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WORD COUNT 6538
TIME SUBMITTED 26-JAN-2023 08:22AM
PAPER ID 95924680

INTERNATIONAL REVIEW OF MODERN SOCIOLOGY VOLUME 46, NUMBER 1-2, AUTUMN 2020

OIL PALM GOVERNANCE AT THE GRASSROOTS: HOW ASSEMBLAGE LINKS OIL PALM, LIVELIHOODS, AND LOCAL ADMINISTRATION IN AN INDONESIAN VILLAGE.

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Oil palm governance has attracted significant research attention. However, the impact of this work on palm oil governance remains patchy. In part, this is linked to trends in palm oil research, which focus on the conservation-development binary that limits exploration of the practices whereby actors in different sites work out oil palm governance. In this paper, we propose an approach that conceptualizes the oil palm industry as an assemblage of heterogeneous human and non-human elements and explores how these are contingently brought together in the oil palm industry. These are employed to examine how oil palm is integrated into a village in West Kalimantan. The study shows that while current partnership arrangements leave village governments in a weak position vis-à-vis large plantation companies, local administrative arrangements provide local actors with the capacity to respond to opportunities in a variety of ways resulting in diversified small-scale production addressing multiple livelihood objectives.

INTRODUCTION

The Indonesian state plans further expansion of oil palm cultivation, justified by its ability to deliver developmental benefits (Susanti and Maryudi 2016). A substantial scientific literature exists

concerning the Indonesian oil palm sector. Much of this literature recognizes the benefits of oil palm (Euler et al. 2017, Agustira et al. 2008) and measures to further promote it. Another significant body of work examines its social and environmental costs (Vijay et al. 2016). The desire to strike a balance between development and conservation has given rise to numerous proposals for the adoption of alternative practices within and outside the industry supporting a better balance between environment and development (Nagiah and Azmi 2012, Paramananthan 2013, Hansen et al. 2015, Padfield et al. 2016). However, the actual uptake of such practices is patchy; only a limited proportion of global oil palm is produced in compliance with sustainability standards, and the effectiveness of these measures is questioned (Carlson et al. 2018, Gassler and Spiller 2018, Kim 2015, Ruysschaert and Salles 2014), while evidence that less damaging forms of agriculture are capable of replacing the cultivation of oil palm on a significant scale is limited (see for example Dienle et al. 2020, Giesen et al. 2018). As a consequence, and despite intense scientific endeavors, environmental problems associated with the industry persist.

The case of oil palm highlights broader challenges in managing science-to-policy relationships in environmental governance. While the oil palm boom has generated an enormous degree of research activity, the extent to which this work contributes to policy varies. Inevitably, this problem has itself become the subject of research to "bridge the gap" between research and policy. Valuable as this work is, the interface between environmental research and governance remains challenging. While environmental scientists may rightly suggest that this failure relates to aspects of the policymaking process that are beyond their control, it may at least be worth considering the extent to which current approaches to studying the oil palm industry and its governance framework provide the basis for designing effective policy interventions and engagement strategies.

In this paper, we consider this question focussing on the Indonesian context. Drawing on the ideas of assemblage outlined in the introductory paper in this issue, rather than focussing on the formal elements of oil palm governance, we suggest that the palm oil industry is constantly being re/produced through the interactions of entities of which it is comprised. Such practices and

the assemblages they generate are contingent and open-ended, transcending the formal components of the oil palm industry and governance. This framing allows for a richer analysis of how different actors' decisions and actions at different points in the industry contribute to the shape that its governance takes. Thus, we in this paper present an empirical description of how a complex oil palm assemblage emerges in one village in Indonesia. A brief discussion and concluding remarks consider the implications of this perspective for research into the governance of the industry.

OIL PALM IN INDONESIA

While the Indonesian oil palm industry initially lagged behind that in neighboring Malaysia, Indonesia's oil palm expansion in the 1990s and early years of the 21st century accelerated, resulting in the country becoming the world's largest palm oil producer in the early 21st century. It now controls 46% of the world market. 12.3 million hectares (6%) of Indonesian soil is planted with oil palm, contributing around 7% of Indonesia's GDP (Varkkey et al. 2018).

As in Malaysia, oil palm has been present in Indonesia for many decades, having first been brought into the country as an ornamental plant in the 19th century. However, before the 1960s, the crop's commercial value was viewed as limited. It was overshadowed by the production of other more established crops in colonial commodity supply chains (rubber being particularly significant in this system). During the early years of independence, a period of "guided democracy" emerged. A form of neo-consensus operated within the country, with at this time economic and political interest groups exerting a significant influence on national policies. Attitudes towards agriculture reflected a broader "decolonization" agenda with a focus shifting from commodity production as a focus for rural policies, and an emphasis on measures that supported food and income security for rural populations, agrarian and land reform, and economic self-sufficiency. These policies came to be linked with a period of economic and political instability, poor agricultural performance, and a turning away from global markets (which were changing dramatically at this time Noor and Yazid 2014).

Indonesian economic priorities experienced a significant shift between 1964 and 1966 with the fall of the regime of its first President, Sukarno in 1965 and, following a period of significant

upheaval, his replacement by Suharto in 1966 (Noor and Yazid 2014). Suharto's regime was underpinned by the support of the military and informed intellectually by the New Order movement, which supported an opening up of trade and foreign policy. Following a significant period of political instability during which opposition voices were violently purged, Sukarno's "guided democracy" approach was superseded by the *Orde Baru* (New Order) regime under Suharto. This regime vested significant power in an executive headed by Suharto and supported electorally via the Golkar organization (later party). In economic terms, Suharto and the New Order regime was credited with turning the country's fortunes around in the late 1960s and 1970s by adopting more outward-looking, pro-Western economic and foreign policies (Noor and Yazid 2014).

Under Suharto, Indonesia has been described as evolving into a unitary developmental state (Wie 2012b). Under this model, the state retained a strong role in steering economic development. However, rather than using this power to placate the demands of national interest groups, this power was mobilized to support the development of a trading economy that could grow GDP via a series of five-year economic plans. Natural resource extraction was an important component of this approach. In the early 1970s forestry was identified as a mechanism for accelerating economic development (Susanti and Maryudi 2016), enacted through the first of a series of five-year national development programs (Rudner 1976, Wie 2012a). At the same time, the lack of a strong opposition meant that during the New Order era, Indonesian political and economic life came to be worked out within the ruling regime and its supporting organizations, notably Golkar members and the military (Wie 2012a). One result of this is that while the state successfully grew, the national economy developed a business and policy culture in which patronage relationships between commercial actors and influential local figures played an important role (Tyson et al. 2018).

The Indonesian take up of the oil palm itself began in earnest only during the 1980's when dwindling timber supplies made oil palm more attractive. Expansion of the crop accelerated in the 2000s. The estimated present oil palm plantation is about 14 m Ha. The original centers of the industry were on areas of Sumatra

in particular. However, as demand and production technologies evolved, oil palm cultivation expanded in Borneo and West Papua.

Like Malaysia, Indonesian discourse concerning palm oil also supported the idea that the crop could perform a dual role: as an engine for increasing GDP, and as a mechanism for supporting rural development and anti-poverty measures. From a relatively small base in the 1970s, production expanded. The 1980s and 1990s saw large areas of former forest and rubber cultivation being given over to oil palm production, accompanied by policies aimed at supporting an industry that involved both large companies and small producers. A key driver of the expansionary strategy is the idea that the demand for oil palm will continue to grow. Simultaneously, the limited extent of mechanization in the industry permits participation by large and small operators to continue in parallel. Many large operators benefitted from the support of key local stakeholders via patronage relationships (Varkkey 2012). Concurrently, policies were developed on a range of partnership arrangements through which smallholders could also participate in the palm oil "boom" (see McCarthy and Zen 2010, McCarthy 2010). The primary form such policies took during the New Order period were variations of so-called nucleus and estate (NES) schemes (World Bank 2011). The principle idea underpinning these schemes was that a large company would enter into a relationship with smaller-scale producers. In the initial versions of the scheme, the large company would develop a parent estate and possibly a mill, while providing technical support for smallholders who agreed to develop plots and sell fresh fruit bunches to the companies. In early versions of the scheme, the plantation and smallholdings comprised 80% and 20% of the total scheme, respectively. In some cases, this approach also linked the issue of overpopulation and land scarcity by marrying the NES concept to transmigration policies. This was made explicit in the PIR-Trans program, which supported the creation of NES schemes in which the smallholders were transmigrants (McCarthy and Cramb 2009).

Following varied levels of success, NES schemes were effectively discontinued in 2001 (McCarthy and Cramb 2009). This followed the turmoil of the financial crisis and the end of the Suharto regime and the appointment of a new government, which adopted a much more neo-liberal approach to economic policy, and advocated a

smaller role for the central state in economic development. Consequently, the development of new palm oil schemes assumed a more expressly commercial focus. This coincided in 2001 with decentralisasi policies (a policy of decentralisation), and subsequent *Reformasi* (reformation policy) to devolve more powers to the provincial, district, and even village governments, thus these layers of use government assumed a greater degree of control over land. Under these arrangements, the district government was given responsibility for allocating land to new palm oil developments by companies. These companies were then obliged to enter into negotiations with communities located where they wished to establish palm oil plantations and form partnerships with them (*Kemitraan*), under which local communities would receive ownership of up to 20% of the planted area. According to McCarthy and Zen (2010), this new arrangement has proven to be somewhat problematic as it allows considerable scope to provincial and district governments to reinterpret national guidelines. Critically, questions emerge concerning how village governments manage governance at the local level.

OIL PALM AND VILLAGE LIFE – TELUK EMPENING

In this section, we address the question of how local governance of the palm oil assemblage is worked out by focussing on one village in West Kalimantan. Teluk Empening is located in Kubu Raya Regency 48 kilometers south of Pontianak in West Kalimantan. The village is situated on a bend of the River Kapuas (0°23'S, 109°36'E) and possesses a mixture of peat and mineral soils. The area has seen the large-scale conversion of tropical forests. A large oil palm plantation is located to the southwest of the village while land to the north of the village proper has been developed for rice cultivation. Within and around the village, there is, therefore, a range of areas that have been cleared, drained, and converted into different agricultural land use classes. A small area of the village's land (300 hectares) is part of the large oil palm plantation, and other land is now used for various long and short term crops and agricultural activities (PODES data). Teluk Empening is not a transmigration community, but few of the inhabitants come from groups that are indigenous to the location. Rather, most of those living in the area were drawn there for multiple reasons. In

interviews, collaborators cited the opportunities offered by the presence of significant areas of land suitable for rice production, a perception that land was available to those willing to clear it, and employment in the oil palm plantation. The piecemeal nature of its settlement has resulted in an area with a diverse ethnic base dominated by Buginese and Madurese people and others from a wide range of ethnic backgrounds.

Despite its riverside location, the village retains a largely agricultural character. Fishing undertaken there is extremely small scale, largely involving trapping or fishing for snakehead in drainage ditches. While of negligible commercial value, these fish do constitute an extra source of protein in the village diet. Interviews with locals and observations made during the research confirm that while rice cultivation dominates in the areas of mineral soil, many of the area's households cultivate crops primarily or exclusively on peat. Limited evidence of conflict relating to land use was detected during the research; unclaimed land is being actively cleared and brought into production in the area, which raises issues concerning land titles. During the period we spent in the village, concerns were expressed about the impact of restrictions on burning on the ability of locals to clear and farm land.

METHODS

We came to Teluk Empening in the hope of exploring how local livelihood and cropping practices intersected with the natural environment. The approach drew on assemblage theory: livelihood was conceptualized as a set of practices during which individuals and households assembled a range of entities and objects in ways that make possible the reproduction of a meaningful daily life. Besides the production of physical elements of livelihood, attention was also paid to the sociocultural elements, including power and identity. In this context, we did not single out oil palm as the focus of the investigation. Rather, we allowed observations concerning the role of oil palm to emerge from a holistic account of how people assembled livelihoods in specific biophysical, economic, and sociocultural contexts.

Data was gathered via a mixed-methods approach. A quantitative survey of household livelihood practices was undertaken. The survey was targeted towards members of local

households who engaged in agriculture on peatland as part of their livelihoods. The questionnaire consisted of a detailed series of closed questions exploring multiple themes relating to livelihoods. This included questions on household composition, agricultural and non-agricultural income, land ownership and transfers, crop choices and outcomes, agricultural and land management practices, and market access and support structures. In addition to the quantitative survey, in-depth interviews were undertaken with several farmers, traders (shopkeepers and agricultural traders), members of local NGOs, figures in the local administration including the current and former heads of village, and figures in the provincial administration and peat restoration agency (*Badan Restorasi* Gambut or BRG). Participants were identified via a snowball sampling technique.

A final element of the research involved the staging of several participatory exercises. These took the form of workshops where locals and researchers discussed local administrative and economic issues, key problems and opportunities the area faces, and aspirations for the future.

PALM OIL AND LIVELIHOOD ASSEMBLAGE

The survey data largely confirm the findings of work undertaken by Jelsma et al. (2017) and suggestions made by McCarthy (2010), highlighting the variability of livelihood among smallholders in palm oil-producing areas. Households in the area produce a wide range of crops. Furthermore, besides their own farming, agricultural households draw on multiple income sources, including employment in the village government, plantation work, trading, and laboring. Except for rice, most agricultural produce goes to the market. By and large, therefore, this is a community engaged in petty commodity production. The survey data found only weak relationships between crop choice and levels of income available to a household. Among the factors that did seem to have a bearing on income were the level of education of different households, their relationship with the village government, ethnicity, and size of the holding.

The survey, interviews, and observations showed that livelihood practices in Teluk Empening are not homogenous. Within the broad category described as smallholders, we identified a wide range of

strategies employed by different individuals and households, resulting in significantly different outcomes. While most of those we spoke to had low income, the village also has a small group of people who appear to be doing significantly better. In-depth interviews with members of this group revealed that even among them, there was a high degree of variation in the strategies they employed.

One collaborator attributed his success to his trading business, which had allowed him to generate additional money to increase his land. Another worked exclusively on peat soil and employed a strategy whereby he would grow a short term cash crop for some years until the land "was no longer good for them", at which point he would plant oil palm on these areas and clear more land, in this way building up the size of his landholding. A third attributed his success to the fact that he had developed a substantial commercial oil palm holding combined with rice in other sites. What was notable about this group is that they enjoyed relatively good relationships with the village government, belonging to the same ethnic group as the village leadership, and in two cases, also holding minor positions within the village government itself. They also revealed a considerable degree of knowledge of additional supports that could be accessed via the government, and skills in negotiating additional resources through these and other links. In particular, they had successfully made use of the somewhat ambiguous land titling powers of the different layers of government to increase the amount of land under their control.

In assemblage terms, we see the different individuals seeking to bring together a variety of different human and non-human objects in ways that support their livelihood. The degree to which they can territorialize these different human and non-human components in ways that reflect their interest is reflected in the outcomes they achieve. It is important to stress that, in some cases, the maximization of income may not be the actors' goal. Therefore, it is not necessarily the case that those who generate the largest income are the most successful in fulfilling their livelihood goals. However, those who do pursue strategies that lead to the generation of the most income exhibit several similarities. These include a wider social network, connections to the village government, and strategies that result in increasing landholding. Crucially, their

relationship with the palm oil assemblage was both instrumental, tangential, and variable. One of the village's largest farmers had, in effect, established himself as a small-scale plantation owner while combining this business with rice production. A second of the more successful farmers used oil palm as a means of securing and maintaining title land.

By contrast, others in the village merely used the oil palm industry as a source of employment or cultivated small plots which yielded limited benefits. In the case of this village, therefor we see that oil palm is used by local people in different ways not simply to boost income, but also to secure and maintain control of the land. Regardless of how policy researchers may conceptualize the design and implementation of oil palm policy, the realities of oil palm cultivation at the grassroots level are shaped by how locals incorporate it into their lifeworlds and livelihoods.

Palm Oil Assemblage and Local Institutions

The accompanying illustration (Figure 1) is based on a description of local institutional arrangements provided to us by a senior member of the local government in Central Kalimantan. However, it is essentially that which can be found in any basic textbook on Indonesian governance. This distinguishes five layers of government, ranging from the nation to the village. As it is currently constituted, the Indonesian system of government is, to some degree, a legacy of previous government policies. The idea of five strictly nested layers of government was initially linked to the desire of the early post-colonial regime to avoid any suggestion of federalism that might invite ideas about separatism across the archipelago. Under the New Order, the layers of government became the mechanisms for ensuring compliance with the regime's rules and regulations via a strict and rigidly controlled hierarchy of reporting arrangements. Since the end of that period, the different layers of government within Indonesia have evolved into the basis of a less centralized system of government with extensive devolved powers.

Figure 1 Multilayered government in Indonesia

However, as was mentioned above, the data from the extended and group interviews illustrate that local government and governance in Indonesian communities are complex. Besides the village government itself, a range of subordinate layers exist in the form of sub-villages, community organizations (*Rukun Warga* or RW), and neighborhood organizations (*Rukun Tetangga* or RT). In addition, a range of quasi-autonomous organizations has evolved at the village and sub-village level. Sometimes, these entities are subordinate to the village leadership, in the case of others, they are funded and administered under different national, provincial, and district arrangements. Interviews and observations in Teluk Empening revealed an incredibly dense network of local organizations and entities connected to the village government in different ways (see Figure 2).

Figure 2 Local administration and influences.

Kemitraan Negotiations

The in-depth interviews gave some insight into how these complex arrangements are negotiated, and also concerning the impact of R*eformasi* measures on the responsibilities and operation of the village government. As a rural village (*desa*), the village government of Teluk Empening is subject to a degree of democratic control. The village head is elected, as in theory, are the head of RW and RT. However, in practice, the elected village head of Teluk Empening has generally come from within one ethnic community. Furthermore, the village head has a very strong influence on the composition of the village government, appointing his executive officers and also suggesting RT and RW heads.

Appointment to these positions is not a minor issue. Many of the positions come with payments, and in some cases, provide access to significant resources and the levers of local power. Under *Reformasi*, introduced by President Susilo Bambang Yudoyon and strengthened by president Jokowi most of those we interviewed felt that the village government had improved with additional funding and training, and more control over local processes of land acquisition and land use planning. This was consolidated under Law No. 6 (2014) and Regulation No. 60 (2014), which extended additional power and budget to village governments. In theory, this extends to land use: villages retain the power to issue letters to signify that individuals have rights to land (*Surat Keteratangan Tanah* or SKT). Villages have responsibility for local environmental issues, and oil palm concession holders must negotiate the terms under which they can plant oil palm.

Village governments thus retain considerable control over civic groups and land access and titling. In addition, however, they are now key actors in the new and more commercialized "partnership" arrangements in relation to the development of new oil palm concessions. Under such arrangements, a large palm oil company was issued permissions to plant on specific tracts of land close to Teluk Empening. Consequently, the company was required to negotiate a partnership arrangement with Teluk Empening and neighboring villages under which benefits of the plantation are shared with the villages. While, in theory, this process extends some autonomy to the village in practice, they only have scope to discuss the terms under which the concession is operated. They are

essentially presented with a *fait accompli*: in the words of one of the respondents, "the district government told the palm oil company which land they had to use for their plantation and which villages the land belonged to. The company then had to negotiate with the different villages". This arrangement places the onus on village governments and companies to reach acceptable terms under which the company could use land in the village catchment. The village government entered into negotiations with the palm oil company concerning 300 hectares of village land, which had been granted to them for oil palm.

While under the partnership arrangements, some benefit is expected to accrue to the village, in this case, those interviewed indicated that the extent of the benefits to Teluk Empening was extremely limited. Indeed, those currently serving the village government expressed some dissatisfaction with the results of the negotiation and were at pains to stress that the deal had been done before their appointment. Under the agreement, the village did not receive any share of income from the estate. Rather, a small donation amounting to a contribution to the wage costs of the village administration was agreed upon.

While they did not claim to be pleased with the outcome, those interviewed were relatively understanding of the position of the then village head, stressing the difficult position he was in. According to two of those interviewed, this was because the company had more experience and resources in dealing with these types of negotiations: "the company negotiators were highly skilled and were able to offer incentives to the village government". This suggests that while in theory, *Kemitraan* arrangements offer the prospect for villages to develop mutually beneficial partnerships with palm oil companies, such negotiations are undertaken in conditions in which power relations are asymmetrical and can lead to arrangements which heavily favor plantation companies over local communities.

Again, drawing on assemblage theory, we can understand that the companies relationship to other branches of government, access to social and human capital (in the form of its relationship with entities and significant negotiating skills), experience, as well as its influence with people in other tiers of government places it in a good position to "fix" relationships with the village in ways which support its interests.

DISCUSSION

Exploring the relationship between oil palm and assemblage in Teluk Empening via an assemblage approach draws attention to the existence of diverse arrangements through which the industry is articulated in local livelihoods and local administration. An examination of the practices of the small farmers who live there reveals that these individuals employ highly differentiated strategies that result in a diverse range of outcomes. What an examination of their interaction with the palm oil assemblage suggests is that these small-scale producers are not slavishly incorporated into the palm oil assemblage in ways that are dictated by the industry. Rather, they are knowledgeable and capable and respond to the introduction of the crop in multiple ways. These may or may not correspond to how the industry envisages such relationships to evolve, or to those forms of behavior anticipated by policymakers or researchers. In effect, in Teluk Empening, we see some local actors adopting practices of assemblage which align entities from the palm oil assemblage in their livelihoods. Governance is not simply handed down to these groups. Rather, they have the capacity to interpret, resist, modify, and mutate the palm oil assemblage, in effect doing governance at the farm level. This suggests that palm oil governance is more nuanced and complex than many policymakers suggest. Rather than simply seeking to resolve the large questions concerning the role of palm oil in national conservation and development strategies, it is also important to consider local factors that may influence responses to, and shape the outcomes of, policies.

By contrast, the position of local governments is much more difficult. Situated in a space in which they have only limited scope to overturn or influence agreements made at the district level, they are also hampered by being placed into uneven negotiations with people who have access to forms of knowledge, social capital, and political influence that they lack. Ironically, therefore, by dividing the various governance roles between different layers of government in relation to palm oil and "empowering" village governments to participate in partnership negotiations, they have left these local governance entities in a weaker position vis a vis palm oil companies.

However, it would be misleading to suggest that the devolution

of power to the village government solely plays into the interests of large-scale plantation companies. As noted above, the livelihood strategies of this smallholder community are diverse. Different local actors operating in similar agro-ecological conditions exercise a wide degree of agency and assemble various combinations of activities in household livelihood portfolios, which include both agricultural and non-agricultural components. Some local actors have demonstrated considerable skill in their dealings with the village government, employing formal and informal relationships with figures within the village government, knowledge of its procedures, and positions within it to pursue strategies which have enabled them to accumulate significant holdings and capital through the cultivation of a combination of different crops, land clearance, and allied activities. The village government also provides a direct route to prosperity for senior figures within the leadership and facilitates wider dissemination of benefits in the area. As we have seen, the extent to which different locals were able to do so was unclear. There was some evidence that, as Bebbington et al. (2006) suggest, variations in the social capital of different locals have a strong bearing on the extent to which they were able to make use of the opportunities offered by decentralization and the local government. This perhaps suggests that some investment in measures to grow social capital within existing local governance structures can play an important role in steering the future development of the oil palm assemblage in Indonesia.

CONCLUSION

Indonesia is the world's largest producer of oil palm. The industry absorbs a total of over 6 million hectares of land, with plans afoot to further expand on this total. Simultaneously, the development of the oil palm industry has attracted considerable criticism from scientists and others who have raised significant concerns regarding its environmental impact. However, despite a wealth of evidence concerning the adverse environmental impact of current oil palm industry practices, the extent to which these concerns impact on oil palm governance remains open to question. We argue that this is in part due to the way in which scientists perceive the palm oil problem. Too often, scientific approaches to the question of oil palm governance rely on a relatively simplistic view of the relationship

between science and policymaking, which employs a "fix the problem" approach, in which the role of research is clearly defined as involving the provision of discreet solutions to isolated technical problems. As a counterpoint, we suggested that an approach to exploring the palm oil industry at the national and even local level may provide useful additional insights.

Employing such an approach in the case of Teluk Empening reveals the challenges of attempting to design interventions that impact on oil palm expansion. We suggest that an understanding of how palm oil expansion is being undertaken cannot simply treat it as a form of economic development driven by technology, land availability, and capital. Indeed, such narratives carry the danger of detaching the oil palm, associated actors, and the biological and physical environment from the "particular conjunctures of circumstances, events and relationships that are integral to regional change" (Blanco et al. 2015).

ACKNOWLEDGEMENTS

This work was supported by the Equitable Society Research Cluster (SRC), University of Malaya grant number GC003B-17SBS and Biotechnology and Biological Sciences Research Council (BBSRC), United Kingdom grant number BB/P023533/1 (SUSTAINPEAT).

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