

What Lies Ahead? Between Climate Change, Avoided Deforestation and Indonesia

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Abstract:

Mounting global concern over climate change and the link to deforestation has refocused international attention on the need to protect the world's forest. Rampant forest and peatland destruction in Indonesia means that the country is one of the world's top three emitters of CO₂, a major contributor to global warming. Based on data from 2000, Indonesia's annual emissions from forestry and land use change are calculated at 2,563 MtCO₂e, dwarfing the yearly amount from energy, agriculture and waste which amount only to 451 MtCO₂e.

During COP 13 in Bali, the Government of Indonesia officially proposes REDD (Reduced Emission from Deforestation and Degradation), which offers financial rewards for activities that can reduce CO₂ from clearing, converting, or degrading forests. The REDD is a reward for not being CO₂ emitters and for policies and business practices that do not support deforestation and degradation. However, such concerns have been raised by others about the Indonesia's readiness on emission reduction. What are the implications of REDD for Indonesia, its forests and its forest dependent peoples? Will REDD successfully halt deforestation in Indonesia? What are the greatest challenges when REDD is being implemented? Will REDD success without the government respects indigenous people rights and resolves its ambiguity land tenure policies?

In order to understand and analyze the implication of implementing REDD at the local and community level, this study will discuss a case study in Mount Halimun-Salak National Park, Indonesia, where various kinds of policy mechanism and land use planning actions are taken to halt deforestation. This case study is a good example on how local government and business sector caught between their own economic and financial interests and the growing international demands for conservation, the resistance of forest dependent people, the impact to local livelihood etc.

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1. Background

Global concerns over climate change have passed the 'tipping point' and the denial response has become a rapidly declining minority report. The United Nation Framework Convention Climate Change (UNFCCC) was established to avoid the effects of human-induced climate change on humankind and earth ecosystems. Yet the evidence that such change is already occurring and bound to increase, as compiled by the Intergovernment Panel Climate Change (IPCC) reports, makes clear the urgency of reducing net emissions of greenhouse gasses increases rather than decreases. The fact that about 20% of global emissions, in the form of deforestation and land use change, has been left out of the global rules of the game is less and less acceptable. The world can no longer afford to ignore the role of deforestation in global warming.

The Stern Report (2006) and its sobering forecast of the economic costs associated with climate change was compelling in reminding policy makers of the important linkages between forests and climate. Every year some 13 million hectares of forest is lost, and deforestation now adds more carbon to the atmosphere than comes from the fossil fuel-intensive global transport sector. The argument for inclusion of forests in a future climate agreement is twofold: forests are the largest emitter not included in the current Kyoto agreement, and the costs of reduced emissions compare favorably with most other sectors.

Indonesia is the largest global emitter of CO₂ and other greenhouse gasses from the land use change and forestry (AFOLU or LULUCF) sector, and third overall after China and USA if fossil fuel emissions are added. The sources of carbon stock in forestry come from forest cover, agro-forestry, plantations, fallow land, grassland, shifting cultivation areas, settlements and surrounding and mixed unproductive land. Emissions from the forestry sector occur as carbon stock is depleted and released into the atmosphere caused by changes in forest and other woody biomass stock, forest and grassland conversion, abandonment of managed land and forest fires. Forest fires contribute 57% to GHG forestry emissions (PEACE, 2007).

During COP 13 in Bali, the Government of Indonesia (GoI) officially proposed REDD (Reduced Emission from Deforestation and Degradation). The proposed REDD in Bali at the end of 2007 offered financial rewards for activities that can reduce CO₂ from clearing, converting or degrading forests. It is about rewarding policies and business practices that do not support deforestation and degradation. As a result, REDD initiative has emerged as a likely component of the global climate protection regime, to be negotiated to replace the Kyoto Protocol, which come to an end in 2012.

However, what REDD topics previously discussed in Bali will only address part of the issue and it is not yet clear how deforestation can be reduced and incentives will reach people on the ground who need to benefit from changing land uses.

The government claims that 70% of the incentives will be given to the local level, but people are worried about how the mechanism to distribute these incentives. The study argues that REDD incentive in the future will face many resistances from the local level due to the lack of understanding by the Gol on several issues such as poverty and people's livelihood, forest land tenure and politics of regional autonomy and decentralization policies. The above situation was caused mainly on multiple legalities that cause conflicting powers and land ownership. A case study of conservation programs to halt deforestation in Mount Halimun Salak Area demonstrates those issues above and illustrates the challenges ahead in the future when REDD initiative will be implemented at the local level due to multiple legality in Indonesia.

2. The Construction of Avoided Deforestation Issue and the Politics of REDD in Indonesia

The idea to manage the world's forests in order to offset or sink atmospheric carbon was actively discussed in the academic community during the 1970s (Baes et al, 1977; Dyson, 1976; Whittaker and Likens, 1973 in Lovbrand, 2007). There is a common understanding until now that forests play a vital role in the global carbon cycle. When forests grow, they withdraw carbon dioxide from the atmosphere and sequester it in trees and soil. When they are destroyed or degraded, much of this carbon is released, either immediately if the trees are burned or more slowly if the organic matter decays naturally.

However, when the United Nations Framework Convention on Climate Change (UNFCCC) drew up the Kyoto Protocol to combat global warming in 1997, the decision was made to exclude emissions from tropical deforestation. Many believed that the challenges and uncertainties inherent to quantifying forest sector emissions would weaken the overall strength of the climate regime, and developing countries worried that a plan to reduce deforestation would threaten their sovereignty over land use decisions and subsequently their right to develop.

There were also doubts that the methodologies to be employed, particularly to control leakage, and whether these would be robust enough to ensure real carbon benefits. This controversy finally led to the adoption of afforestation and reforestation as the sole eligible activities under the Clean Development Mechanisms (CDM) in the first commitment (2008-2012) (Peskett et al, 2006). Unfortunately, the government agencies in Indonesia failed to recognize the opportunity to integrate the CDM into the national sustainable development agenda and to engage the private sector. The Kyoto Protocol was merely ratified only to invite investment. No method has been tested out or has confidence been built, since no single project has been executed to gain experience (Murdiyarto, 2004).

In worldwide, there is now growing interest in finding means by which reducing deforestation rates could be included in the post-2012 era by which past

deforestation rates in non-Annex 1 countries could be used as the baseline against which future rates are compared, such that reductions in the rate of deforestation could be rewarded. REDD was announced as a one of mechanism to replace the Kyoto Protocol in 2012. The REDD initiatives propose to pay developing countries for the carbon value of their forests. It is believed that these payments could shift the balance away from the economic incentives currently favoring deforestation, thus making sustainable forest management a more profitable alternative. However, issues surrounding the design and implementation of such a mechanism are complicated and contentious.

The Indonesia proposals imply that payments would be in large part be made to government ministries or treasuries, which in turn suggests that schemes would in part apply to forests deemed by the government and the courts to be state land. It suggest that compensation funds could be distributed among protected area authorities, certified logging companies engaged in sustainable forest management (SFM), initiatives to tackle illegal logging, payment for environmental services (PES) schemes and community-based forest management (CBFM) – though the Indonesian proposal does not specify in detail which bodies or legal persons would receive funds for these initiatives (Gol, 2007).

Despite of great expectation by the government that REDD can be seen as a compensation fund to protected areas, a case study of Mount Halimun-Salak National Park can illustrated the future challenge when REDD incentives are being implemented.

3. Politics of Conservation and Protected Areas: Case Study of Mount Halimun-Salak National Park, Indonesia

Mount Halimun-Salak is located in West Java and Banten Provinces within three regencies (Bogor, Sukabumi and Lebak) covering an area of 113,357 hectares. The national park itself can be reached within four hours of journey from Jakarta, capital of Indonesia, toward the interior of Rangkasbitung City.

When the government changed the status of Mount Halimun-Salak into a national park in 2003, the people living within its boundaries lost their access rights. Several signposts declaring a national park designation were erected surrounding its boundaries, causing concern among the people who claim most of the designated land as their traditional access rights. The people still hold to their claim within the national park designation, despite being disregarded because it is not legal enough according to the national park authorities. Fearful of being evicted, on 16th – 18th October 2003, the customary people from 31 villages within the national park held a meeting and until now refuted the government's declaration (RMI, 2003).

The sub-topics below describe the government's struggle to designate Mount Halimun-Salak as a protected area and the contests that hampered the government's attempt to manage Mount Halimun-Salak National Park.

3. a. The Politics and Scientific Rationale behind National Park Designation in Mount Halimun-Salak

The history of the preservation in Indonesia began in the 1880s under the Dutch Colonial regime. At the beginning, the initiative for preservation was taken predominantly into the hands of Dutch NGOs and individual members of the elite rather than Colonial Forestry Service. For example, in 1889, the Director of the Bogor Botanical Garden, Melchior Treub, appointed the Cibodas Forest in West Java as a nature reserve under the Botanical Garden management. Another significant contribution came from an NGO, the Dutch Organization for Nature Protection, who proposed to the Colonial Forestry Service that it be allowed to manage 12 forested areas in Java under the nature reserves type of management. The Colonial Forestry Service was reluctant to devolve power to the organization and responded by issuing the 1916 Staatsblad. This Staatsblad 278/1916 established a legal basis for gazettement nature reserves under the control and management of the Dutch Colonial Regime (Departemen Kehutanan 1986; Peluso, 1992).

However, the scientific justification to designate Mount Halimun Salak at first was not based on its biodiversity richness, but rather based on its hydrological functions. A commission, consisted of forester, engineer, and agriculture researchers, was set up to study the hydrological value of this vast area. The study explained that the forest should be protected from deforestation as it had reduced water discharge of many rivers. The water supply was decreasing while this supply was necessary to irrigate water in the future. In conclusion, the commission urged the government to create forest reserve in Mount Halimun-Salak area (Hoemacommissie Bantam, 1932). This study gave the government justification to declare Mount Halimun Salak as state forest land.

However, the commission's conclusion was rejected by civil services in Banten Residency. The civil services worried that this conclusion might lead to land disputes with local people who still practiced shifting cultivation (Kools, 1935). Nevertheless, their concern did not stop the government's policy and declare Mount Halimun-Salak area as protected junglegrounds state forest land. Several gazettement and delineation processes in order to determine forest boundary between state and non-state forestland were conducted within 1906 to 1939 period. Nearly 80,000 ha of Mount Halimun-Salak Area were designated (G. Galudra, 2005a; G. Galudra, 2005b). This policy led to land disputes in the future, which will be discussed in the next topic.

In early 1940, the Dutch Colonial government started to consider Mount Halimun-Salak as nature reserve, but this idea did not continue after independence.

During two decades, through the 1950s to end of 1960s, preservation efforts were very minor due to political unrest and governmental transformation from the Dutch Colonial regime to the Indonesian leadership. Another significant reason is that the preservation idea was considered by most independence leaders to be associated with colonial values (Jepson and Whittaker, 2002).

Nevertheless, the preservation narrative still remained in the minds of Indonesian foresters, university lecturers and policy makers. During the reign of the New Order, which occurred throughout the period of 1967 to 1997, preservation remained the dominant narrative for the management of protected areas. First, Basic Forestry Law No. 5/1967 (BFL) specifically the articles relating to the protection of forests, which continued to strongly reflect the preservation narrative contained in the 1941 Ordinance for Nature Protection. Second, the preservation narrative carried out with it the assumption that only the state (in this case, the government), which had the right to access and control, was capable of protecting the uniqueness of nature or wildlife species. This policy had actually already been in place since the Dutch colonial period with the issuance of the 1916 Staatsblad No. 278.

Ultimately, this preservation idea and policy affected the management policy in Mount Halimun-Salak. In 1979, by using forest gazettelement during the Dutch Colonial, the government declares Mount Halimun as natural preservation, covering an area of 40,000 ha. The declaration was enacted through Minister Decree No 40/1979. The reason for this declaration is that this area contains many endangered species such as *Hylobates moloch*, *Presbytis aygula* and *Panthera pardus* and therefore preservation of these habitats were considered urgent.

History repeats itself. Perum Perhutani, state forest logging concession in Java, rejected this policy since the area also included more than 1,000 ha of teak forest. After many discussion and dialogue among government entities, the government decided to exclude this teak forest area from natural preservation, resulting to reduction of its size to less than 38,000 ha. Many conservationists regretted this policy because the reduction has excluded the possibility to create a corridor for wildlife passage between Mount Halimun and Mount Salak (Badan Planologi Archives, unpublished). Even so, the idea to protect the wildlife corridor was still remain in their thoughts.

In 2001, several floods and landslides appeared in the surrounding of Mount Halimun-Salak area. Around 102 villages in Lebak, Pandeglang and Serang Regencies were under flood; causing more than 60,000 people became refugees (Kompas, 2001a). In the southern part, several landslides had destroyed 2000 houses in Sukabumi Regent, causing 94 people killed and others homeless (Kompas, 2001b). The natural disaster in surrounding Mount Halimun-Salak area became a major headline in national newspaper and gave the conservationist justification to push the government to declare the whole area as

protected areas. Water crisis had been used also as a justification by the conservationist to put 45% of West Java land, including Mount Halimun-Salak area, as protected forests (Kompas, 2003a). Furthermore, deforestation had been also used as an allegation of Perum Perhutani's mismanagement (Kompas, 2003b). Within the period of 1989 to 2001, Mount Halimun Salak area lost 22,000 ha or 25% of its forest cover due to logging activities and illegal agricultural expansion, causing water crisis to the surrounding areas and disenfranchisement of wildlife habitats (JICA, 2007).

Based on these reasons, in 2003, the government issued a decree (Minister Decree No. 175/2003) that claimed all Mount Halimun Salak area as national park. Even though the Perum Perhutani tried to resist (Perum Perhutani officer personal communication, 2004), its effort failed as it had already lost their legitimacy to control the area due to mismanagement. This decree meant as a triumph by the conservationist, but how the government controlled this area under the national park management will certainly a different story.

3. b. The Struggle of Government in Controlling and Managing National Park

After Mount Halimun-Salak was designated as a national park, the government tried to manage it based on zoning system. This is in line with the Forestry Law No. 41/1999 and Conservation Law No. 5/ 1990, which stipulate that a national park should be managed based on different zoning system such as core, wildlife and utilization zone. Regrettably, when the local communities and local government heard about this declaration, they refuted it and therefore causing conflicts against the national authorities.

These two laws prohibited people to access the national park forest causing concern from local communities that they could not use the forest. These conflicts impeded national park's work to manage the area, resulting to unfinished zoning system. Three reasons below explain the failure of national park authorities to manage the area after Mount Halimun-Salak became a national park.

Poverty, Livelihood and Forest Access

A survey in 2005, conducted together between the national park authorities and JICA researchers, shows that around 108 villages were actually within the designated national park border. From these villages, about 314 settlements were located inside the national park with about 600,000 people living in it. Consequently, this condition led to a possible of using national park forest land and recourses for people's livelihood. More likely that the policy-makers unaware with this condition.

Several studies show that many people who live surrounding Mount Halimun-Salak area had been using and accessing its forest land and resources for their subsistence needs and supporting marketable products. Firewoods for cooking, plants for medicine, logs for housing materials and forages for cattle were some examples of local communities' use of forest resources (Adimihardja et al, 1994; Badrudin, 1999; Gunawan, 1999; Mudofar, 1999).

A research survey by Hadi (1994) in 7 villages showed that about 20% of the people in these villages were actually generating income from Mount Halimun-Salak forest area. The forest income constituted an average of about 22% of mean total household income. Moreover, the study also revealed that there was one village which had more than 65% of its people who generate income from forest. The forest income in this village constituted 32% of total household income; a percentage that was higher than the percentage of previous 7 villages. The differences of these percentages depend on the generating income activities besides forest income and infrastructure. More people will access and depend on forest products if they have alternative source of income and better road infrastructure (Hadi, 1994; Mudofar, 1999). The study also reveals that this forest dependence did not cause local deforestation.

On the other hand, this study only focused on a subset of forest products, namely woods, fodder, plants, bamboos, rattans etc. Others use of forest land is its land fertility. Mount Halimun-Salak forest has become a ground area for shifting cultivation expansion due to its soil fertility. Official report calculated that only 1137 ha of this area had been used for shifting cultivation (Departemen Kehutanan, 2003a; Departemen Kehutanan, 2003b). This report is far well below estimation. A survey conducted by local people in 2005 claims that around 8,000 ha had been used for shifting cultivation. The size of forest land used for shifting cultivation might well bigger as this survey only focused Lebak Regent only, while Sukabumi Regent and Bogor Regent had not been calculated. This different claim might be related to the methods on identifying shifting cultivation lands. Another reason concerned on land tenure issues in order to reduce land claims from local communities.

Another fact about shifting cultivation in national park forest is that the shifting cultivators had their own forest classification system based on their knowledge. This classification affects their access to the forests. They classified forest land into four types, first, old forest, where many wild animals live; second, sacred forest, where only certain permits could allow people to access; third, reserved forest, where the area is reserved to anticipate population growth; and fourth, open access forest, where people could use for dwellings and cultivated land (Adimihardja, 1992; Kuswanda, 1999). It is uncertain on what basis these forest classification are created, but conflicts on forest access had been recorded since the national park had been designated (Galudra, 2003).

Another use of forest land is what lies below it. After a state mining company explored the area in 1988 and mined for gold and silver, migrant people flocked the area also looking for gold as illegal miners. There were no exact data on how these migrant workers had caused deforestation. An official report estimated that about 65.8 ha of national park forest has been used by these illegal miners (Departemen Kehutanan, 2003b). On the other hand, moderate estimation calculated it more than 200 ha (Indonesian Nature Conservation Newsletter, 2002), while other source reckoned about 6,000 ha of national park forest (Pikiran Rakyat, 2003).

The gold exploration by the state mining company had attracted many people to migrant to the areas within the national park, causing further deforestation to the national park forest. However, migrant people, who became illegal miners, were not the only one who responsible for furthering deforestation. A study in Kendeng Mountain (western part of the national park) shows that around 29% of illegal miners came from local people (Suhaeri, 1994). Most local people claim that illegal mining activities were quite appealing since they gave more cash than farming activities. An income study to four villagers near the illegal mining activities demonstrated that about 24% of their income came from these illegal mining activities (Nurhawan et al, 2006).

Land Tenure and Conflicts

Four people from Lebak District are being arrested in 2005. The police, as well as the national park officers, claimed that these people cut many trees inside the national park border. They accused them as illegal loggers. In contrast, these people claimed that all the trees inside the national park border were belonged to their ancestor land. There was a huge argument who own those land and some NGOs question the designation process by the government,

The designation process by the government is actually defined in Forest Law 1999. An article in this law stipulates that after the government designates a forest, it obliges to demarcate and gazette the area in order to separate and determine which area belongs to the state and which area belongs to others (local communities' rights). This article is used by some NGOs and researchers to push the government to conduct these processes. There is a hope for the local communities who have claims to be excluded from this designated national park. Even the forestry officers believe too (WG-T, 2005).

Unfortunately, the government used its legitimacy to designate this area as state forest land (national park) based on demarcation and gazette process during the Dutch Colonial, within the period of 1905-1930s (Galudra, 2005). From 1280 km of designated land boundaries, only 110 km have not yet been gazetted and delineated, leaving the rest of them legally protected. This fact gave the government its legitimacy and legally to claim Mount Halimun Salak Area as a national park. However, this fact did not stop the question why many

national park lands are being claimed and used by the local communities for agriculture cultivations and settlements. About 314 settlements are identified and around 8,000 ha of land are being claimed as shifting cultivations.

These 8,000 ha of shifting cultivations were derived from unfinished solution by the state during the Dutch Colonial (Galudra, 2006). The Resident of Banten rejected the Forest Service's proposal to convert shifting cultivation land to forest land. Furthermore, he stated that these shifting cultivations were well legally protected through Resident Decree of 1912 and forced-conversion would cause conflict against these shifting cultivators. On the other hand, the forest service advanced hydrological functions as its main argument. Both have their rationale arguments and they brought this topic to Governor General's decision. Regrettably, no conclusive decision about this problem was made during the Dutch Colonial.

The Government of Indonesia admitted about this problem but no further research or policy was made to cope it. This weak land tenure situation caused some forestry officers levied and taxed those people who cultivate the state forest land. Although the forestry officers claimed that this tax was accordance to forest policy, it was uncertain which forest policy was being used. Certainly, the weak land tenure situation brought free-riders such as forestry officers to conduct corruption act.

This weak land tenure situation led to the certification process during the agrarian reform in Indonesia during 1960s. National Land Agency was responsible to codify shifting cultivation land into a national land titling and mostly converted into ownership rights. A survey in Nanggung Sub-Districts, part of North Halimun-Salak Area, revealed that about 40 ha of designated national park were already being certified in 1960s as land ownership rights (Nurhawan et al, 2006). The Forest Department claimed that these certified lands were illegal as these lands were certified within the state forest border based on forest delineation and gazettelement. In contrast, the National Land Agency asserted that the state forest border was unclear and most of the certified lands were formerly shifting cultivation lands. Both government entities should resolve and negotiate their different interpretation about the extent of certified land rights and shifting cultivators land because the way the title documents are issued by them may also jeopardize the legitimacy of these documents.

Politics of Regional Autonomy and Decentralization Policies

The decentralization law of 1999 and 2004 had putted regional districts more power/ autonomy on natural resources management. Even though the national park designation is under the central government power and authority, in some extent, the regional government can influence the outcome of the national park designation. In national newspaper, the Bupati opposed the idea of national park

designation if the local communities' land had to be subjugated into the national park land.

In Forestry Law of 1999, the head of district (Bupati) could issue a policy to demarcate a designated state forest land and appointed a team to implement this demarcation process. After the national park designation, The Bupati of Lebak certainly responded and issued two decrees on national park demarcation in 2007. It gave the opportunity to exclude the local communities' land from the national park. In April 2008, the Bupati held a discussion with a national legislative (DPR) and demand to the government to exclude 15,000 ha of land from national park land. He explicitly requested the land as many local communities had already used this land before the national park designation. Furthermore, he argued that the national park designation had caused many evictions and terrors from the national park authorities. His demand certainly in line with the Forestry Law of 1999 article 19 that state forest land can be converted to non-state forest land use after the national legislative approval. The national legislative (DPR) created a commission on studying the possibilities of national park conversion.

Hearing to this early news, the central government tried also to set up a team as a counter-measure of the Bupati's movement. This team tried to collect all supporting data that the government, in terms of its legality, claims Mount Halimun-Salak area as a national park in accordance to the law. It is uncertain what will be the result as these two parties, Bupati and the central government, are presently trying to influence the national legislative' decisions.

4. Discussions and Conclusion: What Lies Ahead?

The Halimun-Salak National Park experience shows that the idea of the government to halt deforestation received many resistances from local communities and local government. The government seems unaware with the multiple legalities that came from its constitution and law. The conflict between shifting cultivators and the forestry officers during the Dutch Colonial resulted to weaken land tenure condition within the current national park designation. There was uncertainty on how to deal with this conflicting claim. Furthermore, it led to corruption act by the forest officers afterwards.

The legitimacy and legality of national park designation is somehow under questions. Although the government had already gazetted and demarcated the area, the area still overlaps with other claims. These claims mostly were based on historically use and control and legalized by the national land agency. The national land agency had issued several individual land ownership rights certificates to some local people, but these certificates were rejected by the forestry officers. Both institutions had legal procedures which both of them used different laws. The Forestry Department used Forestry Law of 1999, while the

National Land Agency used Agrarian Law of 1960. Both laws have different interpretation on land ownerships and customary ownership.

Another fact is the possibility to convert the designated state forest land to other uses. The Bupati's proposal in Lebak District shows that in term of legality, the conversion can be done after the National Legislation's approval. This approval should be based on in-depth research from appointed team/ commission. The designation could not give any guarantee that the forest will not be clear for other use.

The implication to REDD is that what the drivers of deforestation are. The drivers of deforestation are causing CO₂ emissions. Agricultural expansion is a leading cause worldwide, implicated as a factor in 96% of cases assessed in the most comprehensive study of deforestation to date (Geist and Lambin, 2002). Infrastructure expansion such as roads and settlements and wood extraction are also major contributors, although all three factors often occur simultaneously in a given forest. Many scientists in Indonesia tried to understand what are the drivers and the underlying drivers of deforestation (Suyanto, 2007, Kanninen, 2007), but their findings did not clearly explain multiple legality as the underlying cause of deforestation. Multiple legality had caused unclear and uncertainty to the land tenure and ownership in Indonesia. It also leads to different interpretations that cause people to bend the laws, resulting further legal conflicts. There are no exact legal systems that could curb these multiple legality. Stern (2006) itself stressed the clarity of boundaries and ownership, but failed to address the underlying cause of this unclarity.

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