Tinjar (and ultimately to Long Lama on the Baram), cut through this hinterland (Fig. 3). From this time individual households started moving upstream to the roadside because of the vastly improved access it provided to towns and markets, especially the divisional capital, Miri. Some of this land had already been cultivated before the road was built, and some rubber planted with the assistance of the RPS happened to be near the road. However, much of the land had been selectively logged in the 1960s by a Japanese company; people proceeded to clear this land for rice farms, including both hill and swamp rice. Permanent farmhouses were built and pepper gardens established in response to the boom in pepper prices at that time.

In 1985 the whole community of Rumah Radin moved to the road but, by mutual agreement, split into two longhouses. Two years later Rumah Pagon moved from Kuala Bok to the road, also dividing into two longhouses. Altogether there were about 70 households – too many to build one longhouse. The limited land and the desire to be close to farming land led to the decision to build several smaller longhouses distributed along the road. In 1995 one of these longhouses burned down and was replaced by two shorter longhouses. Thus the original migrants to Kuala Bok had, through complex processes of demographic and socio-economic change, given rise to five longhouse-communities distributed along the Tinjar Road in the upper reaches of Sungai Bok. However, these five groups still shared access rights to their original territory (*menoa*), which remained undivided (*tanah saum*).

The customary ownership of the Sungai Bok lands was called into question in 1988 when the communities received notice from the Department of Land and Survey that the Sibu-based global timber and plantation giant, Rimbunan Hijau (RH), had been given a provisional lease to an area of about 5,000 ha along the western side of the Tinjar Road to plant oil palm (Fig. 3). The area included land that had been cultivated for hill rice and was now secondary forest, as well as some rubber and pepper gardens. Moreover, the whole area lay within the original territory allocated to the settlers at Kuala Bok in the 1930s, including forested land that had never been farmed. The area of the original RH lease accounted for more than half the territory allocated to the Sungai Bok community in the 1930s. Nevertheless, the Department's position was that, as the land in question had not been cultivated before 1958 (the cut-off date stipulated in the Sarawak Land Code for acquisition of 'native customary rights' by clearing and cultivation), it was legally state land, available for alienation to other parties.

The Bok communities objected to the notice, claiming that they held customary rights to land inside the lease area. At a longhouse meeting (*aum*) it was eventually decided to pursue a compromise with the government and the company. Rather than claim all their original territory, they would make a smaller claim that would encompass most of the land needed by households to maintain their livelihoods. Following this, a meeting was held in Beluru, the sub-district headquarters, with the sub-district head, the government-appointed Iban regional headman (*penghulu*), the headmen (*tuai rumah*) of the Sungai Bok longhouses, and a representative of RH. The proposal to

excise the area required by the Bok communities from the RH lease was accepted, subject to two conditions – first, the communities should plant oil palm on the land acquired and sell their fruit to the RH mill; second, they should support the company to apply for additional State land to replace the land surrendered. This was agreed. Fig. 3 shows the original lease to RH (Lots 57 and 58), the area excised from the lease for the benefit of the Sungai Bok communities (Lot 58), and the hinterland area added to the RH lease (Lot 56). Note that, notwithstanding this agreement, Lot 58, where the communities were to plant oil palm, officially remains state land (Cramb and Sujang 2011).

In 1989-90 the Department of Agriculture provided oil palm seedlings to the landholders. All those with land along the road planted oil palm, though in a half-hearted way, mainly to reinforce their now-tenuous claim to the land. Prices were also relatively low at the time. Hence there was no maintenance of the crop. Palms took three to five years to bear fruit, which is slow by commercial standards. Then in the mid-1990s the SOP mill was approached to see if they would buy the fruit (the RH mill was not yet operational). One longhouse member bought a truck and offered MYR 50 per ton to transport the fresh fruit bunches (ffb) to the mill. He was paid immediately by the mill and in turn immediately paid the owners. The incentive of cash in the hand encouraged them to clear and maintain their oil palm plots, resulting in increased yields and profits.

Since then there has been renewed interest in planting. The soils are quite productive, receiving annual depositions of fertile silt during flash flooding. Better planting material has been obtained from the Department of Agriculture's nursery at Kabuloh. Higher prices in the late 1990s led to further increase in profits. The cost of planting was reduced by cultivating hill rice and other crops between the oil palm for the first two years, which also minimised weeding requirements. Tuai Rumah Gansa, son of Pagon, one of the Kuala Bok pioneers, had 12 ha in production. He employed longhouse people in rotation and Indonesian plantation workers on Sundays. There were now several truck owners willing to transport ffb to the RH mill at MYR 50 per ton. The fruit was classed as Grade C but the producers were paid directly into their bank accounts in Miri.

Other longhouses along the Tinjar Road (especially in the upper Bakong) began planting in the 1990s as well (Fig. 3). Holdings were mostly around 2 ha. In addition, some longhouses entered into new contractual arrangements with Miri-based investors. In one case the community established a joint venture with a well-connected developer, with 80 per cent of profits to the investor and 20 per cent to the landholders. In another case, where the land had already been surveyed, land was leased to a local Malaysian Chinese investor at MYR 0.20 per palm per month (about MYR 350 per ha per year). As argued below, these 'investor-friendly' arrangements reflected a situation in which land was relatively abundant but the labour and capital to develop it was relatively scarce.

The focus on oil palm in the Bok communities and elsewhere has meant that other farming activities have fallen by the way. Few people cultivate pepper – once the mainstay of the longhouse economy – given the high labour requirement, the escalating cost of fertiliser, and the fall in price. Rubber prices have improved since 2002 but the established rubber gardens are mostly too far from the road, having been

planted along the rivers when the longhouses did not have road access. Hence rubber tapping has largely ceased (though some still tap and are making good returns). Rice is still cultivated on a small scale on nearby swampy land, using fertiliser and herbicide to improve the yield and the return to labour – the fallow vegetation is sprayed and left to decay, the rice seed is dibbled directly into the soil, and little further is done until harvest. These trends have been reinforced by the out-migration of young people, many of whom have moved to Miri to work, buying low-cost housing with the help of their parents and the profits from oil palm. Consequently the labour available for farming activities is increasingly limited.

As a final twist to this story, the Sungai Bok longhouses have joined with neighbouring longhouses to develop a proposal for a joint venture scheme on their unutilised Native Customary Land under the *Konsep Baru* policy (Cramb and Sujang 2011). Considering their success with smallholder oil palm, and their inability to make productive use of their pre-1958 shifting cultivation lands away from the road, they were motivated to turn these lands into a productive asset generating dividends (Fig. 3). However, a dispute over the Department of Land and Survey’s mapping of their NCL and uncertainty about the merits of entering into a joint venture arrangement, given the problems facing these schemes elsewhere in Sarawak, has led to delay in finalising the necessary agreements.

### ***Household survey***

A questionnaire survey was undertaken in November 2009 of 72 households in the five Sungai Bok longhouses, representing 76 per cent of the total. The interviews were conducted in the Iban language by young people from the community with secondary school education. Interviews took about half an hour. The data were entered and analysed in an Excel spreadsheet. For the analysis, respondents were divided into three groups – those with no oil palm (n=13), less than 10 ha of oil palm (n=49), and 10 or more ha of oil palm (n=9). The 10 ha cut-off was determined on the basis of the skewed distribution of planted area, as discussed below.

The average household size was 7.2 but the average number of residents was only 4.7, reflecting the pervasive outmigration of younger household members to work in Miri and elsewhere. Nevertheless, the surveyed households averaged 2.0 farm workers, ranging from 0 to 4 (Table 2), so there was an adequate source of labour for oil palm, though the farm workforce was ageing. There was no significant difference between the three groups in the number of farm workers.

**Table 2. No. of household members available for farm work**

| No. of farm workers | No. of households | % of households |
|---------------------|-------------------|-----------------|
| 0                   | 2                 | 2.8             |
| 1                   | 16                | 8.3             |
| 2                   | 41                | 56.9            |
| 3                   | 9                 | 12.5            |
| 4                   | 4                 | 5.6             |
| <b>Total</b>        | <b>72</b>         | <b>100.0</b>    |

Fifty nine households (82 per cent) had planted oil palm. These households gave as their reasons that the soil was good for oil palm (the soils are a mixture of mineral soils and shallow peat) and the mill was close by, hence they could make a good return. Those with no oil palm generally gave as their reasons that they had no money to buy seedlings and their land was too far from the road.

The average holding size was 5.4 ha, with 4.1 ha mature and 1.3 ha immature. This was identical to the mean area found by Majid Cooke et al. (2006) and to the Sarawak-wide average for smallholders in 2006; it was above the average area of 4 ha contributed to SALCRA and LCDA schemes. However, the distribution was highly skewed, with a mode of 2-4 ha (31 per cent of all households and 37 per cent of those with oil palm), while 8 per cent of all households had 10-20 ha and 4 per cent had 20-40 ha (Table 3). Those with less than 10 ha averaged 3.1 ha and those with 10 ha or more averaged 18.4 ha. This bifurcation into two size groups was also found by Majid Cook et al. (2006), and is evident in the data collected for the KBT Subis, discussed in the appendix. However, as discussed below, the relative abundance of land meant that the growth of the larger holdings was not at the expense of households with smaller holdings, nor of those without any oil palm (and was probably constrained in any case by the limited availability of those willing to work for wages).

Table 3. Area of oil palm per household

| Holding size (ha) | No. of households | % of households |
|-------------------|-------------------|-----------------|
| 0                 | 13                | 18.1            |
| 0.1 – 1.9         | 15                | 20.8            |
| 2.0 – 3.9         | 22                | 30.6            |
| 4.0 – 5.9         | 8                 | 11.1            |
| 6.0 – 7.9         | 4                 | 5.6             |
| 8.0 – 9.9         | 0                 | 0.0             |
| 10.0 – 14.9       | 5                 | 6.9             |
| 15.0 – 19.9       | 1                 | 1.4             |
| 20.0 – 29.9       | 1                 | 1.4             |
| 30.0 – 39.9       | 2                 | 2.8             |
| n.a.              | 1                 | 1.4             |
| <b>Total</b>      | <b>72</b>         | <b>100.0</b>    |

Planting had occurred in two overlapping waves. About half the 59 households with oil palm had planted 10 or more years previously (mainly in the mid-1990s but some as far back as the 1980s) and the other half had planted in the past decade, especially in the previous 1-5 years (Table 4). The smaller size group averaged 11 years of oil palm planting and the larger size group averaged 19 years, suggesting that the latter had slowly built on the advantage they gained from their earlier start by expanding the area planted. In all cases, the oil palm was established on the household's existing farming land and did not involve clearing primary forest or acquiring land from others. In over 80 per cent of cases the land was under secondary scrub or forest (*temuda*) within the shifting cultivation cycle (Table 5). In other cases the oil palm had directly replaced rubber, pepper, cocoa, or fruit trees.

Table 4. Years since first planting of oil palm

| Years since first planting | No. of households | % of households |
|----------------------------|-------------------|-----------------|
| 0                          | 13                | 18.1            |
| 1-5                        | 15                | 20.8            |
| 5-9                        | 8                 | 11.1            |
| 10-14                      | 5                 | 6.9             |
| 15-19                      | 21                | 29.2            |
| 20-24                      | 6                 | 8.3             |
| Na                         | 4                 | 5.6             |
| Total                      | 72                | 100.0           |

Table 5. Previous land use of oil palm plot

| Previous land use    | No. of households | % of oil palm households |
|----------------------|-------------------|--------------------------|
| Shifting cultivation | 49                | 83.1                     |
| Rubber               | 7                 | 11.9                     |
| Pepper               | 1                 | 1.7                      |
| Cocoa                | 1                 | 1.7                      |
| Orchard              | 1                 | 1.7                      |
| Total                | 59                | 100.0                    |

Twenty two of the respondents (30 per cent) indicated they had received some assistance with planting in the 1990s, mainly from the Department of Agriculture, though four were directly assisted to plant by their local Member of Parliament. Most, however, had received no government assistance. This applied equally to the two size groups. Moreover, no-one had taken any private credit or loan, whether short-term or long-term, in cash or kind. Even for those who received early government assistance, most of the planting has been a result of their own investment of labour and capital. Hence they can be regarded as 'independent smallholders' in the sense discussed earlier in the paper.

Respondents reported buying seeds at MYR 1.80 each, or 6-month-old seedlings at MYR 3-6 each, from government agencies (the Department of Agriculture or the Malaysian Palm Oil Board) or private companies such as Sarawak Oil Palm. The type or quality of the planting material was not ascertained. The planting density was 120-130 palms per ha on undulating land and 135-140 palms per ha on steeper land. One farmer decided to plant 180 palms per ha 'because I have limited land'. Most respondents undertook replacement planting where seedlings had died. Only three respondents terraced their farms (which were mostly undulating rather than steeply sloping) but it was common to build farm paths to facilitate removal of the harvested fruit bunches, though the surface was not gravelled as in estates. No-one had dug drains.

Most farmers (75 per cent) applied fertiliser to their immature and mature palms and used herbicide to keep weeds under control. The fertiliser (urea and compound NPK fertiliser) and herbicide (glyphosate and paraquat) were bought in Miri and paid for with cash. On average, farmers applied over 200 kg/ha of fertiliser by gross weight to their mature palms; some applied up to 800 kg/ha. Commercial practice is to apply

about 1,000 kg/ha of compound fertiliser to mature palms, indicating that the smallholders faced an overall capital constraint on fertiliser use. The rate of application was significantly higher for the smaller size group than the larger size group, suggesting that the larger farmers, despite their greater income, still struggled to meet the full capital requirements of their operation.<sup>21</sup>

Most labour was provided by the household members working on their own plot, though maintenance operations such as weed control were often undertaken by women using labour exchange (*bedurok*) in small groups, typically every two months or so. Seventeen households (29 per cent) hired labour to carry out some of their operations, mainly road maintenance (25 per cent) and carrying fruit bunches (25 per cent), but also including spraying (9 per cent) and slashing (19 per cent) weeds, fertilising (5 per cent), and harvesting (15 per cent). As would be expected, the incidence of hiring labour was lower for the smaller size group (22 per cent) than for the larger size group (67 per cent), which particularly relied on hired labour for harvesting. In all cases this was local labour; no respondent reported hiring Indonesian workers. It is noteworthy that hired labour was provided by households that also had their own oil palm plots, not by those households without any oil palm. This confirms that the latter group were labour-constrained, partly accounting for their unwillingness or inability to plant. Wage rates were MYR 30-35/day, considerably higher than on private or government-managed plantations where Indonesian workers were paid MYR 12-15/day.

The average yield of fresh fruit bunches obtained from mature plots was 11.5 t/ha (compared with the Sarawak average of 15.3 t/ha in 2009, mainly reflecting estate yields). About two thirds of those with mature plots obtained yields of 5 to 14 tons/ha (Table 6). However, six farmers reported over 20 t/ha and two of these achieved over 30 t/ha. The yield for the smaller size group averaged 12.0 t/ha, compared with 9.2 t/ha for the larger size group, presumably reflecting the different intensity of fertiliser application. The frequency of harvesting – a function of labour availability – would also have affected yield; there was a tendency to harvest only every 3-4 weeks to save labour. Most oil palm holdings were located 100 m or less from the truck pickup point, but some were as far as 3 km. Some form of transportation such as a motorcycle was used in these cases to haul the fruit bunches to the roadside.

Table 6. Yield of mature oil palm plots

| Yield<br>(t ffb/ha/y) | No. of<br>Households | % of<br>households |
|-----------------------|----------------------|--------------------|
| 1-4                   | 6                    | 13.3               |
| 5-9                   | 18                   | 40.0               |
| 10-14                 | 11                   | 24.4               |
| 15-19                 | 4                    | 8.9                |
| 20-24                 | 4                    | 8.9                |
| 25-29                 | 0                    | 0.0                |
| 30-39                 | 2                    | 4.4                |
| <b>Total</b>          | <b>45</b>            | <b>100.0</b>       |

<sup>21</sup> This is consistent with the experience of larger smallholders in KBT Subis who significantly increased their yields once they had access to credit for fertiliser (see appendix).

Most farmers with mature holdings (62 per cent) sold directly to the nearest mill, owned by Rimbunan Hijau. Some of these paid MYR 45-50/ton to a local Iban contractor (usually also a smallholder) to transport the fruit bunches to the mill. Over a third (36 per cent) sold directly to one of five local Iban buyers. One sold to a Chinese company. Four of the five respondents with their own truck were in the larger size group.

In all cases farmers were paid the same day in cash for their ffb delivered to the mill. The price received for the most recent delivery (November 2009) averaged MYR 336/t, ranging from MYR 250 to 370/t. The variation in price was independent of the size class or the mode of selling (e.g., those selling to RH reported the full range). Thus prices appeared to be competitively determined, based on quality, though all farmers complained that prices were too low given the high cost of inputs.

The average gross revenue obtained in 2009 was about MYR 14,000, or about MYR 3,500 per mature ha. This is somewhat lower than the mean of MYR 16,500 reported by Majid Cooke et al. (2006). The distribution was skewed, reflecting the skewed distribution of landholding (Table 7). Nearly a third of all respondents earned less than MYR 10,000 per year. However, a minority (14 per cent) with large, productive holdings earned from MYR 20,000 to over MYR 60,000. Thus the mean revenue for the smaller size group was MYR 9,130 and for the larger size group, MYR 41,100.

Table 7. Estimated gross annual revenue from sale of fruit (2009)

| Revenue (MYR/y) | No. of households | % of households |
|-----------------|-------------------|-----------------|
| Nil             | 25                | 34.7            |
| < 10,000        | 23                | 31.9            |
| 10,000 – 19,000 | 11                | 15.3            |
| 20,000 – 29,000 | 4                 | 5.6             |
| 30,000 – 39,000 | 2                 | 2.8             |
| 40,000 – 49,000 | 2                 | 2.8             |
| 50,000 – 59,000 | 0                 | 0.0             |
| 60,000 +        | 1                 | 1.4             |
| na              | 4                 | 5.6             |
| Total           | 72                | 100.0           |

The ‘modal farmer’, with a mature holding of about 3 ha and a yield of about 12 t/ha (typical of the < 10 ha size group), would have had annual paid-out costs of about MYR 1,000 for fertiliser (at 230 kg/ha) and a similar amount for herbicides, plus about MYR 1,800 for transportation to the mill (at MYR 50/t). If all labour was supplied by the family (typically the case for this size class), this would mean a net cash income from oil palm of about MYR 6,640. This translates to MYR 2,210 per ha and MYR 44 per day, assuming 50 days per ha (Table 8). This is well above the rural wage rate and higher than the return to other farm activities at the time. Farmers with higher inputs and yields would have earned correspondingly more. For example, a farmer in the same size group who applied 800 kg/ha of fertiliser and obtained a yield of 20 t/ha would have earned MYR 3,345 per ha and MYR 60 per day. All farmers would have experienced increased returns as ffb prices increased in 2010-11. At MYR 400/t the modal farmer would earn MYR 70 per day, and at MYR 600/t, he/she would earn MYR 120 per day, even with low yields and poor-grade fruit.

Table 8. Estimated costs and returns for a typical smallholder in the survey

| Item                      | Assumptions             | Value      |
|---------------------------|-------------------------|------------|
| Output                    | 12 t/ha from 3 ha       | 36 t       |
| Revenue                   | 36 t @ MYR 290/t        | MYR 10,440 |
| Expenditure on fertiliser | 230 kg/ha @ MYR 70/50kg | MYR 1,000  |
| Expenditure on herbicide  |                         | MYR 1,000  |
| Transportation            | 36 t @ MYR 50/t         | MYR 1,800  |
| Total paid-out costs      |                         | MYR 3,800  |
| Net revenue               |                         | MYR 6,640  |
| Family labour input       | 50 days/ha for 3 ha     | 150 days   |
| Net revenue/ha            |                         | MYR 2,210  |
| Net revenue/day           |                         | MYR 44     |

Note: USD 1.00 = MYR 3.20 on 28 November 2011.

Oil palm planting was typically the major source of livelihood for those households with mature palms. Apart from being producers, some households had one or more members who worked on other oil palm smallholdings (11 per cent), on an oil palm plantation (6 per cent), as a contractor transporting fruit bunches (3 per cent), or in a palm oil mill (6 per cent). (Interestingly, all of these households had their own oil palm; it was not the case that households without oil palm were supplying labour to either the small or large-scale oil palm sectors.) Other farming activities had been largely overshadowed by oil palm. As Table 9 shows, most households (89 per cent) produced some swamp rice (or dry rice on flat lowland areas) for their subsistence; very few (13 per cent) still planted hill rice, hence there was an abundance of secondary forest in the more remote parts of the longhouse territory. Rubber and pepper, the traditional cash crops, had clearly fallen by the way (though many have since started tapping their existing rubber trees and are making good returns, given prices of MYR 8-9/kg for unsmoked sheets). Even backyard activities such as pigs, poultry, and horticulture were only undertaken by a third of households interviewed.

Table 9. Livelihood activities other than oil palm planting

| Activity                | No. of households | % of households |
|-------------------------|-------------------|-----------------|
| Hill rice               | 9                 | 12.5            |
| Swamp rice <sup>1</sup> | 64                | 88.9            |
| Pepper                  | 1                 | 1.4             |
| Rubber <sup>2</sup>     | 3                 | 4.2             |
| Other agriculture       | 23                | 31.9            |
| Wage work               | 25                | 34.7            |
| Salaried work           | 19                | 26.4            |
| Business                | 3                 | 4.2             |
| Remittances             | 17                | 23.6            |

<sup>1</sup> Swamp rice' (*padi paya*) is grown in naturally swampy conditions without bunds using direct seeding. Some farmers also planted 'dryland rice' (*padi emperan*) on flat dry land adjacent to the swampy land.

<sup>2</sup> Subsequent observations indicate that more households are now tapping rubber, given recent high prices.

A large proportion of households derived income from non-farm work (wages, salaries, or remittances). There were no significant differences between the two oil palm groups in terms of other livelihood activities, but the non-planters, while almost all cultivating swamp rice, had a significantly lower proportion deriving income from daily or monthly wages or remittances, consistent with their explanation that they had no capital to buy oil palm seedlings. Hence they were cash-poor households in any case, and this was one factor inhibiting the generation of higher cash incomes through oil palm. For most households, however, the livelihood system was constructed around oil palm as the only cash crop, swamp rice as a low-input subsistence buffer, and non-farm sources of income derived from urban-based employment.

## **Discussion**

The oil palm planters in the Sungai Bok survey were essentially independent smallholders who had taken on the activity with little or no assistance from government agencies or private traders and financiers. Though there was a small number of landholders with 10-30 ha of oil palm who had started earlier and now made use of hired labour, by far the majority had planted under 8 ha, typically 2-4 ha, and operated with labour provided by husband and wife (who also engaged in other farm and non-farm pursuits). Less than one in five households had not planted oil palm, most of whom lacked non-farm sources of cash flow to provide the start-up capital and/or did not have suitable land. Thus, although there were different strata in terms of the area planted with oil palm, this did not reflect a process of agrarian differentiation in the sense of 'a cumulative and permanent ... process of change ... based on ... increasing inequalities in access to land' (White 1989, 20). Land remained relatively abundant<sup>22</sup> and the strata were more the product of initial differences in wealth and status within the longhouse and differences in 'human capital' affecting access to off-farm sources of cash flow rather than a necessary consequence of the oil palm boom.<sup>23</sup> The limited evidence from other surveys, combined with anecdotal evidence and casual observation from elsewhere in Sarawak, suggests that the survey respondents are fairly typical of Dayak oil palm smallholders in the state.

Many of the Sungai Bok smallholders began planting desultorily and experimentally, mainly to confirm their claim to the land, but for most this is now their major on-farm source of income – 'strategic agriculture' has become a genuine 'livelihood strategy'. Their oil palm smallholdings provide them with steady employment and cash income throughout the year, without them being subject to the directions of plantation managers or having onerous financial obligations to suppliers of inputs and credit. This strategy is buttressed, on farm, by low-input swamp rice cultivation for subsistence and, off farm, by urban wage and salary employment, and in a few cases self-employment in rural transportation and marketing.

Smallholder oil palm has proved to be a livelihood strategy that generates relatively high returns to household labour and capital, even though yields per unit of land are low. However, this is consistent with the circumstances of most farm-households in

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<sup>22</sup> Though some households had lost land in the deal with Rimbunan Hijau and the Department of Land and Survey described earlier.

<sup>23</sup> Contrast this situation with the disequalising effects of the cocoa boom in Sulawesi as analysed by Li (2002) or of the teak boom in northern Laos (Newby and Cramb 2011).

Sarawak, where farming land is still relatively abundant and underutilised but family labour is increasingly scarce and costly, given the opportunities available for urban-based employment and residence. Capital has also been scarce and costly, with limited availability of private credit for smallholder farm development and restricted access to the subsidised capital resources channelled through government schemes for smallholders. This constraint is being progressively lifted as increased income from oil palm provides the working capital to purchase farm inputs and expand the planted area without resort to credit, but the level of fertiliser use is still low, suggesting that capital remains limiting.

Even with low inputs of labour and capital, and hence yields of around 12 tons per ha, smallholders with about 3 ha of mature palms were able to earn around MYR 7,000 per year,<sup>24</sup> providing a return to family labour of over MYR 40 per day when prices were low, rising to over MYR 100 per day at current (May 2011) prices.<sup>25</sup> Nevertheless, smallholder returns to labour and capital could be improved, particularly by greater use of fertiliser to increase yields. Provided the ratio of ffb price to fertiliser price is favourable, the response of yield to increased fertiliser application (up to say 1 ton per ha of an appropriate compound fertiliser properly applied) would translate directly into increased net income per day. A further area of improvement would be in the upgrading of farm access roads to lower the cost of harvesting and hauling fruit, and to assist those whose land is currently not sufficiently accessible for them to consider planting.

This suggests a need for greater use of well-targeted support measures enabling the acquisition of good quality planting material, the use of higher levels of recommended fertilisers, and improvement in infrastructure. Rather than the fully-subsidised approach of the DA's Oil Palm Mini-Estates, which are popular with participants but unlikely to be a very cost-effective use of public funds, it would seem better to expand and refine the farmer group (KBT) approach pioneered and fostered by the MPOB. This not only alleviates the constraint on capital, ensuring greater use of fertiliser, but provides access to good quality planting material and technical advice, and facilitates savings in the transportation and assembly of fruit for processing, while leaving the overall development and management of the farm in the hands of the smallholders. An additional public investment in farm access roads could assist both planters and those who are currently non-planters to obtain greater benefits from oil palm.

## **Conclusion**

The leviathan that is the modern Sarawak state has used its coercive territorial powers to favour its close relatives, the crocodiles of the commercial plantation sector, in opening up land for oil palm development. This is a particular instance of the global land grab phenomenon in which domestic rather than transnational players dominate – a powerful alliance has been developed between the political elite in Sarawak and its clients in the agribusiness and forestry sectors, pushing the legal defences of customary landholders to the limit. Notwithstanding setbacks inflicted by the judgements of the High Court, which has drawn on common law arguments to uphold

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<sup>24</sup> This on its own is just below the rural poverty line used in the Ninth Malaysia Plan (2006-2010), set at MYR 698 per month for a family of four. However, it was not the only source of cash income for the households in the survey, and they also grew a substantial proportion of their rice requirements.

<sup>25</sup> This is well above rural wage rates of up to MYR 30-35 per day.

customary land claims, this political-commercial alliance has succeeded in converting vast tracts of public and community land into private landholdings, generating valuable rents for a privileged few from both timber extraction and large-scale tree-crop agriculture.<sup>26</sup>

Nevertheless, the wily mouse-deer has found ways to enjoy at least some of the fruits of the oil palm boom. Oil palm smallholders have inserted themselves into the interstices of the extensive plantation landscape, particularly in northern Sarawak, creating a more diverse social, economic, and environmental outcome than the Taib Government's intended 'rows of plantations and villages well organised in centrally managed estates'. These smallholders mostly obtain lower yields than the estates but achieve good returns to their limiting resources of labour and capital, while maintaining a degree of livelihood diversity. Importantly, the rapid growth of oil palm smallholders has not been associated with marked differentiation between rural households. The context here is all important – extensive landholdings derived from the traditional practice of shifting cultivation, continuing low population density, and the rapid growth of non-farm employment in the Malaysian economy have all combined to produce a relatively land-abundant village agriculture, notwithstanding the on-going internal land grab, as well as diversified livelihood portfolios in which non-farm sources of income and capital feature prominently. Hence establishing three hectares or so of oil palm is within the reach of most households – provided they have a couple of farm workers and some start-up capital and their land is not too inaccessible – without incurring onerous obligations to large landholders or creditors. Nevertheless, targeted support for these smallholders in the form of group-brokered credit for key inputs, technical advice, and coordinated provision of infrastructure, especially farm access roads and fruit collection centres, could help to raise their incomes still further and spread the benefits of the oil palm boom more widely and equitably.

## References

- Baird, I.G., 2010. Land, rubber and people: rapid agrarian changes and responses in Southern Laos. *Journal of Lao Studies* 1: 1-47.
- Barlow, C., 1985. Indonesian and Malayan agricultural development: 1870-1940. *Bulletin of Indonesian Economic Studies* 21: 81-111.
- Barlow, C., 1986. *Oil Palm as a Smallholder Crop*. Palm Oil Research Institute of Malaysia (PORIM), Occasional Paper No. 21. Kuala Lumpur: PORIM.
- Borras, S. M., Jr., Hall, R., Scoones, I., White, B., and Wolford, W., 2011. Towards a better understanding of global land grabbing: an editorial introduction. *Journal of Peasant Studies* 38(2): 209-216.
- Cramb, R.A., 1983a. *A Survey of Chinese Farmers in the Sungai Tengah Area*. Farm Management Report No. 1. Kuching: Sarawak Department of Agriculture.

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<sup>26</sup> About 80% of oil palm plantations have been established in primary forest (Cramb 2011).

Cramb, R.A., 1983b. *An Approach to Classifying Farming Systems in Sarawak*. Farm Management Report No. 4. Kuching: Sarawak Department of Agriculture.

Cramb, R.A., 1990. The role of smallholder agriculture in the development of Sarawak: 1963-1988. In A.M. Mat Salleh, H. Solhee, and M.Y. Kasim, eds. *Socio-Economic Development in Sarawak: Policies and Strategies for the 1990s*, pp. 83-110. Kuching: AZAM.

Cramb, R.A., 1993. Shifting cultivation and sustainable agriculture in East Malaysia: a longitudinal case study. *Agricultural Systems* 42: 209-226.

Cramb, R.A., 2007. *Land and Longhouse: Agrarian Transformation in the Uplands of Sarawak*. Copenhagen: NIAS Press.

Cramb, R.A., 2011a. Reinventing dualism: policy narratives and modes of oil palm expansion in Sarawak, Malaysia. *Journal of Development Studies* 47: 274-293.

Cramb, R.A., 2011b. Agrarian transitions in Sarawak: intensification and expansion reconsidered. In R. De Koninck et al., eds. *Borneo Transformed: Agricultural Expansion on the Southeast Asian Frontier*, pp. 44-93. Singapore: NUS Press.

Cramb, R.A., and Sujang, P.S., 2011. 'Shifting ground': renegotiating land rights and rural livelihoods in Sarawak, Malaysia. *Asia Pacific Viewpoint* 52: 136-147.

Cramb, R.A., and Ferraro, D. (in press). Custom and capital: a financial appraisal of alternative arrangements for large-scale oil palm development on customary land in Sarawak, Malaysia. *Malaysian Journal of Economic Studies*.

Deininger, K., 2011. Challenges posed by the new wave of farmland investment. *Journal of Peasant Studies* 38(2): 217-247.

Deininger, K., and Byerlee, D., 2011. *Rising Global Interest in Farmland: Can it Yield Sustainable and Equitable Benefits?* Washington, DC: World Bank.

De Koninck, R., Bernard, S., and Bissonette, F., eds. 2011. *Borneo Transformed: Agricultural Expansion on the Southeast Asian Frontier*. Singapore: NUS Press.

Department of Agriculture, 1985. *Crop Production Handbook*, vol. 2 Costs and Returns. Kuching: Sarawak Department of Agriculture.

Department of Agriculture, 1997. *Production Handbook: Partial Budget on Crops, Livestock, Aquaculture*. Kuching: Sarawak Department of Agriculture.

Department of Agriculture, 2011. *Agricultural Statistics of Sarawak 2009*. Kuching: Sarawak Department of Agriculture.

Dewey, C.J., 1974. The rehabilitation of the peasant proprietor in nineteenth-century economic thought. *History of Political Economy* 6(1): 17-47.

Eastwood, R., Lipton, M., and Newell, A., 2010. Farm size. In R. Evenson and P. Pingali, eds. *Handbook of Agricultural Economics*, vol. 4, pp. 3323-3397. Amsterdam: North-Holland.

Ellis, F., 1993. *Peasant Economics: Farm Households and Agrarian Development*. Cambridge: Cambridge University Press.

Ellis, F., 2000. *Rural Livelihoods and Diversity in Developing Countries*. Oxford: Oxford University Press.

Ellis, F., and Biggs, S., 2001. Evolving themes in rural development: 1950s-2000s. *Development Policy Review* 19: 437-448.

Hall, D., Hirsch, P., and Li, T. M., 2011. *Powers of Exclusion: Land Dilemmas in Southeast Asia*. Singapore: NUS Press.

Hayami, Y., 1998. The peasant in economic modernisation. In C.K. Eicher and J.M. Staatz, eds. *International Agricultural Development*, 3rd ed, pp. 300-315. Baltimore and London: Johns Hopkins University Press.

Hayami, Y., 2010. Plantation agriculture. In R. Evenson and P. Pingali, eds. *Handbook of Agricultural Economics*, vol. 4, pp. 3305-3322. Amsterdam: North-Holland.

Hunting Technical Services and Hoff and Overgaard, 1974. *Miri-Bintulu Regional Planning Study*. Report to State Planning Unit, Sarawak, Malaysia.

Li, T.M., 2002. Local histories, global markets: cocoa and class in upland Sulawesi. *Development and Change* 33: 415-437.

Li, T.M., 2009. Exit from agriculture: a step forward or a step backward for the rural poor? *Journal of Peasant Studies* 36(3): 629-636.

Li, T.M., 2011. Centring labour in the land grab debate. *Journal of Peasant Studies* 38(2): 281-298.

McCarthy, J.F., and Cramb, R.A., 2009. Policy narratives, landholder engagement, and oil palm expansion on the Malaysian and Indonesian frontiers. *The Geographical Journal* 175: 112-123.

Majid-Cooke, F. 2002. Vulnerability, control and oil palm in Sarawak: globalisation and a new era? *Development and Change* 33: 189-211.

Majid Cooke, F., Ngidang, D., and Selamat, N., 2006. *Learning by Doing: Social Transformation of Small-Holder Oil Palm Economies of Sabah and Sarawak, Malaysia*. Report submitted to UNESCO, Participatory Programme Research Project No. 27213203 MAL.

Manivong, V., and Cramb, R.A., 2008. Economics of smallholder rubber expansion in northern Laos. *Agroforestry Systems* 74: 113-125.

M4P 2005. *Thirty Cases of Contract Farming: An Analytical Overview*. Making Markets Work Better for the Poor (M4P) Project. Hanoi: Asian Development Bank.

Netting, R. M., 1993. *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford: Stanford University Press.

Newby, J.C., and Cramb, R.A., 2011. Smallholder teak and agrarian change in northern Laos. *Small-Scale Forestry* (published on-line 13 April 2011).

Ngidang, D., 2002. Contradictions in land development schemes: the case of joint ventures in Sarawak, Malaysia. *Asia Pacific Viewpoint* 43: 157-180.

Potter, L., 2011. Plantations, smallholders, elites and traditional growers: the dynamics of oil palm production in Cameroon. Paper presented at International Symposium on Society and Resource Management, Kota Kinabalu, 15-17 June 2011.

Rachman, N.F., Savitri, L.A., and Shohibuddin, M., 2009. Questioning pathways out of poverty: Indonesia as an illustrative case for the World Bank's transforming countries. *Journal of Peasant Studies* 36: 621-627

Scoones, I., 2009. Livelihoods perspectives and rural development. *Journal of Peasant Studies* 36: 171-196.

Snelder, D.J., and Lasco, R.D., eds., 2008. *Smallholder Tree Growing for Rural Development and Environmental Services*. Dordrecht and London: Springer.

So, Sokbunthoen, 2010. Land rights in Cambodia: an unfinished reform. *Asia Pacific Issues* 97. East-West Center.

T'ien, J.K., 1953. *The Chinese of Sarawak: A Study of Social Structure*. London: London School of Economics and Political Science.

Walker, A., 2009. 'Now the companies have come': local values and contract farming in northern Thailand. In Dominique Caouette and Sarah Turner, eds. *Agrarian Angst and Rural Resistance in Contemporary Southeast Asia*. London: Routledge.

Wee, A.C., and Ngui, C., 1980. *A Study of the Danau Smallholder Oil Palm Scheme and the Danau Palm Oil Mill*. Planning Division Report No. 33. Kuching: Sarawak Department of Agriculture.

White, B. N. F., 1989. Problems in the empirical analysis of agrarian differentiation. In G. Hart, A. Turton, B. White, B. Fegan, and T. G. Lim, eds. *Agrarian Transformations: Local Processes and the State in Southeast Asia*. Berkeley: University of California Press, pp. 15-30.

World Bank, 2007. *Agriculture for Development*. Washington DC: The World Bank.

Wright, S., 2009. *Agriculture in Transition: The Impact of Agricultural Commercialisation on Livelihoods and Food Access in the Lao PDR*. Vientiane: UN World Food Programme Laos (draft report).

Zen, Z., Barlow, C., and Gondowarsito, R., 2005. *Oil Palm in Indonesian Socio-Economic Improvement: A Review of Options*. Working Papers in Trade and Development No. 2005/11. Canberra: Division of Economics, Research School of Pacific and Asian Studies, Australian National University.

Zola, A., 2008. *A Preliminary Assessment of Contract Farming Arrangements and Plantations in the Agriculture and Natural Resources Sector of Southern Lao PDR*. Vientiane: ADB.

## Appendix: Case Studies of Supported Smallholder Schemes

Two cases in Sri Aman District in southern Sarawak illustrate the operation of the Department of Agriculture's previous schemes for oil palm smallholders.<sup>27</sup> Sungai Jaong is an Iban longhouse community which received support under the SHOP planting program in the early 2000s. In this case there was little or no coordination and smallholders were left to plant on their own, having been provided with subsidised planting material and fertiliser and technical advice from the DA's generalist extension staff. There was no investment in terracing or farm roads. When the price of ffb dropped and the price of fertiliser rose sharply in the mid-2000s, most participants gave up. The project was described by the Divisional Agricultural Officer as 'a total failure'.

The second case is Rapak, which took part in the OPME scheme.<sup>28</sup> Several neighbouring longhouses contributed a block of about 100 ha, with individual lots of 1-3 ha. All development work was undertaken by Peladang Berdikari, a semi-private subsidiary of the Sarawak Farmers' Organisation (the commercial arm of the DA). There were problems with the supply of seedlings (a state-wide problem due to demand outstripping supply) leading to delayed planting, but eventually the project was handed over to the farmers in 2003-4 when the palms were coming into production. The farmers preferred to manage the mature plantation themselves rather than contract Peladang Berdikari to do so. The Pantu Area Farmers' Organisation continued to provide some services, selling fertiliser and purchasing ffb for transportation to the nearby SALCRA mill, though some farmers with their own trucks preferred to sell directly to the mill. The Rapak smallholders survived the cost-price squeeze of the middle part of the decade and continued to make good returns, with no debts to repay as well as having land and labour available for other pursuits. Hence the farmers regarded this scheme as a success, and preferable to a large joint venture scheme, though there were concerns about ongoing maintenance and harvesting as the palms became taller and the farmers grew older.

Peladang Berdikari did enter into a management arrangement for a 209 ha mini-estate at Kerapa in Sarikei Division in central Sarawak which involved paying the landholders rental in years 4, 5, and 6, and a share of the profits from Year 7, including a fixed component and a variable component linked to the price. Peladang Berdikari was expecting to start making a profit from this arrangement in 2008, the seventh year.<sup>29</sup>

One of the earliest and most successful of the MPOB's smallholder buying groups has been KBT Subis in Miri District (Fig. 2). KBT Subis was formed in 2004 as a contractual arrangement between four parties: (1) Sarawak Oil Palm (SOP) Berhad as the operator of the mill; (2) the Area Farmers' Organisation (Pertubuhan Peladang Kawasan, PPK) for Subis; (3) oil palm smallholders in the Subis area who were (or became) members of PPK Subis; (4) MPOB as the monitoring and enforcing agency.

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<sup>27</sup> Interview with Bumphray Kuntoi, formerly Divisional Agricultural Officer, Sri Aman Division, July 2009.

<sup>28</sup> Interviews with Wong Ting Hun, Peladang Berdikari, April 2008; Bumphray Kuntoi, Department of Agriculture, July 2009.

<sup>29</sup> Interview with Wong Ting Hun, Peladang Berdikari, April 2008

The conditions for receiving credit through the PPK<sup>30</sup> are that the farmer has to be a member, the credit is given in kind (largely in the form of fertiliser) up to a maximum value of MYR 3,000 for a maximum period of 12 months, and the interest rate charged is 3 per cent for 1-3 months, 5 per cent for 4-6 months, and 10 per cent for 7-12 months. PPK Subis also provides a collecting service to smallholders, who deliver their harvest in small lorries to the Subis Collection Centre from where it is hauled by SOP trucks to the mill.<sup>31</sup>

The Subis smallholders have been planting oil palm for many years, being surrounded by the long-established SOP plantations and with good access to the SOP mill. They planted oil palm on their farming land, previously used for upland rice (and forest fallow), rubber, or pepper. Some of the farmers with larger areas (20-25 ha) now employ permanent local workers as well as Indonesian plantation workers on Sundays (their day off). In the first year of the KBT scheme, the number of participants was 1,425, increasing to 5,697 in 2008. The total tonnage increased accordingly from just over 12,000 tons in 2006 to more than 44,000 tons in 2008. Likewise, the annual value of credit extended rose from MYR 121,000 in 2006 to MYR 394,000 in 2008. The loan recovery rate has been about 75 per cent over the duration of the scheme, meaning that some participants are accumulating debts. Hence the total debt in 2008, including current and unpaid loans, was MYR 463,843. Records for five leading farmers in the Subis KBT for 2006 to 2009 showed yields increasing from an average of only 5 tons/ha in 2006 to 16 tons/ha in 2009, with some regularly obtaining 20-25 tons/ha. Much of this increase was due to the increase in fertiliser use made possible by the scheme.

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<sup>30</sup> The ultimate source of credit was AgroBank, described as a 'government-linked' bank, formerly Bank Pertanian (Agriculture Bank).

<sup>31</sup> Information from interviews with officials of MPOB (Kuching office), August 2008, and the Farmers' Organisation (Miri office), July 2010.