

The laws of nature

文章导读：地球上主要的碳库（即碳的储存库）包括陆地和海洋生态系统，以及大气和化石燃料。实现碳达峰与碳中和目标，除了要减少能源使用以及降低温室气体排放外，还要加强对生态系统及生物多样性的保护，增加生态系统碳汇来抵消人类活动造成的二氧化碳排放。碳汇即通过植树造林、种草、种植农作物、保护湿地等，利用植物光合作用吸收大气中的二氧化碳，并将其固定在植被和土壤中，从而减少温室气体浓度的活动或机制。



【1】 There is a financial case for investing in biodiversity

对生物多样性进行投资有财务依据

【2】 the natural world is a source of beauty and wonder, but it also provides humans with essential services. Jungles, **savannahs**¹ and **mangroves**² act as buffers against infectious diseases and storm surges. Forests channel moisture into rivers that **irrigate**³ crops, while their roots prevent landslides. At a gathering on Monday in Montreal, 196 governments from around the world pledged to protect and restore 30% or more of the Earth's water and land by 2030.

自然世界是美丽和奇迹的源泉，但它也为人类提供了必要的服务。丛林、稀树草原和红树林是抵御传染病和风暴潮的缓冲区。森林将水分输送到河流中，灌溉农作物，而其根部则可防止滑坡。周一在蒙特利尔举行的一次集会上，来自世界各地的196个政府承诺到2030年保护和恢复地球30%或更多的水和土地。

【3】 Lofty promises about preserving the world's biodiversity have been made and broken many times before. One step towards avoiding yet more disappointment is to emphasise the close link between preserving biodiversity and the widely held goal of reaching net-zero carbon emissions.

关于保护世界生物多样性的崇高承诺，此前已经多次做出，也多次被打破。避免

¹ **savannahs** / səˈvænəz/ (尤指非洲的)稀树草原

² **mangroves** / ˈmæŋˌɡroʊvz/.红树林植物

³ **irrigate** / ˈɪrɪɡeɪt/vt.灌溉；冲洗(伤口或身体部位)

更多失望的一个步骤是强调保护生物多样性与实现净零碳排放这一广泛目标之间的密切联系。

【4】The destruction of natural environments is depressing, relentless and hard to ignore. The area of coral reefs⁴ has halved since the 1950s and the rate of loss is accelerating. Some 10m hectares of forest are lost worldwide every year. Less known is the link between biodiversity and climate change. Each year more than a quarter of the carbon dioxide emitted by industry and agriculture is absorbed by natural ecosystems.

自然环境的破坏令人沮丧、无情且难以忽视。自 20 世纪 50 年代以来，珊瑚礁面积已减少一半，损失速度正在加快。全球每年约有 1000 万公顷的森林消失。生物多样性与气候变化之间的联系鲜为人知。每年工业和农业排放的二氧化碳中有四分之一以上被自然生态系统吸收。

【5】Around the world, investment in the energy transition⁵ is accelerating. Spending in 2022 on clean energy, for example, should reach \$1.4trn, roughly a fifth above the prepandemic level. Scores of countries and thousands of big companies have plans to get to net-zero emissions within the next 20-30 years. Given that biodiversity has an important role in meeting these carbon-reduction goals, you might think that it would feature highly in these plans.

在世界各地，对能源转型的投资正在加速。例如，2022 年用于清洁能源的支出将达到 1.4 万亿美元，大致高于疫情前水平。数十个国家和数千家大公司计划在未来二三十年内实现净零排放。鉴于生物多样性在实现这些减碳目标方面发挥着重要作用，你可能会认为生物多样性将在这些计划中发挥重要作用。

【6】Not so. For example, Joe Biden's chief piece of climate legislation, the Inflation Reduction Act, contains about \$400bn of subsidies for clean energy and other initiatives yet has too little to say about biodiversity. Faced with tighter regulation of emissions and carbon-pricing schemes, many bosses are now dedicating more time and cash to cutting their firms' carbon footprints. But most still regard biodiversity as a nice-to-have luxury that is far beyond their remit⁶.

并非如此。例如，乔·拜登（Joe Biden）的主要气候立法《通胀削减法案》（Inflation Reduction Act）包含了约 4000 亿美元的清洁能源和其他举措补贴，但对生物多样性却只字不提。面对对排放和碳定价计划的更严格监管，许多老板现在正投入更多的时间和现金来减少公司的碳足迹。但大多数人仍然认为生物多样性是一种奢侈的享受，远远超出了他们的职责范围。

1. 关于职责的英文表达

⁴ coral reefs 珊瑚礁

⁵ energy transition 能源转型

⁶ remit /'ri:mɪt/ 职权范围；控制范围；影响范围；汇款；汇付；免除，赦免（债务、职责、惩罚等）

(1) 除了常见的 **duty, obligation, responsibility** 外, 本文用了 **remit**, 英文的解释为: Someone's remit is the area of activity which they are expected to deal with, or which they have authority to deal with. 即表达职权范围; 控制范围; 影响范围的意思, 如:

Such decisions are outside the **remit** of this committee.

这样的决定超出了委员会的职权范围。

(2) 此外还有 **onus** /'ounəs/ 也可以表达职责的意思, 英文释义为: If you say that the onus is on someone to do something, you mean it is their duty or responsibility to do it. 即有 义务; 责任; 职责的意思。

The **onus** is on the shopkeeper to provide goods which live up to the quality of their description...

店主有义务提供质量与其描述相符的商品。

(3) **mantle** 英文释义为: If you take on the mantle of something such as a profession or an important job, you take on the responsibilities and duties which must be fulfilled by anyone who has this profession or job. 即(指某一职业或要职的)责任, 职责。

We have the rare opportunity to seize the **mantle** of national leadership.

这次是我们担当国家领导职责的天赐良机。

【7】That needs to change. Safeguarding biodiversity is an efficient way to control carbon emissions. More of the rising amounts of government spending being thrown at mitigating and adapting to climate change should be spent on it.

这需要改变。保护生物多样性是控制碳排放的有效途径。政府用于缓解和适应气候变化的开支应该更多地用于此。

【8】In addition, companies and investment firms that are allocating huge sums to developing clean-energy sources, re-engineering industrial processes and developing carbon-capture technologies should pay more attention to the opportunities from preserving ecosystems. By investing in biodiversity—directing capital to projects that repair an ecosystem, for example—companies can offset their emissions. By some estimates, schemes to manage carbon-rich **peatlands**⁷ and wetlands and to reforest cleared land could provide more than one-third of the emissions reductions that are needed to prevent more than 2°C of global warming.

⁷ **peatlands** .泥炭地

此外，投入巨资开发清洁能源、重新设计工业流程和开发碳捕获技术的公司和投资公司应该更加关注保护生态系统的机会。例如，通过对生物多样性的投资，将资本引向修复生态系统的项目，公司可以抵消其碳排放。据一些估计，管理富含碳的泥炭地和湿地以及重新造林已清理土地的计划可以提供防止全球变暖超过 2°C 所需的三分之一以上的减排。

【9】Key to **marshalling**⁸ more capital is better measurement, so that the link between investment in natural projects, biodiversity and carbon is made clear. Today some so-called carbon- offset schemes that involve firms paying money to, say, plant a forest, are **dubious**⁹ and opaque—and belong to the realm of **con-artists**¹⁰ and **scams**¹¹ rather than science. Better guidelines and practice can help and so can new technology. Drones and satellites can improve the measurement of biodiversity and accounting systems can measure how spending on biodiversity compares with funnelling cash into other kinds of carbon management.

筹集更多资金的关键在于更好的衡量，从而明确自然项目投资、生物多样性和碳排放之间的联系。如今，一些所谓的碳抵消计划涉及公司花钱种植森林，这些计划是可疑和不透明的，属于骗子和骗局的领域，而不是科学领域。更好的指导方针和实践会有所帮助，新技术也会有所帮助。无人机和卫星可以改善对生物多样性的衡量，会计系统可以衡量生物多样性支出与向其他类型的碳管理投入资金的情况。

【10】The services ecology
服务生态

【11】The planet is in a **vicious**¹² cycle in which global warming damages ecosystems, in turn impairing their ability to absorb carbon. Over the past 20 years the Amazon has become a net source of carbon dioxide, emitting 13% more than it captures. Spending money on nature need not only be an act of **philanthropy**¹³. It can also be attractive for governments and firms investing in mitigating climate change.

地球正处于一个恶性循环中，全球变暖破坏了生态系统，进而削弱了它们吸收碳的能力。在过去的 20 年里，亚马逊雨林已经成为二氧化碳的净排放源，排放的二氧化碳比吸收的二氧化碳多 13%。把钱花在自然上不仅是一种慈善行为。它对投资缓解气候变化的政府和企业也有吸引力。

⁸ **marshalling** /'mɑ:rlɪŋ/ 结集；收集；安排；控制人群；组织；维持秩序 marshal 的现在分词

⁹ **dubious** /'du:biəs/ adj. 怀疑；无把握；拿不准

¹⁰ **con-artists** 骗子

¹¹ **scams** /skæmz/ n. 欺诈；诈骗骗局

¹² **vicious** /'viʃəs/ adj. 恶毒的；狂暴的；残酷的；凶猛危险的；充满仇恨的；严厉的；恶劣的

¹³ **philanthropy** /fr'lənθəpi/ n. 慈善事业；慈善；博爱；乐善好施