



**A WORK IN PROGRESS:
UPGRADING INDONESIA'S NATIONAL LAND AGENCY, 2004–2014**

Leon Schreiber and Jordan Schneider drafted this case study based on interviews conducted in Jakarta, Indonesia, in March and April 2015, as well as October and November 2017. Case published December 2017.

SYNOPSIS

When he won Indonesia's October 2004 presidential election, Susilo Bambang Yudhoyono found he had inherited a struggling land administration system that would block progress on some of his key policy initiatives. The National Land Agency (known by the abbreviation BPN, for Badan Pertanahan Nasional) managed records on landownership and transactions. But the organization was dogged by corruption, high costs, and delays. On average, it took 33 days, six visits to a local land office, and US\$110 for landowners to register property transactions. In addition, the BPN held ownership records for only a third of the estimated 89 million land parcels on the thousands of islands in the sprawling archipelago. In keeping with his campaign pledge to spur rural development, Yudhoyono appointed a new leadership team to revamp the BPN and get the agency on track. The team partnered with the World Bank in a program to title unregistered land and then rolled out a new land database that digitally stored all new transactions, equipped vehicles to deliver mobile services in rural areas, and worked with other ministries to design a comprehensive OneMap for the country. Although the reforms improved efficiency and sharply increased the pace of property registration, 10 years after Yudhoyono's election it remained clear that additional measures were still needed to reach the goal of a well-functioning, corruption-free, comprehensive, and sustainable land registry.



INTRODUCTION

The strengthening of land rights, particularly in rural areas, was central to the platform that helped carry Susilo Bambang Yudhoyono to victory in Indonesia's October 2004, first-ever direct election of a president. On the very eve of his election, Yudhoyono, a former army general, published his doctoral dissertation in agricultural economics, wherein he examined how rural agricultural development could alleviate unemployment and poverty in a country in which nearly a quarter of the population lived on less than US\$1.90 per day.¹

But Indonesia's National Land Agency—known by the abbreviation BPN, for *Badan Pertanahan Nasional*—was ill-equipped to meet Yudhoyono's ambitions of securing tenure rights for the millions of Indonesians who did not have access to land services. The BPN was dogged by problems of corruption, inefficiency, and high costs. The organization's 430 land offices served 225 million Indonesians dotted across the nation's 8,000 inhabited islands, and for many rural landowners, the nearest office was at least a day's journey away.

In 2005, it took an average of 33 days and six visits to a local BPN office for Indonesians to register land transactions. It also cost at least US\$110 to register property—a steep price in a nation whose average citizen earned just US\$1,148 per year.² To make matters worse, since its founding in 1988, the BPN had managed to register only 30 million of the country's estimated 89 million land parcels, meaning that the vast majority of property transactions in Indonesia were not formally recorded. Without legal title to their parcels, more than 50 million holders of relatively small properties often found it hard to resolve ownership disputes, access credit, and sell their land.

The lack of a comprehensive, up-to-date registry with information on landownership also held back economic development. Pelopor Yanto, secretary of agrarian legal affairs, who joined the BPN in 1991 and still worked there in 2017, said that the lack of landownership information meant that it often took a long time for the government to launch development projects. “The lack of data [makes] the land acquisition process take so long and makes it so expensive that the government [cannot] do infrastructure development,” he said. “So we realized that we cannot [become] a modern country if we cannot finish [registering] all the land.”

In July 2005, President Yudhoyono appointed a new leadership team to fire up the troubled BPN. Charged with making sure the agency lived up to the president's ambitions, the team faced a difficult job.

THE CHALLENGE

The BPN was an old institution, and its problems were not new. The agency had been established as a stand-alone organization in 1988 by then President Suharto (like many Indonesians, he used only one name), a military general who had come to power in 1968 following a coup. But the land

agency's roots went back even further—to the 1960s, when it was part of the home affairs ministry. The BPN's original mission was to serve the interests of Suharto's New Order military dictatorship.

Under Suharto's three-decade rule, the Indonesian government promoted large-scale farms and industrial projects under a land-for-development policy that routinely displaced small farmers, providing them with only meager compensation. From 1988 to 1998, the year of the Asian financial crisis that led Suharto to step down, the agency also issued location permits that helped corporations quickly acquire more than 200,000 hectares (about 770 square miles), frequently displacing entire communities.³ Further, to consolidate his hold on Indonesia's natural resources, Suharto passed the Basic Forestry Law in 1967, creating a forestry ministry with control over 70% of Indonesia's landmass. That left the BPN with jurisdiction—through the 1960 Basic Agrarian Law—over only the remaining 30% of Indonesia's land.

It was only after protests ousted the Suharto regime in 1998 that the BPN took its first steps toward becoming a publicly oriented land administration agency. The 49% of Indonesians who lived in rural areas constituted two-thirds of citizens living beneath the poverty line in 2004.⁴ Improving the security of those households' farms was a significant challenge to the government's goal of sparking growth and reducing inequality.

A series of new regulations adopted after the transition to democracy enabled the BPN to carry out systematic land registration that converted customary land claims (known as *adat* rights) to formal ownership rights for the first time. The new regulations also required that the BPN make sure all Indonesians had access to the registry's services. But progress was slow, and as the agency struggled in the mid 2000s, Yudhoyono brought in new management, led by one of his closest advisers, Joyo Winoto, a former land rights activist with a doctorate in political economy from Michigan State University. The new team's mission was twofold: to improve the quality of services it delivered to existing titleholders, and to significantly increase the number of landowners with formally registered title documents. Yanto said: "The law required that any transactions on [titled] land must be immediately registered at the local land office. If a transaction is not registered, it is not legally recognized," thereby leaving landholders vulnerable to land grabbing and other disputes.

Most of the country's unregistered land belonged to the more than 50% of farming households that each owned less than half a hectare—scarcely enough for survival.⁵ Such households generally transacted land under customary *adat* law. However, *unwritten* customary claims had little standing in the country's courts, which tended to favor whichever party held *formal* documents. Without a registered title, a household could neither legally buy nor legally sell land, nor use its parcel as collateral for a bank loan to, say, buy better farming tools or start a business. To bring the owners of the nearly 60

million untitled land parcels into the national registry, the BPN had to significantly strengthen its efforts to convert customary and other unregistered rights into formal titles.

To achieve its dual goal of improving service quality and increasing land titling, the agency would have to overcome some deep-rooted problems. Some of them stemmed from widespread corruption, and others had their roots in cumbersome procedures and management practices, antiquated technology, the absence of a digital map of the country, and fractured authority.

Corruption was pervasive, leading many citizens to conclude that the agency merely remained a tool to serve elite interests. In 2003, the World Bank reported that the BPN “has been used by [the] prevailing political and bureaucratic establishment for personal and political gains.”⁶ And in 2007, two years after new leadership took over at the BPN, a survey of citizens, conducted by Indonesia’s Corruption Eradication Commission, underscored the depth of the challenge. The commission, commonly known by its Indonesian acronym KPK, standing for *Komisi Pemberantasan Korupsi*, found that the BPN ranked second lowest in perceived integrity among 30 government agencies.⁷

Although much of the corruption was petty, the job of a registry official could be lucrative because a common form of misconduct was the so-called thank-you money that citizens paid to expedite transactions, said H. S. Dillon, chairman of the board of the Bandung Institute of Technology and the Partnerships NGO. More blatantly, some BPN staff sold false title documents—a practice that facilitated land grabs by wealthy businesses and powerful community members. Dillon blamed such false documents for causing most of Indonesia’s land disputes.

The unofficial money paid to service-level land registry staff for expedited documents and unauthorized activities flowed up the chain of command. Dillon said that as a management-level employee at the BPN, “if you had been doing your job well and you have been paying your bosses, it was only a matter of time” before an employee received a promotion to a position that would enable that employee to make even more illicit money. The BPN’s traditional career progression path reinforced that dynamic, and staff who worked for decades in the same functional group had the time and connections necessary to build graft networks.

The BPN’s personnel policy institutionalized corruption and inhibited improvements in performance. When the BPN’s new management team took office, three main considerations drove promotions: seniority, personal relationships, and kickbacks. Because staff could make the most money by extracting payments directly from citizens and businesses, officials angled for postings in local offices. In the capital city, Jakarta, there was less opportunity for such “gratification,” said Irawan Sumarto, a director under Winoto. Staff

assigned to the capital's central office to help lead nationwide upgrades often lacked motivation, and they started trying to leave as soon as they arrived.

The BPN's head office also faced a serious challenge to its authority. In the reform era that had begun with the fall of Suharto in 1998, legislators aimed to decentralize the government and empower provinces, regencies (districts), and cities. In the initial rush, parliament passed laws designed to dissolve the BPN as a national organization. By 2000, the agency's role had been reduced to "monitoring standards, training, and provision of some services," according to a World Bank report.⁸ During the next four years, President Abdurrahman Wahid and his successor, Megawati Sukarnoputri, prevented complete devolution of national authority, but by the time Yudhoyono assumed office, the BPN had lost most of its power over employees in local offices across the country.

Confusion and uncertainty persisted as the BPN's new leadership came in, with various political interests jockeying to tip the balance of power. The "money motive," wrote Noer Fauzi Rachman, professor of human ecology at Bogor Agricultural University, drove local elected officials to push for control of nearby land offices in order to sell valuable property and reduce land taxes for their supporters.⁹ In some regions, local governments created parallel land offices; in others, politicians simply took control of the existing staff.¹⁰ One of the new leadership's first tasks was to reestablish control over its regional offices.

Another challenge was that the BPN's procedures for registering land and follow-up transactions were extremely complex and sometimes even contradictory. Winoto wrote that the "jungle of regulation" that comprised more than 600 separate rules and laws¹¹ made procedures in land offices "very complicated and time consuming."¹² Also, given Indonesia's dispersed population, many farmers had to travel long distances to visit BPN offices. To register property, they had to undertake the long journey to a BPN office six times and pay a high fee of US\$110. To create the conditions necessary for the land registry to be updated sustainably, the BPN had to streamline its procedures. But it also needed help from the Indonesian legislature, which had the power to adopt new and simplified land law regulations.

Furthermore, years of underfunding had left the agency with antiquated technology. Local surveyors sometimes still used measuring tape because they had no GPS-enabled tools. With modern technology, the surveyors could have plotted the boundaries of several small parcels each day, but manual techniques forced them to instead spend several days per farm or parcel. Also, all transactions were paper based, which meant that each individual office stored piles of paperwork in archive rooms. There was no digital database that connected the central office in Jakarta to each of the 430 regional offices, which made it nearly impossible for the head office to keep track of changes to the national registry. The team had to adopt new

technology urgently and find ways to digitally link the regional registries with a central repository.

Finally, the BPN had no digital maps or registers of landownership. Before the agency could register a new property, staff had to sift through paper archives to determine whether the description overlapped with previously registered parcels. That process added weeks to the registration process and increased opportunities for corruption in exchange for faster service. But the problem went well beyond the BPN: the Indonesian government did not have one unified, official map that guided land administration in the country. Different ministries used different standards and definitions of what constituted, for example, forest land or customary land. Even as it worked to meet its internal challenges, the BPN would have to work with other departments to create one unified map for Indonesia.

FRAMING A RESPONSE

To round out the BPN's new senior leadership team, Winoto reached outside the BPN's ranks to people he trusted. He lured Irawan Sumarto, a geodetic engineer, from the Bandung Institute of Technology to lead a newly created directorate for base mapping. Budi Mulyanto, who served as director of thematic mapping and who taught at Bogor Agricultural University, worked with Sumarto to improve the BPN's mapping capabilities. Suyus Windayana, a longtime BPN employee, became head of land development for systems, data, and information—a position that enabled him to champion computerization. And Rukhyat Noor, another career official who ran the local office that managed the BPN's first pilot program for mobile land services, came to lead the agency's nationwide rollout as head of the innovation and data center directorate from 2008 to 2012.

However, before the leadership team could begin working to improve the BPN's services and speed up land titling, the team had to find a way of consolidating the Jakarta head office's control over the hundreds of regional offices located throughout the country. Establishing central control was a highly political process, and the team spent most of 2005 and early 2006 lobbying the national government both to increase the agency's budget and to reestablish the BPN as a national-level institution with broad authority over land policy.

Yudhoyono was initially wary of centralizing the BPN's functions, because the president needed the support of powerful local politicians in order to achieve his other policy goals. In opposition to the BPN's quest for greater central control, the leaders of the governors association regularly called on the national government to devolve the BPN's functions even further—to the district level. Also, cabinet members and parliament were hesitant to increase funding for an organization that many viewed with some skepticism. Winoto described the effort to centralize the BPN as a “power

struggle” between himself and the local politicians, adding that the fight was the most difficult part of the reform process.

Aside from statutory power, the BPN also needed more money to accelerate the pace of registrations. Without more funding, the agency would continue lacking the tools that could speed the process even if the team succeeded in centralizing authority in the organization. Winoto’s close relationship with the president opened doors. Winoto said political opponents met with him because they “believed I’m a friend of the president.”

In making a pitch for greater central control, the leadership team tailored its messages to the audience. For cabinet members, who had to approve the BPN’s budget request, the team linked the agency’s work to the broader economic picture. The agency’s presentations focused on how increases in land registration would spark economic growth by bringing more farmers into the formal economy, partly by letting them take out mortgages on their properties in order to invest in improvements. For parliamentarians, the BPN focused on how constituents would think more highly of their representatives after the agency improved its services.

In April 2006, Yudhoyono resolved the centralization dispute with a decree that solidified the BPN leadership’s control over its 24,000 employees by restoring broad management of land affairs to the national level. Legislators gave the decree additional legal force in 2007. The parliament also wrote language into the national development plan that specifically mandated the BPN to (1) enforce laws dealing with land rights, (2) implement efficient land management, (3) improve land laws and regulations, (4) provide access to land for the poor, (5) resolve land conflicts, and (6) develop human resources.¹³ The organization also secured substantial budget increases from parliament. The BPN’s annual budget increased from 950 billion rupiah in 2005 (equal to about US\$105 million at the time) to Rp1.2 trillion in 2006 (US\$133 million) and Rp2.2 trillion in 2009 (US\$215 million).¹⁴

With the BPN’s authority and funding bolstered, the leadership team turned to questions of strategic planning. The agency benefited from an existing cooperation agreement with the World Bank. From 1995 to 2001, the bank had run a project that, among other priorities, supported efforts to reform the regulatory environment within which the BPN operated. Shortly before Yudhoyono’s election in 2004, the bank also approved a new deal to provide US\$64.6 million for the BPN in the hopes of (1) reforming the still-complex regulatory framework, (2) building capacity, (3) developing a central land information system, and (4) strengthening regional offices.

In cooperation with World Bank land specialists, the agency adopted a new strategic plan that would guide its work from 2007 onward. Echoing many of the World Bank’s priorities, the BPN’s plan consisted of four pillars: (1) reforming land policy by simplifying regulation, (2) reforming and improving the BPN’s bureaucracy, (3) developing the infrastructure needed

for efficient land administration and service, and (4) improving the agency's processes for land services and administration.¹⁵

In a final push to convince Yudhoyono of the urgent need to accelerate land titling in a country in which two-thirds of landholdings were not formally registered, Winoto invited Peruvian economist Hernando de Soto to Indonesia. In 2000, de Soto had published the book *The Mystery of Capital*, in which he argued that property that was not formally registered lost much of its value because owners could not borrow money against it.¹⁶ De Soto termed the value lost due to the asset's informality as *dead capital*. The argument implied that wherever property that had been previously held informally became registered, the formalization would unlock tremendous economic value. (Even though the theory proved popular, many economists remained skeptical.)¹⁷

On November 7, 2007, de Soto delivered a presentation to the president and cabinet ministers on how land titling could contribute to economic growth, poverty eradication, and job creation. A statement subsequently released on Yudhoyono's website praised de Soto as the "father of the people's economy," who had sensitized the Indonesian cabinet to the need to "develop integrated property systems."¹⁸

Bolstered with the president's political backing as well as with a new strategic blueprint, more funding, and stronger central authority over regional land offices, the BPN leadership team set out to improve land services and ramp up titling efforts across Indonesia.

GETTING DOWN TO WORK

The team's first priority was to make sure that senior employees were in positions that aligned with their skills while also trying to break the tradition of promoting personnel based solely on seniority. The agency planned to work with World Bank consultants to ramp up the speed of land titling and to design a digital database that would store all registry information in one place. As part of the push to improve access to its services, the BPN further planned to convert motor vehicles into mobile offices that could travel to remote rural areas. Finally, in cooperation with other ministries, the agency had to improve the standards of the maps it used.

Shuffling personnel and revamping incentives

Even as they worked to obtain additional funding and consolidate managerial control over regional offices, the BPN's senior leaders realized that the agency's ossified personnel system was in need of a shake-up. Winoto said he came to see the BPN "as a dinosaur who doesn't know how to die . . . or live." By basing promotions largely on seniority rather than competence, the BPN's personnel management system was riddled with perverse incentives that diminished the agency's overall performance. In response, Winoto asked Dillon of the Bandung Institute to help improve the

BPN. Winoto respected the work that Dillon's nongovernmental organizations, called Partnerships, had done in vetting staff within the Corruption Eradication Commission (KPK), and he hoped to enlist similar support. Dillon said he was skeptical at first, given the BPN's poor track record, but that he later became convinced of the new leadership team's commitment to reform. Dillon won a US\$200,000 grant from the Norwegian Embassy, which had supported his past policy research, to help improve the BPN personnel system.

Although many aspects of the personnel system were flawed, Dillon said he aimed to focus first on practices involving staff advancement. "In bureaucratic reform . . . the quickest gains are in promotions. You can really get your message through that you are not going to allow the previous system to continue," he said. The goal of reforming the promotion system was to change employees' mindset on a day-to-day basis. Dillon said he wanted staff to ask themselves why they had not been promoted, a question he believed would bring "the factor . . . of integrity into the calculus of decision making."

Dillon's Partnerships staff designed a vetting process, administered tests, and conducted interviews to determine the capabilities and integrity of each of the BPN's hundreds of management-level employees. The program, which drew upon interviews with psychologists and psychiatrists, aimed, in Dillon's words, "to assess whether guys would be competent and morally inclined to maintain integrity." Partnerships then supplemented its analysis with the BPN's existing individual performance data to create profiles for each management-level employee.

Concerned that he could not rely on the BPN's human resources department to manage reassignment based on the performance data, Winoto decided to control the process himself and had the results of the Partnerships vettings delivered only to him. "I didn't give the [profiling] information to anyone," he recalled. After spending three weeks deciding whom he would place in each agency role, Winoto called a nationwide meeting of his management-level staff to announce the new position assignments. The reshuffling promoted talented young managers and moved hundreds of other employees to different directorates in order to improve coordination and communication.

To defuse employee dissatisfaction with the changes and maintain the BPN's internal stability, Winoto said he was careful to maintain morale among those reassigned to less-important positions or undesirable locales. He claimed he fired only two employees during his entire tenure running the BPN, preferring instead to rotate incompetent or corrupt staff to minor positions rather than pursue the drawn-out process required for dismissals. The BPN's senior leaders also never referred to new placements as demotions and did not cut the salaries of staff who found themselves with fewer responsibilities.

Winoto said he thought his initial “shock therapy” staff rotations succeeded in reducing delays and corruption. In 2008, Winoto began to rotate officials back—closer to their areas of professional expertise. But the old, corrupt promotion practices quickly returned. For instance, in 2008, when he told a handful of human resources officials certain information on placements before announcing them publicly, Winoto said that “in less than 24 hours,” promotion lists spread throughout the human resources department. He also said some staffers then approached those who had already been chosen for advancement and promised to ensure their promotions in return for cash. In response to those leaks, Winoto again kept management-level personnel decisions within his inner circle.

Senior mapping official Sumarto said the initial rotations had been too arbitrary to send a clear message: “The speed of rotation was very fast. Reward and punishment was not working properly,” he thought. Winoto himself conceded that “maybe conceptually I was too ambitious.” In addition, the rotations applied only to about 800 senior employees and not to the more than 23,000 lower-level staff.

Ramping up land titling

To speed up the pace of registering new titles, the BPN had to define and streamline its procedures, and the team worked closely with the World Bank’s consultants to develop a plan. Given the sheer scale of the challenge of registering close to 60 million parcels, officials decided to create a system for that would operate in parallel with existing procedures at the land offices. The BPN teams would travel into communities to help stimulate demand for titling and to render quick service. Meanwhile, the land offices would continue serving people who visited to use their services. Yanto said the duplication was necessary because “we did not want to interrupt activities at the land offices. Those services had to continue.”

The first step was to decide which regions to prioritize for the new traveling units. The team eventually settled on a strategy that deliberately focused on hotspot areas that were underserved by existing land offices. Hotspots were defined by two criteria: high levels of land conflict, and potential for significant economic growth.

In a novel move, BPN leaders next assembled more than 100 so-called adjudication teams. Each team comprised at least 10 staff members and included land administration officers with the authority to approve new titles, as well as conflict mediators and both public and private surveyors. To facilitate relations with local communities, the leader of each team was a senior official in the regional land office and spoke the local language. By assembling all of the people required to issue new titles, the BPN hoped to speed up the process as well as to “break down the ego that existed between different units [within the BPN],” Yanto said.

Each adjudication team had the authority to issue thousands of new titles per year to villagers who lived in the areas they were assigned. Using equipment funded by the World Bank, the adjudication teams set up base camps in hard-to-reach parts of the country. Each base camp had all of the equipment required for land registration, and it also housed sleeping quarters and kitchens for team members.

With all members assembled, a team began by mapping the outside boundaries of a local village. “Once we created this ‘work map,’ we went to the smallest sub-village, which might consist of about 40 households,” Yanto said. After speaking with local elected and traditional leaders, the team agreed on a date for all landowners to assemble. At that community meeting, the team made appointments with each landowner to survey that landowner’s parcel boundaries. On the appointed day, the landholder was asked to point out boundaries, and the adjudication team consulted with all of the landowner’s neighbors.

If the on-site mediators were unable to resolve boundary disputes, “we asked [the neighbors] to discuss it and come to our base camp once they found an agreement,” Yanto said. “If they could not agree, we did not issue the title but indicated a dashed line on our map to show that this is an unresolved boundary or general boundary.” Most landowners were able to clarify their boundaries, in which case all of the neighbors signed off on the agreement before the adjudication team finalized the title. Next, the team posted a public notice at its base camp and at the village government’s offices as well as outside mosques or churches. If any new objections arose, “we invited them to the base camp, where we tried to resolve the dispute,” he added. If the two sides deadlocked, the title would not be issued before a court ruling resolved the dispute.

At the end of the process, the adjudication team occasionally handed over title documents during a public ceremony. Yanto stressed that at the ceremonies, the team explained that the titles should be used as collateral for bank loans only if the landowners planned to invest in productive activities. “We invite local government, banks, and nongovernmental organizations to explain the different types of credit and how to use them productively,” he said.

Improving digital infrastructure

Even with streamlined procedures for registering new parcels, however, the system would remain inefficient unless the BPN also quickly upgraded its infrastructure. The agency’s antiquated information technology slowed registrations and opened doors for corruption. Local land offices managed their archives manually, and the vast majority of the agency’s more than 430 offices followed entirely manual, paper-based procedures to register land. Some local offices still used measuring tape to survey parcels, and most documents lacked geographic coordinates to identify boundaries. The 2004

tsunami that swept Aceh, which nearly wiped out the BPN's manual records of landownership in the province, highlighted the need for digital backups.

By creating a digital database from which landownership information could be retrieved instantly and modified, the BPN hoped to protect records against being lost, speed up the registration process, and cut down on graft.

From 1998 to 2003, the BPN had received funding from the Spanish government for a pilot project to install local area networks that would accelerate registration in 26 offices. Local land office staffers knew “the substance of what they do” but struggled to learn the programs and procedures for re-creating their work digitally, said Budi Mulyanto, director of thematic mapping at the time. Mulyanto added that many BPN officials were unenthusiastic about plans to roll out a digital registry database. Because training was inadequate under the pilot, staffers struggling with the technology had to work longer hours to learn to use the computers. Further, because the BPN had not yet developed a national standard procedure for the digitization of data, different offices computerized land registration materials in different file formats.

Following the end of the pilot project in 2003, “we had a dream to implement a digital system for the whole country,” recalled Windayana, who was in charge of land development systems, data, and information. The head office set the goal of nationwide computerization of services, and with support from the World Bank, the agency launched a nationwide digitization drive in 2005.

The BPN instituted a number of reforms to promote digital adoption, and it fixed the problems that had emerged during the pilot project. First, the head office issued standard operating procedures that specified the maximum time period for each stage in registering land. Second, the BPN linked promotions to effective computer skills, Winoto said. Danny Prasetyo, a staffer involved in the BPN computerization effort, said Winoto “implied that if you have good data [in the office you ran,] you’ll have a good career.” Winoto also issued more than 40 internal directives to speed up the registration process.

Local and provincial offices began to register land on computers and undertook the arduous process of creating digital registries from the paper-based archives. During the next few years, computerization in local offices accelerated rapidly. Supported by World Bank funding, the BPN installed fiber-optic cables, computers, printers, and scanners. Guidebooks, annual training sessions in Jakarta, and field visits by headquarters staff helped local officials build their skills. Sumarto said the computer training was most difficult for older staffers, who often would “just nod” during training sessions. But because Jakarta stopped accepting manual registrations at offices that had been computerized, even older employees realized they had to learn the new systems, and they became more attentive during training, Prasetyo said. Windayana added that “sometimes our [national-level]

personnel worked in rural offices for up to three months before people were comfortable [with the new technology].”

Initially, each land office that became newly connected to the digital network stored registry data on its own servers. At night, the head office then simply downloaded data from the local server to a central server located in Jakarta. However, that system gave the central office very little control over the quality of the newly uploaded information. In response, as more offices became connected, the BPN began developing a new system whereby all local servers were removed. Instead, the agency directly connected each office to a bigger central server located in Jakarta.

The centralization of all data made it much easier for the head office to track updates to the national registry. Windayana added that centralization also improved the quality of the information uploaded to the registry, because the central database accepted only transactions that were submitted in the correct format and with complete information. As a security measure, each land office could make changes to information on land parcels located only within its area of coverage. Another benefit was that “the digital system records all changes [to the registry], so we can trace it back if there’s any fraud. People feel watched,” Windayana said.

GPS-aided surveying, which was possible only after land offices were computerized, also proved critical to accelerating the pace of land registrations. Surveying was a major bottleneck in the registration process. Surveyors were in chronically short supply across the nation, and they used old methods, so it took two or three days to survey just one plot. In 2008, after an initial 140 offices had been computerized, the BPN purchased upgraded GPS-enabled surveying tools. And after the surveyors learned how to use the new technology, said Mulyanto, they could survey and map multiple plots daily if the weather was clear; cloudy days or remote areas with poor connections forced the surveyors to revert to older techniques. In response to poor connections, the organization began installing advanced global positioning systems that worked without interruption across even the most-densely-populated areas with the smallest parcels, thereby enabling teams to survey up to 30 parcels a day.¹⁹

According to Windayana, whereas only 26 offices were digital in 2005, by 2013 the BPN had succeeded in digitally connecting all 430 land offices. However, although all transactions registered since 2013 would be captured digitally, Windayana estimated that because every individual land title contained large numbers of supporting documents, “2 billion to 3 billion” paper records from before 2013 still had to be digitized.

Going mobile

In spite of the sharper focus on land titling and on making improvements to the agency’s digital backbone, millions of rural Indonesians still had to travel long distances to reach their nearest land office. The cost of

predatory middlemen and uncertainties about the advantages of registration further discouraged citizens living in remote areas from accessing the BPN's services. And if property holders forgot a document or needed additional verification, they had to make repeat visits to that distant office to complete the titling process. Prasetyo said middlemen commonly took advantage of the situation by charging landholders up to triple the official price to register land.

After assuming office, the BPN's senior leadership weighed its options for resolving the proximity issue. One possibility was to hire additional staff and open new offices, but the costs associated with such steps were too high. Another alternative was to provide registrations through the Internet, but many rural villages lacked online access. The team decided on a third option: to bring the BPN to the people rather than having the people come to the BPN. The team envisioned motorbikes and vans carrying surveyors and registrars to raise awareness of the agency's services and to conduct

Textbox 1: Land Redistribution Fails to Take Off

In addition to trying to improve the BPN's administrative functions, the agency's leadership also attempted to reorient the institution toward a sharper focus on land redistribution. Unequal access to land was an acute problem in Indonesia, because a handful of wealthy Indonesians owned vast tracts, and the government granted concessions covering millions of hectares for plantations, with palm oil concessions alone amounting to 7.9 million hectares.¹ At the other end of the spectrum, 66% of the 34.9 million people whose incomes were below the national poverty line lived in rural areas where households cultivated less than one-half hectare, on average.²

In January 2007, President Yudhoyono publicly committed to "land redistribution for the people." He promised that the BPN would redistribute 8 million hectares of state forest, a massive leap from the 1 million hectares the Indonesian state had redistributed from 1960 to 2004. But in order to identify unoccupied land it could transfer to Indonesia's poor smallholders, the BPN had to win support from the forestry ministry, which retained direct control of 70% of Indonesia's land area, even though by 2007 only half of the nation was actually forest.

The BPN team took up the challenge. In addition to planning to redistribute 1.1 million hectares of state lands under the BPN's authority, the team hoped to enlist support by the forestry minister to redistribute an additional 8.15 million hectares of state forest land to land-scarce communities. The BPN also identified another 7.35 million hectares of state land that had been abandoned or misused by private companies. But the BPN's ambitious campaign failed on a number of fronts. Even though Yudhoyono approved the plan and the forestry ministry initially signed a tentative agreement on the issue, the forestry minister, who was with a different political party from the president, was reluctant to relinquish control and diminish his own communal forestry ownership programs. The agency also lacked the legal clout to redistribute the 7.35 million hectares of abandoned concession land. Ultimately, the BPN managed to redistribute only a few hundred thousand hectares of the land under its direct control.

¹ USAID, *Land Tenure Profile: Indonesia*, December 2010, accessed November 29, 2017; http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Indonesia_Profile_0.pdf.

² Joyo Winoto, "Taking Land Policy and Administration in Indonesia to the Next Stage and National Land Agency's Strategic Plan," 10.

registrations on-site so that villagers in remote areas would not have to make long trips to offices.

In 2006, the BPN executed a successful pilot program that offered a new mobile service in central Java, Indonesia's most populous island. The program was called *Layanan Rakyat Untuk Sertifikasi Tanah*, or LARASITA (the People's Services Program for Land Certification). The agency chose Karanganyar—a relatively developed regency with a population density of about a thousand per square kilometer—because of the regency's competent staff and supportive local government. Noor, a career BPN employee who ran the Karanganyar land office, said constituents' complaints about substandard service and greedy middlemen were frustrating the local regent (the Indonesian version of a local district mayor), Rina Iriani, who offered to pay for the first LARASITA van.

Noor created procedures that remained mostly unchanged as the program expanded. First, the BPN area office would contact local mayors and village heads, and all would agree on a date convenient for villagers. Depending on the remoteness of the village, the village head would make arrangements for officials to stay the night. Upon arriving, BPN staffers would explain the agency's services and try to make the villagers feel at ease with the process. Traditional BPN offices were "too formal" for villagers, Prasetyo said. "It's kind of depressing for them to go to the *kantor* [office], which has a rule that they have to dress properly," he said. Further, said Noor, many villagers spoke the national language only poorly and felt intimidated about using their second language to navigate a complicated process. Noor said BPN workers in LARASITA vans wore casual clothing and spoke local languages in order to make villagers feel more comfortable with the process.

For the LARASITA workers, demonstrations of the value of land titling in limiting ownership disputes and preserving land for future generations proved more effective than explaining the benefits of access to credit. Prasetyo said that before families registered land, "brothers would fight when their parents just pointed a finger" at what land was whose. *Think about your children* proved a common and effective refrain whereby BPN staffers motivated villagers to use LARASITA.

After villagers understood the importance of gaining clear title to their holdings, BPN officers began to survey the land and to process paperwork. To connect the van in Karanganyar with archival data in the agency's main office, BPN staffers installed a relay antenna atop the highest point in the district, a Javanese-Hindu temple built in the 1400s. But when Noor recognized that not all villages could establish such a connection, the office developed a registration procedure that stored data temporarily on LARASITA computers for uploading later to the main office. And even though LARASITA officials' inability to access the archival data necessary to

advance applications slowed the process, off-line LARASITA services proved substantially more convenient for villagers than visiting local offices.

In 2007, the BPN expanded the LARASITA pilot to 30 more local offices. First, Noor visited Jakarta to discuss equipment requirements and best practices with national staff. And to expand the pilot, he worked with the central office to identify high-performing, computerized offices with supportive local politicians. Representatives from those chosen local offices visited the Karanganyar offices to see LARASITA in action. During the following months, employees from Karanganyar periodically visited local offices to troubleshoot and measure progress. Overall, Noor said, the selection of competent offices facilitated the rollout of the program.

In 2008, Noor became head of the innovation and data center directorate in Jakarta. Noor's 30-person staff assumed responsibility for coordinating LARASITA and were responsible for expanding the program to 124 of the 430 total land offices. Also in 2008, Noor began funding night and weekend LARASITA visits in order to serve villagers who worked weekdays. Occasionally, BPN officials took their families with them to the villages, picnicking with locals for lunch while explaining the importance of the BPN's services. Prasetyo, a BPN computerization staffer, said LARASITA could prove "fun for the whole family," which helped motivate employees to participate in the program.

Beginning in 2008, the scale-up began to encounter trouble. Noor said not everyone at the BPN was happy about the changes taking place. The streamlining of procedures via computerization had increased transparency and reduced the delays that had provided opportunities for BPN officials to extract side payments from their customers. Further, LARASITA required a shift in mindset among the staff, who were accustomed to sitting in their offices and waiting for people to come to them. "The big problem is that the staff of the land office have to move," Noor stressed. The LARASITA program made officials work longer hours and outside their air-conditioned offices—with no pay increase. "We thought that all of the staff would be like Karanganyar," Noor said, but at some offices, LARASITA vans rarely left the parking lot.

The BPN team took steps to pressure BPN offices to implement the program. Winoto issued a regulation mandating compliance and began to link an office's implementation of LARASITA to promotions of its managers. Noor instituted national training based in Jakarta, where, aside from teaching best practices, instructors also "talked heart to heart" to motivate staff, explaining it was the BPN's duty to improve villagers' lives, he said. Noor's office also began to track LARASITA usage more actively. For instance, the BPN installed GPS trackers on vans that monitored their movement "like the head of police," said the agency's legal adviser, Guna Negara.

As LARASITA expanded, middlemen began to fight to protect their livelihoods. Prasetyo said middlemen would spread falsehoods about BPN

among local village leaders and say the land titles were fakes. As a result, he said, some village heads refused to schedule dates for LARASITA visits. In response, BPN officials worked with higher-level officials to arrange visiting times. Prasetyo said field staffers who interacted directly with villagers were able to dispel the worries created by middlemen.

Creating a OneMap

While the BPN was expanding access to its services, Yudhoyono was taking another important step to support the agency by starting the process of the creation of standard and accurate maps of Indonesia's land. During a cabinet meeting in December 2010, officials from the President's Delivery Unit for Development Monitoring and Oversight—known by its Indonesian abbreviation of UKP4—displayed two maps of an area on the island of Papua. The forestry ministry had produced one, and the environmental affairs ministry had produced the other. However, because the ministries used different definitions of forests and different mapping techniques, the two maps showed two startlingly different pictures of the same forests.

Nirarta Samadhi, deputy head of UKP4 at the time, recalled that “the president sat forward in his chair when we showed him the differences. That's where the president decided we need a OneMap—one authoritative map that can be used by everyone.” Creating a OneMap would eliminate any discrepancies between the BPN's data and other government agencies and would also enable the agency to eventually map all landownership on a single, integrated map.

Yudhoyono assigned UKP4 to lead the initiative, and Samadhi was appointed to lead the OneMap task force. The president also tied the OneMap work to Indonesia's efforts to protect its forests under the United Nations' REDD+ program. “Although the president's idea was simple, in actuality it was more complex than it sounded. But it was also a great opportunity to improve land and forest governance,” Samadhi said.

In line with Indonesia's obligations under REDD+, the team's first task was to map all primary natural forest and peat land in Indonesia, with the aim of issuing a two-year moratorium on new commercial licenses in those areas. “The aim [of the moratorium] was to provide breathing space to improve governance of the forests and peat land,” Samadhi said. But to create an accurate map of land that could be placed under moratorium, the team first had to map areas with existing land-use licenses issued by the BPN or the forest ministry, which thus could *not* be placed under moratorium. That restriction required the task force to work closely with all agencies formally tasked with managing land and issuing concessions: the BPN, the forestry ministry, the internal affairs ministry, the agriculture ministry, and the Geospatial Information Agency.

Also, after consulting with the different ministries, the task force chose a scale of 1:50,000 as the standard for all base maps. Although some team

members argued for a more detailed scale, the scale of 1:50,000 was already significantly more detailed than the 1:250,000 maps used by most ministries to grant concessions.

But the task force ran into resistance when it tried to collate all existing commercial licenses. Samadhi explained that although most land-use concessions were granted under a veneer of legality, agencies and ministries often did not follow all of the proper steps before granting licenses. In other cases, applicants simply paid bribes to senior officials in exchange for obtaining concessions. “The BPN was one of those that resisted,” Samadhi said. The task force realized that some agencies—including the BPN, which issued commercial licenses to cultivate plantation land—would refuse to cooperate since they were afraid of being prosecuted in cases in which the law was not properly followed. In response, Samadhi’s team undertook to “not question any particular concession unless *all* agencies wanted to question it. It was a way to build trust,” he said.

One year after the task force began its work, the team issued its first official moratorium map, which protected 64 million hectares of primary forest. But the process of clarifying which areas were under some type of concession also meant that other parts of the country were included on the OneMap. After completing the moratorium map, “we embarked on a wider agenda that was no longer tied up specifically to REDD+. We now focused on fixing the [entire] map of Indonesia,” Samadhi said. And in order to speed the process, Yudhoyono mandated Indonesia’s space agency to procure satellite images of the country. At the same time, the Geospatial Information Agency began to develop an online portal that would let the public access the OneMap.

By the end of Yudhoyono’s term in 2014, the task force had produced a 1:50,000 base map for the country’s entire landmass that also showed areas under concession. For the first time, the BPN and all other agencies had an agreed-upon central reference point. The KPK anticorruption commission began using the map during audits and investigations into fraudulent licenses. But Samadhi wanted to go further. “The next challenge is to map coastal areas,” he said. “And for the maps to be even more useful, we need to eventually also produce maps at scales of 1:10,000 to 1:1,000.”

OVERCOMING OBSTACLES

Despite improvements in some services, serious corruption problems remained at the BPN, an institution originally designed to protect and empower elites during the Suharto-era New Order dictatorship that ruled Indonesia from 1967 to 1998. Although the transition to democracy in the late 1990s required the agency to begin serving all Indonesian landholders equally, the organization was slow to rid itself of corrupt practices that invariably disadvantaged the rural poor—citizens whom President Yudhoyono had pledged to empower.

Initially, the president's appointment of Winoto—who was not a BPN insider—raised hopes that his new team would finally act decisively against corruption. But Deni Purwana, a member of the KPK's land affairs task force, said the BPN remained paralyzed by corruption because graft “extended from the lowest to the very highest level.”

On one end of the spectrum, acts of petty corruption remained pervasive in the 430 land offices. One of the most common forms of graft involved collusion between public notaries and land officials. “Public notaries act as middlemen—as if they are land agents,” Purwana said. “They exploit the fact that according to the law, they are protected from prosecution if they endorse a fake document.” In another typical example of petty corruption, to ensure speedy service for a notary's clients, the notary would strike a deal with a corrupt land office official. In exchange for preferential treatment, the notary would then pay the official a cut of the money extorted from landowners.

Given the BPN's reputation for inefficiency, notaries routinely demanded fees from their clients in order to speed up the registration process. The notary would then take the registration documents to the land office, where he would jump to the front of the queue, pay a cut of the extorted money as a bribe, and quickly register the transaction. Aside from extorting money from typically impoverished landowners, one of the most pernicious effects of the collusion between notaries and BPN employees was that it gave both parties a stake in maintaining the BPN's image as being corrupt and inefficient.

The lack of regular staff rotation between different land offices was another big part of the problem, because it gave land officials plenty of time to build corruption networks in the region where they worked. “We have repeatedly recommended [to the BPN] that the first step in solving the problem is to regularly rotate all staff,” Purwana said. Although Winoto shuffled about 800 of the BPN's 24,000 personnel members shortly after he came to office, that big-bang rotation applied largely to senior staff, leaving many of the lower-level officials in place. The rotation was also only a onetime event and did not become a regular feature at the agency.

To prove the extent of the BPN's petty corruption problem, in 2010 the KPK secretly installed video cameras in land offices across the country. “The recordings physically showed the under-the-table payments,” Purwana said. “There's no shame; they do it almost explicitly and in plain view” of other people in the office. But when KPK investigators showed the incriminating video recording to BPN's management team, “They only shrugged their shoulders and said, ‘What can we do?’ . . . The BPN was one of the few institutions that simply ignored our recommendations,” Purwana recalled.

The episode vividly showed that the BPN leadership lacked the will to act decisively against corruption. According to Purwana, because so many senior BPN officials had been involved in dubious transactions in the past,

including during the Suharto regime, “they are afraid that if they open things up, they will also be implicated [by their colleagues]. You want them to move, but one of their legs is still attached to the past because of all the sins, mistakes, and crimes [the BPN committed]. Officials hold each other hostage; it’s like a Mexican standoff.”

But graft was not limited to instances of petty corruption. In March 2012, BPN chief Winoto was personally ensnarled in a corruption investigation that dated back to 2010. Alongside Winoto, the KPK implicated a number of cabinet ministers and senior lawmakers in a scheme to issue a marked-up, no-bid contract for a sports complex in return for bribes. For the sports complex tender process to move forward, the Ministry of Youth and Sports Affairs had to obtain a land certificate for the project site. The BPN had failed to issue the certificate when first requested in 2006, but it suddenly granted the ministry’s request in 2010. In the course of the KPK investigation, two officials said Winoto had taken a bribe in return for providing the essential paperwork.

Although Winoto denied the allegation and was not prosecuted, he became a political liability for Yudhoyono, who replaced Winoto as part of a broader cabinet reshuffle in June 2012. (By 2015, Winoto still had not been formally charged with any crime.²⁰) The president replaced Winoto with former attorney general Herndarman Supandji “to settle legal problems in the sector,”²¹ although critics felt that his performance in combating graft as attorney general was “lackluster.”²²

Partly in response to the unusual situation that ended Winoto’s tenure, the agency subsequently launched an anticorruption pilot project in about half of the country’s land offices. The BPN changed the physical layout of its regional offices to separate each one’s administrative back office from its customer-facing front office. The agency also changed the old layout wherein staff members would sit on high platforms and look down on customers. The hope was that putting staff at eye level with clients would make interactions feel more equal.

The project also prohibited cash payments in selected offices. In those offices, clients could pay only by using mobile money, or they could pay cash first at the local post office before submitting their receipts to the land office. Finally, the BPN designed a cell phone application and SMS system that enabled landowners to look up the cost of any transaction before going to the land office. By providing customers with fee information up front, the agency hoped the system would reduce opportunities for officials to skim money off the top by charging higher prices for land services.

ASSESSING RESULTS

The BPN could point to a number of headline achievements during Yudhoyono’s term as president from 2004 to 2014. The agency significantly sped up the rate at which it titled previously unregistered land parcels: from

800,000 parcels to about 1.8 million annually. More than 2 million of the newly registered parcels were registered through programs that provided subsidies covering more than 75% of the cost to landowners.²³ Internal reforms improved efficiency because the average number of days it took to register property dropped from 33 in 2005²⁴ to 22 in 2014²⁵—even though landowners still had to go through six different steps to register land. The improvements at the BPN also helped Indonesia to marginally improve its ranking on the World Bank’s *Doing Business* index, which measures the ease of doing business in almost 200 countries worldwide. With regard to the ease of registering property, Indonesia improved from 120th in 2007²⁶ to 101st in 2014.²⁷

The successful rollout of a digital registry database across the entire country was no small feat and was a key driver of progress. Previously, the BPN had no central system to log changes to the national registry as they happened. Instead, each local office maintained its own, paper-based registry; and it was a long and arduous process to compile all the data to get a national picture. The adoption of a fully centralized digital database in 2013 meant that the BPN head office now had real-time and up-to-date information on all land transactions registered across the country.

Aside from generating better data, the central database gave the head office both greater control over the quality of information uploaded to the registry and the ability to track down fraudulent transactions. The digital backbone also enabled the agency to roll out a mobile application and an SMS service whereby landholders could get information on how to register transactions. Windayana added that the next step would be to “enable fully electronic registration” over the Internet.

The LARASITA mobile-services program produced mixed results. Although LARASITA was nominally expanded to more than a third of all land offices, a 2012 government review found that local officials did not always use the vehicles to travel to remote areas as intended.²⁸ Instead, lack of proper oversight led to many local staffers’ preference to set up the mobile offices in more developed areas that already had better access to land services. Windayana conceded that “we are no longer monitoring the vehicles by using GPS.”

In addition to the duplication of efforts in urban areas and the underserving of rural ones, a consultant from the World Bank who worked closely with the BPN’s senior leadership team, Shivakumar Srinivas, said there was not enough demand for registry services in remote areas to justify the substantial investment in equipping vans and motorcycles. He said the funds spent on LARASITA could have been better used to improve infrastructure and capacity in existing land offices. LARASITA also “demanded an intense public awareness campaign to generate demand for certification, which the BPN, as a typical government agency, was not fully ready for,” Srinivas said.

“Had it been less ambitious—and a little more planned within the available resources—it probably would have been more sustainable.”

Despite halting progress in other areas, during Yudhoyono’s term Indonesia failed to tackle the two deepest problems plaguing the land sector: unaffordable fees and rampant corruption. Although the BPN talked tough and launched an anticorruption drive toward the end of Yudhoyono’s term, from Purwana’s point of view the agency’s actions remained superficial. The BPN still did not have a policy to regularly rotate its staff members, and Purwana doubted whether most of the rural landowners even knew about or used the newly designed mobile tools.

Although the BPN made some progress in clarifying and simplifying procedures under its purview, the agency lacked the legal authority to lower most of the fees associated with registering land transactions. Without cooperation from the legislature, by 2014 landowners still had to spend an average of 10.6% of a property’s value to register a transaction²⁹—down only marginally from the 11% that registration cost in 2005.³⁰

REFLECTIONS

Even if it wanted to, the BPN could not address the problem of high fees on its own. Out of the 10.6% paid by landowners to register property, the bulk of the cost—7.5% of property value—came from land taxes levied by local and national governments on both buyers and sellers. Despite years of lobbying by some in the BPN as well as by nongovernmental organizations for comprehensive legal reform to the Basic Agrarian Law that dated from 1960, the Indonesian parliament failed to act. Because the high costs discouraged landholders from registering transactions, the failure to lower the fees threatened the long-term sustainability of the BPN’s efforts to draw more people into the formal land administration system.

The government’s failure on that front also worried World Bank consultants who had worked closely with BPN leaders from 2004 to 2009. Although in a 2014 project review the bank reported modest success in accelerating land titling and in improving service efficiency, it rated the BPN’s performance as “unsatisfactory, mainly because of the limited high-level commitment to institutional reform and the absence of a sustained push by the National Land Agency to increase the transparency ... in land administration services.”³¹ The bank’s report added that because the rules related to land rights were “poorly defined and not transparently administered” in Indonesia, the government’s priority ought to be to champion legal and policy reform.³² But because the BPN paid “less attention to [legal] reform than to land titling, [it was] unlikely to lead to a sustained increase in tenure security.”³³

By undermining public trust in the institution, the persistence of corruption posed another direct threat to the long-term sustainability of the registry. Irawan Sumarto, a senior mapping officer, explained that even

though the digital infrastructure streamlined procedures, staffers who used to do “bargaining before [processing a transaction], now do [the service] first and then [expect the customer to] ‘give thanks’ (through paying a bribe). At least now nobody wants to do it openly.”

Deni Purwana, an investigator and member of the land affairs task force from the Corruption Eradication Commission, did not hold out much hope that the BPN would soon be able to root out graft: “The corruption problem in the BPN is so old, goes so deep, and is too widespread to be fixed using conventional methods.” Even the appointment of a BPN outsider in the form of Joyo Winoto, a former land rights activist with a doctorate in political economy from Michigan State University, “did not make any difference,” Purwana said. “I honestly don’t know how to solve this problem. [When it comes to battling corruption], this is the most difficult institution in the entire national government.”

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