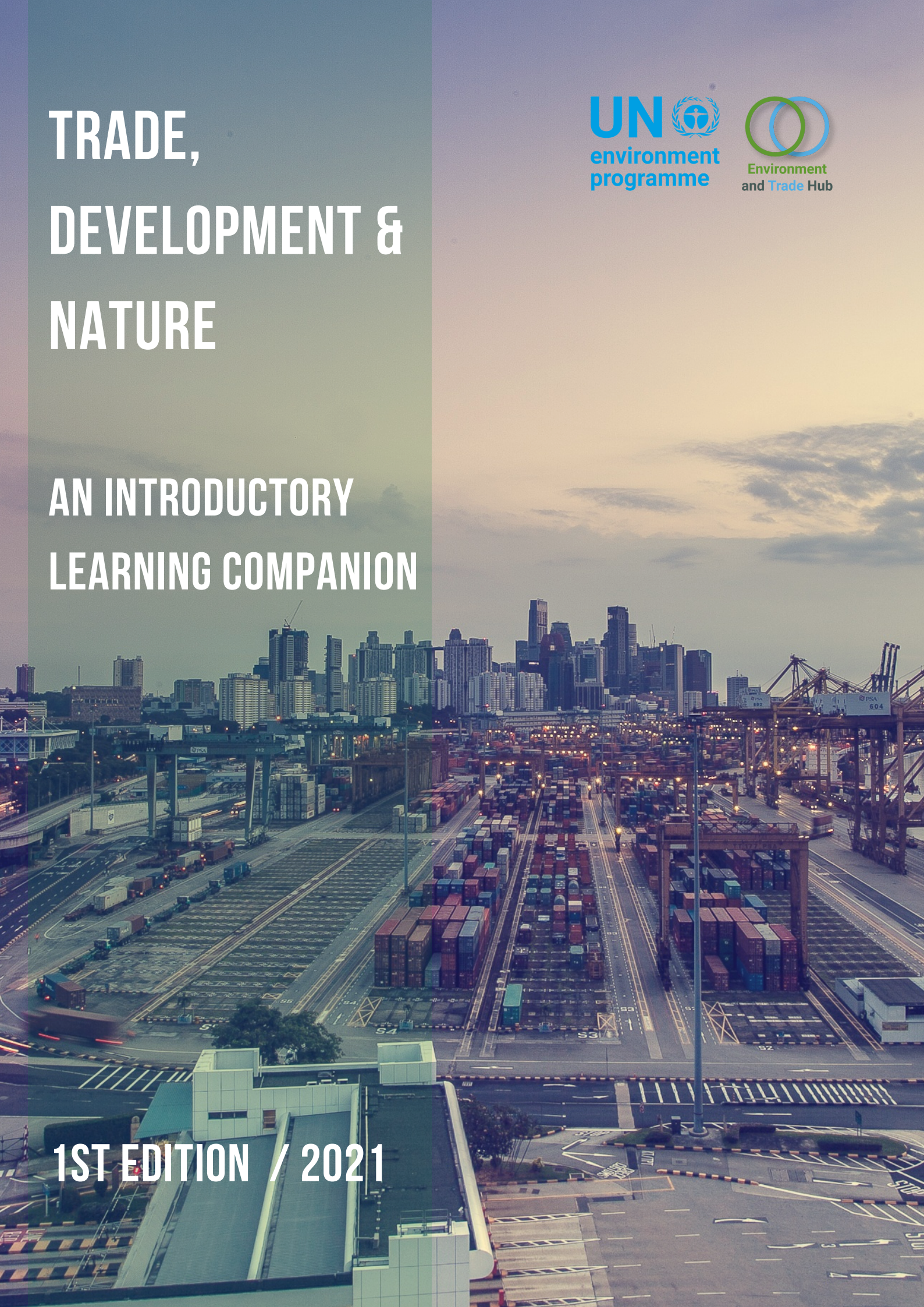
TRADE, DEVELOPMENT & NATURE

AN INTRODUCTORY LEARNING COMPANION



1ST EDITION / 2021

ABOUT

This Introductory Learning Companion has been developed with the aim of providing an up-to-date, evidence-based, interdisciplinary resource for all types of learners, including those with little or no prior knowledge on economic and trade policy, or the interactions between trade and nature. The companion may also serve as a useful resource and reference manual for lecturers and trainers in professional or higher education.

Learning Objectives:

1. Understand the role of trade in the global economy, and the major trends that have shaped the evolution of globalization.
2. Describe the mechanisms via which trade can promote or retard economic growth.
3. Appreciate the complex relationship between trade and inequality -between countries and within countries
4. Understand the various mechanisms via which trade can affect nature - positively and negatively
5. Appreciate trade's increasingly important role as a tool of sustainable development, in general, and environmental sustainability, more specifically.

AKNOWLEDGEMENTS

Authored by Elena Antoni (CIFOR. tradeimpact), with the support of Colm Hastings (UNITAR) and Jayasurya Kalakkal (UNEP)

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Proofreading and Editing: Tamla Berry
Design: Elena Antoni

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Contact information: for comments, suggestions, observations, or information regarding use : antoni@tradeimpact.org

TRADE, DEVELOPMENT & THE ENVIRONMENT HUB

GCRF UKRI UK Research and Innovation

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THIS INTRODUCTORY LEARNING COMPANION DRAWS FROM, AND COMPLEMENTS A RANGE OF EXISTING MATERIALS, INCLUDING:

PAGE "Green Economy and Trade" Online course and training material, developed jointly by the UNEP Environment & Trade Hub, and the United Nations Institute for Training and Research (UNITAR), under the Partnership for Action on Green Economy (PAGE), 2017-2019

Green Industrial Policy: Promoting Competitiveness and Structural Transformation - Online Course & Capacity Building Material, developed jointly by UNEP, UNITAR, and UNIDO, 2019-2020

UNCTAD Virtual Institute Teaching Material on Structural Transformation and Industrial Policy (2016) United Nations Conference on Trade and Development.

IISD and UNEP, Trade and Green Economy: A Handbook (3rd edn, 2014) International Institute for Sustainable Development: Geneva

Resources made available by OurWorldInData, including "Trade in Globalization", Ortiz-Ospina, E. and Beltekian, D., "Trade and Globalization" (2018)

1.TRADE & THE GLOBAL ECONOMY

Globalization has been characterized by record levels of international trade

- In 1948, the value of world merchandise exports (i.e. exports of goods) stood at US$58 billion.[3]
- According to the World Trade Organization (WTO), in 2019 that figure had risen to over US$18.7 trillion - an increase of over 32,000 per cent.[4]

International trade also increased in importance, relative to GDP [5]

- In 1945, at the end of the Second World War, the value of exported goods accounted for less than 5 percent of total global output;
- Today, that figure is close to 25 per cent.

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THE ERA OF GLOBALIZATION

Since the establishment of a new economic order following the Second World War, the world has become increasingly interconnected and globalized, with more and more countries now integrated into a single, global economy.

Today's era of globalization has been driven by two factors:

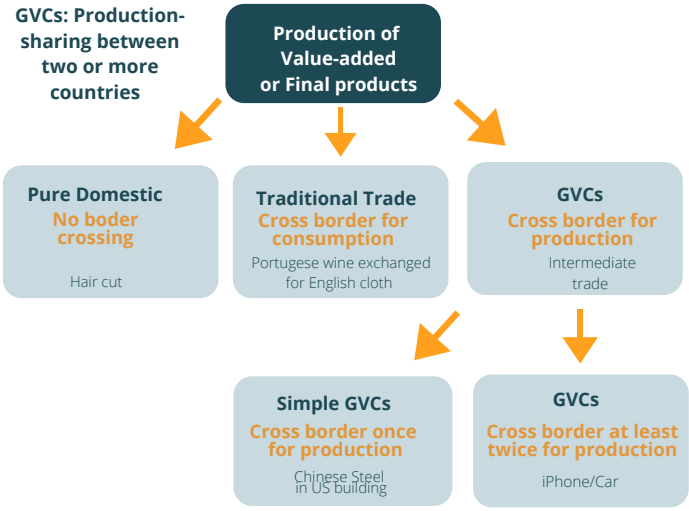
- Technological innovation, which has made the transport of goods across large distances both cheaper and easier (notably, via container ships and ports);
- Successive economic liberalization – initiatially driven, at the multilateral level, by the General Agreement on Tariffs and Trade (GATT), which came into effect in 1948.[1]

GLOBAL & REGIONAL VALUE CHAINS (GVC'S): THE FRAGMENTATION OF GLOBAL PRODUCTION

In the mid-1990s, with the rapid growth of intermediate goods trade, and increasing expansion of international vertical specialization, the world entered into a new age of globalization. Today, economies are highly integrated, with countries not only exchanging final goods, but also intermediary inputs via so-called 'value chains'.

FIGURE 1: DECOMPOSITION OF PRODUCTION ACTIVITIES

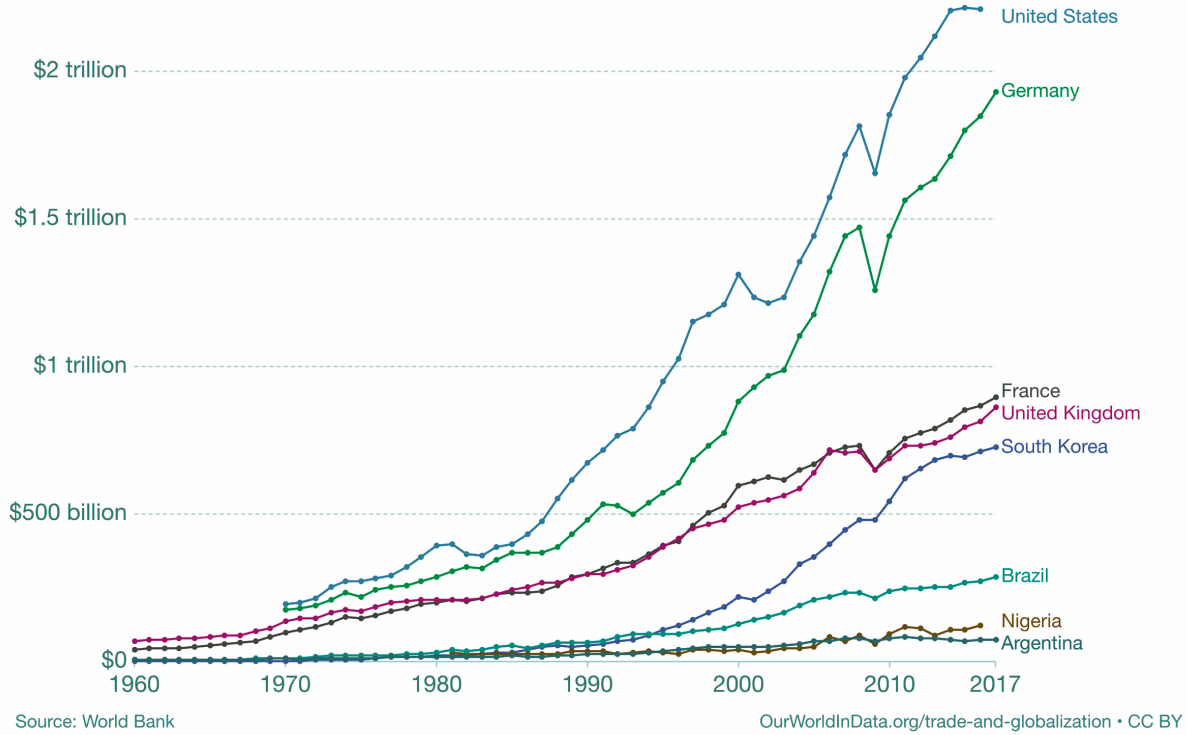
Reproduced from.: FIGURE 1.1, Li et al., 2019



THE ERA OF GLOBALIZATION: VISUALIZED

CHART 1: VALUE OF EXPORTED GOODS AND SERVICES, 1960 TO 2017

adjusted to inflation, and shown in constant USD. Source: Ortiz-Ospina & Beltekian, 2018

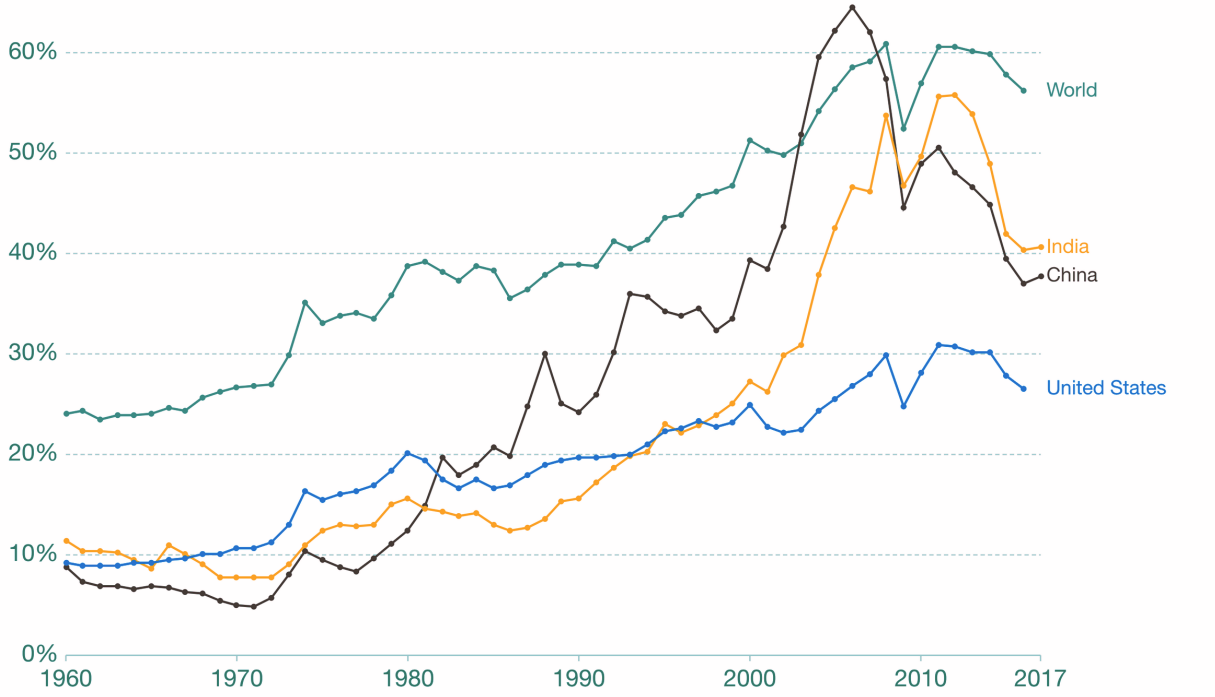


Source: World Bank

OurWorldInData.org/trade-and-globalization • CC BY

CHART 2: TRADE - EXPORT PLUS IMPORTS - AS SHARE OF GDP, 1960 TO 2017

Shown is the Trade Openness Index: The sum of exports and imports of goods and services, divided by gross domestic product (GDP)



Source: World Bank

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DATASOURCE:

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GLOBAL VALUE CHAINS OF PRODUCTION

TRADE & INVESTMENT: INCREASINGLY TWO SIDES OF THE SAME COIN

One of the defining characteristics of GVCs is an increasing overlap and complementarity that can be observed between trade and investment. Formerly understood to be mutually exclusive, Multinational Corporations (MNC) are now increasingly combining trade and investment, as well as strategic partnerships, as cornerstones of their global strategy.[1]

THE CONCEPT & FUNCTIONING OF GVCS

The concept of a 'Value Chain' refers to the full range of interrelated activities that are required to bring a product to life, from its conception, to its end use and beyond. This also includes related activities such as design and marketing, which are not captured by the narrower concept of "supply chains". [2]

GVCs 'unbundle', or disaggregate the production process, which allows countries (or more accurately, the firms in a particular country) that possess a comparative advantage at a particular production process, to specialise, thereby enhancing overall efficiency.

> **FURTHER AUDIO RESOURCE**
>
> Audio Podcast: McKinsey Global Institute: "Globalisations next chapter", available here.

A SLOW-DOWN IN THE GROWTH OF GVCS: CYCLICAL OR STRUCTURAL IN NATURE?

Since the financial crisis in 2008, a slow-down in the growth of GVCs and a tendency towards regionalization, and shorter value chains could be observed. Some actors expected this trend to be of a cyclical nature, and thus expected the growth pattern of global trade to rebound to its pre-crisis levels.

However, increasingly, actors have pointed to structural reasons for the slow-down in the growth of GVCs, including technological trends such as robotics and automation, and a higher preference for proximity to target markets. Political, socio-economic and environmental developments (such as populism/new protectionist tendencies, or the COVID-19 pandemic) may reinforce this trend. [3], [4], [5]

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GLOBAL VALUE CHAINS: POLICY IMPLICATIONS

The fragmentation of production along GVCs has resulted in economic opportunities but also generated new challenges.

- For example, the ability to specialize in a particular aspect of production may make it easier for developing economies to integrate into GVCs, and thus diversify more easily away from activities concentrated on primary resource extraction.
- However, once integrated, developing economies may struggle to "move-up" within GVCs, from lower to higher-value activities.[2]

Policies can make an important contribution towards shaping countries' engagement with GVCs:

- Understanding the dynamics of GVCs can help policy makers design appropriate trade and trade-related policies that enhance countries' welfare, and promote broader policy objectives.
- Strategies to shape markets in a way that foster non-economic benefits, as well as a good regulatory framework, including strong social and environmental policies, are key enabling conditions to ensure that GVCs contribute to broader policy objectives. [3], [4]

"[i]n a world of GVCs, trade policy cannot solely focus on impediments to trade with direct trade partners. The whole value chain and bottlenecks upstream and downstream among third countries have to be considered in order to boost exports and improve economic performance."[1]

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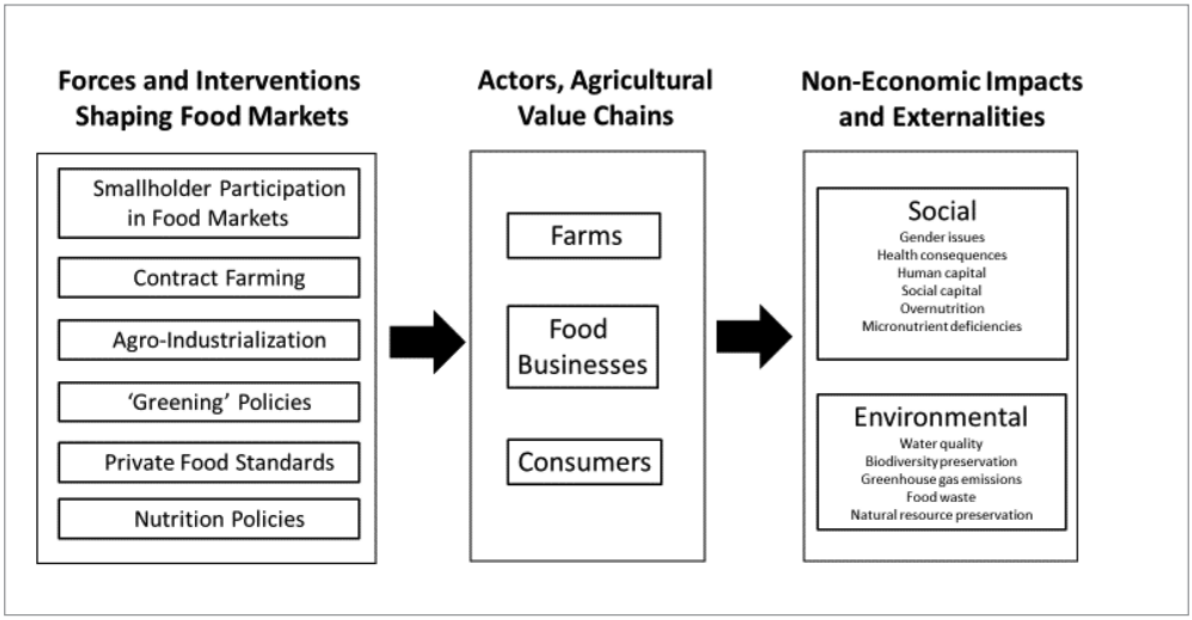
FIGURE 2 : CONCEPTUAL FRAMEWORK TO EXAMINE NON-ECONOMIC IMPACTS IN AGRICULTURAL VALUE CHAINS

Source: Gómez, et al., 2020



TRADE AS AN ENGINE OF ECONOMIC GROWTH

Economic growth and poverty
Global GDP per capita increased from US$3,277 in 1950 to US$14,574 in 2016, while the percentage of the world population living in extreme poverty decreased from 44 per cent in 1981 to less than 10 per cent in 2015.[1]

Measuring wealth and prosperity: Gross Domestic Product (GDP) & beyond

- GDP is a measure of total production - all services and products produced in an economy.[3]
- However, GDP has also functioned as a measure of progress and prosperity more generally, a practise increasingly called into question.
- Other indices that are more focused on measuring well-being, prosperity and other aspects of sustainable developments have therefore been proposed as alternatives. Examples include the Inclusive Wealth Index [4], the Inclusive Green Growth Index [5], and the Better Life Index.[6]

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[6] OECD (2020) Better Life Index, online available here

INTERNATIONAL TRADE AS AN ENGINE OF ECONOMIC GROWTH

Sustained levels of economic growth in the last centuries were accompanied by an even faster growth in global trade and economic integration. In more recent decades, this trend can be observed for both developed and developing countries, with an even stronger correlation seen in the latter.

Empirical evidence, on both country- and firm- level, suggests that trade is one of the key factors in driving national income (GDP per capita) and macroeconomic productivity (GDP per worker) over the long run.[1]

MECHANISMS VIA WHICH TRADE AFFECTS ECONOMIC GROWTH

Ways in which trade liberalisation and economic integration promote economic growth:

- Competition
- Economies of scale effects (access to greater markets)
- Learning and innovation

Mechanisms via which trade and economic integration can retard growth:

- undermining "Learning by Doing" in infant industries in the presence of a latent competitive advantage
- disadvantageous historic specialisation in sectors with little growth potential, which may call for the development of new specializations, with support of of direct government intervention.[2]

WHAT WILL THE WORLD LOOK LIKE AFTER COVID-19?

Simon Mair (2020). What will the world be like after coronavirus? Four possible futures. The Conversation. Available online here & the audio version here

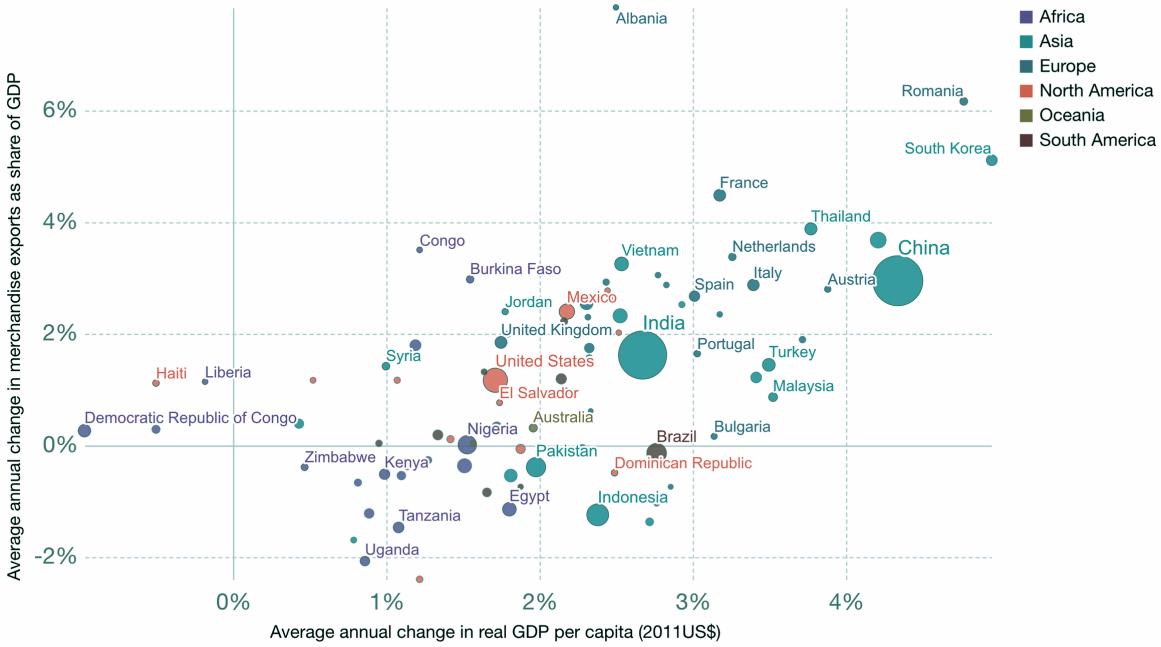
FURTHER READING:

Ventura, J. (2005). A global view of economic growth. Handbook of economic growth, 1, 1419-1497. Online here.
Core-econ (2020). Ch. 18.10 Trade and Economic growth. Core-econ.org; online available here.

THE ERA OF GLOBALIZATION VISUALISED

CHART 3: GROWTH OF GDP AND TRADE, 1945 TO 2014

Average annual change in real GDP per capita vs average annual change in exports as share of GDP. Source: Ortiz-Ospina & Beltekian, 2018



Source: Fouquin and Hugot (CEPII 2016), Maddison Project Database (2018), Population (Gapminder, HYDE(2016) & UN (2019)), Our World In Data
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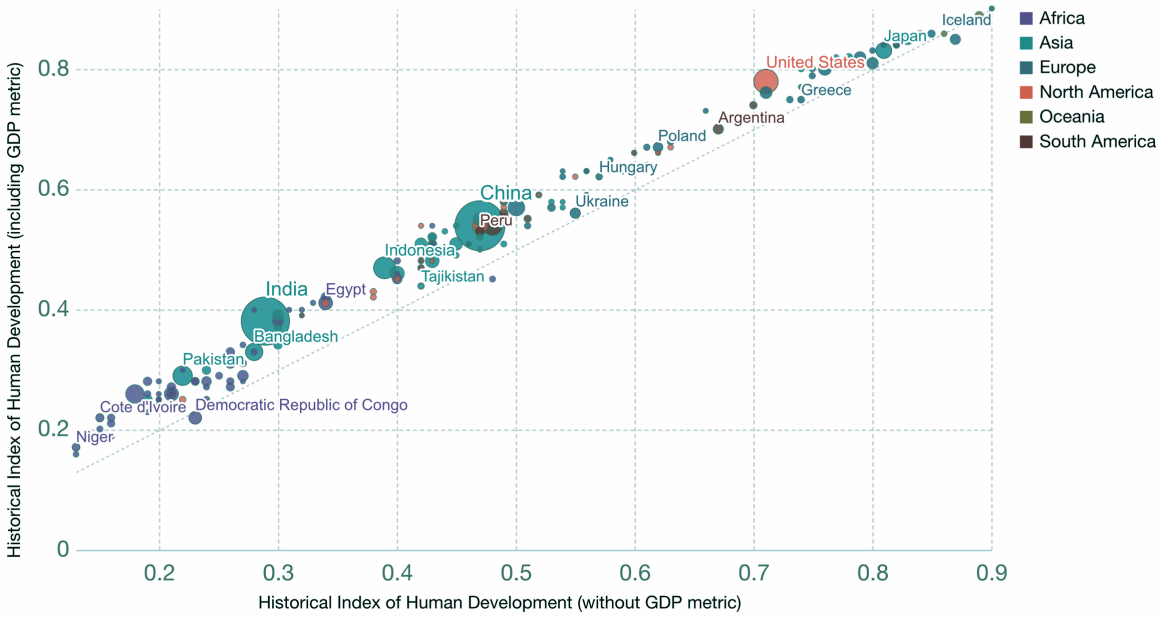
CHART 4: HISTORIC INDEX OF HUMAN DEVELOPMENT WITH GDP METRIC VS. WITHOUT GDP METRIC, 2015

The Historic Index of Human Development (HIHD) is a summary measure of average achievement in key dimensions of human development, representing an index of life expectancy, literacy rates and education enrolment, and per capita gross domestic product.
Shown below: HIHD with and without GDP measure



Source: Prados de la Escosura (2018)

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DATASOURCE:

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Data source: The World Bank Development indicators;
For further information & analysis visit: www.ourworldindata.org/trade-and-globalization ;

2.TRADE, POVERTY & INEQUALITY

Dhingra, & Tenreyro (2020), who reviewed the impact of liberalisation in agriculture on welfare in Kenya, find that policy changes to promote agribusiness and corporate engagement caused a reduction of farmers' incomes. This was the case as profits were captured by foreign companies, rather than farmers themselves. Kenya's revised agricultural strategy of 2010 acknowledges that liberalisation may lead to adverse effects for small farmers, if there is no critical mass and not enough capacity for the domestic private sector to grow.[7]

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[4] See for instance Chan, Anita & Ross, Robert. (2003). Racing to the bottom: International trade without a social clause. Third World Quarterly - THIRD WORLD Q. 24. 1011-1028. 10.1080/0143659031000163044.

[5] UNCTAD. (2017). Trade and Development Report 2017–Beyond austerity: Towards a global New Deal. ISO 690

[6] See for example: Jack, J. T. (2016). Dependency and Third World Underdevelopment: Examining Production-Consumption Disarticulation in Nigeria. African Research Review, 10(4), 204-223. For online stories and blogs on the issue see also: Commodity histories: Peanuts and economic dependence in french west africa,retrieved online here; Frankema, E. (2015). How Africa's colonial history affects its development. Published online on the WEF blog, here

[7] Dhingra, S., & Tenreyro, S. (2020). The Rise of Agribusiness and the Distributional Consequences of Policies on Intermediated Trade (Working Paper); see also Dhingra, Swati & Tenreyro, Sivana (2020). The impacts of agribusiness-led development on farming incomes and profits. Retrieved from: here.

TRADE & POVERTY

Historically, increased participation of developing countries in world trade has been accompanied by a reduction in extreme poverty. Research findings support the view that, generally, trade is an ally in the fight against global poverty, by increasing average incomes and providing resources with which to tackle poverty. At the same time, policy reforms accompanying trade liberalization ('trade adjustment measures') can clearly exacerbate poverty for some, and create adverse effects on certain groups.[1],[2]

TRADE & GLOBAL INEQUALITY

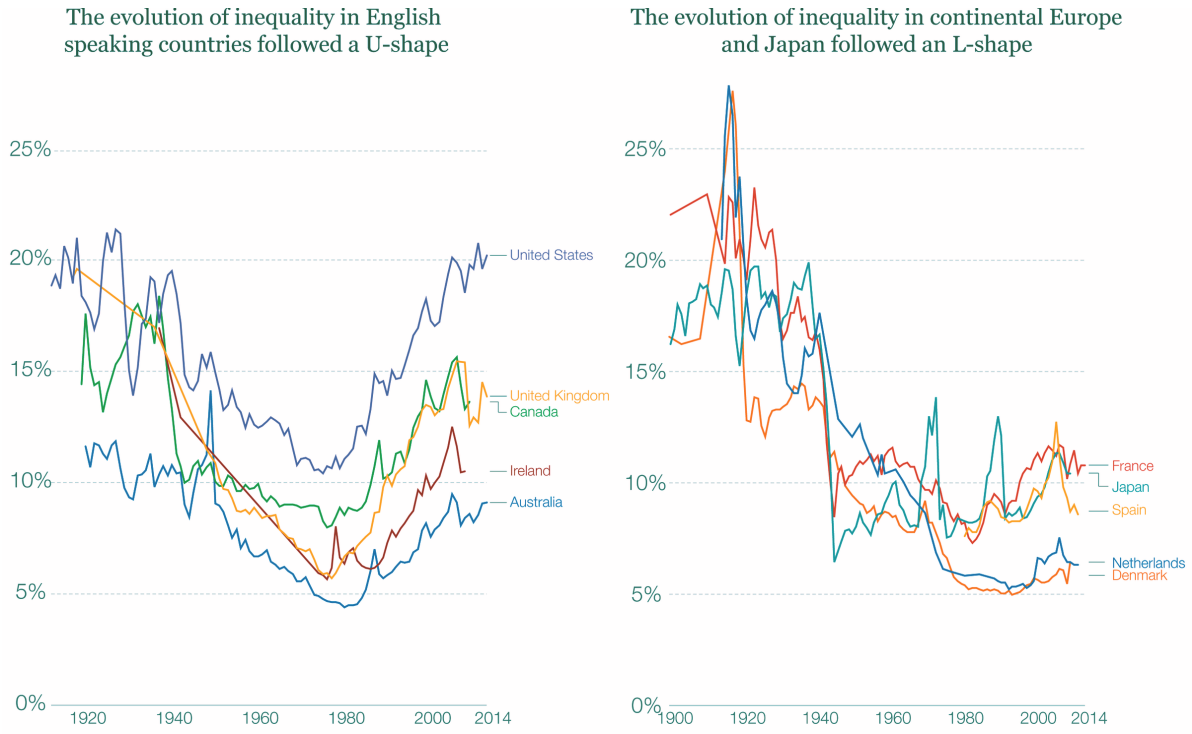
The fragmentation of production along GVCs has created economic opportunities for some countries with historically lower socio-economic development levels. This contributed to the reduction of inter-country inequalities (i.e. inequality between countries). However, at the same time, many countries experienced stagnant or declining levels of economic growth.[3]

Also, critics maintain that structural dynamics of global trade may prevent countries that are specialising in low-value goods and services to reach a substantially higher level of welfare.[2] In addition, ownership and power distribution in global supply chains can undermine the ability of small-scale producers to capture a significant portion of the total economic value generated.[3] Critics of free trade have also pointed to the risk of a global race to the bottom, with global companies moving from country to country, in the quest of ever cheaper workforce or inputs of production.[4] In addition, increasing concentration of power within GVCs may represent the creation of 'a new form of global rentier capitalism to the detriment of balanced and inclusive growth for the many', where 'the winner takes most'. [5]

Finally, economic path dependency-effects from colonial rule and other major power relationships can still determine countries' position in global trade today, as can be observed for some commodity dependent developing countries.[6]

THE EVOLUTION OF POVERTY AND INEQUALITY

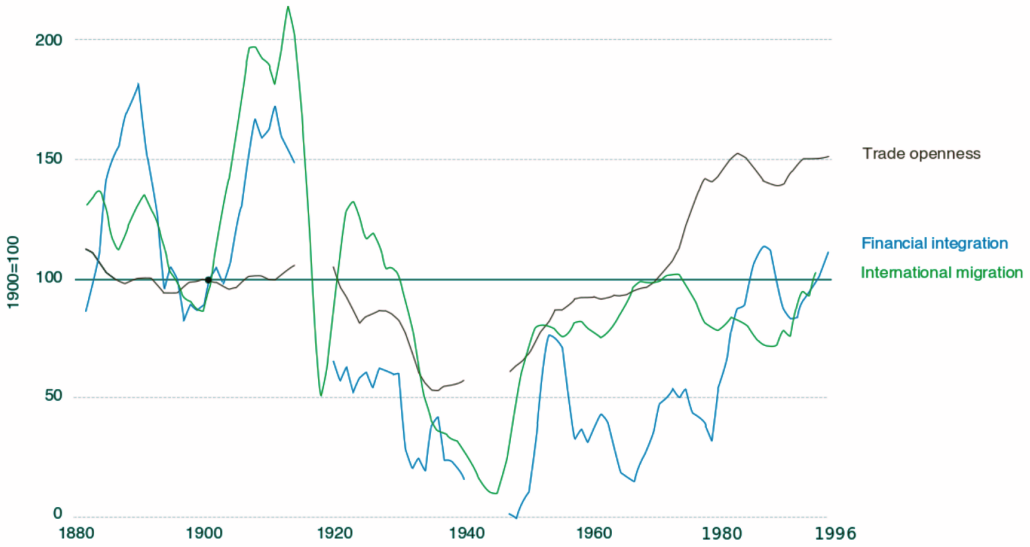
CHART 5: SHARE OF TOTAL INCOME GOING TO THE TOP 1% SINCE 1900



Data source: World Wealth and Income Database (2018). This is income before taxes and transfers.
This data visualisation is available at OurWorldinData.org. There you find the raw data and more visualisations on inequality and how the world is changing. Licensed under CC-BY-SA by the author Max Roser.

CHART 6: MIGRATION, FINANCIAL INTEGRATION AND TRADE OPENNNESS, WORLD 1880-1996

Evolution of three indicators measuring integration in commodity, labour and capital markets over the long run. All indicators are indexed such that 1900=100.



Note: Commodity market integration is measured by computing the ratio of goods exports to GDP. Labor market integration is measured by dividing the migratory turnover by population. Financial integration is measured using Feldstein–Horioka estimators of current account disconnectedness.
Source: Broadberry and O'Rouke (2010), The Cambridge Economic History of Modern Europe: Volume 2, 1870 to the Present. Cambridge University Press
This is a visualization from OurWorldinData.org, where you find data and research on how the world is changing. Licensed under CC-BY-SA by the authors Esteban Ortiz-Ospina and Diana Beltekian

DATASOURCE:

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INEQUALITY WITHIN COUNTRIES

Several studies have reviewed the impact of globalization on wages, jobs and welfare [4]:

Porto (2006) looks at the distributional effects of the MERCOSUR Agreement on Argentine families, and finds that this regional trade agreement led to benefits across the entire income distribution. He finds the effect was progressive: poor households gained more than middle-income households, because prior to the reform, trade protection benefitted the rich disproportionately.

Topalova (2010) studies the effects of trade liberalisation in the 1990s across India, and finds that liberalisation had a stronger negative impact among the least geographically mobile at the bottom of the income distribution, and in places where labor laws deterred workers from reallocating across sectors.

Trefler (2004) studies the Canada-US Free Trade Agreement and finds there was a group who bore "adjustment costs" (displaced workers and struggling plants) and a group who enjoyed "long-run gains" (consumers and efficient plants).

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TRADE AND INEQUALITY WITHIN COUNTRIES

Especially industrialised and post-industrial economies experienced a backlash against trade, linked to the off-shoring of production and associated loss of employment. Nevertheless, the relationship between trade and inequality is more complicated than this may lead to suggest.

Studies have shown that trade liberalisation often has a negative impact on wages and employment for specific groups of people, which can be true for developed and developing economies.[1] Overall, empirical literature indicates that trade liberalisation has affected wage inequality, but also that its cumulative effect has been modest. The overall impact of trade on welfare and inequality depend on many factors, including the domestic policy framework.[2]

Nevertheless, there remain serious distributional concerns associated with economic adjustment effects of trade. Therefore, public policies, such as unemployment benefits and other safety-net programs, can and should help redistribute the gains from trade. Furthermore, government measures such as re-training and re-skilling are vital to help workers adapt to structural economic change.

FROM INCOME TO WELFARE EFFECTS

As Ortiz-Ospina (2018) highlights: "*The fact that trade negatively affects labor market opportunities for specific groups of people does not necessarily imply that trade has a negative aggregate effect on household welfare. This is because, while trade affects wages and employment, it also affects the prices of consumption goods. So households are affected both as consumers and as wage earners*". [3]

TRADE & HUMAN RIGHTS

TRADE AND HUMAN RIGHTS

The promotion of economic growth in itself may not lead to inclusive, sustainable and equitable development outcomes. For this reason, the idea that trade agreements should be subject to a human rights impact assessment has been gathering momentum in recent years [1],[2], along with proposed further mechanisms, to ensure that Human Rights are not undermined as a consequence of economic integration.

Several instruments have clarified the relationship between trade and human rights:

- The *General Assembly resolution 67/171* affirms human rights as a guiding consideration for multilateral trade negotiations. The resolution calls for the mainstreaming of the Right to Development, and to strengthen The Global partnership for Development within international trade institutions.
- The *UN Guiding Principles on Business and Human Rights (UNGPs)* specify that governments and market actors have duties and responsibilities to safeguard human rights in the context of all business activity, including investment.[1]

CORPORATE ACCOUNTABILITY AND THE CHALLENGE OF EXTRATERRITORIALITY

While economic integration has advanced rapidly, global governance still remains strongly rooted in the concept of State sovereignty, and international cooperation has been largely insufficient in filling this "regulatory void". It thus often remains unclear whether international companies are accountable for human rights abuses that occur within their supply chains, and if so, under which jurisdiction. [3]

However, as Berkes and Antal (2018) note: "State practice reveals progressive evolution (...) towards the duty of home States to protect from the harmful conduct of their corporate nationals acting abroad." [4] Particularly noteworthy in this regard is a Resolution by the UN Human Rights Council towards the elaboration of an internationally legally binding instrument on transnational corporations and other business enterprises with respect to human rights, adopted in 2014. [5]

"*Let me begin by observing that it is true that human rights are predicated on the equality of all human beings, while the imperative of comparative advantage in trade inevitably creates winners and losers. And it is also true that human rights priorities lie in the protection and empowerment of the vulnerable and the marginalized, while success in trade rewards those who possess a competitive edge in navigating the global markets. Further, human rights law insists on State obligations, while the liberalization of trade may make the role of States progressively shrink. (...). When it comes to essential elements of welfare and human rights, such as food, health care, and education, the international community and States cannot and should not leave the concerns of human welfare solely to market forces.*"

Source: UNITAR High Level Panel on Human Rights and Trade, Statement by Ms. Navanethem Pillay, United Nations High Commissioner for Human Rights, Geneva, 27 September 2010 , online here.

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3. TRADE, ECONOMIC GROWTH & NATURE

75% of the Earth's ice-free land surface has been significantly altered, most of the oceans are polluted, and more than 85% of wetlands globally have been lost. [3]

By 2010, 34% of global biodiversity had been lost with a projected increase to 38-46% by 2050. [4]

Global emissions of CO_2 have increased by almost 50% since 1990. [4]

According to the WEF's Global Risk Report, all of the five top perceived global risks over the next years relate to the environment. [5]

The WWF (2020) Living Planet Report estimates that by 2050, "Business as Usual" will come at a cumulative cost of $10 trillion by 2050. A Sustainable Development pathway, however, could result in gains of US$ 230 billion by 2050.

CONVENTIONAL PATTERNS OF ECONOMIC GROWTH ARE DISRUPTING OUR PLANET'S NATURAL ORDER

In the past 50 years, nature has been transformed by an explosion in global trade, consumption, and human population growth, as well as rapidly accelerating urbanisation. As a result, this has added huge pressures on nature and the stability of the Earth's operating systems that sustain us.[1]

Climate change, loss of biodiversity, depletion of water reserves, ocean acidification, and reduction of soil fertility, all demonstrate that human actions are irrevocably disrupting our planet's natural order [2], resulting in acute societal and economic risks. [5]

At the same time, wealthy individuals and nations consume a much higher amount of natural resources and have thus a much larger environmental footprint.

Nevertheless, environmental impacts disproportionally affect lower-income countries. One reason for this is a shift in the environmental burden of production from high to lower income countries which is made possible by international trade: a large share of raw materials is produced in lower income countries resulting in higher localised pollution, and are then exported and consumed in higher income countries (see also Chart 7 and 8). [6]

FIGURE 3 THREATS TO NATURE, AND UNDERLYING DRIVERS AND PRESSURES

Source: WWF, 2020
For an interactive experience visit "Why are we losing nature?"

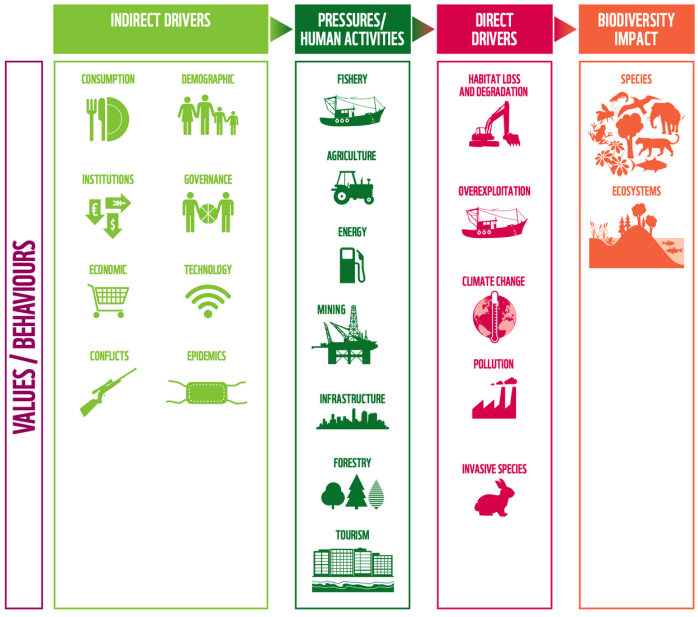

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CHART 7 AND 8: THE RAW MATERIAL TRADE BALANCE ON A PER CAPITA BASIS AND OVERALL (FIG. 4 AND FIG. 5 REPESCTIVELY) INDICATES THAT IN 2017 EACH PERSON IN THE HIGH- INCOME GROUP WAS DEPENDENT ON THE MOBILIZATION OF AN AVERAGE OF 9.8 TONS OF MATERIAL RESOURCES ELSEWHERE IN THE WORLD. THIS RELIANCE ON EXTERNAL MATERIALS HAS BEEN RISING AT A RATE OF 1.6 PER CENT ANNUALLY SINCE 2000.

Source: UNEP, 2020

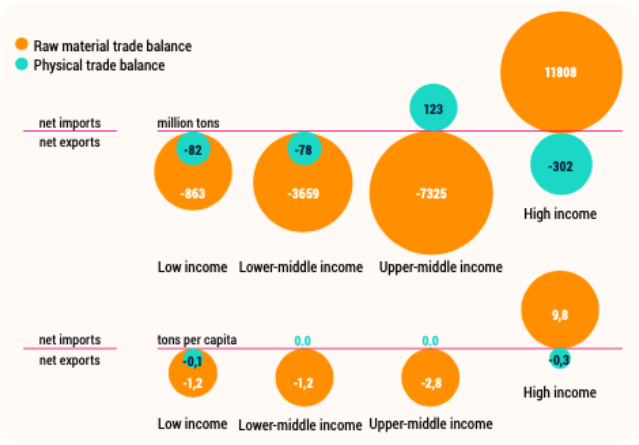
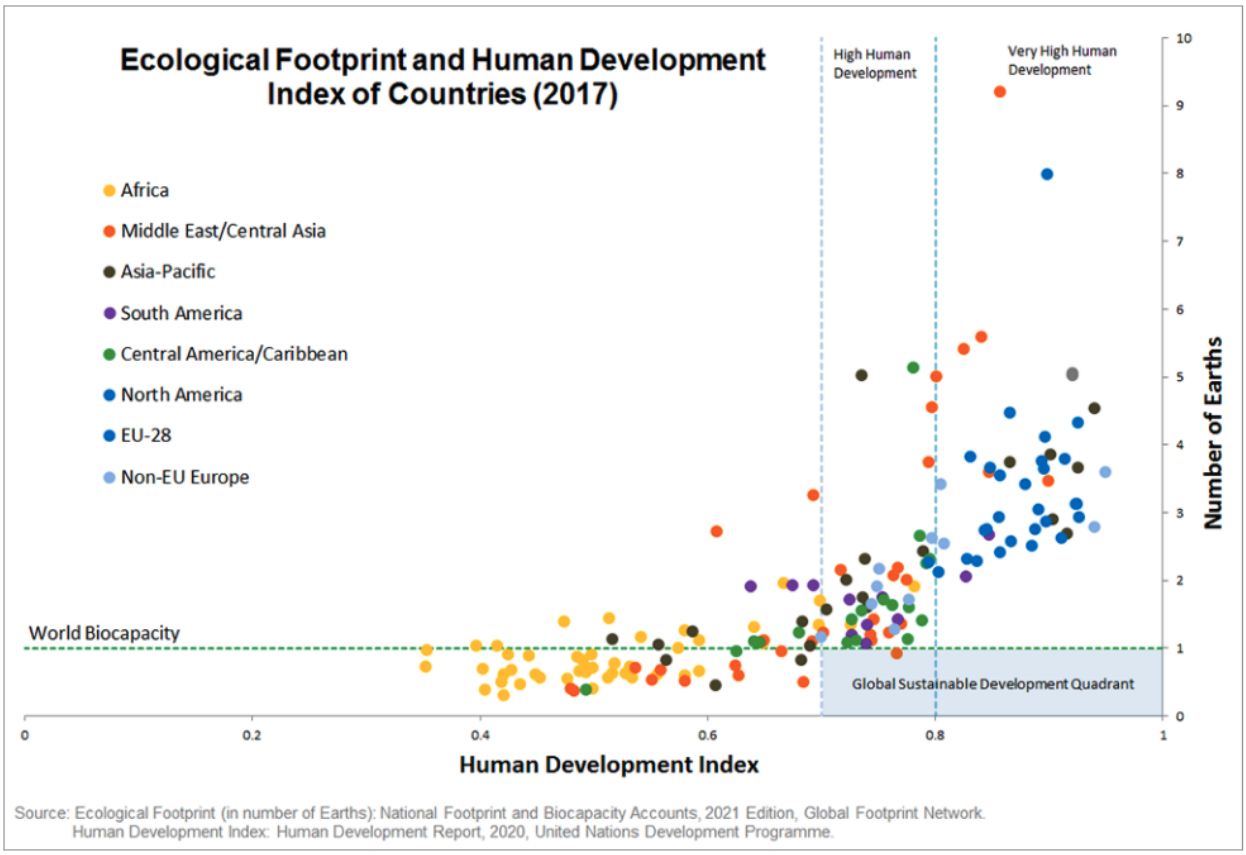


CHART 7: DISTRIBUTION OF PHYSICAL TRADE BALANCE AND RAW MATERIAL TRADE BALANCE, BY COUNTRY INCOME, 2017

CHART 8: COMPARISON OF PER CAPITA PHYSICAL TRADE BALANCE (PTB) AND RAW MATERIAL TRADE BALANCE (RTB) ACROSS INCOME BANDS, FOR 1990, 2000 AND 2017

CHART 9: ECOLOGICAL FOOTPRINT AND HUMAN DEVELOPMENT INDEX OF COUNTRIES

Source: Global Footprint network , 2021



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THE ROLE OF TRADE

Lenzen et al (2012) estimate that 30 per cent of threats to species globally are associated with international trade.[4]

Pendrill, et al (2019) find that 29-39 per cent of deforestation-related emissions are driven by international trade. This is substantially higher than the share of fossil carbon emissions embodied in trade, indicating that efforts to reduce greenhouse gas emissions from land-use change need to consider the role of international demand in driving deforestation.[5]

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THE IMPACT OF TRADE ON NATURE

Global trade has greatly accelerated in the past decade, promoting economic growth, and enabling today's patterns of global consumption and production. Similar to other human activities, including urbanisation, consumption and production, trade exerts pressures on the environment, and has acted as an indirect driver of environmental degradation.

On the other hand, as a driving force of innovation, trade can also act as an important tool to support the development, diffusion and promotion of environmental solutions. However, as suggested by WTO and UNEP (2018), trade can only exert its positive impacts in the presence of functioning markets, effective institutions, and sound social and environmental policies, all areas that show deficits today.[1]

TRADE: GOOD OR BAD FOR THE ENVIRONMENT?

The impact of trade on the environment hinges ultimately on the 'structure' of economic growth (the composition of inputs used -including environmental resources- and outputs -including pollution and waste), as well as a countries' regulatory environment, including institutions and policies related to the environment.[1]

Rather than asking whether trade affects the environment, a better question may be whether economic integration and trade liberalization policies are a good or a bad thing for the environment. Consequently, one may ask, how trade policies (and wider policy-making) can help alleviate negative trade-induced environmental impacts and induce positive environmental change.[2]

In this regard, it may be suggested that, going forward, trade's overall effect on the environment will depend on countries' ability to effectively align trade with the concept of sustainable development, and mainstream environmental sustainability across trade institutions and policies. [3]

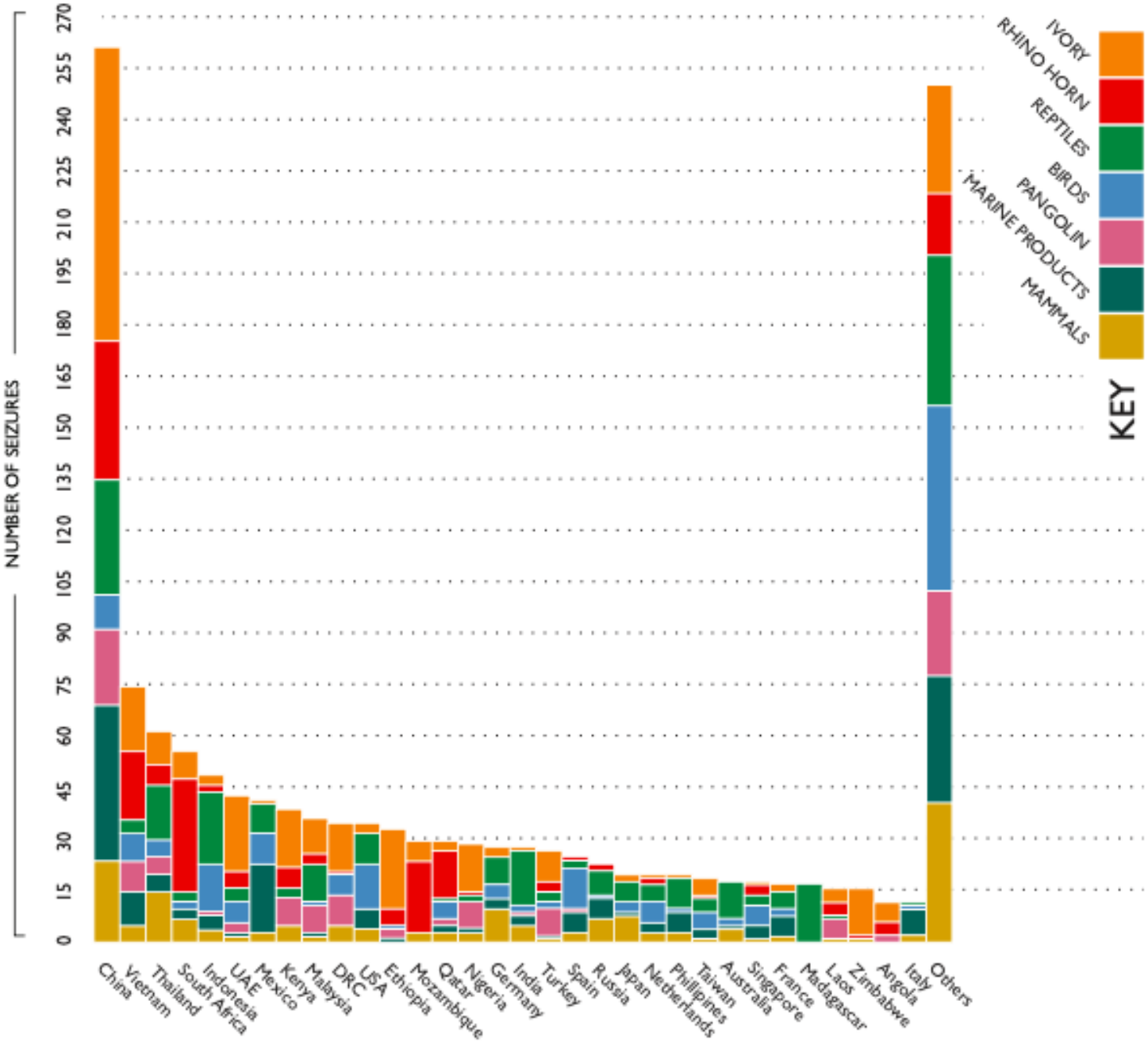
FURTHER ONLINE RESOURCES

UNCTAD: Globalization in the Era of Environmental Crisis by Prof. Sachs - 1/2 Online here.

For current discussions see also Mission of Barbados to the UN& other International Organisations& WTO Secretariat: Sustainable trade after Covid-19: Can we do better? Published on youtube here.

CHART 10: NUMBER OF ILLEGAL WILDLIFE PRODUCT SEIZURES IN THE TOP18 COUNTRIES (2016-2018)

Source: ROUTES, 2019. Figure 7 shows illegal wildlife trade by air to be widespread throughout the world's regions, with at least one country from every region other than the Middle East appearing as one of the top 18 countries by seizure count. Each country also made a wide array of wildlife seizures, although some countries did seem to prefer certain types of wildlife (e.g. ivory in China, marine species in Mexico, rhino horn in South Africa and Mozambique, and reptiles in India).



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TRADE AS A TOOL TO PROTECT THE ENVIRONMENT

In its opening text, the Marrakesh Agreement recognises that trade relations should be conducted in such a way as to be "allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development."[1]

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THE ROLE OF TRADE AS A TOOL & MEANS OF IMPLEMENTATION

The rise of sustainable development as a guiding principle of international law and governance has also transformed the role of trade and trade policy: Trade is no longer solely viewed as a key driver of economic growth, but also, more broadly, as a means to advance sustainable development in its three, indivisible dimensions: environmental, social and economic sustainability.[1]

This is also reflected in the Marrakesh Agreement of 1994, the founding Agreement of the World Trade Organisation, which establishes sustainable development as the overarching objective of the organisation.[2]

Furthermore, the United Nations 2030 Agenda for Sustainable Development, signed by the heads of State of all UN-member countries in 2015, defines trade as an important tool for realising the 17 Sustainable Development Goals (UN SDGs).[3]

THE ROLE OF TRADE POLICY AND TRADE INSTITUTIONS

In their joint report, UNEP and WTO (2018) observe that proactive and forward-looking trade approaches can be part of a coordinated and effective solution to tackle mounting environmental challenges, while fostering economic and social prosperity. The two organisations further propose that if properly harnessed, trade policy can help make the world economy more sustainable and resilient to environmental risks, while having positive effects on prosperity, jobs and equality - thus progressing towards the SDGs contained in the 2030 Agenda.[4]

This assigns an important role to trade institutions in mainstreaming sustainable development and promoting coherence between trade policy and the environmental, social and economic dimensions of sustainable development.

TRADE: OPPORTUNITIES & CHALLENGES

MECHANISMS VIA WHICH TRADE LIBERALISATION AFFECTS THE ENVIRONMENT & NATURE (NEGATIVELY AND POSITIVELY)

As we have seen, trade can have negative impacts on the environment, but may also be a tool to support environmental protection, depending on the structure of economic growth and the wider enabling environment.

TRADE LAW AND POLICY: OPPORTUNITIES AND CHALLENGES

More specifically, trade law and policies can have positive and negative impacts on environmental sustainability, depending on the extent to which trade and environmental objectives can be made mutually supportive. This, in turn, relies, to an important extent, on the ability to effectively mainstream environmental sustainability across trade institutions and policy.

Restricting countries' policy space

International trade law and policy is very far reaching in scope and possesses strong enforcement mechanisms. For this reason, trade law interacts with other areas of policy-making well beyond purely trade-related matters, which can result in effectively restricting countries' policy space, i.e their ability to regulate on wider policy objectives. This can be a cause of concern, if this results in countries being restrained in their ability to promote environmental policy objectives or if countries hold back on policy choices out of fear of litigation-mechanisms, a threat some also refer to as the 'political chill' effect of trade.[2] However, there are several arguments for why this concern is mostly theoretical in nature: in most cases, countries apply policy measures without too much concern for potential restrictions of their policy space. Also, countries with a low economic relevance are not at great risk of litigation. A final point to mention is the current stalemate over WTO Dispute Resolution, which has resulted in parts of the WTO Dispute Settlement becoming dysfunctional at this point in time. [3]

On the flipside, the same mechanism can be an important tool to effectively commit countries to refrain from certain environmentally harmful activities, such as eliminating harmful subsidies or restricting trade in species protected by the CITES Convention.

Grossman and Krueger (1991) proposed three separate mechanisms by which trade liberalisation affects environmental conditions [1]:

- Via the scale effect - the impact of trade liberalisation on economic growth, and associated environmental impacts;
- the composition effect: the change in the nature of economic activities in which a country specialises;
- the technique effect: the change in production methods due to a change in trade policy.

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FIGURE 4: INTERNATIONAL TRADE AND CIRCULAR ECONOMY OPPORTUNITIES

Source: OECD, 2021

At present, countries' economies continue to be mostly linear. This is inherently unsustainable, and current consumption and production patterns are contributing to an increasing environmental footprint. Of the estimated 90 billion tonnes of resources that were used in 2017, more than 50 per cent was dispersed or emitted as waste and less than 10 per cent was recycled back into the economy. As a result, many companies, countries and regions have started to adopt circular economy models. The circular economy involves using resources more efficiently across their life-cycle by closing, extending and narrowing material loops that could result in decoupling of primary raw material consumption from economic growth.

These models seek to create value by redesigning and optimizing products for multiple cycles of use. If scaled up globally, the activities underpinning circularity – eco-design, reuse and repair, refurbishment, remanufacturing and recycling – could gradually replace existing "linear" models of "take-make-dispose". This could foster sustainable consumption and production patterns, and supporting these issues is therefore at the core of promoting a shift to a more sustainable trading system.

Ensuring environmentally sustainable supply chains through international trade is an important aspect of the transition towards a more resource-efficient and circular economy. The emergence of global value chains with cross-border trade in raw materials, intermediate goods, and final products enables associated environmental impacts to occur in places different from where final consumption takes place. Circular economy initiatives – such as recycling to close material loops, eco-design to extend material loops, higher-value loops such as repair, reuse, refurbishment, and remanufacturing, as well as product-service systems – largely take place domestically within national boundaries. However, the circular economy can have important interlinkages with international trade in several ways illustrated in Figure 4.

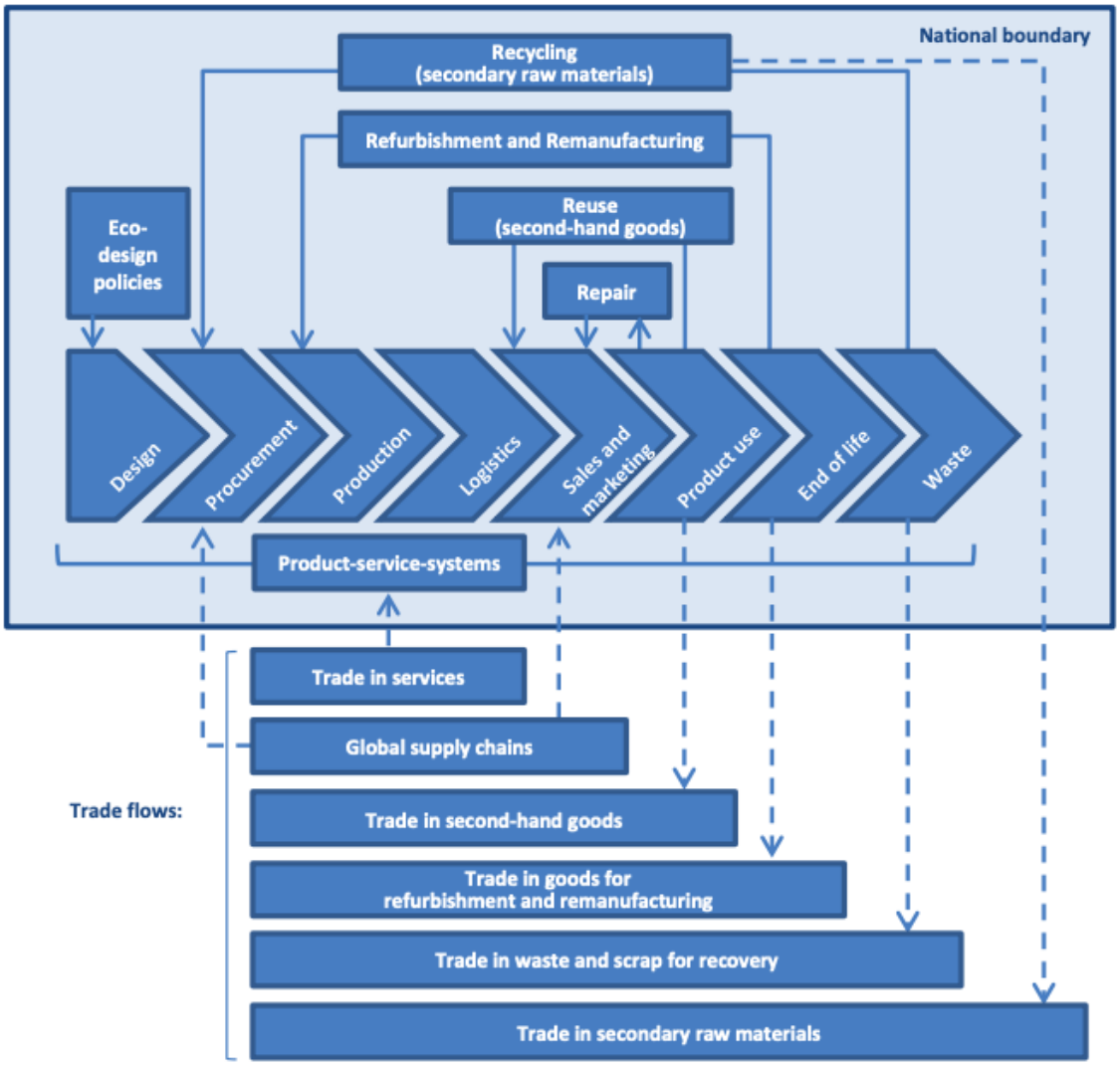

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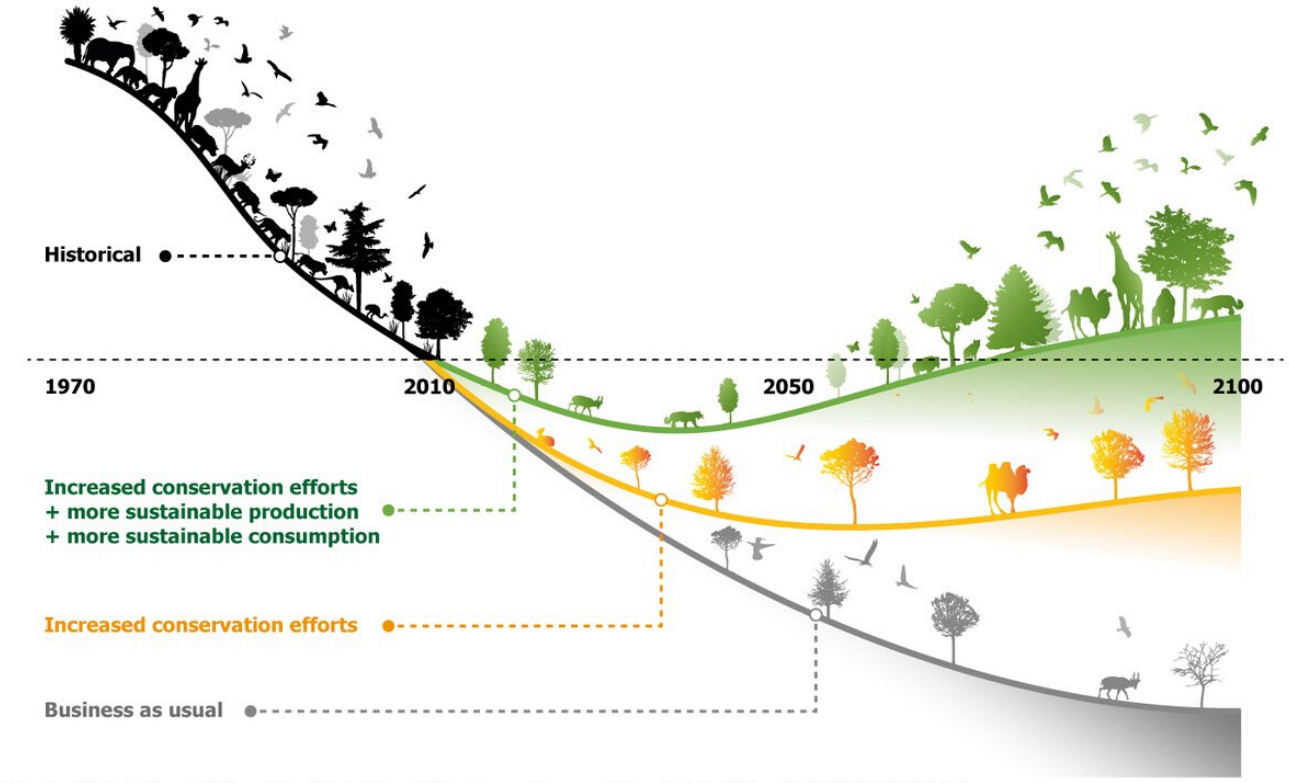
FIGURE 5: BENDING THE CURVE OF BIODIVERSITY LOSS

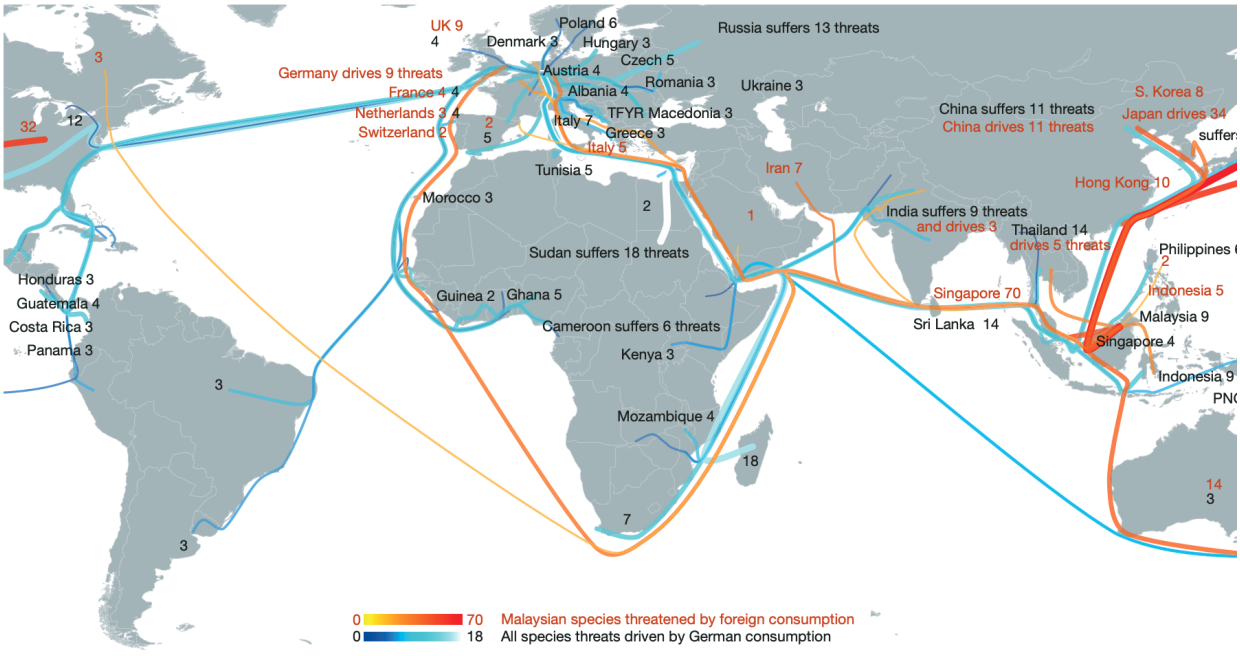
Source: Leclère et al., 2020
An internatinonal initiative modelling the impact of different scenarios on biodiversity shows that to preserve biodiversity, substantial transformation of consumption and production is required, in addition to ambitious conservation goals.



This artwork illustrates the main findings of the article, but does not intend to accurately represent its results (https://doi.org/10.1038/s41586-020-2705-y)

FIGURE 6: FLOW MAP OF THREATS TO SPECIES

Source: Lenzen et al., 2012 An interactive version is available at www.worldmrio.com/biodivmap/.
Flow map of threats of species caused by exports from Malaysia (red) and imports into Germany (blue). Note that the lines directly link the producing countries, where threats are recorded, and final consumer countries. Supply- chain links in intermediary countries are accounted for but not explicitly visualized.



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TRADE AS A TOOL: OPPORTUNITIES

TRADE AS A TOOL: MECHANISMS

Trade can help make available, and generate the necessary resources for environmental protection

- Trade-induced economic growth can promote development and social welfare that can, in turn, increase countries' capacity to manage environmental problems.

Trade can promote economic efficiency and innovation in support of environmental outcomes

- In addition, facilitated access to new technologies can help make local production processes more efficient by diminishing the use of inputs such as energy, water, etc.
- Also, by opening new markets, trade promotes 'economies of scale' effects and competition, again promoting innovation, that can accelerate the development of effective, low-cost Environmental Goods and Services (such as pollution-control equipments, energy efficiency appliance, renewable energy equipment etc.).

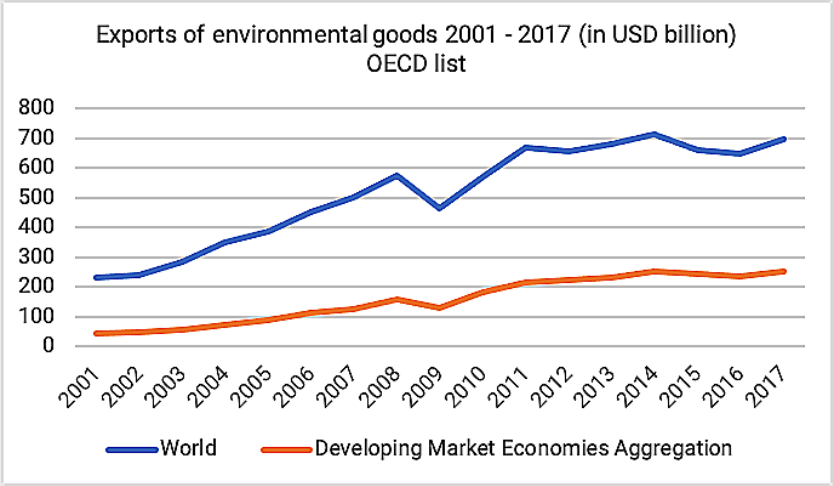

CHART 11: EXPORT OF ENVIRONMENTAL GOODS 2001-2017 (IN USD), OECD LIST

Exports of environmental goods have more than tripled over the last 15 years. Using the OECD classification of environmental goods, global exports amounted to nearly USD 700 billion in 2017.

Trade can provide access to new markets for Environmental Goods and Services

- Trade can enable access to Environmental Goods and Services also to those countries that do not produce or service these themselves - such as access to sanitation, pollution abatement equipment, renewable energy, etc.
- By enabling producers access to new markets, trade can facilitate the uptake of more sustainable products. [1], [2]

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TRADE POLICY AS A TOOL: MECHANISMS

Addressing market failures

By addressing market failures, and levelling the playing field, trade policy can contribute to functioning markets that internalise environmental and social costs, address overexploitation of common resources, and preserve public goods.

Examples:

- elimination of harmful environmental subsidies (fossil fuel subsidies, harmful fisheries subsidies);
- help establish transparency on environmental impacts of production and consumption across the supply chain;
- encourage alignment with international environmental and sustainability standards or mutual recognition of different standards
- Carbon Border Tax adjustments can help level the playing field for environmentally sustainable products

Providing economic incentives and credible enforcement mechanisms

By conditioning market access to environmental outcomes, trade policy can provide additional incentives for States to comply with environmental laws or implement existing environmental laws and policies

- For example: conditioning the ratification of a trade agreement on effective implementation of a Multilateral Environmental Agreement (such as the Paris Agreement), or compliance with a non-deforestation policy.

International trade law and policy has much more "teeth" -which means that it has stronger and more effective legal enforcement mechanisms available - than does international environmental law, which increases the likelihood of Countries to comply with rules set out under international trade law.

- For example, Multilateral Trade Agreements include a Dispute Settlement Procedure, which forms part of the World Trade Organisation. Also, Regional Trade Agreements (RTAs) generally include a Dispute Settlement Procedure to address conflicts arising under the respective agreement in question. [1] ,[2]

Why is the EU Carbon Border Tax Adjustment Proposal controversial?

As part of the European Union's 'Green Deal' project, the European Commission has announced its plans of putting in place a Carbon Border Tax adjustment, a tax applying to all those products imported to the EU that do not comply with the same high environmental standards, as those produced within the EU.

While this policy can be considered very important from an environmental perspective, it raises concerns in particular for lower-income countries that fear they may not be competitive enough to export to the EU, given the lower environmental standards and capacity in their countries. [3],[4]

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TRADE AS A PRESSURE: CHALLENGES

Lenzen et al (2012): "30% of global species threats are due to international trade. In many developed countries, the consumption of imported coffee, tea, sugar, textiles, fish and other manufactured items causes a biodiversity footprint that is larger abroad than at home. Our results emphasize the importance of examining biodiversity loss as a global systemic phenomenon, instead of looking at the degrading or polluting producers in isolation." [4]

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MECHANISMS VIA WHICH TRADE MAY INCREASE ENVIRONMENTAL PRESSURES

Trade can greatly accelerate and augment development-related pressures

- While, previously, many changes in ecosystems were strongly linked to changes in local or national consumption patterns, the separation between place of production and consumption can significantly augment these pressures by linking changing global patterns of consumption to local impacts
- This can accelerate unsustainable use and overexploitation of natural areas - far from places of consumption (so called 'carbon leakage' effect, which is also relevant for biodiversity, in particular as relating to agricultural trade). [1]

Trade induced competition effects

- While trade-induced competition can enhance innovation and also induce an upward trend in environmental regulation (the so-called California effect), economic pressures may also lead businesses to reduce environmental standards, or may reduce the regulatory and enforcement capacity of countries, as a consequence of larger-scale liberalization measures.

Trade as a motor of economic growth & overconsumption

- By displacing production to countries with lower-wages, trade contributed to a fall in prices for consumer goods.
- While this contributed to higher GDP, it also promoted overconsumption particularly in Western countries, with detrimental environmental impacts, particularly in countries of production [2],[3]

"Academic literature shows that, under efficient collective resource management policies... or property rights.... the price driver generated by trade agreements in the exporting country can lead to further investment and exports without leading to overexploitation. On the opposite, insertion in international trade will lead to amplify the poor management of the commons.". Bellora et al (2020), p.10) [1]

Trade promotes specialisation - and contributes to the uniformisation of cultivated species

- Trade liberalisation may lead to specialisation in pollution-intensive activities in some countries if environmental policy stringency differs across countries – the so-called pollution haven hypothesis. [1]
- More generally, a main benefit associated with free trade - specialisation - may be problematic from a biodiversity perspective, which lives of as the name suggests- diversity. Trade plays a role in the 'uniformisation of cultivated species by promoting concentration on few high yield species and the uniformisation of agricultural landscapes'. [2]
- Specialised ecosystems are, by nature less diverse, and therefore, less functional; they are at higher risk to perturbations and less resilient.
- Trade-related economic efficiency gains may, therefore, clash with environmental efficiency- that actually relies on more diversity to remain resilient and provide wider socio-economic benefits.

Extensive global trade networks have greatly increased the complexity of supply chains

- International supply chains are highly intransparent, making it in many cases impossible for consumers or regulators to understand the origin of certain goods, and thus, their environmental impacts.

Transport-related environmental impacts

- The expansion of global trade has also led to an increase in global transportation, increasing pressures on ecosystems and the climate.
- Freight transportation constitutes 8 percent of global CO2 emissions today, which is expected to increase by 157 per cent on the road and 77 per cent over the water by 2050. Experts predict that the movement of goods may triple or quadruple in the next few decades. [3]

Bellora et al (2020): In addition to the decline of wild and natural biodiversity, biodiversity of cultivated crops and farmed animals has also been decreasing. For example, most of the bananas produced on earth are from the same variety, and a small number of apple varieties constitute a disproportionate share in production.

The effects of the North American Free Trade Agreement (NAFTA) on Maize is another example: According to local indigenous associations in several Mexican states Maize and the use of standardized seeds not only endangered the cultivation of many local varietes but more generally the entire landscape and overall ecosystems (Antal et al, 2006 as cited in [1]).

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ON THE USE OF THIS RESOURCE

Contact information: for comments, suggestions, observations, or information regarding use: antoni@tradeimpact.org

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