

Nature-Positive Lifestyles

Unlocking Opportunities for
People and Planet



Hot or Cool

Report

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Editing and Proofreading Barney Jeffries (Swim2Birds, UK).

Illustrations Jerker Lokrantz (Azote, Sweden), Christina Rüegg Grässli (The New Division, Sweden).

Graphics Gauri Varma (Hot or Cool Institute, Germany).

Design and Layout Gauri Varma (Hot or Cool Institute, Germany).

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Lead authors of the report

Alessandro Galli, Hot or Cool Institute

Luca Coscieme, Hot or Cool Institute

Viivi Toivio, Hot or Cool Institute

Sami El Geneidy, University of Jyväskylä

Charlotte Maddinson, University of Jyväskylä

Additional contributions were provided by the following experts

Pedro Jaureguiberry (Instituto Multidisciplinario de Biología Vegetal, Argentina), Livia Cabernard (Technical University of Munich, Germany), Esther Sanyé-Mengual (JRC, Italy), Ian Donohue (Trinity College Dublin, Ireland), HyeJin Kim (UK Centre for Ecology & Hydrology, UK), Nike Sommerwerk (Fresh Thoughts, Austria / Berlin Natural History Museum, Germany), Carlos Andres Trujillo Valencia (Universidad de los Andes, Colombia), Camila Cosse Braslavsky (Consumers International, UK), Siri Maassen (The New Division, Sweden), Aimée Aguilar Jaber (Hot or Cool Institute, Germany), Magnus Bengtsson (Hot or Cool Institute, Germany), Hedda Roberts (Hot or Cool Institute, Germany).

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The logo for SITRA, featuring the word "SITRA" in a bold, black, sans-serif font. The letters are stylized, with the 'S' and 'I' having a unique, blocky appearance.

Table of Contents

Abbreviations	9
Executive Summary	10
PART I: Introduction	15
1. Why Lifestyles Matter for Biodiversity	16
1.1 A lifestyle perspective is essential for a nature-positive future	18
1.2 Innovative policy approaches are needed for sustainable lifestyles	19
1.3 Lifestyle-related data and indicators are critical for monitoring progress	20
PART II: Evidence and Insights from Lifestyles	21
2. Linking Lifestyles, Drivers of Nature Loss and Impacts for Effective Policy Interventions	22
2.1 Food	25
2.2 Mobility	26
2.3 Housing (energy)	27
2.4 Consumer goods	28
3. From Theory to Practice: the Biodiversity Footprint of Brazil, Japan and Finland	30
3.1 How the lifestyle biodiversity footprint is calculated	31
3.2 Lifestyle biodiversity footprint of consumption in Brazil, Finland and Japan	33
3.2.1 Food	34
3.2.2 Mobility	37
3.2.3 Housing (energy)	40
3.2.4 Consumer goods	43
3.3 Comparing lifestyle biodiversity and carbon footprints	46
PART III: Enabling Lifestyle Change Through Systems and Policy	48
4. Transforming Both Aspirational and Provisioning Systems to Enable Lifestyle Changes	49
4.1 Provisioning systems	50
4.2 Aspirational systems	51
4.3 Transforming provisioning and aspirations for sustainable lifestyles	52

5. Leveraging Choice-Editing to Implement Transformative Policy Packages	53
5.1. Choice-editing as an effective policy approach	54
5.2. Existing sectoral choice-editing policies	56
5.2.1 Food: increasing plant-based diets, reducing food waste and shortening supply chains	58
5.2.2 Mobility: reducing travel demand and prioritising active transport	62
5.2.3 Housing: reducing resource use and promoting smaller, nature-positive living spaces	65
5.2.4 Consumer goods: rethinking needs and tackling overconsumption	68
PART IV: Conclusions and Way Forward	71
Glossary	74
Further reading	76
Annexes (available only upon request)	
Supplementary table of country-specific biodiversity footprint results	

Figures

Figure A: Lifestyle biodiversity and carbon footprint across countries	11
Figure B: Aligning systems to enable lasting lifestyle change	12
Figure 1: Solution spaces for transformative biodiversity governance	17
Figure 2: The building blocks of lifestyles	19
Figure 3: Relationships among lifestyle domains, drivers of biodiversity loss, and impacts on nature	24
Figure 4: Total lifestyle biodiversity footprint (pBDe/capita/year) by domain	33
Figure 5: Biodiversity impact intensities (pBDe/kg) and consumption amounts (kg/capita/year) by food component	35
Figure 6: Contribution of direct biodiversity loss drivers to food-related biodiversity footprints in Brazil, Finland and Japan	36
Figure 7: Biodiversity impact intensities (pBDe/passenger-km) and travel demand (passenger-km/capita/year) by transport mode	38
Figure 8: Contribution of direct biodiversity loss drivers to mobility-related biodiversity footprints in Brazil, Finland and Japan	39
Figure 9: Biodiversity impact intensities (pBDe/kWh) and housing energy use (kWh/capita/year) by housing energy component	41
Figure 10: Contribution of direct biodiversity loss drivers to housing-related biodiversity footprints in Brazil, Finland and Japan	42
Figure 11: Biodiversity impact intensities (pBDe/€) and expenditure (€/capita/year) by consumer goods	44
Figure 12: Contribution of direct biodiversity loss drivers to consumer goods biodiversity footprints in Brazil, Finland and Japan	45
Figure 13: Lifestyle biodiversity and carbon footprint across countries	46
Figure 14: Systemic interventions for lasting behaviour change	52

Tables

Table A: Examples of existing policies across key lifestyle domains	13
Table 1: Existing choice-editing policies for nature-positive food consumption	59
Table 2: Existing choice-editing policies for nature-positive mobility	63
Table 3: Existing choice-editing policies for nature-positive housing	66
Table 4: Existing choice-editing policies for nature-positive consumption of goods	69

Boxes

Box 1: Key facts on food and its impacts on nature	25
Box 2: Key facts on mobility and its impacts on nature	26
Box 3: Key facts on housing and its impacts on nature	27
Box 4: Key facts on consumer goods and its impacts on nature	28
Box 5: Consumption-based accounting for biodiversity	32
Box 6: Overcoming barriers to nature-positive lifestyles through choice-editing	55

Abbreviations

BDe	biodiversity equivalent
CBD	Convention on Biological Diversity
GHG	greenhouse gas
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
KMBGF	Kunming-Montreal Global Biodiversity Framework
LCA	life-cycle assessment
pBDe	pico-biodiversity equivalent
PDF	potentially disappeared fraction of species
tCO ₂ e	tonnes of carbon dioxide equivalent

Executive Summary

Overview

Current patterns of resource use are pushing the planet well beyond safe ecological limits, even as millions of people are still struggling to satisfy basic needs. The message is clear: the way we currently meet our needs and pursue our aspirations cannot continue without risking severe consequences. Unsustainable lifestyles – particularly in high-income countries and among the wealthiest people – are driving growing pressures on land, water, species and climate. This pressure is mainly due to what we eat, how we travel, how we live and what we buy. Rethinking how needs are met more equitably and sustainably requires a focus on key impact areas, a clear understanding of how provisioning systems shape individual behaviour, and stronger action by governments, the private sector and communities to make sustainable living the default.

This report is written for policymakers, as well as for experts and stakeholders working across biodiversity, sustainability and behaviour change. It explores how food, mobility, housing and consumer goods connect to the drivers of biodiversity loss and environmental impacts. It identifies high-impact areas and outlines evidence-based strategies for action, providing both a strategic framing and a practical policy toolkit for

making lifestyle transition a central pillar of nature-positive development.

The report argues that transitioning to more sustainable lifestyles must become a core strategy for halting and reversing biodiversity loss. Protecting nature cannot be achieved solely through conservation and restoration; it also requires reshaping the social, economic and cultural systems that drive demand for land, materials and energy in the first place. By aligning how societies meet everyday needs with ecological limits and social equity, policymakers can address the root causes of biodiversity loss while delivering co-benefits for climate, health and well-being.

The report advances three core propositions:

- Lifestyles are a major driver of biodiversity loss and climate change; they are therefore a key lever for reversing these crises.
- Lifestyle impacts can be measured and managed through robust, consumption-based indicators.
- Sustainable lifestyles can be mainstreamed through systemic, policy-led transformations of markets, infrastructures and social norms.

Quantifying the biodiversity impacts of lifestyles

Central to this report is the calculation of a biodiversity footprint of everyday lifestyles. While carbon footprints are now widely used to guide climate action, biodiversity impacts have remained largely invisible to decision-makers, whether individuals, businesses or government representatives. The biodiversity footprint fills this gap by tracing household consumption – across food, mobility, housing and consumer goods – through global supply chains, revealing the resulting pressures it places on ecosystems and species.

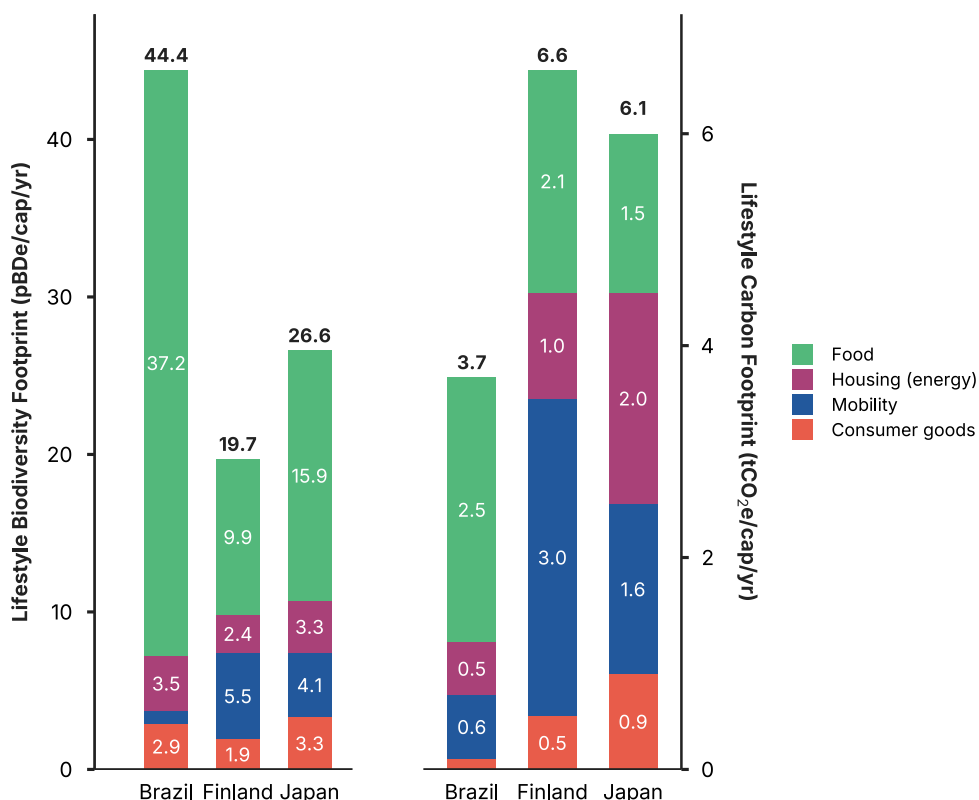
The case studies of Brazil, Finland and Japan show that lifestyle choices cause substantial and highly uneven pressures on biodiversity, often beyond national borders. What people eat, how they travel, the living space they occupy and the goods they purchase all affect land use, pollution, climate change and resource extraction in various places across the world.

The results reveal three crucial insights:

- Food is the dominant driver of biodiversity loss, especially diets rich in animal-based products.
- Mobility and household energy use also contribute substantially to biodiversity loss and dominate climate impacts, providing strong opportunities for co-benefits when low-carbon and nature-positive solutions align.
- Consumer goods and housing also matter for biodiversity, particularly where systems designed for fossil-based materials, large living spaces and inefficient infrastructure lock societies into high-impact patterns.

By comparing the biodiversity and carbon footprints of lifestyles (Figure A), the report shows that many of the most effective climate actions – such as shifting to plant-rich diets, reducing car dependency and improving energy efficiency – also deliver large biodiversity gains. At the same time, it highlights the need to anticipate and manage trade-offs, for example

Figure A: Lifestyle biodiversity and carbon footprint across countries.



Left bar = lifestyle biodiversity footprint (pico biodiversity equivalents, pBDe/capita/year);

Right bar = lifestyle carbon footprint (tCO₂e/capita/year).

Nature-Positive Lifestyles Executive Summary

between land use for climate mitigation and biodiversity conservation, underlining the importance of integrated policy design.

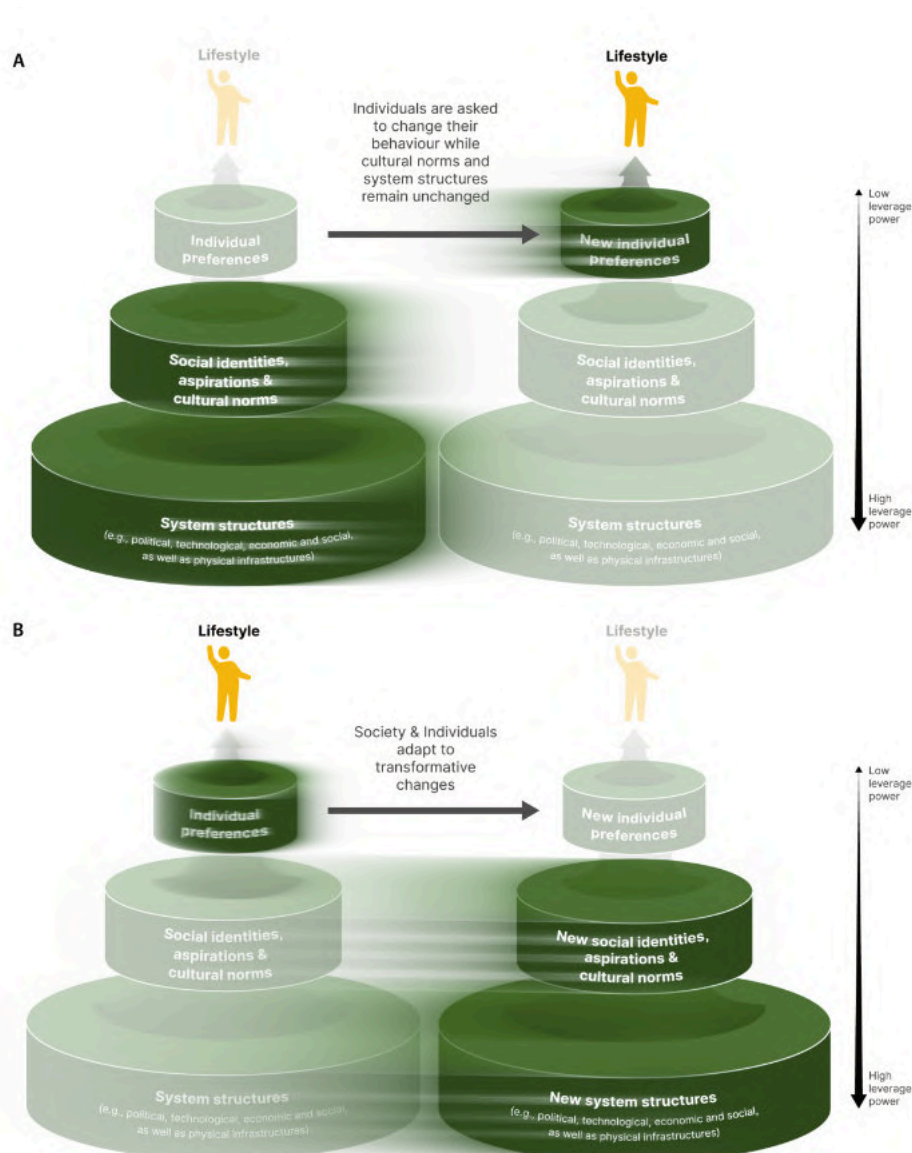
Linking biodiversity loss to lifestyles transforms how policy priorities can be set. By connecting biodiversity impacts to how people eat, travel, live and consume, policymakers can clearly identify high-impact lifestyle domains and behaviours where targeted interventions can deliver the greatest benefits for nature, climate and people.

Why lifestyles are a systems issue

Lifestyles are not simply the outcome of individual choice. They are shaped by two interlocking systems:

- Provisioning systems – how food, housing, mobility and goods are designed, produced, traded, distributed, priced and made available.
- Aspirational systems – the cultural values, social norms, narratives and status signals that define what is considered desirable and normal.

Figure B: Aligning systems to enable lasting lifestyle change.



Individual behaviour change is unlikely to persist when provisioning systems and cultural norms continue to favour high-impact options. Aligning what is available with what is socially desirable creates conditions in which nature-positive choices become the default. Choice-editing provides a policy approach to enable this systemic shift.

Today, these systems largely reward overconsumption. Car-dependent mobility, meat-heavy diets, large homes, fast fashion and disposable goods are often the easiest and most heavily promoted options. Advertising, media and economic incentives reinforce material-intensive notions of success, while sustainable alternatives tend to remain low-status, costly or inconvenient.

While individual choices matter, they are insufficient. Transforming lifestyles requires systemic change, not just awareness-raising. Society, with governments playing a key role, must transform both the material factors that shape lifestyle choices and the cultural meanings attached to consumption and various modes of needs-satisfaction, so that nature-positive ways of living become the default (Figure B).

Choice-editing: making sustainable options the default

This report identifies choice-editing as a powerful way for governments to turn this systems perspective into practical action. Choice-editing means deliberately redesigning markets, infrastructures and social environments so that high-impact options are progressively phased out and low-impact, nature-positive options become easier, cheaper and more attractive.

A core contribution of the report is a structured collection of more than 100 existing policy measures from around the world that already apply choice-editing across food, mobility, housing and consumer goods (Table A). Together, these examples provide policymakers and practitioners with a practical reference for replication, adaptation and scaling.

Table A: Examples of existing policies across key lifestyle domains. See Chapter 5 for the full set of policy examples.

<p>Food</p> <ul style="list-style-type: none">• Fiscal incentives: Germany uses differentiated VAT rates to support a shift toward plant-based diets.• Subsidy reforms: The Netherlands is redirecting subsidies to favour more sustainable food production.• Guideline updates: Nordic countries have updated national dietary guidelines to promote sustainable eating habits. <p>Mobility</p> <ul style="list-style-type: none">• Urban design: Barcelona and Cape Town are reallocating street space to prioritise shared and active mobility.• Awareness campaigns: Italy is reshaping transport aspirations through targeted media and behavioural campaigns.• Fiscal measures: Scotland is introducing taxes on private jet flights to better reflect their climate impacts and curb highly carbon-intensive travel. <p>Housing</p> <ul style="list-style-type: none">• Small housing: Japan is implementing zoning laws that encourage small housing, reducing the impact on land and energy use.• Energy-efficient appliances: India is encouraging the manufacturing and adoption of energy-efficient appliances to reduce climate change impact on nature.• Land-use planning: Nairobi is dedicating land to forests and greenery to prevent sprawling residential or industrial developments in those areas. <p>Consumer Goods</p> <ul style="list-style-type: none">• Sufficiency policies: Amsterdam is adopting sufficiency-focused policies to reduce material throughput.• Progressive taxation: The United States is trialling taxes targeting high-impact consumption.• Regulatory bans: Naples is introducing bans on luxury goods to curb excessive consumption.

They demonstrate that many of the tools needed to shift lifestyles already exist, and that the main challenge lies not in invention but in coordination, ambition and policy integration.

When bundled into coherent policy packages, choice-editing aligns individual intentions with systems conditions, making sustainable lifestyles realistic and desirable.

Measuring what matters

To steer this transition, policymakers need better data. Current biodiversity frameworks still focus mainly on ecosystems within national borders, even though much of the damage is driven by consumption along global supply chains.

This report therefore calls for:

- Strengthening the Kunming-Montreal Global Biodiversity Framework, including Target 16, with indicators that capture consumption-driven biodiversity loss.
- Standardising national consumption data in physical units, disaggregated by socio-economic groups.
- Integrating consumption-based biodiversity and carbon footprints into national and international reporting systems.

The biodiversity footprint case studies of Brazil, Finland and Japan demonstrate the feasibility of assessing lifestyle impacts on biodiversity and show how this can generate policy-relevant insight. Making lifestyle impacts visible allows governments to prioritise action, track progress and align national policies with global goals.

Co-creating a nature-positive future

A nature-positive future is one in which human well-being improves while ecosystems recover and thrive. Achieving this requires new visions of good living based on health, sufficiency, equity and care for the natural world.

This transition must be built with society, not for it. Policymakers, businesses, civil society and communities must work together to co-design pathways that reflect diverse needs and values. Indigenous peoples and local communities, artists and cultural actors, youth, consumer groups and marketers all have vital roles to play in reshaping what is considered normal, desirable and meaningful.

Participatory processes and cultural engagement can build legitimacy, trust and political momentum for ambitious change.

From momentum to mainstream

Momentum is building. Policies that reshape choices, shift values and support sustainable lifestyles are already being implemented, with tangible results. Yet broader and faster uptake is needed. By combining robust footprint metrics, systemic policy tools and inclusive governance, countries can move beyond incremental change toward lifestyles that allow people and nature to thrive together.

The transition to nature-positive lifestyles is not about sacrifice. It is about creating societies that live well within ecological limits – healthier, more equitable and more resilient for generations to come. By making sustainable living the new normal, through ambitious policy, inclusive collaboration and cultural transformation, policymakers can help unlock a future in which both people and nature thrive.

PART I

Introduction



1

Why Lifestyles Matter for Biodiversity

The escalating triple planetary crisis of biodiversity loss, climate change and pollution – deeply interconnected and driven by unsustainable consumption and production – demands urgent, systemic and socially grounded action. While climate change has received considerable global attention, biodiversity loss and ecosystem degradation¹ continue to be treated as secondary concerns, despite posing equally critical threats to human well-being, economic stability and planetary health. They also significantly undermine our ability to respond to climate challenges (IPBES, 2019).

Addressing the biodiversity crisis requires more than conservation and restoration. It requires social innovation and deep societal transformation: a reconfiguration of how people live, consume, and relate to nature. Recent policy advances – including the EU Biodiversity Strategy for 2030, the Kunming-Montreal Global Biodiversity Framework (KMGBF) and the EU Nature Restoration Regulation – represent significant milestones. Yet two persistent challenges continue to limit the effectiveness of biodiversity policy responses (Figure 1).

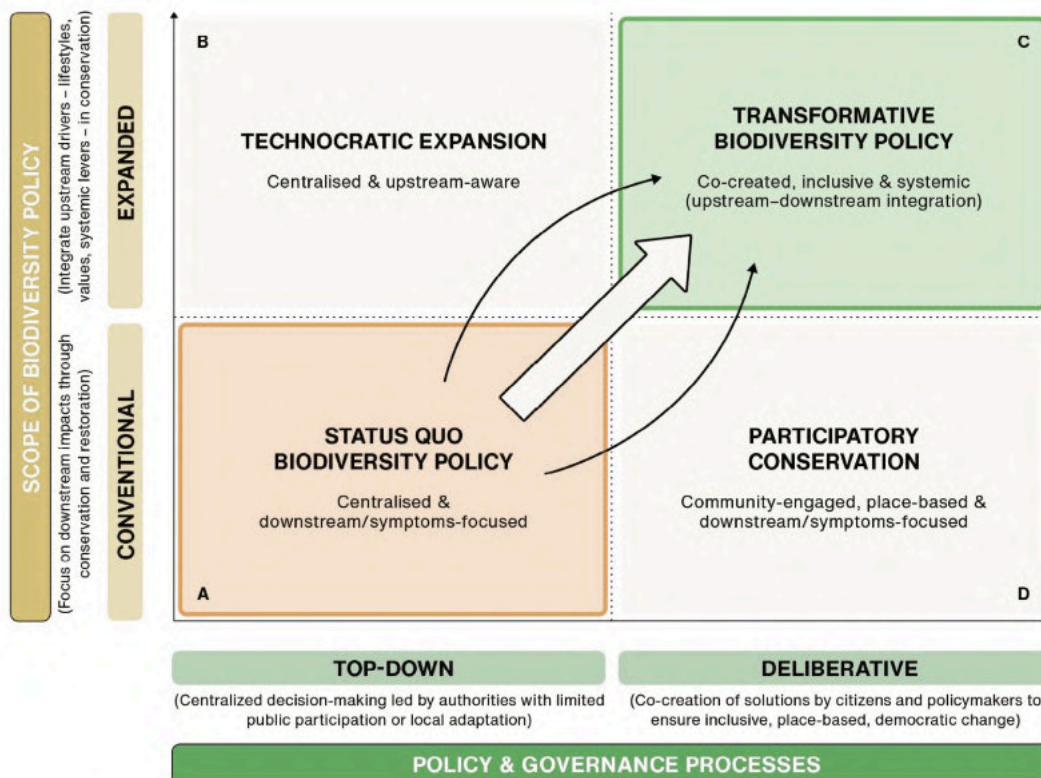
First, lifestyle patterns and cultural values remain largely overlooked in biodiversity strategies (Verissimo et al., 2025), even though they strongly influence land use, resource demand, production systems and pollution – key drivers of biodiversity loss (IPBES, 2019).

Second, biodiversity policies remain dominated by top-down governance, often failing to meaningfully engage citizens or build socially inclusive, democratically legitimate pathways for change. As a result, many well-intended measures struggle to gain public support, lack political durability, or do not address the systemic roots of unsustainable behaviour.

To move beyond this status quo, momentum is building among organisations worldwide for biodiversity policymaking to evolve from centralised, downstream-focused approaches toward co-creative, inclusive and systemic frameworks that integrate both upstream and downstream levers of action.

¹ Building on the IPBES work, the term “nature” can be used to refer to both biodiversity and ecosystems. The expression “nature loss” is thus often used in this report as a broad term to indicate both change and decline of biodiversity (e.g., species extinction), and the degradation of ecosystems and their functionality.

Figure 1: Solution spaces for transformative biodiversity governance.



Moving beyond conservation-only and top-down approaches requires addressing lifestyle drivers of biodiversity loss and embedding biodiversity policy in inclusive, participatory governance processes.

This requires:

- Broadening biodiversity policy frameworks to incorporate lifestyle change and other underused levers of action: Applying a systems lens reveals how unsustainable lifestyles, overconsumption and overproduction drive biodiversity loss and climate impacts, and how individual preferences, cultural norms and structural conditions sustain these patterns. Conservation and restoration must be complemented by policies that address these upstream determinants.
- Embedding this broader framing in participatory and deliberative processes: Citizens, stakeholders and policymakers must

be engaged in jointly envisioning nature-positive ways of living and co-designing policy packages to achieve them. Accessible language and formats that resonate with diverse communities are essential for building shared ownership, trust and democratic legitimacy.

This report contributes to these shifts by examining how everyday lifestyle choices – across food, mobility, housing and consumer goods² – affect nature through the five key drivers of biodiversity loss. It also introduces pilot applications of a biodiversity footprint methodology³ for Brazil, Finland and Japan (Chapter 3), which quantitatively link household consumption to biodiversity impacts.

² While previous studies (e.g., Akenji and Chen, 2016) include leisure as a distinct domain of final consumption, this report considers leisure as a cross-cutting element across food, mobility, housing and consumer goods. Leisure-related impacts and policy examples are thus integrated within these domains rather than treated separately.

³ See www.sitra.fi/en/news/finns-biodiversity-footprint-calculated-for-the-first-time-important-step-forward-in-combating-biodiversity-loss

Extensive research⁴ shows that lifestyles are central to environmental impacts: nearly 70% of climate impacts, 70% of land use, 48% of material use and 81% of freshwater use can be directly or indirectly linked to lifestyles and household consumption across the four lifestyle domains (see Chapter 2). Yet the role of lifestyles and consumption patterns in driving biodiversity loss remains underexplored in both science and policy. Most biodiversity policies still prioritise protecting ecosystems and species, with insufficient attention to the upstream societal drivers of degradation. While habitat protection and restoration help slow biodiversity loss and maintain ecosystem integrity, they alone cannot prevent, halt and reverse nature loss, as called for by the UN Decade on Ecosystem Restoration (2021-2030).

Recognising that lifestyles are not simply the outcome of individual preferences but emerge from the interplay of cultural, social and structural forces, this report discusses the importance of transforming both provisioning systems – the structures that determine how goods and services are produced and delivered – and aspirational systems – the norms, values and desires that shape consumption (see Chapter 4). It then presents more than 100 examples of existing choice-editing⁵ policies across four lifestyle domains (see Chapter 5), demonstrating that many transformative measures are already in place and can be scaled or adapted.

By adopting the lifestyle perspective provided by this report, policymakers can more effectively address root causes in high-impact, overconsuming societies, while preventing unsustainable structural lock-ins in emerging and developing economies. They can design integrated interventions and build socially robust pathways toward a nature-positive future within a fair consumption space⁶ – one that favours nature recovery while ensuring equitable access to essential needs, decent living standards and human dignity.

1.1 A lifestyle perspective is essential for a nature-positive future

Lifestyles are complex, socially shaped patterns of consumption and behaviour, reflecting how people meet their needs and aspirations. They are shaped not only by individual preferences but by three interconnected factors:

1. system structures,
2. social contexts (e.g., identities, cultural norms and aspirations), and
3. individual preferences (e.g., motivations and capacities).

System structures – urban design, food systems, transport infrastructures, supply chains, technologies, pricing, regulation – play the most decisive role. They shape social identities and values, which in turn reinforce these structures and influence individual choices.

As Figure 2 illustrates, individual agency is nested within broader cultural and structural contexts, meaning that corporations, governments, media and cultural influencers carry disproportionate responsibility for shaping the conditions under which sustainable or unsustainable lifestyles emerge.⁷

Transformative change therefore requires coordinated action at multiple levels:

- top-down (government-led) policy and regulation to shift system structures;
- bottom-up (community-driven) innovation to catalyse social norms and participation; and
- side-by-side collaborative processes that engage diverse actors from across society, including youth, gender-marginalised and underrepresented groups, and Indigenous peoples, whose worldviews and practices offer invaluable insights into sustainable living in harmony with nature.

A reimagined societal vision – co-created through public dialogue and aligned with citizens' aspirations – must be anchored within political, economic and

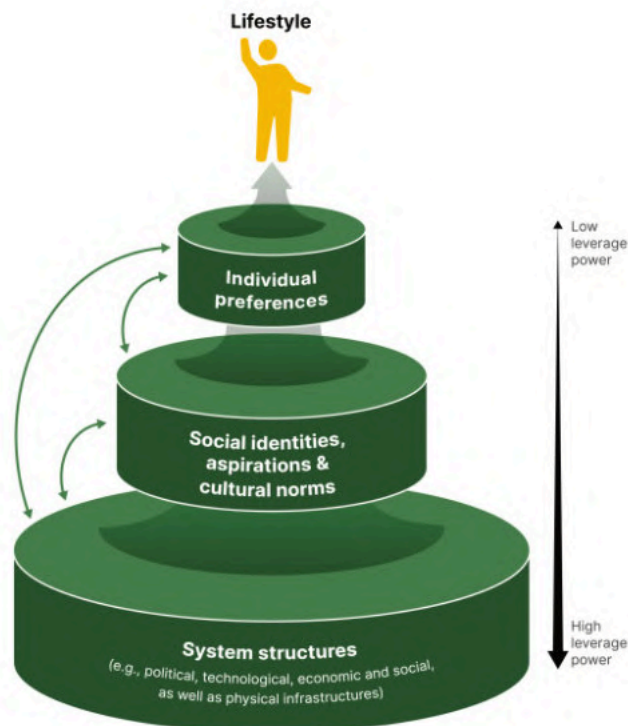
⁴ See for instance Ivanova et al., 2016.

⁵ Choice-editing is here considered as a comprehensive approach to shaping consumption by design, encompassing regulatory measures, educational campaigns and social marketing initiatives that influence both provisioning and aspirational systems, often outside the conventional scope of choice-editing.

⁶ See Akenji et al., 2021.

⁷ Figure 2 simplifies the Attitude-Facilitator-Infrastructure (A-F-I) framework proposed by Akenji and Chen (2016), and highlights the macro areas that determine lifestyles without zooming into the multiple sub-components or actors of these areas.

Figure 2: The building blocks of lifestyles.



Lifestyles are shaped by interconnected factors: system structures, social identities, aspirations and cultural norms, and individual preferences. The organisation of system structures influences social identities and individual preferences that, in turn, reinforce those structures. Systemic change and structural interventions have the highest potential to break systemic lock-ins and overcome entrenched behaviours.

technological systems to enable nature-positive lifestyles for all.

1.2 Innovative policy approaches are needed for sustainable lifestyles

Policies aimed at promoting sustainable ways of living have traditionally relied on consumer awareness campaigns, ecolabels, modest economic incentives and behavioural nudges.⁸ While these measures have delivered incremental progress – and technological innovations have further supported sustainability efforts – they remain insufficient to address the triple planetary crisis with the urgency required.

By relying on voluntary actions or market forces, these approaches have failed to drive the deep structural transformations needed. At the same time, existing systems have eroded the skills needed for alternative consumption practices – such as repair, reuse and refill

– and progressively reshaped aspirations in ways that normalise disposable consumption.

This report emphasises choice-editing as a powerful policy approach to shift responsibility away from individuals and toward systemic change. In this context, choice-editing refers to the intentional redesign of consumption environments and cultural cues to make sustainable options the default, enabling individuals to adopt nature-positive lifestyles without requiring constant effort, sacrifice or specialised knowledge.

This approach⁹ expands responsibility to policymakers, businesses and cultural institutions, recognising their critical role in shaping consumption environments. By ensuring that more sustainable alternatives become the most accessible, affordable, attractive and convenient options for consumers, choice-editing fosters sustainable, nature-positive lifestyles by design. It also responds to the growing public demand for systemic support in adopting sustainable ways of living.

⁸ See The Boundless Roots Community, 2021.

⁹ Choice-editing has been used by businesses and retailers, and in health and safety policies (See Section 5.1) and could be leveraged and expanded into environmental policy.

1.3 Lifestyle-related data and indicators are critical for monitoring progress

Equitably addressing the triple planetary crisis requires rethinking global policy targets and frameworks. While the Kunming-Montreal Global Biodiversity Framework acknowledges lifestyle-driven root causes of nature loss, its targets¹⁰ remain largely focused on downstream impacts. Broadening biodiversity policy to embrace lifestyle domains – such as food, mobility, housing and consumer goods – can help policymakers address root causes, advance social justice, and support broader environmental and societal goals.

The concept of a fair consumption space must guide this shift, ensuring that environmental efforts do not disproportionately burden lower-income groups. Integrating gender equity, youth voices and Indigenous knowledge is essential, as these groups often face the greatest environmental impacts while contributing valuable knowledge and sustainable practices.

To support this shift, the report introduces a consumption-based biodiversity footprint as a practical tool for embedding lifestyle considerations into biodiversity policy. By linking household demand in food, mobility, housing and consumer goods to pressures on land, ecosystems and species along global supply chains, the biodiversity footprint makes lifestyle-driven nature loss visible, comparable and policy-relevant. It allows policymakers to identify high-impact domains, understand which direct drivers of biodiversity loss matter most, and assess how climate and biodiversity objectives interact. This analytical foundation, presented in Chapter 3 through pilot applications for Brazil, Finland and Japan, provides the evidence base for the systems-level policy approaches and choice-editing strategies developed in the remainder of the report.

Policymakers, corporations, media, and cultural influencers shape systems that influence social values and daily choices.

¹⁰ The Kunming-Montreal Global Biodiversity Framework of the Convention on Biological Diversity (KMGBF) represents the main international process to set nature loss targets. Out of its 23 targets, only three touch on drivers of nature loss (Target 7 on pollution, Target 8 on climate change, and Target 16 on overconsumption and waste).

PART II

Evidence and Insights from Lifestyles



2

Linking Lifestyles, Drivers of Nature Loss and Impacts for Effective Policy Interventions

KEY CHAPTER MESSAGES

The following messages highlight priority insights for policymakers and practitioners designing effective interventions to address the lifestyle drivers of nature loss:

- **Recognise nature as the foundation of human well-being and economic stability:** Nature underpins human needs and economic activities, providing services such as climate regulation and pollination that support food security, economic resilience and human health. Prioritising nature in policy helps secure a stable foundation for societal well-being.
- **Focus on lifestyle policy action to reduce biodiversity loss:** Reorienting policies toward lifestyle domains enables actions on upstream drivers of biodiversity loss: land and sea use, direct resource exploitation, pollution, climate change and invasive species.
- **Prioritise high-impact domains for nature-positive lifestyles:** Food and mobility are the highest-impact lifestyle domains for reducing pressures on biodiversity, followed by housing and consumer goods. Addressing these domains holistically can minimise trade-offs and magnify co-benefits.
- **Align global consumption with environmental limits and social equity:** Unsustainable consumption in high-income countries increasingly drives environmental impacts beyond their borders. Coordinated policies that account for these cross-border effects are essential for reducing global footprints and promoting equitable resource use.

Nature is humanity's life-support system, providing essential resources and services – from food, water and shelter to climate regulation, pollution control and pollination – that underpin human well-being and economic activity. Healthy ecosystems sustain over 75% of global food crops through animal pollination and absorb around 60% of global anthropogenic carbon emissions each year.¹¹ They also shape cultural and spiritual identities and generate value across business and finance sectors (TNFD, 2023).

Yet human lifestyles are increasingly linked to biodiversity loss, and impacts vary widely across countries and income groups. High-income countries often externalise a substantial portion of their environmental pressures through global supply chains: over 50% of the biodiversity loss associated with consumption in the Global North occurs in other regions (Wilting et al., 2017). This displacement amplifies global inequalities and complicates efforts to address the root causes of the biodiversity crisis.

Addressing the lifestyle drivers of biodiversity loss presents both challenges and opportunities. Protecting designated conservation areas has limited effect if surrounding ecosystems continue to degrade. Knowledge gaps¹² and complex global supply chains make it difficult for consumers, businesses and policymakers to trace the ecological impacts of everyday consumption, while limited public awareness constrains political appetite for systemic change. Cross-border “outsourcing” of impacts further obscures the links between local actions and global consequences, masking resource constraints and intensifying social inequalities and ecological vulnerabilities.

A major barrier to effective policy design is the absence of a comprehensive accounting system capable of fully quantifying how lifestyle domains translate into the five IPBES drivers of biodiversity loss and, in turn, into impacts on nature. Unlike established climate metrics (e.g., carbon footprints), no end-to-end, globally agreed

methodology yet exists to trace these relationships quantitatively, and that can thus help set clear, quantifiable nature targets.

However, an extensive body of scientific literature provides qualitative evidence of how lifestyle domains influence land and sea use, resource exploitation, pollution, climate change, and invasive species. Drawing on this research, this chapter presents a first qualitative mapping of how consumption and production activities within the four major lifestyle domains – food, mobility, housing and consumer goods – drive biodiversity loss. It identifies key intervention points, cross-domain interactions, and opportunities to maximise co-benefits and avoid trade-offs.

While some frameworks¹³ include a fifth lifestyle domain (leisure), this report treats leisure as a cross-cutting factor influencing the other four. Among these domains, food and mobility are the most impactful, followed by housing and consumer goods.¹⁴

Importantly, many of the drivers of biodiversity loss mirror those of climate change, reflecting the fact that both crises stem from the same underlying pressures from human activity. Actions in lifestyle domains can influence multiple drivers of biodiversity loss at once – from land-use change to direct exploitation of resources – while also delivering benefits for climate mitigation (see Figure 3). Yet trade-offs are also possible: substituting fossil-based materials with bio-based alternatives for energy or packaging, for instance, may result in land-use changes that threaten biodiversity and long-term ecosystem resilience if not properly planned.¹⁵

¹¹ According to Diaz et al. (2019), over 75% of global food crops, including fruits and vegetables and key cash crops like coffee and cocoa, depend on animal pollination. Meanwhile, according to IPBES (2019), marine and terrestrial ecosystems sequester 5.6 gigatonnes of carbon annually, equivalent to approximately 60% of global anthropogenic emissions.

¹² Nearly 90% of Earth's species, particularly in deep oceans and dense rainforests, remain unknown to science (Mora et al., 2011). This knowledge gap hinders our understanding of how these species contribute to vital ecosystem functions, such as nutrient cycling and pollination. As a result, it is difficult to accurately assess the full impact of human activities, like deforestation and pollution, on biodiversity.

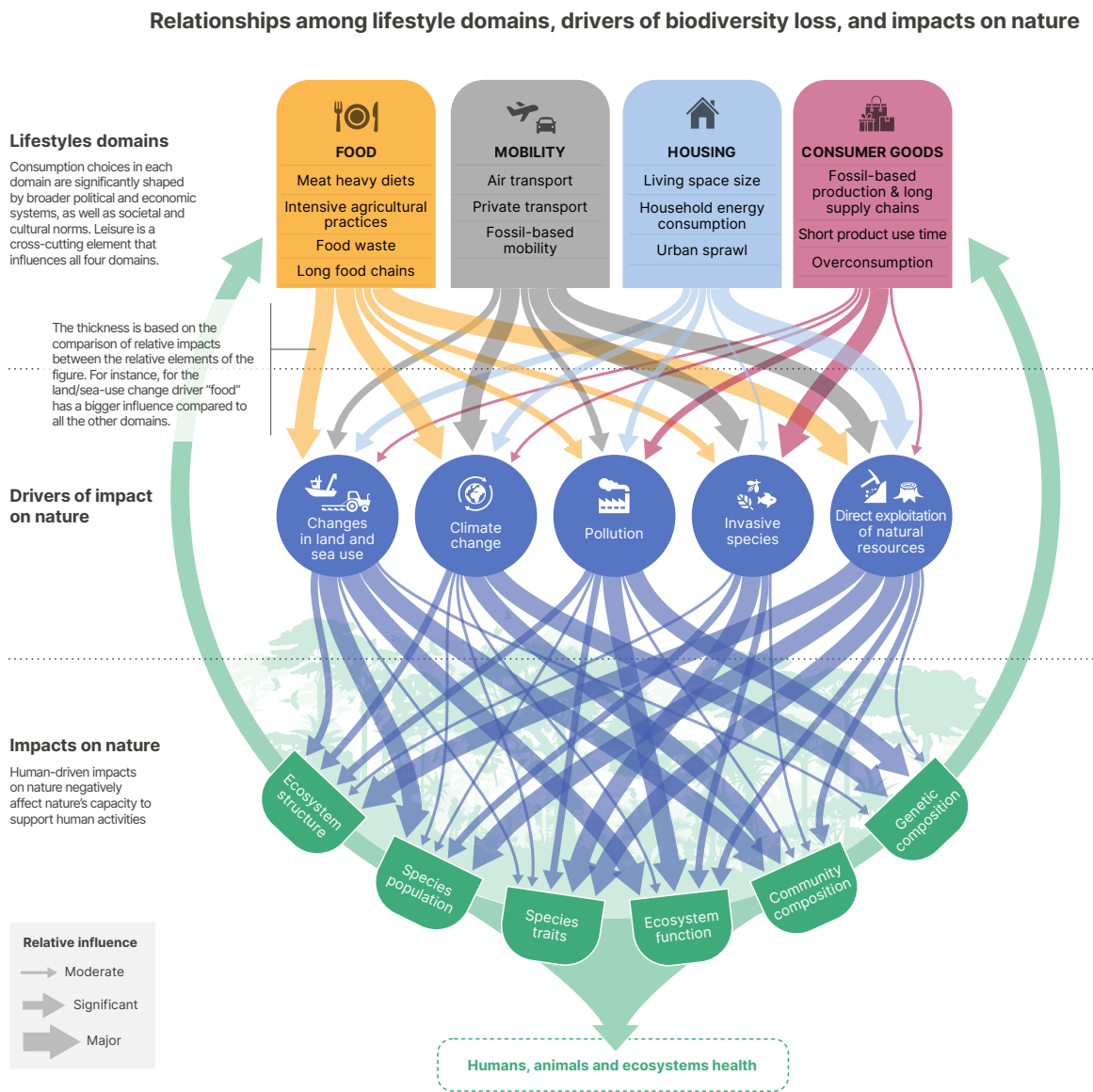
¹³ The five domains usually considered are food, housing, mobility, consumer goods and leisure (see for instance Akenji and Chen, 2016).

¹⁴ See Boxes 1-4 in this section for key facts and statistics.

¹⁵ See Baldwin-Cantello et al., 2023, Hirata et al., 2024, and Pörtner et al., 2021 for further details on the trade-offs, particularly in the management of land for climate mitigation versus biodiversity restoration.

PART II
Evidence and insights from lifestyles

Figure 3: Relationships among lifestyle domains, drivers of biodiversity loss, and impacts on nature.



The way we eat (food), travel (mobility), live (housing), and consume goods – often linked to unsustainable values and aspirations locally and globally – affect nature through five main drivers (IPBES, 2019): changes in land and sea use, resource exploitation, pollution, climate change, and invasive species. These drivers impact nature in terms of six essential biodiversity variables: ecosystem structure, species population, species traits, ecosystem function, community composition and genetic composition (Pereira et al., 2013). Arrow thickness between lifestyle domains and drivers reflects data from literature and expert consultations. Arrows between drivers and impacts are based on findings from Jaureguiberry et al. (2022). Leisure is considered as a cross-cutting element affecting all domains.

2.1 Food

Agriculture is the leading driver of biodiversity loss, accounting for more than half of the decline in terrestrial species (see Box 1 for key facts on food trends and their impacts on nature). The expansion of croplands and livestock farming – especially for beef production and for soy and palm oil cultivation – causes deforestation and habitat destruction.¹⁶ Diets high in red meat – especially from animals raised in intensive farming systems – and in fish and seafood – particularly higher trophic-level species such as large predatory fish – further contribute to greenhouse gas (GHG) emissions, exacerbating climate change and placing additional stress on nature (Galli et al., 2023; Katz-Rosene et al., 2023).

Unsustainable agricultural practices, including excessive fertiliser and pesticide use, contribute to pollution, eutrophication and soil degradation, severely impacting ecosystems. Global reliance on a narrow range of animal species and crops (wheat, rice, maize and soy) exacerbates resource exploitation, depletes soil nutrients, reduces agrobiodiversity and weakens ecosystem resilience. Increasing demand for out-of-season food, long supply chains and continuous product rotation in supermarkets fuel GHG emissions and food waste.

Box 1: Key facts on food and its impacts on nature.

Food trends	Food impacts on nature
<ul style="list-style-type: none"> • Global meat production and consumption more than tripled over the past 50 years, reaching an all-time high of 45 kg per person in 2022 (Ripple et al., 2023). • Meat-heavy diets, particularly those based on beef, require three times more land and generate five times more emissions than plant-based diets (Poore and Nemecek, 2018; Galli et al., 2023). • Just 12 plants and 5 animal species account for nearly 75% of the food available globally (FAO, 1999). • Food waste consumes nearly 30% of the world's agricultural land (1.4 billion hectares) and represents an economic loss of nearly €1 trillion annually (FAO, 2011). • Only 30% of the population meets crop demand locally (within 100 km) (Kinnunen et al., 2020), while cities consume 79% of global food supplies (FAO, 2019). • Men consume 57% more meat than women, contributing to a 41% higher dietary environmental footprint, while women are 50% more likely to adopt plant-based diets and 25% more likely to choose pro-environmental food options (Sabaté & Soret, 2014; Bianchi et al., 2018). 	<ul style="list-style-type: none"> • The global food system drives 23–42% of global GHG emissions (Babiker et al., 2022) and accounts for 70% of freshwater withdrawals, with agricultural land covering over 37% of Earth's terrestrial surface (FAO, 2004). • By 2050, food-related GHG emissions are expected to increase by 87%, cropland use by 67%, blue water use by 65%, and phosphorus and nitrogen application by 54% and 51%, respectively, compared to 2010 (Springmann et al., 2018). • Agriculture accounts for 53% of the decline in terrestrial species (Tanentzap et al., 2015). • The conversion of land for agriculture is responsible for about 80% of global deforestation (Kissinger et al., 2012). • Up to \$577 billion in annual global crop production is at risk due to pollinator loss (IPBES, 2016).

¹⁶ According to the first Global Tree Assessment, nearly 40% of tree species worldwide are at risk of extinction. Trees make up approximately 25% of the species on the IUCN Red List, with more threatened tree species than all threatened birds, mammals, reptiles, and amphibians combined (see <https://iucn.org/press-release/202410/more-one-three-tree-species-worldwide-faces-extinction-iucn-red-list>).

2.2 Mobility

Fossil-fuel-based private transportation and aviation also contribute to nature loss, accounting for 2–5% of global biodiversity decline (see Box 2 for key facts on mobility trends and their impacts on nature). Emissions from these mobility modes accelerate climate change, disrupting ecosystems, altering species distributions

and amplifying stressors such as droughts, floods and wildfires. Infrastructure development for space-intensive transport further exacerbates land-use changes, with roads and railways fragmenting habitats, compounding biodiversity impacts and disrupting ecosystem functions. Roads alone threaten approximately 2,300 key biodiversity areas (Laurance et al., 2014).

Box 2: Key facts on mobility and its impacts on nature.

Mobility trends	Mobility impacts on nature
<ul style="list-style-type: none"> • Air transport peaked at about 4.5 billion passengers annually in 2019, before falling sharply during the COVID-19 pandemic (Ripple et al., 2023). • Air transport alone is expected to grow by 4.3% annually over the next 20 years (ICAO, 2019). • Aviation accounts for 2.5% of global emissions (Richie, 2024), yet only 10% of the global population routinely uses it, making it one of the most carbon-intensive consumption activities (Gössling & Humpe, 2020). • Private cars and vans consumed over 25% of global oil and produced about 10% of global energy-related CO₂ emissions in 2022 (IEA, 2024a). • Global road networks are projected to grow by 14–23% by 2050, adding 3.0–4.7 million kilometres of paved roads (Meijer et al. 2018). • Men are more likely than women to use private cars and air travel, resulting in a 70% higher mobility-related carbon footprint on average, while women tend to rely more on public transportation and active travel modes, which have lower environmental impacts (Mattioli et al., 2020; Brand et al., 2021; Peters, 2013). 	<ul style="list-style-type: none"> • Mobility systems (land, sea and air) contribute to 7% of global climate impacts, 6% of pollution, and 2–5% of nature loss (UNEP, 2024) • Linear transportation infrastructure, such as roads and railways, threatens wildlife via direct mortality and fragmentation of ecological connectivity (Hilty et al., 2020); habitat fragmentation can reduce biodiversity by 13% to 75% and impairs key ecosystem functions (Haddad et al., 2015). • Planned road and railway projects in 137 countries pose risks to about 2,500 species globally (UNEP, 2022). • Infrastructure developments jeopardise the retention of an estimated 1.17 million tonnes of nitrogen by vegetation (UNEP, 2022) and may release up to 883 million tonnes of carbon from vegetation and soils (UNEP, 2022).

2.3 Housing (energy)

The expansion of suburban housing – driven by urbanisation and increasing preferences for larger living spaces – accelerates natural resource depletion (e.g., building materials) and land-use change (see Box 3 for key facts on housing trends and their impacts on nature). Aspirations for private gardens contribute to nature privatisation, often replacing biodiverse landscapes with monoculture lawns or non-native ornamental plants. This can reduce wildlife habitat and ecological connectivity, while limiting public access to natural spaces.

Frequent aesthetic home renovations, fuelled by media-driven ideals for a good life, drive material consumption, waste generation and energy demand. In contrast, housing retrofits – such as insulation, heat pumps, rooftop solar, efficient appliances and electrification – enhance sustainability by reducing energy use and GHG emissions.

Box 3: Key facts on housing and its impacts on nature.

Housing trends	Housing impacts on nature
<ul style="list-style-type: none"> • Operations of buildings account for 30% of global final energy demand, including direct energy use and the indirect energy required for heat and electricity (IEA, 2024b). • Floor area growth in buildings and infrastructure is projected to double by 2060 (IEA, 2022). • Urban areas have rapidly expanded, with the urban population growing from 30% of humanity in 1950 to 55% in 2018, and projections reaching nearly 70% by 2050 (UNDP, 2018). • From 1990 to 2014, urban sprawl increased by 95% worldwide (Behnisch et al., 2022). • Under a business-as-usual scenario, urbanisation will continue at a rapid pace. Each week until 2030, about 1.5 million people will be added to cities, driving further growth in built areas (WEF, 2020). • About 60% of women in urban informal settlements face challenges in accessing affordable housing, compared to 40% of men. Women in low-income households are 50% less likely to own property, limiting their ability to invest in energy-saving measures (Satterthwaite, 2014; UN Women, 2020). 	<ul style="list-style-type: none"> • Energy use in buildings contributes 26% of global energy-related GHG emissions (IEA, 2024b). • Construction of human spaces accounts for 17% of climate change impacts, 9% of biodiversity loss and 6% of water-related impacts (UNEP, 2024). • The built environment is estimated to affect 29% of species in the International Union for Conservation of Nature's (IUCN) list of threatened and near-threatened species (WEF, 2020). • If current trends continue, by 2030 the global expansion of urban areas could threaten 290,000 km² of natural habitats – an area larger than Ecuador (The Nature Conservancy, 2018).

2.4 Consumer goods

The consumption and production of consumer goods, such as textiles and fashion, cosmetics, and electronics, drive resource extraction, pollution and environmental degradation, with cascading impacts on biodiversity (see Box 4 for key facts on consumer goods trends and their impacts on nature).

Globalised supply chains, with goods often produced in one region, traded across the world and consumed elsewhere, amplify environmental footprints, spread invasive species and exacerbate resource exploitation. Rising demand for materials such as metals, timber, synthetic fibres and oil, coupled with pollution from plastics and industrial emissions, further disrupts ecosystems.

Box 4: Key facts on consumer goods and its impacts on nature.

Consumer goods trends	Consumer goods impacts on nature
<ul style="list-style-type: none"> • Per capita production of manufactured goods doubled between 1992 and 2014 (Dasgupta, 2021). • In 2020, the anthropogenic mass – the total material output of human activities – surpassed the combined global living biomass (Elhacham et al., 2020). • Global use of materials – including metals, fossil fuels, minerals and biomass – has tripled over the past 50 years, reaching 100 billion tonnes in 2020 (UNEP, 2024). • Between 2005 and 2015 global textile production doubled, while the number of times a garment was worn before being discarded fell by 36% (EMF, 2017). • Since the 19th century, the share of global GDP accounted for by merchandise imports has more than tripled, with a marked increase since the 1990s due to rising exports from newly industrialised countries (Hulme, 2021) • Global advertising spending was projected to reach US\$762.5 billion by the end of 2024, with digital platforms expected to account for around 60% of the total spending by 2025. The US advertising market is larger than the combined total of the next seven largest markets (Dentsu, 2023). • Women account for 60-80% of global consumer spending, particularly in retail, fashion and household goods. About 70% of women in European markets prefer eco-friendly products, compared to 50% of men. Gender inequality in wages limits women's ability to make environmentally conscious purchases (UNEP, 2020). 	<ul style="list-style-type: none"> • Manufactured goods, from vehicles to textiles and appliances, account for about one-third of global GHG emissions and around 5% of global freshwater and land use (Circle Economy and Deloitte, 2024). • Over 50% of nature loss associated with consumption in developed economies occurs beyond their national borders (Wilting et al., 2017). • The growth of consumer-goods trade has accelerated the global spread of alien species, annual records of which have increased nearly 20-fold since the 19th century, causing widespread ecosystem disruption and biodiversity loss (Hulme, 2021) • Over a third of materials used for textiles comes from land-based ecosystems, produced through cropping, grazing or forestry (Textile Exchange, 2023). • By 2030, the fashion industry is projected to require 35% more land – equivalent to 115 million hectares, or nearly the size of South Africa – for cotton, forest for cellulosic fibres, and grassland for livestock (Global Fashion Agenda & Boston Consulting Group, 2017). • Textiles are responsible for 9% of annual microplastic pollution to oceans (UNEP, 2021).



Clear, quantifiable nature targets, similar to those for climate change, are essential for developing effective policies that drive transformative change.

3

From Theory to Practice: the Biodiversity Footprint of Brazil, Japan and Finland

KEY CHAPTER MESSAGES

The following messages highlight priority insights for policymakers and practitioners, drawing on consumption-based evidence from three country case studies to inform nature-positive policy design:

- **Consumption-based biodiversity footprints make lifestyle impacts on nature visible across global supply chains.** This chapter applies a biodiversity footprint approach to link household consumption in four lifestyle domains – food, housing, mobility and consumer goods – to biodiversity impacts along global supply chains, expressed using biodiversity equivalents (BDe), a globally comparable indicator of biodiversity damage.
- **Lifestyle biodiversity footprints differ markedly across countries, revealing distinct policy entry points.** Per-capita biodiversity footprints vary substantially between Brazil, Finland and Japan, reflecting differences in consumption patterns, production systems, and the geographical origin of goods. These contrasts underline the need for country-specific, demand-side policy strategies rather than one-size-fits-all solutions.
- **Food is the primary lifestyle domain influencing the direct drivers of biodiversity loss across countries.** Across all three case studies, food accounts for the largest share of biodiversity impacts, driven mainly by land-use change associated with animal-based foods. Mobility, consumer goods and housing also contribute, with their relative importance shaped by travel demand, energy systems, material use and infrastructure.
- **Disaggregating biodiversity footprints by direct drivers clarifies where policy action is most effective.** Land use is the dominant driver of food-related biodiversity impacts, while climate change drives most impacts from mobility and housing energy use. This driver-based perspective helps align policy interventions with the pressures that matter most for biodiversity outcomes.
- **Comparing biodiversity and carbon footprints helps safeguard biodiversity outcomes while advancing climate goals.** Differences in lifestyle domain priorities show where actions to reduce biodiversity loss also lower emissions, and where trade-offs may arise, enabling policy packages that protect nature while contributing to climate objectives.

This chapter applies the framework introduced in Figure 3 to quantify how everyday lifestyles translate into impacts on nature for three countries: Brazil, Finland and Japan. The biodiversity footprint links what households consume in four key lifestyle domains – food, mobility, housing energy and consumer goods – to biodiversity impacts along global supply chains.

By doing so, it moves beyond visible impacts (such as habitat loss) to reveal the underlying consumption patterns that drive biodiversity loss and how they affect most of the direct anthropogenic drivers identified by IPBES (i.e. land-use change, climate change, pollution, invasive species, and resource exploitation). It also enables direct comparison between biodiversity and carbon footprints, making it possible to identify where climate action and nature protection reinforce each other, and where trade-offs may arise.

Brazil, Finland and Japan were selected because they represent different geographies, income levels, consumption patterns and roles in global supply chains, and because robust lifestyle carbon footprint data is available for all three (Hot or Cool, 2025). Together, they provide a practical test bed for showing how biodiversity footprints can support targeted, country-specific policy design.

This chapter addresses three policy-relevant questions:

- Where do lifestyle-related biodiversity impacts come from? How do biodiversity footprints differ across food, mobility, housing and consumer goods, and which underlying drivers matter most?
- Where do biodiversity and climate goals align or conflict? Which lifestyle changes deliver joint benefits for nature and climate, and where do trade-offs need to be managed?
- How robust is the evidence for policy use? What uncertainties matter most in biodiversity footprinting, and how should they be handled when designing policy?

3.1 How the lifestyle biodiversity footprint is calculated

The lifestyle biodiversity footprint is a consumption-based accounting method that links household consumption to biodiversity loss along global supply chains, expressing impacts in a common biodiversity unit.

In this study, biodiversity impacts are calculated using the BIOVALENT method (El Geneidy et al., 2023), which expresses impacts as biodiversity equivalent (BDe) – the share of global species expected to be lost because of human pressures. Results are reported in pico biodiversity equivalents (pBDe = BDe × 10¹²) to make the very small per-capita contributions to global biodiversity loss easier to interpret and compare. BDe builds on the potentially disappeared fraction of species (PDF) indicator (Verones et al., 2020) and extends it to estimate extinction risk across terrestrial, freshwater and marine ecosystems in a globally consistent way (El Geneidy et al., 2025a, b).

The calculation workflow, which links consumption and behaviour to biodiversity loss along supply chains, follows three main steps:

Step 1) Household consumption

Annual consumption by households is compiled for four lifestyle domains – food, mobility, housing and consumer goods – using activity and expenditure data harmonised to a consistent base year (see Box 5 for details).¹⁷

Lifestyle domains are defined to be comparable across the three countries while minimising double counting and to reflect how people actually meet their needs:

- Food: all food and drinks consumed at home and outside in physical units (including meat, fish, dairy, cereals, vegetables and fruit, and alcoholic and non-alcoholic beverages).
- Housing: household energy and water use for heating, cooling, lighting, cooking and hot water.¹⁸

¹⁷ Note that in this report we restrict the footprint analysis to four lifestyle domains – food, housing, mobility and consumer goods – rather than the full six-domain lifestyle framework (which also includes leisure and services) to correspond to the pressure sectors represented in the biodiversity framework introduced in Figure 3. Leisure and services are retained as separate domains in the underlying lifestyle accounts but are not quantified in terms of biodiversity footprint in this report.

¹⁸ Embodied impacts from living space (i.e. construction and maintenance and utility supply related to residential buildings) are not included into consumption-based biodiversity footprint; this means that as these housing-related elements are incorporated in future calculations, housing's share of the total biodiversity footprint will likely increase. Potential benefits or harms to biodiversity from green areas in yards are currently unaccounted.

Box 5: Consumption-based accounting for biodiversity.

This report uses a consumption-based approach to measure biodiversity and climate impacts. Unlike traditional production approaches, which only count environmental damage from domestic production, consumption-based accounting includes the impacts embedded in imports and excludes those linked to exports. This reflects the true global footprint of how people live.

Unlike traditional consumption-based accounts, however, the analysis in this report focuses on household lifestyles, excluding government spending and capital investment. This allows the footprint to reflect how people meet everyday needs – what they eat, how they travel, how they live and what they buy.

The biodiversity footprint covers four lifestyle domains: food, housing energy, mobility and consumer goods, matching the framework used throughout the report and enabling direct comparison with the lifestyle carbon footprint.

Where possible, the footprint is calculated using physical consumption data (such as kilograms of food, kilometres travelled, and kilowatt-hours of energy). These are combined with life-cycle impact data to estimate biodiversity and climate pressures. For consumer goods, where physical data is limited, spending data and multi-regional input-output (MRIO) models are used to trace impacts along supply chains.

- Mobility: all private and public transport for commuting, leisure and travel.¹⁹
- Consumer goods: clothing, furniture, appliances and other purchased non-food goods.

This structure allows impacts to be attributed to everyday activities rather than economic sectors.

Step 2) Linking consumption to the direct drivers of biodiversity loss

To connect consumption with biodiversity loss, the study traces supply chains using a hybrid life-cycle approach that combines:

- detailed product-level life-cycle data, and
- global economic input-output data capturing trade and production structures.²⁰

The drivers of biodiversity loss for food consumption are quantified with data from global meta-analysis of the environmental impacts of different food commodities (Poore & Nemecek, 2018). The structure of the food supply chains is estimated by pairing FAOSTAT agricultural activity data with trade information from Resource Trade Earth.²¹

This makes it possible to link household consumption to the direct drivers of biodiversity loss identified by IPBES – particularly land-use change, climate change, pollution and resource extraction – wherever they occur in the world (i.e., spatially explicit biodiversity impact estimates by producing region and commodity).²²

Step 3) Quantifying biodiversity impacts

The resulting impact on nature from the drivers of biodiversity loss is calculated using the BIOVALENT life-cycle impact model (El Geneidy et al., 2023). It converts land use, emissions and other pressures into ecosystem-specific species loss risks, which are then aggregated into a single biodiversity equivalent value. By summing impacts across all products, regions and supply chains, the method produces a per-capita lifestyle biodiversity footprint for each country and each lifestyle domain.

The same framework allows for comparison with lifestyle carbon footprints, making it possible to identify synergies and trade-offs between biodiversity and climate outcomes.

Coverage and limitations

The analysis in this study covers the most important biodiversity drivers where data is robust. For food, land

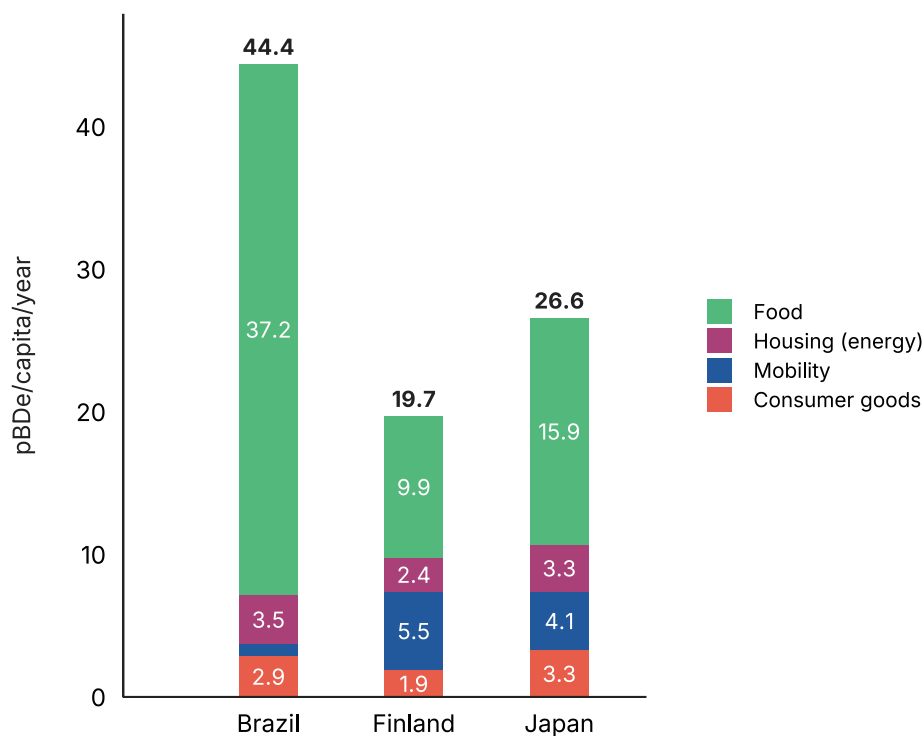
¹⁹ The biodiversity footprint of mobility includes impacts from vehicle use and manufacturing as well as transport infrastructure (e.g., road networks).

²⁰ See El Geneidy et al., 2025a and El Geneidy et al., 2025b for full details on the calculation methodology.

²¹ See <https://resourcetrade.earth>

²² See GitHub at <https://github.com/charlottesmaddinson> for further details.

Figure 4: Total lifestyle biodiversity footprint (pBDe/capita/year) by domain.



use and climate change are included, reflecting their dominant role in biodiversity loss. For housing, mobility and consumer goods, the analysis focuses mainly on climate change, land use and pollution, as biodiversity impacts in these domains are primarily mediated through energy use, material extraction and associated supply chains, and these pathways are best captured by current footprinting methods.

Drivers such as overexploitation and invasive species cannot yet be consistently traced through global supply chains and are therefore not included across lifestyle domains. While this means the analysis does not cover the full spectrum of biodiversity pressures, it remains robust for the drivers assessed. These drivers represent major and policy-relevant pathways through which lifestyles contribute to biodiversity loss, allowing the results to reliably inform priority setting and targeted interventions, while also pointing to areas where data and methods need to improve.

3.2 Lifestyle biodiversity footprint of consumption in Brazil, Finland and Japan

Per-capita lifestyle biodiversity footprints vary substantially across the three countries examined in this report (Figure 4). Brazil exhibits the highest overall footprint at 44 pBDe per capita per year, followed by Japan with 27 pBDe per capita, and Finland with 20 pBDe per capita. These values indicate that the average consumption pattern of a person in Brazil, Japan and Finland places approximately 4.4×10^{-11} , 2.7×10^{-11} and 2.0×10^{-11} of all species, respectively, at risk of global extinction in the long term, capturing cumulative extinction risks over timescales of decades to centuries. The scale of these impacts becomes clearer when extrapolated globally: if everyone consumed like the average person in Brazil, Japan and Finland, approximately 36%, 22% and 16%²³ of all species on Earth, respectively, would be at risk of extinction. These stark cross-country differences in lifestyle-related pressures on biodiversity underscore the need for demand-side strategies to reduce biodiversity loss that are tailored to national contexts.

²³ Percentage shares were obtained by multiplying country-specific per-capita biodiversity footprint values by the global population of 8.14 billion people in 2024 (United Nations 2024).

Across the three countries, food is the primary lifestyle domain influencing the direct drivers of biodiversity loss. It accounts for 51-84% of the biodiversity footprint, largely reflecting pressures associated with animal-based foods. Mobility is the second largest contributor in Finland (28%) and Japan (15%), reflecting high usage of private fossil-fuel-based cars, but contributes only 2% in Brazil. Consumer goods and housing each account for between 6% and 16% of total biodiversity footprint across the three countries.

The following sub-sections assess the contribution of each lifestyle domain to national biodiversity footprints in the three countries. For further details on country-specific results, please refer to Annex Tables A-F.

3.2.1 Food

Across Brazil, Finland and Japan, food is the single largest contributor to lifestyle biodiversity footprints, accounting for 51-84% of total impacts. Food-related footprints range from 9.9 pBDe per capita per year in Finland to 16 pBDe in Japan, and up to 37 pBDe in Brazil (Figure 4). These differences are driven primarily by dietary composition – especially meat consumption (including beef, lamb, pork, poultry and other meat) – together with agricultural practices, their intensity, and the biodiversity richness of producing regions (Figure 5).

In all three countries, meat consumption is the largest contributor to food-related biodiversity footprints, with per-capita consumption highest in Brazil (100 kg per year), followed by Finland (75 kg) and Japan (60 kg). For country-specific component-level consumption amounts, please refer to Annex Tables A-F.

Brazil's higher footprint is driven by higher beef consumption and the predominance of beef cattle, which have shorter lifespans and higher land-use intensity than dairy cattle, the main beef source in Finland. The biodiversity footprint weights land-use impacts by global species extinction potential; because Brazil has exceptionally high species richness, including more endemic species than any other country, meat-production-related land-use change results in higher biodiversity impacts per unit of pressure than in less biodiverse regions such as Finland (Figure 5). As much of the meat consumed in both countries is supplied domestically, these impacts largely reflect pressure on

national species pools. Cross-country comparisons should nevertheless be interpreted with caution as results are sensitive to differences in consumption data sources (e.g. FAOSTAT for Brazil versus national statistics for Finland). Even so, the biodiversity footprint illustrates how geographical context shapes biodiversity impacts from a global perspective.

The "other food" category is a major contributor to overall biodiversity footprints, particularly in Brazil and Japan, reflecting consumption of high-impact commodities such as cacao, sugar and vegetable oils. Its contribution is lower in Finland, although differences in food categorisation²⁴ across data sources affect comparability. Dairy is a more prominent contributor in Finland due to higher per-capita consumption (160 kg/year) and the predominance of cheese, which has a substantially higher impact intensity than liquid milk. In Brazil and Japan, dairy consumption is mainly reported as liquid milk (150 kg and 60 kg per capita, respectively), likely understating impacts outside Finland and highlighting the need for more granular consumption data. Fish consumption is low in Brazil and Finland but exceeds that of any single meat product in Japan, where it generates a noticeable biodiversity footprint due to its high impact intensity.²⁵ Some observed differences may therefore reflect methodological limitations rather than lifestyle differences alone.²⁶

Looking at the direct drivers of biodiversity loss, food biodiversity footprints are mostly determined by land use and climate change (Figure 6).

In Brazil, the food biodiversity footprint is dominated by land-use impacts, accounting for around four-fifths of the total. This is largely driven by beef, other meats and animal products, as well as plant-based proteins. In Finland, land-use and climate impacts are more evenly balanced: climate impacts are strongest for meat, dairy, vegetables and cereals, while land-use impacts are more important for fruits, fish, other food and beverages. Japan's food-related biodiversity footprint is again primarily land-use driven, with climate change acting as a secondary driver across all food categories. Taken together, these patterns indicate that reducing the consumption of land-intensive animal products and other high-impact foods is central to lowering food-related biodiversity impacts across all three countries.

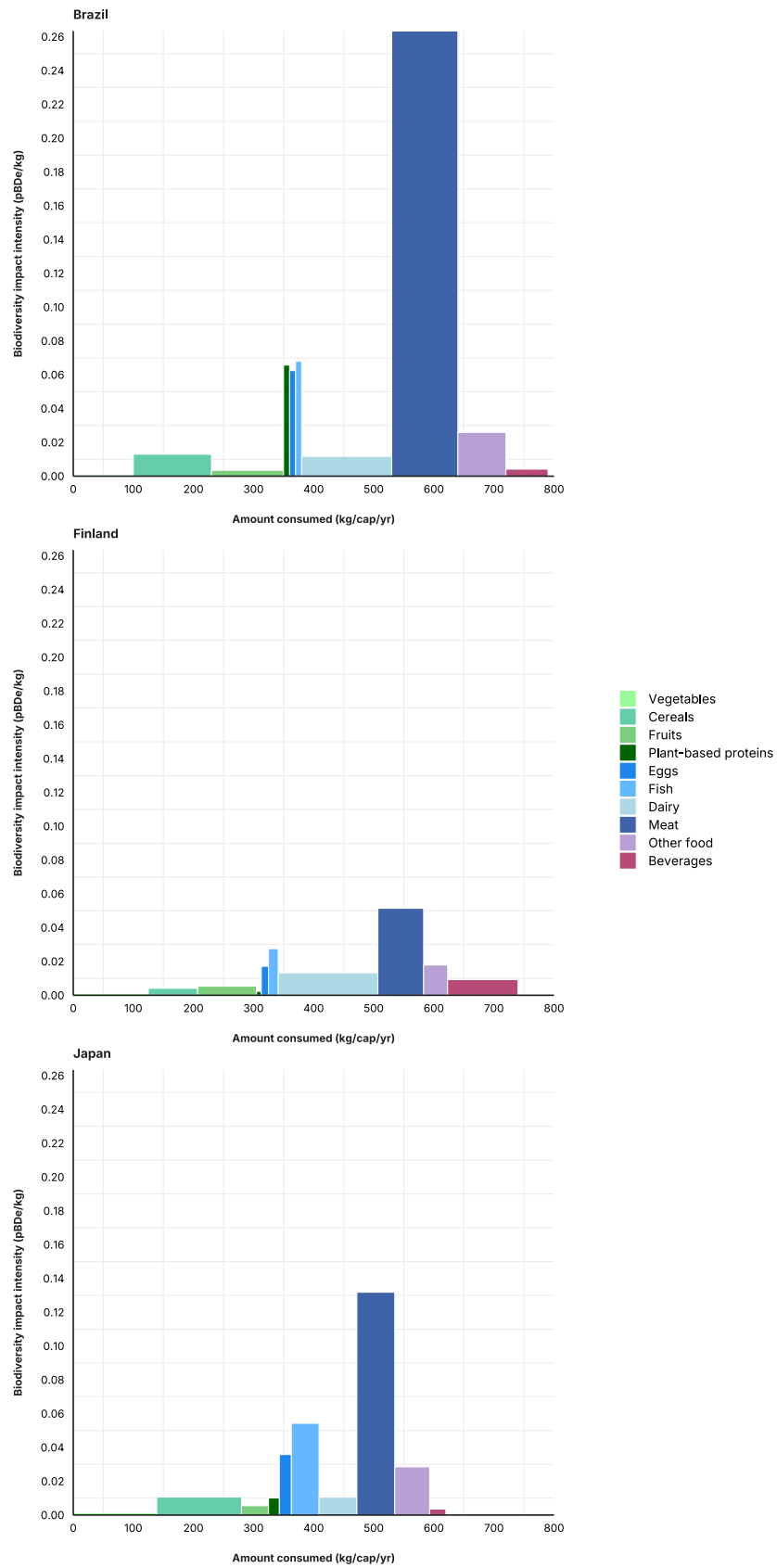
²⁴ "Other foods" includes "infant food" and "miscellaneous" products in Brazil and Japan's consumption values, but not within Finland, for example.

²⁵ The biodiversity impact per kilogram of food item.

²⁶ See for example Bromwich et al., 2025.

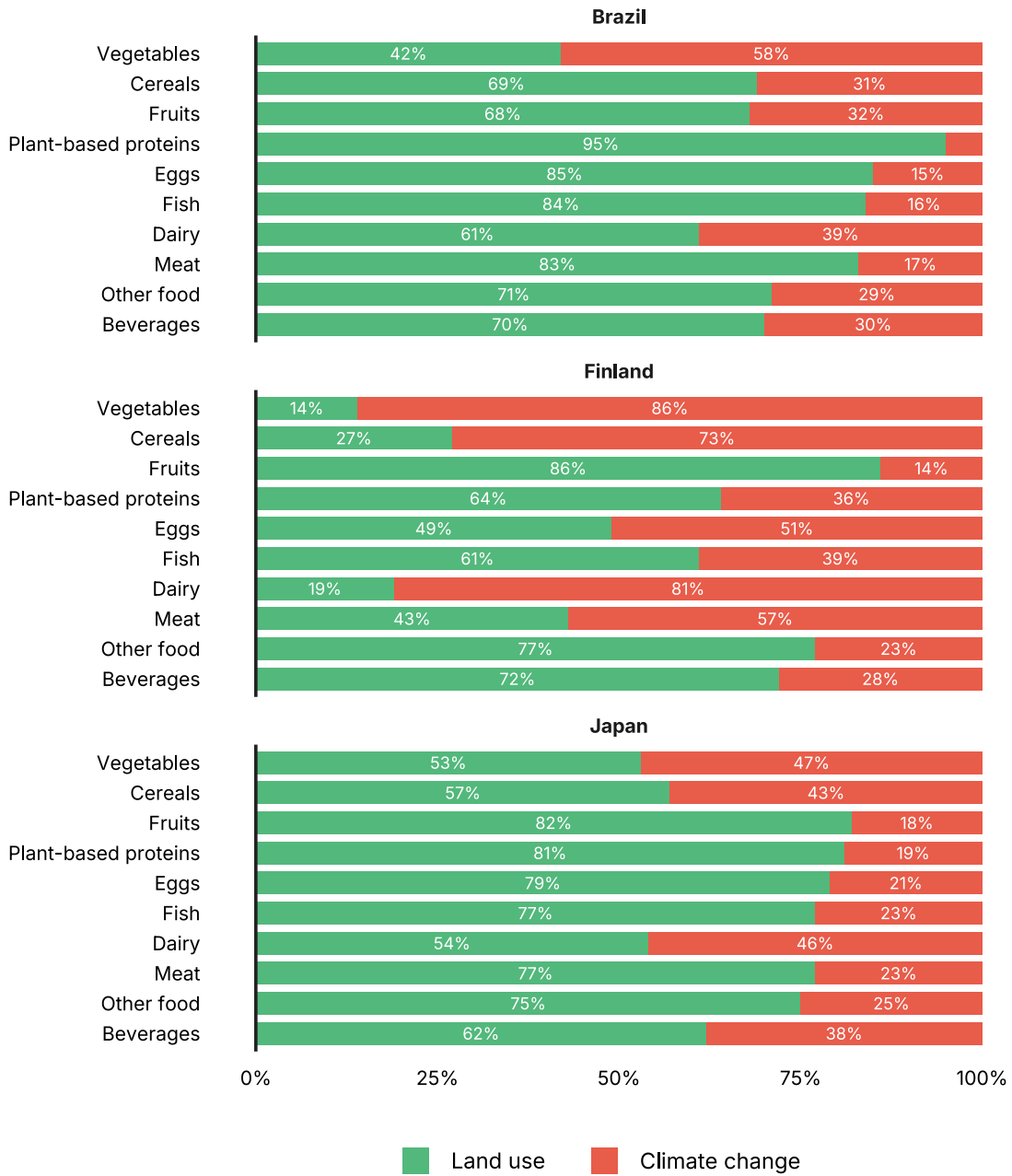
PART II
Evidence and insights from lifestyles

Figure 5: Biodiversity impact intensities (pBDe/kg) and consumption amounts (kg/capita/year) by food component.



PART II
Evidence and insights from lifestyles

Figure 6: Contribution of direct biodiversity loss drivers to food-related biodiversity footprints in Brazil, Finland and Japan.



3.2.2 Mobility

Across the three countries, mobility-related biodiversity footprints differ by almost an order of magnitude, ranging from about 0.8 pBDe per capita per year in Brazil to 5.5 pBDe in Finland, with Japan lying in between at 4.0 pBDe (Figure 4). These differences are driven primarily by overall travel demand and modal structure, rather than by the availability of transport modes alone.

Total passenger travel demand is highest in Finland (17,630 passenger-km per capita per year), followed by Japan (9,860 passenger-km) and Brazil (4,270 passenger-km). While this gradient broadly explains cross-country differences in mobility-related biodiversity footprints, variation in biodiversity impact intensity per passenger-kilometre plays a decisive role, particularly for car travel (Figure 7).

Private cars are the largest contributor in all three countries, with modal shares of 56% in Finland, 34% in Japan and 31% in Brazil. Notably, Japan's car-related footprint is similar to Finland's despite substantially lower car travel, indicating higher biodiversity impact intensity per kilometre. This is likely linked to a combination of vehicle characteristics,²⁹ low occupancy rates, fuel mix, and upstream supply chains including vehicle manufacturing, material extraction and fuel production. In Brazil, car travel demand is comparatively low (1,180 passenger-km per capita per year), yet car travel still exhibits relatively high biodiversity impact intensity, despite widespread use of flex-fuel vehicles running on gasoline-ethanol blends. This suggests that biofuel blending does not necessarily reduce biodiversity impacts per kilometre, likely due to land-use pressures and supply-chain effects associated with fuel production.

Public transport plays a substantially larger role in Brazil and Japan than in Finland, though with different dominant modes. Nearly half of all passenger travel in Brazil is met by public transport, primarily buses, and about a third in Japan, dominated by rail. In both countries, public transport contributes relatively little to biodiversity footprints due to consistently low impact intensity per passenger-kilometre, even where usage is high.

In Finland, by contrast, public transport accounts for only around 12% of passenger-kilometres, reinforcing the dominance of private cars in overall impacts.

Rail transport shows the clearest decoupling between mobility provision and biodiversity impact: it supports large travel volumes – especially in Japan – while contributing relatively little to biodiversity impacts. Bus transport displays similarly low impact intensity, but its contribution depends more strongly on demand, which is high in Brazil and more limited in Finland and Japan.

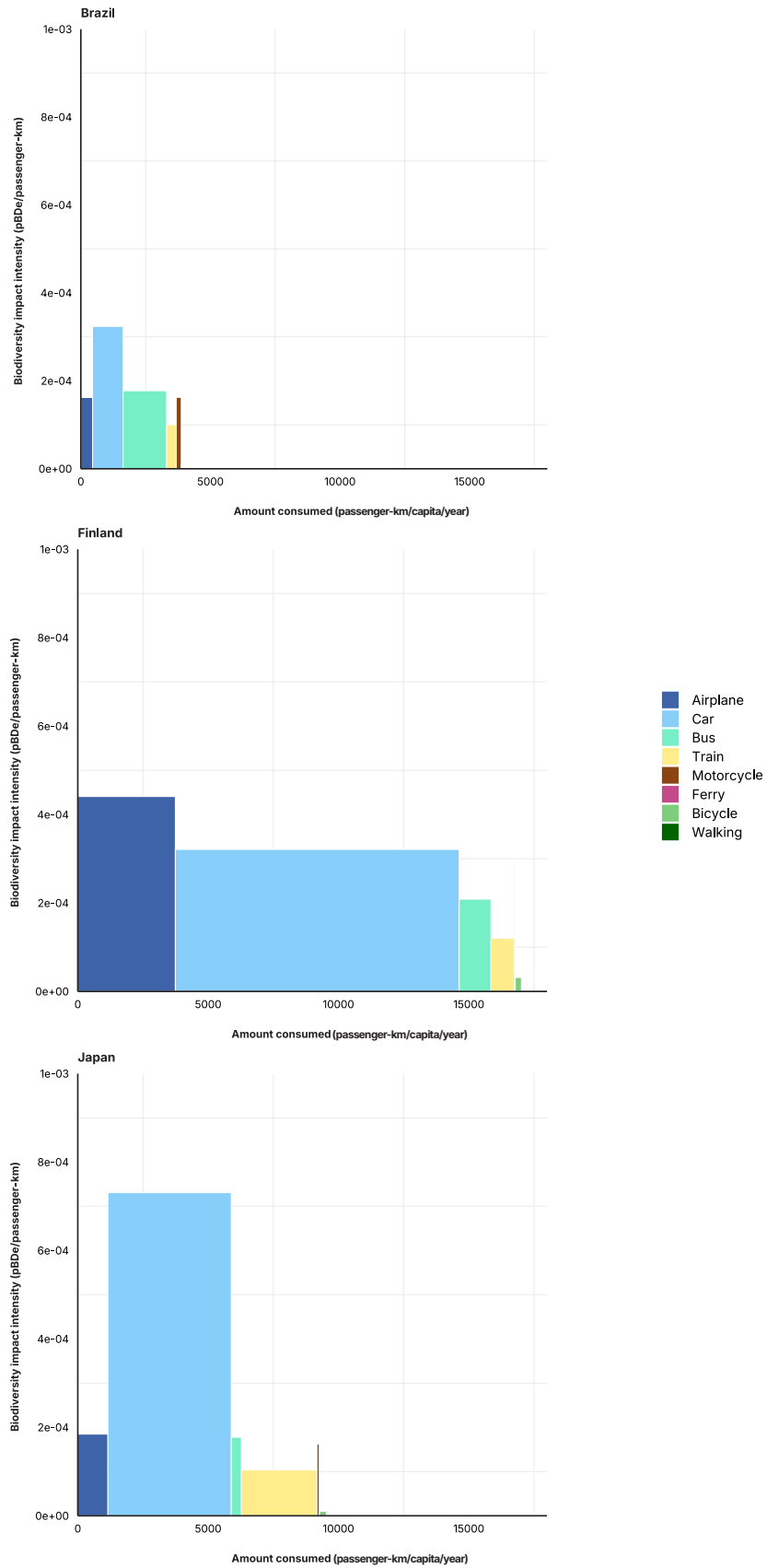
Aviation contributes a relatively small share of mobility-related biodiversity footprints across all three countries, but with important structural differences. Finland shows the largest aviation footprint due to high levels of international travel, while aviation plays only a minor role in Brazil. Across countries, domestic flights exhibit higher biodiversity impact intensity than international flights, as take-off and landing account for a larger share of fuel use on short routes (Baumeister, 2019).

Across all three countries, mobility-related biodiversity footprints are driven almost entirely by climate change impacts associated with fuel combustion and electricity use (Figure 8), with only minor contributions from air pollution and, in Finland, a small land-use component linked to road and rail infrastructure and possible biofuel use. Results for Finland remain subject to uncertainty, as the assessment does not fully reflect the national electricity mix and excludes certain impact pathways (e.g., ecotoxic emissions), which may further influence biodiversity outcomes.

²⁹ Hybrids still rely partly on gasoline, and the electricity they draw comes from a grid that is relatively fossil-heavy, which raises the impact per kilometre and reinforces the dominance of climate-change-related drivers.

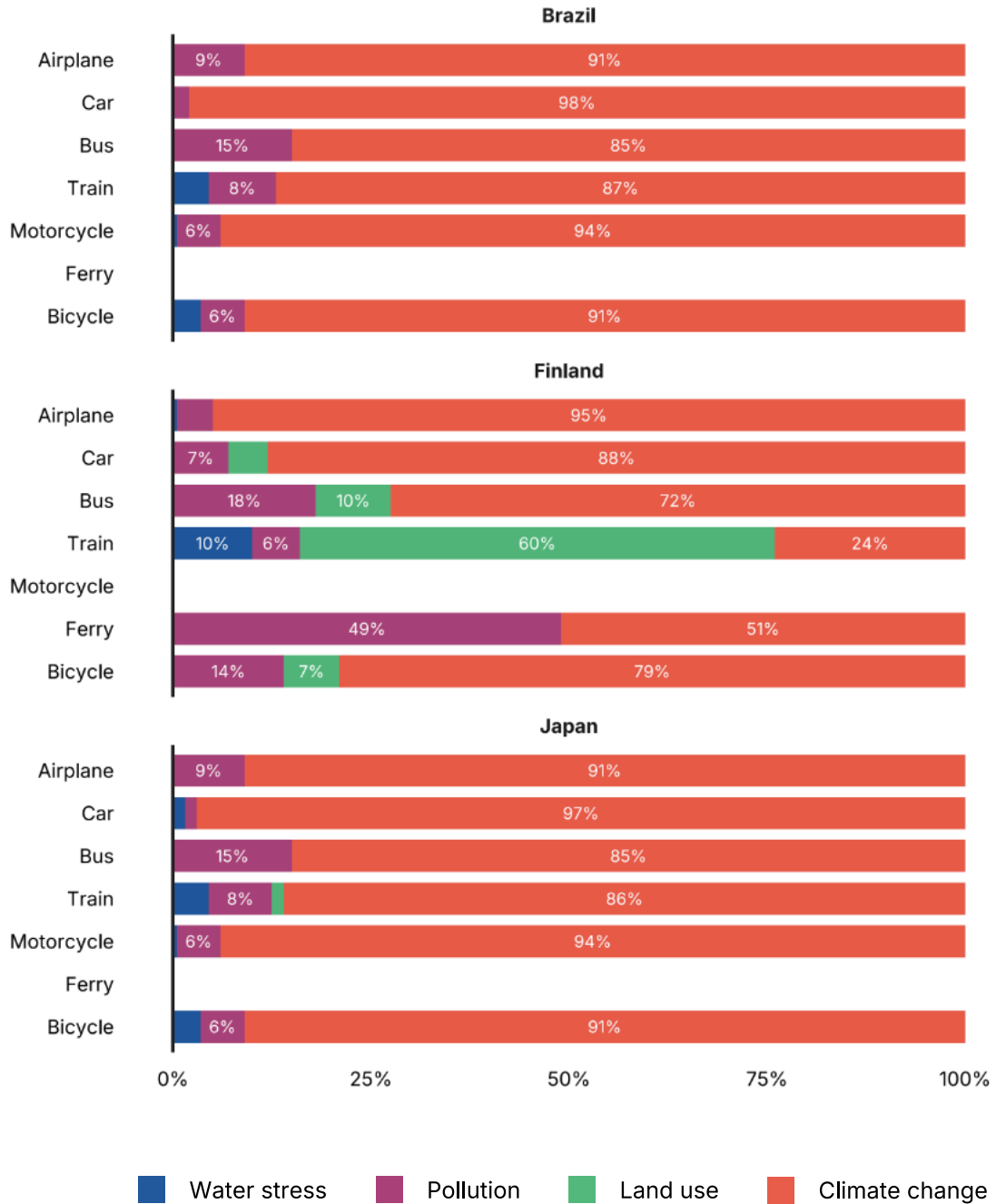
PART II
Evidence and insights from lifestyles

Figure 7: Biodiversity impact intensities (pBDe/passenger-km) and travel demand (passenger-km/capita/year) by transport mode.



PART II
Evidence and insights from lifestyles

Figure 8: Contribution of direct biodiversity loss drivers to mobility-related biodiversity footprints in Brazil, Finland and Japan.



3.2.3 Housing (energy)

Across all three countries, housing-related lifestyle biodiversity footprints are of similar magnitude – ranging from about 2.4 pBDe per capita in Finland to nearly 3.5 pBDe per capita in Brazil (Figure 4) – despite large differences in living conditions and associated energy demand (11,370 kWh in Finland, 1,160 kWh in Brazil and 3,970 kWh in Japan).

This contrast highlights the non-linear relationship between energy use and biodiversity impacts. Differences in housing-related biodiversity footprints are driven less by total energy consumption and more by the energy mix, fuel-specific impact intensities and associated land-use pressures, particularly those linked to biomass (Figure 9).

Finland illustrates this pattern clearly. It has the highest household energy demand but the lowest housing-related biodiversity footprint among the three countries. High energy demand reflects large average living space (42 m² per capita) and long heating seasons, with nearly half of household energy used for heating. This demand is met mainly through district heating and wood-based fuels. Although electricity and heat are partly renewable, biodiversity impacts remain substantial from wood burning (1.5 pBDe per capita) and district heating (0.9 pBDe per capita). Wood-based energy shows high biodiversity impact intensity due to land-use pressures²⁷ associated with forestry, while district heating reflects a mixed fuel base combining biofuels with peat, coal and natural gas.²⁸

Brazil shows the opposite pattern: much lower household energy use but a higher housing-related biodiversity footprint. Smaller dwellings (31 m² per capita) and a warm climate reduce heating and cooling needs, and electricity supply is largely renewable (about 87%, mainly hydropower), resulting in a comparatively small electricity-related biodiversity footprint. Instead, housing impacts are dominated by other energy sources, with fossil gas emerging as the single largest contributor, reflecting its relatively high biodiversity impact intensity driven by climate impacts.

In addition, a substantial share of biodiversity impacts arises from renewable household fuels, primarily firewood used for cooking and heating. Although these are classified as renewable, their biodiversity footprint reflects land-use impacts occurring in a biodiversity-rich context, leading to disproportionately high impacts relative to energy use (see Section 3.2.1).

Japan falls between Finland and Brazil in terms of energy demand (3,970 kWh per capita per year) and biodiversity footprint (3.3 pBDe per capita). Despite living space comparable to Finland (42 m² per capita), biodiversity impacts are higher because of a fossil-intensive energy mix. More than half of household energy demand is electricity, largely generated from coal, oil and liquefied natural gas, while other household fuels (e.g., kerosene and LPG) are almost entirely fossil-based, with renewables playing only a marginal role (IEA, 2025).

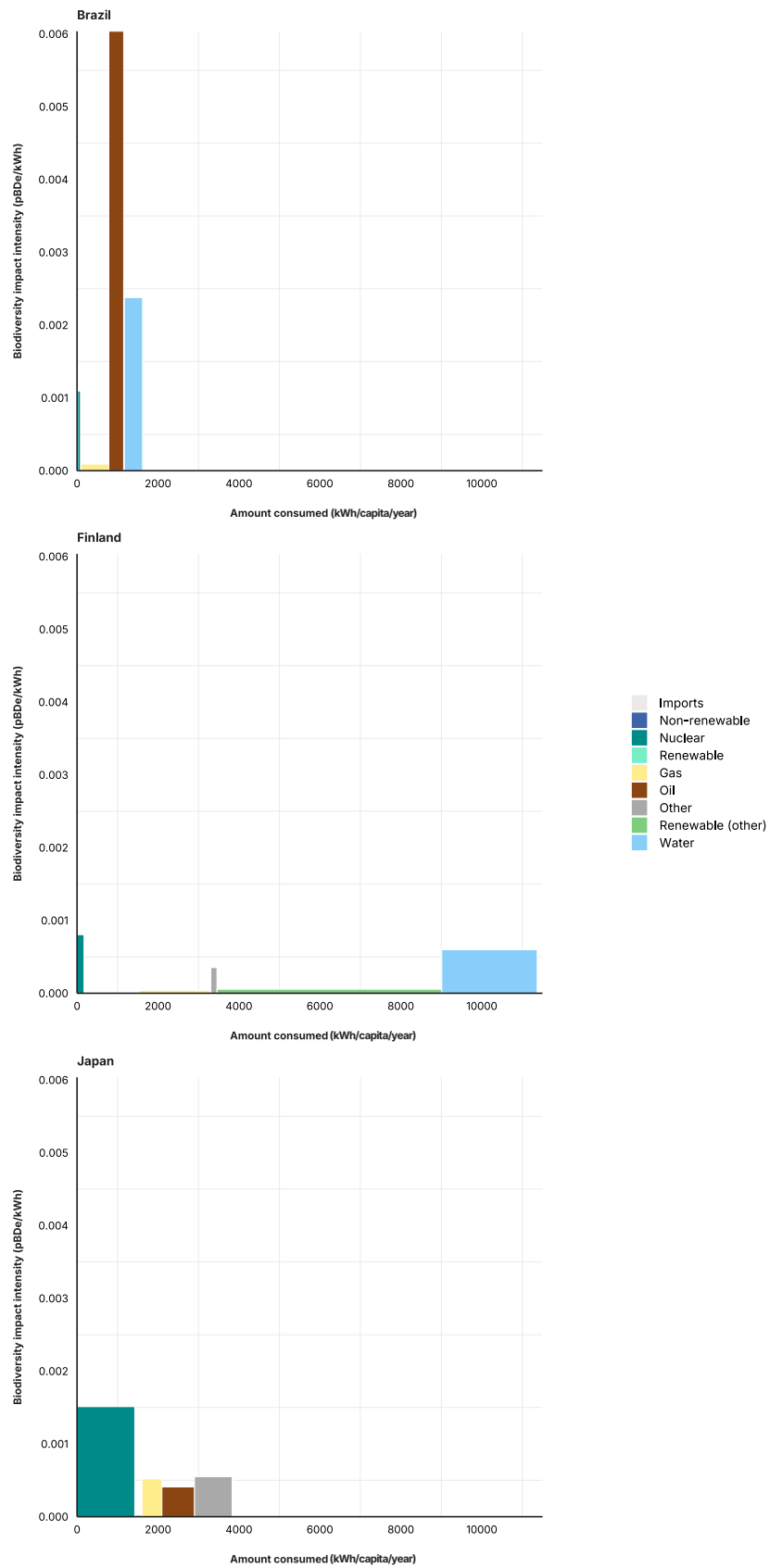
Examining the direct drivers of biodiversity loss, climate change is the dominant driver across all three countries, primarily due to electricity use (Figure 10). Land-use becomes a more important driver for other household fuels, particularly in Brazil and Finland, where bioenergy plays a larger role. These results underscore the need for caution when interpreting the biodiversity impacts of renewable energy: without explicit attention to land-use intensity, forest management and sourcing practices, the biodiversity costs of bioenergy can outweigh its climate benefits.

²⁷ The analysis could not distinguish different forest-management practices; characterisation factors represent average Finnish forestry supplying both timber and energy wood. In practice, household firewood often comes from young stand management, single-tree felling, and logging residue collection (El Geneidy et al. 2025).

²⁸ District heat was produced mainly from biofuels (46%): forest fuels 30%, industrial wood residues 11%, and other biomass 5%. Fossil shares were peat 8%, coal 8%, and natural gas 6%; heat pumps supplied 6%. An additional 12% came from waste-heat recovery without heat pumps, for which no biodiversity footprint was calculated.

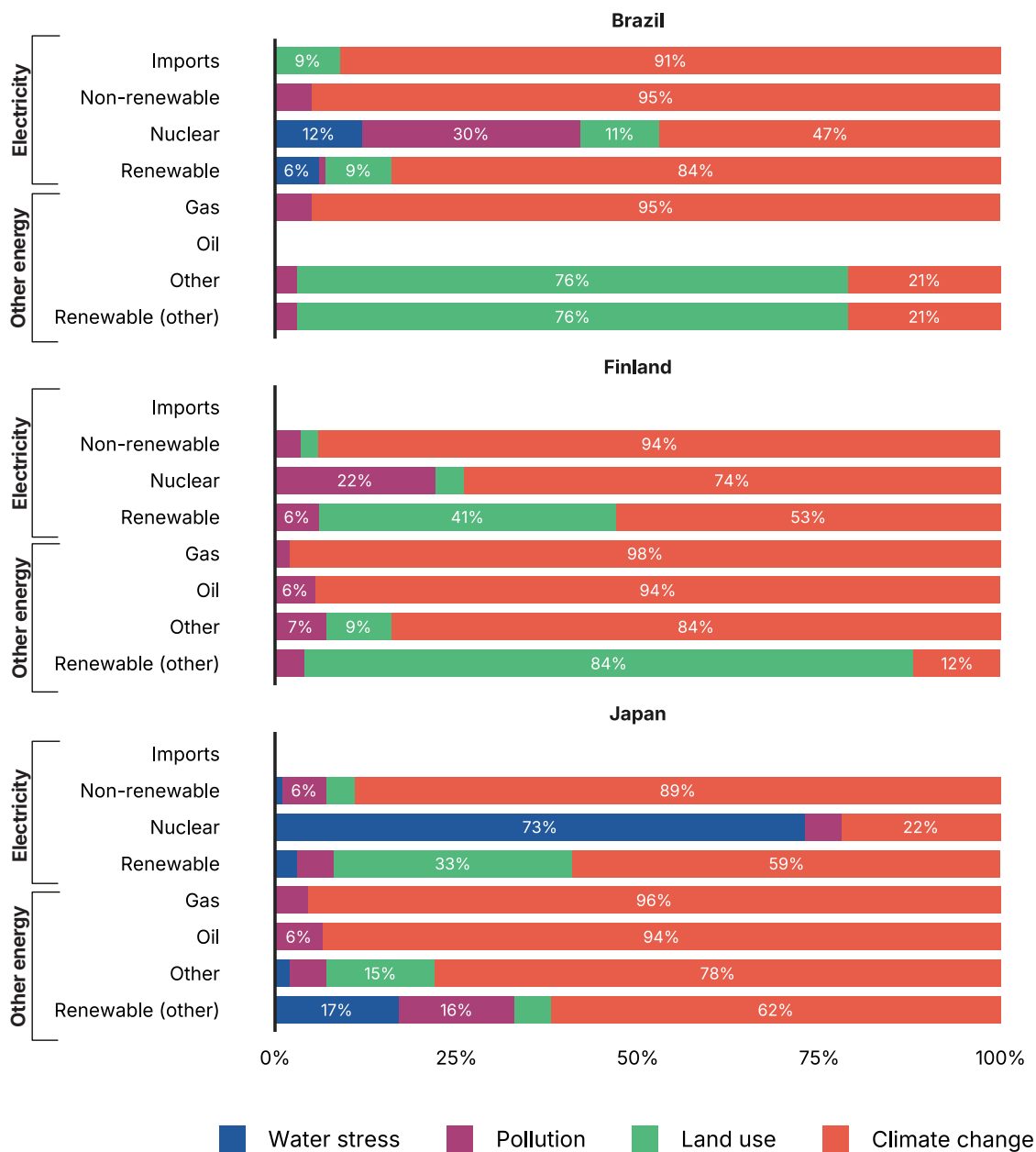
PART II
Evidence and insights from lifestyles

Figure 9: Biodiversity impact intensities (pBDe/kWh) and housing energy use (kWh/capita/year) by housing energy component.



PART II
Evidence and insights from lifestyles

Figure 10: Contribution of direct biodiversity loss drivers to housing-related biodiversity footprints in Brazil, Finland and Japan.



3.2.4 Consumer goods

Consumer goods biodiversity footprints range from around 1.9 pBDe per capita per year in Finland to 3.3 pBDe per capita in Japan, accounting for approximately 6–12% of total biodiversity footprints (Figure 4). Cross-country differences are driven more by impact intensity and sourcing patterns than by expenditure levels alone (Figure 11).³⁰

Furnishing and household equipment dominate consumer-goods biodiversity impacts in all three countries, accounting for around 85% in Brazil, 66% in Finland and 57% in Japan, despite differences in spending patterns and total expenditure.³¹ Total per-capita expenditure is lowest in Brazil (€260 per capita per year), followed by Japan (€1,650) and Finland (€2,620), yet expenditure levels do not translate linearly into biodiversity impacts³².

Despite far lower spending, Brazil's consumer-goods biodiversity footprint (2.9 pBDe per capita) exceeds that of Finland (1.9 pBDe per capita). This reflects higher biodiversity impact intensities, particularly for furnishing and household equipment, driven by material-intensive supply chains (e.g. timber, leather, metals, plastics) and land-use change in biodiversity-rich production areas. As a result, biodiversity impacts per euro are substantially higher in Brazil than in the other countries assessed.³³

Finland shows the lowest consumer goods footprint, despite the highest expenditure, reflecting much lower biodiversity impact intensities across both furnishing and clothing. This is largely explained by a higher share of domestically produced goods, where production occurs in ecosystems with relatively low species richness, resulting in lower biodiversity impacts per unit of pressure. For the share of goods that are imported, impacts occur outside national borders, but overall this

combination leads to an order-of-magnitude lower biodiversity impact per euro than in Brazil and Japan.

Japan's consumer goods footprint is the largest in absolute terms (3.3 pBDe per capita), driven by both high expenditure and high impact intensity in specific categories, most notably clothing and footwear. Although clothing accounts for only about a third of expenditure, its footprint is comparable to furnishing, reflecting land-use pressures from fibre production and impacts embedded in global textile supply chains.

Across all three countries, consumer goods impacts are primarily driven by land use and climate change, with pollution and water stress playing a smaller role (Figure 12). These patterns highlight cross-country differences not only in how much is spent, but also in what is bought and where goods are sourced, with higher species richness in production regions amplifying biodiversity impacts per euro.

³⁰ Classification of this domain follows COICOP classification (United Nations, 2018) and includes product categories 03 Clothing and footwear and 05 Furnishing, household equipment and routine household maintenance.

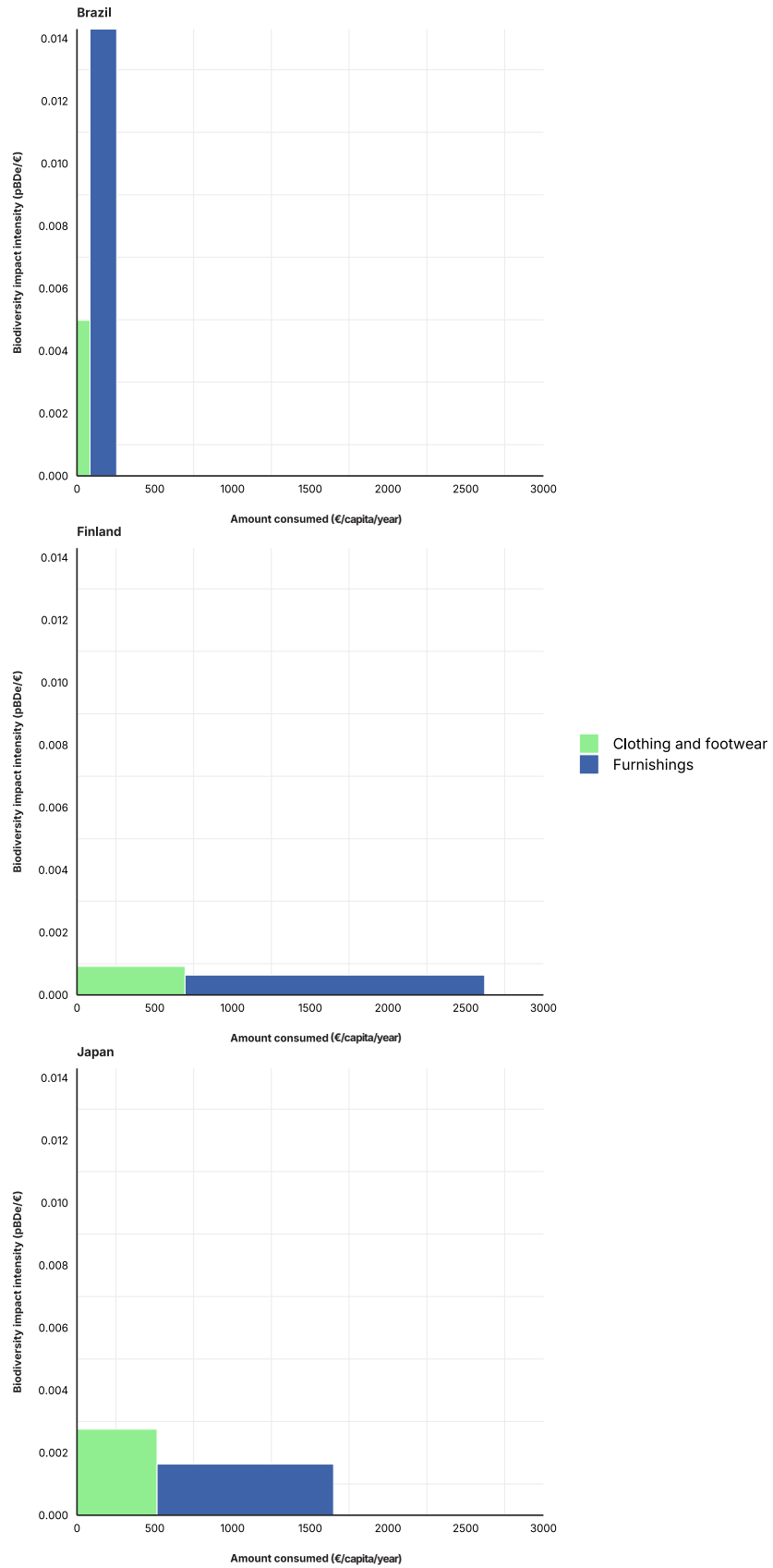
³¹ Including, for example, furniture and room coverings, items for sanitation and medicine, appliances, electronics, paper and stationery, and other goods, such as plastic articles, glass, ceramic and non-metallic products.

³² Expenditure data is expressed in euros and adjusted for inflation and price-year consistency, but are not adjusted for differences in purchasing power or cost of living across countries. Impacts are therefore attributed per euro of final consumption, following standard consumption-based accounting using multi-regional input-output models (e.g. EXIOBASE). As a result, biodiversity impacts per euro reflect differences in production structures, supply chains, and the biodiversity context of producing regions, rather than differences in the quantity of goods and services purchased for a given amount of expenditure. Accounting for purchasing power could alter cross-country comparisons by better reflecting physical consumption volumes, but would require additional methodological development beyond the scope of this study.

³³ For example, the furnishing biodiversity impact intensity in Brazil is about 0.014 pBDe/€, roughly 8 times Japan's (0.002 pBDe/€) and 23 times Finland's (0.0006 pBDe/€).

PART II
Evidence and insights from lifestyles

Figure 11: Biodiversity impact intensities (pBDe/€) and expenditure (€/capita/year) by consumer goods.



PART II
Evidence and insights from lifestyles

Figure 12: Contribution of direct biodiversity loss drivers to consumer goods biodiversity footprints in Brazil, Finland and Japan.

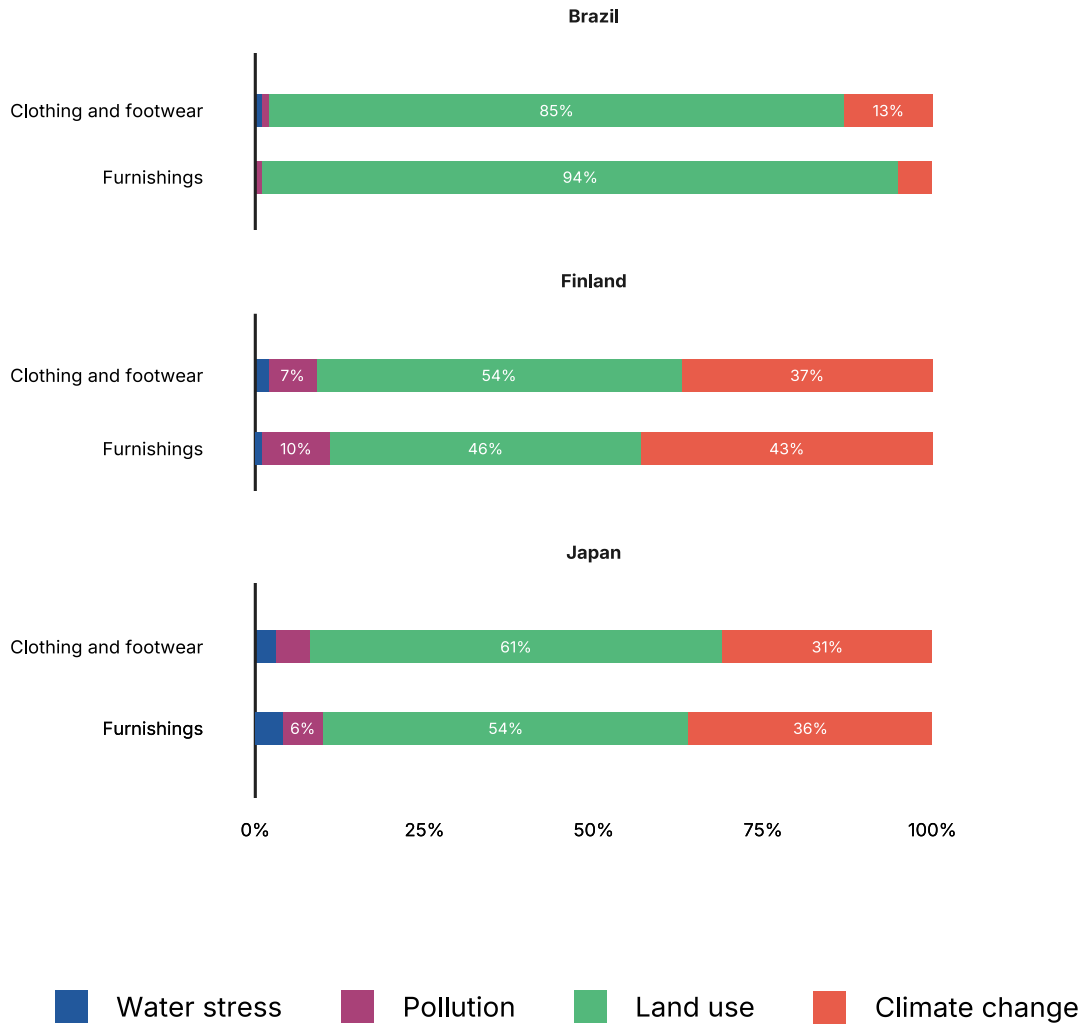
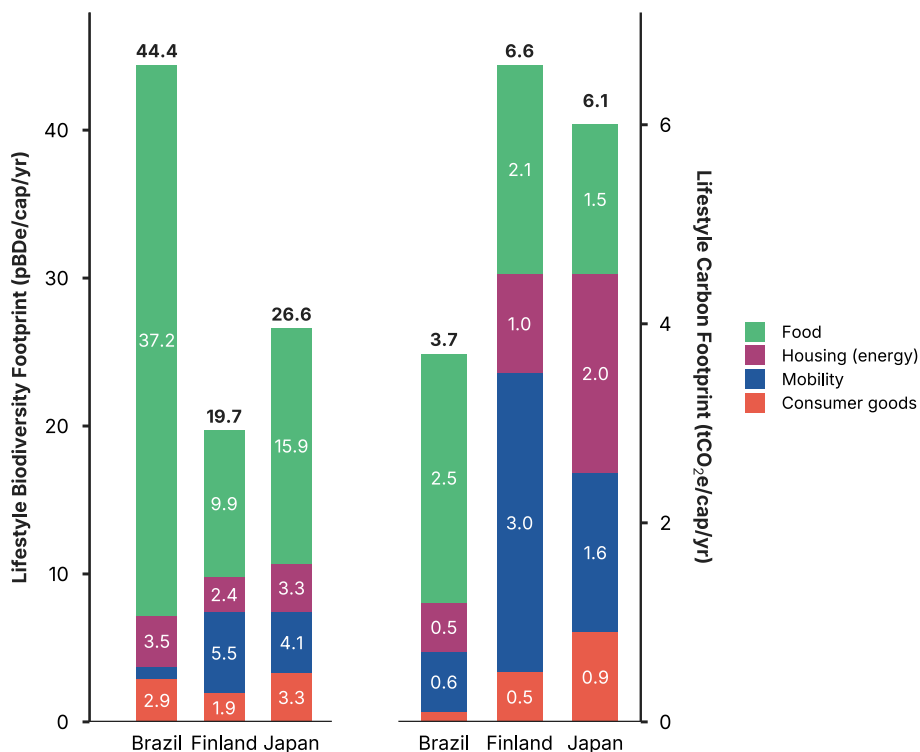


Figure 13: Lifestyle biodiversity and carbon footprint across countries.



Left bar = lifestyle biodiversity footprint (pico biodiversity equivalents, pBDe/capita/year);

Right bar = lifestyle carbon footprint (tCO₂e/capita/year).

3.3 Comparing lifestyle biodiversity and carbon footprints

This section compares lifestyle biodiversity footprints with lifestyle carbon footprints to identify where the same lifestyle levers generate co-benefits for nature and climate, where trade-offs may arise, and how policies can be designed so that decarbonisation is also nature-positive.³⁴

Across all three countries, the comparison reveals systematic differences in how lifestyle domains contribute to biodiversity loss and carbon emissions. Food dominates biodiversity footprints, accounting for roughly 50–84% of total impacts (9.9–37.2 pBDe per capita), while housing and personal mobility dominate carbon footprints, contributing around 30–50% of total lifestyle emissions (1.1–5.0 tCO₂e per capita) but comparatively smaller biodiversity impacts. Consumer goods contribute a similar share of carbon emissions

(generally below 15%) and biodiversity impacts (around 10–20%), underscoring the importance of assessing lifestyle interventions through both indicators.

In Brazil, biodiversity and carbon footprints amount to approximately 44.4 pBDe per capita and 3.7 tCO₂e per capita, respectively (Figure 13). Food dominates both metrics, accounting for about 84% of the biodiversity footprint and 67% of the carbon footprint. Meat consumption is the single largest contributor to both. Mobility is the second-largest source of carbon emissions (around 16%) but contributes only marginally to biodiversity impacts (about 2%). This indicates that while mobility decarbonisation is essential for climate goals in Brazil, it will reduce biodiversity pressures more modestly unless accompanied by habitat-aware infrastructure and sustainable materials sourcing. Housing plays a relatively minor role in both footprints, reflecting low energy demand and a largely renewable electricity mix. By contrast, consumer goods –

³⁴ The lifestyle carbon footprint attributes GHG emissions to household consumption, including both direct emissions and those embodied in supply chains (tCO₂e per capita). Meanwhile, the lifestyle biodiversity footprint applies the same consumption-based approach, but expresses biodiversity impact as biodiversity equivalents (pBDe per capita; see Box 5 in Section 3.1 for consumption-based accounting). While climate change is one of the main drivers of biodiversity loss and is therefore implicitly included, the biodiversity footprint quantifies the resulting biodiversity damage associated with GHG emissions, rather than solely focusing on the amount of GHG emissions caused by consumption.

particularly furnishings and household equipment – generate a comparatively high biodiversity footprint per euro despite a modest carbon footprint, highlighting the importance of material- and land-use-intensive supply chains (timber/leather/metal processing) and the geographical origin of production.

In Finland, the footprints present a different configuration, with totals of around 19.7 pBDe per capita and 6.6 tCO₂e per capita (Figure 13). Mobility dominates the carbon footprint – driven mainly by car use (1.7 tCO₂e) and aviation (1.7 tCO₂e) – and also contributes substantially to the biodiversity footprint. The largest co-benefits therefore lie in reducing travel demand and shifting from cars and flights to rail and bus transport. Housing contributes a moderate share to both footprints (12% of biodiversity footprint and 16% of carbon footprint), but the contrast between indicators is particularly marked for heating fuels. Wood-based heating and district heating account for a large share of Finland's housing-related biodiversity footprint (2.8 pBDe; 87% of housing domain), while contributing less to the carbon footprint (0.5 tCO₂e; 46%). This reflects methodological differences between indicators: carbon accounting treats wood combustion as low carbon, whereas biodiversity footprints assign the land-use pressures of forestry to consumption. This divergence illustrates the value of complementing carbon footprints with biodiversity footprints to support more integrated nature–climate policy design. Food remains the largest contributor to biodiversity impacts (9.9 pBDe; 50% of total) and a significant contributor to carbon emissions (2.1 tCO₂e; 31%), reinforcing the importance of dietary shifts. In consumer goods, furnishing dominates both footprints, suggesting clear co-benefits from durability, repair and material efficiency.

Japan shows the sharpest divergence between indicators, with footprints of around 26.6 pBDe per capita and 6.1 tCO₂e per capita. Food dominates the biodiversity footprint (16 pBDe; 60%), with meat (7.9 pBDe) and fish (2.7 pBDe) being key hotspots. Dietary changes – such as reducing red meat intake and shifting toward lower trophic-level seafood – thus offer substantial biodiversity benefits but more moderate carbon reductions. In mobility, cars account for most biodiversity impacts (3.4 pBDe; 85% of domain footprint) but a smaller share of climate impacts (1.7 tCO₂e; 58% of domain footprint), while rail transport combines high passenger volumes with low impact intensity across both indicators. Housing is particularly important for Japan's carbon footprint (2.0 tCO₂e; 34% of total carbon footprint) due to fossil-heavy electricity generation, and also contributes to biodiversity impacts (3.3 pBDe; 13%). Power-sector decarbonisation and end-use efficiency therefore yield large carbon reductions, while biodiversity outcomes depend strongly on technology choices and land-use implications. In consumer goods, furnishing and household equipment dominate both footprints (57% in biodiversity footprint and 67% in carbon footprint), but the overall leverage of this domain is smaller than that of food, housing or mobility.

Taken together, the three country case studies point to food as the central leverage point for reducing biodiversity loss, while mobility and housing energy use remain key levers for climate mitigation. Policies that consider both footprints can prioritise dietary change, pursue transport and energy decarbonisation with explicit biodiversity safeguards – particularly regarding biomass use – and reduce absolute consumption alongside improving product longevity and circularity, especially for furnishings in Brazil and Finland and apparel in Japan.

Biodiversity and carbon priorities diverge: food dominates biodiversity loss (51 to 84% of species loss), while housing and mobility dominate carbon footprints (30 to 50% of emissions).

PART III

Enabling Lifestyle Change Through Systems and Policy



4

Transforming Both Aspirational and Provisioning Systems to Enable Lifestyle Changes

KEY CHAPTER MESSAGES

The following messages highlight priority insights for policymakers and practitioners seeking to transform provisioning and aspirational systems for nature-positive lifestyles:

- **Systemic change is essential to enable nature-positive lifestyles:** Individual actions alone cannot deliver the scale of transformation required. Coordinated shifts in how societies produce, distribute and consume goods and services are needed to align lifestyles with planetary boundaries.
- **Provisioning systems shape what choices are available:** Restructuring how goods and services are designed and delivered is key to ensuring that sustainable choices – such as healthy food, clean energy and sustainable transport – are accessible, affordable and attractive to all. Integrating "*sustainability by design*" into consumption and production systems helps reduce environmental impacts and unlock new opportunities for nature-positive living.
- **Aspirational systems shape what choices are desirable:** Media, arts and cultural actors, influencers and marketers can play a crucial role in aligning cultural values and aspirations with sustainable consumption. Strengthening collaboration between these stakeholders, policymakers and business leaders can drive transformative change toward fair, sustainable and nature-positive lifestyles. Ethical marketing, responsible media campaigns and community initiatives can help make sustainable lifestyles more desirable and accessible while promoting health, equity and environmental stewardship.
- **Aligning provisioning and aspirational systems in policy processes accelerates transformation:** Coordinating policies that transform both aspirational and provisioning systems ensures mutual reinforcement. Shifting societal values from wealth accumulation to well-being and equity, while restructuring how goods and services are designed, produced and delivered, can make nature-positive choices accessible and aspirational by default. These synergies are essential for building public acceptance and driving large-scale change.

Current socioeconomic systems often prioritise profit maximisation and short-term economic growth, making sustainable lifestyle options unappealing or inaccessible for many (Galli et al., 2024). The emphasis on wealth accumulation and material status-signalling – driven largely by higher-income groups – fuels extractive production patterns that promote overconsumption, harm nature and exacerbate social inequalities.

Findings from the biodiversity footprint analysis in Chapter 3 highlight how consumption-driven pressures are deeply embedded within economic and social systems. Addressing these pressures and striving for nature-positive lifestyles require transformations that simultaneously reshape how goods and services are designed, produced and delivered to meet societal needs (*provisioning systems*) and how needs, consumption desires, cultural values and aspirations are formed (*aspirational systems*).

4.1 Provisioning systems

Provisioning systems determine the material basis of lifestyle: how food is grown, energy is generated, mobility is organised, and products are designed, marketed and disposed of. Currently, these systems lock societies into overconsumption and overproduction patterns³⁵ and are structured to cater primarily to the demands of the wealthy. Often lacking financial, ethical and social accountability, they deplete natural resources, accelerate biodiversity loss, and still leave many basic human needs unmet. Across supply chains – from production to consumption – unsustainable choices often remain the most affordable, appealing, convenient or even the only available option for both producers and consumers.

Addressing this challenge requires policies that transform provisioning systems to reduce environmental impacts while ensuring equitable access to essential goods and services – such as healthy and nutritious food, and clean energy – for all societal groups (see Chapter 5). This shift demands a deliberate move from efficiency-based improvements to sufficiency-oriented redesigns.

By reorienting policies around lifestyle domains, governments can reshape how provisioning systems operate – meeting needs in new ways and embedding sustainability throughout production and consumption. This approach addresses the root causes of environmental degradation while advancing broader social and equity goals.

Despite widespread recognition of humanity's impact on nature, biodiversity policy has largely focused on conservation without equal attention to provisioning systems and the societal behaviours and structural drivers that underpin them. Effective solutions must therefore move upstream, tackling overconsumption and structural dependencies within these systems. As will be discussed in Chapter 5, this entails advancing sufficiency and fair consumption principles; promoting diets centred around local, plant-based food systems; implementing space reallocation policies; and fostering circular economies and innovative business models that meet needs while minimising waste and resource extraction.

By transforming how – and how many – goods and services are designed, produced and consumed, policymakers and businesses can establish systems that support both environmental sustainability and equitable resource access.

Provisioning systems, which design and deliver goods and services to meet societal needs, often drive overconsumption and overproduction, prioritising the wealthy while depleting natural resources and failing to meet many basic human needs.

³⁵ For example, urban layouts that prioritise private vehicles over public transport, or energy grids dependent on fossil fuels, constrain people's ability to live sustainably even when they wish to do so.

Aspirational systems encompass cultural values and desires that shape consumption and foster lifestyles. Transforming aspirational systems is crucial to making nature-positive lifestyles more attractive, desirable and accessible to all.

4.2 Aspirational systems

Aspirational systems encompass the cultural values, social norms and status signals that define what is seen as a desirable lifestyle. These systems, shaped by institutions, media and cultural dynamics, play a central role in influencing consumption choices and everyday behaviours. Transforming aspirational systems is therefore crucial to making nature-positive lifestyles more attractive, desirable and accessible to all.

Consumption-driven lifestyles in high-income countries have far-reaching environmental repercussions, impacting nature across borders and setting global aspirations that reinforce materialism and overconsumption.³⁶ Yet these lifestyles are not solely the result of individual choices (see Figure 2); they are embedded within profit-driven production systems that have made unsustainable consumption the default. Marketing, pervasive narratives, greenwashing and structural incentives continue to sustain this system. Dominant narratives centred on self-interest and material wealth detract from environmental sustainability and social equity, while eroding public trust and consumers' agency.

Reversing this trend requires reorienting aspirational systems toward sustainability, resilience and collective well-being over profit maximisation. This means shifting from dominant narratives of extraction, exploitation and disposable consumption to those grounded in regeneration, equity and care (UNEP and UNFCCC, 2023). Aspirational systems that prioritise health, safety, equity, community bonds and environmental stewardship can make nature-positive lifestyles viable.

Indigenous peoples and local communities encompass a wide diversity of cultures, livelihoods, and knowledge

systems, shaped by specific ecological, social and historical contexts. Many studies have shown that, in numerous settings, Indigenous and local knowledge systems are closely linked to long-term stewardship of land and seascapes, emphasising reciprocity, collective responsibility and intergenerational care for nature. For example, the IPBES Global Assessment highlights that biodiversity tends to decline more slowly, or be better conserved, in areas managed or governed by Indigenous peoples, where customary institutions and place-based knowledge remain strong (IPBES, 2019). While such relationships with nature vary widely across contexts, these examples demonstrate that alternative value systems – grounded in community well-being, respect for ecological limits and long-term resilience – can offer powerful counter-narratives to dominant consumerist aspirations. Recognising, respecting and amplifying this diversity of Indigenous and local perspectives can help broaden societal visions of “good living”, showing that nature-positive lifestyles are not only viable but also deeply fulfilling, as they support cultural identity, social cohesion and well-being.

Achieving this shift requires coordinated efforts among governments, businesses and civil society to reshape the narratives driving consumption. As discussed in Chapter 5, this includes policies that regulate advertising of unsustainable products and services while proactively instilling a sustainability vision in the public imagination. By showcasing the health and well-being benefits of clean air and water, access to thriving natural spaces, diverse seasonal food options and reduced car dependency, policymakers, businesses and cultural actors – including artists, storytellers, influencers, designers, media and marketing professionals – can make sustainable lifestyles more aspirational and attainable.

³⁶ Future wealth is expected to concentrate in urban areas of emerging economies (e.g., upcoming megacities), where new consumer groups—predominantly young and already engaged with global aspirations—are rapidly expanding. This trend is likely to accelerate overconsumption, reinforcing existing unsustainable patterns.

4.3 Transforming provisioning and aspirations for sustainable lifestyles

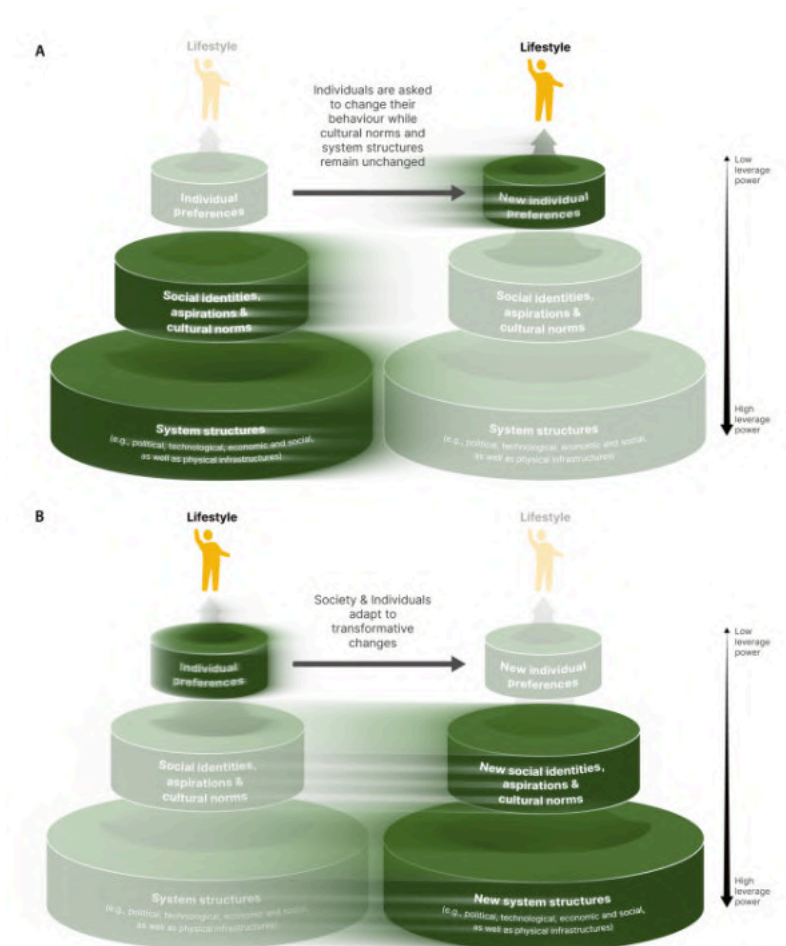
Lifestyles extend beyond consumption to include non-economic activities such as family care, social interactions, volunteering and civic participation. These activities – often performed by women – significantly contribute to well-being, tend to have minimal environmental footprints, and are integral to fostering more sustainable, fulfilling lives (Lorek et al., 2023). Incorporating gender equity into policy design is essential for recognising and integrating these non-economic activities into policy frameworks.

Provisioning and aspirational systems are interdependent and must evolve together to enable sustainable, nature-positive lifestyles (see Figure 14).

Changing aspirations without transforming provisioning systems can create practical barriers to behaviour change. Conversely, reforming provisioning systems without shifting aspirations may lead to social resistance or backlash.

Building coherence between the two systems requires coordinated action across public, private and civic actors, guided by shared visions of “good living within planetary boundaries”. Policies that promote inclusive participation, narrative change and cross-sector collaboration can strengthen this alignment. Only by integrating structural reform with cultural renewal can societies achieve the scale of transformation needed to make nature-positive lifestyles the norm rather than the exception.

Figure 14: Systemic interventions for lasting behaviour change.



Interventions that solely target individual preferences – such as awareness campaigns, modest economic incentives and nudges – risk failure, as they require individuals to change their behaviour even though cultural norms and system structures remain unchanged. To avoid this, aligning provisioning and aspirational systems creates new, more sustainable social contexts – shaping identities, aspirations, and cultural norms – within which individual preferences can naturally adapt. This systemic approach – which can be realised through a choice-editing policy approach – ensures that sustainable choices are accessible and practical as well as socially desirable and widely embraced.

5

Leveraging Choice-Editing to Implement Transformative Policy Packages

KEY CHAPTER MESSAGES

The following messages highlight priority insights for policymakers and practitioners developing and implementing transformative policy packages for nature-positive lifestyles:

- **Integrate sustainability into lifestyles through choice-editing:** Transforming consumption and production patterns requires shaping aspirations and curating market offerings so that nature-positive choices become the default. Choice-editing ensures that sustainable options are accessible, affordable and appealing to all.
- **Scale and adapt successful policies for nature-positive lifestyles:** Successful choice-editing approaches in food, mobility, housing and consumer goods demonstrate clear potential to drive sustainability transitions. Tailoring these approaches to local contexts can accelerate the shift toward nature-positive, low-impact ways of living.
- **Prioritise high-impact actions:** Major opportunities for reducing nature loss and climate impacts include reducing meat and fish consumption and minimising food waste – while redefining status-signalling food habits toward sustainable diets – as well as promoting active and shared mobility, and enhancing public transport options. Enabling energy-efficient living and supporting durable, repairable and circular consumer goods can further address resource overexploitation and contribute to a holistic transition. These actions can address both climate and biodiversity pressures simultaneously.
- **Transform aspirations and cultural norms:** Designing and promoting motivational visions of sustainable living, regulating marketing, redirecting advertising and media, preventing greenwashing, and supporting education, arts and cultural actors can help shift societal values from material consumption toward nature-positive aspirations. Indigenous peoples' knowledge and worldviews offer powerful examples of holistic human–nature relationships.
- **Foster (re)connection with nature:** Integrating green spaces into urban planning, promoting outdoor education and encouraging nature-based recreation can deepen emotional and cognitive human–nature connections. This contributes to psychological well-being, enhances ecological awareness, and motivates individuals and communities to adopt lifestyle choices aligned with ecological health. Indigenous peoples' worldviews, which recognise a deep human–nature interdependence, can inspire more holistic approaches to reconnecting with nature.

Building on the systemic framing of Chapter 4, this chapter presents concrete policy mechanisms that operationalise transformations in both provisioning and aspirational system. Choice-editing provides an evidence-based approach for redesigning consumption environments so that sustainable, nature-positive lifestyles become the default. Governments and other decision-makers have a wide portfolio of policy tools that can be strategically combined to influence the decisions of citizens, public authorities and businesses; reshape consumption and production patterns; shift societal aspirations; and support the emergence of lifestyles that benefit both biodiversity and climate.

These tools³⁷ range from laws and regulations to economic and financial measures such as subsidies, taxes and voluntary incentive schemes. They also include social and cultural interventions – such as visioning alternative pathways, narrative shifting, and awareness and educational initiatives – that hold significant potential for fostering transformative change in social and economic systems. An effective approach within this toolkit is “choice-editing”.

5.1. Choice-editing as an effective policy approach

Choice-editing refers to redesigning the architecture of lifestyle choices – the provisioning and aspirational systems that influence how people meet their needs. Through this approach, decision-makers (including businesses and policymakers) actively shape the range of products and services available in the market, influencing their competitiveness and appeal, thereby guiding consumer choices.³⁸

Choice-editing has proven effective in health and safety initiatives; examples include public policies on tobacco and alcohol, appliance safety standards, and the removal of hazardous products from the market. These successes provide a compelling blueprint for expanding choice-editing into environmental policy, promoting sustainable, nature-positive lifestyles. However, implementing such measures requires careful consideration of enforcement challenges and potential consumer resistance, underscoring the need to design policies that inspire and enable sustainable choices rather than imposing restrictions.

Historically, however, choice-editing has been used by media, businesses, retailers and brand-owners in largely unregulated ways. This includes shaping product offerings, design choices, market-tailored standards and marketing strategies that associate products with psychological meanings such as status or identity. These practices have often promoted materialistic values and consumption-driven lifestyles for economic advantage. Redirecting choice-editing toward sustainability instead allows policymakers to meet growing public demand for systemic support in adopting more sustainable ways of living. This involves reshaping consumption and production patterns, cultural values and societal aspirations to align with environmental and social priorities. Rather than restricting individual freedoms, choice-editing can expand access to sustainable alternatives.

Choice-editing is about redesigning the architecture of lifestyle choices. It shapes markets and societal values to align with sustainability, expanding access to sustainable options without restricting individual freedoms.

³⁷ IPBES identifies four categories of policy instruments: 1) Legal and regulatory instruments, 2) Rights-based instruments and customary norms, 3) Economic and financial instruments, and 4) Social and cultural instruments (see www.ipbes.net/policy-instruments).

³⁸ While policies can drive significant environmental benefits, it is important to consider potential rebound effects. These occur when efficiency gains or cost savings lead to increased consumption, partially offsetting impact reductions. For example, more fuel-efficient vehicles may encourage additional driving, or savings from second-hand purchases might be redirected to high-impact goods. Psychological factors, such as “moral licensing”, can also play a role, where one sustainable action justifies another less sustainable one. Policy strategies should anticipate and mitigate these effects to maximise net environmental benefits.

Existing examples of sustainability choice-editing (see Tables 1-4 in Section 5.2) provide actionable models that can be scaled and adapted. Measures targeting (public) education, media, the arts and marketing can reshape both provisioning and aspirational systems. When bundled into coherent policy packages, choice-editing can lower consumption impacts, enhance the

appeal of more sustainable alternatives, and remove barriers to adoption (see Box 6). By prioritising enabling environments and incentivising positive choices, rather than relying primarily on restrictions, policymakers can drive systemic change – making sustainable lifestyles both practical and aspirational, while ensuring public trust and engagement.

Box 6: Overcoming barriers to nature-positive lifestyles through choice-editing.

Barriers	Choice-editing actions
<p>Economic growth mindset</p> <p>A societal focus on economic growth and materialism as the primary means of improving well-being and fulfilling needs.</p>	<p>Shifting away from overemphasis on economic growth, materialism and profit maximisation is essential to prioritise nature-positive lifestyles. Education policies and the regulation of marketing and media representations of success can promote values centred on healthy relationships, altruism and respect for nature, encouraging a broader societal shift.</p>
<p>Short-termism</p> <p>The tendency to prioritise immediate (often economic) gains over long-term (sustainability and societal) benefits.</p>	<p>Short-term political cycles drive decision-making, favouring immediate results over long-term, systemic solutions. Governments can prioritise long-term environmental and social benefits by removing and reallocating subsidies and institutionalising foresight mechanisms, such as committees for the future. Incorporating Indigenous stewardship values, fostering futures literacy in public administration, engaging citizens in vision-setting, and aligning policies with sustainable development goals are vital strategies for overcoming short-termism.</p>
<p>Linear government in complex systems</p> <p>Governance structures often struggle to manage the dynamic changes in complex socio-ecological systems driven by multiple environmental, social and economic factors.</p>	<p>Policies should adopt holistic approaches to address key leverage points within systems, recognising interconnections between different areas of consumption and life. Ensuring policy coherence across sectors and establishing robust data systems for monitoring and evaluation can help policymakers evaluate the success of their initiatives, enabling adjustments to align efforts with shared visions for sustainable, nature-positive lifestyles.</p>
<p>Social norms</p> <p>The tendency of individuals to conform to societal standards and unwritten norms to gain social acceptance, and a sense of connection.</p>	<p>Shaping sustainable living into aspirational, desirable and accessible social norms is key. Engaging artists and cultural influencers, co-developing publicly supported future visions, implementing education policies, and regulating marketing and media can help mainstream sustainable lifestyles and foster social acceptance.</p>

<p>Disinformation</p> <p>Deliberate dissemination of inaccurate or misleading information by individuals, businesses, groups or organisations can distort public perception and impede understanding of critical environmental and societal issues.</p>	<p>Governments, businesses, competition authorities, organisations, consumer groups and consumer protection agencies can collaborate to counter misinformation and misleading advertising (e.g., greenwashing), and foster positive narratives about sustainable living. It is essential to focus on responsible marketing and transparency. Responsible marketing practices, transparency and accurate representation of products' sustainability can empower consumers to make informed choices while discouraging unsustainable behaviours.</p>
<p>Knowledge and awareness gaps</p> <p>Biodiversity is undervalued and underappreciated by the public, particularly when compared to climate change, which often dominates ecological discourse.</p>	<p>For nature-positive strategies to be effective, biodiversity considerations must be integrated into both public policies and everyday lifestyle choices. While public education is important, making sustainable options the default can drive widespread adoption, even among those less aware of environmental issues. Combining informed citizenship with accessible and attractive eco-friendly choices – alongside opportunities for local communities to reconnect with their surrounding nature – can help shape socio-environmental policies rooted in the choice-editing approach.</p>
<p>Socioeconomic obstacles</p> <p>Poverty, conflicts, social and emotional stress, cognitive limitations and challenging socioeconomic conditions heavily influence consumption and lifestyle choices and restrict awareness and connection with nature.</p>	<p>Governments can support and promote sustainable lifestyles by implementing comprehensive policies that go beyond reducing the price of green products. These policies should improve the availability, effectiveness and appeal of eco-friendly alternatives. Innovative solutions, such as promoting sharing economies or service-based models instead of ownership, can also foster new ways of meeting needs, resource efficiency, frugality and sustainability while reducing materialistic consumption.</p>

To make nature-positive lifestyle options the default, several barriers must be addressed which extend beyond the issue of sustainable lifestyles alone. Source: updated from Galli et al. (2024) through expert consultations.

To be effective and fair, choice-editing must also ensure equitable access. Policies should guarantee socially acceptable minimum levels of well-being for all – healthy food, mobility access, quality housing and essential goods – while reducing overconsumption and shifting aspirations toward sufficiency and shared prosperity.

5.2. Existing sectoral choice-editing policies

Reversing nature loss requires solutions that shift lifestyles away from activities that harm nature. Effective solutions should target both provisioning and aspirational systems. The tables below present examples of policies that positively impact nature through a choice-editing approach (see Tables 1-4) in the four lifestyle domains described in Chapter 2; they are organised by specific impact areas within each domain, as shown in Figure 3. While some are early-stage proposals, others are being actively implemented at local and national levels. These policies can be scaled

Choice editing for sustainable lifestyles requires an understanding of local, cultural and economic contexts, while also addressing equitable access, overconsumption, and the need to redefine societal aspirations.

and tailored to local contexts, ensuring that diverse communities and regions can leverage them to promote nature-positive behaviours. Prioritisation of these policies for targeted interventions also depends on the specific drivers of nature loss that policymakers aim to address.

The choice-editing approach works by editing out undesirable products and services from the market and editing in better options. This reduces – and ultimately reverses – the attractiveness gap between high- and low-impact choices currently embedded in system design:

- **Edit out:** This principle uses clear criteria to reduce or eliminate nature-harmful consumption options (often also carbon-intensive) from the market to stay within sustainable limits. It makes high-impact options more expensive, less appealing to consumers, or hard to access.
- **Edit in:** This principle promotes low-impact alternatives to existing high-impact products and services, driving social innovation to make eco-friendly choices the default. It increases the attractiveness, affordability and availability of low-impact options and introduces alternative satisfiers to human needs that are both nature-positive and enhance well-being.

It is crucial that choice-editing policies enable equitable access, ensuring that the sustainability transition does not disproportionately disadvantage those on lower

incomes, women or other marginalised groups. Everyone should have access to socially accepted minimum levels of consumption essential to well-being, including healthy food, energy, comfort, and access to essential places and services. By addressing these needs, policies can support a just transition that benefits all members of society.

Creating effective policy packages that restructure choice architecture toward nature-positive lifestyles requires an understanding of local contexts. In cities with developing infrastructure, a choice-editing approach can help shape public spaces and facilities in new construction and urbanisation projects.³⁹ In cities with well-established infrastructures and systemic lock-ins, choice-editing can focus on rethinking the design, use and allocation of current resources.⁴⁰

Cultural and economic contexts also shape implementation. In developed countries with meat-heavy diets, choice-editing can prioritise a shift toward plant-based options through adjustments in both provisioning and aspirational systems.⁴¹ In developing regions where food and nutritional security remain a challenge, choice-editing may prioritise safe and nutritious food access while guiding dietary preferences toward sustainability.⁴²

While existing choice-editing policies promote some more sustainable consumption options, significant gaps remain in addressing overconsumption and redefining societal aspirations. Policymakers can bridge these gaps through ambitious measures such as carbon quotas (Akenji et al., 2021), circular economy incentives,

³⁹ In Nairobi, Kenya, for example, efforts such as the restoration of the Nairobi River and the development of the Karura Forest as an urban recreational area have enhanced environmental sustainability and promoted healthier lifestyles.

⁴⁰ For example, Copenhagen's transformation into a bicycle-friendly city – with extensive cycling lanes and reduced car access in the centre – has influenced transportation choices and reduced carbon emissions.

⁴¹ In the United Kingdom, for instance, public institutions like schools and hospitals are introducing more plant-based meals in their menus, aligning dietary options with sustainability goals.

⁴² India's National Food Security Act, for instance, enhances access to staple foods, while government initiatives promote balanced diets by incorporating traditional plant-based foods to improve nutritional outcomes.

community service requirements,⁴³ innovative public education,⁴⁴ and regulations that align societal values with sustainability and well-being.

5.2.1 Food: increasing plant-based diets, reducing food waste and shortening supply chains

Transforming food consumption is a critical starting point for reducing lifestyle impacts on nature. For some, it is about changing current consumption patterns; for others, it is about ensuring basic survival. Whether the focus is on reducing overconsumption or securing essential nutrition, reshaping our diets is key. This means reconsidering not only what we eat but also how our food is produced and sourced.

Shaping nature-positive diets involves increasing the consumption of plant-based foods, such as legumes, fruits, vegetables and whole grains; favouring meat produced through regenerative farming practices; and incorporating alternative proteins like pulses and plant-based meat substitutes.⁴⁵ Sustainable agricultural practices (such as organic farming and agroecology), shorter supply chains, reduced reliance on highly processed imported products, minimised food waste

and seasonal eating all contribute to reducing nature loss. Reviving traditional food knowledge – such as harvest festivals and community-based food networks – can strengthen food sovereignty while preserving biodiversity.

Table 1 provides illustrative examples of existing choice-editing policies that lower the impact of food systems on nature by reshaping dietary aspirations and changing food provisioning systems.

Beyond these measures, more ambitious and often unexplored policies – supported by evidence from scientific research – could be introduced to further align diets with sustainability goals.⁴⁶ Examples include mandatory rules for restaurants and canteens to offer more vegetarian and vegan options, introducing footprint quotas to limit dish sizes and the availability of land- and carbon-intensive dishes, requiring supermarkets to prominently feature plant-based alternatives, and restricting advertisements in shopping channels, TV shows and other media that promote unsustainable, unhealthy food habits.

Transforming food consumption is essential for reducing lifestyle impacts on nature, whether by shifting consumption patterns to curb overconsumption or ensuring access to basic nutrition, all while reconsidering both what we eat and how it is produced.

⁴³ Since 1995, the government of Rwanda has institutionalised the Umuganda (“communities coming together”) programme, which mandates people aged 16 to 65 to participate in community service on the last Saturday of every month, nationwide. See www.undp.org/blog/umuganda-rwandas-audacity-hope-end-plastic-pollution.

⁴⁴ Starting from the 2024/2025 school year, Strade Maestre offers high school students the opportunity to complete an itinerant school year walking across the Italian peninsula, incorporating educational activities based on the experiences and territories they encounter. See <https://dgeric.cultura.gov.it/en/eventi/strade-maestre-sed-incontro-di-presentazione-del-progetto-educativo>.

⁴⁵ Animal-based protein consumption significantly drives nature loss through the direct exploitation of resources, land and sea use, and climate change (see Section 2.1, Box 1). See also Kozicka et al., 2023.

⁴⁶ Achieving nature-positive diets also requires addressing corporate power in agricultural production systems. Although beyond the scope of this report, it is worth noting that the privatisation of essential resources such as seeds and water often marginalises small-scale farmers, reducing their autonomy and access to traditional, biodiverse and sustainable agricultural practices. These dynamics also influence food affordability and accessibility, often favouring unsustainable options. To counter these challenges, policies that safeguard farmers’ rights to seeds, promote equitable access to water and curb monopolistic practices in the agricultural sector are essential. Supporting community seed banks and water stewardship programmes can thus foster resilient, equitable and inclusive food systems that align with nature-positive goals.

Table 1: Existing choice-editing policies for nature-positive food consumption.

	Meat heavy diets	Intensive agricultural practices	Food waste	Long food chains
Edit-in policies	<ul style="list-style-type: none"> Increase plant-based diets by public procurement (14-city commitment) Require cafés and restaurants to encourage customers to select plant-rich dishes (WRI) Establish public distribution systems for low-carbon footprint foodgrains at affordable prices (India) 	<ul style="list-style-type: none"> Mandate forest preservation on private land (Brazil) Offer progressive payments to farmers that adopt higher-impact conservation practices (UK Environmental Land Management Scheme) Support training programmes for small-scale farmers in regenerative agriculture (Central America) Promote digital and in-person training programmes on sustainable agricultural practices (East Africa) Promote media campaigns to raise awareness of sustainable agriculture benefits and environmental costs of intensive farming (Cuba) Support school garden-based programmes that improve children's understanding of sustainable agricultural practices (US) 	<ul style="list-style-type: none"> Require food labels to include tips on storage, handling and using leftovers to reduce food waste (France) Require grocery stores to stock a broad variety of healthy food options (Minneapolis) Require bars and restaurants to provide "doggy bags" (Spain) Revise marketing standards and allow the sale of imperfect food products (Kenya) Upgrade packaging criteria to require features that allow food to last longer (Australia) Implement tax incentives for food donations (Colombia) Mandate organic food waste recycling and support composting infrastructure and education (California) 	<ul style="list-style-type: none"> Give licensing advantages to businesses that sell local food (Italy) Provide subsidies to local food organisations and community groups (Canada) Prioritise local smallholder farmers in public procurement (South Africa) Encourage residents to plant vegetable gardens by providing them with resources and technical advice (Singapore) Introduce labels such as "Local" and "Regionally Sourced" (Italy) Reduce tax rates for locally produced food (India) Fund campaigns to promote local food consumption (Kenya) Plan for urban areas that integrate local food production through zoning laws that prioritise spaces for local farmers' markets or food hubs (Toronto)

PART III
Enabling lifestyle change through systems and policy

Edit-in policies		<ul style="list-style-type: none"> Promote urban agriculture by renting out small gardens at low prices to citizens, which can be used both to produce food and as outdoor spaces for people with no balconies or gardens (Germany) 		<ul style="list-style-type: none"> Prioritise transportation routes for local food distribution (San Francisco) Establish networks and platforms for easy access to local food producers (Denmark) Create programmes that foster stronger connections between local agricultural, tourism and food supply sectors (Scotland) Mandate restaurants to have unlimited drinking water for free in refillable glass jars (France) Develop campaigns and initiatives that celebrate regional food species and ecosystems, highlighting their role in preserving biodiversity and strengthening community life and culture (Ark of Taste initiative)
Edit-in & out policies	<ul style="list-style-type: none"> Introduce differentiated VAT with exemptions for plant-based staple food and increasing VAT on high environmental impact food products such as meat (Germany) Update dietary guidelines to promote plant-based food (Nordic Nutrition Recommendations) 	<ul style="list-style-type: none"> Provide funding for farmers transitioning to less chemically intensive farming methods (EU) 	<ul style="list-style-type: none"> Require food waste education on public media, through ministry activities, and in school and university curricula (Italy) 	<ul style="list-style-type: none"> Promote school field trips and educational projects with local farms (New Zealand)

PART III
Enabling lifestyle change through systems and policy

Edit-in & out policies	<ul style="list-style-type: none"> Shift subsidies on animal-based protein production to plant-based (The Netherlands) Introduce sustainable food literacy in school curricula (Germany) 		<ul style="list-style-type: none"> Ease administrative burden to bring new products from surplus food to the market (EU Novel Foods Regulation) 	
Edit-out policies	<ul style="list-style-type: none"> Restrict new licences for restaurants that encourage meat consumption (Amsterdam) Adopt national plans to reduce livestock numbers (The Netherlands) Introduce taxes on high-impact unhealthy food (Denmark) Regulate advertising and media messages on high-impact foods (e.g., red meat and dairy) (Spain) Require front-of-packaging warning labels (Argentina, Chile, Mexico, Brazil) 	<ul style="list-style-type: none"> Revise environmental labelling of food products not to favour intensive production (France) Stop subsidies to intensive farming (Plant Based Cities initiative) Halt the development of new intensive farms (Norfolk and Wye, UK) Implement "zero growth" strategies on fertilisers and pesticides (China) Pay a yearly rent to farmers to remove environmentally sensitive land from agricultural production (USDA Conservation Reserve Programme) 	<ul style="list-style-type: none"> Promote campaigns on the benefits of reducing food waste at home (International, UNEP, UK) Set public procurement standards on aspects related to food waste, such as size portions and staff training (Brazil) Penalise food service operators that induce or mislead consumers to order excessive meals (China) Require large shops to donate unsold food (France) Restrict or ban "buy-one-get-one-free" promotions on food (UK) Promote the development of bulk selling activities and the update of reusable packaging (France) 	<ul style="list-style-type: none"> Restrict imports of ultra-processed food products with long value chains (Brazil)

This table is organised by two dimensions: 1) major nature-impact hotspots as identified in Figure 3 – meat-heavy diets, intensive agricultural practices, food waste and long food chains; and 2) policy approaches – editing out undesirable options, editing in sustainable alternatives, or combining both. Each policy is linked to an emblematic initiative, selected for its visibility, effectiveness, or relevance to underrepresented regions. Scaling up policies that simultaneously edit in and out options, while adapting to local contexts, is essential to maximise impact. Transforming food systems in this way can address drivers of impact on nature, with major impacts on changes in land and sea use, climate change and resource exploitation, as well as significant effects on pollution and invasive species (see Figure 3).

5.2.2 Mobility: reducing travel demand and prioritising active transport

Achieving nature-positive mobility requires reimagining urban spaces and transitioning to low-impact lifestyles that address key drivers of nature loss, such as land-use change, climate change and pollution. This entails reducing the need for travel and prioritising active mobility options – such as walking, cycling and public transportation – rather than fossil-fuel-based, space-intensive modes.⁴⁷ Air travel and private cars contribute to climate change – a major driver of nature loss – as well as habitat fragmentation (see Section 2.2, Box 2). Changing mobility practices thus provides opportunities to address nature loss, create spaces for nature restoration activities, and improve accessibility (see Table 2).

Beyond these measures, integrated policies are crucial for fostering a balanced approach that combines mobility (connections), proximity to essential places (accessibility) and digital solutions to reduce travel demand. Achieving this shift requires a fundamental change in priorities: mobility policies should focus less on moving people and more on enhancing access and quality of life. Policymakers have the opportunity to prioritise the installation of infrastructures for sustainable mobility options – such as cycling and public transport – ensuring these systems are accessible in all areas. Alongside promoting the use of sustainable transport, mobility policies should also reduce the dependency on, and attractiveness of, car-dependent transport modes. This shift can be supported by ambitious, long-term policies, including progressive standards for sustainable streets that evolve over time, planning for car-free urban areas, requiring companies to minimise business flights, and implementing limits on intercontinental flights through bans and carbon quotas.

**Mobility policies should focus less on moving people
and more on enhancing access and quality of life.**

⁴⁷ Indigenous peoples' and local communities' knowledge of walking routes offers valuable insights for active mobility, combining efficiency with meaningful engagement with nature. Traditional trails not only provide direct and accessible paths but also strengthen ecological awareness and cultural connections to the land, reflecting long-standing, low-impact mobility practices.

PART III
Enabling lifestyle change through systems and policy

Table 2: Existing choice-editing policies for nature-positive mobility.

	Air-transport	Private transport	Fossil-based mobility
Edit-in policies	<ul style="list-style-type: none"> Invest in high-speed rail and night train connections (China) Require airports to transition ground operations to renewable energy sources (Norway) Promote staycations and local tourism (Italy) 	<ul style="list-style-type: none"> Increase incentives for public transport (India) Provide free public transport (Tallin) Support home and hybrid working (EU) Establish public-private partnerships to increase car-pooling through campaigns, incentives, and reserving lanes for high-occupancy vehicles (Malaysia) Consolidate transport regulations and provide innovation funds to support digital mobility tools that help integrate various modes of non-private transport (Helsinki) Encourage businesses to adopt flexible working hours to reduce public transport overcrowding (Seoul) Provide discounts on public transport during peak holiday seasons (Australia) 	<ul style="list-style-type: none"> Provide public funding to low-impact mobility communities (Barcelona) Support initiatives on sustainable mobility days and nature walking (UK) Invest in the electrification of public transport and rail systems (Mexico) Impose higher taxes on high-emission vehicles (France) Encourage the use of electric bicycles via subsidies for e-bike purchases, and tax incentives for businesses that are involved in e-bike manufacturing/offer e-bike options for commuting (China) Use local knowledge to identify and map walking routes between neighbouring areas (Slow Ways)
Edit-in & out policies	<ul style="list-style-type: none"> Ban short-haul flights when public transport alternatives are in place (France) Require airlines to provide information on the environmental impacts of flying and flag travel alternatives (EU) 	<ul style="list-style-type: none"> Reconfigure public space to reduce private car use and promote green and active mobility options (Cape Town) Switch car space to nature restoration activities and ecological corridors (Barcelona) Promote alternative mobility aspirations in media and advertisement campaigns (Italy) 	<ul style="list-style-type: none"> Require car advertising to encourage people to bike and walk (France) Support the development of digital tools for transport-related carbon rationing (Lahti) Develop campaigns that encourage people to swap short car trips for cycling, highlighting health and environmental benefits (UK) Create and support citizen assemblies on the decarbonisation of transport (Germany)

PART III
Enabling lifestyle change through systems and policy

Edit-out policies	<ul style="list-style-type: none"> • Introduce carbon taxes on flying (China) • Ban fossil-fuel private jets (UK) • Introduce taxes on private jet flights to reflect their climate impact (Scotland) • Halt the development and expansion of airports (Vienna) • Support social movements encouraging people to avoid flying (Sweden) • Ban advertising of low-cost air travel (France) • Adjust ticket prices based on carbon emissions (Sweden) • Introduce per capita caps on number of flights per year (UK) 	<ul style="list-style-type: none"> • Plan urban systems that reduce the need to move about (15-minute city) • Halt major road building projects (Wales) • Disincentivise car use with congestion charges and car-free zones (London) • Establish car ownership quotas (Singapore) 	<ul style="list-style-type: none"> • Progressive ban on company cars, starting from non-electric (Belgium) • Ban fossil-fuel transport advertising from public transport stations (Amsterdam) • Ban the sale of new petrol and diesel cars (EU) • Introduce yearly progressive fuel taxes (Canada)
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The table is organised by two dimensions: 1) major nature-impact hotspots as identified in Figure 3 – air transport, private transport and fossil-based mobility; and 2) policy approaches – editing out undesirable options, editing in sustainable alternatives, or combining both. Each policy is linked to an emblematic initiative, selected for its visibility, effectiveness, or relevance to underrepresented regions. Scaling up policies that simultaneously edit in and out options, while adapting to local contexts, is essential to maximise impact. Transforming mobility in this way can address drivers of impact on nature, with major impacts on climate change, resource exploitation and invasive species, as well as significant effects on changes in land and sea use and pollution (see Figure 3).

5.2.3 Housing: reducing resource use and promoting smaller, nature-positive living spaces

Achieving nature-positive housing requires reducing energy consumption, using low-impact building materials, opting for smaller homes, conserving water, and promoting shared utilities and equipment (see Section 2.3, Box 3). Smaller living spaces can significantly reduce environmental footprints, especially when located in well-designed, high-quality neighbourhoods that enhance liveability and accessibility. Resilient and inclusive communities in thoughtfully designed neighbourhoods are essential for minimising housing's negative impact on nature. Housing acts as a major status symbol which drives inequality across income groups, so shifting societal aspirations is crucial. Public campaigns, educational programmes and media promotion of new norms or regulations can foster a shift away from large homes toward more sustainable, socially connected communities⁴⁸ (see Table 3).

Beyond these measures, policies are urgently needed to incentivise smaller living spaces, support the use of shared facilities and appliances, and prioritise the refurbishment and reuse of existing buildings over new construction.

Housing acts as a major status symbol, driving inequality across income groups, so shifting societal aspirations is crucial.

⁴⁸ Indigenous peoples and local communities have long built climate-responsive homes using local materials, creating structures that are both sustainable and culturally significant. Their emphasis on communal living and shared resources fosters social cohesion while reducing material consumption. These principles offer valuable insights for shifting aspirations toward more sustainable, community-oriented housing.

Table 3: Existing choice-editing policies for nature-positive housing.

	Living space size	Household energy consumption	Urban sprawl
Edit-in policies	<ul style="list-style-type: none"> Require that smaller homes are located near public transport hubs (Singapore) Promote public green areas (São Paulo) Provide subsidies and tax credits for housing that reduces carbon footprints through shared facilities at a convenient cost (Portland) Offer incentives to seniors and empty-nesters to downsize into smaller, more energy-efficient homes (Netherlands) Support projects that design communal spaces in areas where smaller homes are common to make these neighbourhoods more liveable (Haiti) 	<ul style="list-style-type: none"> Promote sustainable housing through digital tools that provide transparency on energy and economic commitments for housing options during pre-construction or purchase (EU) Require all new buildings to be zero-emission and nearly zero-energy, strengthening energy performance standards across the EU (EU) Incentivise renewable energy communities (Brazil) Promote campaigns to reduce energy consumption by adopting sustainable behaviours (Japan) Mandate energy suppliers to offer smart meters to all homes (UK) Set national energy codes for buildings ensuring that homes built today are more energy-efficient (Canada) 	<ul style="list-style-type: none"> Integrate urban green spaces and natural water management systems, curbing sprawling developments and enhancing biodiversity (China) Integrate energy-efficient housing and accessible public transport within a compact footprint, minimising urban spread (Hammarby Sjöstad, Stockholm) Integrate wildlife corridors within urban planning to maintain connectivity for ecosystems (Amsterdam)
Edit-in & out policies	<ul style="list-style-type: none"> Implement zoning laws that encourage small housing (Japan) Set standards on flexible and modular housing which can adapt to changing family sizes and lifestyles over time (Helsinki) 	<ul style="list-style-type: none"> Favour the retrofitting of existing buildings (including social housing) over new construction (Denmark) Set public procurement standards across public sector projects to reduce environmental footprints (South Africa) 	<ul style="list-style-type: none"> Set urban growth boundaries to manage expansion, protecting farmland and ecosystems while fostering efficient urban development (Portland) Replace urban infrastructures with green urban infrastructure and nature-based solutions, curbing sprawl and increasing biodiversity (Seoul)

PART III
Enabling lifestyle change through systems and policy

Edit-in & out policies	<ul style="list-style-type: none"> Implement mandatory quotas that reserve a percentage of new residential developments for affordable units designed to be smaller and more accessible to lower- and middle-income groups (Johannesburg) Promote campaigns on the environmental and well-being benefits of smaller housing (US) 	<ul style="list-style-type: none"> Encourage the manufacturing and adoption of energy-efficient appliances (India) Simplify processes for consumers to select renewable energy suppliers and ensure that green energy is readily available on the market (EU) Create programmes to distribute energy-efficient lighting to households (Mexico) Implement educational programmes on energy efficiency (Mexico) 	<ul style="list-style-type: none"> Dedicate land to forests and greenery to prevent sprawling residential or industrial developments in those areas (Nairobi) Optimise the use of existing infrastructures, promoting higher-density housing and mixed-use projects rather than horizontal expansion (US) Implement nature-based solutions (e.g. urban forests to reduce heat islands) making compact urban living more desirable and reducing the demand for suburban developments (Singapore) Offer financial incentives for high-density urban projects and levy penalties on developers expanding into natural or agricultural lands (France)
Edit-out policies	<ul style="list-style-type: none"> Disincentivise vacant properties and multiple home ownership (Canada) Prevent non-residents from purchasing existing homes (New Zealand) Impose property taxes that are progressive based on the size and value of the property (Switzerland) Limit advertising practices that may mislead consumers or overstate the luxury or desirability of large homes (US) 	<ul style="list-style-type: none"> Prohibit advertising and media messages that encourage excessive energy use (EU) Enforce strict advertising rules that prevent misleading claims about a product's energy consumption (Australia) 	<ul style="list-style-type: none"> Design greenbelts around urban areas to limit urban sprawl and encourage development within existing city limits (UK) Employ mixed-use zoning policies to integrate residential, commercial and industrial areas, reducing the spread of low-density suburbs (Curitiba) Impose impact fees on developers who build on undeveloped land (California)

The table is organised by two dimensions: 1) major nature-impact hotspots as identified in Figure 3 – living space size, household energy consumption and urban sprawl; and 2) policy approaches – editing out undesirable options, editing in sustainable alternatives, or combining both. Each policy is linked to an emblematic initiative, selected for its visibility, effectiveness, or relevance to underrepresented regions. Scaling up policies that simultaneously edit in and out options, while adapting to local contexts, is essential to maximise impact. Transforming housing in this way can address drivers of impact on nature, with major impacts on direct resource exploitation, significant effects on changes in land and sea use, climate change and pollution, as well as moderate impact on invasive species (see Figure 3).

5.2.4 Consumer goods: rethinking needs and tackling overconsumption

Achieving nature-positive lifestyles in consumer goods requires rethinking real versus perceived needs, reducing overconsumption and challenging throwaway culture (UNEP and UNFCCC, 2023; Arthur, 2024) (see Section 2.4, Box 4). This includes reshaping societal aspirations and definitions of a “successful life”, increasing transparency on environmental and social impacts, and promoting sustainable use and circular business models. Policies should support sufficiency; circular consumption such as share, reuse, repair; and extended producer responsibility standards, along with innovative business models like product-as-a-service that prioritise access over ownership.⁴⁹ Financial tools such as subsidies and VAT exemptions (such as for start-ups) can further support these efforts (see Table 4).

Beyond these measures, there is an urgent need to address overall overproduction and overconsumption levels, setting limits on overuse of resources through tools like carbon and nature quotas at the production stage, and setting global targets to reduce lifestyle impacts on nature. Contributing to this would be policies that address aspirational systems and redefine societal values about success and well-being, moving from material accumulation to more sustainable, nature-positive lifestyles. Effective consumer campaigns, social marketing and other efforts to shift public sentiment and behaviours provide a good starting point for designing ambitious policies.

Achieving nature-positive lifestyles in consumer goods requires rethinking real versus perceived needs, reducing overconsumption and challenging throwaway culture. This includes reshaping societal aspirations and definitions of a “successful life”.

⁴⁹ Indigenous and local knowledge systems have long embraced resource stewardship, sufficiency and shared use, contrasting with consumer-driven excess. Practices such as communal ownership and cyclical use ensure resources remain available for future generations. Integrating these principles into modern economies can support a shift toward circular, sufficiency-based consumption aligned with sustainability goals.

Table 4: Existing choice-editing policies for nature-positive consumption of consumer goods.

	Overconsumption	Fossil-based production and long supply chains	Short product use time
Edit-in policies	<ul style="list-style-type: none"> Mainstream product-as-a-service business models by financing start-ups (EU) Finance free public libraries (Finland) Fund research projects that explore the well-being benefits of reducing consumption (EU) 	<ul style="list-style-type: none"> Require companies to identify their carbon footprint and implement measures to reduce it (EU) Provide incentives to businesses that adopt sustainable practices (including sustainable marketing) (US) Fund and promote projects that reuse city centres and other premium locations as hubs for sustainable product retail (EU) Create "made-in" label programmes to promote local products with reduced carbon footprint associated with shorter supply chains (California) Promote sustainable trade practices for biodiversity-based products and services (Peru) Offer tax levies based on the share of fossil materials in products and packaging (UK) Introduce eco-labels based on climate and biodiversity impacts (Nordic Eco-Label) 	<ul style="list-style-type: none"> Implement mandatory eco-design quality and durability standards (EU) Implement tax breaks on repairs (Sweden) Support repair training programmes and repair cafés and promote them in the media (Germany) (Japan) Launch campaigns encouraging consumers to use products for longer and prioritise sustainable alternatives (Planet Positive Beauty Guide - UK) Support initiatives that promote design for attachment and long-lasting style (Redress Design Award) Prioritise products with modular features in public procurement (US) Require manufacturers to provide repair manuals, tools and affordable spare parts for products (India) Support platforms of certified second-hand sellers and businesses that engage in re-commerce (e.g., selling refurbished electronics or clothing) (EU) Support informal recycling networks (Nigeria) Organise community swap meets where consumers exchange usable goods (Los Angeles)

PART III
Enabling lifestyle change through systems and policy

Edit-in & out policies	<ul style="list-style-type: none"> • Adopt sufficiency policy frameworks (Amsterdam) • Require schools to dedicate a minimum number of hours per week to sustainable consumption (Italy) • Encourage business models and retailers to develop and install refill systems in supermarkets (UK) 	<ul style="list-style-type: none"> • Switch subsidies from fossil-based products to sustainable alternatives (India) • Create programmes that set progressively more ambitious standards for products with reduced carbon footprint (Japan) 	<ul style="list-style-type: none"> • Require advertising for certain products to disclose their expected lifespan or reparability (EU)
Edit-out policies	<ul style="list-style-type: none"> • Regulate consumeristic messages in advertising and the media (US) • Ban free returns from online shopping to discourage impulse buying and curb the practice of purchasing items for social media display before returning them (UK) • Support campaigns on limiting the yearly purchase of new items (UK) • Enforce limits on bulk purchases (US) • Introduce more progressive taxes on higher incomes and luxury goods (US) • Implement work-sharing and working hours reduction policies (Germany) • Restrict imports of non-essential items and luxury goods (Sri Lanka) • Ban mega yachts and excessive consumption behaviours (Naples) 	<ul style="list-style-type: none"> • Regulate to limit greenwashing and increase value-chain transparency (EU) • Ban fossil-based products (e.g. plastic bags) (Bangladesh) • Introduce extended producer responsibility systems for fossil-based products, requiring producers to take responsibility for the entire life cycle of their products, including collection and recycling (France) • Support initiatives to reduce carbon emissions in digital advertising technology (OpenX) 	<ul style="list-style-type: none"> • Ban planned obsolescence by making it illegal for manufacturers to intentionally design products with a limited lifespan (France) • Ban the disposal of usable goods, making it mandatory to donate, recycle or repair (Sweden) • Apply penalties on business models that promote short use time and high frequency purchases (e.g. fast fashion) (France)

The table is organised by two dimensions: 1) major nature-impact hotspots identified in Figure 3 – fossil-based production, short use time and overconsumption; and 2) policy approaches – editing out undesirable options, editing in sustainable alternatives, or combining both. Each policy is linked to an emblematic initiative, selected for its visibility, effectiveness, or relevance to underrepresented regions. Scaling up policies that simultaneously edit in and out options, while adapting to local contexts, is essential to maximise impact. Transforming the consumption of goods and services in this way can address drivers of impacts on nature, with major impacts on invasive species, significant effects on pollution, as well as moderate impact on changes in land and sea use, climate change and direct resource exploitation (see Figure 3).

PART IV

Conclusions and Way Forward



PART IV *Conclusions and way forward*

Biodiversity loss continues at an alarming pace, driven largely by unsustainable consumption and production patterns. This report positions **lifestyle change as a central, upstream strategy for halting and reversing biodiversity loss** – complementing climate action and addressing the shared root causes of the triple planetary crisis.

Transforming lifestyles requires more than changes in individual behaviour. It demands shifts in the societal values and norms that define “good living”, alongside changes in the structural drivers – including markets, infrastructures and policies – that shape everyday choices. Major shifts are particularly needed in high-income countries, where lifestyle pressures on nature are greatest, and among the wealthiest segments of the global population. Yet all societies benefit from shaping positive visions of well-being that avoid locking in material-intensive lifestyles as incomes rise.

The results of Chapter 3 make this explicit: lifestyle domains show sharp cross-country differences in their biodiversity and carbon footprints, revealing clear priority areas and major opportunities for co-benefits. Dietary change offers the largest opportunities for reductions in biodiversity impacts across all three countries studied, while mobility and energy are the major drivers of climate impacts. These insights directly inform the policy directions outlined below.

At this critical juncture, coordinated, decisive action is needed. Four overarching messages emerge:

- 1. Lifestyle change must become central to biodiversity policy:** Efforts to protect nature must move “upstream”, not only treating the symptoms but addressing the drivers of nature degradation. A lifestyle approach reframes good living around well-being, equity, sufficiency, and healthy relationships with nature – while reinforcing climate and pollution strategies. The lifestyle domains with the greatest impacts offer the most powerful leverage points for reducing biodiversity loss and mitigating climate change. The integrated biodiversity-carbon footprint results presented in Chapter 3 underline the potential for co-benefits when actions are aligned (e.g., dietary shifts or modal shift to public transport).
- 2. Policymakers can leverage proven policy tools to redesign provisioning and aspirational systems:** Governments already influence consumer behaviour through health, safety and economic policy. These same tools can be used more systematically to reshape consumption environments toward nature-positive options. Choice-editing – discussed in Chapter 5 – removes harmful options while making sustainable alternatives accessible, affordable and attractive. When embedded in biodiversity policy packages, it can align market offerings and societal aspirations with sustainability goals. Examples across food, mobility, housing and consumer goods illustrate how both provisioning systems and social narratives can be redesigned to favour nature-positive, low-carbon lifestyles.
- 3. Lifestyle indicators and targets are essential to guide action and monitor progress:** Current global biodiversity frameworks do not adequately capture lifestyle-driven pressures on biodiversity and ecosystems. Evidence from Chapter 3 shows that consumption-based footprinting makes these pressures visible, allowing policymakers to identify high-impact lifestyle domains, compare priorities and track progress. Without such indicators, major drivers of biodiversity loss linked to everyday consumption remain poorly addressed.
- 4. Efforts must be unified across society:** Meaningful change depends on the combined efforts of governments, businesses and communities – including women, local knowledge holders, Indigenous peoples and marginalised communities. While policymakers play a critical role, inclusive, community-driven initiatives are essential for designing nature-positive solutions. Sustainable lifestyle visions must be developed *with*, not *for*, communities. This means creating participatory forums where citizens co-design pathways for change, ensuring meaningful inclusion of underrepresented groups, engaging new actors such as marketers, storytellers, artists and influencers to shift social narratives, and supporting international civil-society networks that connect and amplify these efforts. Such engagement builds legitimacy, strengthens accountability, and increases the political feasibility of ambitious lifestyle policies.

PART IV Conclusions and way forward

These messages point to three actionable options for policymakers. While these options have global relevance, tailoring them to local contexts is essential to account for cultural and socioeconomic differences and ensure their effectiveness:

- 1. Design integrated policy packages using choice-editing:** Adopt choice-editing approaches to develop comprehensive policy packages that reshape provisioning and aspirational systems. Immediate actions should focus on food and mobility – by promoting plant-based diets and active transportation – and longer, circular product use. Additionally, address gaps in existing policies by regulating harmful advertising and cultural signals promoting overconsumption. These efforts help counter overconsumption and create motivational and desirable visions of sustainable living.
- 2. Integrate lifestyle indicators and targets into global frameworks:** In the short term, strengthen the implementation and monitoring of the Kunming-Montreal Global Biodiversity Framework by enhancing Target 16 with clear benchmarks and a headline indicator capturing consumption-driven biodiversity loss. Integrating consumption-based biodiversity and carbon footprints into national reporting systems would support transparency, accountability, and policy coherence across biodiversity and climate agendas. To enable this, national statistical offices should be supported and mandated to standardise, maintain and regularly update consumption data in physical units, disaggregated by socioeconomic groups. In the longer term, embed lifestyle-based indicators and targets into post-2030 agreements and other multilateral environmental agreements. These targets should focus on high-impact lifestyle domains – such as meat and fish consumption, food waste, air travel, living space size and clothing – and be explicitly linked to the direct drivers of biodiversity loss, including land-use change, climate change and pollution. A coordinated approach across biodiversity and climate frameworks – guided by science-policy expertise – can help align objectives, minimise trade-offs and reinforce nature-positive outcomes.
- 3. Institutionalise participatory processes and inclusive vision-making:** Support national and international forums for public participation to elevate community and stakeholder perspectives and foster new vision development, enabling inclusive deliberation on nature-positive futures. Foster civil-society networks to coordinate these efforts and translate discussion into inclusive, action-oriented outcomes. Elevate Indigenous and local knowledge to guide effective and equitable solutions.

This is a decisive moment to redefine humanity's relationship with nature. The insights and options presented in this report provide a practical, evidence-based pathway to align everyday living with the regeneration of nature. By reshaping consumption environments, redefining societal aspirations, establishing robust indicators and engaging society in co-creating futures, policymakers can accelerate the transition to nature-positive, low-carbon lifestyles – improving well-being, equity and planetary health for generations to come.

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Glossary

Affluence: The pursuit of wealth, luxury, and material status, often associated with higher-income groups, which drives overconsumption and extractive production patterns.

Aspirational systems: The cultural values and desires that shape consumption and foster lifestyles.

Biodiversity equivalent: A metric used in biodiversity footprint assessments that expresses the share of global species at risk of extinction as a result of activities that harm nature. Biodiversity equivalent (BDe) values range from 0 to 1; for example, 0.01 BDe indicates that 1% of the world's species are likely to be lost in the long term due to a given activity. The biodiversity equivalent is calculated by combining ecosystem-specific impacts (terrestrial, freshwater and marine), weighted by each ecosystem's share of global species richness (see Potentially Disappeared Fraction of species, PDF). Biodiversity equivalents enable global comparisons of biodiversity footprints across world regions, in a way analogous to carbon dioxide equivalent in carbon footprint calculations.

Biodiversity impact intensity: The biodiversity impact of an activity per unit of consumption, expressed for example as BDe per kilogram of product (BDe/kg) or per passenger-kilometre (BDe/pkm).

Choice-editing: A broad approach to policy that shapes consumption by design, including regulations, educational campaigns and social marketing to influence individual preferences, cultural values, social norms and system structures.

Circular economy: An economic system aimed at eliminating waste and reusing resources by designing sustainable products and promoting recycling, extending product life cycles and regenerating natural systems.

Consumption-based accounting: A methodology for measuring environmental impacts by tracking the consumption of goods and services, ideally expressed in physical units, to assess – among others – their nature, climate and pollution footprints.

Earth system boundaries: Biophysical limits within which humanity can safely operate, such as climate stability and biodiversity integrity. Six out of nine boundaries are currently breached due to human activities.

Edit-in and edit-out: The key principles – within a choice-editing approach – used to transform aspirations and consumption patterns, where *edit-out* reduces or eliminates nature-harmful consumption by making unsustainable options more expensive, less appealing or harder to access, and *edit-in* promotes low-impact alternatives by making eco-friendly choices more attractive, affordable and available.

Lifestyles: Socially shaped patterns of consumption and behaviours that satisfy needs and wants, reflecting group dynamics rather than solely individual choices. They encompass daily practices influenced by habits, social contexts and system structures.

Lifestyle-based targets: Specific, measurable goals aimed at reducing environmental impacts through sustainable changes in individual and collective lifestyle domains, including food, housing, mobility and consumer goods.

Lifestyle biodiversity footprint: A consumption-based indicator that quantifies the pressures human activities place on biodiversity along global supply chains. It links the consumption of goods and services to key drivers of biodiversity loss (such as land-use change, resource exploitation, pollution and climate change) and expresses their combined impact as biodiversity equivalents (BDe, often reported as pico biodiversity equivalents, pBDe). The biodiversity footprint enables comparison of biodiversity impacts across lifestyle domains, countries and consumption patterns, analogous to the role of carbon footprints for climate impacts.

Nature: A broad term used to refer to both biodiversity and ecosystems.

Nature loss: A broad term used to indicate both the change and decline of biodiversity (e.g., species extinction), and the degradation of ecosystems and their functionality.

Nature-positive future: A future in which human activities no longer drive biodiversity loss, but instead enable ecosystems to recover, regenerate and thrive while supporting human well-being. Achieving such a future requires aligning lifestyles and economic systems with ecological limits and addressing the key drivers of nature loss, including land and sea use, climate change, pollution, resource extraction and overconsumption.

Nature-positive lifestyles: Ways of living that prioritise actions and behaviours that reduce pressures on nature, contribute to the restoration of ecosystems, and promote long-term harmony between human activities and natural systems.

Overconsumption: The excessive use of resources and goods beyond what is necessary, leading to environmental harm and depletion of natural systems.

Pico biodiversity equivalent: A unit used to facilitate the presentation of biodiversity footprint results. Pico denotes 10^{-12} , meaning that 1 pBDe equals 10^{-12} biodiversity equivalents (BDe). As with other scientific units, this scaling is used to make very small values

easier to read and interpret (e.g. expressing 0.000001 grams as 1 microgram).

Potentially disappeared fraction of species: A biodiversity impact metric used in biodiversity footprint assessment. The potentially disappeared fraction of species (PDF) represents, for each ecosystem type (terrestrial, freshwater, marine), the share of Earth species that are likely to disappear in the long term as a result of a given activity. Ecosystem-specific PDFs are converted into biodiversity equivalents (BDe) by applying weighting factors based on the relative share of species in each ecosystem and aggregating the results across ecosystem types.

Provisioning systems: The way in which goods and services are delivered to meet societal needs.

Species populations: Measures of the distribution and abundance of species as well as the specific structure of their populations.

Species traits: Measures of within-species changes in traits over time.

Sufficiency: A sustainability principle advocating for frugality in consumption, focusing on meeting basic needs and achieving well-being through non-material aspects, such as social relationships, community and purposeful living, rather than pursuing material wealth or excessive resource use.

Sustainable lifestyles: Patterns of living that minimise environmental impact, conserve resources and support equity, while ensuring well-being and quality of life.

Triple planetary crisis: The interconnected challenges of nature loss, climate change and pollution, which require holistic and coordinated solutions.

Well-being: A holistic concept encompassing physical, mental and social health, as well as satisfaction derived from relationships and purposeful living, beyond material consumption.

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