

## PALM OIL GOVERNANCE IN DIFFERENT LOCATIONS: USING THE ASSEMBLAGE APPROACH TO UNDERSTAND A "COMPLEX" SECTOR

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*This article serves as an introduction to this special issue on Palm Oil Governance in Southeast Asia and Latin America. The papers in this collection provide an overview of governance issues that confront the oil palm complex in Southeast Asia and Latin America, combining insights from different countries regarding how national regimes have sought to address common challenges that confront the industry. By applying the assemblage approach to dissect governance issues in different regions and countries, we hope that lessons can be extracted concerning the global challenges the industry faces, and how differing national governance regimes and affected communities in different countries respond to these challenges. Hence, these papers will contribute towards a better understanding of the drivers and processes that shape the governance of the industry, both in different nations and globally. Ultimately, such knowledge can support a more grounded appraisal of the palm oil sector and contribute to a comprehensive analysis of the forces shaping local and global oil palm governance regimes.*

### INTRODUCTION

Oil palm is widely regarded as the most productive of all current oil crops (Cramb and Curry 2012). Since 2002, palm oil has been the world's most widely used vegetable oil. Sheil et al. (2009) estimate that the oil palm produces between three and eight times as much oil per area of land used than any competing crop. The area planted with oil palm now accounts for nearly one-tenth of the world's permanent cropland (Koh and Wilcove 2008), and further land use conversion to oil palm is expected to occur (Wilcove and Koh 2010, Koh and Wilcove 2007, Carlson et al. 2012).

The biophysical characteristics of the crop mean that its production is confined to countries in the tropical belt. High productivity, earning potential, and suitability to tropical climates has led to its adoption in several low- and middle-income countries as an important tool for rural development (Varkkey and O'Reilly 2019, Noor et al. 2017, Sayer et al. 2012, Alam et al. 2016, Bou Dib et al. 2018). Indeed, the relatively small populations on much of the land which is suitable for oil palm and the perception (contrived or otherwise) of this land as underutilized, waste, or idle may make it more attractive to developers and policymakers alike who may anticipate little opposition to development and easy access to land in such areas (Majid-Cooke 2006, Lee et al. 2014).

Oil palm is also credited with bringing millions of people out of poverty across the tropical belt (Euler et al. 2017, Krishna et al. 2017). Additional indirect benefits linked to the crop include the extension of amenities such as roads, electricity, and services such as schools and healthcare into remote, poorly developed areas (Gatto et al. 2017). In Indonesia, palm oil is also employed in policies supporting the movement of people to less populated areas (McCarthy and Cramb 2009). As a consequence, what some commentators have described as the oil palm boom, has occurred as countries with suitable growing conditions have scrambled to adopt the crop leading to one of the most "significant and rapid environmental transformations in history" (Cramb and Curry 2012, see also McCarthy and Cramb 2009, Pye and Radjwali 2017, Schoneberger et al. 2017).

Indonesia and Malaysia have, for decades, dominated global palm oil production. However, the crop is now being developed in other countries in Southeast and Southern Asia, Africa, and Latin America. While the industry in Latin America is still considered small, it is experiencing substantial growth. Colombia is currently the fourth largest palm oil producer globally, with an annual production estimated at 1.35 million tonnes. Brazil, Mexico, Honduras, Peru, Ecuador, and Costa Rica also have significant land under oil palm. The expansion of the crop in this region has attracted the attention of the multinational companies which dominate global production, including companies based in Singapore, Malaysia, and Indonesia.

Oil palm has acquired a global reputation as a valuable means

of advancing the economic development of rural areas in the tropics (Sayer et al. 2012, Agustira 2008, Cramb and Curry 2012, Rist 2010). Simultaneously, palm oil is also perceived by some as a massively destructive industry that inflicts significant environmental damage and produces negative social outcomes (Barral 2015). Oil palm has come to be regarded as a controversial crop at the nexus of environmental and development policies.

Navigating between palm oil's developmental benefits and the social and environmental costs associated with the crop poses significant challenges for governance regimes in producing countries. These, in turn, have led to diverse governance responses at the national level as different states respond to these opportunities and threats differently. Conversely, the arrival of new players has implications for the global governance of the industry itself. This renders efforts to generalize about the impact of oil palm highly problematic. In understanding the governance of the oil palm industry, we are at once dealing with global trends, diverse local responses to these trends, and the complex ways in which local and global governance arrangements interact (Cramb and McCarthy 2016). Perhaps understandably, the scale of the industry and the rapidity with which it has expanded has meant that research concerning the governance of the industry struggles to keep pace with, and capture, the full complexity of such arrangements.

In this introductory paper, we highlighted the influence that existing approaches to looking at the palm oil industry have on our understanding of the debate, and pose the question as to whether these approaches adequately capture the wide variety of diverse activities in the different arenas through which oil palm is produced. In the next section, we briefly consider the implications that current trends in oil palm research have on current understandings of the crop and its governance. We suggest that current research pays limited attention to the day-to-day processes through which policies are made and implemented at the grassroot level. We suggest an alternative framing that conceptualizes the oil palm industry as an assemblage. Following this, we outline how an approach drawing on assemblage theory employed by environmental researchers such as Li (2007) and further developed by Mueller (2015) can be utilized to better understand the dynamics of oil palm governance.

## **PALM OIL GOVERNANCE IN THE LITERATURE**

Industry bodies, academic institutions, and publications have encouraged the work of a range of researchers and commentators which, in different ways and different disciplines, emphasize the importance of oil palm in economic development and address the practicalities of developing the industry (Huan n.d., Melling et al. 2008, Mutert et al. 1999, Paramananthan 2013, World Bank 2011). Much of this literature focuses purely on the technical challenges associated with the oil palm industry. They are published in highly specialized disciplinary journals or in-house journals which have links to the palm oil industry itself or the parastatals that support it (Goldstein 2015, Liu et al. 2020).

While this literature is portrayed as primarily addressing purely scientific challenges, such work is very much in keeping with popular political discourse concerning development. In Malaysia, where the large-scale commercialization of the crop was pioneered, the oil palm has acquired strong ideological associations that link the crop to the country's long-held ambition of becoming a developed nation (Varkkey and O'Reilly 2019). The country has invested substantial public and private resources and political capital in promoting the crop both domestically and internationally via state and non-governmental bodies such as the Malaysian Palm Oil Board (MPOB). This has helped to popularise oil palm and generate and disseminate expertise concerning the crop to other countries in the tropical belt.

At the same time, oil palm has become associated with serious environmental and social problems. In Indonesia and Malaysia, where the industry is most firmly established, there is significant evidence concerning the adverse environmental impact of the crop (see, for example, Goldstein 2015, Evers et al. 2016, Carlson et al. 2012). The industry is linked to the destruction of rainforests and the release of carbon through fire events and the drainage of large areas of tropical peat (Miettinen et al. 2011, Schrier-uijl et al. 2013, Wicke et al. 2011), resulting in peat oxidation during which greenhouse gasses are released (Evers et al. 2016). Oil palm expansion is also associated with severe atmospheric pollution events that cross national boundaries (Varkkey 2012).

Thus, a second core element of oil palm research concerns its implications for conservation, environmental wellbeing, and

ecosystem function (Evers et al. 2016, Page et al. 2011, Vijay et al. 2016, Wilcove and Koh 2010). A particular area of concern has been the adverse impact of peatland and forest conversion on the capacity of these areas to continue to act as carbon pools (see, for example, Page et al. 2011). Again, the academic debate is paralleled in popular discourse. Oil palm has become a lightning rod issue for conservationists, exemplified in the discourse employed by international NGOs such as Greenpeace (Greenpeace 2014), and linked to what some regard as ineffectual and unfair EU restrictions on palm oil imports (Varkkey 2018).

A range of other dis-welfares has been linked to the conversion of tropical forests and peatlands to oil palm (Uda et al. 2017). Such negative social impacts include threats to human rights and poor employment conditions in the industry (see, for example, Barral 2015), conflicts over land access rights (Cramb and Sujang 2011, McCarthy et al. 2012), and the unequal distribution of the costs and benefits of the industry (McCarthy 2014).

Both pro- and anti-oil palm views draw on substantial literature that supports two truths. The first is that oil palm delivers short- and long-term economic benefits at both national and local level, and that many (though not all) communities in areas where it has been grown have derived measurable (though variously defined) benefits. Oil palm is thus presented as a powerful tool for rural development (Cramb and Sujang 2013, Euler et al. 2017). The second truth is that the conversion of tropical forests to oil palm cultivation involves significant social, environmental, and health costs both locally and internationally.

The dilemmas that are generated by these two opposing truths poses a complex combination of challenges to researchers. On the one hand, they are engaged in efforts to gather, interpret, and disseminate a range of scientific data that deals with the complexities of the biophysical, economic, and social processes involved in the development of oil palm. On the other, the knowledge produced has significant implications in normative discussions concerning policymaking and action on the ground. The two opposing poles of conservation and development creates a binary which has a significant influence on research trajectories. As illustrated in Figure 1, the bulk of studies on oil palm can be located along a normative continuum ranging from those studies which support palm oil

development (located at position A) through to those which stress the damage palm oil inflicts and argue against further palm oil expansion (located towards position B).

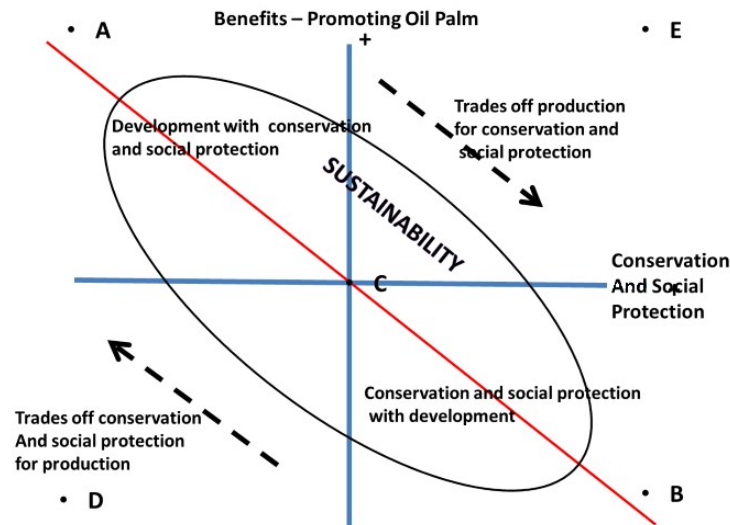


Figure 1 Normative framings in the literature on oil palm

In practice, these two extremes are occupied by a (not insignificant) minority of contributors to the oil palm debate. Most participants occupy a position between these two extremes, balancing environmental costs and development gains under the rubric of sustainable development (Basiron et al. 2007, Brokhorst et al. 2017, Nagiah and Azmi 2012, ZSL n.d.). The tension between these different positions, and efforts to reconcile them, have become a central feature of debates concerning oil palm governance.

This conservation/development binary draws emphasis on a limited number of issues. Of note are the concentration of research on the performance of the Roundtable on Sustainable Palm Oil (RSPO) as an example of global multi-stakeholder governance (Hospes 2014, Schouten and Hospes 2018), the implications of oil palm expansion on land tenure (Rietberg and Hospes 2018, McCarthy and Cramb 2009, McCarthy 2010), as well as environmental governance and oil palm (Aubert 2017). Following Miller's (2019, 2014) useful critique of "sustainability," this framing of oil palm in terms of environmental, social, and economic costs

and benefits acts as a dominating problematic, reducing the level of attention paid to other issues and approaches in relation to oil palm.

The foregrounding of this binary has several implications for the study of oil palm governance. Notable among them is the limited focus on how palm governance is worked out in different national contexts. Hospes (2014), for example, speaks of a gap in the literature concerning the “reactions of nation states and producers in the south to the implementation or diffusion of global private partnerships”. He attributes this gap to a bias in the literature linked to several factors:

- (1) the widespread proposition that global governance has emerged to deal with problems which are beyond the capacity of the nation state
- (2) how concepts such as non-state (NGO and social movements) or market-based governance have drawn attention away from the responses of national governance regimes
- (3) the overemphasis on how global governance affects actors in the south at the expense of how the responses of actors in the south affect global governance regimes.

We largely agree with the general point that Hospes makes. The dominance of some issues inevitably draws attention away from others, including the question of how oil palm governance is worked out in specific localities in different nation states. Furthermore, it understates work that suggests a more nuanced approach to palm oil governance. Growing recognition of these issues has led to proposals for work that gives attention to historically and geographically situated national and local contexts (Jelsma et al. 2017, Bennett et al. 2019), where policymakers, industry actors, and local communities are engaged in the “working out” of the palm oil boom.

Cramb and Sujang (2011) referred to the notion of a palm oil complex in which “a whole series of differentiated actors (different types of plantation companies, local communities, landholders, migrant workers, government agencies, local officials, advocacy groups and so on), each pursuing their own perceived interests and encountering unique sets of circumstances, interact in multiple

ways to give rise to discernible, higher-order processes of far-reaching and often unintended or unplanned change". Work by Carmenta et al. (2017) speaks to the importance of recognizing the multilayered nature of palm oil governance. Throburn and Krull (2015) highlight the complex interrelations between resource governance and environmental issues in palm oil-producing regions. Commentators have also identified the importance scale (Hospes and Kentin 2014) and the need to pay attention to livelihoods in palm oil governance (Deligiannis 2012).

These contributions call attention to the diverse ways in which different actors, pursuing a range of different interests, collectively shape the oil palm industry in different countries. While we by no means suggest that a focus on governance regimes within nations provides a definitive account of the industry's governance, understanding how national governance regimes are worked out forms an important part of the story, which needs to be understood if the governance of the sector is to be comprehensively mapped. It is our view that such an understanding can only be improved through national comparisons, which allow the exploration of how these dynamics are shaped by different national policy assemblages.

### **APPLYING THE ASSEMBLAGE APPROACH**

An exploration of national and sub-national governance involves a range of questions; how the industry is currently controlled at the national and local level, who controls it and how, who benefits from the industry and to what extent, how its introduction affects existing social, economic and land tenure arrangements and how the costs associated with the adoption of such arrangements should be shared.

The way in which governance arrangements and policy regimes have evolved in different national contexts may have varying environmental, social, and economic implications. This can include implications over land use in producing locations and on the rights and interests of a wide variety of actors, including, but not restricted to, local communities, large-scale producers, and market intermediaries. Cramb and colleagues (2016) describe the industry as a "complex" in which multiple actors, located in different sites and circumstances and pursuing different goals in a range of ways collectively, contributing to higher-order processes that give the industry its shape.



The way that locations become involved in emerging industries such as palm oil cannot be simply represented *a priori* as a form of “factory floor agriculture” or resource extraction driven by technology, land/resource availability, capital inputs, and output costs. It also cannot be assumed that power and decision-making within such industries operate in a linear fashion. Such approaches detach human actors and non-human biological and physical entities from the “particular conjunctures of circumstances, events and relationships that are integral to regional change... [so that] a restricted view emerges...when capitalist and technological processes of accumulation are emphasized at the expense of recognition given to other entities” (Blanco et al. 2015 pp. 179-180).

Assemblage theory offers an alternative approach to understanding socioeconomic practices in ways that facilitate an exploration of issues of scale, livelihood, power, and ordering. A particular feature of such approaches is that it centers on the interaction of human and non-human entities in such practices (Thornton et al. 2020). Assemblage describes both the process and the result of processes through which heterogeneous entities are brought together to serve certain functions for a certain time. Within the approach, a key role is given to how these entities are linked together through “relations of exteriority”. Multiple sets of such relationships link different entities and determine the shape and effect of an assemblage at any given time. Assemblage based approaches avoid *a priori* assumptions about who holds power and how social structure is constituted, rather treating these as emergent properties of the processes through which assemblage itself is constructed (Mueller 2015).

Assemblage-inspired work explores how entities pursuing differing projects are brought together and linked via a series of relations in ways that have power and structuring effects (Umans and Arce 2014). A critical benefit of this approach is that it does not privilege one site or set of power relations. Rather than suggesting that organizations or industries are the results of defined institutional practices underpinned by discreet driving forces such as capital or technology, the approach emphasizes contingency, material transversal associations, and events (Deleuze and Guattari 1987). Power concerns the capacity of entities to “fix” relationships between different components of the assemblage in ways that

support their projects or interests, a process termed as “territorialization”. Such territorializations are prone to mutation, transformation, and “break up”. Power and agency are thus contingent and emerge from dynamic processes.

Assemblage rejects notions of linear arrangements between different “levels” of governance and *a priori* assumptions about which the most important decisions are. Instead, these questions are opened as objects of inquiry. In this approach, governance is understood as the efforts of some of these actors to enact specific relations and maintain this, locking and fixing actors and objects into arrangements which are maintained over time (Li 2007). Assemblage theory also suggests that assemblages are themselves made up of assemblages and that relationships between these can shift over time. In the case of palm oil, this may help enable the simultaneous analysis of governance in specific sites and its articulation with the wider palm oil industry

Employing this approach allows us to redefine oil palm governance as an open-ended assemblage entities linking a range of human and non-human entities in ways that are continually being renegotiated as different entities pursue separate objectives. From this perspective, we can view oil palm governance as a multidimensional process occurring in multiple places at once, involving a variety of actors and objects whose articulation is contingent. This allows us to explore how the operation of power in different arenas influences the overall shape of the assemblage. Such an approach helps to bring local actors into view and exposes the potential for new and different trajectories of national, regional, and local action to shape the governance of the oil palm industry, drawing attention to how certain actors have sought to arrange the components (territorialize) this assemblage in ways that reflect these interests.

### **PALM OIL ASSEMBLAGES IN SOUTHEAST ASIA AND LATIN AMERICA**

The papers in this collection offer an overview of governance issues that confront the oil palm complex in Southeast Asia and Latin America, combining insights from different countries about how national regimes have sought to address common challenges that confront the industry. By applying elements of assemblage theory

to dissect governance issues in different regions and countries, we hope that lessons can be extracted concerning the global challenges the industry faces, and how differing national governance regimes and affected communities respond to these challenges. Hence, these papers will contribute towards a better understanding of the drivers and processes that shape the governance of the industry, both in different nations and globally. Such knowledge can hopefully support a more grounded appraisal of the palm oil sector and contribute to a comprehensive analysis of the forces shaping oil palm governance.

The papers demonstrate the heterogeneous nature of oil palm governance and the industry itself. They illustrate that, despite some superficial similarities, the palm oil industry in different countries follows (often radically) varying trajectories. Thus, a critical question concerns how we conceptualize the process through which oil palm comes to be adopted and incorporated into socio-economic-environmental practice in particular locations and the role that governance plays in these processes.

When we look at palm oil in different parts of the world, we are confronted with a diverse range of situations. We can understand the palm oil industry in each location as being comprised of heterogeneous elements. Non-human actors like the oil palm tree itself, pests, technologies, and landscapes interact with human actors at the national, regional, and local levels, contributing to the shaping of the oil palm assemblage in each area. Within these national assemblages, certain actors have sought to shape the palm oil industry in different ways, which reflect their different understandings of how the palm oil industry may impact on their economic, social, environmental, and political interests and their efforts to arrange the components of the oil palm assemblage in ways that reflect these interests.

Thus, governance of this sector involves choices between livelihood and conservation, between the interests of large-scale producers and small-scale producers, and between conflicting national environmental and economic policy goals. Achieving a balance between these conflicting interests has proven extremely difficult. Governance has not facilitated the equitable development of the industry in ways that support the interests of all the affected entities to the same degree. Rather, the outcomes have tended to

be heavily skewed in favor of certain interests over others. Resource-poor indigenous villagers and transmigrants have often borne the brunt of government-sponsored 'lose-lose' and 'win-lose' initiatives prioritizing conservation over livelihood goals (Jewitt et al. 2014), while at the same time large scale producers have often benefitted generously from governments applying a light-touch approach to their regulation. These outcomes draw attention to the wide range of challenges that oil palm poses for governance, and the presence of dominant tensions between different entities that shape governance arrangements.

This collection is timely as Latin American countries are currently embarking on policies to support expanded palm oil production, even though assessments of the crop's positive and negative impact are less well-rehearsed here. However, the Southeast Asian experience suggests any expansion of oil palm in Latin America is likely to have implications for communities living in affected areas and involve environmental costs, such as putting the biodiversity of the Amazon basin and other areas of high ecological value at risk and threatening globally important carbon sinks. Bearing this in mind, the papers in this collection seek to pose and answer several key questions when considering both the global and local oil palm assemblage:

- How do different governance arrangements enable and legitimize expansion?
- How do power differentials affect oil palm governance?
- How does governance enable the accumulation of wealth?
- How is conflict governed and moderated in the oil palm sector?

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