第五版《全球生物多样性展望》

COP decisions 13/29 and 14/35 – GBO-5 should provide:

- A report on progress to Aichi Biodiversity Targets, and contributions to the SDGs;
- A basis for post-2020 global biodiversity framework

GBO-5 should draw upon, 6th National Reports, IPBES GA etc.

167 National Reports and **170** NBSAPs analysed

93 References to national reports from **59** Parties

675 Citations to academic literature and technical reports

50 Indicators; Focus on trends 2000-2020

926 Comments on the first draft

第一部分. 导言

生物多样性促进可持续发展

第二部分. 2020年生物多样性现状

爱知生物多样性目标的实现进度

第三部分

通往2050年生物多样性愿景之路

第一部分. 导言

生物多样性促进可持续发展

Biodiversity → SDG

- ✚ Contributes
- ✚ Supports
- ! Loss Jeopardizes

SDG → Biodiversity

- ▲ Contributing
- ▽ Enabling
- ⭘ Constraining

可持续发展目标	爱知生物多样性目标	生物多样性对可持续发展目标的影响	可持续发展目标对生物多样性的影响
1	18	✚ !	▽ ⭘
2	7, 13, 16	✚ !	▲ ▽ ⭘
3		✚ !	▽
4			▽
5			▽
6	5, 14	✚ !	▲ ▽
7		✚	▲ ⭘
8	4	✚	▽ ⭘
9		✚	▽ ⭘
10			▽
11		✚ !	▲
12	1	✚	▲
13		✚ !	▲ ⭘
14	3, 6, 8, 10, 11	✚ !	▲
15	2, 5, 9, 11, 12, 15, 16	✚ !	▲
16			▽
17	19, 20		▽

第二部分. 2020年生物多样性现状

爱知生物多样性目标的实现进度

For each Aichi Biodiversity Target:

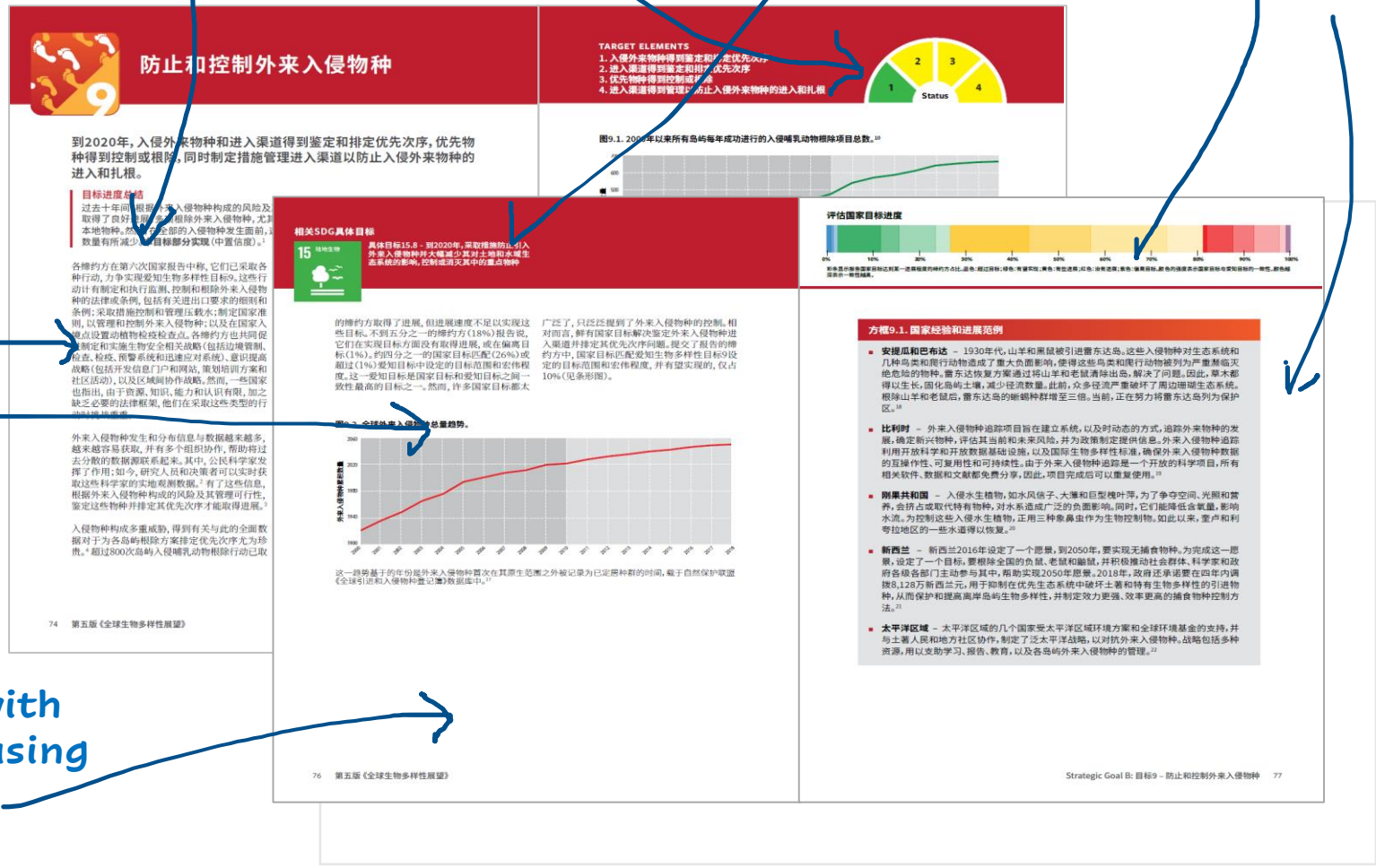
Summary of progress towards target and each element

Most relevant SDG target(s)

Analysis and examples from national report

Narrative based on national reports and scientific literature

Indicator based charts with data since 2000 and focusing on changes since 2010



2% Parties report that they will exceed national targets

24% Parties report that they are on track to reach national targets

55% report progress but not at a rate that will allow the target to be

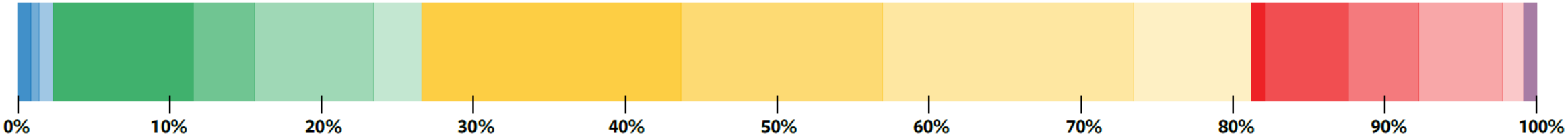
18% report that they are making no progress towards their targets

1% report they are moving away from the target

About a quarter of national targets are similar to (26%) or exceed (1%) the level of ambition and scope set out in the Aichi Target.

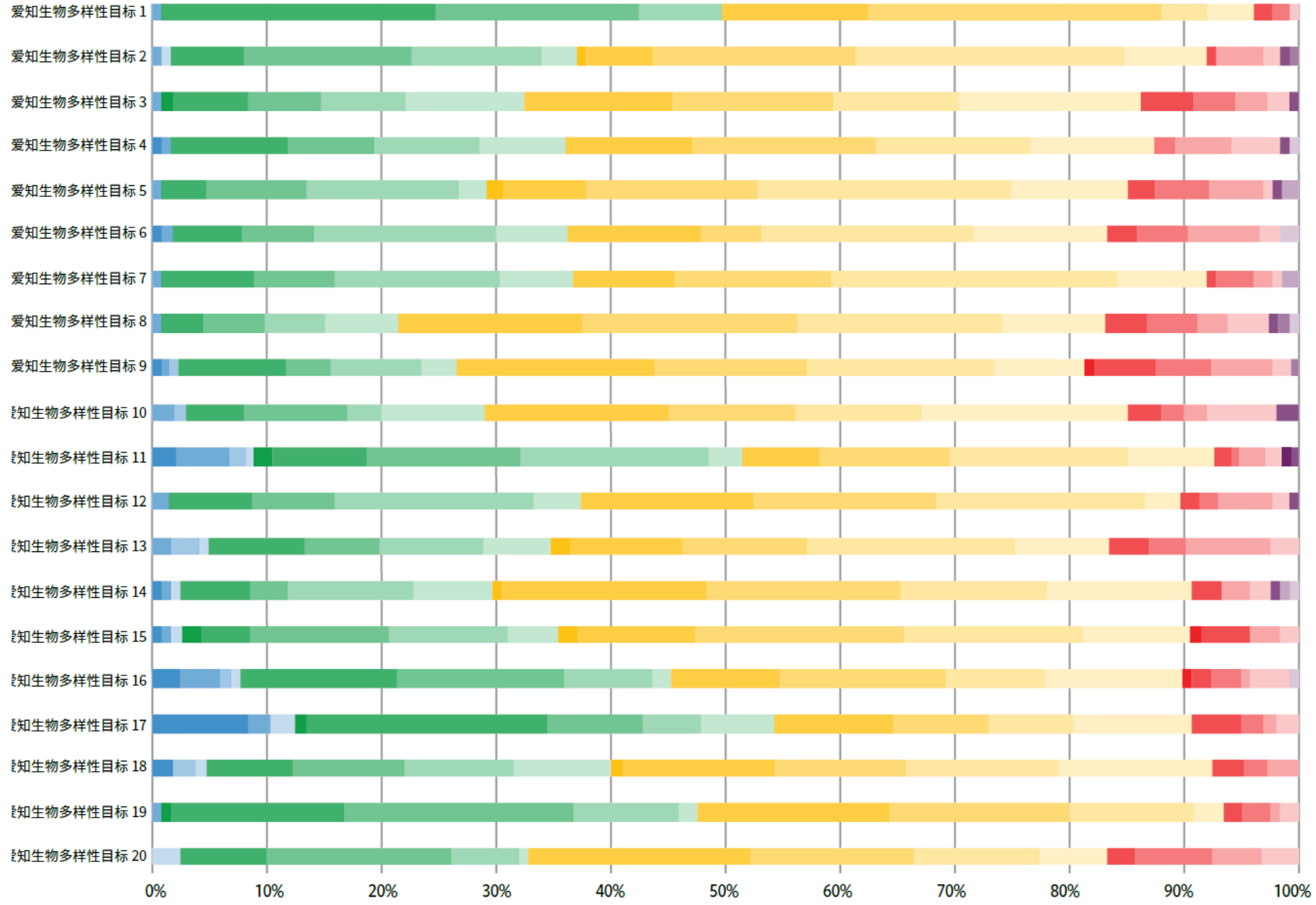
Only 10% of reporting parties have national targets of similar scope and ambition to Aichi Biodiversity Target 9 and are on track to meet them

评估国家目标进度



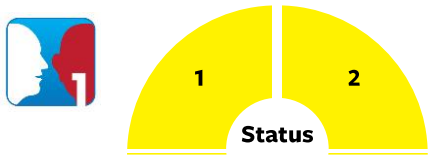
彩条显示报告国家目标达到某一进展程度的缔约方占比。蓝色:超过目标;绿色:有望实现;黄色:有些进展;红色:没有进展;紫色:偏离目标。颜色的强度表示国家目标与爱知目标的一致性。颜色越深表示一致性越高。

图21.2. 评估国家目标进度和这些目标与爱知生物多样性目标的一致性。



- 有望超过
- 有望实现
- 有些进展但速度不够
- 没有显著变化
- 偏离目标

- 目标没有相关性
- 目标太低
- 目标宏伟程度较低或未涉及所有要素
- 目标相称
- 目标超过范围和/或宏伟程度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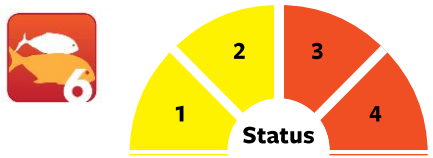
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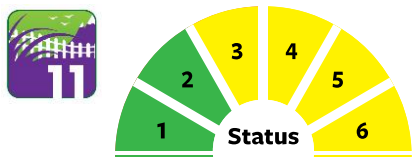
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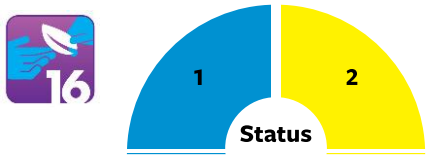
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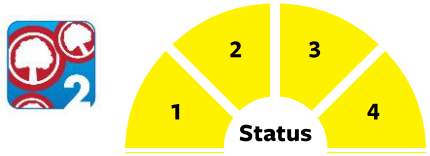
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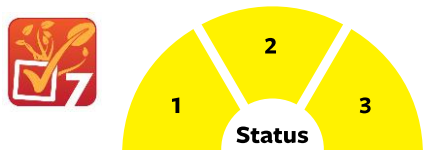
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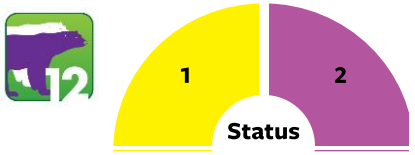
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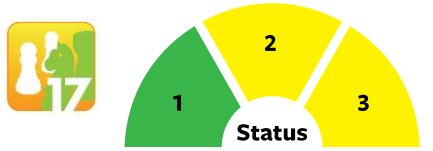
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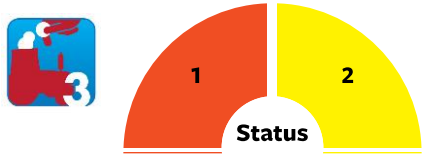
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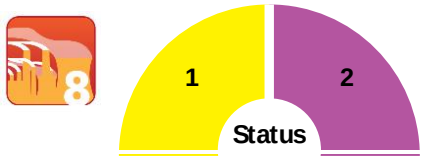
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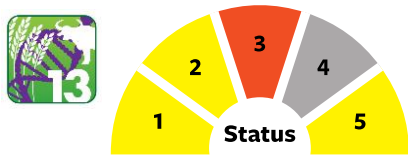
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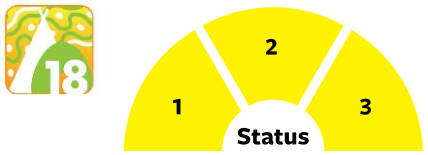
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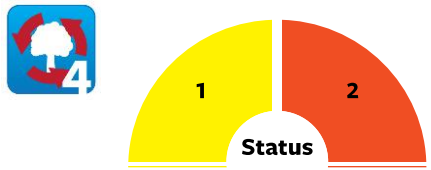
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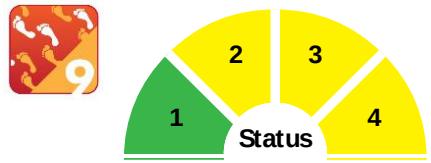
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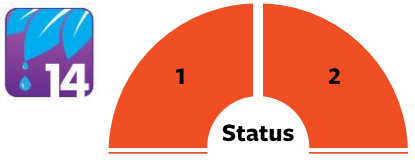
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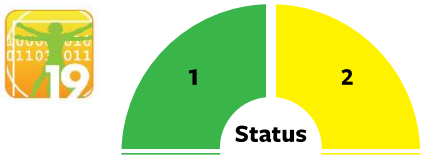
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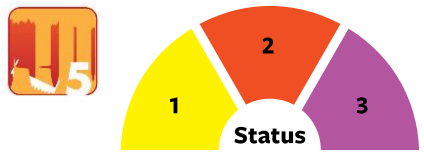
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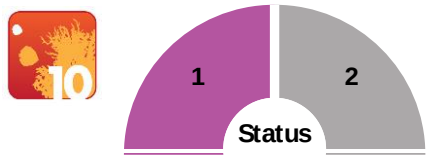
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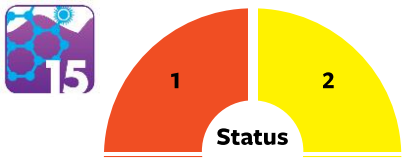
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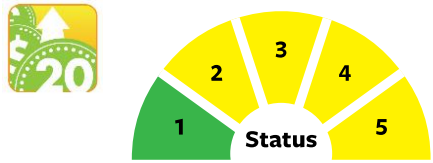
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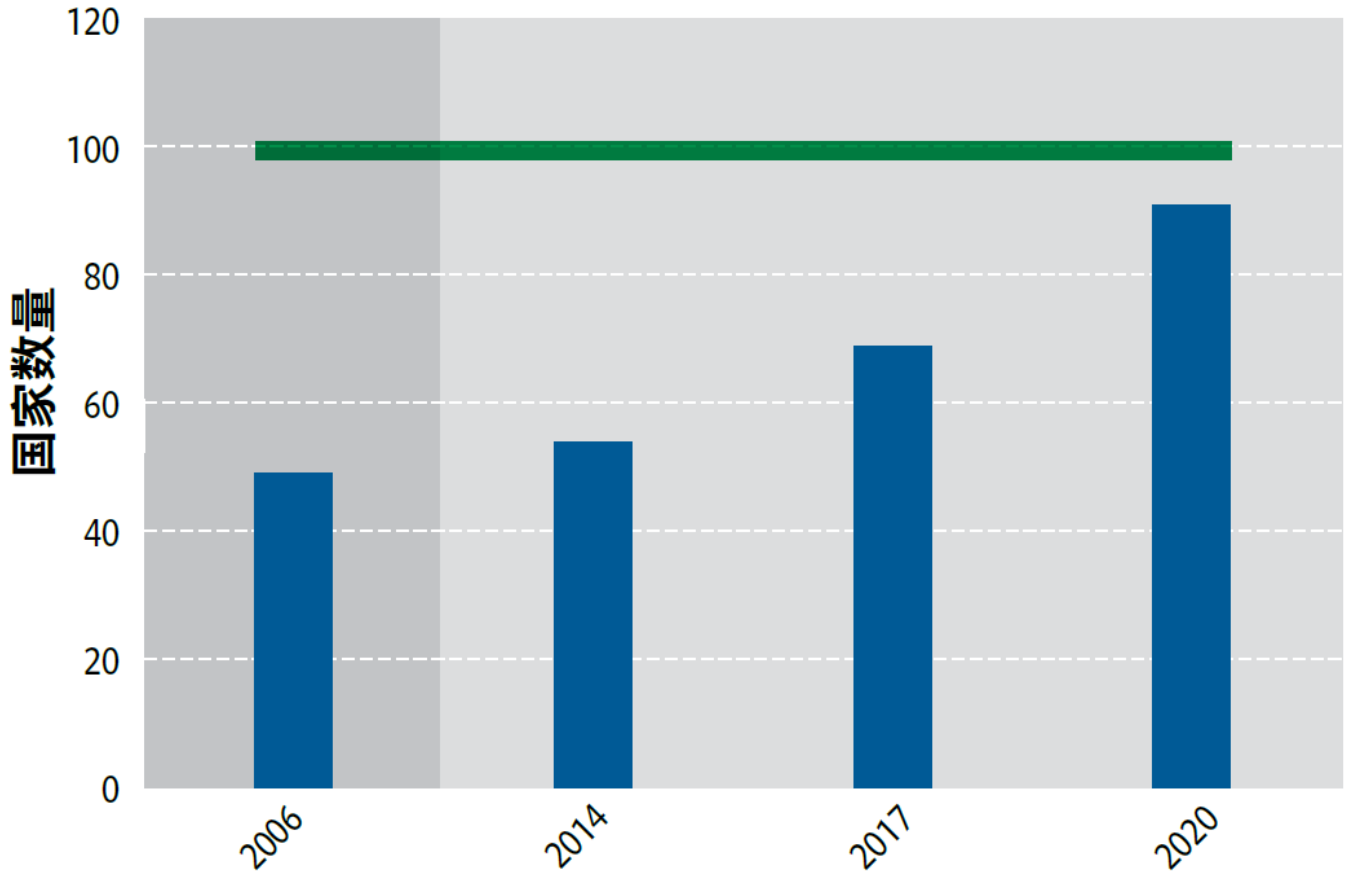
Success Stories relating to the underlying causes of biodiversity loss (Goal A):

Almost 100 countries have incorporated biodiversity values into national accounting systems

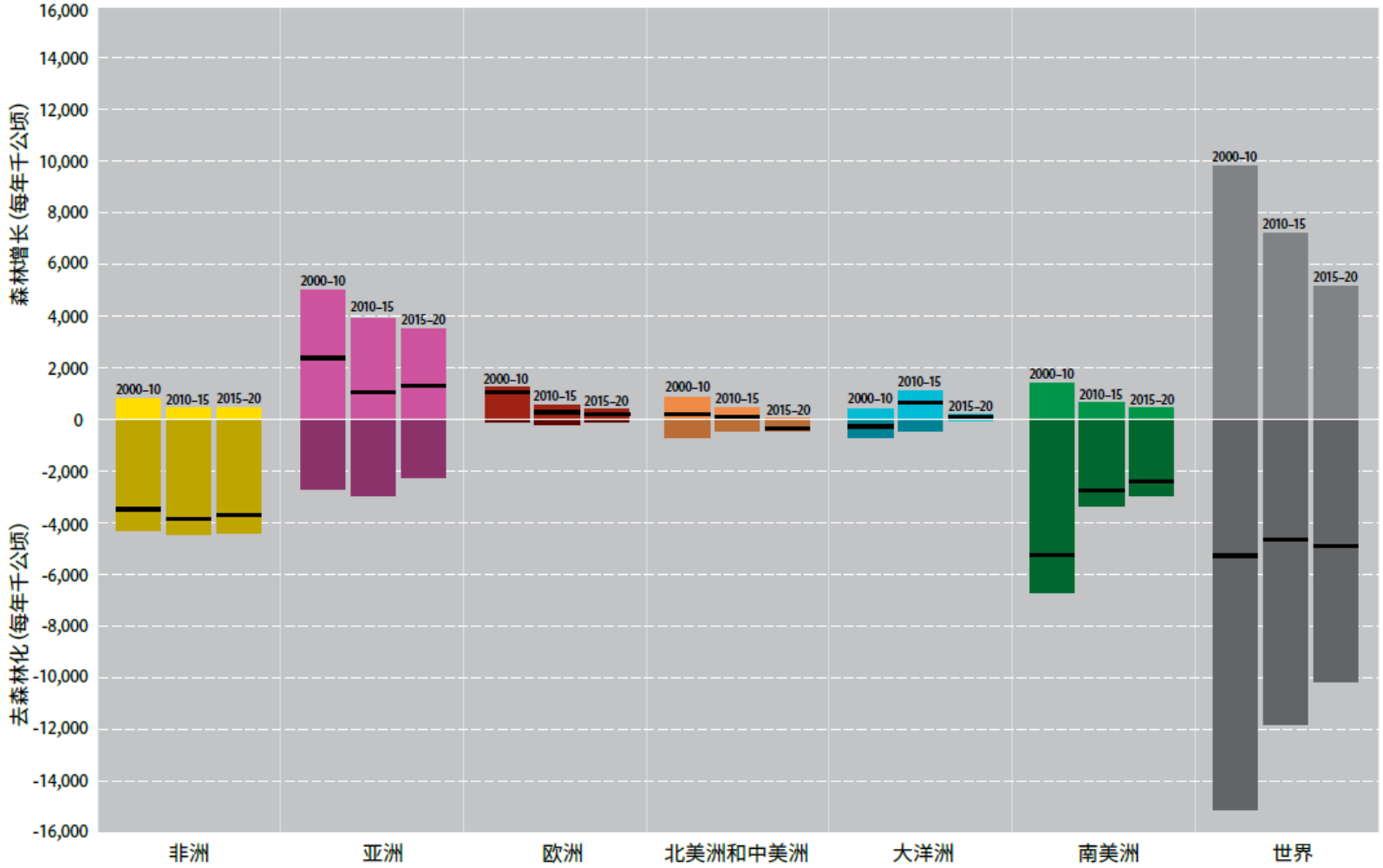
图2.1 – 实施环境经济核算体系的国家数量趋势



Success Stories Relating to the direct pressures on biodiversity (Goal B):

- The rate of deforestation has fallen globally by about a third compared to the previous decade

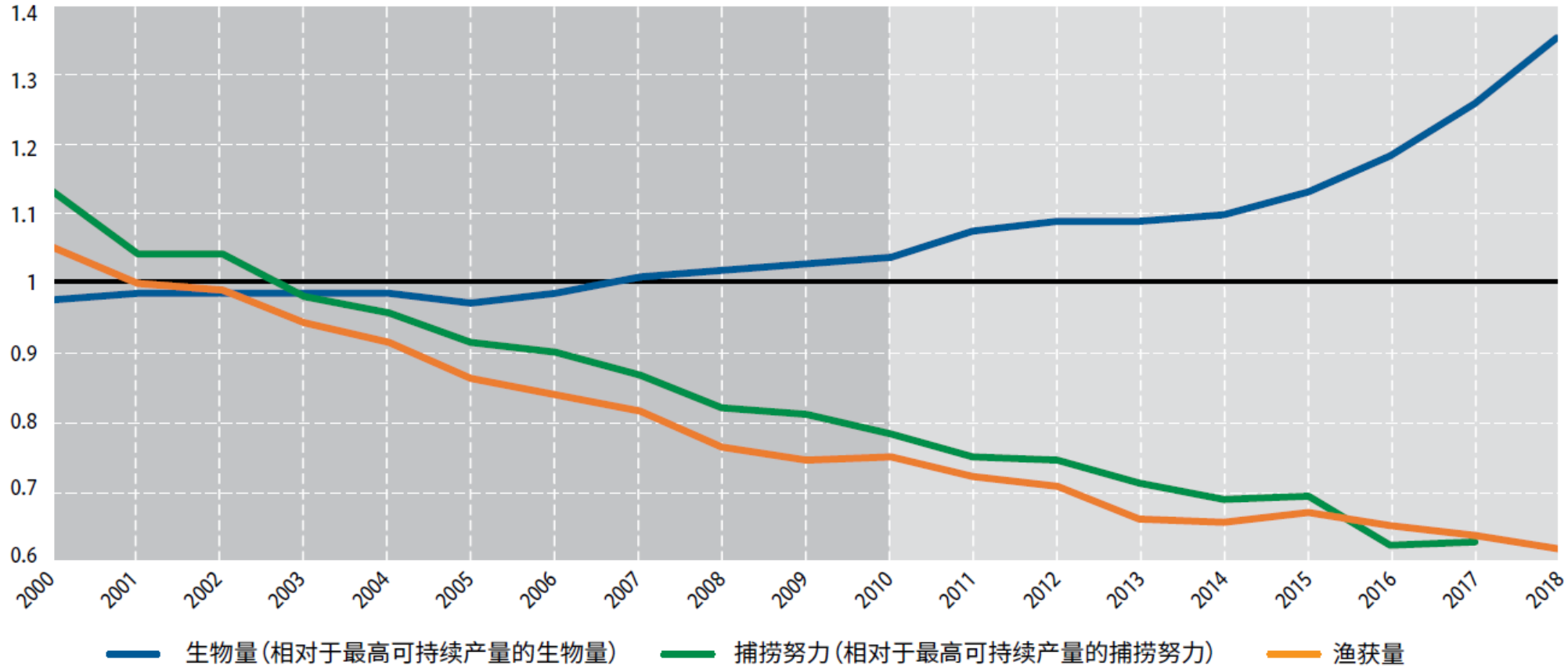
图 5.1 全球森林增长和去森林化的年速率。[5]



Success Stories Relating to the direct pressures on biodiversity (Goal B):

- In about half of fisheries, where good management policies have been introduced, involving stock assessments, catch limits, and enforcement, the abundance of marine fish stocks has been maintained or rebuilt

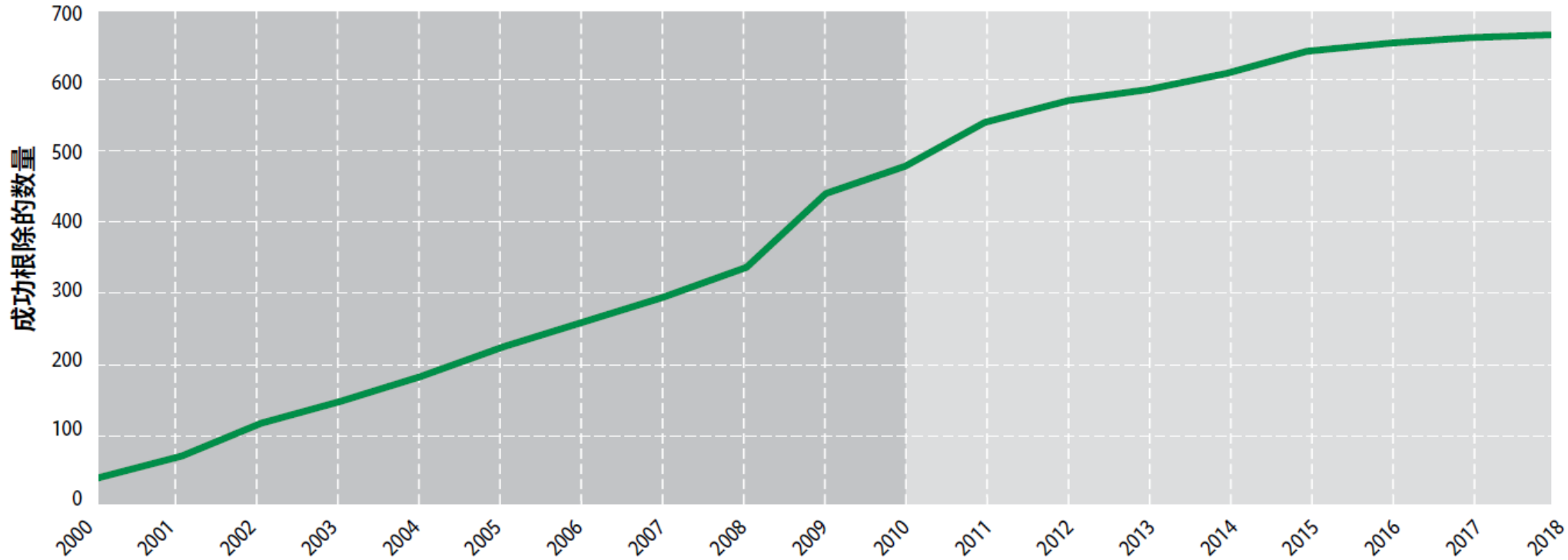
图6.3. 经正式种群评估的渔业相对生物量、捕捞努力量和渔获量趋势。[18]



Success Stories Relating to the direct pressures on biodiversity (Goal B):

- There have been an increasing number of successful cases of eradication of invasive alien species from islands, and of the targeting of priority species and pathways to avoid future invasive species introductions

图9.1. 2000年以来所有岛屿每年成功进行的入侵哺乳动物根除项目总数。[10]



Relating to the status of biodiversity (Goal C):

Protected area, increasing from about 10% to at least 15% terrestrially, and from about 3% to at least 7% in marine areas.

图 11.1. 全球保护区的覆盖范围和未来的承诺。[19] 虚线表示如果履行承诺，每个类别的保护区覆盖范围水平。

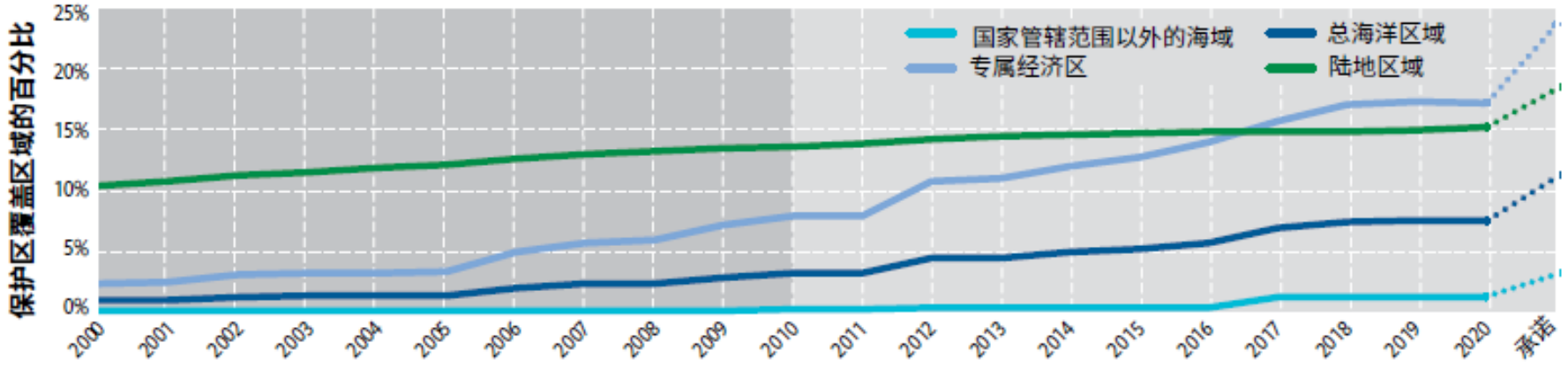
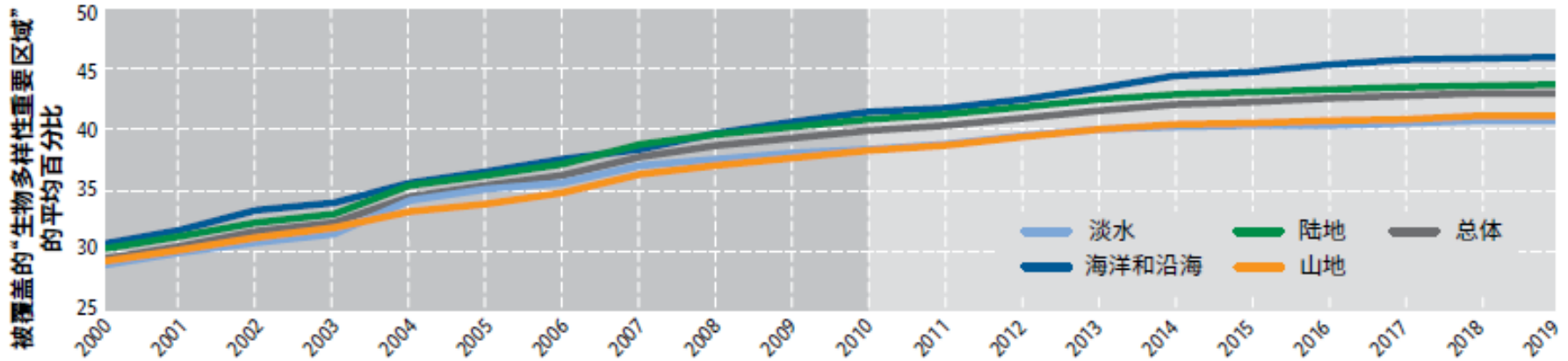


图 11.2. 总体上以及陆地生态系统、海洋和沿海生态系统、淡水生态系统以及山地生态系统中被保护区覆盖的“生物多样性重要区域”的平均比例。[20]

The protection of areas of particular importance for biodiversity (KBAs) has increased from 29% to 44%



Relating to the status of biodiversity (Goal C):

Conservation actions are estimated to have prevented between 28 and 48 bird and mammal species from going extinct since 1993 (when the CBD came into force), including between 11 and 25 since 2010.

Conservation actions include:

- protected areas,
- hunting restrictions,
- control of invasive alien species,
- *ex situ* conservation &
- re-introduction.

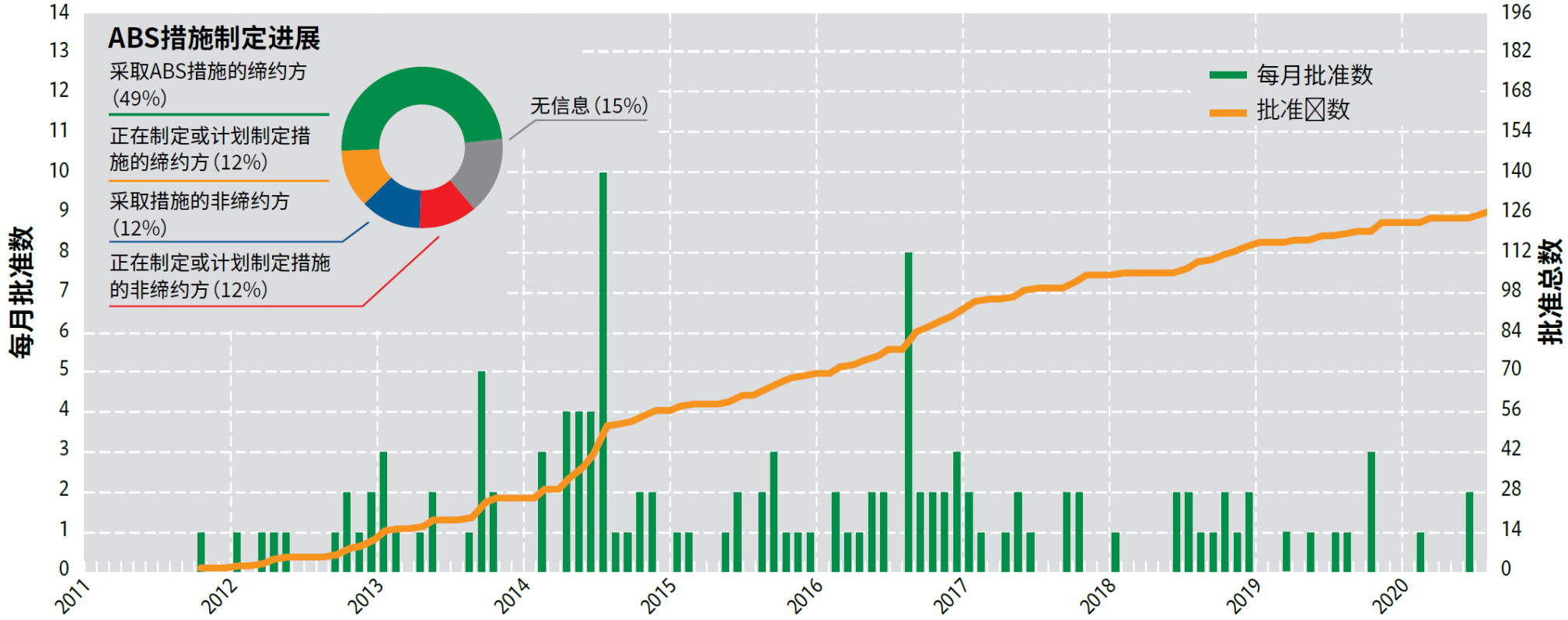
Without such actions, extinctions of birds and mammals in the past decade would likely have been two to four times higher.

Black footed ferret
© Joel Sartore/National Geographic
natgeophotoark.org.

Success stories relating to measures enabling implementation (Goal E):

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization has come into force and is now fully operational in at least 87 countries and internationally

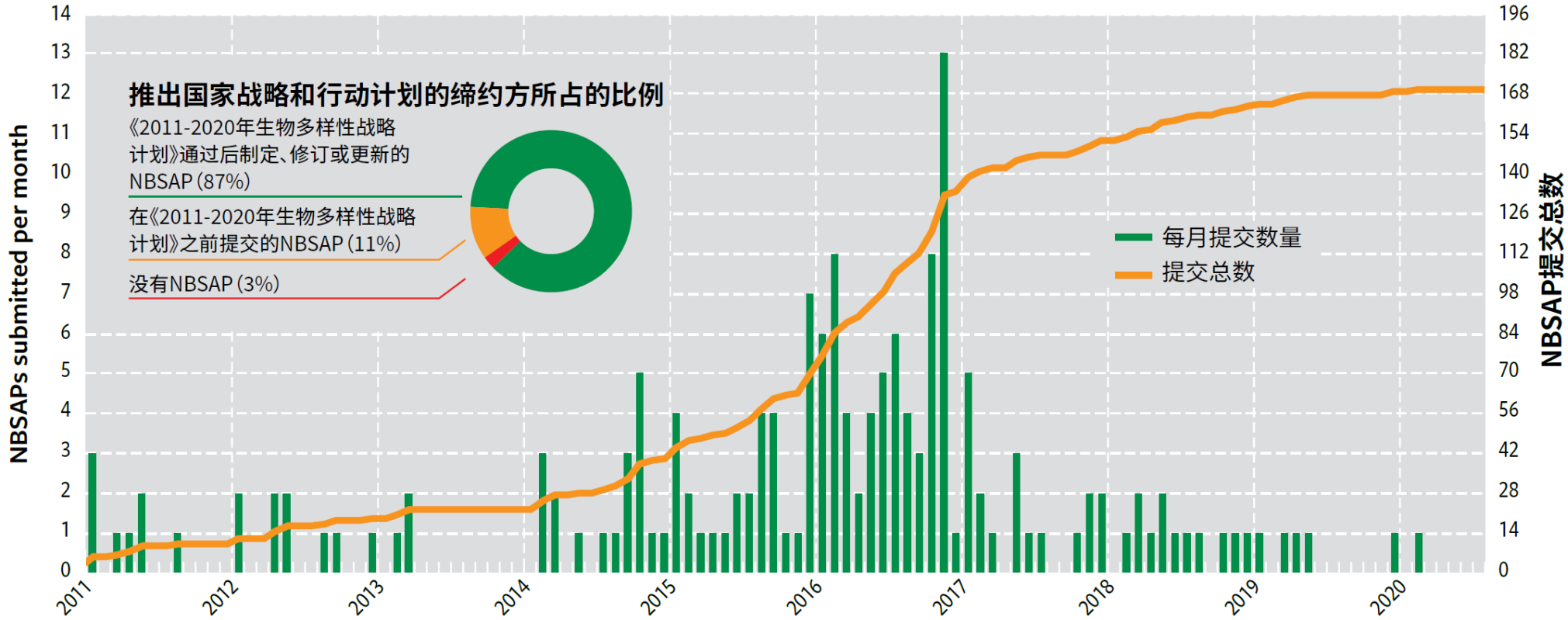
图16.1: 批准《名古屋议定书》和制定ABS措施进展趋势



Success stories relating to measures enabling implementation (Goal E):

- National biodiversity strategies and action plans (NBSAPs) have been updated in line with the Strategic Plan for Biodiversity 2011-2020 by 170 countries, 85% of CBD Parties

图17.1 - 提交国家生物多样性战略和行动计划的程度和时间。[3]



Success stories relating to measures enabling implementation (Goal E):

- There has been a substantial increase in the data and information on biodiversity available to citizens, researchers and policy makers, including through the efforts of citizen science

图 19.1 – 经自然保护联盟红色名录[8] 评估的物种数量增长情况

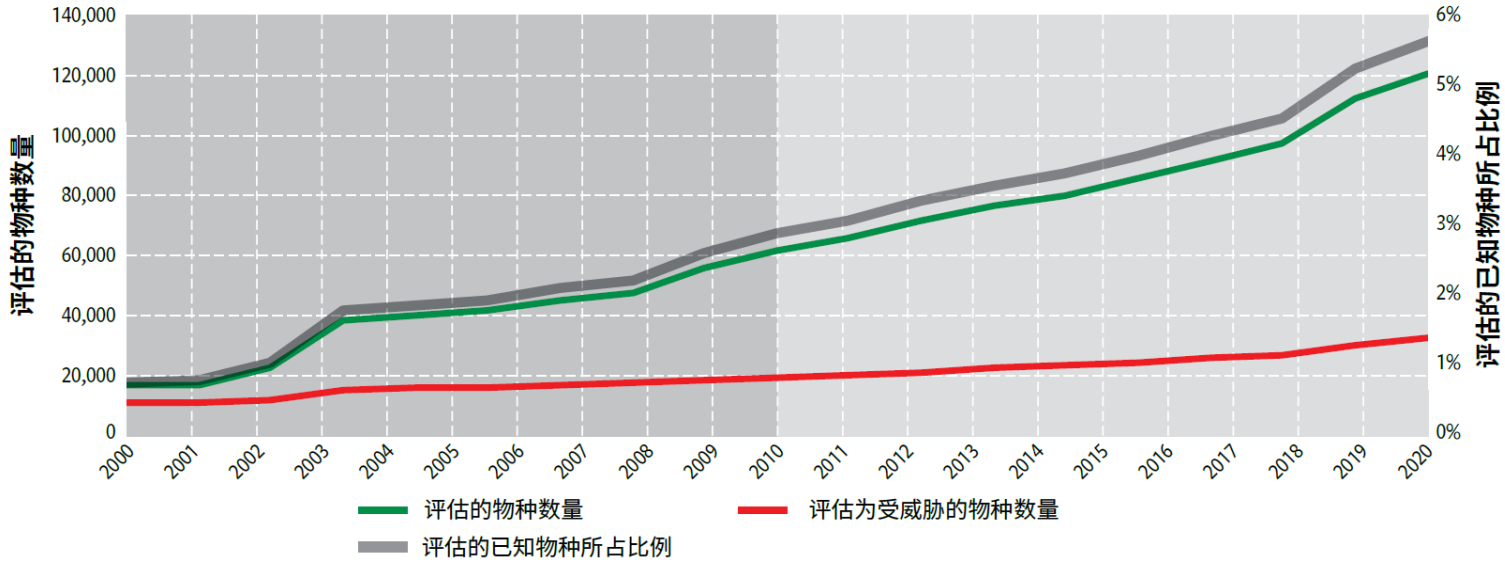
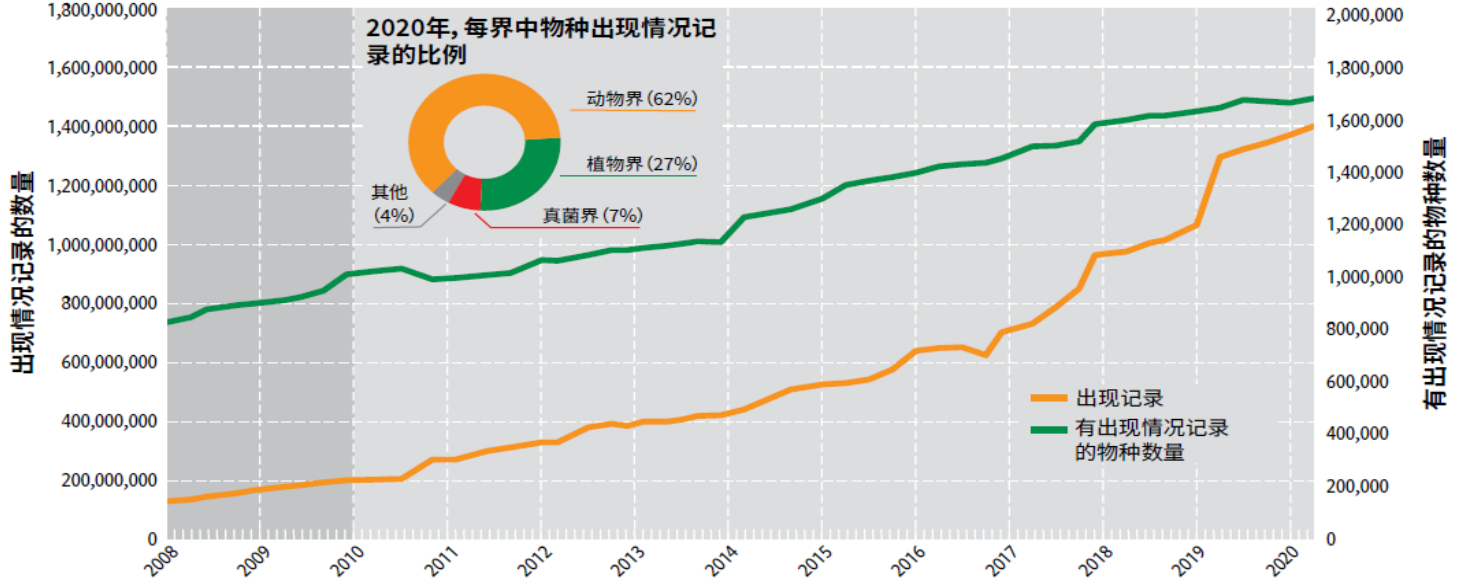


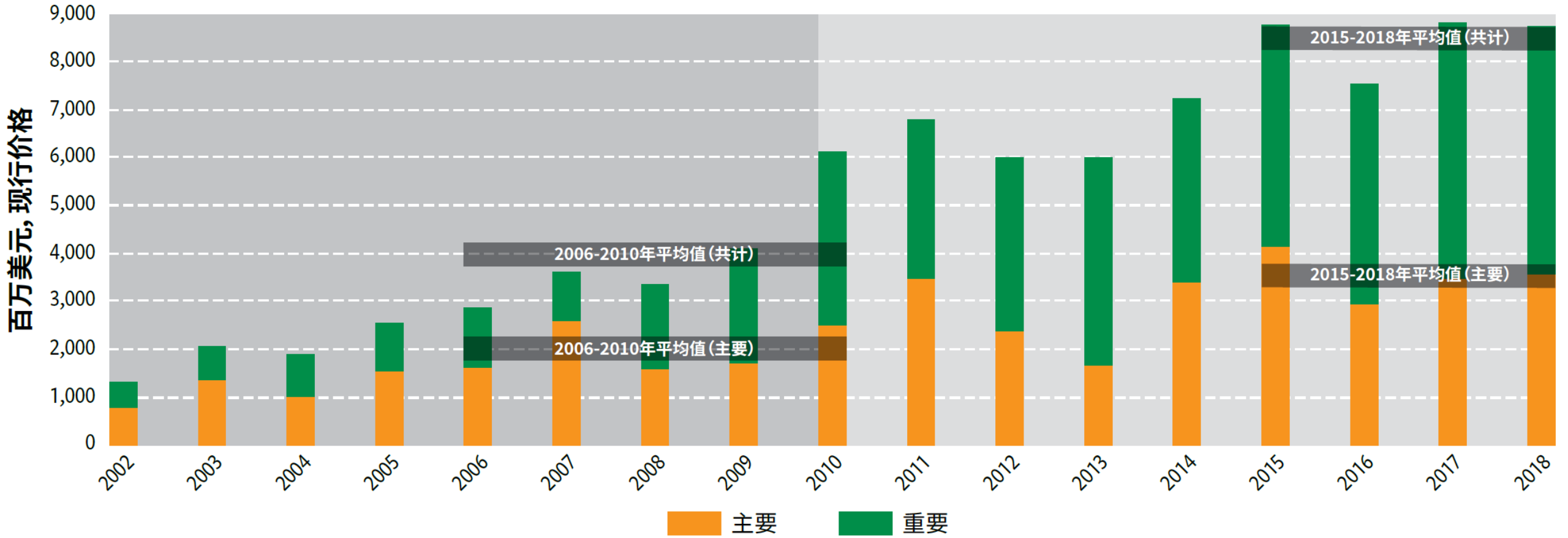
图 19.2 - 全球生物多样性信息机制传输的物种出现情况记录的增长情况[14]



Success stories relating to measures enabling implementation (Goal E):

- Financial resources available for biodiversity through international flows have doubled

图 20.1 - 与生物多样性有关的双边官方发展援助趋势[20]



Lessons from the Strategic Plan for Biodiversity 2011-2020. Need for:

- Still greater efforts to address the direct and indirect drivers of biodiversity loss, including through greater interaction among government ministries, economic sectors and society generally.
- Strengthen further the integration of gender, the role of IPLCs & stakeholder engagement.
- Well-designed goals and targets formulated with clear, and, simple language, and with quantitative elements (i.e. 'SMART').
- Strengthen NBSAPs, including their adoption as whole-of-government policy instruments.
- Reduce time lags in planning and implementat
  unavoidable time lags in implementation.
- Increased ambition of national commitments,
  review, learning and adaptive management.
- Greater attention to implementation; sustaine
  targeted support to countries.

第三部分

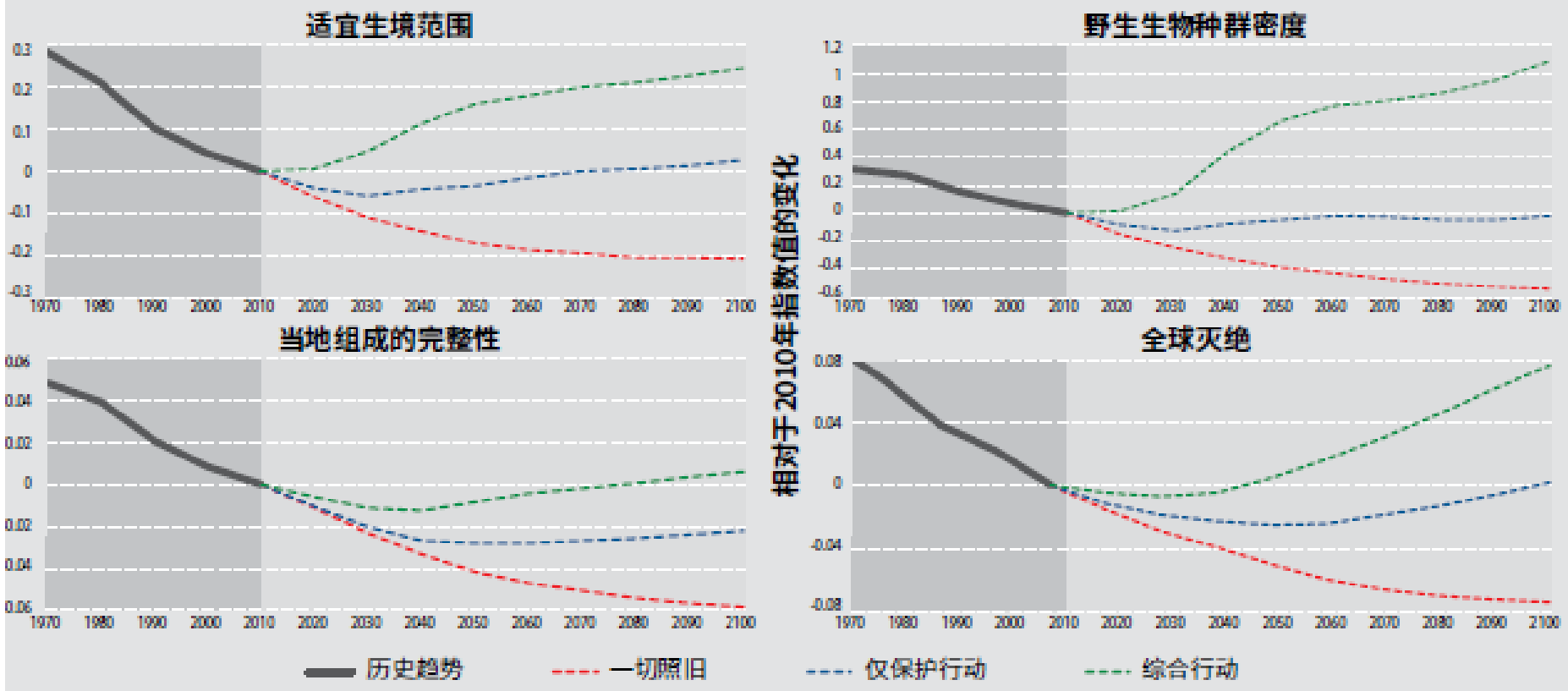
通往2050年生物多样性愿景之路

Bending the curve of biodiversity loss requires:

- ❖ Bold conservation and restoration action; and
- ❖ Change in agricultural production and trade, and consumption patterns.

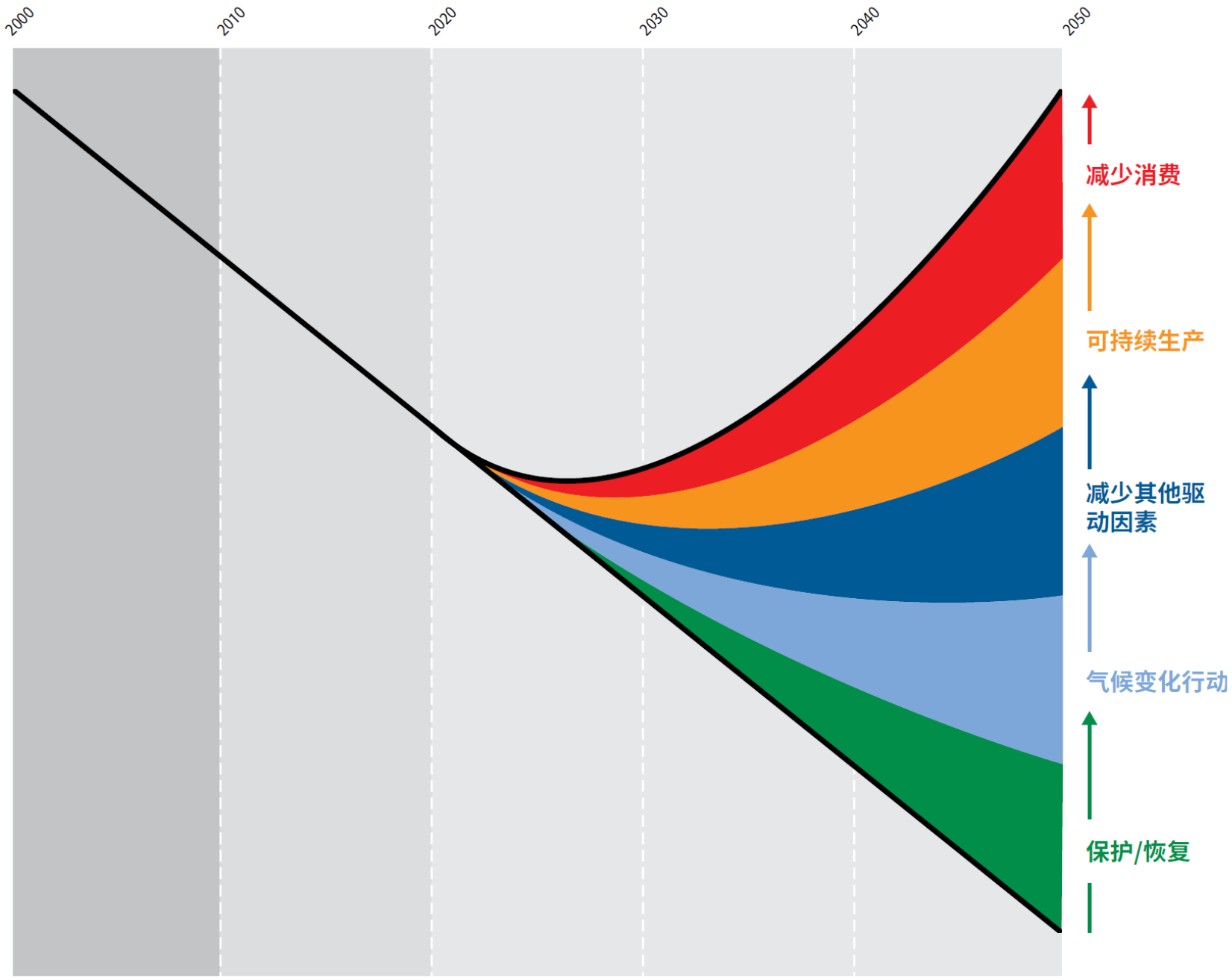
→ (Integrated Action Portfolio)

图22.1. 四个选定陆地生物多样性指标的历史和模拟未来趋势，分别基于“一切照旧”做法、一组大胆保护和恢复措施（“仅保护行动”）、一组保护和恢复行动与其他措施相结合的综合措施以解决供应方和需求方为生产粮食而转用生境的压力（综合行动）。[20]



Putting nature on a path to recovery, towards the 2050 Vision requires transformative change through a portfolio of actions

图. 减少生物多样性丧失和恢复生物多样性的行动组合。



Eight Transitions to Living in Harmony with Nature

The Land and Forests Transition

The Food Systems Transition

The Sustainable Freshwater Transition

The Cities and Infrastructure Transition

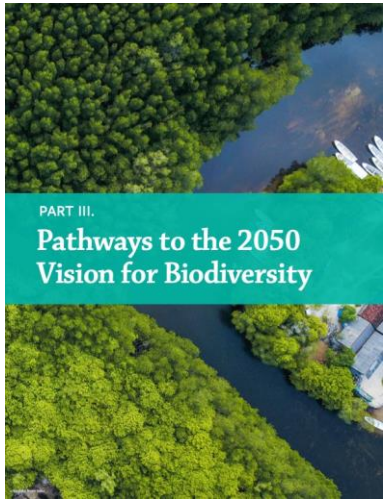
The Fisheries and Oceans Transition

The Climate Action Transition

The Sustainable Agriculture Transition

The Biodiversity-Inclusive One Health Transition

For each Transition:



Summary description

Rationale & Benefits

Key components

Progress towards transition (examples)

Linkages with other transitions

土地和森林转型

转型概要

保护完整的生态系统，恢复生态系统，整治和扭转退化，利用景观级空间规划来避免、减少和减缓土地使用变化。这一转型确认妥善保护的生境对于维护生物多样性、提供生态系统[illegible]重要价值，确认需要开辟这样一种局面——维持和改善粮食安全不再需要大规模[illegible]他生态系统的用途。

理由和效益

土地利用变化是陆地生物多样性丧失的最大直接驱动因素。[1] 全球范围内特别是热带地区森林和其他自然生态系统的丧失和退化仍在继续（见爱知目标5）。森林丧失的主要原因是农业扩张（例如在南美洲主要是商业农业，在中部非洲主要是小规模农业），[2] 不过城市化[3] 和基础设施发展[4] 也越来越重要（见城市和基础设施转型）。土地利用变化情景设想显示可能有几种未来，取决于全球、国家和地方所作决定（方框22.2）。[5] 如上一节所述（见途径），实现这些变革对于减少和扭转生物多样性丧失至关重要。

减少土地对森林和其他自然生态系统的压力，可避免生境的进一步丧失，创造条件恢复更多生境，从而减少许多物种灭绝的风险。这将保护和增加靠森林生态系统为生的人们的收入和营养来源。许多与森林物种和景观的文化联系将得到保护，同时也有利于健康和福祉。维持自然生态系统在[illegible]护授粉媒介物种、支持空气和水质以及通过捕获和储存碳来减缓气候变化方面的作用，将为地方、区域和全球社会带来更广泛的效益。

转型的主要组成部分

对土地利用和土地利用变化采取统筹办法。这需要：一致性的农业、林业、农村、城市和基础设施发展政策，全面的空间规划，应用生态系统办法或景观办法；[6] 强有力的社区参与，辅之以土地保有权、权限和监测；为研发投资，提高农业、畜牧业、林业系统的生产力、可持续性和一体化；[7] 制定和实施土地利用、土地利用变化和空间[illegible]策框架，酌情包括对去森林化或[illegible]限制，对原生植被最小面积的要[illegible]性无净损失或净收益的要求；[8] [illegible]链加强法律规定的监督和执行。[9]

通过保护区和其他有效地区措施[illegible]性，[10] 确保保护最完整的生态系统[illegible]物多样性和生态系统服务地点，[illegible]地方社区的充分参与（方框22.3）。

恢复和修复生态系统，[11] 包括转[illegible]和半自然生态系统，优先考虑有[illegible]样性、加强提供生态系统服务、减[illegible]变化的影响、恢复连通性、提高生[illegible]防治荒漠化和土地退化、改善人[illegible]统，包括重新引入关键物种并酌情[illegible]统（方框22.4）。[12] 确保土著人民和[illegible]参与恢复活动的拟定和实施。[13]

管理景观，平衡保护和恢复生物[illegible]木材生产以及其他需求、提供生态[illegible]乡发展，促进生态连通性，增强[illegible]的生物多样性。[14]（见农业、淡水[illegible]施、气候行动转型）

走向转型

若干国家的粮食安全状况有所改[illegible]有所增加或保持稳定。联合国粮[illegible]粮农组织）确认1990年以来这样

其中12个——包括智利、哥斯达黎加、冈比亚、格鲁吉亚、加纳、突尼斯、越南——森林覆盖率增加10%以上。这些国家的共同点包括提高农业部门的生产力、提供资金和技术支持、保障土地保有权、利益攸关方的参与以及森林和农业政策改革、承认森林对社会的价值、促进政策一致性。[15] 其他一些国家森林丧失显著减少（见爱知目标5），其中许多国家投资促进保护区（见爱知目标11）和生态系统恢复（见爱知目标15）。

有些国家采用一系列办法和工具进行空间规划。德国[16] 和南非[17] 等国家制定了涵盖生物多样性的综合国家规划框架。许多国家——包括巴西、哥麦隆、几内亚、马达加斯加、墨西哥、蒙古——制定了生物多样性补偿和"无净损失"政策和方案。最近对此类政策的评估查到12,000多个补偿项目，覆盖37个国家的1,500多万公顷土地。[18] 中国制定了各种划定保护区的"红线"（方框11.1）。[19] 墨西哥的新《可持续林业法》对农业边界作了限制。[20] 20世纪60年代以来巴西的《森林法》（保护原生植被法）规定了保护农村地产的最小原生植被面积，从亚马孙森林生物群落的80%到其他生物群落的20%不等，包括河岸和陡坡等环境敏感地区。设立了全国农村地产登记册以记录这些地区。还制定了国家原生植被恢复计划。[6]

方框22.3. 保护区

保护区和其他有效地区保护措施，如果选址和设计得当，并得到有效和公平的管理，仍是保护生物多样性的重要措施。[22] 保护目标可优先考虑生物多样性高、不可替代性高、具有高度生态完整性的大型完整景观和/或人类压力巨大威胁下的高度脆弱地区。[23] 所有这些都很重要，但需采取不同的或互补的办法。

为保护区提出的百分比目标介于10%到100%之间，视所分析的分类群和景观而定。[24] 例如保护大约三分之一的地球陆地表面可覆盖85%的植物物种，[25] 而要充分覆盖所有陆地哺乳动物将需要大约60%的陆地面积（南极除外）。[26] 覆盖零灭绝联盟目前认定的所有保护点[27] 和其他生物多样性重要区域，[28] 稀有物种分布热点以及其他列入国际自然保护联盟红色名录受威胁物种高密度区域，只需要在目前陆地保护区覆盖范围上再增加2.4%。[29] 然而为了维持生态功能和自然对人类的贡献（例如碳封存和提供淡水），需要覆盖更多的区域。[30] 一项模拟研究显示，执行当前生物多样性、气候变化、森林和土地退化的国际目标将意味着除恢复外要保护28%的陆地面积。[31] 最近许多提议趋向于到2030年保护大约30%的陆地表面，之后可再设更高的目标。[32] 但是人们强调，重要的是要瞄准生物多样性成果而不是空间区域，包括通过生态连通性。[33]

剩余荒野覆盖大约23%的陆地（南极除外），[34] 但过去20年出现显著下降（超过300万平方公里）（见爱知目标5）。[35] 然而维持所有荒野或所有完整地区的生态完整性不一定需要正式的保护区地位或积极的保护行动。[36] 还应当指出，土著人民有权拥有和/或管理约3,000万平方公里的土地，这些土地不在报告的保护区内，占地球剩余自然土地的很大一部分。[37]

与其他转型的部分联系

农业：有赖于通过避免进一步扩大耕地来减少土地对生态系统的压力；有助于农业必需的生态过程

城市和基础设施：有赖于通过改进城市扩张和基础设施发展的规划来减少土地对生态系统的压力；有助于城市人口必需的生态系统服务

气候行动：有赖于通过陆地气候减缓减少土地压力；有助于通过保护和恢复高碳生态系统促进碳固存，提高复原力，保护生态系统服务免受气候影响

淡水：有赖于通过大型水力发电计划和其他水利基础设施发展减少土地压力；有助于水净化和供应

一体健康：有助于通过维持健康的生态系统降低疾病风险

方框22.4. 生态系统恢复的潜力

大规模恢复生态系统，包括恢复以前转为农地的土地，恢复退化的生态系统，对于保护生物多样性和稳定地球气候至关重要，联合国已宣布2021-2030年为联合国生态系统恢复十年。

一项新的恢复机遇分析报告[38] 显示，恢复15%的跨多重生物群落的转用土地可以减少约60%的灭绝债务（根据当前压力预测的未来灭绝），同时封存多达3,000亿吨二氧化碳。这些效益大部分可实现，同时各国可通过缩小作物和牲畜产量差距保持或增加农业产量。

为了在合理成本基础上优化生物多样性和气候变化目标的结果，必须进行完善的空间规划。该分析显示国际合作对于在能产生最大环境效益的地方开展恢复工作具有重要意义。

可持续粮食系统转型

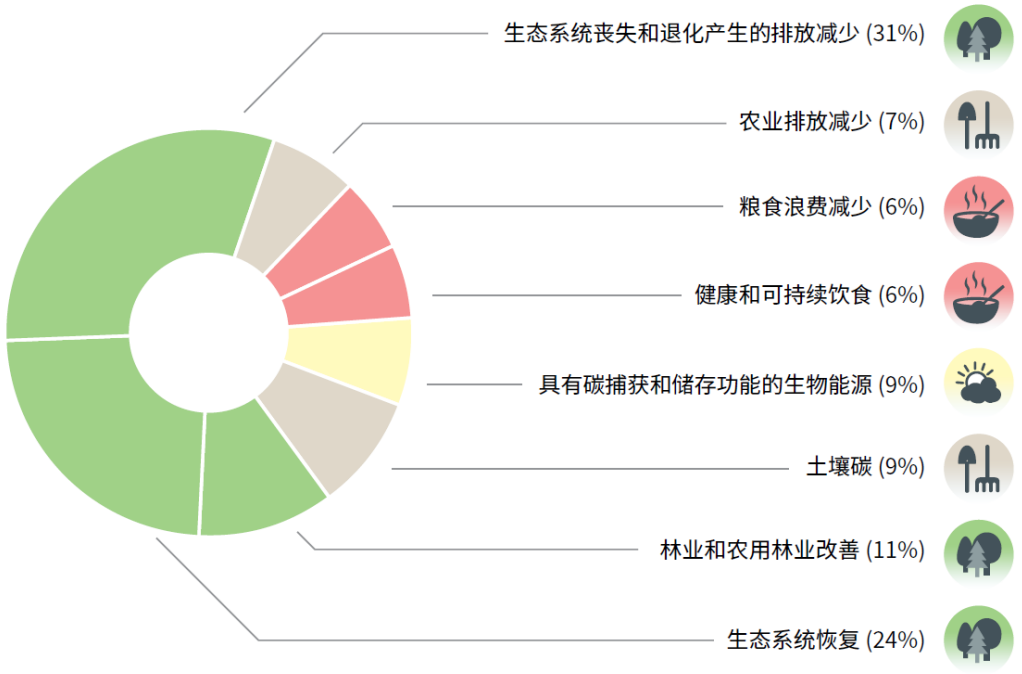
Enabling sustainable and healthy diets with a greater emphasis on a diversity of foods, mostly plant-based, and more moderate consumption of meat and fish, as well as dramatic cuts in the waste involved in food supply and consumption. This transition recognizes the potential nutritional benefits from diverse foods and food systems, and the need to reduce demand-driven pressures globally while ensuring food security in all its dimensions.

- Rebalance agricultural policies and incentives
- Promote the availability of healthy and sustainable diets.
- Promote access to healthy and sustainable diets
- Promote the consumption of healthy and sustainable diets,
- Promote measures to reduce food waste,
- Encourage businesses to promote sustainability through supply chains and to redesign product portfolios

可持续气候行动转型

Employing nature-based solutions, alongside a rapid phase-out of fossil fuel use, to reduce the scale and impacts of climate change, while providing positive benefits for biodiversity and other sustainable development goals. This transition recognizes the role of biodiversity in sustaining the capacity of the biosphere to mitigate climate change through carbon storage and sequestration and in enabling adaptation through resilient ecosystems, as well as the need to promote renewable energy while avoiding negative impacts on biodiversity

图22.5. 通过使土地部门转型，并在粮食系统、农业、林业、湿地和生物能源领域采取措施，各项措施着重帮助实现《巴黎协定》的1.5摄氏度气温目标。



涵盖生物多样性的一体健康转型

Managing ecosystems, including agricultural and urban ecosystems, as well as the use of wildlife and trade, through an integrated approach, to promote healthy ecosystems and healthy people.

- recognizes the full range of linkages between biodiversity and all aspects of human health, and
- addresses the common drivers of biodiversity loss, disease risk and ill-health.

- Reduce disease risk by conserving and restoring ecosystems.
- Promote sustainable, legal and safe use of wildlife.
- Promote sustainable and safe agriculture, including crop and livestock production and aquaculture.
- Create healthy cities and landscapes.
- Promote healthy diets as a component of sustainable consumption

图22.3. 本版《展望》审视的人类活动、人类福祉和自然之间关系的八个方面的转型，显示其中的一些联系。这些联系，包括贡献和依赖，将在下面关于每个转型的章节中描述。

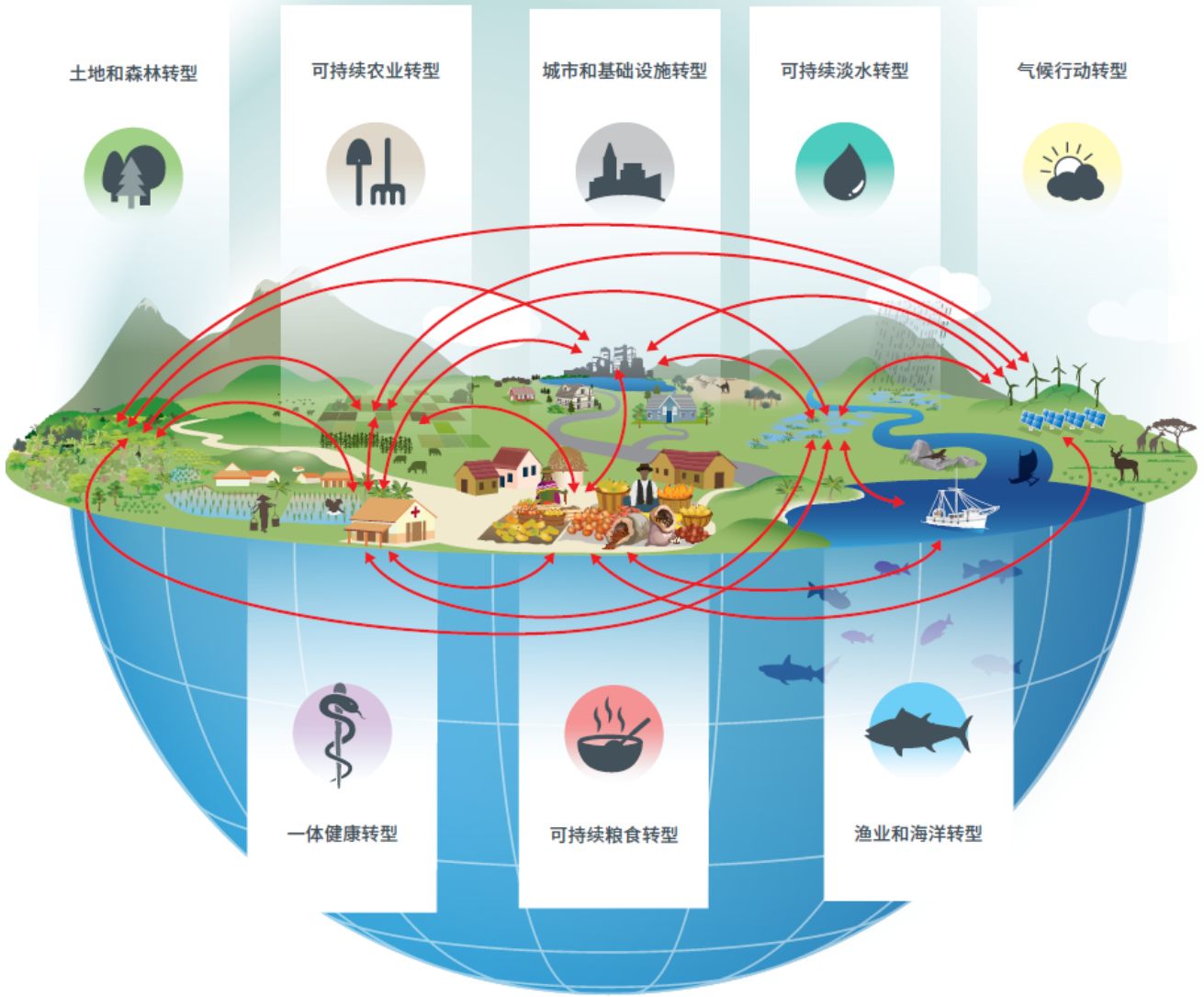


Figure by Yuka Otsuki Estrada

LEVERAGE POINTS

Visions of GQL

Total consumption & waste

Values & social norms

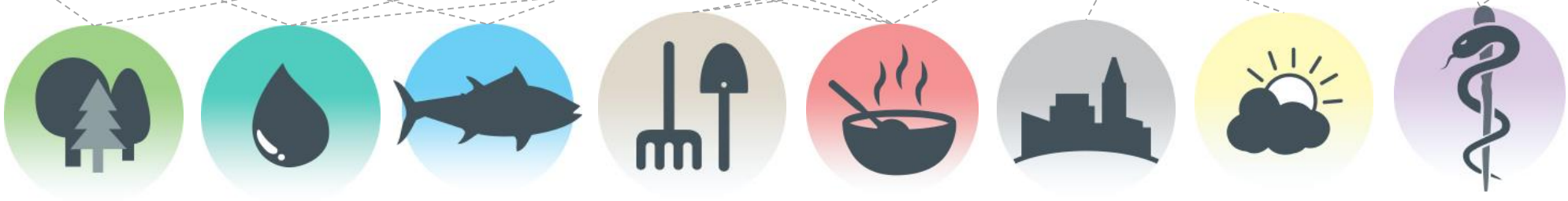
Inequality

Justice & inclusion

Tele-coupling

Innovation

Knowledge



Incentives & Capacity

Integrated Decision making

Precautionary & Adaptive management

Managing for resilience

Laws & enforcement

LEVERS for transformative change

Status:

- None of the Aichi targets fully met.
- Many examples of success – policy measures work!

Outlook:

- Possible to reduce and reverse biodiversity loss, path of recovery towards the 2050 Vision.
- Requires strong conservation and restoration action, addressing all drivers, sustainable consumption.
- Time for action is now.
- Lessons for post 2020 global biodiversity framework.

https://www.cbd.int/gbo5