

CERTIFICATION OF OLD-AGED AND YARD TREES AND THE PROVISION OF ECONOMIC INCENTIVES FOR OWNERS AS A FAIR COMPENSATION FOR ENVIRONMENTAL SUSTAINABILITY GUARDIANS

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Abstract

Efforts to maintain environmental quality are mandated for both the state and its citizens under the 1945 Constitution of Indonesia, particularly Article 28H and Article 33 paragraph (4). These principles align with the global Sustainable Development Goals (SDGs), especially in protecting the environment through the conservation of old-aged trees and privately owned yard trees. This paper examines the necessity of establishing a certification framework for such trees as a legal foundation for granting financial incentives to their owners. These incentives are viewed as a fair recognition of their contributions to clean air provision, carbon absorption, ecological stability, and the prevention of illegal logging. Using a normative juridical method supported by statutory, conceptual, and comparative approaches, this study reveals the absence of any regulations that specifically address legal protection or economic benefits for tree owners outside state forest zones. Certification of individual trees may function as a legal innovation consistent with ecological justice and green economy principles. Implementing this certification mechanism could form the basis for measurable and fair fiscal incentives or environmental compensation. Ultimately, this policy strengthens public legal awareness and supports long-term environmental sustainability.

Keywords: legal protection; ecological justice; environmental sustainability; Indonesia's SDGs; tree certification

INTRODUCTION

The increasingly stressful global environment demands a shift in perspectives on managing natural resources. One aspect that often goes unnoticed is the individual contribution to caring for long-lived trees and those growing in yards. These trees are known to play a crucial role in maintaining air quality, reducing carbon concentrations, and influencing the microclimate in residential areas (KLHK, 2020).

Historically, Indonesians have been accustomed to living alongside ancient trees, both in their yards and in family gardens. However, population growth and urban development have gradually changed people's perceptions of the value of trees. Many owners have come to view old trees

as more profitable to cut down and sell as timber, especially if they are no longer productively producing fruit.

Several studies have shown that families living near forest areas have traditionally maintained perennial plants due to their long-term benefits (Manginsela et al., 2020). However, tree owners on private land have not received legal recognition or compensation for their ecological contributions.

Given this situation, the idea of certifying old-growth and yard trees has become increasingly relevant to ensure ecological sustainability and encourage communities to maintain them. With certification, trees acquire a certain legal status, which can form the basis for incentives or payment for environmental services (PES) schemes.

PROBLEM SUMMARY

That in this research the main topics of discussion are the following matters;

1. Why is certification of old trees and yard trees urgent in the context of environmental sustainability?
2. How do the legal basis and theory of ecological justice support tree certification policies?
3. What forms of economic incentives can be provided as compensation for environmental services to tree owners?
4. What are the best practices from other countries that can serve as models for Indonesia?

RESEARCH METHODS

This research uses a normative juridical method with three approaches:

1. Legislative approach, examining the 1945 Constitution, Law No. 32/2009 concerning PPLH, Law No. 41/1999 concerning Forestry, and the 1960 UUPA.
2. Conceptual approach, examining the theory of ecological justice, green economy, and PES concept.
3. A comparative approach, looking at tree certification and protection practices in Singapore, the UK and the US.

The data was analyzed descriptively qualitatively to produce perspective policy recommendations.

RESEARCH RESULTS AND DISCUSSION

1.1. The Urgency of Certification for Old Trees and Yard Trees

Tree certification is the legal recognition of the status and ecological value of a particular tree, based on its age, species, and ecological contribution. Old trees have significant biological functions by absorbing more CO₂ than young trees (FAO, 2019), providing habitat for biodiversity, and maintaining soil moisture and air quality in densely populated areas.

That older, larger, healthier trees tend to provide greater ecosystem services Suchocka, M. (2023), and the importance of “*large old trees*” for carbon storage, habitat, microclimate. Gilhen-Baker, M. (2022) old trees also play a role in ecosystem dynamics Pasques, O. et al. (2024). The role of yard trees in urban areas clearly has ecosystem services, Hintural, W.P., Jeon, H.J., Kim, S.Y., Go, S., Park, B.B. (2024). of course by further reviewing the relationship between species, tree traits, and ecosystem services. Danchen Liang, Ganlin Huang (2023).

However, in Indonesia, the existence of these trees is in a vulnerable position because:

- a. has no legal status;
- b. does not provide direct economic benefits to the owner;
- c. considered more profitable when cut down;
- d. affected by the pressure of housing development and land commercialization;
- e. and. High PBB encourages the rampant felling of yard trees.

Thus, tree certification is urgent to ensure ecosystem sustainability and encourage communities to protect trees by providing economic benefits.

1.2. Legal Basis and Principles of Ecological Justice

a. Legal basis

Normatively, tree certification can be based on:

- ❖ 1945 Constitution Article 28H paragraph (1): the right to a good and healthy environment.
- ❖ 1945 Constitution Article 33 paragraph (4): sustainable development.
- ❖ UUPA 1960: regulates the social function of land rights, land maintenance, and protection of economically weak parties.
- ❖ Law No. 32/2009: guarantees environmental management based on justice.
- ❖ National RPPLH: opening up space for innovation in environmental protection instruments.
- ❖ The Electronic Land Certificate Issuance Pattern at the BPN can be used as a rule model for tree certification.

While these regulations provide general direction, there are currently no operational regulations specifically addressing the protection of mature trees or yard trees on private land. This regulatory gap opens up an opportunity for the government to develop a new scheme, such as tree certification, as an environmental protection instrument.

b. Principles of Ecological Justice

According to the theory of ecological justice, justice is not only intended for humans, but also for all ecological entities that support life (Schlosberg, 2007). A tree provides many benefits to life, but is often seen as valuable only when the tree is turned into a log that can be processed and traded in the form of processed wood. Tree owners as environmental defenders seem to be the

only players without any assistance and intervention from the government in maintaining old trees and maintaining the trees in their yards. Therefore, appreciation for tree owners who maintain the ecosystem is a form of implementation of ecological justice.

This principle aligns with the Sustainable Development Goals (SDGs), particularly Goals 13 (Addressing Climate Change) and 15 (Sustaining Terrestrial Ecosystems). Tree certification can serve as a basis for recognizing individual contributions to achieving SDG targets at the local level.

1.3. Economic Incentives as Reward for Environmental Services

Tree certification can be the basis for various incentives:

1. Reduction or exemption of PBB for land with certified trees.
2. Maintenance subsidies such as pruning, fertilizing, or care.
3. Individual carbon credits for trees that absorb CO₂ with measurable calculations.
4. Environmental compensation funds, both from the government and corporate CSR.
5. The application of timber duties or excise if certified trees are cut down, thus encouraging the protection of living trees and increasing state revenue.

This scheme aligns with the green fiscal policy concept currently being developed by the Indonesian government (World Bank, 2021).

1.4. Learning from Other Countries

That Indonesia can learn from other countries that have implemented similar policies, considering Indonesia's status as the lungs of the world which is experiencing various problems regarding deforestation (Rahmawati A. Damitiet *al.*, 2025). The implementation in other countries is as follows;

Singapura – Heritage Tree Scheme

- Trees over 80 years old are given special protection and care assistance.
- Certification enhances the social status of trees as ecological heritage.

United Kingdom (UK) – Tree Preservation Order (TPO)

- Prohibiting the felling of certain trees without permission.
- Involving local governments as supervisory authorities.

United States – Urban Forest Credit System

- Provide carbon credits to owners who maintain city trees.
- Credit can be traded legally.

These three models prove that the integration of ecological and economic values through tree certification can be implemented effectively and serve as a reference for Indonesia.

CONCLUSION

Certification of mature trees and yard trees is an important and relevant policy innovation to address the need for community-based environmental protection. Studies show that:

1. Old trees and yard trees have significant ecosystem services that

have not been legally or economically valued.

2. Indonesia has a strong constitutional and legal basis, but there are regulatory gaps regarding the recognition and protection of individually owned trees.
3. Tree certification can be an instrument to provide economic incentives through PES schemes and green fiscal policies.
4. Practices in Singapore, the UK and the US show that tree certification can improve environmental protection while improving community well-being.

Based on these findings, the following policy steps are required:

a. Regulatory Aspects

- Drafting government regulations or ministerial regulations regarding tree certification outside state forest areas.
- Integrating certification into national and regional RPPLH.

b. Institutional Aspects

- Determining the implementing agency, for example BPN in collaboration with KLHK and local governments.
- Building a national database of certified trees.

c. Economic Aspects

- Develop equitable fiscal and non-fiscal incentive schemes, including carbon credits and PBB reductions.

d. Community Participation

- Improving ecological literacy and encouraging local communities to become environmental guardians.

Thus, tree certification not only provides legal recognition for environmental stewards, but also strengthens sustainable development in Indonesia.

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**SERTIFIKASI POHON BERUSIA TUA DAN POHON PEKARANGAN SERTA
PEMBERIAN INSENTIF BAGI PEMILIK SEBAGAI BENTUK IMBAL JASA ADIL
BAGI PENJAGA KEBERLANJUTAN LINGKUNGAN HIDUP**

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Keywords: legal protection; ecological justice; environmental sustainability; Indonesia's SDGs; tree certification

Abstrak

Tanggung jawab untuk menjaga lingkungan hidup tidak hanya berada pada pemerintah, namun juga pada masyarakat, sebagaimana ditegaskan dalam Pasal 28H dan Pasal 33 ayat (4) UUD NRI 1945. Prinsip ini sejalan dengan agenda SDGs yang menekankan perlindungan lingkungan global, termasuk pemeliharaan pohon berusia tua dan pohon pekarangan. Artikel ini mengkaji urgensi pembentukan skema sertifikasi bagi kedua jenis pohon tersebut sebagai pijakan hukum untuk pemberian insentif ekonomi kepada pemilik. Insentif tersebut dipandang sebagai bentuk penghargaan yang layak atas kontribusi pohon dalam menyediakan udara bersih, menyerap karbon, menjaga keseimbangan ekologi, serta mengurangi praktik penebangan ilegal. Penelitian dilakukan melalui metode yuridis normatif dengan pendekatan perundang-undangan, konseptual, dan komparatif. Hasil penelitian menunjukkan belum adanya pengaturan yang secara khusus melindungi pemilik pohon di luar kawasan hutan negara maupun memberikan kompensasi ekonomi atas manfaat ekologis yang mereka jaga. Sertifikasi pohon dinilai dapat menjadi inovasi hukum yang selaras dengan konsep keadilan ekologis dan ekonomi hijau.

Dengan penerapan sertifikasi, dasar pemberian insentif fiskal atau kompensasi lingkungan dapat dirumuskan secara lebih terukur dan berkeadilan, sekaligus meningkatkan kesadaran masyarakat terhadap pentingnya pelestarian lingkungan.

Kata kunci: *perlindungan hukum; keadilan ekologis; keberlanjutan lingkungan hidup; SDGs Indonesia; sertifikasi pohon.*

PENDAHULUAN

Kondisi lingkungan global yang semakin tertekan menuntut perubahan cara pandang dalam mengelola sumber daya alam. Salah satu aspek yang sering luput dari perhatian adalah kontribusi individu dalam merawat pohon-pohon yang sudah berumur panjang maupun pepohonan yang tumbuh di pekarangan rumah. Pohon semacam ini diketahui memiliki peran penting dalam menjaga kualitas udara, mengurangi konsentrasi karbon, serta mempengaruhi iklim mikro di area pemukiman (KLHK, 2020).

Dalam konteks historis, masyarakat Indonesia terbiasa hidup berdampingan dengan pepohonan berumur tua, baik di pekarangan rumah maupun di kebun keluarga. Namun, peningkatan jumlah penduduk dan pertumbuhan kawasan perkotaan secara bertahap mengubah pandangan masyarakat terhadap nilai pohon. Banyak pemilik kemudian menganggap pohon tua lebih menguntungkan jika ditebang dan dijual sebagai kayu, terutama jika pohon tersebut tidak lagi produktif menghasilkan buah.

Beberapa penelitian menunjukkan bahwa keluarga yang tinggal dekat kawasan hutan secara turun-temurun mempertahankan tanaman tahunan karena nilai manfaatnya yang berjangka panjang (Manginsela et al., 2020). Meski demikian, pemilik pohon di lahan pribadi belum memperoleh pengakuan hukum maupun kompensasi atas kontribusi ekologis pohon-pohon tersebut.

Melihat kondisi ini, gagasan mengenai sertifikasi pohon berusia tua dan pohon pekarangan menjadi semakin relevan untuk menjamin keberlanjutan ekologis dan mendorong masyarakat tetap mempertahankannya. Dengan adanya sertifikasi, pohon memperoleh status hukum tertentu sehingga dapat menjadi dasar pemberian insentif atau skema imbal jasa lingkungan (payment for environmental services/PES).

RUMUSAN MASALAH

Bahwa dalam penelitian ini yang menjadi topik utama didalam pembahasan adalah mengenai beberapa hal berikut;

1. Mengapa sertifikasi pohon berusia tua dan pohon pekarangan menjadi urgensi dalam konteks keberlanjutan lingkungan?
2. Bagaimana dasar hukum dan teori keadilan ekologis mendukung kebijakan sertifikasi pohon?
3. Apa bentuk insentif ekonomi yang dapat diberikan sebagai imbal jasa lingkungan kepada pemilik pohon?
4. Apa praktik terbaik dari negara lain yang dapat menjadi model bagi Indonesia?

METODE PENELITIAN

Penelitian ini menggunakan metode yuridis normatif dengan tiga pendekatan:

1. Pendekatan perundang-undangan, menelaah UUD 1945, UU No. 32/2009 tentang PPLH, UU No. 41/1999 tentang Kehutanan, dan UUPA 1960.
2. Pendekatan konseptual, mengkaji teori keadilan ekologis, ekonomi hijau, dan konsep PES.
3. Pendekatan komparatif, melihat praktik sertifikasi dan perlindungan pohon di Singapura, Inggris, dan Amerika Serikat.

Data dianalisis secara deskriptif kualitatif untuk menghasilkan rekomendasi kebijakan yang bersifat prespektif.

HASIL PENELITIAN DAN PEMBAHASAN

1.1. Urgensi Sertifikasi Pohon Berusia Tua dan Pohon Pekarangan

Sertifikasi pohon merupakan pengakuan hukum terhadap status dan nilai ekologis pohon tertentu, baik berdasarkan usia, jenis, maupun kontribusi ekologisnya. Pohon tua memiliki fungsi biologis yang signifikan dengan menyerap CO₂ lebih banyak dibandingkan pohon muda (FAO, 2019), menjadi habitat keanekaragaman hayati, dan menjaga kelembapan tanah serta kualitas udara di kawasan padat penduduk.

Bahwa Pohon yang berusia lebih tua, besar, sehat cenderung memberikan jasa ekosistem lebih besar Suchocka, M. (2023), dan pentingnya “*large old trees*” bagi penyimpanan karbon, habitat, mikro-iklim. Gilhen-Baker, M. (2022) pohon usia lanjut juga berperan dalam dinamika ekosistem Pasques, O. et al. (2024). Peran pohon pekarangan di perkotaan jelas memiliki jasa ekosistem, Hintural, W.P., Jeon, H.J., Kim, S.Y., Go, S., Park, B.B. (2024). tentunya dengan lebih jauh mengulas keterkaitan spesies, trait pohon, dan jasa ekosistem. Danchen Liang, Ganlin Huang (2023).

Namun di Indonesia, keberadaan pohon-pohon tersebut berada dalam posisi rentan karena:

- a. tidak memiliki status hukum;
- b. tidak memberikan manfaat ekonomi langsung kepada pemilik;
- c. dinilai lebih menguntungkan ketika ditebang;
- d. terdampak tekanan pembangunan perumahan dan komersialisasi lahan;
- e. tingginya PBB mendorong maraknya penebangan pohon pekarangan.

Dengan demikian, sertifikasi pohon menjadi urgen untuk memastikan keberlanjutan ekosistem dan mendorong masyarakat menjaga pohon melalui pemberian manfaat ekonomi.

1.2. Dasar Hukum dan Prinsip Keadilan Ekologis

a. Dasar Hukum

Secara normatif, sertifikasi pohon dapat berlandaskan:

- UUD 1945 Pasal 28H ayat (1): hak atas lingkungan hidup yang baik dan sehat.
- UUD 1945 Pasal 33 ayat (4): pembangunan berkelanjutan.
- UUPA 1960: mengatur fungsi sosial hak atas tanah, pemeliharaan tanah, dan perlindungan pihak ekonomis lemah.
- UU No. 32/2009: menjamin pengelolaan lingkungan berasaskan keadilan.

- RPPLH Nasional: membuka ruang inovasi instrumen perlindungan lingkungan.
- Pola Penerbitan Sertifikat Tanah Elektronik pada BPN dapat digunakan sebagai rule model sertifikasi pohon.

Walaupun regulasi tersebut memberikan arah umum, sampai saat ini belum tersedia aturan operasional yang secara khusus mengatur perlindungan pohon berusia tua atau pohon pekarangan di lahan pribadi. Ruang kosong regulasi ini membuka peluang bagi pemerintah untuk mengembangkan skema baru berupa sertifikasi pohon sebagai instrumen perlindungan lingkungan.

b. Prinsip Keadilan Ekologis

Menurut teori keadilan ekologis (ecological justice), keadilan tidak hanya ditujukan bagi manusia, tetapi juga bagi seluruh entitas ekologis yang menopang kehidupan (Schlosberg, 2007). Sebatang pohon memberikan banyak manfaat bagi kehidupan, namun seringkali dipandang berharga hanya ketika pohon tersebut berubah menjadi sebatang kayu yang dapat diolah dan diperjualbelikan dalam bentuk kayu olahan. Pemilik Pohon sebagai pejuang bagi lingkungan hidup seakan menjadi pemain tunggal tanpa adanya bantuan dan campur tangan pemerintah dalam menjaga pohon – pohon yang telah berusia tua dan menjaga pohon pekarangan

rumahnya, Oleh karena itu, penghargaan terhadap pemilik pohon yang menjaga ekosistem merupakan bentuk implementasi keadilan ekologis.

Prinsip ini sejalan dengan Tujuan Pembangunan Berkelanjutan (SDGs), terutama tujuan ke-13 (Penanganan Perubahan Iklim) dan ke-15 (Menjaga Ekosistem Daratan). Sertifikasi pohon dapat dijadikan dasar pengakuan kontribusi individu terhadap pencapaian target SDGs di tingkat lokal.

1.3. Insentif Ekonomi Sebagai Imbal Jasa Lingkungan

Sertifikasi pohon dapat menjadi dasar pemberian berbagai insentif:

1. Pengurangan atau pembebasan PBB bagi tanah dengan pohon bersertifikat.
2. Subsidi pemeliharaan seperti pemangkasan, pemupukan, atau perawatan.
3. Kredit karbon individu untuk pohon yang menyerap CO₂ dengan perhitungan terukur.
4. Dana kompensasi lingkungan, baik dari pemerintah maupun CSR perusahaan.
5. Penerapan bea atau cukai kayu apabila pohon bersertifikat ditebang, sehingga mendorong perlindungan pohon hidup dan menambah pemasukan negara.

Skema ini sejalan dengan konsep green fiscal policy yang sedang dikembangkan pemerintah Indonesia. (World Bank, 2021).

1.4. Pembelajaran dari Negara Lain

Bahwa Indonesia dapat belajar kepada Negara – negar lain yang telah menerapkan kebijakan serupa, mengingat status Indonesia sebagai paru – paru dunia yang mengalami berbagai permasalahan mengenai deforestasi (Rahmawati A. Damiti *et al.*, 2025). Adapun penerapan dinegara lain adalah sebagai berikut;

Singapura – Heritage Tree Scheme

- Pohon berusia lebih dari 80 tahun diberi perlindungan khusus dan bantuan perawatan.
- Sertifikasi meningkatkan status sosial pohon sebagai warisan ekologis.

Inggris – Tree Preservation Order (TPO)

- Melarang penebangan pohon tertentu tanpa izin.
- Melibatkan pemerintah daerah sebagai otoritas pengawasan.

Amerika Serikat – Urban Forest Credit System

- Memberikan kredit karbon bagi pemilik yang memelihara pohon kota.

- Kredit dapat diperjualbelikan secara legal.

Ketiga model ini membuktikan bahwa integrasi nilai ekologi dan ekonomi melalui sertifikasi pohon dapat diterapkan secara efektif dan menjadi referensi bagi Indonesia.

KESIMPULAN

Sertifikasi pohon berusia tua dan pohon pekarangan merupakan inovasi kebijakan yang penting dan relevan untuk menjawab kebutuhan perlindungan lingkungan berbasis partisipasi masyarakat. Kajian menunjukkan bahwa:

1. Pohon tua dan pohon pekarangan memiliki jasa ekosistem signifikan yang selama ini belum dihargai secara hukum maupun ekonomi.
2. Indonesia memiliki dasar konstitusional dan yuridis yang kuat, tetapi terdapat celah regulasi mengenai pengakuan dan perlindungan pohon milik individu.
3. Sertifikasi pohon dapat menjadi instrumen untuk memberikan insentif ekonomi melalui skema PES dan kebijakan fiskal hijau.
4. Praktik di Singapura, Inggris, dan Amerika Serikat menunjukkan bahwa sertifikasi pohon dapat meningkatkan perlindungan

lingkungan sekaligus menyejahterakan masyarakat.

Berdasarkan temuan tersebut, diperlukan langkah-langkah kebijakan sebagai berikut:

- a. Aspek Regulasi
 - Menyusun peraturan pemerintah atau peraturan menteri tentang sertifikasi pohon di luar kawasan hutan negara.
 - Mengintegrasikan sertifikasi dalam RPPLH nasional dan daerah.
- b. Aspek Kelembagaan
 - Menentukan lembaga pelaksana, misalnya BPN bekerja sama dengan KLHK dan pemerintah daerah.
 - Membangun database nasional pohon bersertifikat.
- c. Aspek Ekonomi
 - Menyusun skema insentif fiskal dan non-fiskal yang berkeadilan, termasuk kredit karbon dan pengurangan PBB.
- d. Partisipasi Masyarakat
 - Meningkatkan literasi ekologis dan mendorong komunitas lokal sebagai penjaga pohon (environmental guardians).

Dengan demikian, sertifikasi pohon tidak hanya memberikan pengakuan hukum bagi penjaga lingkungan, tetapi juga

memperkuat pembangunan berkelanjutan di Indonesia.

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