

守护地球之肺：森林保护行动

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Protect the Lungs of the Earth: Forest Conservation

Presenter: xxxx

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目录

CONTENTS

01 森林的呼唤

03 保护策略

02 危机溯源

04 行动召唤



Table of Contents

CONTENTS

01 The Call of the Forest

03 Protection Strategy

02 Crisis Tracing

04 Call to Action





01

森林的呼唤



01

The Call of the Forest



全球森林现状与危机

01

森林面积锐减

过去 30 年，地球失去 1.78 亿公顷原始森林，相当于每分钟消失 20 个足球场。热带雨林、温带阔叶林、北方针叶林三大系统同步衰退，亚马逊、刚果、东南亚三大碳汇区退化速度超预期。

02

自然再生速度滞后

联合国粮农组织报告显示，自然再生速度远低于砍伐速度，森林面积持续萎缩。危机已逼近气候临界点，全球生态系统面临巨大挑战。

03

森林保护的紧迫性

森林是地球生态的重要组成部分，其保护刻不容缓。森林的减少不仅影响气候，还对生物多样性、水资源等产生深远影响。保护森林，就是保护我们共同的家园。



Global Forests: Current State and Crisis

01

Forest area is declining sharply.

Over the past 30 years, the Earth has lost 178 million hectares of primary forest, equivalent to 20 football fields disappearing every minute. The three major forest systems—tropical rainforests, temperate broadleaf forests, and boreal forests—are all in decline simultaneously. The degradation rates in the three major carbon sink regions—the Amazon, the Congo, and Southeast Asia—have exceeded expectations.

02

The rate of natural regeneration is lagging behind.

The Food and Agriculture Organization of the United Nations reports that the rate of natural regeneration is far lower than the rate of deforestation, leading to a continuous decline in forest area. The crisis is approaching a climate tipping point, posing a significant challenge to the global ecosystem.

03

The Urgency of Forest Conservation

Forests are a vital component of Earth's ecosystem, and their protection is an urgent priority. The reduction of forest cover not only impacts the climate but also has profound effects on biodiversity, water resources, and more. Protecting forests means safeguarding our shared home.





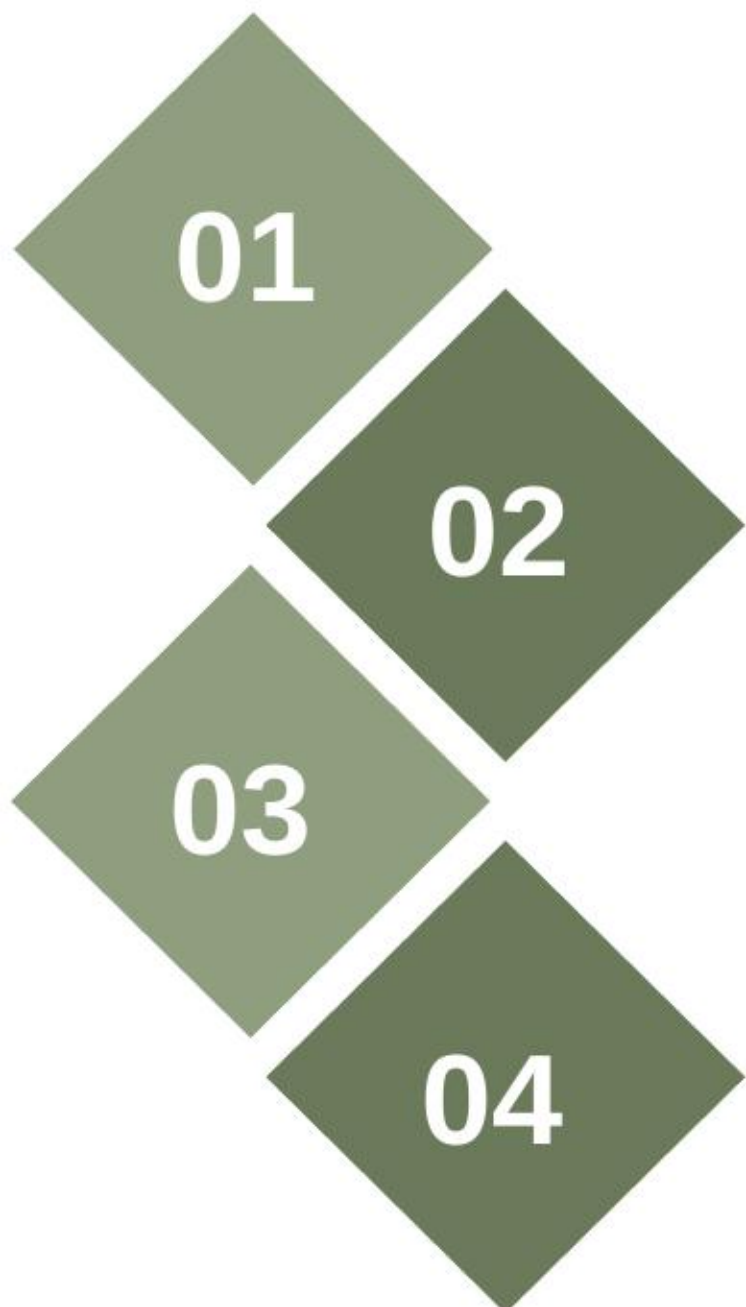
森林的多维价值

气候调节

全球森林每年吸收 29 亿吨碳，占陆地碳汇 45%。森林通过光合作用吸收二氧化碳，释放氧气，对缓解全球气候变化具有不可替代的作用。

生物多样性

森林承载 80% 陆地物种，是地球上生物多样性最丰富的生态系统之一。保护森林就是保护无数物种的生存家园，维护生态平衡。



水源涵养

世界 75% 可用淡水依赖森林涵养。森林能够保持水土，调节径流，减少洪水和干旱的发生，为人类提供稳定的水资源。

16 亿人直接依赖森林获取食物、药材与收入。森林对原住民而言不仅是自然资源，更是文化和精神的寄托。保护森林，就是保护他们的生活方式和文化遗产。



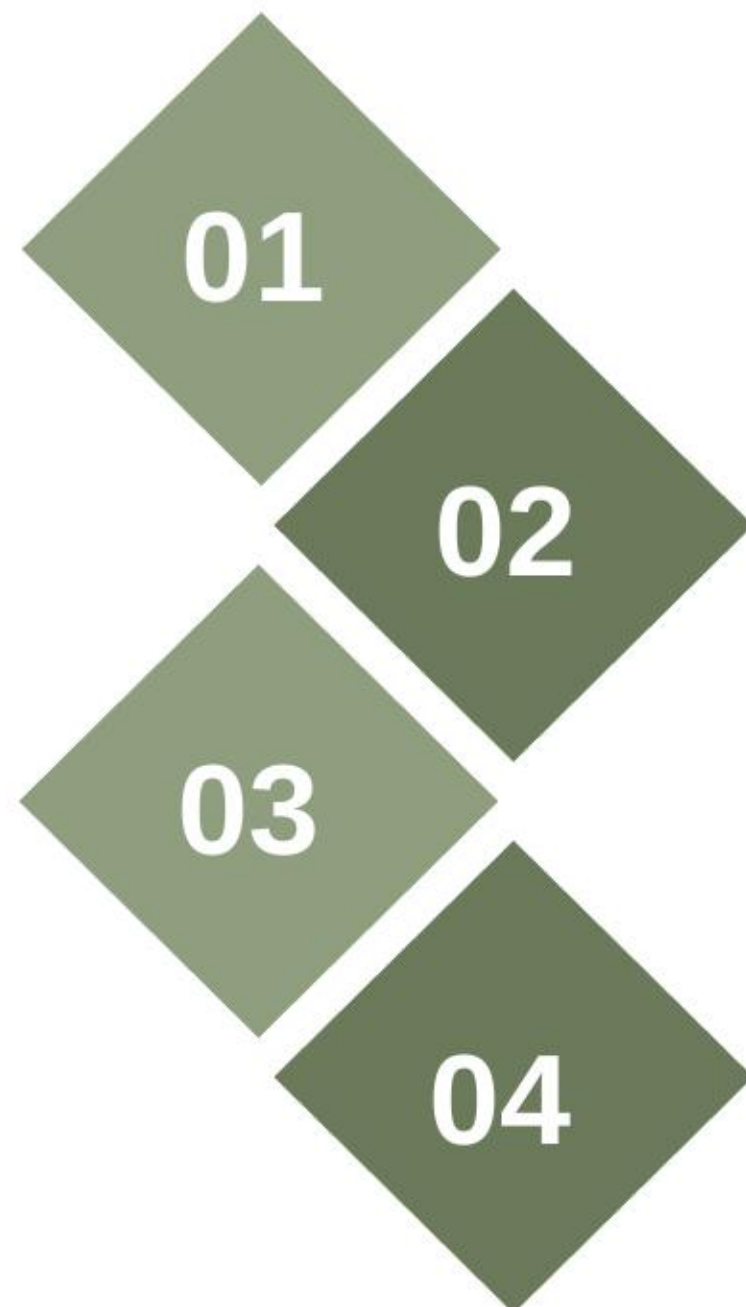
The Multidimensional Value of Forests

Climate regulation

Global forests absorb 2.9 billion tons of carbon annually, accounting for 45% of the terrestrial carbon sink. Through photosynthesis, forests absorb carbon dioxide and release oxygen, playing an irreplaceable role in mitigating global climate change.

Biodiversity

Forests host 80% of terrestrial species and are among the most biodiverse ecosystems on Earth. Protecting forests means safeguarding the habitats of countless species and maintaining ecological balance.



Water conservation

75% of the world's available freshwater relies on forests for conservation. Forests help retain water and soil, regulate runoff, reduce the occurrence of floods and droughts, and provide humanity with a stable water supply.

1.6 billion people directly depend on forests for food, medicine, and income. For indigenous peoples, forests are not merely natural resources but also cultural and spiritual anchors. Protecting forests means safeguarding their way of life and cultural heritage.



02

危机溯源

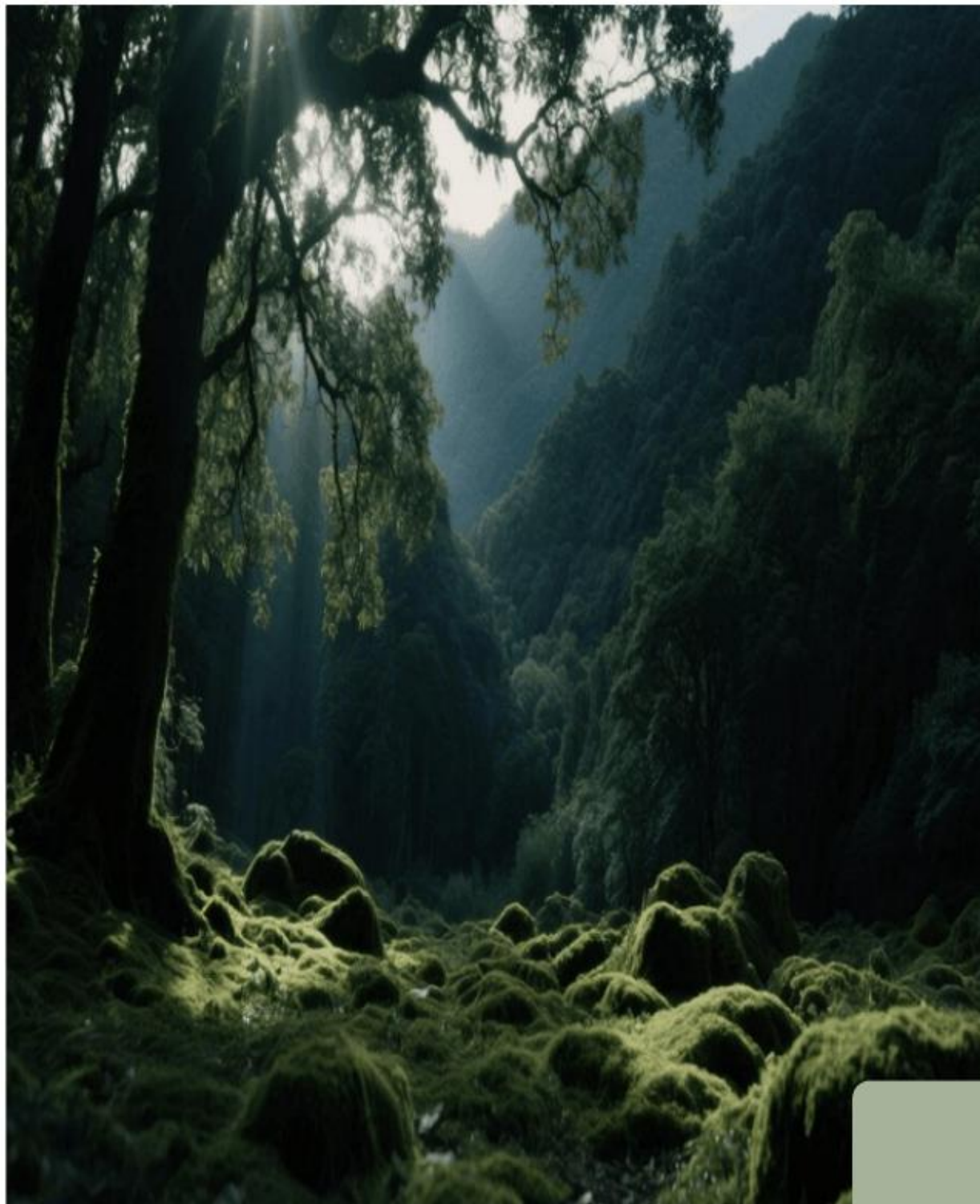


02

Crisis Tracing



砍伐背后的经济驱动



市场需求推动砍伐

国际市场对牛肉、棕榈油、大豆、纸浆的刚性需求，推高产地价格，形成“砍伐—种植—出口—再扩张”循环。这种经济模式是森林砍伐的重要推手。

非法木材贸易猖獗

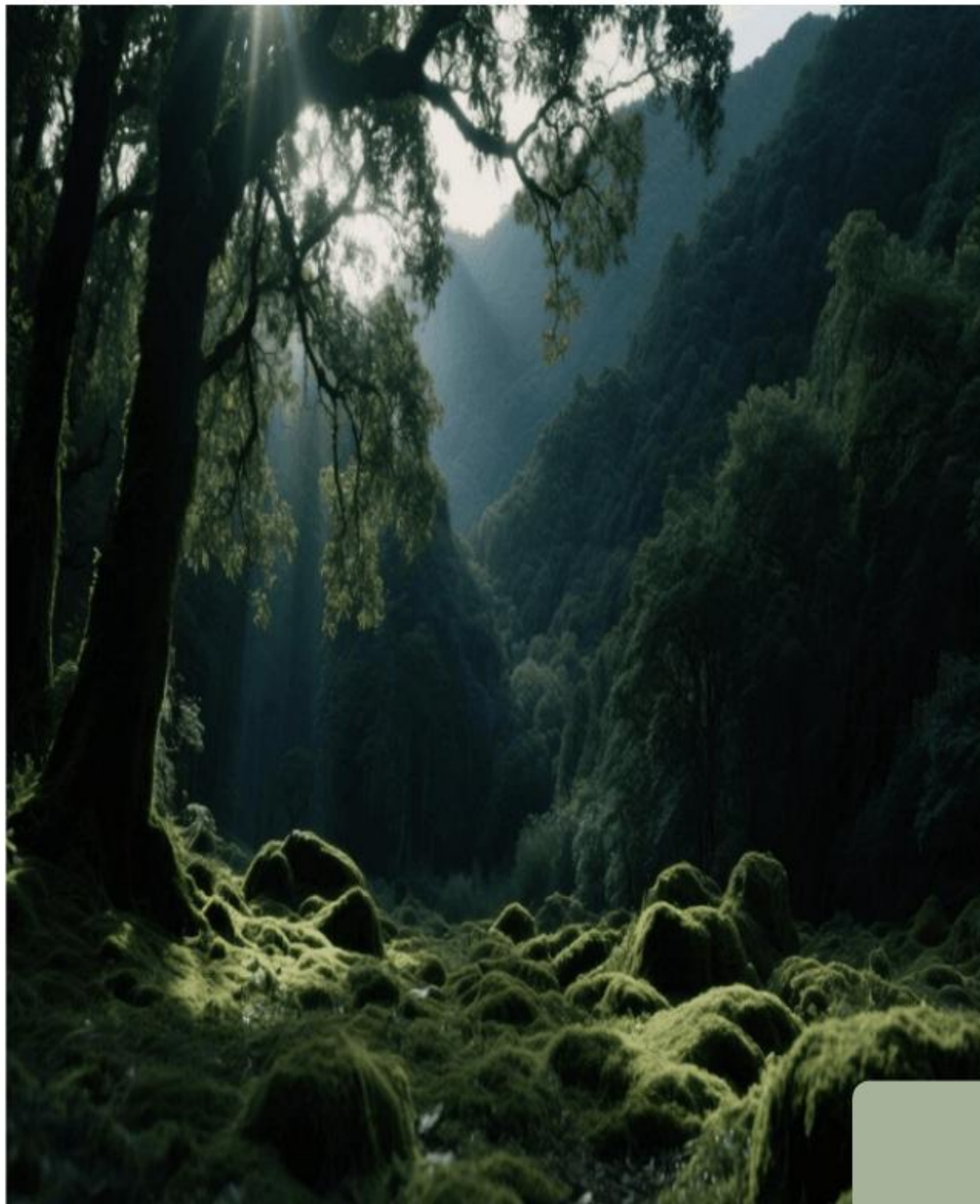
非法木材贸易年规模超 300 亿美元，腐败与执法缺位放大利润。非法砍伐不仅破坏森林，还扰乱了正常的市场秩序。

土地财政的诱惑

短期土地财政诱惑使地方政府默许烧垦。一些地方政府为了短期经济利益，忽视了森林的长远价值，导致森林资源被过度开发。



The Economic Drivers Behind Deforestation



Market demand drives deforestation.

The rigid global demand for beef, palm oil, soybeans, and pulp drives up prices in producing regions, creating a cycle of "deforestation—cultivation—export—further expansion." This economic model is a major driver of deforestation.

Illegal timber trade is rampant.

The illegal timber trade has an annual value exceeding \$30 billion, with corruption and lax enforcement boosting profits. Illegal logging not only destroys forests but also disrupts normal market operations.

The allure of land finance

The temptation of short-term land finance has led local governments to tacitly permit slash-and-burn cultivation. In pursuit of short-term economic benefits, some local governments have overlooked the long-term value of forests, resulting in the overexploitation of forest resources.



森林减少与极端灾害的互促机制

林地消失削弱蒸腾作用，区域降水减少 20%—30%，引发相邻农田干旱。亚马逊若退化成稀树草原，将额外释放 1400 亿吨碳，相当于全球 10 年化石燃料排放。烧垦烟雾颗粒改变云微物理结构，抑制降水，延长火季。森林的减少不仅加剧了气候变化，还导致极端灾害事件频繁发生，形成恶性循环。



The Mutual Reinforcement Mechanism Between Forest Reduction and Extreme Disasters

The disappearance of forestland weakens evapotranspiration, reducing regional precipitation by 20%–30% and triggering droughts in adjacent farmland. If the Amazon were to degrade into a savanna, an additional 140 billion tons of carbon would be released, equivalent to ten years of global fossil fuel emissions. Smoke particles from slash-and-burn practices alter the microphysical structure of clouds, suppress rainfall, and prolong the fire season. The reduction of forests not only intensifies climate change but also leads to more frequent extreme disasters, creating a vicious cycle.





03

保护策略

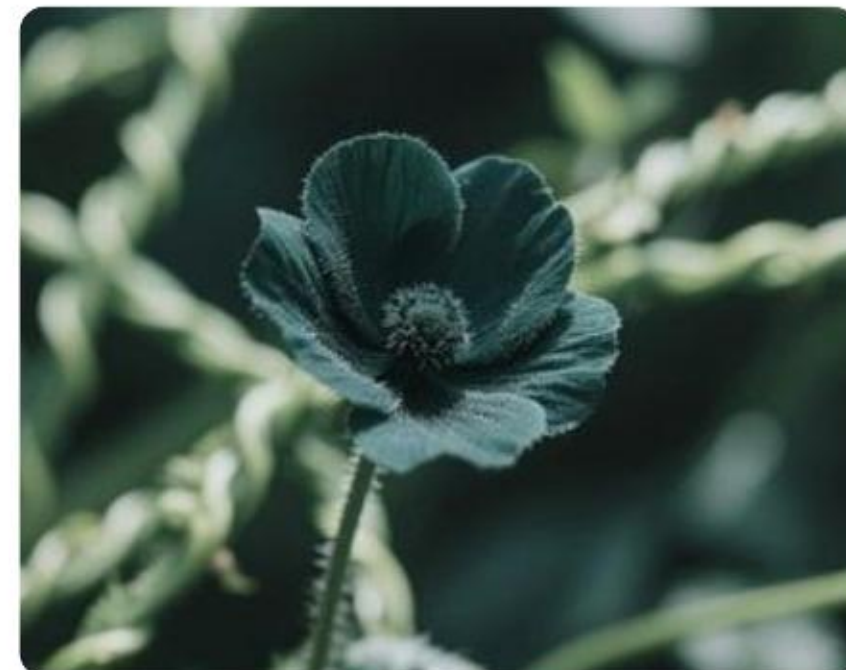


03

Protection Strategy



国际政策与资金机制



全球治理工具

REDD+ 机制允许发展中国家通过减少毁林获得碳汇收益，已完成 29 国谈判，累计筹资超 110 亿美元。欧盟零毁林供应链法案要求七大商品自 2024 年起无毁林证据方可入市。这些政策为森林保护提供了重要的资金支持和法律保障。



资金下沉的重要性

森林碳汇自愿市场 2023 年交易 3.6 亿吨，价格区间 8—30 美元。公共资金与私人资本各有优劣，但资金必须下沉到社区，才能确保保护措施长期有效。



International Policy and Funding Mechanisms



Global governance tools

The REDD+ mechanism allows developing countries to obtain carbon sink revenue by reducing deforestation. Negotiations have been completed with 29 countries, raising over USD 11 billion in cumulative funding. The EU's zero-deforestation supply chain legislation requires that seven major commodities must demonstrate no evidence of deforestation from 2024 onward to enter the market. These policies provide crucial financial support and legal safeguards for forest conservation.



The Importance of Channeling Funds to the Grassroots Level

In 2023, the voluntary market for forest carbon sinks traded 360 million tons, with prices ranging from 8 to 30 US dollars. Public funds and private capital each have their own advantages and disadvantages, but funding must reach the community level to ensure the long-term effectiveness of conservation measures.





科技赋能森林监测

01

卫星监测技术

NASA 的 GEDI 卫星激光雷达可穿透树冠测量生物量，误差小于 10%。这种技术能够实时监测森林的变化，为森林保护提供科学依据。

02

高分辨率影像

Planet Labs 每日 3 米分辨率影像实现砍伐 48 小时内预警。及时的预警能够有效阻止非法砍伐行为，保护森林资源。

03

区块链追溯平台

区块链木材追溯平台将每棵树生成唯一数字指纹，已在加蓬试点追踪 90% 原木。这种技术能够确保木材的合法来源，打击非法木材贸易。

04

AI 声纹监测

AI 声纹监测识别非法链锯声，实时推送护林员。这种技术能够快速发现非法砍伐行为，提高森林保护的效率。



Technology-Enabled Forest Monitoring

01

Satellite monitoring technology

NASA's GEDI satellite LiDAR can penetrate tree canopies to measure biomass with an error margin of less than 10%. This technology enables real-time monitoring of forest changes, providing a scientific basis for forest conservation.

02

High-resolution imagery

Planet Labs' daily 3-meter resolution imagery enables deforestation alerts within 48 hours. Timely warnings can effectively prevent illegal logging and protect forest resources.

03

Blockchain Traceability Platform

The blockchain timber traceability platform creates a unique digital identity for each tree and has been trialed in a pilot project in Gabon, tracking 90% of all logs. This technology ensures the legal origin of timber and helps combat the illegal timber trade.

04

AI Voiceprint Monitoring

AI voiceprint monitoring identifies the sound of illegal chainsaws and pushes real-time alerts to forest rangers. This technology enables the rapid detection of illegal logging activities, thereby enhancing the efficiency of forest protection.





社区共管与生态经济

社区林营的成功案例

尼泊尔社区林营者超过 2.2 万个，10 年内森林覆盖率提升 5%，村民通过林下药材、生态旅游、碳汇分红获得人均年收入增加 90 美元。社区参与是森林保护的重要模式。



生态农业的实践

非洲刚果盆地小农可可联盟，以遮荫可可替代烧垦，出口溢价 20%，每公顷留存 30% 树冠。生态农业不仅保护了森林，还提高了农民的收入。



橡胶采集体系

巴西橡胶采集体系保障原住民收入同时维持 120 万公顷旱季常绿。这种模式实现了生态保护与经济的双赢。



Community Co-management and Ecological Economy

Case Studies in Community-Based Forest Management

There are over 22,000 community forestry user groups in Nepal. Within a decade, forest coverage has increased by 5%, and villagers have achieved an average annual income increase of 90 US dollars per capita through understory medicinal herbs, ecotourism, and carbon credit dividends. Community participation is a vital model for forest conservation.



The practice of ecological agriculture.

The Smallholder Cocoa Alliance in the Congo Basin of Africa uses shaded cocoa as an alternative to slash-and-burn farming, achieving a 20% export premium while retaining 30% canopy cover per hectare. This agroecological approach not only protects forests but also increases farmers' income.



Rubber collection system

The Brazilian rubber tapping system ensures income for indigenous communities while maintaining 1.2 million hectares of evergreen forest during the dry season. This model achieves a win-win outcome for both ecological conservation and economic development.





04

行动召唤



04

Call to Action



企业零毁林承诺路径



设定零毁林目标

企业应设定 2025 年前零毁林目标并公开披露。明确的目标能够为企业提供方向，同时接受社会监督，增强企业的社会责任感。

绘制供应链地图

企业需绘制产品全供应链地图，识别高风险区域。这是实现零毁林承诺的第一步，能够帮助企业了解产品来源，确保供应链的可持续性。

要求供应商提供证明

企业要求供应商提供卫星遥感验证的无毁林证明。这能够确保原材料的合法来源，从源头上杜绝毁林行为。

签订长期采购协议

企业与生产者签订长期溢价采购协议，分摊转型成本。这不仅有助于生产者实现可持续生产，还能保障企业的原材料供应。



Corporate Roadmap to Zero-Deforestation Commitments



Setting a zero deforestation target

Enterprises should set a zero-deforestation target by 2025 and publicly disclose it. Clear targets can provide direction for enterprises, while also subjecting them to social oversight and enhancing their sense of social responsibility.

Mapping the Supply Chain

Companies must map the entire supply chain of their products to identify high-risk areas. This is the first step toward fulfilling zero-deforestation commitments, enabling businesses to understand the origins of their products and ensure the sustainability of their supply chains.

Ask the supplier to provide proof.

Companies require suppliers to provide deforestation-free certification verified by satellite remote sensing. This ensures the legal origin of raw materials and eliminates deforestation at its source.

Sign a long-term procurement agreement

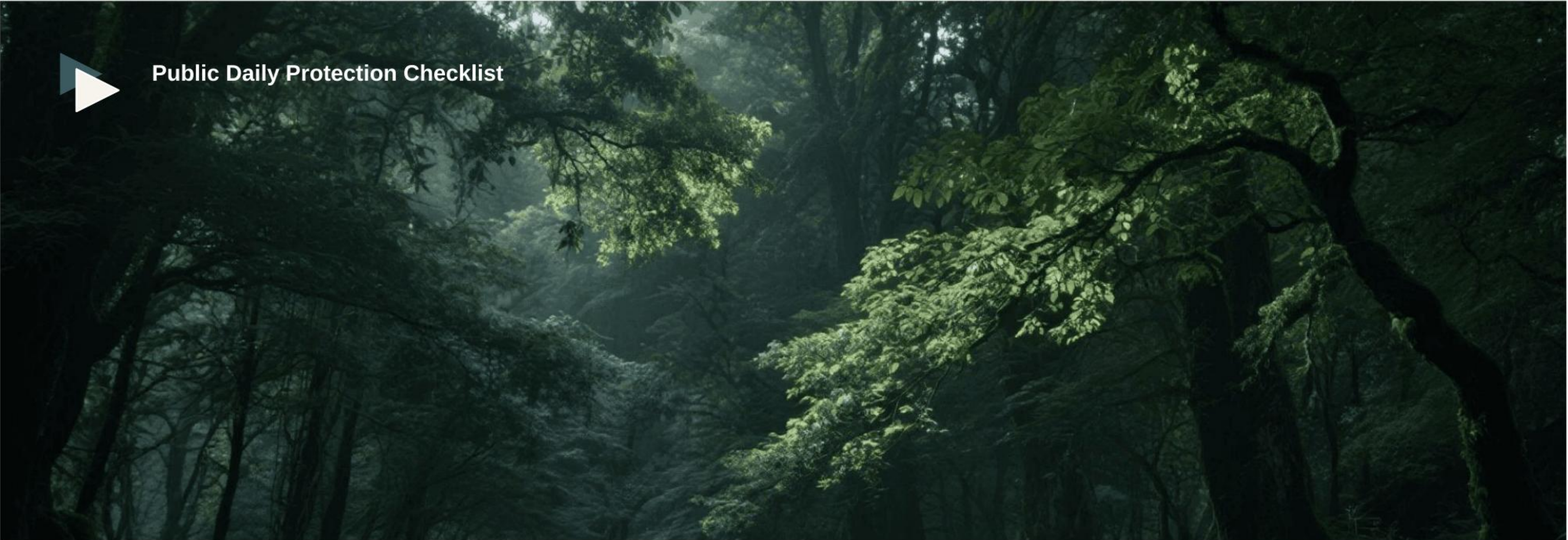
Enterprises sign long-term premium procurement agreements with producers to share the costs of transition. This not only helps producers achieve sustainable production but also ensures a stable supply of raw materials for the enterprises.



公众日常守护清单

公众的日常行动

公众可优先购买 FSC 、 PEFC 认证纸品，拒绝一次性筷子；减少牛肉摄入，每周一天植物蛋白替代；选购棕榈油成分透明的美妆与食品；使用银行与基金时挑选已 divest 毁林企业的绿色金融产品；参与城市植树志愿活动，每人每年种三棵树。这些日常行动能够为森林保护贡献力量。



Public Daily Protection Checklist

The daily actions of the public

The public can prioritize purchasing paper products certified by FSC and PEFC, and avoid disposable chopsticks; reduce beef consumption by replacing it with plant-based protein one day per week; choose cosmetics and food products with transparent palm oil ingredient sourcing; select green financial products from banks and funds that have divested from deforestation-linked companies; and participate in urban tree-planting volunteer activities, aiming to plant three trees per person annually. These daily actions can contribute to forest conservation efforts.





你我共建森林未来



协同网络的力量

政策提供规则与资金，科技降低监管成本，社区把森林当资产，企业兑现零毁林采购，公众用消费与选票施压。每一环都不可替代，共同构建森林保护的协同网络。

行动的号召

今日种下一棵树，明日收获一片气候安全。我们呼吁听众即刻加入本地森林守护组织，把 PPT 知识转化为线下持续行动，共同守护我们的森林家园。



Let's Build the Future of Forests Together



The Power of Collaborative Networks

Policies provide rules and funding, technology reduces regulatory costs, communities treat forests as assets, companies fulfill zero-deforestation procurement commitments, and the public exerts pressure through consumption and voting. Each link is irreplaceable, collectively building a collaborative network for forest protection.

Call to action

Plant a tree today, and reap a climate-secure tomorrow. We urge our audience to join local forest conservation organizations now, translating knowledge from presentations into sustained, real-world action, and together safeguard our forest home.



感谢观看

汇报人 :Kimi AI

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Thank you for watching

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