What does becoming “nature positive” mean, and how can it realistically be achieved?

EJ. Milner-Gulland
The Global Biodiversity Framework, Dec 2022

**Vision for 2050:** Biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

**Mission for 2030:** To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery...

*To achieve this, aligned visions are needed throughout society*
“We need to halt and reverse nature loss measured from a baseline of 2020, through increasing the health, abundance, diversity and resilience of species, populations and ecosystems so that by 2030 nature is visibly and measurably on the path of recovery”
This artwork illustrates the main findings of the article, but does not intend to accurately represent its results (https://doi.org/10.1038/s41586-020-2705-y)

Leclere et al. (2020) *Nature*
https://www.nature.com/articles/s41586-020-2705-y
What do we need to get there?

1. A Target
2. Concrete commitment
3. A Framework for action
4. Accountability
5. Adaptive management
6. Coherence & scalability
A target: “Nature Positive”?

• Target-based: “Becoming Nature-positive means reversing the current declines in biodiversity, so that species and ecosystems begin to recover” (UK Joint Nature Conservation Committee)

• Conceptual: “A nature-positive approach puts nature and biodiversity gain at the heart of decision-making and design. It goes beyond reducing and mitigating negative impacts on nature as it is a proactive and restorative approach focused on conservation, regeneration, and growth” (UK Council for Sustainable Business)

• Process-based: Does not define nature-positive, but outlines how to achieve nature-positive outcomes via a process of “assess, commit, act, advocate” (Business for Nature)

Milner-Gulland (2022) *Nature Ecology & Evolution*
zu Ermgassen et al (preprint) https://osf.io/preprints/socarxiv/rq6z2/
2. Commitment

- Do businesses actually make commitments?
- Do these commitments clearly contribute to a global Nature Positive goal?
- Are commitments improving over time?

Study 2: Da Silva et al. (2019) – companies with NNL/NP commitments in 2016
Study 3: zu Ermgassen et al. (preprint) – Fortune 100 companies 2021 + comparisons
Of the top 100 companies, 86 have publicly available sustainability reports:

- 49 companies mentioned biodiversity or biodiversity related issues, and an additional 16 companies mentioned sustainable forestry or fishing (with no mention of biodiversity).
- 31 companies had a clearly stated biodiversity commitments, and an additional 12 companies had forestry or fishing goals (with no mention of biodiversity).
- Only 5 companies had biodiversity commitments that are specific, measurable, & time-bound (★): Walmart, AXA, Hewlett Packard, Nestlé, Carrefour.
Still a really long way to go

• No firms in zu Ermgassen et al’s study explicitly aimed to achieve biodiversity outcomes aligned with a defined overarching global or national policy target
New targets will also help

TARGET 14
Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework.

TARGET 15
Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;

(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.
3. A Framework for Action

**Prevention**

**Step 1. Avoid**
Avoid deforesting primary growth rainforest, or forest areas containing high levels of biodiversity or protected species. Example: Protected Area closure or new site selection following stakeholder consultation.

**Step 2. Minimize**
Minimize harm to biodiversity by adhering to best practice growing and extraction practices. Example: limiting the footprint of heavy machinery used to extract and transport palm oil to specific areas and ensure any runoff is contained to prevent polluting watercourses.

**Step 3. RemEDIATE**
RemEDIATE the biodiversity loss within the oil palm site. Example: replanting cleared areas of forest following road infrastructure development.

**Compensation**

**Step 4. Offset**
Residual additional damage caused by the oil palm development through improvement of rainforest elsewhere. Example: Local areas with degraded rainforest is replanted near the development site.

4. Accountability

4.2 Overview of the status of available indicators for the proposed components of targets

The 20 proposed targets have 67 components and 162 elements for monitoring, and for these a total of 161 available indicators have been identified for the current document (Table 2; Annex).

Table 2. Summary of the data in the Annex for the proposed targets of the monitoring framework on the number of components, monitoring elements and available indicators. (If an indicator has been listed for more than one monitoring element of a target it has only been counted once for this analysis).

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5. Adaptability

• We need to get started now rather than waiting for the perfect answer
• We need to be prepared to revise our analyses, because the science is evolving, and we need to raise ambition over time
• But we need transparency and humility to be able to do this
6. Scalability

• Scaling an approach within a geography or focal issue
• Scaling by replication: learning across geographies or focal issues
• Scaling by building capability to achieve change
• Scaling by prompting systemic change

Scalable Nature Positive approaches have more, and more lasting, impact
Oxford’s ambitious Environmental Sustainability Strategy is approved

Oxford University approves its Environmental Sustainability Strategy aiming for net zero carbon and biodiversity net gain by 2035.
**Vision:** From the Vice-Chancellor, October 2019

**Commitment:** An Environmental Sustainability Strategy adopted in March 2021, with funding

*Biodiversity Net Gain by 2035 across all its activities against a 2019 baseline*

**Framework:** Mitigation and Conservation Hierarchy

**Accountability:** Baseline impact evaluation, annual impact publicly reported in Annual Reports

**Adaptive management:** Already in 3rd year of doing the analysis, data reporting is already better

**Coherence:** Academics and administrators working together. We’ll see if individual Departments step up...
UPSTREAM EFFECTS

The University of Oxford’s biggest impact on biodiversity* is from the indirect effects of resource use and waste in external supply chains it does not control.

- **Built environment**
  - Direct: 0.13
  - Indirect: 0.12

- **Food**
  - Direct: 0.02
  - Indirect: 0.14

- **Natural environment**
  - Direct: Negligible
  - Indirect: 0.00005

- **Resource use and waste**
  - Direct: Negligible

- **Travel**
  - Direct: 0.09
  - Indirect: 0.06

OXFORD'S OPTIONS

To achieve no net loss of biodiversity, the University of Oxford could focus more heavily on preventing harms to biodiversity (option 1). Or it could try to compensate for the impacts that its activities and operations have on the planet (option 2).

**Current strategy**
- 29% biodiversity impacts mitigated
  - Reduce flights and other travel, use of paper and utilities; limit impacts of IT, food and drink.
- 4% Ecological restoration on Oxford-owned land.
- 67% Purchase biodiversity offset.

**Option 1: Heavy avoidance**
- 37% Stop sale of meat, dairy and alcohol, use of paper and university fleet, construction, flights; implement zero-waste policy; require overseas remote working.
- 28% Halve utilities consumption, IT use, purchase of lab materials; require staff to car share; reduce number of cafes.
- 3% Ecological restoration on Oxford-owned land.
- 32% Purchase biodiversity offset.

**Option 2: Heavy offset**
- -0% (0.04%) Stop sale of meat.
- 24% Cut IT, lab materials, utilities by 20%; halve paper use, construction impacts, staff flights and university fleet.
- 3% Ecological restoration on Oxford-owned land.
- 73% Purchase biodiversity offset.
Example 2: Canteen food

Taylor et al. (2023) Nature Food
Business as usual
Eat Lancet diet
Managed net loss 50%
Managed net loss 75%
No net loss
10% net gain
...by 2035 against a 2019 baseline
Strategies:
(A) 'Preventable impacts'
(B) 'Avoidance-focused'
(C) 'Mixed approach'
(D) 'Reduce-focused'
(E) 'Behaviour-focused'

Top-down approach:
- Low biodiversity risk
- High social risk

Bottom-up approach:
- High biodiversity risk
- Low social risk
Example 3: Nature Positive Universities

Pledgers:
University of Geneva,
Berne University of Applied Sciences

Student Ambassador:
Noa Olivet,
Université de Neuchâtel
NATURE POSITIVE PLEDGE

Pledge, by someone with authority, on behalf of your institution to:

1. **ASSESS YOUR BASELINE**
2. **SET SMART TARGETS**
3. **ACT AND INFLUENCE**
4. **REPORT ANNUALLY**

**THINK ABOUT:**
- How decisions about biodiversity and sustainability are made at your institution
- How to achieve high level support and buy-in from the university leadership and community

Join by October 2022 to become one of the founding universities!

https://naturepositiveuniversities.net
Recap: How do we get to NP?

- **Target:** Need a consistent, robust, accepted definition
- **Commitment:** Seriously lacking still
- **Frameworks:** Available
- **Accountability:** Metric integration needed
- **Adaptive management:** Let’s see...
- **Coherence:** Not great
- **Scalability:** Unknown
Final thoughts

• We need to practice what we preach in our own institutions and our own lives, but...

• ...we need systemic change, individual organisations can’t make the necessary transition alone. So...

• ...can we coalesce behind the CBD’s 2030 mission and support each other’s contributions, through a pluralistic approach?

• So many opportunities for collaboration, synergy, catalysis exist

• Keep up the optimism!
The world needs me to believe and because I need to believe.

Perseverance is the key and I believe we are here to win the battle!

Trees make me smile!