



# TOWARDS POST-2020 EXPERTISE ON #12

## CAN WE HALT BIODIVERSITY LOSS UNDER THE ECONOMIC GROWTH PARADIGM?



### Stefan Schindler

Senior Expert in Biodiversity and Nature  
Conservation Environment Agency Austria, Vienna.

### Josef Settele

Helmholtz Centre for Environmental Research –  
UFZ, German Centre for Integrative Biodiversity  
Research (iDiv), Leipzig, Germany.

### Iago Otero

Interdisciplinary Centre for Mountain Research,  
University of Lausanne, Switzerland.

**Economic growth explicitly prevails in most policies, although it implies large resource consumption and thus amplified pressures on biodiversity. Decoupling of economy and resource use has not taken place yet. New Shared Socioeconomic Pathways (SSPs) should examine low, zero, or negative economic growth and be considered for the post-2020 global biodiversity framework.**

It is well established knowledge and clearly stated in the IPBES Global Assessment <sup>1</sup> that humans currently extract more from the Earth than ever before, and that land and sea-use change and direct exploitation have been the direct drivers of biodiversity loss with the largest impacts on ecosystems in the last 50 years. Climate change, pollution, and invasive alien species had a lower relative impact to date but are accelerating <sup>2</sup>. All these direct drivers are strongly related to economic activities, and increasing evidence shows that an expanding economy degrades biodiversity.

When exploring the connections between economic growth and nature, correlations between gross domestic product (GDP), resource use, and biodiversity loss are eye-catching. Several convincing arguments suggest that causality among these phenomena does exist <sup>3</sup>. Rethinking our approach to the economy is needed to trigger truly transformative and cross-sectoral changes and halt biodiversity loss

**“THE PRESENT GENERATIONS HAVE THE RESPONSIBILITY TO BEQUEATH TO FUTURE GENERATIONS A PLANET THAT IS NOT IRREVERSIBLY DAMAGED BY HUMAN ACTIVITY. OUR LOCAL, INDIGENOUS, AND SCIENTIFIC KNOWLEDGE ARE PROVING THAT WE HAVE SOLUTIONS AND SO NO MORE EXCUSES: WE MUST LIVE ON EARTH DIFFERENTLY.”**

Audrey Azoulay, Director-General,  
United Nations Educational,  
Scientific and Cultural Organization  
(UNESCO)



# 1. DECOUPLING ECONOMIC GROWTH FROM RESOURCE USE: EVIDENCE FROM RESEARCH AND POLICIES

For many countries, health, food security, and poverty eradication are among the top socioeconomic challenges. Around the globe, economic growth is the main political priority to solve any kind of socioeconomic challenge, although economic parameters often lack appropriate consideration of natural capital and negative externalities. But is it feasible to reduce resource use and biodiversity impacts under an economic growth paradigm, and is the growth paradigm appropriate for halting biodiversity loss?

**Absolute decoupling**<sup>4</sup> means that resource use or biodiversity impact declines in absolute terms while GDP grows. This requires that resource efficiency grows faster than GDP. Absolute decoupling has not occurred so far at global scale, because under current socioecological conditions, economies with higher GDP tend to (i) consume more raw materials and energy, (ii) occupy more productive land, and/or (iii) use it more intensively. The few cases of absolute decoupling found in the scientific literature at the national level were related to increased import of material-intensive goods from the Global South, low GDP growth rates, or decarbonisation policies. In the case of biodiversity, an absolute decoupling between economic growth and impacts occurred in Western Europe and North America following the financial crisis of 2007. It was caused by a reduction in consumption, but soon after the crisis, biodiversity impacts increased again.

In the relative decoupling model, GDP grows faster than resource use, which is still growing. It has been observed in the global aggregate as well as in many countries, for measures of aggregate use of resources and greenhouse gas (GHG) emissions during the last century: In the period 1910–2005, global GDP increased much faster than global human appropriation of net primary production (HANPP)<sup>5</sup>; between 1970 and 2005, a 1% growth in GDP per capita implied a 0.8% growth in material use per capita on average across 39 countries<sup>6</sup>. Global relative decoupling of materials stopped with the change of century as economic growth then occurred mainly in regions with resource-intensive productions. Regarding GHG emissions, an analysis of 189 countries for the period 1961–2010 found that a 1% increase in GDP was associated with a 0.5–0.8% increase in CO<sub>2</sub> emissions<sup>7</sup>. The period 2006–2016 shows declining absolute emissions for the United States and the EU28 despite continued economic growth, indicating that for some GHG emissions, absolute decoupling is possible with decarbonisation

policies, even if these declines are far slower than those needed to meet the 1.5°C Paris Agreement target.

**Advocacy of economic growth in the environmental arena** is unequivocal in some of the most influential policy documents on sustainability and biodiversity. The first major international declaration concerning sustainable development, the 1987 Brundtland report, called for “internationally expansionary policies of growth” in industrial countries and for “more rapid economic growth in both industrial and developing countries”. This commitment has since been reiterated in all subsequent major sustainability declarations and agreements, including the declaration of the UN Conference on Environment and Development held in Rio de Janeiro in 1992, the 2011 UN Environment Programme (UNEP) report on the green economy, the UN Sustainable Development Goals, and the declaration of the Cancun CBD COP 12 (2016). While advocating economic growth, these policies acknowledge the relevance of drivers of biodiversity loss that are strongly related to economic growth, thus having mostly ambiguous positions. At the same time, many of these policies pay insufficient attention to how economic growth can be decoupled from biodiversity loss. Other key biodiversity policies do not acknowledge the problematic nature of economic growth at all. This is the case with the CBD’s Aichi Targets, which aimed at containing “the impacts of use of natural resources well within safe ecological limits” without addressing the systemic relationships between economic growth and critical drivers of biodiversity loss.

**“COVID-19 HAS CAUSED HUMANITY’S ECOLOGICAL FOOTPRINT TO CONTRACT, PUSHING THE DATE OF EARTH OVERSHOOT DAY BACK MORE THAN THREE WEEKS COMPARED TO LAST YEAR. THE CHALLENGE OF RELAUNCHING OUR ECONOMIES PRESENTS COUNTRIES WITH A UNIQUE CHANCE TO ACT ON THE FUTURE WE WANT.”** From Earth Overshoot Day<sup>8</sup>

## 2. STEPS TO INTEGRATE BIODIVERSITY IN POLICIES BEYOND ECONOMIC GROWTH

**Biodiversity policies need to address the impact of economic growth:** Several biodiversity targets may be unachievable unless clear progress is made in explicitly addressing the impacts of economic growth. Current biodiversity policies reflect the shared assumption that economic growth is needed to alleviate poverty and achieve prosperity. Only few policy documents explicitly mention that reducing the

<sup>1</sup> IPBES (2019), Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz Decoupling, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany.

<sup>2</sup> Maxwell et al. (2016), “Biodiversity: The ravages of guns, nets and bulldozers.” Nature News, 536, 143.

<sup>3</sup> The present publication is based on the review by Otero et al. (2020) “Biodiversity Policy beyond Economic Growth”. Conservation Letters 13(4), e12713, <https://cutt.ly/hfZ8gmQ> (see there for further reading).

<sup>4</sup> Means that increases in the efficiency of resource use could enable economic growth while reducing environmental and biodiversity impacts.

<sup>5</sup> GDP 17-fold versus HANPP twofold. See Krausmann et al. (2013). “Global human appropriation of net primary production doubled in the 20th century”. Proceedings of the National Academy of Sciences, 110(25), 10324–10329.



Fishing boat at sea during sunset, South Korea.

<sup>6</sup> 39 developed and developing countries from Europe, Asia, North America, South America and Oceania (plus Algeria as single African country). See Steinberger et al. (2013) Development and dematerialization: An international study. Plos One 8, e70385.

<sup>7</sup> Burke et al. (2015) "Carbon dioxide emissions in the short run: The rate and sources of economic growth matter". Global Environmental Change 33(C), 109–121.

<sup>8</sup> <https://cutt.ly/9gMgxZK>

<sup>9</sup> IPBES (2019), The global assessment report on Biodiversity and ecosystem services, <https://cutt.ly/qfZ2RR6> (Chapter D; page 20)

<sup>10</sup> Read Expertise on Biotrade (#17)

<sup>11</sup> Ball et al. (2013) "Okun's Law: Fit at Fifty?" National Bureau of Economic Research, Working Paper no. 18668.

pressures of a growing economy on biodiversity is challenging. This is the case, for example, of the CBD Global Biodiversity Outlook 4, which recognizes that absolute decoupling is unlikely given current patterns of consumption.

As economic growth and related unsustainable resource use are considered one of the most relevant drivers of biodiversity loss, we can assume that an emphasis on unreflected growth in environment and sustainability policies as described above hinders the safeguarding of biodiversity in the same way as a wrong or incomplete diagnosis hinders a proper medical treatment.

### ALTERNATIVE ECONOMIC MODELS

An emerging literature explores whether and how it may be possible to find a "prosperous way down" by designing policies to control unsustainable economic expansion:

- + Steady-state economics proposes legal limits to the economy's use of energy and materials throughput. This could allow the economy to develop qualitatively within such limits;
- + Degrowth scholars highlight the potential of grassroots movements to facilitate the transition to a new economy and consider a reduction of GDP inevitable if throughput is to decrease to sustainable levels;
- + The post-growth literature prefers to ignore GDP, which is deemed a bad indicator of welfare and argues for proper environmental and well-being policies, regardless of their effects on GDP.

While this literature has its origins in the Global North, analogous values in other geographical settings—such as subsistence-living, balance between all living beings, and reciprocity—favour a joint exploration of alliances.

### CHALLENGES FOR TRANSFORMATIVE CHANGE

Measures stemming from these alternative economic models, such as a reduction of working hours and national resource caps, may benefit biodiversity. They also match an expanding ethics favourable to more personal time, a better environment, and improved health. Obstacles to implementing these policies include:

- + Structural incentives to overwork;
- + Social and cultural barriers: simplicity and humility go against the societal mainstream of consumption and growth;
- + Corporate barriers: industries tend to endorse policy initiatives that secure growing access to resources from global markets, thus against the rationale of resource caps. Furthermore, revenue is a basic driver of corporate profit;
- + Political and legal barriers: modern societies require material growth in order to preserve the socioeconomic and political status quo. This can hinder the process of going beyond economic growth in biodiversity policies;
- + Path dependency.

However, the political confrontation between alternative socioeconomic models can be an opportunity to expand the solutions space in the fight against biodiversity loss. Whether alternative ideas will permeate national and international legal frameworks influencing the planet's biodiversity will ultimately depend on the ability of political actors to forge new consensus beyond the one of economic growth.

**"A KEY COMPONENT OF SUSTAINABLE PATHWAYS IS THE EVOLUTION OF GLOBAL FINANCIAL AND ECONOMIC SYSTEMS TO BUILD A GLOBAL SUSTAINABLE ECONOMY, STEERING AWAY FROM THE CURRENT, LIMITED PARADIGM OF ECONOMIC GROWTH."**

IPBES global assessment, 2020, Summary for policy makers <sup>9</sup>

## 3. TOWARDS A TRANSITION TO REAL SUSTAINABILITY

Tools and solutions for a society in transition to real sustainability include those related to governance and to employment policies. Examples for governance options are the establishment of absolute caps on the amounts of resources embedded in imported goods and services via multilevel governance, the development of specific moratoria on resource extraction in highly sensitive biodiverse regions ("resource sanctuaries"), and limitations to the expansion of large infrastructures.

Employment policies include those that redirect economic activities toward employment-rich sectors, such as health and caring services <sup>10</sup>, and those that provide incentives for sharing work by reducing working hours to increase the number of new jobs even if productivity and growth stall. Work-sharing schemes could be applied in combination with taxation linked to resource use and environmental and biodiversity impacts. Thus, increase of unemployment is not a necessary outcome of an economic slowdown <sup>11</sup>. At the same time, redistributive policies such as taxes on high-income brackets, specified ratios for the spread between minimum and maximum salaries, and capital or inheritance taxes can reduce poverty and inequality. The presence of quality health and education systems in middle-income countries suggests that it is possible to secure good public services at much lower levels of GDP than those of today's richest countries.

Relocalizing the economy is an important principle for biodiversity conservation and sustainable use, even if local production does not always mean lower environmental impacts. Supporting local and regional agro-ecological management practices that enhance the diversity and services of ecosystems while





Thailand, Stock market  
@ Sarinyapinngam

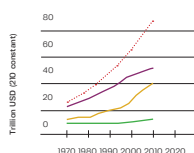
<sup>12</sup> Read Expertise on  
Mainstreaming (soon available)

<sup>13</sup> Read Expertise on Biodiversity  
Footprint (#11)

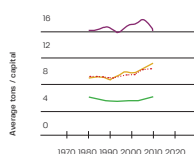
<sup>14</sup> Read Expertise on Biotrade  
(#17)

<sup>15</sup> see Otero et al. (2020),  
"Biodiversity Policy  
beyond Economic Growth".  
Conservation Letters, in press.  
<https://cutt.ly/jfZ7DhK>

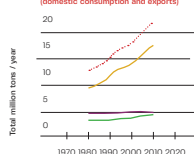
#### A Gross domestic product (GDP)



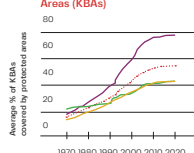
#### B Domestic material consumption



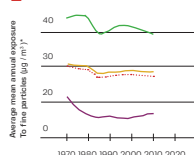
#### C Extraction of living biomass



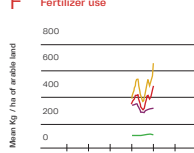
#### D Protection of Key Biodiversity Areas (KBAs)



#### E Air pollution



#### F Fertilizer use



Developed Developing  
Least developed World

Figure 1.  
Development pathways since  
1970 for selected key indicators  
of human-environment  
interaction, which show a  
large increase in the scale of  
global economic growth and its  
impacts on nature, with strong  
contrasts across developed,  
developing, and least developed  
countries (after IPBES, 2019).

ensuring food sovereignty  
could reduce biodiversity  
pressures from food  
systems<sup>12</sup>. While small-  
scale farming systems may  
be less productive in GDP  
terms, they are employment-  
rich and often provide  
higher social value for local  
communities.

**Labelling based on a  
product's full biodiversity  
footprint<sup>13</sup>** along  
international trade routes  
has the potential to mitigate  
the impacts of consumption.  
Together with increased  
governmental control of  
advertisement and the  
use of public media to  
provide information on  
the impacts of products,  
it could contribute to  
more biodiversity-friendly  
consumption.

#### Differences in dependence on biodiversity among CBD parties.

The consequences of the  
loss of biodiversity and  
ecosystem services are  
even more problematic for  
least developed countries  
where humans depend  
more directly on them.  
The current trade of goods  
and services<sup>14</sup> creates many  
ecological debts in the  
Global South and especially  
in emerging countries  
without compensation  
systems, internalization of  
externalities in the prices or  
markets, and with low levels  
of ecosystem restoration  
plans. Tools and solutions  
could incorporate:  
+ Different caps for national  
resource use to be applied  
to different countries  
depending on their

past consumption and ecological or carbon debts;  
+ Approaches related to the concepts of balance  
between all living beings and reciprocity;  
+ The CBD mechanism of Access and  
Benefit-Sharing (ABS).

## 4. THE ROLE OF SCENARIOS FOR A TRANSFORMATIVE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Many of the proposed tools and solutions have  
not yet been widely applied nor analysed, so the  
investigation of their prospects constitutes fertile  
ground for future research and trials in the real  
policy-making world. Probably, the recovery from  
the COVID-19-related economic crises will induce  
a moment to assess societal and environmental  
responses to reduced production and consumption  
activities. It is crucial to derive sturdy conclusions  
and design appropriate policies from this recovery  
period in order to clear a path towards progress in  
true sustainability within the CBD post-2020 global  
biodiversity framework.

Scenario development can play a critical role in  
shifting away from the current development model,  
whereby positive visions of a shared future are  
collectively designed. In particular, new Shared  
Socioeconomic Pathways (SSPs) could examine low,  
zero, or negative growth approaches, compatible  
with ambitious biodiversity and well-being targets.

New SSPs<sup>15</sup> within biodiversity-related multilateral  
environmental agreements and scientific fora have  
the potential to open up the range of policy options  
beyond mere projections of the status quo.

The discussion on crucial aspects of the post-  
2020 framework—new targets and indicators,  
mainstreaming of biodiversity across all economic  
sectors, and transformative change—can benefit  
from both the evidence and the alternative scenarios  
presented, especially on the need to go beyond the  
economic growth paradigm.

TOGETHER  
CBD COP 15 KUNMING 2021  
TOWARDS  
A GLOBAL  
DEAL FOR  
NATURE &  
PEOPLE

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