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INCOMPLETE?

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After 200 years, why is Indonesia's cadastral system still incomplete?

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Abstract

This paper discusses Indonesia's experience with establishing a uniform cadastral system in rural areas since the idea was first mooted in the early 19th century. Until 1961, a formal cadastre that identified, measured, registered and certified land titles existed only in urban areas. A cadastre for rural land did not start until after the 1960 Agrarian Law. Until then, the village-based land tax registers acted as a substitute cadastral register in areas subject to land tax. In the 19th century, this system was imperfect and calls to resolve issues of inequity in tax assessment led to improvements, especially since 1907. A proper rural cadastre was not introduced during the colonial era, because of the high cost involved, and because its certification of individual land rights would have clashed with customary regulations, including notions of communal land tenure. The introduction of a rural cadastre after 1960 was piecemeal, and the use of property tax registration as a substitute cadastre has continued. By 1992 cadastre registrations covered just 20% of land plots, mostly in urban areas. A World Bank-sponsored project helped to increase coverage since 1994 to 32% in 2013. Greater coverage was delayed by the rapid increase in newly opened up agricultural areas, the cost of land title certificates, the difficulties of reconciling individual land ownership with customary regulations, and also the continued use of property tax registers as a substitute cadastre.

Keywords: land tax, land tenure, land rights, land registration, cadastre, Indonesia

JEL codes: N55, Q15, R52

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1. Introduction

In October 2014, President Joko Widodo appointed Ferry Mursyidan Baldan as Indonesia's Minister for Agrarian Affairs and Spatial Planning. Supported by a new Ministry (*Kementerian Agraria dan Tata Ruang*) he assumed responsibilities for agrarian affairs, including the vexed issue of rural land registration. The creation of a new ministry is indicative of the urgency to sort out the complications of Indonesia's agrarian affairs. But urgency to resolve agrarian issues is nothing new. In response to public discussion, official investigations have looked into issues of land registration and governments have vouched to resolve them on many occasions during the past 200 years. What were the shortcomings of administrative processes and structures that were put in place in the past to resolve agrarian issues, and why is the coverage of Indonesia's cadastral system still not comprehensive?

This paper offers a historical overview of attempts to introduce a cadastral system of measurement, registration and certification of land titles in rural Indonesia since 1813. Its purpose is to help explain the circumstances that led to the current situation of sustained uncertainty of land titles in Indonesia, particularly in rural areas.¹ What was done to safeguard rights to farmland in rural areas of Indonesia and assess the success or failure of such efforts? For that purpose, the paper will discuss in a broadly chronological fashion cover three associated aspects: the measurement, registration and certification of farmland in response to land taxation and agrarian legislation.

2. Land tax and land registration in the 19th century

Indonesia has long been a legal patchwork, which was reflected in the ways in which rights to land were defined and upheld. For a long time the laws and regulations of the Dutch colonial state only applied to areas under direct colonial rule. Self-governing principalities throughout the country retained their legal systems, except where they adopted some of the laws of the colonial state. Legislation of the colonial state affecting rights to land gradually extended across the country as part of the process by which colonial rule extended across Indonesia during the late-19th century (Lindblad 1989). But even after Indonesia's federal structure was abolished in 1951, the legal system remained a combination of colonial laws and regulations, new legislation and regulations, and the vestiges of regionally very different customary regulations (*adat*).

¹ The paper will pay less attention to urban areas, as these were largely – but not completely – covered by the cadastral services attached to municipal governments. It also refrains from the labyrinthic legal intricacies of land issues, which have been the subject of a plethora of legal scholarship.

The starting point of the process to unify agrarian legislation and codify rights to land was the extension in 1813 of a real estate tax (*verponding*) in the city of Batavia to the city's surroundings, and later to other urban areas. The tax was based on the assessment and registration of real estate, including land, which led governments of cities and towns to establish offices providing cadastral services in urban areas; first in Java and later in other parts of the country as they came under direct colonial rule. The cadastral service served taxation purposes and were the basis for a systemic range of urban cadastral services on a fee-for-service basis, including the re-measurement, registration, and certification of urban land plots and the production of maps showing plot borders to facilitate orderly transfers of land (Jaarsma 1918: 12-20; Colombijn 2014: 141-180).

In rural areas the extension of the real estate tax took the form of the land tax (*landrente*) in Java in 1813. Thus, rural areas were explicitly excluded from the real estate tax, and therefore from these cadastral services. This situation formally continued in rural Indonesia until 1961.² Consequently, the provision of systematic cadastral services and the formal measurement, recording and certification of rights to land long remained restricted to urban areas, even though such urban services covered the growing areas of informal urban settlement by indigenous Indonesians in a haphazard way.

The introduction of the land tax in parts of rural Java marked the start of continuing official and public discussions about the basis for tax assessment and the possibilities of making tax liability more equitable. This was an issue, because suitable and reliable statistical data were simply not available for that purpose at the time. Initial intentions to introduce a cadastral system, or cadastre, in rural Java were soon abandoned in favour of a system that delegated tax collection to village heads. Hence, the colonial government's 1819 land tax ordinance effectively made the assessment of land tax liabilities subject to haggling (*admodatie*), i.e. annual negotiations between village authorities and colonial administrators (Teng 1933: 13-15).

The arbitrary assessment of land tax liabilities triggered repeated calls in official correspondence and newspapers for a more objective methodology.³ The government ordered a series of Cadastral-Statistical Surveys (*Kadastraal-Statistieke Opnamen*) during 1864-1879 that eventually spanned nine of Java's 23 residencies. The surveys aimed to improve the collection of statistical data at village level, including the measurement and recording of farmland. In each residency a cadastral-statistical office organised land surveying on a rolling basis, recording its findings

² The exception was rural land occupied by foreign plantation and mining companies after 1870, which generally had their landholdings surveyed by cadastral offices on a fee-for-service basis.

³ Hugenholtz (1994) offers a detailed account of the twists and turns of this quest for a more objective methodology during 1812-1920.

onto 1:2,500 land maps, and supervised the maintenance of village registers containing statistical data on land use. The project was halted in 1879 because of the high cost of surveying and resurveying village lands; slow progress; insufficient employees with suitable qualifications; and what later were demonstrated to be unreliable outcomes, due to the use of non-standardised measurements and recordings and a reliance on untrained administrators rather than skilled technical personnel to take the recordings (Jaarsma 1918: 16, 47-48).

Consequently, the assessment of land tax liabilities remained subject to haggling. In principle, village administrators were required to establish and maintain transparent registers of landholdings and landholders liable for land tax. But malversation continued to mar the system. Village authorities took advantage of the ignorance of farmers when assessing tax liabilities, and abused their right to reserve village land as payment for their administrative services (*tanah bengkok*). They also condoned the practice by which unscrupulous large landowners encouraged farmers who were seeking loans to sign papers that purported to offer land as collateral, but actually transferred ownership. Colonial officials, particularly the inspectors (*controleurs*) in the regencies (*afdeelingen* or *kabupaten*) often expressed indignation about the injustice of such malversation in newspaper articles. They also objected because the consequent conflicts over land that were brought to the regional law court (*landraad*) over which they presided. There, they often had to pass judgement on the basis of scant and imprecise documentation and unreliable witness statements.

Secondly, there were technical reasons for imperfections in the land tax system. For example, regional officials continued to use the village land tax maps created in the 1860s and 1870s, even though they were inaccurate and outdated. There were also inconsistencies across regions in how village land registers were maintained, and the re-measurement of farm land to account for changes in land use was done haphazardly, if at all. The annual haggling about tax liabilities focused on irrigated land (*sawah*) that produced rice, while upland areas liable to land tax remained based on casual visual inspections. Hence, holders of upland fields found that their tax liabilities were even more a matter of haggling with village authorities than was the case with irrigated land. The gradual expansion of farm agriculture into upland areas since the 1870s (Van der Eng 1996: 24) therefore increased inequities in land tax liabilities on farmers operating irrigated and upland fields.

3. The land tax registers and the 1870 Agrarian Law

During the 1860s, opponents of the so-called Cultivation System in Java spurred public debate – largely in The Netherlands – about ending the system and opening up rural Java to private investment. They favoured a role for private enterprise in the production of export commodities and also a system that identified individual land

holdings. Their champion, Minister of Colonial Affairs Fransen van de Putte, proposed a draft agrarian law in 1865 that advocated only individual land ownership and the establishment of a rural cadastre to record it. But his political opponents insisted that not enough was known about the rights to land of native Indonesians to be able to assume that such rights included the notion of individual land ownership. They succeeded in having this concern articulated in 1866 in other legislation as the right to self-determination for local communities (*beschikkingsrecht* or *hak ulayat*) in Indonesia.

As a result, the 1870 Agrarian Law recognised customary land tenure regulations by stealth. It decreed a system that would define and guarantee land tenure of indigenous Indonesians, but it did not prescribe the establishment of a rural cadastral system. It also facilitated access to land by private companies, but prohibited non-native residents, including companies, from owning rural land as freeholds. Instead, non-natives could only take out leaseholds for a maximum of 75 years on land hitherto unused for sedentary farm agriculture, or 2.5 years on existing farmland. The law required the colonial government to ensure that such arrangements would not breach the land rights of native Indonesians. This principle was formalised with the 1870 domain declaration (*domeinverklaring*) and the 1875 alienation prohibition (*vervreemdingsverbod*). The first declared all land in the areas under direct colonial rule to be state domain, as far as it was not proven to be owned by anyone. The second prohibited the sale of land by native Indonesian landholders to non-native residents, in an attempt to stem increasing rural landlessness.⁴ Together, these items of legislation articulated the government's intention to protect farmers from land alienation by predatory non-natives, particularly European entrepreneurs keen to establish agricultural ventures, as well as ethnic Chinese crop foresters and money-lenders.

To implement the legislation, the government briefly considered designing a cadastral system, but decided not to proceed for two reasons. Firstly, by the 1870s the experience with the Cadastral-Statistical Surveys showed that establishing and maintaining a rural cadastre would be relatively expensive, with the costs likely to exceed land tax revenues. Secondly, further official and public discussion about the nature of land tenure precluded a registration system that defined individual land holdings.

Subsequent public debate reinforced the notion that village autonomy and indigenous institutions needed to be respected and protected, and that *adat* regulations existed parallel to the system of law that the colonial government introduced. Such debate spurred the notion that village autonomy and indigenous institutions needed to

⁴ This limited land ownership by non-native residents of colonial Indonesia to urban areas and to the so-called 'private estates' along Java's North coast. Farmland under customary regulations was in principle also state domain, but in practice the colonial state did not seek to control it.

be respected and protected, and that *adat* regulations existed parallel to the system of law of the colonial state. This spurred an urge to understand, protect and accommodate regionally very different forms of *adat* regulations. The notion took hold that it would be up to local communities Java to arrange agrarian affairs, possibly in the form of ‘communal ownership’ (*communaal bezit*).⁵ The first statistical data for 1882 on tenure of farmland in Java confirmed this urge, as they showed that 57% of farmland was under communal ownership, with villagers having alternating or fixed shares in village land (*Koloniaal Verslag* 1883, Appendix P, Table 1).⁶

The study and identification of *adat* regulations flourished in the context of the ‘Ethical Policy’, which required the colonial government to accept greater responsibility for the welfare of Indonesians (Van der Eng 2004). From 1901 onwards, *adat* champion Van Vollenhoven orchestrated a series of local studies based on data supplied by colonial administrators throughout Indonesia (Van Dijk 2005: 135-137). The studies confirmed plurality in the definition of land rights across Indonesia. Nevertheless, the *adat* studies seemed to justify the notion of plurality of land tenure. They also embedded the belief that customary regulations with communal land tenure prevailed in rural Indonesia; that such systems were essentially communalist and static in nature; and that customary arrangements such as communal landownership had to be accommodated in agrarian policy (Fitzpatrick 2007: 136). Together, they provided arguments against the introduction of a rural cadastre for the purpose of registering individual landholdings.

Running parallel to this public debate about the nature of land tenure was a public debate about issues of equity and fairness in the assessment of land tax liabilities. The imperfections in the land tax system and the malversation with land titles were well-known at the time, and inspired ongoing public discussion in journals and newspapers (*e.g.* Lucardie 1880; Verstijnen 1890; *De Locomotief*, 2-18 July 1902). Complaints about the system to assess land tax liabilities mounted. In part as a consequence of the incompleteness of the Cadastral-Statistical Surveys, but particularly due to the arbitrariness in the assessment of land tax liabilities. Half-hearted official attempts to change the land tax system were unsuccessful and calls for

⁵ There were regional differences in how ‘communal ownership’ was defined and in principle the term ‘land regulated by customary rights’ could be a better term. Nevertheless, the term ‘communal ownership’ is commonly used. To be consistent with sources, it is also used in this paper. Goh (1986) discusses the extensive body of literature that in the late-19th and early 20th century discussed this notion of communal land ownership, particularly the question whether this form of land tenure was a long-time indigenous institution that had to be respected and preserved, or whether it had been a response by rural communities to the pressures imposed on rural populations by the 1830-1870 Cultivation System in order to share responsibility for the onerous labour services demanded under the system as in-kind taxation. Boomgaard (1989) has shown that the notion of communal land ownership was probably not widespread in Java before being imposed by colonial officials, and that actually individual land ownership was the norm in Java in the 19th century.

⁶ By then the convoluted outcomes of an extensive survey in 1868-1869 into local land rights – published in 1876 and 1880 – had already confirmed that communal ownership dominated (Kano 1977).

improvements and systemisation of the land registration system continued, including calls for a rural cadastre (*inlandsch kadaster*) that would properly survey and certify landholdings in rural Java and improve equity in the establishment of land tax liabilities.

During 1897-1906, the colonial government supported a trial with a new method to assess land tax liabilities in Priangan residency, where individual rights to farmland, rather than communal rights dominated. As in other parts of Java, the registration of rural land rights in Priangan was imperfect, conflicts over land were rife, land grabbing was prevalent, and regional law courts found it difficult to resolve issues impartially (Wolters 1998). The new system concentrated the services of available rural surveyors and also engaged surveyors from the urban cadastral services. They adapted their surveying method to cover parcels of farmland comprising several individual farm plots. Local officials from the Department of Internal Affairs then classified parcels for the purpose of assessing land tax liabilities.

4. Reform of the land tax registration system as a substitute rural cadastre

The trial in Priangan was the basis for a new land tax ordinance in 1907 and an overhaul of the system of land tax assessment in the rest of Java (excluding the private estates). This new system was phased in during 1908-1920 in other residencies in Java, including Yogyakarta and Solo. The new system provided for the surveying of both irrigated and upland farm areas; it also improved and systematised the village-based land registers; and it provided a better basis for the assessment of land tax liabilities through monthly recording of harvested area with different crops, based on systemic crop cuttings to assess crop yields.

Importantly, the new system centred on the creation of a village-based land tax map (*landrentekaart*, 1:5,000) and an improved and more systematically compiled and maintained village land tax register (*landrenteregister*) (Dalam Negeri 1919; Teng 1933: 56-71). Both served a fiscal purpose and did not record and certify individual landholdings. Nevertheless, the map identified the location and the size of a parcel of land comprising individual farm plots, and the register contained the names of the farmers who operated the farm plots and who paid the land tax.

Professional surveyors of the new land tax ‘brigades’ of the Topographical Service (*Topografische Dienst*) conducted the measurement of land parcels on the basis of trigonometry in a cumulative fashion, one subdistrict (*kecamatan*) after another. For the practical purpose of measurement, a parcel was defined as a complex of taxable village lands. It covered several individual farm plots that had natural boundaries and appeared to have natural common characteristics and a common crop yielding capacity on which the land tax could be based. The maximum size of a parcel was 15 hectares for irrigated land and 35 hectares for an upland area. Within each

parcel, land tax and village officials estimated the approximate areas of the individual plots of farmland with the involvement of the landholders. Hence, in contrast to the old system, the land tax was now assessed individually, although not with the level of detail and security that a proper cadastral system would have offered. The system was regarded as providing an acceptable compromise between accuracy, cost and fairness (Huender and Meijer Ranneft 1926: 30 and 44-45).

After surveyors had mapped taxable fields in a village, the land classification personnel of the Land Tax Service (*Dienst der Landrente*) of the Department of Finance created the village land tax registers. The names of the owners of each parcel and plot of land were recorded in these registers. Landholders effectively relied on this record, on mutual agreement and on physical markers such as ditches, trees or hedges to confirm the boundaries of their individual plots of land. A farmer's receipt (*girik* or *petuk*) for his annual payment of land tax was his documented proof of indicative ownership, even though the receipt only stated who had paid the tax for what land plot and did not certify ownership.

After the system was in place, the village land tax registers were checked regularly by taxation officials. As surveying of taxable land was relatively labour-intensive and costly, re-measurement to account for changes in land use, such as conversions to roads, irrigation works or houses, were recorded on the land tax maps in a 10-year cycle. Changes in land ownership due to sale, inheritance or donations were also recorded in the village register, and passed up the administrative chain to be recorded in duplicate registers held at an office for agrarian affairs in each residency and at the Department of Finance in Batavia (Jaarsma 1918: 66-67).

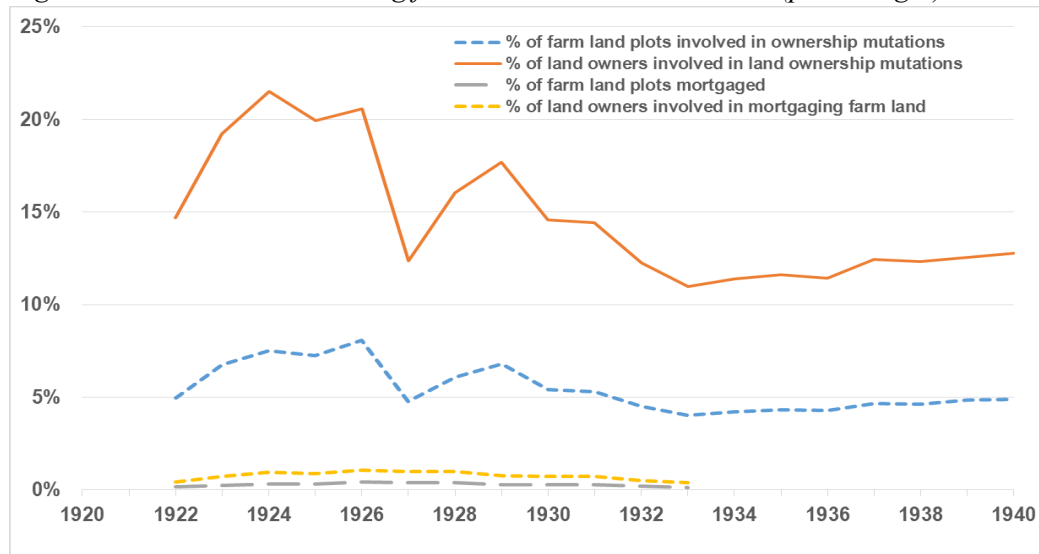
When fully implemented across Java by 1920, the land tax registration system offered a highly accurate estimate of total farmland⁷ and a more objective basis to establishment land tax liabilities. By itself, it did not increase land tax revenues. In all, the land tax was not high; during 1920-1940 the land tax was on average 4% of value added in farm agriculture, contributing just 5% to the government budget (Van der Eng 2006). But the system started to serve as a substitute cadastre, even though it had not been designed for that purpose. After land sales, new owners were eager to get their names and the approximate size of their plots registered in the village land tax registers (Harsono 1973: 5).

The system yielded comprehensive data on rural land transactions in Java, revealing active land markets. Figure 1 summarises aggregated data on rural land transactions. It reveals that during 1920-1940 12 to 22% of landholders registered for land tax were involved in land transactions each year, and that 4 to 8% of the registered land plots changed hands every year through sale, inheritance or donation.

⁷ Added to the cadastral surveying in urban areas, the 75-year land leases held by plantation companies, and of the private estates, an almost complete impression of sedentary land occupation in Java emerged. It showed that the land frontier was almost reached by the late-1920s (Van der Eng 1996: 24).

Only around 1% of land plots was used as collateral for mortgages, but collateral registration was not compulsory. The record therefore excludes informal credit arrangements which may have been more significant (Wolters 1998: 305-308). The voluntary registration of land use as collateral for mortgages reveals that this was relatively marginal.

Figure 1: Transactions involving farm land in Java, 1922-1940 (percentages)



Note: Excludes private estates, and for 1922-1929 excludes Yogyakarta and Solo residencies. The 1927 decrease is caused by a revision of the basis for land tax assessment.

Sources: Calculated from *Statistisch Jaaroverzicht voor Nederlandsch-Indië* (1922-30) and *Indisch Verslag* (1931-40).

Surveying of farmland for land tax purposes was gradually extended beyond Java, first to Bali in 1917, then to Lombok, Southeast Kalimantan, Southeast and South Sulawesi, and Sumbawa in the 1920s and 1930s (Teng 1933: 21-26). A major prerequisite for the introduction of the system was the existence of sedentary farm agriculture, as it was difficult to introduce it in vast areas outside Java where farmers practised shifting cultivation. In the 1930s measurements were extended to areas with sedentary farm agriculture in West Sumatra and Tapanuli with the intention to introduce the land tax there by 1940.

As the land rent system took shape, the question arose whether it could be adapted in terms of surveying and plot registration to become a formal rural cadastre. In 1913, the government ordered the drafting of an ordinance to that effect (*Inlandsch Kadaster* 1914). Calls in newspapers and journals for a proper rural cadastre continued. Advocates argued that it would be the only way to end malversation with

farmland, and also that security of land title would facilitate transparent land markets and allow farmers to capitalise on land (e.g. Jaarsma 1918: 82-93; Idema 1923; Lamster 1923; Raeven 1923-24). The argument against was that the cost of land surveying and land certification was deemed too high to be able to provide a rural cadastre as a well-run public service. The Topographical Service experimented in 1922-1923 with possible ways of organising a proper rural cadastre on a fee-for-service basis, which indicated that costs were indeed prohibitive for most rural landholders.⁸ In addition, Java by then had a substitute cadastre – the land tax register. It was frequently argued in the media that this was preferable to a low-cost, poorly run rural cadastre. Secondly, the existence of unidentified customary land tenure regulations caused the government to hesitate about introducing a cadastral system to define individual land titles, even though it was known that the share of farmland in Java under ‘communal ownership’ was decreasing to 42% in 1902 and 18% in 1932 (*Koloniaal Verslag* 1904, Appendix M, Table 1; *Indisch Verslag* 1940: 262-263). For cost reasons, the government decided in 1925 not to proceed with changing the land tax system into a rural cadastre.

Underlining the issue of legal plurality, the Agrarian Law did not necessarily apply to the self-governing territories (*swapraja*) in colonial Indonesia, particularly in the outer islands. Until their abolition in 1957, most defined and administered rights to land in alternative ways. For example, Surakarta had its own cadastral system (Ockers 1934), while Aceh, North Sumatra and Riau used a ‘grants’ system (Scheffer 1915; Jansen 1925; Deelman 1926). The latter loosely copied land tenure arrangements in Malaya, where sultans of the Malay states extended freehold ‘grants’, administered by a local registration office.

5. 1951 land tax abolition, 1960 Agrarian Law and difficulties of land reform

During the Japanese occupation 1942-1945, the system of land taxation remained largely unchanged, at least in Java. The cadastral work for the land tax registers was merged with the Cadastral Service for urban areas into the new Land Registry Service (*Jawatan Pendaftaran Tanah*) in the Department of Justice. Anecdotal evidence suggests that in many villages the quality of cadastral record-keeping deteriorated, as registers were no longer updated. During the revolution period 1945-1949, land tax registers were destroyed in several villages. Copies of the land tax maps kept in

⁸ The Topographical Service conducted tests in 1922 and 1923 in several parts of Java by measuring individual land plots and offering maps of the plots to rural landholders at f1.50 per plot (Topografische Dienst 1923). It measured 121,222 plots and sold a plot map to 66% of landholders. But most landholders were not interested in participating. The disappointing outcome was due to the cost involved; the possibility that local officials obstructed the tests because of they would be deprived of income from maintaining a land tax register; and the fact that there was no registration of individual plots, just measurement and the plot map (Raeven 1923: 87-89).

Jakarta were all destroyed just after August 1945 by fervent Indonesian nationalists. In the late-1940s the colonial government started to reconstruct the missing records on the basis of records held at regencies and residencies, but the Indonesian government abolished the land tax in 1951 and this work ceased.

In contrast to the 1920s, there were few public calls for a rural cadastre during the 1950s, as several committees worked on designing new agrarian legislation that would meet the principles of the new constitution, and also address problems of increasing landlessness and poverty in Java. Initially, the terms of reference for these committees included the introduction of a modern system of land tenure that would end the pluralism of the colonial period, emphasise strong individual property rights, and introduce a comprehensive cadastre and a uniform land registration system (Harsono 2005: 125-126). However, for reasons of political expediency the terms of reference were revised to include the need for due reference to *adat* in the new law.

Other developments impacted on the way the law shaped up. For example, the government issued several agrarian regulations, such as the 1954 regulation that effectively ended the long-term rural land tenure of private enterprises by declaring that the occupation of their land by ‘squatters’ was no longer a violation of the law and that disputes had to be resolved through mediation. The terms of reference for the new law included specification of minimum and maximum sizes of landholdings, which suggested that the law would be a starting point for land reforms. It increased expectations that land re-distribution could help resolve the growing problem of rural poverty, as population growth accelerated in the 1950s in a situation in which the land frontier had been closed in Java (Van der Eng 1996: 24, 142-153).

The significance of resolving agrarian issues was underlined by the fact that there was a Minister for Agrarian Affairs during 1951-1967. Nevertheless, the Office for Agrarian Affairs (*Kantor Urusan Agraria*), which assisted agrarian policy making, was located in the Ministry of Home Affairs, and the Land Registry Service remained part of the Ministry of Justice. Resolving agrarian issues was delegated to regional authorities, which maintained offices for agrarian affairs that seem to have focused on resolving claims by foreign-owned plantations who wanted ‘squatters’ evicted. In 1957 the Land Registry Service and the Office of Agrarian Affairs were merged into the Ministry of Agrarian Affairs (*Departemen Agraria*), tasked with preparing the implementation of the new agrarian law and subsequent land reforms.

Law No. 5 of 1960 on Basic Agrarian Principles, or the Basic Agrarian Law (BAL, *Undang Undang tentang Peraturan Dasar Pokok-Pokok Agraria*), sought to achieve two things. Firstly, it unified land tenure by ending the distinction between landholders of native Indonesian and other ethnic backgrounds. Article 21 stated that only Indonesian citizens had the right of land ownership (*hak milik*), and Article 42 that foreign nationals had the right of land use (*hak pakai*). This was in the context of Article 33(3) in the 1945 Constitution of the Republic of Indonesia, which specified

that the ‘land, water and the natural resources contained within them are to be controlled by the State and used for the greatest possible prosperity of the people’ (rather than foreign-owned firms). Secondly, Article 19 of the law stipulated the introduction of a cadastral system to register ownership of all land plots, while Article 17 mentioned maximum landholdings, thus underscoring that the cadastral system would serve the purpose land redistribution (Gautama and Harsono 1972: 21-24).

The preamble of the BAL explicitly stated that the law was based on *adat*, with further clauses declaring that customary regulations remained valid where they did not contradict other articles in the law. It is possible that the law intended customary arrangements of land ownership to gradually adapt to the details of the BAL, leading eventually to a uniform land ownership regime.⁹ However, the law did not specify what forms of *adat* would actually apply: those identified by Van Vollenhoven and/or any unwritten, locally different versions.

With the land tax abolished in 1951 and in the absence of a rural cadastre, relatively informal ways of confirming land titles (*e.g.* an unofficial letter of sale witnessed by a village head), and – according to anecdotal evidence – land tax receipts and the old land tax registers continued to serve as documentation in transactions involving land, such as mortgaging. In the early 1970s, farmers still relied on tax receipts for such purposes (Harsono 1973: 5-6).

It is difficult to know how many of the pre-war land tax registers had survived the turbulent 1940s. Where they did, village authorities may have continued them after 1951. One reason was that an agricultural income tax for larger landholders replaced the land tax. Local authorities actually collected this tax on the basis of land tax assessments, and continued to do so after the agricultural income tax was revised in 1959 to become an agricultural production tax (Booth 1974: 59).

A second reason is that the land tax registers were related to the system used to determine how farmland was being used and to measure and monitor farm crop production since 1916. For example, the rice crop cuttings used to determine the annual land tax liabilities of farmers were also used to estimate rice production. Hence, the Central Bureau of Statistics relied until the 1963 Agricultural Census on the land tax data for information on the stock of farmland. Even though the Department of Finance no longer had responsibility for regular checking village land tax registers after 1951, these data still informed BAL-related decision making and the subsequent land reforms (*e.g.* Sadjarwo 1961).

The BAL decreed the establishment of a rural cadastral system. The 1961 implementing instructions specified this requirement by requiring all villages to have

⁹ The BAL recognised different types of land titles, including *e.g.* the right to use land (*hak pakai*), and expected a conversion of *adat* land arrangements into one of these types that would then be recorded for individual landholders (Gautama and Harsono 1972: 97-100). Leaving aside the question whether these different types suit the specifics of existing *adat* arrangements, the regulations that implemented the BAL seem to favour individual ownership.

a land register (*buku tanah*) containing details of individual landholdings and landholders, as well as changes in such details (Gautama and Harsono 1972: 93-94; Harsono 1973: 9-16). This was similar to the land tax register, but this time the register recorded individual land plots. Registered landholders were expected to receive land certificates (*sertifikat tanah*) from the local Land Registration Offices (*Kantor Pendaftaran Tanah*, since 1988 *Kantor Pertanahan*), and the intention was for landholdings to be professionally surveyed and recorded. The instructions for the establishment and maintenance of the land register took no account of other forms of landholdings than individual ownership, despite the BAL's references to *adat*.

A 1960 government regulation defined maximum rural landholdings in general terms, and a subsequent instruction from the Ministry of Agrarian Affairs refined them by regency on the basis of rough indications of regional population density. But shortages of manpower with the relevant technical skills, as well as financial limitations meant that a rural cadastre took time to be established. The 1961 instructions therefore left the identification of surplus or absentee farmland for redistribution to subdistrict land reform committees (Morad 1970: 8-18; Harsono 1973: 12-13). Most likely these committees used data from the often outdated land tax registers, because those were the only available records of rural landholdings. But the registers also provided owners of oversized landholdings ways to frustrate the reform process, for example because they only recorded who was liable and paid land tax, not necessarily who owned the land, and landholders could have plots in different villages.

In 1963 the regional land reform committees produced estimates of land available for redistribution and the reforms started. Despite the rural upheaval and mass murders during 1965-66, by 1969 294,000 hectares had been redistributed to 593,000 farmers in Java, and 388,000 hectares to 274,000 farmers outside Java (Morad 1970: 16; Tjondronegoro 1972: 8). Just 17% was excess land of large landholders and 82% was state-controlled land, mostly newly opened up land outside Java. Thus, the land reforms remained relatively marginal and unable to stem increasing landlessness in rural Java. Land redistribution was halted in 1969, which reduced the urgency of further land registration. It is not impossible that former landowners reclaimed some of their redistributed land.

The surveying of individual land plots by the Land Registry Service and the introduction of subdistrict Land Registration Offices, as decreed by the BAL and related implementing regulations, remained piecemeal. One reason was that the required manpower and skills, as well as sufficient financial resources to recruit, train and employ employees to establish and maintain a cadastre, remained limited. In addition, rural land registration was voluntary and done on a fee-for-service basis. Hence, the uptake of land registrations in rural areas where the Land Registry Service had surveyed land and had introduced provincial and subdistrict Land Registration

Offices remained low. During 1961-1989, the offices issued about 11 million land certificates (Risnarto 2009: 48). This compares to about 26 million plots recorded in rural village registers in 1957 (Sadjarwo 1961: 12-13). These numbers suggest that progress with land certification was slow. The registration offices mainly registered land for official purposes, such as to facilitate transmigration projects and also to implement the National Agrarian Program (*Program Nasional Agraria*) that since 1981 subsidised registrations by poor landholders. Farmers were reluctant to ask the offices for their services. In the 1960s, this was because of the risk that their surplus holdings could be identified for land reform. But the main reason were the relatively high registration fees, the cumbersome and lengthy registration process, and the fact that village land registers still sufficed as proof of ownership in many regions (Harsono 1973: 19-20).

Hence, most land transactions were not recorded at the subdistrict Land Registration Office. They continued to be conducted in front of witnesses, particularly the village head, and secured with a change of names in the village land register. Charras *et al.* (1993: 218-220) conceptualised a 'hierarchy of tenure security', including from most to least authoritative: (a) the land certificate (*sertifikat tanah*); (b) a land information letter (*surat keterangan tanah*) from the village head and confirmed by the subdistrict head (*camat*) or the subdistrict agrarian officer, identifying the land plot, (c) a certificate issued by the village head stating that the plot is within his administrative jurisdiction; (d) a record of a past transaction (*akte jual beli* or *surat segel*) involving the land plot, confirmed by a notary and signed by seller, buyer and witnesses; (e) verbal agreements and common knowledge. Land tax receipts were not mentioned in this study, because it related to South Sumatra where the land tax had not been introduced by 1951. There is anecdotal evidence for other parts of the country, where land tax receipts from the colonial era were used as evidence of land ownership. They would have been in category (d).

Thus, the limited introduction of cadastral services in rural areas in the 1960s and 1970s meant that dualism in land rights was perpetuated; between plots that had been surveyed and registered through the cadastral system (largely in urban areas), and unregistered plots with informal ways of confirming land titles and that often remained under customary regulations. This was a major reason for continued insecurity in rural land tenure.

6. Revival and expansion of the rural tax registers

By the mid-1960s, the Indonesian government urgently needed to raise more public revenue and in 1965 it decided to consolidate several property taxes into the local development contribution (*Iuran Pembangunan Daerah*, Ipeda). In rural areas, Ipeda tax continued the 1959 agricultural production tax. Initially it was based on the village

land tax registers as far as they still existed. In urban areas Ipeda replaced the real estate tax (Booth 1974: 59-62).

The introduction of Ipeda triggered a re-start of the surveying of farmland to update or re-establish, and also to individualise the rural tax registers, and extend their introduction to those parts of Indonesia where by 1951 the land tax had not been introduced (McCawley 1972: 28; Booth 1974: 63-66). Although landholders seem to have eager to pay Ipeda and thus secure a tax receipt that would confirm their landholding, a lot of the property information on which the tax was based remained out of date and incomplete. Staffing and budget constraints caused discrepancies in the quality of the data on which the tax liabilities were based. Consequently, the methods to assess Ipeda tax liabilities long varied across regions (Kelly 1993: 86).

Following Indonesia's large-scale tax reform in 1983, the Land and Building Tax (*Pajak Bumi dan Bangunan*, PBB) replaced the Ipeda tax in urban and rural areas, starting in 1986 (Kelly 1993; Rosengard 1998: 122-135). PBB tax liability assessments were expected to be the cadastral system in both urban and rural areas. However, the pace of land registration at the cadastre had been very slow during the 1970s and 1980s, and the land cadastre was still incomplete. This caused the Directorate General of Taxation in the Ministry of Finance to use its network of regional offices to create its own database. The Ministry's own property tax information system (*Sistem Manajemen Informasi Objek Pajak*) was launched in 1991, and by the mid-1990s it contained records of 78 million properties (Kelly 2004: 121-122). This fiscal cadastre was entirely separate from the land cadastre. It recorded taxpayer details, land and building locations, the value of properties, and the tax liability of owners. The comprehensiveness of the PBB fiscal cadastre suggests that many property owners continued to use property tax receipts as proof of indicative ownership, underlining that tax payers accepted paying PBB as an incentive to have their property recorded (Fitzpatrick 1997: 196; Kelly 2004: 126-127; Castañeda Dower and Potamites 2014: 444). The Ipeda and PBB receipts function in category (d) of the 'hierarchy of tenure security' mentioned above.

Comparing cadastre and PBB records, the World Bank estimated that by 1992 just 12 million of the nation's 54 million rural land plots had been surveyed and registered at the subdistrict cadastral offices (World Bank 1994b: 36). At the same time, the number of plots was estimated to be growing by 1 million per year – faster than the number of surveyed and registered plots – due to the accelerated expansion of agricultural land particularly in Sumatra and Kalimantan through the clearing of forest land as well as mutations in land ownership. Nationally on average 20% of registrable land had been registered under the BAL, but mostly in urban areas. For rural land, the average was just 10% (Fitzpatrick 1997: 173).

Other developments complicated matters. The accumulation of some 2,000 land-related laws and central and regional regulations had made land transactions and

land registration even more complex and less transparent, sometimes resulting in contested land transactions as the huge number of items in the Indonesian news media indicates. Documented evidence of rights to land dating back to 1960 was often imperfectly preserved, while newly deforested land areas had not yet been surveyed and the lower rungs of the ‘hierarchy of tenure security’ had yet to materialise.

Initially, the Directorate General of Agrarian Affairs (*Direktorat Jenderal Agraria*) in the Ministry of Internal Affairs was overseeing the accumulation of agrarian issues during the 1970s and 1980s. It had been formed after the Ministry of Agrarian Affairs had been disbanded in 1967 and it was tasked with the implementation of the BAL and the cadastral services. It had limited resources to face the enormous task and address the complications that further developments created. In addition, Agrarian Affairs was no longer a ministerial position after 1966 and there was no influential champion to advance the case of land registration. This changed when a 1988 Presidential decree converted the Directorate General into the semi-autonomous National Land Agency (*Badan Pertanahan Nasional*, BPN), which reported directly to the President. The agency was tasked to work towards resolving land issues. It was given responsibilities for measuring as well as mapping, registering and issuing land titles to holders on a fee-for-service basis, and settling land disputes.

7. BPN and the World Bank land administration project 1994-2009

Following the establishment of BPN and the policy priority accorded to the registration of rural land titles, the government started discussions with foreign aid donors, particularly the World Bank and Australia’s AusAID. Both supported the large Land Administration Project (LAP, or *Proyek Administrasi Pertanahan*) aimed at improving land titling in rural Indonesia (Warren and Lucas 2013). Reflecting the significance of the issue, Heads of BPN held ministerial status during 1993-1999. The project was scheduled for implementation in several phases, with the first phase in 1994-1999 focusing on Java, and the second 2000-2019 phase spread over four 5-year periods focusing on the outer islands. The total budget for the first 10-year phase was US\$ 140 million, of which the Indonesian government contributed US\$ 45 million, AusAID US\$ 15 million and remainder was covered by a World Bank loan.

Implemented through BPN, LAP aimed was to re-design land administration and land management for the purpose of promoting efficient land markets and alleviating social conflicts over land. LAP’s key objectives were to: (a) acceleration of the land titling and registration process through modern surveying techniques, by systematically photographing, surveying and registering plots of all non-forest areas in order to certify rights; (b) improvement of the institutional framework for sustainable land administration, by strengthening BPN’s institutional capacity for land administration so that it would be able to achieve the objectives of the project and

sustain the project outcomes; (c) development of a data base of land laws and regulations and assisting BPN, in reviewing and drafting land laws and regulations.

The arguments underlying LAP were firmly based on the notion that accurate land titles are a key requirement for economic development. They are expected to assist in the verification of legal rights by individuals and institutions and thus facilitate a quick and flexible accommodation of changes in land use in response to market signals. Secure land titles were also expected to allow owners to mobilise financial resources through collateral arrangements. By offering the owners/operators greater security of tenure, land titles provide more incentives to invest in land, leading to greater productivity.

The first phase of the project aimed to register 1.2 million plots and provide direct benefits to about 4 million people in areas where they previously had little protection against unfair land acquisition, no access to formal credit based on land as collateral, and experienced difficulties in selling their land at fair prices in the absence of formal land titles. The project covered the first phase of the land titling program. During the four following 5-year phases another 43 million plots were expected to be registered to achieve a close to 100% registration of the estimated stock of land plots in non-forested areas.

In all, 1.9 million land titles were registered under the LAP during 1994-2001, or 270,000 per year (World Bank 2002: 14). A follow-up project registered a further 2.4 million land titles during 2005-2009, or an annual rate of 480,000 (World Bank 2014a: 32). BPN leveraged the experience it gained under the project by extending its surveying work independently of direct World Bank support. In total, it appears that BPN stepped up the registration of land plots and issuing of land titles to an annual average of 3.3 million during 2005-2008, of which 62% were owner-initiated and 38% due to implementation of government programs such as Prona (BPN 2009: 13).¹⁰ Innovations in the registration process, for example by using online plot recording and registration in 2006 and also the use of a mobile land certification service to reach remote areas, allowed BPN to increase the registration rate. Nevertheless, problems with BPN service delivery at the lowest level remained. They include operational issues, such as the shortage of experienced surveyors, the limited infrastructure that surveyors and land office staff have to work with, and the poor cooperation between government agencies in relation to land issues (Koespramoedyo et al. 2013). There is also limited evidence of BPN officials levying of unscheduled fees that increase the cost to landholders of registering plots (*e.g.* Hamka *et al.* 2012).

The World Bank discontinued its support to BPN after 2009, because project results remained below expectations. In 2013, BPN reported that 27.5 million land

¹⁰ Data on the completeness of the cadastral system are not readily available. BPN's website (www.bpn.go.id/Publikasi/Data-Pertanahan/) offers an interactive map containing geographical location of registered plots and a promise of tabulated data, but links to quantitative data are void.

certificates had been issued and recorded. This was a significant increase from the 12 million in 1992, but still just one-third of the estimated total number of urban and rural land plots, which had in the meantime increased to an estimated 85 million (World Bank 2014b: 241). The main reason was the accelerated expansion of the rural land frontier in the outer islands. Unlike Java, where the frontier for agricultural production had been reached in the late 1920s, outside Java the total area of land used for agricultural production increased from 19 million hectares in 1980 to 30 million in 1995 and 47 million hectares in 2014 (Van der Eng 1996: 280-288, updated with BPS data).

The increase in the number of certified land titles has had the expected effect of advancing land markets in rural areas as well as improving farm productivity (*e.g.* Risnarto 2009: 50-56; Stacey 2011; Grimm and Klasen 2015). On the other hand, the number of disputes about land have multiplied (Lucas and Warren 2013: 9-11). A major reason is that a more complete cadastral coverage had not been attuned to accommodating customary land rights. While the BAL acknowledged such rights, few landholding individuals or communities have actually sought to have their customary land rights recognised during the 1960s-1980s so that they could be adapted to the details of the law.

Where landholders did not or could not make use of the nascent rural cadastral services, it remained up to regional authorities to marry the details of the BAL with local notions of *adat* and interpret and implement the latter as they saw fit. While the BAL acknowledged such rights, few landholding individuals or communities actually sought to have their customary land rights recognised during the 1960s-1980s so that they could be adapted to the details of the law. Consequently, customary rights to land were largely ignored, or was at best paid ‘lip service’, while public authorities have increasingly used the ‘national interest’ principle in Article 21 the BAL to override these customary rights. However, such decisions have not remained unchallenged, particularly since 1998. The plurality of land rights has therefore become an ongoing source of disagreement and conflict about rights to land (Fitzpatrick 1997; Daryono 2010).

The LAP reinforced interest in customary land rights. The first phase also included a research project to determine whether ‘customary (*adat*) land rights exist (especially the ability to use land according to customary communal rights, or *hak ulayat*), and explore the feasibility, desirability and methodology for improving their security through land registration’ in order to exclude such areas from systematic land registration if the existence of such rights could be confirmed (World Bank 1994a: 3-5; World Bank 1994b: 6, 29-31). This project identified the existence of customary forms of land tenure in West Sumatra, Central Kalimantan and Lombok (Habsjah *et al.* 1998). It thus exposed a weakness in the program; the difficulty of upholding

customary rights to land including communal ownership among rural populations, while the whole project was geared towards recording individual land rights.

In the context of political change in Indonesia since the abdication of President Soeharto in 1998, the outcomes of this research project informed a wave of new interest in land issues, particularly in the land rights of rural communities in remote regions subject to deforestation. In 1999, an amendment of the Constitution recognised the existence of ‘*adat* law communities’ (article 18B), which was subsequently included in new items of legislation, such as the 1999 Human Rights Law and the 1999 Forestry Law. Contradicting the BAL, article 6 of the Human Rights Law stated that traditional rights (*hak ulayat*) to land are part of the cultural identity of *adat* communities and are deserving of protection (Fitzpatrick 2007: 131). And a Ministerial Decree clarified in 1999 that land subject to traditional regulations is effectively exempted from the BAL (Slaats 2000: 67). In addition, Fitzpatrick (2007: 131) noted that ‘the new draft Agrarian Resources Act of 2004 (which is intended to replace the BAL) not only recognizes *hak ulayat* but provides that customary law (*hukum adat*) shall be the basis for natural resource regulation (arts 5, 8).’ These developments have altogether enhanced ambiguity between formal and customary regulations and have sustained the duality of land rights. They increased uncertainty about land rights in areas where individual land rights have not yet been certified, and in some cases have even made certified individual land titles contestable. Until the new agrarian law is promulgated, and until customary land tenure arrangements have been identified, Indonesia’s legal system is likely to find it hard to resolve cases of disputed land rights.¹¹

8. Conclusion

The magnitude of the task of registering rural land holdings in Indonesia has increased enormously during the 200 years since 1813. Nevertheless, it appears that three issues remained the same. The high cost of the required administrative effort continues to frustrate the establishment of a comprehensive cadastral system in rural areas. The low-cost alternative in the form of the systems used to assess and levy land and property taxes in rural areas continues to be seen and accepted as one of the substitutes for formal cadastral services. And public authorities continue to be confounded by the existence of land tenure regulated by customary rights and how to accommodate those in the context of existing agrarian legislation.

¹¹ Soesangobeng (2004) argued on the basis of fieldwork in Sumatra and with due reference to the Dutch tradition of *adat* scholarship, that registration of land under customary rights is possible, provided that procedures for registration are adjusted to accommodate such land areas. In the context of decentralisation in Indonesia since 1999, he was optimistic about the possibilities of doing this, but unspecific about how to adjust what seems like a uniform cadastral system.

This paper has shown that, despite public calls for change, the colonial government remained reluctant to introduce a rural cadastre due to the cost to both public purse and landholders, as well as concerns about how to accommodate customary land rights, particularly communal land ownership, in a user-pay cadastral system that would have focused on individual ownership and that could have been the start of a process of land alienation. The governments of independent Indonesia were more optimistic about their abilities to implement a user-pay cadastral system in rural areas. But the abolition of the land tax in 1951 and the strong ambition in the 1950s to change agrarian legislation for the purpose of ending duality in agrarian laws and facilitating land redistribution in the absence of a proper rural cadastre did not help matters. Make-do forms of land registration continued in the form of the village land registers. While they suited the purpose of levying tax, they remained imperfect as substitute land titles because they did not certify ownership. The 1960 BAL ordered formal cadastral services to be extended to rural areas, but uptake of these services remained limited due to limitations in resources, as well as concerns among landholders about the cost of seeking certification of holdings. The push by BPN to advance rural certification of land holdings during 1994-2014 was significant, but its impact lagged the accelerated expansion of the rural land frontier since the 1980s.

There are now at least three factors that complicate resolving land issues in Indonesia. Firstly, there is a plethora of legal documents pertaining to land laws and regulations, many of them overlapping and contradictory (Winoto 2010: 14). Work has been underway to improve this legal framework, with the intention of creating a new agrarian law, but there is currently no indication that this process will be completed soon. Secondly, there has been a resurgence of interest in *adat*. *Adat* was of course part of the BAL, but it was largely ignored, or was at best paid ‘lip service’. Secondly, since 1999, the terms *adat* (customary regulations) and *hak ulayat* (the right to self-determination) have been enshrined in various items of legislation, but not always with an unambiguous understanding of what they entail and how they should be operationalised. Without identification and recognition of the many forms of customary land rights outside the cadastral system, as well as effective principles to protect them, it will remain hard for the legal system to resolve the large number of land disputes in Indonesia. Thirdly, despite the push by BPN, a range of operational matters continue to stand in the way of effective land registration in rural areas.

It is not likely that these three issues, and possibly others can be resolved soon. One possible way forward to resolve the accumulating number of land disputes in relation to the first two issues could be to follow the example of other countries. Particularly, European countries and Japan have in the past decided to shed notions of customary land tenure, including communal and collective land ownership, in favour of unambiguous individual land ownership supported by an effective cadastral system (Dovring 1965; Sorensen 2010). Given the BAL, more recent items of legislation

affecting land tenure, as well as the current public discourse in Indonesia, it seems unlikely that such a change will be on the political agenda in Indonesia anytime soon.

In the meantime it may be more relevant and practicable to focus on the third issue. The downside is that further improvements in formal land registration are likely to require greater commitments of public funds, given that vast areas of agricultural land are still unsurveyed and that the fee-for-service basis still deters many landholders. A possible alternative with lower cost implications is further consideration of what can be done to more formally acknowledge and enhance the currently informal ways in which many Indonesian landholders still articulate their rights to land with alternatives to formal certification. This could include the coordination and possibly integration of the land cadastre and the property tax register, as *e.g.* Aisiyah and Erawanta (2010) argued.

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