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RESTORATION



# GUIDELINES FOR FOREST LANDSCAPE RESTORATION IN INDONESIA



# PANDUAN RESTORASI BENTANG ALAM DI INDONESIA





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Panduan Restorasi Bentang Alam ini merupakan hasil kelompok kerja nasional yang terdiri dari berbagai instansi pemerintah, akademisi, lembaga swadaya masyarakat dan sektor swasta di Indonesia.

The production of these guidelines benefited from excellent collaboration with government agencies and local partners, without whom this project would not have been possible or delivered such positive results.



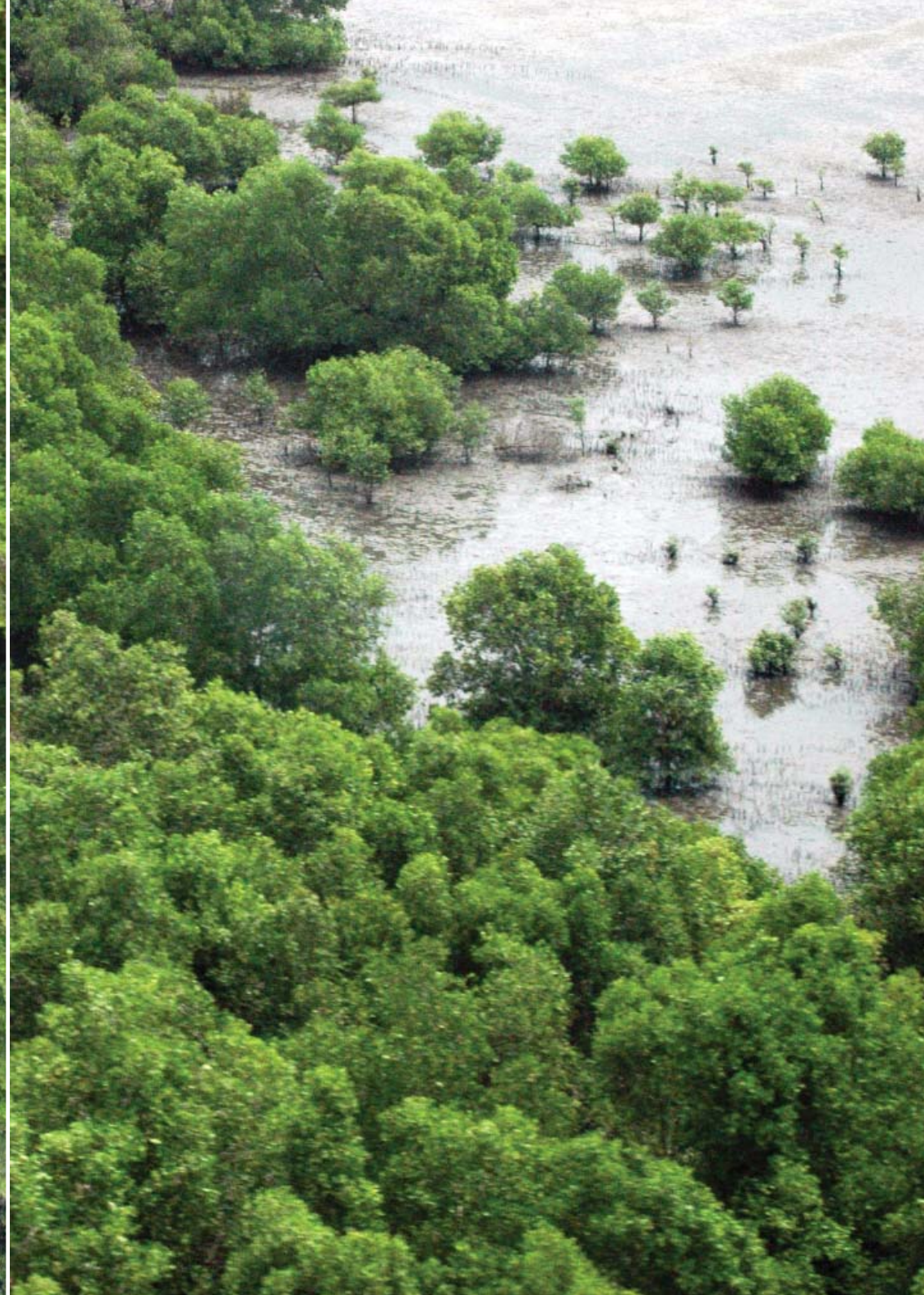
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# Forest Landscape Restoration in Indonesia

## Preamble

The working group adopted the following working definition of “landscape” applicable to conditions in Indonesia:

“A geographical entity consisting of an interrelated land-use mosaic(s) where energy, materials, organisms and institutions combine to give ecological, social-economical and cultural benefits”.

It was then agreed that the term “Forest Landscape Restoration” would be used to describe actions that: seek to alter the structure and function of the mosaic over time to optimize benefits for stakeholders.

A long term vision of a landscape has to accommodate environmental values and economic efficiency together with social, culture, and spiritual values. This range of landscape features must be combined in ways that are agreed by stakeholders and that are measurable in ways that allow accountability to these stakeholders.

A landscape vision has to be defined in a clear and transparent way. It must be realistic, and based on priority setting that responds to local, regional, national and global challenges.

The following 10 principles and 34 guidelines for landscape restoration were developed by an informal Indonesia National Working Group on Landscape Restoration in a workshop conducted in Prana Dewi, Batukaru, Bali from the 12th – 16th of May 2009. The Indonesia Working Group was established during the workshop that was supported by the Ministry of Forestry of the Republic of Indonesia, funded by ITTO and IUCN, and facilitated by the Tropenbos International Indonesia Programme. The workshop was an activity sponsored by and contributing to the Global Partnership for Forest Landscape Restoration.

The guidelines were inspired by existing national and international guidelines. Important sources of ideas and information were: Minister of Forestry Regulation No. P.61/Menhut-II/2008, ITTO Guidelines - Policy Development Series No. 13 on ITTO Guidelines for Restoration, Management and Rehabilitation of Degraded and Secondary Tropical Forests, and Policy Development Series No. 17 on ITTO/IUCN Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests, and other sources.

Kelompok Kerja Nasional Restorasi Bentang Alam Indonesia menetapkan definisi ‘bentang alam’ yang sesuai dengan keadaan di Indonesia sebagai berikut: Entitas geografis yang terdiri atas mosaic-mosaic tata guna lahan yang saling berinteraksi dimana energi, material, organisme dan institusi dipadukan untuk memberikan manfaat ekologis, sosial ekonomi, dan budaya bagi kehidupan.

Lebih lanjut Kelompok Kerja Nasional menyepakati penggunaan istilah ‘Restorasi Bentang Alam’ untuk menjelaskan suatu gerakan sebagai berikut: Upaya-upaya memampukan struktur dan fungsi mosaic tata guna lahan untuk kesinambungan manfaat yang optimal bagi para pemangku kepentingan.

Visi bentang alam dalam jangka panjang harus mengkomodasi nilai-nilai lingkungan dan efisiensi ekonomi bersama dengan sosial, budaya, dan nilai-nilai spiritual. Ragam perwujudan bentang alam perlu dikombinasikan dan disepakati oleh para pemangku kepentingan dalam rumusan yang dapat diukur tingkat pencapaiannya serta dapat dipertanggung jawabkan.

Visi bentang alam harus dirumuskan dalam suatu program yang jelas dan realistis, yang disusun berdasarkan kesepakatan skala prioritas dan mampu menjawab permasalahan lokal, regional, nasional dan global.

Berikut adalah 10 asas dan 34 panduan restorasi bentang alam telah berhasil disusun oleh Kelompok Kerja Nasional Restorasi Bentang Alam Indonesia pada tanggal 12-16 Mei 2009 di Prana Dewi, Batukaru, Tabanan Bali. Kelompok kerja ini terbentuk dalam lokakarya yang difasilitasi oleh Departemen Kehutanan, ITTO, IUCN, dan diselenggarakan oleh Tropenbos International Indonesia Programme. Lokakarya ini merupakan kegiatan yang disponsori oleh dan berkontribusi terhadap Kamitran Global Restorasi Bentang Alam Hutan.

Penyusunan panduan ini mengacu pada berbagai panduan yang telah diterbitkan oleh berbagai lembaga baik nasional maupun internasional. Sebagai acuan pokok dalam penyusunan panduan ini adalah Surat Keputusan Menteri Kehutanan No. 61/2008 tentang Ketentuan dan Tatacara Pemberian Izin Usaha Pemanfaatan Hasil Hutan Kayu Restorasi Ekosistem dalam Hutan Alam pada Hutan Produksi melalui Perumahan, Panduan ITTO – Policy Development Series No. 13 tentang ITTO Guidelines for Restoration, Management and Rehabilitation of Degraded and Secondary Tropical Forests, Panduan IUCN-ITTO – Policy Development Series No. 17 tentang ITTO/IUCN Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests, dan berbagai sumber lainnya.



## The interests of all actors especially the inhabitants of the landscape must be assured

GL 1.1. The interests of stakeholders in landscape restoration must be achieved through vertical (sectoral) and horizontal (cross-sectoral) coordination. This coordination will require the establishment of formal and informal institutions at the landscape scale.

GL 1.2. Landscape restoration scenarios have to be developed with the participation of all concerned stakeholders, they must be clear and easily understood and all stakeholders must be engaged in implementing agreed measures to achieve the desired scenarios.

GL 1.3 Visualization techniques and simple simulation modeling, that have been used successfully in Indonesia, should be used to help communicate landscape concepts and understand the landscape values of different stakeholders.



Panduan 1.3. Teknik visualisasi dan modeling sederhana yang telah dipakai dengan berhasil di Indonesia, perlu dimanfaatkan untuk mengkomunikasikan konsep bentang alam dan pemahaman akan nilai bentang alam kepada semua pemangku kepentingan.

Panduan 1.2. Skenario restorasi bentang alam harus jelas dan mudah difahami dan dapat diilaksanakan oleh para pihak.

Panduan 1.1. Proses pencapaian keinginan para pihak dalam FLR dilakukan melalui koordinasi secara vertikal dan horizontal dengan pembentukan lembaga formal dan non-formal.

**Terlaminya kepentingan para pihak khususnya penduduk setempat dari suatu bentang alam**





# Principle 2.

## Stakeholder platforms are needed to enable governmental, private sector and civil society representatives to negotiate and take decisions at landscape scales

GL 2.1. Different stakeholders must be brought together to participate in decision making processes on landscape restoration with the objective of harmonising their different activities in the landscape through agreement on desired scenarios and commitment to achieving them.

GL 2.2. Facilitators that are trusted and acceptable to all stakeholders are needed to ensure the success of landscape restoration.

GL 2.3. Stakeholder fora may lead the process of establishing Local Forest Councils with a mandate to work at the landscape scale.



**Dasar pijakan bagi para pihak: (pemerintah, sektor swasta dan wakil-wakil masyarakat madani), diperlukan dalam negosiasi dan pengambilan keputusan pada skala bentang alam**

Panduan 2.1. Dasar pijakan para pihak yang berbeda dalam pengambilan keputusan pengelolaan bentang alam harus dipaduserasikan dengan cara membangun kesepakatan dan komitmen bersama.

Panduan 2.2. Diperlukan fasilitator yang diterima semua pihak untuk menjamin keberhasilan restorasi bentang alam.

Panduan 2.3. Forum para pihak perlu dibentuk untuk mendorong proses menuju pembentukan Dewan Kehutanan Daerah dengan mandat untuk berkarya dalam skala bentang alam.



## Manage in an adaptive experimental framework and manage for change

GL 3.1. Plans and management measures for a landscape have to be developed based on documented learning processes dealing with short-term, medium-term and long-term changes.

GL 3.2. The knowledge and understanding of all stakeholders from different sectors is needed to allow for adaptive management of landscapes to address diverse needs and to help stakeholders dealing with the dynamics of changes in the landscape.

GL 3.3. Learning processes need to be put in place as part of the implementation of landscape restoration so that activities can be continuously adapted to anticipate changing needs and conditions.

GL 3.4. It is difficult to predict future changes in landscapes and it is important that managers constantly monitor these changes and adapt their activities to ensure the continued supply of environmental goods and services.



Panduan 3.4. Prediksi perubahan bentuk alam sulit dilakukan, dan karenanya pengelolaan bentuk alam harus memonitor perubahan secara terus menerus dan melakukan adaptasi kegiatan untuk menjamin kelestarian pasokan barang dan jasa dari lingkungan.

Panduan 3.3. Proses pembelajaran perlu diimplementasikan sebagai bagian dari restorasi bentuk alam, sehingga akuitas tersebut dapat dilakukan secara berkala untuk mengantisipasi perubahan kebutuhan dan keadaan.

Panduan 3.2. Pengetahuan dan pengalaman dari semua pemangku kepentingan di berbagai sektor diperlukan untuk memungkinkan adanya pengelolaan bentuk alam yang adaptif dalam memenuhi kepentingan yang beragam dan membantu para pemangku kepentingan dalam menghadapi dinamika perubahan dalam sebuah bentuk alam.

Panduan 3.1. Rencana dan langkah-langkah pengelolaan untuk bentuk alam perlu dibangun berdasarkan proses pembelajaran yang terdokumentasi dalam mengatasi masalah dalam kurun waktu jangka pendek, menengah dan panjang.

## Bentuk alam dikelola secara adaptif terhadap perubahan





# Principle 4.

## Manage the entire mosaic not just the pieces

GL 4.1. Planning and priority setting for management of land use mosaics has to be aligned with District and Provincial Spatial Planning and must be based upon sound scientific approaches.

GL 4.2. Implementation of landscape restoration has to be agreed by the owners and users of all the pieces of the landscape mosaic and must be based upon a full understanding of the rights and responsibilities of each party.

GL 4.3. The livelihoods of local people and the habitats of wildlife depend upon different parts of the landscape under management by different land owners and users. A challenge for landscape restoration is to ensure that the different parts of the landscape can be managed in ways that meet the needs of people and wildlife species. This requires detailed knowledge of both local peoples' livelihoods and of the ecosystem.



## Pengelolaan mosaic fataguna lahan secara terpadu

4.1. Perencanaan dan penyusunan prioritas pengelolaan mosaic fataguna lahan harus disinkronkan dengan Rencana Tata Ruang Wilayah Kabupaten/Kota yang disusun berdasarkan kajian ilmiah.

4.2. Implementasi restorasi bentang alam harus disepakati oleh para pihak dan disertai pemahaman terhadap hak dan kewajiban masing-masing.

4.3. Matapencarian masyarakat lokal dan habitat bagi satwa liar bergantung pada masing-masing mosaic bentang alam yang dikelola oleh masing-masing pemilik dan pengguna lahan. Tantangan dalam restorasi bentang alam adalah menjamin bahwa setiap bagian dalam bentang alam dapat dikelola sedemikian rupa sehingga memenuhi kebutuhan masyarakat lokal dan habitat bagi satwa liar. Untuk itu diperlukan pengetahuan lengkap mengenai matapencarian lokal dan ekosistem secara keseluruhan.



## Ensure economic efficiency and financial viability

GL 5.1. Landscape restoration requires sustained financial support and this may be provided by the National Budget, Local Budget, private, Community, and external institutions.

GL 5.2. Landscape restoration must support the economic efficiency and profitability of different land uses and contribute to the improved livelihoods of local people.

GL 5.3. Payments for environmental services such as Reduced Emissions from Deforestation and Forest Degradation (REDD) may contribute to the cost of landscape restoration and compensate local stakeholders for loss of income resulting from landscape conservation measures.



## Jaminan efisiensi ekonomi dan keberlanjutan pendanaan

5.1. Restorasi bentang alam memerlukan dukungan pendanaan yang berkelanjutan. Pendanaan ini dapat berasal dari APBN, APBD, perbankan, pihak swasta, masyarakat, dan atau instansi yang tidak mengikat.

5.2. Restorasi bentang alam harus mendukung efisiensi ekonomi dan keuntungan dari segenap pengguna lahan dan menyumbang pada perbaikan matapencaharian masyarakat lokal.

5.3. Pembayaran jasa lingkungan seperti Pengurangan Emisi Karbon dari Pencegahan Deforestasi dan Pengurangan Degradasi Hutan (REDD) dapat menyumbang biaya restorasi bentang alam dan memberikan kompensasi atas kerugian yang dialami oleh masyarakat lokal yang diakibatkan dari langkah-langkah dalam restorasi bentang alam.



# Principle 6.

## The integrity and resilience of ecological systems within the landscape will be essential component of the landscape approach

GL 6.1. Landscape restoration should be directed to maintaining local biodiversity and establishing a mosaic of land uses, in order to protect the integrity of and optimize the environmental services provided by the landscape.

GL 6.2. Habitat corridors and strips of riparian vegetation must be maintained to enable the dispersal of biodiversity through the landscape.

GL 6.3. An appropriate balance must be achieved between natural and plantation forests and other land uses to ensure a diversity of land uses to meet present and future needs of stakeholders.

GL 6.4. Species-rich agro-forests have a special value in Indonesia in providing goods and services for local people whilst maintaining ecological services and supporting a rich biodiversity.

GL 6.5. Local knowledge is valuable in the implementation of landscape restoration and can ensure that the full diversity of landscape values are maintained or restored and that local cultural, and spiritual values persist and the beauty of the landscape is protected.



- 6.1. Restorasi bentang alam harus dilakukan untuk memperbaiki keanekaragaman hayati, mosaic tataguna lahan, dan menjaga integrasi untuk mengoptimalkan fungsi dan manfaatnya.
- 6.2. Koridor habitat dan kanan-kiri sungai harus dipelihara guna memungkinkan terjadinya persebaran keanekaragaman hayati dalam sebuah bentang alam.
- 6.3. Keseimbangan yang tepat harus tercapai antara hutan alam dan hutan tanaman serta penggunaan lahan lainnya agar terjamin keberagaman pemanfaatan lahan dalam memenuhi kebutuhan kini dan masa mendatang.
- 6.4. Wanatani yang kaya jenis memiliki nilai penting di Indonesia dalam menyumbangkan barang dan jasa lingkungan untuk masyarakat lokal sekaligus berperan dalam memelihara jasa ekosistem dan mendukung kekayaan keanekaragaman hayati.
- 6.5. Dalam implementasi restorasi bentang alam harus memperhatikan kan, mengadopsi, serta menghargai pengetahuan dan kearifan lokal agar fungsi dan keindahan bentang alam tetap terjaga.
- 6.6. Restorasi bentang alam menjadi komplemen penting dalam penyusunan dan evaluasi RT-RW Kabupaten/Kota.

## Pendekatan restorasi bentang alam memperhatikan esensi integritas dan daya lenting ekosistem



## Environmental, societal, technological and economic change will present new opportunities and challenges at landscape scales

GL 7.1. The UN Framework Convention on Climate Change (including an agreement on REDD) should be implemented in ways that maintain or restore landscape values.

GL 7.2. Landscape restoration has to anticipate and respond to the dynamic nature of the local and global economy. Economic changes will have impacts on what is possible and desirable in a landscape.

GL 7.3. Landscape restoration has to be taken into consideration in deciding on investments in infrastructure and industry.



**Dinamika sosial, ekonomi, dan teknologi memunculkan peluang serta tantangan dalam restorasi bentang alam.**

7.1. Konvensi perubahan iklim dan REDD harus menjadi peluang pendanaan tetapi juga tantangan bagi implementasi restorasi bentang alam.

7.2. Restorasi bentang alam harus mengantisipasi dinamika ekonomi baik lokal maupun global.

7.3. Restorasi bentang alam harus menjadi acuan dalam investasi ekonomi, infrastruktur, dan industri.



# Principle 8.

## The capacity of institutions operating within the landscape will need to be strengthened

GL 8.1. Landscape restoration requires improvements in the quantity and quality of human resources and must be supported through training, technical assistance, focus group discussions, and broad consultations.

GL 8.2. Implementation of landscape restoration requires the establishment of working groups involving all stakeholders and these must ensure that the activities of different sectoral institutions are coordinated at a landscape scale.



Panduan 8.2. Implementasi restorasi bentang alam memerlukan pembentukan POKJA (Kelompok Kerja) yang melibatkan para pihak (multi stakeholders).

Panduan 8.1 Restorasi bentang memerlukan peningkatan kualitas dan kuantitas sumber daya manusia melalui berbagai kegiatan seperti diklat, pendampingan, focus group discussion, konsultasi dan lain-lain

## Kapasitas institusi yang terlibat dalam pengelolaan bentang alam perlu diperkuat

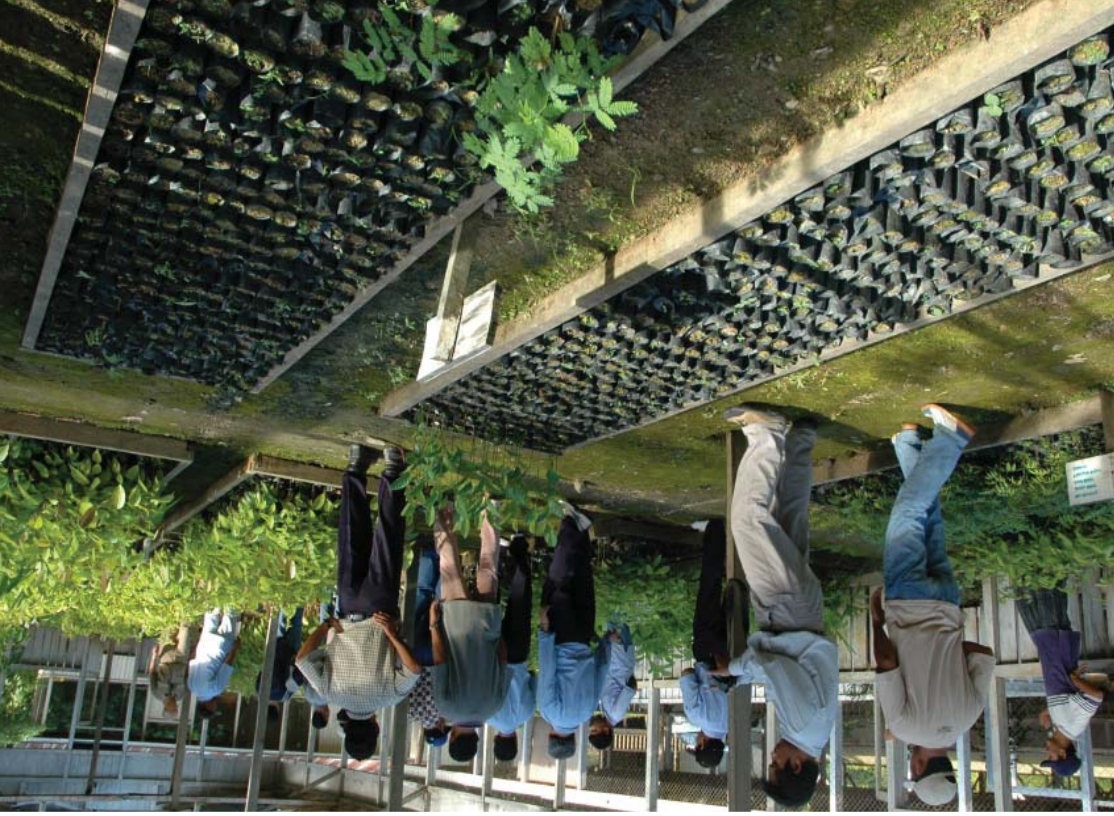


## Appropriate legal and policy frameworks must be in place to enable landscape scale interventions

GL 9.1. Adjustment and establishment of laws and regulations is needed to secure rights and reduce uncertainty of stakeholders whose economic activities are influenced by the implementation of landscape restoration.

GL 9.2. Multistakeholder and especially multi-sectoral coordination is needed to implement the laws and regulations in support of landscape restoration.

GL 9.3. Multistakeholder agreement is needed in the designation of coordinators and management units for the implementation of landscape restoration.



## Aturan perundang-undangan dan kerangka intervensi bentang alam.

Panduan 9.1. Penyesuaian dan pembentukan peraturan perundang-undangan diperlukan untuk menjamin kepastian hukum, kepastian areal dan kepastian usaha dalam implementasi restorasi bentang alam.

Panduan 9.2. Koordinasi para pihak diperlukan untuk melaksanakan peraturan perundang-undangan dalam implementasi restorasi bentang alam.

Panduan 9.3. Diperlukan persetujuan para pihak dalam menetapkan koordinator dan unit pengelolaannya untuk implementasi restorasi bentang alam.



# Principle 10.

## Commitment to implementation and enforcement

GL 10.1. Dissemination of information is needed for each step in landscape restoration to secure multistakeholder commitment.

GL 10.2. Role, rights, and responsibilities must be clear and agreed for consistent implementation of landscape restoration.

GL 10.3. Continuous monitoring and evaluation with the participation of all stakeholders is required for effective and efficient implementation of landscape restoration.

GL 10.4. To secure the success of landscape restoration, effective and consistent law enforcement is needed.



**Dalam implementasi FLR diharuskan adanya komitmen, konsistensi dan penegakan hukum**

Panduan 10.1. Diperlukan sosialisasi dalam setiap tahapan restorasi bentang alam untuk memperoleh komitmen para pihak.

Panduan 10.2. Diperlukan pembagian peran, hak, dan kewajiban yang proporsional dalam implementasi kegiatan restorasi bentang alam secara konsisten.

Panduan 10.3. Dalam implementasi restorasi bentang alam, diperlukan kegiatan monitoring dan evaluasi secara kontinyu untuk melihat efektivitas dan efisiensi.



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