Towards REDD+ Integrity:
Opportunities and Challenges for Indonesia

Ahmad Dermawan and
Anna Christina Sinaga

Towards REDD+ Integrity:
Opportunities and Challenges for Indonesia

Ahmad Dermawan
and Anna Christina Sinaga

Anti-
Corruption
Resource
Centre
www.U4.no

Contents

Abstract

Reducing Emissions from Deforestation and Forest Degradation (REDD+) has become a cornerstone of Indonesia's forest sector policies. Given corruption risks in the sector, a number of policies and initiatives – both specifically linked to REDD+ and to broader national reform efforts – have been launched to ensure that risks of corruption in REDD+ are minimized. Efforts directly linked to REDD+ include clarifying REDD+ regulatory frameworks and institutional arrangements and establishing REDD+ safeguards. Broader reforms relevant to anti-corruption and REDD+ include an initiative to clarify the status of state forests, the development of "one map" and "one data" policies, and the establishment of a multi-door approach to address forest crimes. This U4 Issue paper assesses the extent to which these reforms actually address corruption risks. Areas where the government of Indonesia and its donor partners could strengthen anti-corruption measures related to REDD+ are also presented. Policy suggestions include (i) anchoring regulatory frameworks and institutional arrangements more securely, (ii) addressing coordination gaps and building subnational government capacity, (iii) clarifying auditing responsibilities and deciding on how REDD+ benefits will be redistributed, (iv) strengthening the role of the Supreme Audit Board in REDD+, (v) encouraging coordination across licensing systems and strengthening incentives and sanctions for all public officials, and (vi) introducing REDD+ to judges.

About the authors

Ahmad Dermawan is a scientist for the forest and governance portfolio at the Center for International Forestry Research (CIFOR). He obtained his masters' degree in development and resource economics from the Agricultural University of Norway (now known as the Norwegian University of Life Sciences). At CIFOR he is involved in research on forest sector trade and investment, including the impacts of large scale investments in timber plantations, estate crops, and mining on forest conditions, economic conditions, the informal timber sector, corruption, and the valuation of natural resources.

Anna Christina Sinaga is a researcher for the forest and governance portfolio at CIFOR. She obtained her masters' degree in law from Utrecht University in the Netherlands. She specializes in international criminal law, particularly anti-corruption, anti-money laundering, and forest governance and policies.

Acknowledgments

About the REDD Integrity project

1 Introduction

In September 2009, during the G20 meeting in Pittsburgh, Indonesia's President Yudhoyono made a commitment to reduce carbon emissions by 2020, relying on a combination of domestic and international donor financing. Since emissions from the forest sector constitute a large proportion of Indonesia's total carbon emissions, national and international actors have begun paying close attention to any developments in the country's forest sector. Schemes for Reducing Emissions from Deforestation and Forest Degradation (REDD+)[1] have become a cornerstone of the Indonesian forest sector and play an important role in fulfilling the president's commitment towards emission reductions. With the scope of the project now expanded to include goals related to conservation, sustainable forest management, and the enhancement of carbon stocks, REDD+ has also been used as a framework to improve forest governance, develop the livelihoods of forest communities, and preserve biodiversity and ecosystem services.

The government of Indonesia (GoI) has led significant efforts toward REDD+ readiness and has made notable achievements in a number of areas. For example, the GoI has set-up regulatory frameworks and established an agency that specifically manages REDD+. The development of a monitoring, reporting, and verification (MRV) system is underway, and a number of activities at the subnational level to prepare for REDD+ have taken place. A Constitutional Court decision clarifying the procedure to officially declare Indonesia's forest estate areas and explaining the status of indigenous forests could also provide solid foundations for effective REDD+ implementation.

An overarching concern, however, has been that both domestic and foreign REDD+ financing in Indonesia is vulnerable to various corrupt practices (Dermawan et al. 2011). Indonesia's 132 million hectares of state forests (*kawasan hutan*) are formally under the control of the Ministry of Forestry (MoF), and a key challenge is that REDD+ is emerging within a still underperforming forest governance framework. There is a risk that REDD+ may become another type of activity benefitting large and powerful actors at the expense of forest communities and smallholders. This concern arises from past experiences with the Indonesian forest concession system, where opportunities for local participation and accountability were minimal. But REDD+ is also an opportunity for significant reform. Relevant reforms are taking place not only in the MoF, but also outside the ministry's sector responsibilities. Reforms linked to REDD+ could have an impact on other sectors, too. The development of a "one map" policy (discussed further below), for example, has contributed to creating a solid base for activities in other sectors as well, clarifying where there are overlaps among land use permits.

This U4 Issue paper takes stock of recent reforms in Indonesia that raise potential corruption risks in REDD+ schemes. In 2011, CIFOR published an overview of corruption risks associated with REDD+ in Indonesia (Dermawan et al. 2011). Transparency International has also published a report and guidelines on preventing corruption associated with REDD+ in Indonesia (Hewitt and Cowling 2012; Haryadi et al. 2013). This paper assesses measures by the government, law enforcement, and audit agencies in Indonesia

---

[1] The plus (+) sign signals that activities also include conservation, sustainable management of forests, and enhancement of carbon stock.

for addressing the risks highlighted in Dermawan et al. (2011). The period of analysis is from 2011 to early 2014.

The paper is structured as follows. The next section provides a brief note on methodology. Section three discusses drivers and rates of deforestation and forest degradation in Indonesia. Section four provides an update on the evolution of REDD+ in Indonesia. Section five highlights the corruption risks in REDD+ already identified in Dermawan et al. (2011) and discusses recent reforms that attempt to address some of these risks. Section six discusses the anti-corruption implications of these reforms, including what domestic and international stakeholders can do to further support the GoI in fully addressing corruption risks in REDD+.

2 Methodology

Our analysis draws on a literature review and key informant interviews based on a specially designed political economy research protocol. The literature review focused on key developments in several areas. First, we focused on REDD+ policies and institutional arrangements at both the national and subnational levels. Second, we looked at reforms carried out by the GoI within the MoF as well as within other ministries and agencies. Third, we built on the literature on governance issues with regard to REDD+ to address factors that could potentially influence the risk of corruption in REDD+ beyond what was presented in Dermawan et al. (2011). This included survey work on governance indicators (Situmorang et al. 2013) and Transparency International's assessment of the risks of corruption in REDD+ in three Indonesian provinces (Haryadi et al. 2013). Fourth, we looked at other factors beyond governance that may influence whether and how REDD+ competes with other sectors, and what this may mean in terms of corruption risks.

We discussed a number of issues identified during our literature review in interviews with key informants. Specifically, we spoke with officials from the Corruption Eradication Commission (KPK), the National Development Planning Agency (Bappenas), the Supreme Audit Board (*Badan Pemeriksa Keuangan*, BPK), and provincial agencies that handle REDD+ related issues in East Kalimantan and Papua.

We also benefitted from two focus group discussions (FGDs) held in May and September 2014. The FGDs dealt with state losses in the forest sector due to forest-related crimes. They were intended to confirm our preliminary findings on corruption risks and relevant reforms undertaken by the GoI. Participants in these FGDs came from the MoF, the Ministry of Agriculture, the BPK, the KPK, the National Police, the Attorney General's Office, the National REDD+ Agency, the Presidential Working Unit for Supervision and Management of Development (UKP4), Bappenas, Bogor Agricultural University, and the non-governmental organizations Transparency International Indonesia, Indonesia Corruption Watch, and Epistema.

3 Deforestation and forest degradation in Indonesia

3.1 State forests and forest sector revenues

The forest estate (*kawasan hutan*) accounts for approximately two-thirds of Indonesia's land area. At 132 million hectares (Kementerian Kehutanan 2012), this forestland is under the sole authority of the MoF. Relative to its vast size, the economic contribution of the forest sector is still minimal. From upstream to processing activities, the sector was estimated to contribute US$ 18 billion (or around 2.5%) to Indonesia's GDP in 2013 (BPS 2014).[2] Its export value (from processed timber, pulp, paper, and paper products) for the same year was US$ 9.1 billion, or around 4.9% of Indonesia's total exports (Bank Indonesia 2014).

The latest government regulation on non-tax state revenues (*penerimaan negara bukan pajak*) lists more than 30 sources of forest sector revenues, although most revenue comes from only a few sources.[3] In 2011, approximately 80% of a total revenue of 3.49 trillion Indonesian rupiah (IDR) (US$ 291.1 million) came from three sources: (i) the Reforestation Fund (*Dana Reboisasi*, DR), (ii) the Forest Resource Rent Provision (*Provisi Sumber Daya Hutan*, PSDH), and (iii) the Forest Concession Fee (*Iuran Hak Pengusahaan Hutan*, IHPH). Revenues from the DR reached IDR 1.82 trillion (US$ 151.9 million), while revenues from the PSDH and IHPH reached IDR 868.5 billion (US$ 72.4 million) and IDR 119.3 billion (US$ 9.9 million), respectively.

Another revenue stream that is steadily increasing is that from forest land leases (*pinjam pakai kawasan hutan*). Within this scheme, forestland can be leased for other purposes while retaining its status as state forest. Forest land leases are mainly used for mining activities, including exploration and exploitation. In 2011, revenue from this source reached IDR 432.5 billion (US$ 36 million), doubling from the previous year and surpassing revenues from the IHPH – traditionally the third largest source of forest revenue in the country. As we shall see in the next section, mining is an important driver of deforestation in Indonesia. At the same time, it is an important sector in Indonesia's efforts to accelerate economic development and secure its energy supply.

Even while explaining the contribution of the forestry sector to the Indonesian economy, it is worth noting the losses the country has had to bear due to poor governance in the sector. Various estimates of the loss due to illegal logging range from US$ 600 million to US$ 8.7 billion annually (Luttrell et al. 2011). Indonesian Corruption Watch (ICW) has noted that in 2011 the MoF reported losses of approximately US$ 22.75 billion due to violations of the processes governing the granting of plantation and mining licenses in seven provinces (Central Kalimantan, East Kalimantan, West Kalimantan, South Kalimantan,

---

[2] A simple explanation would be that other sectors (e.g. secondary and tertiary sectors) have become relatively larger in the Indonesian economy. However, it is important to note that the low contribution of the forest sector to GDP may reflect the existence of market failure, where a number of forest products and services are not counted in the calculation of economic wealth.

[3] See Government Regulation No. 12 of 2014 on the types and tariffs of non-tax forest revenues applied by the Ministry of Forestry.

South-east Sulawesi, Riau, and Jambi) (ICW 2013). The KPK estimates that potential corruption for every logging or timber plantation concession could reach from IDR 688 million to IDR 22.6 billion (approximately US$ 55,400 to US$ 1.8 million) annually (KPK 2014a). These figures cannot be compared with those reported by ICW due to different estimation methods; however, they suggest that losses could be higher than the MoF has reported.

3.2   The deforestation rate and data inconsistencies

The rate and causes of deforestation in Indonesia have been the subjects of longstanding debates (World Bank 1994; Sunderlin and Resosudarmo 1996; Hansen et al. 2013; Margono et al. 2014). The MoF has reported a decrease in the annual deforestation rate over the last several years. The ministry's statistics report that the annual deforestation rate was about 0.8 million hectares during the period 2009–2010 (Kementerian Kehutanan 2012), but decreased to 0.45 million hectares per year in the period 2010–2012 (Rusli 2013; Kementerian Kehutanan 2013a).

The MoF's published figures are lower than those reported by others, however. Miettinen et al. (2011) showed, for example, that Indonesia lost approximately 11 million hectares during the 2000–2010 period, or 1.1 million hectares per year. Hansen et al. (2013) calculated that Indonesia lost an annual average of 1.02 million hectares of forest during the 2000–2012 period. Margono et al. (2014) recently highlighted that the deforestation rate for the 2011–2012 period was about 0.85 million hectares. The MoF, responding to the Margono et al. (2014) study, issued a press release maintaining that deforestation in primary forests for the 2011–2012 period was only 24,474 hectares and that the rate increased to only 261,000 hectares when secondary and planted forests were also included (Kementerian Kehutanan 2014a). One reason for these inconsistencies could be differences in the methodology used to interpret satellite images. Another potential source of difference is the definition of forests used (Sari and Samadhi 2014).[4]

The Margono et al. study is important because it reports the deforestation rate after a logging moratorium had been in place for one year. In light of this study, the effectiveness of the moratorium for reducing deforestation was placed in some doubt. It is important, therefore, for the MoF to clarify the sources of difference between the rate reported by the ministry and the one published by Margono et al.

3.3   Main drivers of deforestation and forest degradation

Various studies have described the drivers of deforestation and forest degradation in Indonesia (Indrarto et al. 2012; Hosonuma et al. 2012; Kissinger, Herold, and De Sy 2012; Abood et al. 2014). A number of activities have been identified as sources of forest degradation or deforestation, such as logging, forest fires, establishment of timber plantations and estate crops, and expansion of mining activities. At the same time, these sectors have also significantly contributed to the Indonesian economy in recent decades.

---

[4] Agus Purnomo, special assistant to President Yudhoyono on climate change, and the authors have engaged in a discussion about the issues related to these definitions and implications for the moratorium (Purnomo 2014).

While there is broad agreement about the drivers of deforestation, there are disagreements over the relative importance of each driver. Studies show, for example, that between 50 and 85% of the 8 million hectares of currently productive oil palm plantations in Indonesia, mostly in Sumatra and Kalimantan, have been developed through prior deforestation (Fitzherbert et al. 2008; Miettinen et al. 2011; Miettinen et al. 2012). Other studies, while agreeing oil palm is one of the several drivers of deforestation, claim that the impact of other drivers such as land clearing for pulp and paper industries and fires is larger than that caused by oil palm expansion (Gunarso et al. 2013; Abood et al. 2014).

Logging has been the dominant source of forest degradation since the GoI first issued its large scale logging concession policy in 1970. Before then, logging permits on the outer islands of Indonesia were issued on a small scale with little involvement from the central government (Barr et al. 2006). Though the amount of timber harvested via logging concessions has been decreasing, timber production from logging concessions in 2012 still reached 5.1 million cubic metres (m3) from 292 registered logging companies controlling 23.3 million hectares of production forests. Actual production has, however, been well below the annual allowable cut set by the MoF: 9.1 million m3 from 2007 to 2012, and 9.5 million m3 since 2012 (Kementerian Kehutanan 2013a). While this seems acceptable from the point of view of reducing deforestation, these figures do not account for illegal logging activity. One study estimates that the timber harvested illegally has decreased from approximately 33 million m3 in 2003 to 5.3 m3 in 2008 (Lawson and McFaul 2010). However, there is concern about whether this is actually the case, since data used to estimate illegal logging is inconsistent and unclear and does not account for the production of large numbers of small scale actors (Dermawan, Obidzinski, and Amira 2014).

Timber plantations and associated industries are the leading economic contributors from the forest sector. Typically, timber plantations are developed by clearing forestland. An increasing demand for pulp and paper has naturally increased demand for timber (Gilbert 2014). The area for timber plantations has increased from 4.5 million hectares in 2000 to 12.5 million hectares in 2012 (Kementerian Kehutanan 2013a). In 2012, production of timber from plantations reached 26.1 million m3. Despite the increased production of plantation timber by more than 6 million m3 compared to the previous year, this is still insufficient for meeting demand from the pulp and paper industries, which is estimated at 32 million m3 of roundwood equivalent (Dermawan, Obidzinski, and Amira 2014). For this reason, several pulp and paper companies still rely on timber from land clearing permits for natural forests prior to establishing timber plantations. Indeed, timber production derived from land clearing permits reached 14.5 million m3 in 2010 before suddenly dropping to 0.7 million m3 in 2012. Official forestry statistics report, however, that timber production from "other sources" suddenly increased from 3.7 million m3 in 2010 to 21.8 million m3 in 2011 and later decreased to 17.1 million in 2012 (Kementerian Kehutanan 2013a). This may indicate that land clearing practices continue and are still an important source of timber supplies for industries.

Indonesia's oil palm industry is an important economic subsector, but has driven deforestation and created greenhouse gas emissions in Indonesia (Gilbert 2012; Carlson et al. 2013). Exports from the subsector reached US$ 23.3 billion in 2011, more than double the value of exports of timber, pulp, and paper products during the same period (Kementerian Perindustrian 2012). The oil palm subsector has

experienced tremendous growth during the last decade. The area of plantation estates increased from 8.2 million hectares in 2009 to 10 million hectares in 2013 (Kementerian Pertanian 2014).

Another important cause of deforestation is forest fires. For example, the increase in industrial timber and oil palm plantations in Riau – many of which appear to be illegal, based on Landsat imagery (Gaveau and Salim 2013) – has led to an increased risk of forest fires (Ekadinata et al. 2013). Forest fires are a severe occurrence that affects not only Indonesia, but also its neighbours: fires in Riau in June 2013 caused haze in Singapore and Malaysia, affecting their agricultural sectors.

The size of the forest areas affected by mining is relatively small compared to that affected by oil palm and timber plantations; however, it may have been underestimated (Indrarto et al. 2012). The MoF reported that from 2008 to 2012, permits for mining exploration were awarded for about 2.1 million hectares of forest. Of this, permits were awarded for mining exploitation in about 252,000 hectares (Kementerian Kehutanan 2013a). However, thousands of permits for small scale mining operations were also issued at the district level (Indrarto et al. 2012). Furthermore, data on small scale illegal mining is not easily accessible (ibid.). The KPK has paid particular attention to the mining sector because it presents significant corruption risks (Astuti 2014). For example, the KPK carried out a review on problems in the non-tax revenue management of Indonesia's mineral resources and found 19 problems in four areas. These four areas are related to the administration of non-tax revenues, the regulatory frameworks of such non-tax revenues, organization and human resources, and the effect on state revenue when companies do not fulfil their obligations (KPK 2014b).

While all of these drivers affect deforestation rates, wider reform processes have also been important in shaping forest conditions. Since 2001, Indonesia has been in an era of decentralization. One of the main consequences of this movement was the division of some regions (districts or provinces) into new regions in order to strengthen local political power. An effect of this was that district governments were able to issue permits for small scale actors within their jurisdictions, and oil palm and coal mining were the most lucrative sectors where such permits were issued. The issuance of permits thus became an important political tool for the heads of districts to pay off allies, as well as to gain popularity and strengthen their chances for re-election. For example, one study showed that deforestation rates increase both before and after local elections (Burgess et al. 2012). Decentralization also created an opportunity for subnational government units to issue tax regulations to increase locally generated income, and often these regulations were not in line with regulations issued by higher authorities (Barr et al. 2006). As a result, in September 2014, a new law on regional government (Law No. 23 of 2014) was issued that revoked the right of district governments to issue forestry and mining permits and transfers this authority to the provincial level. The one remaining power at the district government level relates to licensing geothermal activities.

In the forestry sector, district governments now have authority only to award permits for smallholder timber plantations (*hutan tanaman rakyat*, HTR) and community forests (*hutan kemasyarakatan*). The district head can issue these permits on behalf of the minister of forestry (Myers and Ardiansyah 2014). The provincial government can issue permits for non-timber forest products and village forests. Although the MoF issues most of the permits, subnational governments are expected to provide technical recommendations. Even issuing these recommendations creates corruption risks, however, since officials often ask for bribes before issuing their recommendations.

3.4 Reforestation achievements

While the previous section highlights major sources of deforestation, it is important to also note reforestation achievements in Indonesia. Between 2007 and 2012, the MoF reforested approximately 777,000 hectares. In addition, the MoF supported the development of over 1.2 million hectares of private forest (*hutan rakyat*) and urban forest during the same period (Kementerian Kehutanan 2013a).[5]

Other than government programs, private forests have become increasingly important in supplying some timber based industries, particularly in Java. Several plywood mills from Indonesia's outer islands are in the process of relocating or exploring relocation to Java. This will provide competition for the furniture industry, which has traditionally been dominant on Java. With demand for timber from private forests increasing, smallholders are becoming interested in planting trees, and private forests on Java are currently growing by approximately 200,000 hectares annually. One factor driving smallholders to plant trees in Java is the desire to establish clear ownership of their land. While these smallholders still face a challenge in meeting the government's legality standard, these private efforts to plant trees provide lessons about how individual smallholders can increase their compliance capacity by joining groups (Obidzinski et al. 2014).

3.5 REDD+ and other initiatives that promote good governance in the forest sector

The history of the development of Indonesia's forest sector since the early 1970s illustrates how timber has been overexploited both for economic purposes and to form and sustain political dominance (Barr 2001). Gellert describes this as an "extractive regime" where "extraction of natural resources form[s] a significant basis for the production and accumulation of value" and "a resilient economic and political regime of growth and accumulation that can withstand crises and last for years if not decades" (2010, 30). Achieving good governance has been a lesser priority, which has led to a crisis in forest governance (Barr et al. 2006).

In the timber value chain, the movement toward sustainable production and consumption has promoted market-based sustainability standards. Both international market-based sustainability standards (such as the Forest Stewardship Council) and national market-based sustainability standards (such as the Indonesian Ecolabeling Institute) have arisen since the 1990s. Government-led standards – pertaining to timber legality as well as sustainability – have also emerged since the early 2000s. The timber legality verification system (SVLK) is currently the mandatory legality standard for timber in Indonesia, and the GoI aims for all logging and timber plantation concessions to move towards sustainable management of

---

[5] These reforestation activities are linked with the government's "one billion trees" program. By 2012, the program achieved the planting of 1.6 billion trees. These trees came from practically all activities under the management of the MoF as well as from other ministries and agencies. Within the MoF domain, the program included activities such as rehabilitating conservation or protected forests, planting urban forests, reclaiming former mining forests, and establishing timber plantations. Activities outside the MoF domain included (among other things) tree planting as part of corporate social responsibility programs and planting trees on the side of toll roads (Kementerian Kehutanan 2013b).

production forests (PHPL). In the land sector, concerns that the estate crop sector (notably oil palm) has been expanding at the expense of natural forest loss has led to the emergence of both an international voluntary sustainability standard (the Roundtable of Sustainable Palm Oil) and a national mandatory standard (Indonesian Sustainable Palm Oil).

REDD+ emerged in 2007[6] – at a time when a number of other initiatives aimed at improving governance in the forestry sector were also emerging. However, REDD+ readiness activities may have displaced existing initiatives such as timber certification and sustainable oil palm standards. A substantial amount of funding has been placed into REDD+, but meaningful outcomes in terms of emission reduction or revenues from carbon credits have yet to be achieved. On the other hand, earlier initiatives have begun to show some promising results, albeit slowly, in terms of the number of companies moving toward certification of forest management.

4 The context of REDD+ in Indonesia

This section highlights major changes in the REDD+ and climate change policy arena in Indonesia since 2011. These changes include policies, institutional arrangements, and subnational activities (Table 1). While this section focuses on issues directly related to REDD+, we also cover some developments in other areas that could potentially affect REDD+ implementation.

4.1   Regulatory and institutional frameworks

The GoI has issued a number of new policies and regulations over the last three years, including Presidential Regulation No. 61 of 2011 on the National Action Plan to Reduce Greenhouse Gas Emissions, known as RAN-GRK. The regulation requires all provinces to develop provincial emission reduction plans by 2012. The Indonesian REDD+ Task Force developed a national REDD+ strategy, with the head of the REDD+ Task Force issuing Decision No. 02/Satgas REDD+/09/2012. One important matter remaining is to synchronize both documents in terms of their operationalization at the national and subnational levels, particularly in their approach to data use and accounting procedures (Republik Indonesia 2014).

A key development in terms of institutional arrangements was the continuation of the REDD+ Task Force after its first term ended in December 2011. By 2012, the REDD+ Task Force worked in 10 main areas, including the establishment of the National REDD+ Agency.[7] The task force ended its second term in June 2013 as mandated by the presidential instruction, after which the Indonesian president issued a decree establishing the National REDD+ Agency in September 2013. This agency reports directly to the president and is the designated national authority for REDD+ in Indonesia, assisting the president in

---

[6] REDD emerged even earlier, in 2005.
[7] The 10 areas were (i) the national REDD+ strategy and action plan; (ii) the establishment of the National REDD+ Agency; (iii) the concept note for the REDD+ financial mechanism; (iv) the development of the first REDD+ pilot province of Central Kalimantan; (v) monitoring of the moratorium on new land use licensing; (vi) the establishment of the MRV institution and mechanism; (vii) mainstreaming of national and subnational programs; (viii) legal review and enforcement; (ix) communication and stakeholder engagement; and (x) knowledge management and support.

coordinating, synchronizing, planning, facilitating, managing, monitoring, overseeing, and controlling REDD+. The National REDD+ Agency is now working to create a funding instrument for REDD+ in Indonesia. Termed "FREDDI," the instrument will invest in other funds on the basis of national trust fund regulations. FREDDI provides four funding windows for REDD+ implementation: (i) national initiatives, (ii) subnational initiatives, (iii) competitive cycles (where FREDDI could issue calls for proposals and partners would compete for grants), and (iv) small scale initiatives (where FREDDI would finance small grants).

In May 2013, the president of Indonesia issued a presidential instruction to extend the moratorium on licensing in primary forests and peat land for another two years. The extension aims to complete efforts to improve the governance of forests and peat lands. Specific instructions to the minister of forestry include the update of a moratorium map every six months.

Another crucial aspect of REDD+ in Indonesia is its safeguards. A safeguards unit developed PRISAI (Principles, Criteria, Indicators for REDD+ Safeguards in Indonesia) to be approved by the National REDD+ Agency. PRISAI has 10 components, including clarifications of the status of tenure and land use rights and the improvement of forest governance. During its development PRISAI went through stakeholder consultations at both the national and subnational levels. The safeguards in PRISAI will be used as a basis for implementing REDD+ projects in Indonesia.

Parallel to this, the MoF has coordinated the development of a safeguards information system, called SIS-REDD+ (*Sistem Informasi Safeguards REDD+*). The development of SIS-REDD+ started in early 2011, when the seven principles of REDD+ safeguards that came out of the COP16 Cancun decision[8] were translated into Indonesia's national context. These resulted in seven principles, 17 criteria, and 32 indicators for Indonesia's REDD+ programme. The MoF and (then) REDD+ Task Force worked together since early stages of developing these safeguards.

Putro, Kleden, and Safitri (2013) concluded that, while both the PRISAI and SIS-REDD+ documents refer to the Cancun agreement as the basis for developing safeguards, the two documents take different approaches. PRISAI was developed to address challenges related to the rights of communities and environmental sustainability. Meanwhile, SIS-REDD+ was developed as an information system that monitors, assesses, and reports on the implementation of safeguards in Indonesia (ibid.). Both deal with anti-corruption; however, the PRISAI document provides more detailed information than the SIS-REDD+ document on criteria and indicators relating to anti-corruption. The PRISAI document also notes who (between the government and the REDD+ proponent) is responsible for ensuring that each indicator is met (ibid.).

Specifically, two criteria in the PRISAI document relate to anti-corruption. The first criterion aims to "support forest governance which is free from corruption, collusion and nepotism (*korupsi, kolusi dan nepotisme, KKN*)." The indicators under this criterion are (i) the availability of instruments to prevent corruption, collusion, and nepotism in forest governance, as well as to prevent KKN and control the

---

[8] See: http://unfccc.int/meetings/cancun_nov_2010/items/6005.php

fiduciary system, and (ii) the availability of a well-structured and recorded reporting mechanism that allows indications of KKN to be traced in subsequent legal processes. The second criterion stipulates that REDD+ proponents must provide a mechanism to prevent corruption and bribery in the implementation of REDD+. This criterion includes two further indicators: (iii) that an anti-corruption mechanism is discussed with the anti-corruption agency in both planning and implementation and (iv) that there is an opportunity to review and provide feedback for the improvement of the anti-corruption mechanism to prevent KKN (Satgas REDD+ 2013a).

A national MRV system will also support the national REDD+ strategy and the RAN-GRK. As well, it will ensure compliance with United Nations Framework Convention on Climate Change (UNFCCC) standards (including those on reporting REDD+ co-benefits and safeguards). The national MRV system is under preparation and is coordinated by the Ministry of Environment. The system will use a combination of satellite, forestry, agricultural, and topographical data from a number of agencies to calculate carbon emissions (Republik Indonesia 2014).

The National REDD+ Agency has identified priorities for preparing for REDD+ implementation at the provincial level. This includes the development of a provincial strategy and action plan (called Strada or SRAP), the development of baseline data and a cadastral map (at the scale 1:50,000), and the establishment of a subnational organization. In addition, the National REDD+ Agency will establish memoranda of understanding with provincial and district governments on REDD+ implementation. Finally, the agency will establish a reference carbon emission level (REL) (Prasetyo 2014).

As of 2014, 10 on-going programmes relate to REDD+ implementation (ibid.):

1. Monitoring the moratorium;
2. License review and gazettement of forest areas;
3. Support of law enforcement efforts;
4. Mapping, capacity building, and implementing programmes on customary forests;
5. Forest fire management and prevention;
6. The Green Village Programme;
7. The Green School Programme;
8. Support for completion of the spatial plan;
9. Support for conflict resolution; and
10. The strategic programme for national parks and protected forests

Some of these programmes have been implemented at the provincial as well as the national level. For example, the provincial government of Papua – under the coordination of the Task Force on Low Carbon Development (*Satuan Tugas Pembangunan Rendah Karbon*) – has developed a REDD+ strategy and action plan for the province as well as a provincial action plan for reducing greenhouse gas emissions (RAD-GRK). Similarly, East Kalimantan has prepared its own RAD-GRK and SRAP REDD+, coordinated by the Provincial Council on Climate Change (*Dewan Daerah Perubahan Iklim*).

The National REDD+ Agency is thus engaged in a phased approach towards full implementation of REDD+. The agency is confident that it will see three positive results by the end of 2016: (i) that Indonesia will be institutionally and operationally prepared to enter full REDD+ implementation and begin receiving payments for its performance; (ii) that Indonesia will have reported initial verified greenhouse gas emission reductions from deforestation, peat decomposition, and peat fires; and (iii) that Indonesia will have made significant progress towards achieving national mitigation objectives (Prasetyo

Table 1: Progress on REDD+ institutions and regulatory frameworks in Indonesia since 2011

Year	Decisions and activities
Overall coordination and management	
2011	• National Action Plan to Reduce Greenhouse Gas Emissions (RAN-GRK) issued
2013	• National REDD+ agency established in September
REDD+ framework policies	
2011	• National Action Plan to Reduce Greenhouse Gas Emissions (RAN-GRK) issued
2012	• National REDD+ strategy finalized by the head of the REDD+ Task Force as Decree No. 02/ Satgas REDD+/09/2012
2013	• 33 provinces finalize provincial action plans to reduce greenhouse gas emissions (RAD-GRK)
2014	• Significant progress on the "one map" policy: a large scale baseline map for Sumatera is completed and the map for Kalimantan is improved
REDD+ implementation policies and measures	
2013	• Forest moratorium extended until 2015
2013	• FREDDI developed as REDD+'s central funding instrument
2013	• Indonesia's REDD+ safeguards (PRISAI) are established
Activities related to REDD+ project implementation	
2014	• A number of subnational REDD+ demonstration activities are underway: most are small scale activities at the project level, although some are larger in scale and test REDD+ strategies at the provincial or district level
Reference levels, accounting and the MRV system	
2013	• An MRV design document is prepared and under consultation with stakeholders
	• An indicative national reference emission level (REL) for the MRV system is completed

Sources: Forest Carbon Partnership Facility (2013); Santosa, Khatarina, and Suwana (2013); Prasetyo (2014); Republik Indonesia (2014)

4.2 Dynamics at the private corporate level

A number of policies pertinent to REDD+ have gained the particular attention of private sector corporate actors. The first policy is the forest moratorium of 2013. As with the earlier moratorium of 2011, private sector actors have not generally supported extending this moratorium until 2015. For example, a representative of the oil palm producer association noted that such an extension could create a potential loss of IDR 14 trillion (around US$ 1.2 billion) as investors move away from Indonesia (Deutsche Welle 2013; Bakrie Global 2013; Bisnis Indonesia 2014).

The corporate sector also has expressed its desire for an integrated single map for Indonesia. The availability of "one map" that everyone could refer to will increase business certainty and reduce conflicts as companies will have better access to geographical data. While the moratorium has provided momentum for the development of one map, the one map initiative began before the moratorium. The idea arose during a cabinet meeting, when officials from the UKP4 highlighted differences between maps from the Ministry of Environment and the MoF (Lang 2012). The president subsequently called for the development of one map for the country. Integrating the various maps used by different ministries and agencies in Indonesia to create a single map is a large undertaking and an important task.

Two further policies outside the REDD+ framework but pertinent to it are also gaining attention from private sector actors. First, the MoF negotiated a forest law enforcement, governance, and trade (FLEGT) voluntary partnership agreement (VPA) with the European Union, which was signed in September 2013. Under the VPA, Indonesia will ensure that exported timber products come from legal sources. On the other end, importing countries in the EU will also ensure that timber products are from legal sources. At the national level in Indonesia, the implementation of the VPA falls within the timber legality verification system (*Sistem Verifikasi Legalitas Kayu*, SVLK). SVLK is aimed at ensuring timber is legally certified and is traceable to the producer. This system is essentially a certification mechanism with governmental regulatory backing. All actors along the timber value chain must be SVLK certified. It is expected that the success of SVLK in reducing illegal logging will also contribute to the reduction of deforestation and forest degradation (Dharmawan et al. 2012). The MoF has set a verification deadline for all large scale logging actors for the end of 2012 and has prolonged the deadline for small scale actors until the end of 2014. While there are challenges with meeting the deadlines (particularly for small scale actors), the ministry reports that it is confident SVLK will reduce illegal logging and the illegal timber trade, both within Indonesia and from Indonesia to the world.

The second policy that may have implications for REDD+ is the issuance of a national sustainability standard for oil palm. In 2011, the Ministry of Agriculture issued guidelines on Indonesian sustainable palm oil (ISPO), which will be mandatory for all oil palm estates. ISPO includes a principle that each company must ensure there is no oil palm development in primary forests and in peat lands, unless the company obtained a permit before issuance of the moratorium. Some oil palm companies are now starting to move towards sustainable production systems, and there are signs that some of the ISPO commitments are being implemented. However, the extent to which these initiatives will be fully successful remains to be seen.

4.3   Opportunities and challenges for REDD+

The GoI has made significant progress in moving toward full REDD+ implementation. However, challenges remain and the overall political context in Indonesia will affect REDD+'s success. Strong political support is required because of the potentially significant impacts of REDD+ in the medium and long term on the Indonesian economy (Indrarto et al. 2012). REDD+ had strong presidential backing during President Susilo Bambang Yudhoyono's administration (Lutrell et al. 2014). In order to avoid setbacks in REDD+ implementation, President Joko Widodo, who assumed the position in October 2014, must continue (and even strengthen) this trajectory (LTS International et al. 2014). For example, the status of the National REDD+ Agency has not been clear under the new president. Immediately after assuming the presidency, in November 2014, President Widodo merged the Ministry of Environment and the MoF into a single entity called the Ministry of Environment and Forestry (MoEF). It appears possible that the new MoEF could dissolve the National REDD+ Agency. In addition to support from the executive branch of government, ensuring progress on REDD+ also requires strong support from the legislative branch (Luttrell et al. 2014).

Central government initiatives could drive changes in the performance of Indonesia's natural resource sector. The government has engaged in two separate trajectories – one towards the acceleration and expansion of national economic development and the other towards "greener" development. Both of these overarching trajectories are likely to influence deforestation and forest degradation in Indonesia, potentially impacting REDD+'s development in the near future.

Looking to the first trajectory, in 2011, the GoI launched its Master Plan for Acceleration and Expansion of Economic Development (*Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia*, MP3EI). This programme aims to enable a huge improvement in economic performance in the country. A specific target is to increase overall GDP from US$ 700 billion in 2010 to US$ 4–4.5 trillion in 2025; likewise, MP3EI aims to increase GDP per capita from US$ 3,000 in 2010 to US$ 14,250–15,500 in 2025. About US$ 400 billion worth of investment is required to reach these targets, most of which is intended to come from the private sector.

One strategy employed by MP3EI is that of "economic corridors." MP3EI names six corridors (the Sumatera, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggara, and Papua-Maluku corridors), along with priority economic sectors in each corridor. For the large outer island corridors – such as Sumatera, Kalimantan, Sulawesi, and Papua – key sectors are expected to include natural resources (see Table 2). Palm oil and coal are among the priority sectors in Sumatera and Kalimantan, for example. Timber is another priority sector for Kalimantan, while oil and gas are among the priority sectors in Kalimantan, Papua, and Sulawesi (Republik Indonesia 2011a).

Table 2: Priority economic sectors in Indonesia under the MP3EI

Sector	Sumatera	Java	Kalimantan	Sulawesi	Bali-Nusa Tenggara	Papua – Kep. Maluku
Steel	✓		✓			
Food and beverages		✓				
Textile		✓				
Transportation equipment		✓				
Shipping	✓	✓				
Nickel				✓		✓
Copper						✓
Bauxite			✓			
Palm oil	✓		✓			
Rubber	✓					
Food agriculture				✓		✓
Tourism					✓	
ICT		✓				
Coal	✓		✓			
Oil and gas			✓	✓		✓
Jabodetabek Area		✓				
Sunda Straits National	✓					
Defense equipment		✓				
Animal husbandry					✓	
Timber			✓			
Cocoa				✓		
Fishery				✓	✓	✓

Source: Republik Indonesia (2011a)

Kalimantan is a unique area with the difficulty of aligning potentially competing roles. On the one hand, the only concession monetizing forest carbon credits under the voluntary carbon market currently operates on Kalimantan (in the Central Kalimantan province). This is also where a REDD+ provincial pilot project is in place. At the same time, however, Kalimantan is considered "the energy reserve" under MP3EI. East and South Kalimantan are currently the main source of coal and oil and gas in the island, but Central Kalimantan also has a significant coal reserve (approximately 3.5 billion tonnes).[9]

---

[9] Central Kalimantan also has significant gold reserves, which will potentially be open for extraction within the next decade.

The acceleration and expansion of these sectors in Kalimantan could potentially clash with environmental sustainability goals (Strategic Asia 2012). As noted above, oil palm plantations, coal mining, and timber plantations have become the main drivers of deforestation in Indonesia (Abood et al. 2014). In addition, development of the Merauke Integrated Food and Energy Estate has opened up forestland in the southern part of Papua (Obidzinski et al. 2013). Realizing the potential consequences of this economic plan in terms of environmental sustainability concerns, Bappenas has been coordinating the effort to add "green" components to MP3EI. This work is currently in progress.

The notion of "greening" the national economy has been on the government agenda for the last three years. Triggered by the publication of a United Nations Environment Programme (UNEP) report on green economies (UNEP 2011), the GoI has been working to define the term "green economy" and to determine how this concept can be implemented in the Indonesian context. The GoI has focused explicitly on being "pro poor, pro jobs, pro growth and pro environment" (Bappenas 2013). As part of the 2014–2019 medium term development planning process, Bappenas is coordinating the formulation of plans on the role of the forest sector in a green economy.

At the subnational level, various provincial agencies have been set up to work on green economy issues. Papua Province, for example, has set up a low carbon development task force. This task force coordinates activities related to climate change mitigation, including the development of a provincial REDD+ strategy and integration of this into government offices' work plans. The task force is in the process of becoming the REDD+ commission of Papua Province.

In the midst of central and regional government efforts to finalize spatial planning (as mandated by the Spatial Planning Law of 2007), the Constitutional Court agreed to review a case brought by five district heads (*bupati*) and one businessperson on the constitutionality of a point under article 1(3) of the Forestry Law of 1999 which stipulates state forests as certain areas which are *appointed* and/or upheld by the government as permanent forests. The MoF has used this article for official declarations of forest areas by appointment. However, the *bupati* and businessperson claimed that the mechanism gave wide discretionary power to the MoF to designate forest areas without proper consultation with communities. The Constitutional Court held that this particular point is not legally binding (Decision No. 45/PUU-IX/2011).

This verdict, along with weaknesses in forest mapping highlighted in the KPK's 2010 review (see Dermawan et al. 2011), put pressure on the MoF to accelerate forest gazettement, since only 14% of the 130 million hectares of state forests has been formally gazetted (Wells et al. 2012; KPK 2012). Following the verdict, the Directorate General of Forest Planning within the MoF created a priority programme that aims to cover 100% of the total state forest area. In 2013, the KPK and 12 other ministries and agencies signed a memorandum of understanding on the acceleration of forest gazettement. This agreement enables other sectors to be involved in the process.

Another important development is Constitutional Court Decision No. 35/PUU-X/2012 on the constitutionality of the phrase "state" in article 1, clause 6. This provision stipulates that indigenous (*adat*)

forests have state forest status. In its decision, the court held that state forests should exclude *adat* forests. This decision is seen as an opportunity for *adat* communities to claim rights to access natural resources. However, under the terms of the decision, indigenous communities must register before they are eligible to claim these rights. Registration occurs under district or provincial government regulations (Kementerian Kehutanan 2013c). Following this decision, indigenous communities in various provinces established notification boards for their area noting that they were now *adat* forests. However, one year after the court decision, progress towards the registration of indigenous communities is still slow, and further efforts are needed for the necessary regulations to be put in place (Saturi et al. 2014).

5 Tackling corruption risks in REDD+ in Indonesia: An update

5.1   Corruption and environmental governance in Indonesia

Indonesia was ranked 114 out of 177 countries on Transparency International's 2013 Corruption Perceptions Index (CPI).[10] Other surveys arrive at similar conclusions, indicating a low level of governance in Indonesia (Martini 2012; Republik Indonesia 2012).[11] Barr et al. (2010) and Dermawan et al. (2011) have highlighted several reforms that may strengthen anti-corruption efforts in Indonesia. These include, among others, strengthening the role of the BPK, strengthening the KPK, and establishing a corruption court. Within the executive branch of the government, some efforts to raise public confidence in the public service in Indonesia have resulted in important achievements. For example, ministries such as the MoF have adopted online licensing systems. The GoI has also set up a centralized e-procurement system and an online information system on non-tax forest revenues. Compared to the previous system (where procurement and licensing was conducted offline and in an opaque manner) these systems greatly increase transparency. They do not, however, guarantee that corruption will disappear (Elbahnasawy 2014; Shrivastava and Bhattacherjee 2014).[12]

A United Nations Development Program (UNDP) survey on forest, land, and REDD+ governance showed that the level of governance in Indonesia is generally weak. Indonesia received an average score of 2.33 out of 5 in this survey. The survey found subnational levels to have lower scores than the central government (Situmorang et al. 2013). Similar findings also came from a survey by the Indonesian Center for Environmental Law (ICEL), which found that forest and land management by district governments is still far from adhering fully to principles of good forest governance (Rahman et al. 2013). These results indicate that, while reforms may have started taking place at the national level, the GoI must work to significantly improve governance conditions at subnational levels.

---

[10] Indonesia shared the ranking of 114 with Egypt (TI 2013).

[11] While corruption perception surveys are often cited as indicators for levels of corruption in a particular jurisdiction, they also have important weaknesses. Olken (2009) and Olken and Pande (2012) elaborate on possible biases of such surveys.

[12] According to Elbahnasawy (2014), e-government can reduce corruption only if there are no face-to-face interactions between private sector and government actors.

5.2   Addressing corruption risks in REDD+

Even as activities for REDD+ readiness are underway, there are concerns that REDD+ could bring its own set of corruption risks. In Indonesia, these concerns stem from three main observations. First, REDD+ involves large sums of money. In addition to the US$ 1 billion pledged by the Norwegian government under its 2011 letter of intent, a number of other projects and activities involve large amounts of money, in the form of loans and grants from donors (Republik Indonesia 2014).[13] In addition, the potential money REDD+ could bring if and when a REDD+ carbon market is available could make it susceptible to corruption. Second, REDD+ is a more complex system than the traditional timber-based concession, trade, and payment system that has been in place in Indonesia since the 1970s, as it involves a non-tangible commodity (carbon) as opposed to a tangible one (timber). Tracing the origin of carbon as a commodity is more difficult than for timber. As an example, the KPK found it difficult to locate timber harvest data when it built its case for the indictment on charges of corruption of Soewarna Abdul Fatah and Teuku Azmun Jaafar (personal communication with the KPK, April 2014). In such corruption cases, the state attorney must show evidence of the amount lost, as well as where the losses took place, in order to convince a judge to make a decision on the amount of money the convicted party must return to the state. Making a similar case for carbon emission fraud under the existing judicial system would be even more difficult. Third, despite a number of reforms that are currently underway, REDD+ is being undertaken in settings where forest governance, data management, and human resource capacity are generally weak (especially at the subnational level). Yet REDD+ has been developed in Indonesia mainly through involvement with technical sector agencies such as the MoF and the National REDD+ Agency, rather than with the inclusion of state law enforcement and audit agencies that could help overcome these governance weaknesses.

The MoF has identified several areas of the Indonesian forest sector that pose corruption risks, including licensing, misreporting data on forest product harvests and trade, manipulating taxes or other charges a company must pay, and manipulating auctions of confiscated timber. In other sectors that affect forests (such as mining) corruption potentially can also occur in relation to licensing or the payment of taxes and charges (Kementerian Kehutanan 2014b). Many of these forest sector corruption risks are also pertinent to REDD+.

One KPK officer noted that corruption risks lie at every control point along the REDD+ process (personal communication with the KPK, April 2014). REDD+ corruption risks start during early policy-making and continue all the way until actors receive their share of REDD+ payments. Corruption can occur in initial policy-making, during the coordination of actor processes, in relation to finance and accounting, through benefit-sharing systems, and in licensing processes (Dermawan et al. 2011; Haryadi et al. 2013; Situmorang et al. 2013). Outside the REDD+ "value chain," weak law enforcement is another source of REDD+ corruption risk. The following subsections summarize the corruption risks highlighted in Dermawan et al. (2011). After highlighting the risks, we discuss recent reforms carried out by Indonesian

---

[13] For example, the Japan International Cooperation Agency (JICA) provided a soft loan of US$ 1 billion in 2008– 2010 for climate change-related activities. In addition, the German Federal Enterprise for International Cooperation (GIZ) funded a US$ 10 million technical assistance program between 2010 and 2015, and the German development bank (KfW) provided a US$ 6.8 million grant for the 2011–2015 period (Republik Indonesia 2014).

government agencies that relate to each particular risk. We then assess the effectiveness of these reforms in addressing the risks (see Appendix 1 for a table summarizing these risks and recent reforms).

5.2.1   Addressing the risks in policy and institutional frameworks

The REDD+ policy-making process presents a number of corruption risks. First, a risk of corruption could be generated by policy confusion and competing objectives and interests (Dermawan et al. 2011). REDD+ provides an opportunity to receive payments for not cutting down trees or increasing forest cover. At the same time, REDD+ involves forgoing benefits from oil palm, timber plantations, and mining activities (Irawan, Tacconi, and Ring 2013). REDD+ has presidential level support and is moving ahead with significant recent progress. It remains to be seen, however, how the future of REDD+ will unfold now that a new president is in place. Increasing demand for oil palm, pulp, paper, and minerals could result in "business as usual" scenarios (Brockhaus et al. 2012). These extractive sectors employ powerful lobby and public relations groups and receive strong support from members of parliament. Representatives of business associations claim that, in addition to contributing to economic growth, these extractive sectors also contribute significantly to job creation, a variable that is of key importance to members of parliament seeking re-election.

One of the most important reforms related to REDD+'s policy and regulatory framework is the "one map" policy. Since one national map has been agreed upon, decision-makers from different ministries and agencies are now able to discuss and decide important issues from the same starting point. Agencies argue that producing one map was one of the very first achievements of REDD+ implementation. Importantly, the map is now published online,[14] and the map is revised regularly based on new information. This also opens up opportunities for the public to monitor and provide critical feedback to changes in the map.

Parallel to the one map policy, the MoF is moving ahead with the gazettement of forest areas. It was reported that the MoF has achieved 68% of its target and aims to reach 100% by 2015 (KPK 2014a). In order to resolve claims, the MoF has issued a regulation that provides that when there are claims on an area already gazetted, the area will be excluded from the state forests after meeting certain requirements. The head of the UKP4 has proposed a period of five years by which third parties must claim forest areas that have been designated by the MoF (Kompas 2014a). However, no final decision has been made as far as this proposal is concerned.

Even where land use maps are clear, competing demands for forestland from the extractive sectors and from REDD+ projects could open up opportunities for corruption by actors who have influential decision-making powers over land allocation, both at national and subnational levels. Importantly, the development of a single map has not been matched with a movement toward improved quality of forest data. Forest data has often been missing or inaccurate, making reporting, tax calculations, and state loss calculations in corruption cases difficult. For example, data on the types of concessions located on each particular tract of forestland is generally inconsistent, and there are often overlaps between logging or timber plantations and

---

[14] A link to the map is found on the UKP4's website at: http://bit.ly/16abW9c. It was in its sixth edition as of July 2014.

estate crops or mining concessions. Data on timber production is also often inconsistent across levels of government. These data gaps and inconsistencies open up opportunities for manipulation.

The Constitutional Court verdict on indigenous community forests has partly resolved the land tenure issue with respect to indigenous communities. Before any community can reclaim land that used to be classified as state forests, however, it must register according to district or provincial regulations. The regulations themselves can involve complex requirements, since (as at the national level) formulating district or provincial regulations involves negotiations between the government and local parliaments. Furthermore, the registration process itself can be lengthy because the indigenous community must prove a number of things. Under the 1999 Forestry Law, the community must show that it is still in the form of a *paguyuban*, that is, that it has a form of government or leadership, occupies a clearly defined territory, has norms and legal instruments in place (particularly a traditional judiciary system), and still collects products from nearby forests for its needs (Kementerian Kehutanan 2013c). Proving these conditions can be difficult, and the whole process can potentially involve several different court decisions to resolve conflicting claims. This presents a risk of corruption in the form of bribery or "speed money" to help the process move more quickly.

REDD+ has created a new currency in regard to forests – that of carbon – consequently also creating a new basis of conflicting claims. Discussions around forest ownership issues now revolve around who owns the carbon in addition to who owns the land. While the Constitutional Court decision clarified that indigenous communities' forests are separate from the state forests, it did not clarify the rights over carbon pools on the land. Thus far, there has not been any clarity on carbon ownership, including how the five carbon pools specified by the Intergovernmental Panel on Climate Change (Garg, Kazunari, and Pulles 2006, page 1.12, table 1.1) – above ground biomass, below ground biomass, dead wood, litter, and organic soil carbon – will be practically translated into the Indonesian context.

5.2.2 Addressing the risks in coordination

In terms of coordination among various REDD+ actors, risks of corruption may arise in relation to the areas of authority held by various agencies and their desire to protect these areas of influence. This risk is higher if the stake in a competing demand for land is higher, for example, where a powerful lobby might be motivated to pay a bribe to influence a particular agency to defend its position. The side effects of decentralization in Indonesia have included poor coordination between the central and subnational government levels, a lack of clarity over roles, and confusion regarding leadership (Dermawan et al. 2011).

One notable achievement in addressing this risk was the joint agreement note (*nota kesepakatan bersama*, NKB) on the acceleration of forest gazettement, signed by 12 ministries and agencies in March 2013. By way of background, in 2010 the KPK conducted a review of the Directorate General of Forest Planning under the MoF. This review resulted in 17 recommendations covering regulation, organization, administration, and human resource management issues. In monitoring the MoF's progress on these recommendations, the KPK concluded that the Directorate General of Forest Planning could not fully implement them alone (KPK 2010; Dermawan et al. 2011).

In a letter to the president on January 2013, the head of the KPK highlighted three main problems related to the planning and management of state forests: (i) disharmony in policies and regulations across sectors, (ii) suboptimal implementation of the gazettement of state forests, and (iii) the absence of a conflict resolution mechanism that provides justice to all parties. The KPK emphasized that resolving these main challenges would require the integrated support of *all* ministries and agencies. The NKB was therefore set forth with three main goals: (i) harmonization of policies and regulations, (ii) reconciliation of technical and procedural aspects, and (iii) conflict resolution based on the principles of justice, respect, and the advancement of human rights according to the law (KPK 2013a).

The NKB contains three annexes that elaborate the details of activities that fall under each of its three main goals, as well as the ministries or agencies that should carry out each activity. If more than one ministry or agency is to carry out an activity, one particular ministry or agency is designated to coordinate efforts. The KPK and the UKP4 coordinate and monitor progress in implementing the NKB, and hold regular meetings with each ministry or agency to evaluate this progress. According to the KPK, the MoF has made significant progress in terms of meeting its NKB targets.

In order to ensure that the NKB will continue into the next presidential term, the KPK has been coordinating with Bappenas. This coordination aims at ensuring that the NKB, which is currently a three year activity, becomes an integral part of the GoI's medium term plan by integrating the NKB into ministry and agency planning over the course of the next five years. The KPK has also been coordinating with the Ministry of Finance to ensure there is a budget to support implementation of the NKB.

In November 2014, the KPK convened a meeting to evaluate the implementation of the NKB and concluded that approximately half of the targets set forth in the NKB had been achieved. Improvements include enhanced forest planning by the MoF and better licensing of estate crop permits by the Ministry of Agriculture and others. However, appendix 3 of the NKB (on conflict resolution) highlights a persistent problem: there is no agency with a specific mandate to handle and solve agrarian conflict. The optimal solution under the NKB would be to build consensus on resolving conflicts by optimizing existing structures within the signatory ministries and agencies; however, this had not been achieved by the most recent NKB evaluation meeting held in November 2014 (KPK 2014c).

National and subnational levels of government, as well as provincial and district governments, are also increasingly coordinating their activities. For example, in Papua, provincial agencies tasked with coordinating emission reduction programs worked with the REDD+ Task Force (and later with the National REDD+ Agency). In addition, the Papua provincial government agency coordinates with district level offices to integrate emission reduction programs and activities. The provincial government also holds regular meetings with organizations that have programs and activities in Papua, in order to align these programs with the provincial government's priorities.

A key success factor in coordinating such activities is that there is a champion who is able to monitor progress and request corrective measures as necessary. This is the case with the role of the UKP4 and the KPK in monitoring implementation of the NKB, which has faced resistance from a number of ministries

and agencies. Subnational government agencies also need to raise the quality of their monitoring work and provide critical feedback to their institutional peers at the provincial and district levels to ensure planning translates into effective implementation.

5.2.3 Addressing the risks in financing and benefit sharing

In terms of REDD+ financing and benefit sharing, corruption risks can come from the failure to establish tools to measure progress against targets (Dermawan et al. 2011). In relation to general financing for climate change (including REDD+), the Ministry of Finance, together with the Climate Policy Initiative, UNDP's Indonesia office, and UNEP, has launched a climate finance tracking system, which adopts the low emission budget tagging and tracking system of UNDP and UNEP (Climate Policy Initiative 2014). The ability to track climate financing within the national budget system is a significant step towards measuring expenditures required to achieve the target of reducing emissions by up to 41% from a business-as-usual scenario. Although the tracking system is not specifically designed as a financial auditing tool, it is possible that the BPK could use the system to conduct performance audits of GoI climate change programmes.

In Indonesia, an analysis of climate finance in 2011 showed that at least US$ 951 million in climate financing came from public sources. The GoI contributed the largest share, disbursing around 66% (US$ 627 million) of public climate finance. In 2011, most domestic climate finance supported essential indirect activities, such as policy development, research, the establishment of an MRV system, and other enabling activities. The forestry sector received 73% of the financial support to such indirect activities (Ministry of Finance and Climate Policy Initiative 2014). To put this in context, however, the fuel subsidy under the national budget for the same year was around US$ 11.8 billion, more than 20 times the figure for national climate financing (Republik Indonesia 2011b). The current administration announced a decision to reduce the fuel subsidy in November 2014, but it remains to be seen how the budget will be reallocated into other activities.

One issue that remains unclear is how benefits from REDD+ should be shared among stakeholders. On the one hand, such arrangements fall under MoF regulation P.36/Menhut-II/2009, which sets out shares of REDD+ revenue for the government, developers, and communities, with the distribution differing for each type of REDD+ project. The Ministry of Finance has objected to this regulation, arguing that revenue sharing is its responsibility and that these matters should be controlled at the government regulation level (which is a higher category than the ministerial regulation level). On the other hand, one of the mandates of the National REDD+ Agency is to prepare and coordinate instruments and funding mechanisms for REDD+, including the distribution of benefits for those who implement REDD+. This mandate is linked to article 5(d) of Presidential Regulation No. 62 of 2013 on the National REDD+ Agency. The National REDD+ Agency has not yet developed a REDD+ benefit sharing arrangement in line with this mandate, and it is unclear how this issue will be resolved.

5.2.4 Addressing the risks in forest sector accounting

The current system for collecting forest concession fees and taxes and for reconciling reports allows unlicensed activities in forest areas and the manipulation of forest production and tax reports. Corruption is also possible during reconciliation and administrative monitoring of invoices and forest production reports. Cumbersome and inconsistent regulations – combined with high transaction costs, missing links in report reconciliation, the absence of performance monitoring, and other problems – creates REDD+ corruption risks. Project proponents could also over-report carbon emission reductions and/or skew national carbon emission accounts in order to make REDD+ appear more successful than it actually is (Dermawan et al. 2011).

While there is significant progress in terms of REDD+ policy and regulatory frameworks, an important outstanding question is how to audit REDD+ accounts. FREDDI, the REDD+ financial instrument discussed above, adopts a trust fund mechanism to manage existing REDD+ funds in Indonesia. The REDD+ money is recorded under the state budget, but is placed outside the treasury (i.e., outside of Ministry of Finance management). UNDP is the trustee of this REDD+ money under a letter of intent between Indonesia and Norway. It is not clear who is to audit REDD+, however. According to Law No. 17 of 2003 on state finance, rights and obligations incurred due to the implementation of state duties are defined as "state finance." Therefore any rights (in this instance, incomes or benefits) incurred while the state is implementing policies to reduce carbon emissions should be accounted for as state finance. Furthermore, Law No. 15 of 2004 on the audit of state finances and Law No. 15 of 2006 on the Supreme Audit Board (BPK) stipulate that the mandate to audit state finance lies with the BPK. Whether REDD+ funds are considered part of state finances or not, the BPK is not engaged in REDD+ discussions. As an example, neither the RAN-GRK nor the REDD+ National Strategy mentions a BPK role in monitoring the use or distribution of benefits from REDD+ projects.

5.2.5 Addressing risks in licensing

In terms of licensing, corruption risks come from unclear procedures or third-party involvement in the submission, review, and approval of applications for REDD+ projects (Dermawan et al. 2011). An audit on licensing revealed that licensing data is not well documented and licensing regulations are not synchronized (aligned across different regulatory levels) or harmonized (aligned across the same regulatory level) (Santosa 2014).

To set up a REDD+ project, a company must go through two licensing processes. First, the company must obtain a concession permit, so that it can engage in its business activities. Second, the company must obtain a permit to implement forest carbon, so that it can carry out activities related to forest carbon. To date, PT Rimba Makmur Utama is the only company that is running a REDD+ project in Indonesia at the operational stage. This company has an ecosystem restoration concession permit, issued by the minister of forestry in 2013. Other than this, there are around 70 REDD+ demonstration activities or pilot projects throughout the country, although their performance is unclear (Kompas 2014b).

An initiative on integrated services for licensing was launched in 2004 with Presidential Decree No. 29/2004 on the implementation of investment through an integrated service system (*Pelayanan Terpadu Satu Pintu, PTSP*). In 2006, President Susilo Bambang Yudhoyono issued Presidential Instruction No. 3 of 2006, which gave investment-related authority to ministries and set forth instructions on policies and activities needed to ensure improvements to the Indonesian investment climate. Following this instruction, the Ministry of Home Affairs (MoHA) issued Ministerial Regulation No. 24 of 2006 on guidelines for one-stop integrated services. This served as the basis for local government heads to create simplified mechanisms in their respective areas. Presidential Regulation No. 27 of 2009 on integrated service of the stock market supported this initiative and stressed the importance of efficient and integrated services to ensure an improved investment climate. All of these policies have also formed the basis for establishing an integrated service system in a number of regions, where local governments provide services such as licensing for opening businesses. The integrated service system has nonetheless taken longer than expected to be implemented, in part because of a misconception about the difference in meaning between "one roof licensing system" (*sistem perijinan satu atap*) and "integrated one door licensing system" (*sistem perijinan terpadu satu pintu*). The former implies that there is an office where the applications are received in one place (but approval still occurs at each respective office, e.g., at the district forestry office). The latter implies that the application and permit can be obtained at the same place (KPPOD 2014).

In order to promote good governance in the forest and peat land sectors, the UKP4 has coordinated the development of a single nationwide licensing information system. The development of this system is just part of its efforts to reform the licensing system; other activities include auditing licensing activities. Under the new licensing system, an online database will integrate licensing data across government agencies at the central and subnational government levels (Santosa 2014). By November 2014, the scope was still limited to licenses in the mining and estate crop sectors, with the aim to integrate data on licensing for other sectors and across government levels. The development of this licensing information system is carried out simultaneously with audits of several existing licenses.

At the subnational level, a number of provinces and districts have set up one door licensing offices. Some of these offices conduct licensing on behalf of the central government. Others have tried to streamline the permit process (e.g., the districts of Berau and Bulungan in East and North Kalimantan). Challenges include harmonizing legal frameworks and resolving issues tied to overlapping uses of a particular area of land (Kartikasari et al. 2012). One significant gap in terms of licensing in the forestry sector is that the provision of technical recommendations for (large scale) concession permits are still carried out by district forestry services (*dinas kehutanan*) instead of being integrated into the one door licensing offices.

The MoF has itself set-up an online licensing system. Its online system was developed starting in 2010 and was officially launched in September 2013 (AntaraNews 2013; ACCH 2013). In addition, the ministry has established a physical booth on the ground floor of its building to provide services to external parties. Via its online licensing portal, the ministry also provides figures on the number of permits it has issued.[15] Implementing e-government (such as online licensing services) in Indonesia faces a major challenge because of the lack of interconnectivity across ministries and agencies. Each ministry has its own

---

[15] See http://lpp.dephut.go.id/home

e-government system that is isolated from other ministries and agencies. This makes monitoring difficult, for example, making it cumbersome to get an overview of whether a particular private firm has fulfilled different requirements set by different public agencies. It also lengthens bureaucratic decision chains, opening up opportunities for corruption. One example is the difficulty in reconciling tax revenues from timber. This is particularly relevant for REDD+, where the MoF issues permits, but a different agency is likely to monitor performance and implementation in terms of calculating carbon emission reductions (BMI 2014).

5.2.6 Addressing the risks in law enforcement

Haryadi et al. (2013) highlighted the risks of corruption in REDD+ in relation to law enforcement. These include the risk that regulations are not enforced or are misused by certain groups for their own benefit, that criminal justice system processes (from investigation to indictment to sentencing) are not conducted properly, and that sentencing is not carried out according to the law, resulting in the dismissal of cases, decisions in favour of certain defendants or the reduction of sentences.[16]

To help reform law enforcement, the UKP4 coordinated the signing of a memorandum of understanding (MoU) to apply a "multi-door approach" to combat forest crimes. The minister of finance, the minister of forestry, the minister of environment, the attorney general, the head of the National Police, and the head of the Indonesian Transaction Reporting and Analysis Center (PPATK) all signed the MoU in December 2012. The MoU aims at strengthening law enforcement in cases related to natural resources and the environment in forest and peat land areas. As a follow up, a joint regulation on handling the crimes in the natural resource and environment sectors on forests and peat land was signed and issued in May 2013. The multi-door approach attempts to respond to forest crimes as cross-sectoral crimes (Satgas REDD+ 2013b). The approach applies a "follow the money" principle in dealing with forest-related crime, and attempts to ensure perpetrators pay the costs of rehabilitation of damaged areas and return lost state finances (Saturi 2012). A guideline about the approach has been prepared (Satgas REDD+ 2013b).

In terms of the country's judicial system, judicial agencies are moving towards a better understanding of environmental issues. In addition, the Supreme Court has signed an MoU with the Ministry of Environment, which has agreed to carry out certified trainings for judges who handle environmental cases. In 2011, the Ministry of Environment also signed an MoU with the National Police and the Attorney General's Office to engage in integrated environmental law enforcement (Kementerian Lingkungan Hidup 2012).

Despite these reforms, the KPK has noted that one challenge in tacking corruption in Indonesia is the suboptimal performance of law enforcement officers (Tempo 2013). The involvement of high ranking law enforcement officers and judges in high profile corruption cases has reduced society's trust in the integrity of law enforcement agencies and courts in carrying out their duties (Kompas 2014c).

---

[16] More generally, the Indonesian rule of law index has highlighted a concern with judicial impartiality. In the 2012 assessment, 60% of respondents disagreed with the statement that judges are free from bribery. About 62% of the respondents stated that judges can be influenced by political parties and the private sector (ILR 2013).

6 Suggestions for improving REDD+ readiness from an anti-corruption perspective

This Issue paper has reviewed a number of risks of corruption for REDD+ in Indonesia, as well as efforts by various Indonesian agencies to minimize these risks. We have highlighted a number of GoI reforms aimed at establishing the REDD+ infrastructure, improving forest governance, clarifying forestland tenure, and improving coordination capacities. These reforms have taken place relatively quickly and smoothly. In addition, other initiatives to enhance forest governance are underway, for example, with regard to timber legality, sustainable forest management, and sustainable oil palm production. It is important to build upon the success of these initiatives and use the lessons learned from these efforts to invigorate the REDD+ process. This requires commitment from actors to support the existing momentum and close the remaining gaps, especially as many areas of reform are still a work in progress. Strong political backing from ex-President Yudhoyono has driven recent change to improve forest governance in Indonesia, and the UKP4's role in coordinating and monitoring many of these reforms, including the establishment of the REDD+ Task Force and the later National REDD+ Agency, has been significant.

The following sections summarize key lessons these reforms in Indonesia can teach us about how to overcome corruption risks in REDD+. REDD+ provides a potentially important opportunity for balancing Indonesia's development path by securing financial compensation for verifiable carbon emission reductions from deforestation and forest degradation. A number of gaps must be filled to better prepare for REDD+ implementation from an anti-corruption perspective. The REDD+ corruption risks in Indonesia are still relatively high in a number of areas, and we focus below on the most important gaps in policy and practice.

Table 3: Summary of risks of corruption in REDD+ in Indonesia, recent reforms, and gaps

Risks of corruption in REDD+	Recent reforms by GoI	Gaps
Policy and institutional framework: • Policy confusion; • Competing objectives and interests; • Powerful lobbying by actors who may lose out with the emergence of REDD+.	• Development of "one map" and "one data" policies; • Gazettement of areas under state forest; • Clarification of the status of adat forests.	• Clarification of "carbon rights" that includes five carbon pools; • Alignment of REDD+ and development targets; • Clarification of the position of the National REDD+ Agency and the UKP4 within the current administration; • Alignment of anti-corruption measures in REDD+ safeguard with anti-corruption laws.

Coordination: • Existing areas of authority held by various agencies and their desire to protect them; • Poor coordination between central and subnational government levels; • Lack of clarity over certain roles and confusion regarding leadership.	• The signing of a joint agreement letter (NKB) across 12 ministries and agencies; • Stronger coordination on REDD+ readiness processes between the National REDD+ Agency and its subnational partners.	• Establishment of a formal mechanism to consistently resolve competing claims over land among permit holders from different sectors; • Improvement of coordination under the decentralization framework.
Financing and benefit sharing: • Failures to establish tools to measure progress against targets.	• Budget tagging for activities related to climate change.	• Clarification of the legally acceptable benefit sharing arrangement among the government, REDD+ proponents, and communities.
Accounting: • Poor reconciliation of reports on taxes that could allow for the manipulation of forest production and tax reports; • The absence of performance monitoring.	• The establishment of FREDDI as the financial instrument for REDD+.	• Clarification of the role of audit agencies in monitoring the financial performance of REDD+ (contingent on whether REDD+ money is included as state finance under Law 17 of 2003, Law 15 of 2004, and Law 15 of 2006.
Licensing: • Unclear procedures or third-party involvement in the submission, review and approval of applications.	• Development of licensing information system; • Implementation of one door licensing systems, especially at subnational level; • Launch of online application and booth at the MoF.	• Integration of various online systems to ensure integration of licensing, reporting, and payment of taxes; • Assurance that systems avoid interactions between applicants and those with the authority to issue permits.
Law enforcement: • Regulations that are not enforced; • Abuse of power; • Criminal justice system not implemented properly.	• The agreement to a multi-door approach between six agencies; • Awareness raising activities for judges on environmental issues.	• Strengthened engagement of judges on forest abuses as an environmental crime issue.

6.1 Anchor regulatory frameworks and institutional arrangements more securely

In the early stages of REDD+ readiness, the UKP4 became one of the key champions of reform in many areas related to REDD+ as well as to forest governance in general. The UKP4 coordinated a number of activities related to establishing the REDD+ framework, including setting up the REDD+ Task Force that later became the National REDD+ Agency. Together with the KPK, the UKP4 also coordinated monitoring of implementation of the NKB. Given the positive roles the UKP4 and the National REDD+ Agency played in raising governance standards ahead of full REDD+ implementation, the GoI should continue the UKP4 and should strengthen the National REDD+ Agency's mandate. If this does not occur, the current administration should at least find ways to set up other agencies that will act as champions and coordinate with the KPK on the implementation of the NKB. If this does not happen, this could place heavy pressure on the KPK, and could potentially divert its attention away from its main mission of eradicating corruption. Similarly, the GoI should strengthen the legal backing of the REDD+ National Strategy as a guiding document for REDD+ implementation.

In terms of REDD+ infrastructure, safeguards should refer to the anti-corruption measures stipulated in Law No. 31 of 1999 and Law No. 20 of 2001. Together these laws list more than 30 forms of corruption under eight categories: state finance loss, bribery, misuse of position, extortion, embezzlement, fraud, conflict of interest, and gratification (KPK 2006). REDD+ safeguards should go beyond merely minimizing the risk of bribery, and should deal with the whole spectrum of potential corrupt activities at all stages of REDD+.

6.2 Address coordination gaps and build subnational governance capacity

Several coordination gaps should be addressed. First, the GoI should provide clarity on which agency will act as the national REDD+ authority under the new government. The GoI should focus on ensuring that decisions on REDD+ are issued by the authorized agency, so as to avoid duplication where similar policies are issued by different agencies.

In terms of monitoring implementation of the NKB, the KPK and the UKP4 should coordinate with the Bappenas to ensure that the NKB becomes an integral part of the national medium term planning process for 2014–2019 (which was under revision in November 2014). Reaching the goal set forth in the NKB that all of Indonesia's forests are fully gazetted would provide a solid baseline: all governmental and private sector actions could start from the same basic understanding of conditions in a particular area. One particular point of the NKB that needs particular attention is resolving competing claims over land.

Another important policy issue is to address low governance capacities at subnational levels, as indicated by surveys of forest, land, and REDD+ governance. The GoI should raise the governance capacity of staff at subnational levels, both in terms of technical aspects related to REDD+ and in terms of managing and distributing associated revenues. International donors can contribute by setting up technical assistance programs to build the governance capacity of agencies at the subnational level. In addition to such efforts to build capacity, the GoI should also engage in efforts to improve enforcement. For example, the KPK and BPK could strengthen their monitoring, supervision, and auditing of subnational governments. Subnational government agencies should also be made aware of and be trained to implement the multi-door approach to tackle forest crimes discussed earlier.

6.3   Clarify auditing responsibilities and decide the redistribution of REDD+ benefits

One issue that must still be addressed in terms of REDD+ financing is which agency has the right to audit existing and future REDD+ funds. Under the current interim arrangement, REDD+ finances are placed in a trust fund system with UNDP as the trustee. The establishment of FREDDI as the financial mechanism in REDD+ helps clarify that REDD+ funds are subject to BPK audits.

In terms of benefit-sharing, the Ministry of Finance should consult with the National REDD+ Agency and the new MoEF to clarify how REDD+ benefits will be redistributed across actors and levels of government. The GoI may want to think about either formulating a draft government regulation on REDD+ benefit sharing or integrating REDD+ benefit sharing into the existing revenue sharing regulation (Government Regulation No. 55 of 2005).

6.4   Strengthen the role of the Supreme Audit Board (BPK) in REDD+

Data collection to establish verified emission reductions under REDD+ must conform to financial audit standards, as well as to MRV standards. The preparation of a technical design for MRV on the carbon emission reduction side is already underway in Indonesia. However, thus far rather limited efforts have been made to strengthen the BPK's financial audit role in REDD+. This is an area where international donors should offer technical assistance or develop partnerships with the BPK.

Another relevant accounting issue relates to the evidence needed to build cases on corruption in criminal court. If someone is alleged to have engaged in criminal corruption with regard to REDD+ that caused financial losses to the state, calculating these losses can be challenging. Recovering state financial losses through the criminal justice system requires detailed data to calculate the loss that is "real [accurate] and certain," as indicated in the Law on Corruption No. 31 of 1999. The BPK, the National REDD+ Agency, and the KPK should begin discussing the types of audits feasible for REDD+ projects that involve government financing. The BPK might subsequently need to decide which types of REDD+ audits could be used as evidence in criminal corruption cases.

Importantly, there is also an opportunity to punish entities or companies through the civil court system in Indonesia. In such cases, natural resource loss or damage can be estimated through a number of valuation methods. A notable example is the case of PT Kallista Alam in the Aceh province: the Meulaboh district court ordered the firm to pay damages that occurred due to the company's actions in burning land for oil palm plantations.[17]

---

[17] See: Putusan No. 12/PDT.G/2012/PN.MBO

6.5   Encourage coordination across licensing systems

One of the gaps in terms of licensing is that licensing data has not yet been integrated into a single portal as envisioned by the UKP4. If licensing data were integrated into a single portal, licensing audits of estate crop and mining sectors could be expanded from the three districts in Central Kalimantan (where such audits currently occur) to more than 500 districts across Indonesia. Of course, expanding auditing of licensing data to cover more licenses would require budget and human resources.

Another gap in terms of licensing is that existing online licensing systems that ministries or agencies may have already developed or implemented have often not been integrated. There is a need to review these existing online licensing systems to find parameters of universal importance to policy makers, such as company ownership, tax payments, and location of concessions. There is also a need to integrate licensing (or at least licensing portals) through one-door systems implemented at the subnational level. This would ensure that data on small scale operators is integrated into the system, even though permits are generally issued at the district level.

6.6   Introduce forestry and environmental issues in general, and REDD+ in particular, into the judiciary system

A multi-door approach has been introduced among law enforcement agencies in Indonesia. It is a great achievement when agencies recognize the importance of tackling forestry crimes and use any available windows to combat the problem. Extending the multi-door approach in the criminal justice system will involve engagement with judges. It is important to assess their understanding on forest and environmental crimes in general, and REDD+ in particular. Subsequently, relevant government or donor agencies could develop programs to strengthen judges' understanding of REDD+.

6.7   Strengthen the reward and sanctions framework, and engage in preventive measures

In addition to the specific areas discussed above where risks of corruption are considered as high, it is important to note that corruption is also a behavioural problem. Focusing on fixing or improving specific systems and structures alone is insufficient, since actors determined to engage in corruption will find ways to work around them. This suggests that a number of prevention measures, including education, are of key importance in supporting the movement towards REDD+ with integrity. In addition, this implies that the GoI should strengthen its application of an overall reward and sanctions framework to government agencies and officials. If officials convicted of corruption can return to the public agencies they worked in, the basis for clean government is undermined.

References

Abood, S., J. S. H. Lee, Z. Burivalova, J. Garcia-Ulloa, and L. P. Koh. 2014. "Relative Contributions of the Logging, Fiber, Oil Palm, and Mining Industries to Forest Loss in Indonesia." *Conservation Letters* (21 April): 1–10. doi: 10.1111/conl.12103.

ACCH (Anti-Corruption Clearing House). 2013. "Kementerian Kehutanan: Perizinan online percepat pelayanan" [Ministry of Forestry: Online licensing speeds up the service]. http://bit.ly/1K2EZuC

AntaraNews. 2013. "Menhut resmikan pelayanan informasi perizinan secara online Kementerian Kehutanan" [The Ministry of Forestry officially launches online licensing information system]. *AntaraNews.com*, 11 September. http://bit.ly/1KjCrGB

Astuti, I. 2014. "Korupsi minerba masif" [Corruption in mineral and coal is massive]. *Media Indonesia*, 26 November. http://bit.ly/1tUMaBa

Bakrie Global. 2013. "Moratorium lahan bisa hambat investasi CPO Rp14 triliun" [Land could inhibit 14 trillion rupiah CPO investment], 20 May. http://bit.ly/18H2OKZ

Bank Indonesia. 2014. "Value of Non-Oil and Gas Export by Commodity." Jakarta: Bank Indonesia. http://bit.ly/1K2Fll5

Bappenas (Badan Perencanaan Pembangunan Nasional). 2013. "Evaluasi Paruh Waktu RPJMN 2010-2014" [Mid term Evaluation of the National Medium Term Development Plan 2010 – 2014]. Jakarta: Kementerian Perencanaan Pembangunan Nasional/Badan Perencanaan Pembangunan Nasional.

Barr, C. 2001. *Banking on Sustainability: Structural Adjustment and Forestry Reforms in Post-Suharto Indonesia*. Washington, DC: WWF Macroeconomic Program Office; Bogor: Center for International Forestry Research (CIFOR). http://www.cifor.org/publications/pdf_files/Books/cbarr/Banking.pdf

Barr, C., I. A. P. Resosudarmo, A. Dermawan, and J. McCarthy, eds. 2006. *Decentralization of Forest Administration in Indonesia: Implications for Forest Sustainability, Economic Development and Community Livelihoods*. Bogor: CIFOR. http://www.cifor.org/publications/pdf_files/Books/BBarr0601.pdf

Bisnis Indonesia. 2014. "Perkebunan kelapa sawit: Pelaku usaha minta moratorium dicabut" [Palm oil plantations: Businesspeople request revocation of moratorium]. *Bisnis.com*, 4 June. http://bit.ly/1zMxGWs

BPS (Badan Pusat Statistik). 2014. *Produk domestik bruto atas dasar harga berlaku menurut lapangan usaha* (miliar rupiah), 2004–2013 [Gross domestic product at current prices by industry (billion rupiah), 2004–2013]. Jakarta: BPS. http://bit.ly/1uQBUoB

BMI (Business Monitor International). 2014. "Indonesia: Q4 2014 Indonesia Information Technology Report," 5 August. London: BMI.

Brockhaus, M., K. Obidzinski, A. Dermawan, Y. Laumonier, and C. Lutrell. 2012. "An Overview of Forest and Land Allocation Policies in Indonesia: Is the Current Framework Sufficient to Meet the Needs of REDD+?" *Forest Policy and Economics* 18: 30–37.

Burgess, R., M. Hansen, B. A. Olken, P. Potapov, and S. Sieber. 2012. "The Political Economy of Deforestation in the Tropics." *Quarterly Journal of Economics* 127(4): 1707–1754.

Carlson, K. M., L. M. Curran, G. P. Asner, A. M. Pittman, S. N. Trigg, and J. M. Adeney. 2013. "Carbon Emissions from Forest Conversion by Kalimantan Oil Palm Plantations." *Nature Climate Change* 3: 283–287.

Climate Policy Initiative. 2014. "Indonesia Launches New Budget-tracking System to Better Target Climate Finance." Press release, Climate Policy Initiative, Jakarta, July. http://bit.ly/1D50rgJ

Dermawan, A., E. Petkova, A. C. Sinaga, M. Muhajir, and Y. Indriatmoko. 2011. "Preventing the Risks of Corruption in REDD+ in Indonesia." CIFOR Working Paper No. 80. Bogor: CIFOR. http://bit.ly/169TTQm

Dermawan, A., K. Obidzinski, and S. Amira. 2014. "Monitoring Illegal Logging at the National Level: Lessons from Indonesia." In *Following the Proceeds of Environmental Crime: Forests, Fish and Filthy Lucre*, edited by G. Rose, 141–157. London: Routledge.

Dharmawan, A. H., B. Nugroho, H. Kartodihardjo, L. Kolopaking, and R. Boer. 2012. *SVLK, Jalan Menuju REDD+* [Timber legality verification system, the road towards REDD+]. Jakarta: Forest Governance and Multistakeholder Forestry Programme. http://kehati.or.id/mfp2/wp-content/uploads/SVLK_Jalan_Menuju_REDD.pdf

Deutsche Welle. 2013. "Kalangan bisnis tolak moratorium hutan" [Businesspeople reject forest moratorium]. *Deutsche Welle*, 15 May. http://www.dw.de/kalangan-bisnis-tolak-moratorium-hutan/a-16813053

Ekadinata A., M. van Noordwijk, S. Budidarsono, and S. Dewi. 2013. *Hot Spots in Riau, Haze in Singapore: The June 2013 Event Analyzed.* ASB Policy Brief No. 33. Nairobi: ASB Partnership for the Tropical Forest Margins. http://www.worldagroforestry.org/downloads/publications/PDFs/BR13072.PDF

Elbahnasawy, N. G. 2014. "E-Government, Internet Adoption, and Corruption: An Empirical Investigation." *World Development* 57: 114–126.

Fitzherbert, E. B., M. J. Struebig, A. Morel, F. Danielsen, C. A. Brühl, P. F. Donald, and B. Phalan. 2008. "How Will Oil Palm Expansion Affect Biodiversity?" *Trends in Ecology & Evolution* 23(10): 538–545.

Forest Carbon Partnership Facility. 2013. *REDD Readiness Progress Fact Sheet. Country: Indonesia*. October 2013. http://bit.ly/1EA41RI

Garg, A., K. Kazunari, and T. Pulles. 2006. "Introduction." In *Agriculture, Forestry and Other Land Use*, vol. 4 of *Guidelines for National Greenhouse Gas Inventories*, edited by S. Eggleston, L. Buendia, K. Miwa, T. Ngara, and K. Tanabe, 1.1–1.29. Hagawa: IPCC (Intergovermental Panel on Climate Change). http://bit.ly/1voKd0S

Gaveau, D., and M. A. Salim. 2013. "Research: Nearly a Quarter of June Fires in Indonesia Occurred in Industrial Plantations." *Forest News: A Blog by the Center for International Forestry Research* (30 July). Bogor: CIFOR. http://bit.ly/1EZ5i1W

Gellert, P. 2010. "Extractive Regimes: Toward a Better Understanding of Indonesia's Development." *Rural Sociology* 75(1): 28–57.

Gilbert, N. 2012. "Palm-oil Boom Raises Conservation Concerns." *Nature* 487: 14–15. http://bit.ly/1DnPvZh

———. 2014. "Fibre Production Drives Deforestation in Indonesia." *Nature*, 21 July. doi: 10.1038/nature.2014.15589.

Gunarso P., M. E. Hartoyo, F. Agus, and T. J. Killeen. 2013. "Oil Palm and Land Use Change in Indonesia, Malaysia, and Papua New Guinea." Reports from the Technical Panels of the 2nd Greenhouse Gas Working Group of the Roundtable on Sustainable Palm Oil (RSPO). http://bit.ly/1KjD6rG

Hansen, M. C., P. V. Potapov, R. Moore, M. Hancher, S. A. Turubanova, A. Tyukavina, D. Thau, S. V. Stehman, S. J. Goetz, T. R. Loveland, A. Kommareddy, A. Egorov, L. Chini, C. O. Justice, and J. R. G. Townshend. 2013. "High-Resolution Global Maps of 21st-Century Forest Cover Change." *Science* 342(60160): 850–853.

Haryadi, D., U. N. Hayati, T. Setiono, I. Sinambela, I. Aristora, Raflis, I. Sari, L. B. Pangkali, and M. F. A. Jaya. 2013. *Safeguarding the Future of REDD+: Indonesia Risk Assessment*. Jakarta: Transparency International Indonesia. http://bit.ly/1HKUWrC

Hewitt, D., and P. Cowling. 2012. *Keeping REDD+ Clean: A Step-by-step Guide to Preventing Corruption*. Berlin: Transparency International. http://bit.ly/1z6LRPf

Hosonuma, N., M. Herold, V. De Sy, R. S. De Fries, M. Brockhaus, L. Verchot, A. Angelsen, and E. Romijn. 2012. "An Assessment of Deforestation and Forest Degradation Drivers in Developing Countries." *Environmental Research Letters* 7: 044009.

ICW (Indonesia Corruption Watch). 2013. Lampiran 1 ICW: Kerugian Keuangan Negara Di Sektor Kehutanan. http://bit.ly/1BUomNS

ILR (Indonesia Legal Roundtable). 2013. *Indeks persepsi negara hukum Indonesia 2012* [Indonesian rule of law index 2012]. Jakarta: ILR. http://www.ilr.or.id/wp-content/uploads/2013/06/Buku-IPNHI-Final.pdf

Indrarto, G. B., P. Murharjanti, J. Khatarina, I. Pulungan, F. Ivalerina, J. Rahman, M. N. Prana, I. A. P. Resosudarmo, and E. Muharrom. 2012. "The Context of REDD+ in Indonesia: Drivers, Agents and Institutions." Working Paper 92. Bogor: CIFOR. http://www.cifor.org/publications/pdf_files/WPapers/WP92Resosudarmo.pdf

Irawan, S., L. Tacconi, and I. Ring. 2013. "Stakeholders' Incentives for Land-use Change and REDD+: The Case of Indonesia." *Ecological Economics* 87: 75–83.

Kartikasari, F. I., M. Priyanta, D. Tresya, and W. Kusumawardhani. 2012. *Perizinan terpadu untuk perbaikan tata kelola hutan di Indonesia: Studi kasus kalimantan tengah* [Integrated licensing for the improvement of forest governance in Indonesia: The Case of Central Kalimantan]. Jakarta: Indonesian Center for Environmental Law. http://icelindonesia.files.wordpress.com/2014/03/perizinan-terpadu-satu-pintu.pdf

Kementerian Kehutanan. 2012. *Statistik kehutanan Indonesia 2011* [*Forestry Statistics of Indonesia 2011*]. Jakarta: Kementerian Kehutanan. http://www.dephut.go.id/uploads/files/Statistik_kehutanan_2011.pdf

———. 2013a. *Statistik kehutanan Indonesia 2012* [*Forestry Statistics of Indonesia 2012*]. Jakarta: Kementerian Kehutanan. http://www.dephut.go.id/uploads/files/BUKU%20STATISTIK%202012.pdf

———. 2013b. *Laporan program penanaman satu milyar pohon tahun 2012* [Report on the one billion tree planting program 2012]. Jakarta: Kementerian Kehutanan. http://1milyar.info/LAPORAN_OBIT_TAHUN_2012.pdf

——— [Ministry of Forestry]. 2013c. "Strategic Steps for Forest Management and Mechanisms for Determining Customary Forests after the Issuance of the Constitutional Court Ruling Number 35/PUU-X/2012 on 16 May 2013." Presentation at "The National Workshop on Forestry Law: The Constitutional Court Ruling Number 35/PUU-X/2012 on 16 May 2013," 29 August. Jakarta: President's Delivery Unit for Development Monitoring and Oversight (UKP4). http://bit.ly/1voRXA2

———. 2014a. *Deforestasi Indonesia pada tahun 2011–2012 hanya sebesar 24 ribu hektar* [Deforestation in Indonesia during 2011–2012 was only 24 thousand hectares]. Siaran Pers No. S.409/PHM-1/2014. Jakarta: Kementerian Kehuntanan. http://www.dephut.go.id/uploads/files/ce7d69be1e3df78967e11864d92d34e1.pdf

———. 2014b. *Korupsi di sektor kehutanan* [Corruption in the forestry sector]. Presentation at 4th Indonesian Anti-Corruption Forum, Jakarta, 10–12 June.

Kementerian Lingkungan Hidup. 2012. *Mewujudkan efektivitas penanganan perlindungan dan pengelolaan lingkungan hidup* [Towards effective protection and management of environment]. Jakarta: Kementerian Lingkungan Hidup. http://bit.ly/1BP97mR

Kementerian Perindustrian. 2012. *Laporan kinerja sektor industri dan kinerja Kementerian Perindustrian tahun 2012* [Report on the performance of the industrial sector and the performance of the Ministry of Industry in 2012]. Jakarta: Kementerian Perindustrian.

Kementerian Pertanian. 2014. *Luas areal kelapa sawit menurut provinsi di Indonesia, 2009–2013* [Palm oil area by provinces in Indonesia, 2009–2013]. Jakarta: Kementerian Pertanian. http://bit.ly/1voTg1I

Kissinger, G., M. Herold, and V. De Sy. 2012. *Drivers of Deforestation and Forest Degradation: A Synthesis Report for REDD+ Policymakers*. Vancouver: Lexeme Consulting. http://bit.ly/16abJCS

KPK (Komisi Pemberantasan Korupsi). 2006. *Memahami untuk membasmi: Buku saku untuk memahami tindak pidana korupsi* [Understanding towards eradicating: Pocketbook to understanding corruption crime]. Jakarta: KPK. http://acch.kpk.go.id/documents/10157/27903/Buku+Saku+Memahami+untuk+Membasmi+Korupsi.pdf

———. 2010. *Matriks temuan dan saran perbaikan kajian sistem perencanaan dan pengelolaan kawasan hutan pada Ditjen Planologi Kehutanan Kementerian Kehutanan Republik Indonesia* [Matrix of findings and suggestions for improvement: An assessment of planning systems and the management of forest estates at the Directorate General of Forest Planning of the Ministry of Forestry of the Republic of Indonesia]. Jakarta: KPK.

———. 2012. "Akibat hutan salah kelola" [The outcome of forest mismanagement]. *Integrito* 30/V: 16–17.

———. 2013a. "Nota kesepakatan rencana aksi bersama: Tentang percepatan pengukuhan kawasan hutan Indonesia" [Memorandum of understanding on joint action plan: Acceleration of gazettement of Indonesia's forest estate]. Jakarta, 11 March. http://bit.ly/1K39v7x

———. 2014a. "1 tahun nota kesepakatan bersama percepatan pengukuhan kawasan hutan Indonesia: Refleksi dan revitalisasinya pada pemerintahan 2014–2019" [1 year of joint agreement note on the acceleration of forest area gazettement in Indonesia: Reflection and revitalization in the 2014–2019 administration]. Jakarta: KPK.

———. 2014b. "Kajian sistem pengelolaan penerimaan negara bukan pajak (PNBP) mineral dan batubara" [An assessment of the management system of non-tax state revenues of minerals and coal]. Jakarta: KPK. http://acch.kpk.go.id/documents/10157/27925/Kajian+KPK+Sistem+PNPB+Mineral+dan+Batubara.pdf

———. 2014c. "KPK evaluasi setahun perkembangan NKB kehutanan" [KPK one year evaluation of NKB forestry]. KPK press release, 10 November. http://bit.ly/1K39v7x

Kompas. 2014a. "Tata batas hutan Kuntoro: Jangan berubah terus" [Kuntoro forest boundaries: Do not keep changing]. *Kompas*, 16 September.

———. 2014b. "REDD+: Proyek percontohan tak termonitor seluruhnya" [REDD+: Demonstration activities not wholly monitored]. *Kompas*, 14 August.

———. 2014c. "ICW: Lembaga peradilan dan penegak hukum belum steril dari corupsi" [ICW: Judiciary and law enforcement institutions have not been sterilized against corruption]. *Kompas*, 3 August.

KPPOD (Komite Pemantauan Pelaksanaan Otonomi Daerah). 2014. Badan Pelayanan Terpadu Satu Pintu (BPTSP) di Provinsi Jakarta: Perspective kewenangan dan kelembagaan [One Stop Integrated Services Agency in province of Jakarta: Authority and institutional perspectives]. Jakarta: KPPOD and Foreign and Commonwealth Office of British Embassy.

Lang, C. 2012. Interview with Kuntoro Mangskusubroto, Head of Indonesia's REDD+ Task Force: "We are starting a new programme, a new paradigm, a new concept, a new way of seeing things." REDD+ Monitor, July (reported online 20 September). http://www.redd-monitor.org/2012/09/20/interview-with-kuntoro-mangkusubroto/

Lawson, S., and L. MacFaul. 2010. *Illegal Logging and Related Trade: Indicators of the Global Response*. London: Chatham House. http://www.illegal-logging.info/sites/default/files/uploads/CHillegalloggingpaperwebready1.pdf

LTS International, Indufor Oy, Ecometrica, and the Chr. Michelsen Institute. 2014. *Real-Time Evaluation of Norway's International Climate and Forest Initiative Synthesising Report 2007–2013*. Oslo: Norwegian Agency for Development Cooperation. http://www.norad.no/no/evaluering/publikasjoner/publikasjon?key=415169

Luttrell, C., K. Obidzinski, M. Brockhaus, E. Muharrom, E. Petkova, A. Wardell, and J. Halperin. 2011. "Lessons for REDD+ from Measures to Control Illegal Logging in Indonesia." Working Paper 74. Bogor: CIFOR. http://www.cifor.org/publications/pdf_files/WPapers/WP74Obidzinski.pdf

Luttrell, C., I. A. P. Resosudarmo, E. Muharrom, M. Brockhaus, and F. Seymour. 2014. "The Political Context of REDD+ in Indonesia: Constituencies for Change." *Environmental Science and Policy* 35: 67–75.

Margono, B. A., P. V. Potapov, S. Turubanova, F. Stolle, and M. C. Hansen. 2014. "Primary Forest Cover Loss in Indonesia over 2000–2012." *Nature Climate Change* 4: 730–735.

Martini, M. 2012. "Causes of Corruption in Indonesia." U4 Expert Answer No. 338. Bergen: Chr. Michelsen Institute.

Miettinen, J., C. H. Shi, and S. C. Liew. 2011. "Deforestation Rates in Insular Southeast Asia between 2000 and 2010." *Global Change Biology* 17: 2261–2270.

Miettinen, J., A. Hooijer, C. Shi, D. Tollenaar, R. Vernimmen, S. C. Liew, C. Malins, and S. E. Page. 2012. "Extent of Industrial Plantations on Southeast Asian Peatlands in 2010 with Analysis of Historical Expansion and Future Projections." *Global Change Biology – Bioenergy* 4(6): 908–918.

Ministry of Finance and Climate Policy Initiative. 2014. *The Landscape of Public Climate Finance in Indonesia.* Jakarta: Ministry of Finance and Climate Finance Initiative.

Myers, R., and F. Ardiansyah. 2014. "Who Holds Power in Land-use Decisions? Implications for REDD+ in Indonesia." CIFOR Infobrief No. 100. Bogor: CIFOR. http://bit.ly/1z6P6X6

Obidzinski, K., I. Takahashi, A. Dermawan, H. Komarudin, and A. Andrianto. 2013. "Can Large Scale Land Acquisition for Agro-development in Indonesia Be Managed Sustainably?" *Land Use Policy* 30(1): 952–965.

Obidzinski, K., A. Dermawan, A. Andrianto, H. Komarudin, and D. Hernawan. 2014. "The Timber Legality Verification System and the Voluntary Partnership Agreement (VPA) in Indonesia: Challenges for the Small-scale Forestry Sector." *Forest Policy and Economics* 14: 24–32. doi: 10.1016/j.forpol.2014.06.009.

Olken, B. 2009. "Corruption Perceptions vs. Corruption Reality." *Journal of Public Economics* 93: 950–964.

Olken, B., and R. Pande. 2012. "Corruption in Developing Countries." *Annual Review of Economics* 4(1): 479–509. http://www.annualreviews.org.ezproxy.library.tufts.edu/doi/pdf/10.1146/annurev-economics-080511-110917

Prasetyo, H. 2014. "REDD+ in Indonesia: Challenges and Progress." Presentation at REDD+ stakeholder meeting, Jakarta, 23 April.

Purnomo, A. 2014. "Angka deforestasi belinda, kajian ilmiah bermuatan politis." *Mongabay*, 18 July. http://bit.ly/16abW9c

Putro, H. R., E. O. Kleden, and M. Safitri. 2013. "Membangun kebijakan kerangka pengaman REDD+ di Indonesia: studi komparatif terhadap SIS-REDD+ dan PRISAI" [Building the policy on REDD+ safeguards in Indonesia: A comparative study on the SIS-REDD+ and PRISAI]. Jakarta: Dewan Kehutanan Nasional. http://bit.ly/1z6P6X6

Rahman, Y., C. Hartati, M. Maulana, H. Subagiyo, and R. A. S. Putra. 2013. "Indeks kelola hutan dan lahan daerah" [Index on forest and land governance of the regions]. Jakarta: ICEL. http://bit.ly/1wX6xZp

Republik Indonesia. 2011a. *Master Plan: Acceleration and Expansion of Indonesian Economic Development 2011–2025.* Jakarta: Coordinating Ministry for Economic Affairs, Republic of Indonesia. http://bit.ly/1z6QvNn

Republik Indonesia. 2011b. *Nota keuangan dan anggaran pendapatan dan belanja Negara perubahan tahun anggaran 2011* [Fiscal memorandum and revised state budget for the 2011 fiscal year]. Jakarta: Republik Indonesia.

Republik Indonesia. 2012. "Strategi nasional pencegahan dan pemberantasan korupsi jangka panjang (2012-2025) dan jangka menengah tahun 2012–2014" [The long term strategy on the prevention and eradication of corruption 2012-2025]. Jakarta: Republik Indonesia.

Republik Indonesia. 2014. *Updated Mid-term Progress Report of the Republic of Indonesia and Request for Additional Funding from the Forest Carbon Partnership Facility (FCPF)*. Jakarta: Republic of Indonesia. http://bit.ly/1D5uLHT

Rusli, Y. 2013. "Forestry Indonesia: Future Perspective of Green Economy." Presentation at workshop "Green Economy in the Forestry Sector," organized by Pustanling & Forclime GIZ, Jakarta, 26 July.

Santosa, M. A., J. Khatarina, and A. S. Suwana. 2013. "The Progress of Governing REDD+ in Indonesia." *International Journal of Rural Law and Policy*. http://bit.ly/1D5uLHT

Santosa, M. A. 2014. "Menuju perbaikan tata kelola hutan dan lahan gambut" [Towards the improvement of forest and peat land governance]. Presentation at workshop, "Refleksi Setahun NKB dan Revitalisasinya Pada Pemerintahan 2014–2019," Jakarta, 12 November. http://bit.ly/1CpFGNH

Sari, A. P., and N. Samadhi. 2014. "The Inconvenient Truth about Indonesian Deforestation." *Jakarta Post*, 12 August. http://bit.ly/1yEVEgc

Satgas REDD+. 2013a. "Prinsip Kriteria dan Indikator Safeguards REDD+ Indonesia – PRISAI" [Principles Criteria and Indicators of Safeguards REDD+ Indonesia – PRISAI]. Jakarta: Satgas REDD+.

Satgas REDD+. 2013b. "Executive summary: Pedoman penanganan perkara multidoor kasus sumber daya alam dan lingkungan hidup" [Executive summary: Guidelines on the multi-door approach on natural resource and environment cases]. Jakarta: Satgas REDD+.

Saturi, S. 2012. "Enam lembaga negara bikin kesepakatan perkuat penegakan hukum kehutanan" [Six agencies agree to strengthen law enforcement on forestry]. *Mongabay*, 20 December. http://bit.ly/1ytP64j

Saturi, S., A. Fachrizal, W. Chandra, T. Wijaya, and A. S. Karokaro. 2014. "Setahun putusan MK 35, pengakuan hutan adat masih di awang-awang" [A year after Constitutional Court Decision No. 25, the recognition of adat forests Is still up in the air]. *Mongabay*, 16 May. http://bit.ly/1EZ6mml

Shrivastava, U., and A. Bhattacherjee. 2014. "ICT Development and Corruption: An Empirical Study." Twentieth Americas Conference on Information Systems, Savannah. http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1602&context=amcis2014

Situmorang, A. W., A. Nababan, H. Kartodihardjo, J. Khatarina, M. A. Santosa, M. Safitri, P. Soeprihanto, and S. Effendi, Sunaryo. 2013. *Participatory Governance Assessment: The 2012 Indonesia Forest, Land, and REDD+ Governance Index*. Jakarta: United Nations Development Program. http://bit.ly/1EZ6mml

Strategic Asia. 2012. *Implementing Indonesia's Economic Master Plan (MP3EI): Challenges, Limitations and Corridor Specific Differences*. London: UK Foreign and Commonwealth Office and Strategic Asia. http://www.strategic-asia.com/pdf/Implementing%20the%20MP3EI%20Paper.pdf

Sunderlin, W. D., and I. A. P. Resosudarmo. 1996. *Rates and Causes of Deforestation in Indonesia*. CIFOR Occasional Paper No. 9. Bogor: CIFOR. http://bit.ly/1z5mJwY

Tempo. 2013. "Samad: Penanganan kasus korupsi belum optimal" [Samad: The handling of corruption cases has not been optimal]. *Tempo*, 13 May. http://bit.ly/1LDjKkI

Transparency International. 2013. *Corruption Perception Index 2013*. Berlin: Transparency International.
http://www.transparency.org/cpi2013

UNEP (United Nations Environment Programme), ed. 2011. *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Nairobi: UNEP. http://bit.ly/1zMyRFy

Wells, P., N. Franklin, P. Gunarso, G. Paoli, T. Mafira, D. R. Kusumo, and B. Clanchy. 2012. "Kajian atas keputusan Mahkamah Konstitusi Republik Indonesia nomor 45/PUU-IX/2011 tentang kawasan hutan: Dampak terhadap hutan, pembangunan, dan REDD+" [An assessment of the Indonesian Constitutional Court Decision No. 45/PUU-IX/2011 on forest estate: The impacts on forests, development and REDD+]. Bogor: Daemeter Consulting; Tropenbos International Indonesia; Makarim & Taira S. http://bit.ly/1CRFxBi

World Bank. 1994. *Indonesia Environment and Development: Challenges for the Future*. Report No. 12083-IND. Washington, DC: World Bank. http://bit.ly/1BP6cum