UNITED ARAB EMIRATES
MINISTRY OF ECONOMY

Navigating the Green Horizon

The Dynamics of Global Trade Sustainability

Global Trade Growth Research Insights Series

December 2023

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In an era marked by profound human influence on the planet's ecosystems, the pursuit of sustainability has become an imperative for governments and businesses. Against the backdrop of escalating climate change and the adverse effects being manifested around the world, sustainability has transcended from a mere aspiration to an imperative demanding immediate attention. The increasing frequency of extreme weather events, rising sea levels, and the ominous specter of global temperature escalation has thrust sustainability into the spotlight as a critical response to a planet in distress.

According to the Intergovernmental Panel on Climate Change (IPCC), global temperatures have risen by approximately 1.1 degrees Celsius above pre-industrial levels, triggering far-reaching consequences. [1] This upward trajectory is not merely a statistical abstraction; it signifies the intensification of wildfires, the accelerated melting of polar ice caps, and disruptions in weather patterns, all of which directly impact ecosystems and human societies.

This climate crisis has pushed sustainability to the forefront of global priorities. It is no longer a distant issue but a practical response to interconnected challenges like environmental damage, resource scarcity, and societal vulnerabilities. The Paris Agreement, a significant international treaty from 2015, embodies the global agreement that immediate, collective efforts are necessary to curb rising global temperatures and address the effects of climate change.

> **Sustainability is no longer a distant issue but a practical response to interconnected challenges**

Evaluating the efficacy of COPs requires a lens focused on long-term commitments rather than immediate spectacle. Since the Paris Agreement, there has been a discernible shift in global warming projections.

Initially, temperatures were predicted to rise by over 3°C above pre-industrial levels by 2100 if policies remained static. However, current policies have led to adjusted forecasts, now suggesting a rise of approximately 2.5-2.9°C. Although these figures still pose significant risks, they represent a marked improvement and validate the power of collective international action.

In this context, sustainability has emerged as a central concern for governments and businesses worldwide.

Companies are actively revising their strategies to mitigate adverse effects. Governments are enacting policies that promote and incentivize sustainable practices, recognizing the necessity of harmonizing economic development with ecological stewardship.

This is not only reshaping corporate strategies and governmental policies, but also exerting a significant influence on the global trading system. We are already witnessing tangible impacts on international trade dynamics, with an increasing emphasis on environmentally responsible production and sourcing practices. These trends are anticipated to bring about profound changes in the global trading landscape, as the demand for eco-friendly products and services continues to grow, influencing trade patterns and trade agreements in the years ahead.

Countries are increasingly introducing and executing trade policies that promote environmental sustainability.

[1] IPCC — Intergovernmental Panel on Climate Change.
https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

Notably, international organizations such as the World Trade Organization (WTO) are pivotal players in this paradigm shift. The WTO's recognition of sustainability as a key priority reflects a broader commitment to integrating environmental considerations into the global trading framework. As sustainability takes center stage, the dynamics of international trade are already undergoing tangible transformations, marked by an increasing emphasis on environmentally responsible production and sourcing practices. These evolving trends are poised to bring about profound changes in the global trading landscape, shaping trade patterns and agreements in the years ahead.

This paper aims to explore the tangible aspects of this worldwide movement. It will examine macro trends in consumer behavior, investment strategies, and policy frameworks as crucial responses to the critical state of our planet. Moreover, it will focus on how countries are altering their trade policies to respond to the growing prioritization of environmental sustainability.

Exploring the Catalysts

Trends Shaping the Age of Sustainable Trade

There are key drivers and trends that are playing a pivotal role in reshaping our approach to trade responsibility and are examined here to gain a better understanding of their importance for the global trading system.

Consumer Demand for Sustainable Products and Services

Consumer demand for sustainable products has emerged as a pivotal force shaping the landscape of modern businesses. As global awareness of environmental issues, social responsibility, and ethical concerns continues to rise, consumers are increasingly scrutinizing the products they purchase, preferring more sustainable options. This is especially true in OECD countries, but also a growing trend in the global south. Today, sustainability is influencing both individual consumer choices as well as their preferences regarding potential employers.

Consumers are increasingly scrutinizing the products they purchase, preferring more sustainable options

Moreover, there is a growing understanding of the interconnectedness between human well-being and sustainable practices. Consumers are increasingly conscious of the social implications of their purchases, such as fair labor practices, ethical sourcing, and the impact on local communities. As a result, they are actively seeking products that reflect responsible and equitable production methods.

A recent study conducted by NielsenIQ in 2023 reveals that 95% of consumers in the US make an effort to adopt sustainable practices. The report indicates that 39% of shoppers express a strong inclination to select a retailer recognized for offering a broad range of sustainable choices.[2]

In Asia, Europe and the Middle East, a similar trend is unfolding. Another 2023 sustainability trends report that surveyed 14,000 individuals from Asia, Europe and the Middle East found that 73% of consumers surveyed aspire to adopt more sustainable lifestyles, with Asia taking the lead[3] . As a result, for businesses, creating sustainable products turns out to be not just a moral imperative but also a profit-generating business decision.

The surge in consumer demand is not for just environmentally sustainable products, but sustainable product life cycles as well. According to a survey of approximately 27,000 global consumers published in September 2021, approximately 88% of the participants expressed prioritizing purchases from companies that implement ethical sourcing practices, and around 83% of them are ready to pay extra for a product that has a guaranteed ethical source. Moreover, close to 64% of 18 to 24 year-olds, which represents almost two-thirds of the youngest adult buyers, mentioned that they would not buy from a company again if it was accused of engaging with unethical suppliers.[4]

The rise of digital media and social networks has significantly amplified the visibility of sustainability issues. There are 4.9 billion social media users globally, meaning 60.49% of the global population use social media. [5] Consumers are more connected than ever, exchanging information, experiences, and concerns about companies and their sustainability efforts. Eco-conscious consumers increasingly turn to social media platforms to seek information about various products and services.

[2] NielsenIQ. The Changing Story of Sustainability. 2022.

[3] Alibaba Group. Sustainability Trends Reports 2023

[4] Forbes. The Economic Benefits And Best Practices Of Ethical Sourcing. 2023.

[5] DemandSurge. Social Media Users. 2023

Companies are responding to this shifting landscape by integrating sustainability into their core business strategies and leveraging environmental sustainability as a market differentiator. Brands that prioritize transparency, ethical sourcing, renewable materials, and environmentally friendly practices are increasingly gaining consumer trust and loyalty. New brands such as Tentree and Allbirds are being created with a mission-driven focus on environmental sustainability. Moreover, established brands are integrating sustainability into their existing products and marketing these to target eco-conscious consumers .Successful examples include H&M's Conscious line of clothing, and TOMS' Earthwise collection of eco-friendly shoes both of which use recycled raw materials to produce. H&M goes further to ensure their products are shipped on shipping lines that are more sustainable in terms of routes and fuels. Similarly, IKEA focuses on energy efficiency and has initiatives in place for responsible sourcing.

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Moreover, innovative marketing strategies emphasizing a product's sustainability credentials are proving to be powerful tools in capturing the attention of environmentally conscious consumers. According to a study conducted by IBM, organizations treating sustainability as a strategic business prospect (referred to as "trailblazers") experienced a remarkable 51% revenue growth during 2021. This figure surpassed the next leading category (referred to as sustainability "strivers"), who achieved a growth rate of 42% over the same timeframe.[6]

In the long run, many businesses are now demonstrating that implementing environmental sustainability measures often leads to cost savings. By reducing waste, improving energy efficiency, and optimizing resources, companies can cut operational costs and enhance efficiency. A recent survey conducted by Gartner Inc, business leaders across North America, Europe, and Asia Pacific highlighted that 80% of respondents acknowledged sustainability as a factor that contributed to optimizing and reducing costs within their organizations.[7]

The source of these cost savings can be many, ranging from increased energy efficiency through the adoption of energy-efficient technologies and practices, to resource optimization that results in a waste reduction. Furthermore, businesses in some countries benefit from incentivization schemes such as tax breaks or grants to businesses that adopt environmentally sustainable practices. As a result, companies are investing increasingly in sustainable production and sourcing. A 2022 research of 850 global companies revealed that over 80% intended to augment their commitments to sustainability by increasing their investments with a view at reaping the benefits of long-term savings.[8]

[6] IBM Institute for Business Value (IBV) and Oxford Economics. Sustainability as a transformation catalyst. 2022

[7] Gartner Inc. Sustainab 8 Boston Consulting Group. 2022

[8] Boston Consulting Group. 2022

Stakeholder & Investor Pressure: The Rise of ESG

In recent years, a notable shift has taken place in the realm of investment. Environmental, social, and governance (ESG) factors have gained considerable prominence.

Investors, ranging from institutional entities to individual stakeholders, are becoming more assertive in their demands for companies to prioritize the environment in their operations and decision-making processes.

According to Gartner's survey conducted in 2022, 87% of business leaders expected to increase their organization's investment in sustainability over the next two years, and 60% of these leaders were driven by investor pressure.[9]

According to a survey of 1040 chief financial officers and 320 institutional investors from around the world, 78% of investors want companies to focus on environmental, social, and governance activity, even if that results in short-term profits taking a hit.[10]

This trend was found to be more prevalent in Europe, than North America and Asia Pacific.[11]

Investors are leveraging their financial influence to encourage companies to embrace environmentally sustainable strategies. Shareholders are using their voting power to advocate for sustainability-related proposals during annual meetings. They are demanding greater transparency regarding a company's ESG performance, seeking clearer insights into how environmental and social considerations are integrated into business practices.

Moreover, shareholder resolutions related to climate change, carbon emissions reduction, and other sustainability initiatives are gaining traction, highlighting the increasing significance of these issues in the investment landscape.

Beyond shareholder activism, institutional investors and asset managers are integrating ESG criteria into their investment strategies. They are evaluating companies not only based on financial performance but also on their ESG practices and impact.

Firms that exhibit a commitment to environmental sustainability, responsible governance, and ethical conduct are more likely to attract investments and support from these influential entities.

In 2020, global sustainable investment assets surpassed $35 trillion, up from $30.6 trillion in 2018. By 2025, these are expected to exceed $53 trillion.[12]

Notably, some studies show that ESG-focused investments have outperformed their counterparts, with ESG-linked exchange-traded funds (ETFs) and indices showcasing this trend. According to a review conducted by NYU Stern Center for Sustainable Business and Rockefeller Asset Management, there is a clear positive relationship between ESG values and financial performance in 58% of the corporate studies.[13]

Additionally, regulatory bodies and stock exchanges are adopting ESG-focused regulations, further propelling the prominence of sustainable investing.

Notably, the European Union's Sustainable Finance Disclosure Regulation (SFDR) and the Task Force on Climate-related Financial Disclosures (TCFD) framework have been influential in driving ESG transparency and accountability.

[9] Gartner Inc. Sustainability Survey: Use Sustainability to Drive Value and Mitigate Disruption. 2022.
[10] EY. 2022
[11] Capital Group. 2022
[12] Bloomberg. 2021
[13] NYU Stern Center for Sustainable Business & Rockefeller Asset Management. ESG & Financial Performance. 2021

Green Policies: A Catalyst for Corporate Sustainability

In recent years, governments worldwide have also intensified their focus on sustainable development, understanding the vital role that businesses play in achieving environmental targets. Green policies, comprising regulations, incentives, and standards, have emerged as primary tools to accelerate the transition towards corporate practices that are environmentally sustainable. Such policies not only aim to protect the environment but also to stimulate innovation, growth, and competitiveness within industries.

Green policies, comprising regulations, incentives, and standards, have emerged as primary tools to accelerate the transition towards corporate practices that are environmentally sustainable

Governments realize that market dynamics alone can't address the issue. Numerous countries have established goals for net-zero carbon emissions by certain years, ranging from 2030 in Uruguay and 2035 in Finland, to 2050 for the majority. Notably, the two largest carbon emitters, the US and China, aim for carbon neutrality by 2050 and 2060.

The EU is also at the forefront, introducing the EU Green Deal and Climate Law, which mandates a 55% emission reduction by 2030 (compared to 1990) and aims for a carbon-neutral stance by 2050. All told, from a singular nation in 2015, over a hundred countries now embrace net-zero ambitions.

Financial incentives are another significant pillar of green policies. Governments have progressively begun to offer tax breaks, grants, and subsidies to companies that adopt environmentally sustainable practices. For example, Germany has allocated €2.5 billion to boost EV infrastructure and is offering a €9,000 incentive for each vehicle to promote its use.[14]

In Shenzhen, China, the leading bus companies were motivated to shift to EVs by receiving an annual subsidy.[15]

Meanwhile, Vietnam has witnessed a staggering 2,435% surge in rooftop solar installations since early 2019, primarily due to a feed-in-tariff initiative.[16]

Moreover, there is a direct governmental investment in nature-centric solutions and farming to safeguard natural ecosystems and foster a sustainable food chain.

This encompasses activities like tree planting, wetland rejuvenation, measures to prevent wildfires, and enhancing water irrigation systems.

Instances include tree planting initiatives announced in Pakistan, Jamaica and the Cayman Islands.

[14] EuroNews. 2021

[15] World Resources Institute. How Did Shenzhen, China Build World's Largest Electric Bus Fleet?. 2018

[16] PV Tech. 2021

The most recent Inflation Reduction Act passed in the USA is another example of such a government intervention. It was introduced with a focus on promoting renewable energy and energy efficiency. Under the Act, $4 billion was allocated to support investments in advanced energy projects. The Act also extended a 30% tax credit for homeowners installing rooftop solar systems until 2034 and added battery storage systems to this incentive from 2023 onwards.[17] However, the Act has faced criticism for its trade implications, particularly concerning its domestic content requirements. These criticisms highlight the complex trade-offs between national policy objectives and their global trade and economic implications, especially in the context of green transitions.

Focusing on trade, government policies play a pivotal role in steering the global trading system towards environmental sustainability. Through legislative and regulatory frameworks, governments started to set the tone for environmentally responsible trade. By implementing policies such as carbon pricing, subsidies for renewable energy, and stringent environmental standards for products and services, governments are incentivizing businesses to adopt greener practices. We are starting to see some tariffs and trade agreements tailored to favor sustainable goods, effectively encouraging international trade that aligns with environmental objectives. Furthermore, government initiatives are promoting transparency and accountability in the supply chain, ensuring that environmental impact is a key consideration in trade decisions. Additionally, we are seeing more and more investment in environmentally sustainable infrastructure and research fostering innovation in green technologies, thus facilitating a smoother transition to a sustainable trading system.

Overall, effective government policies are crucial in aligning global trade with environmental sustainability, creating a synergy between economic growth and ecological preservation.

[17] US Department of the Treasury. 2023

Nearshoring: Emergence of 'shorter supply chains'

Another emerging trend in recent years in environmental sustainability is nearshoring, which is the practice of partnering with suppliers, manufacturers, and other necessary supply chain operations closer to the company in need of the supplies and closer to the consumer.

This concept of nearshoring has surged in popularity within the realm of global trade, primarily fueled by a confluence of economic and geopolitical factors. The COVID-19 pandemic cast a spotlight on the fragility of extended global supply chains, prompting businesses to seek greater resilience by shortening and simplifying these networks. This shift towards nearshoring not only enhances supply chain robustness against various disruptions but also significantly cuts down on transportation costs and times, an increasingly important factor in an era of soaring fuel prices and consumer demands for rapid delivery. Today, the world is coming to realize the environmental impact of 'long' global supply chains. For example, the United Nations estimates that the fashion industry, including materials sourcing, supply chains, washing and waste, is responsible for 8–10% of global carbon emissions. [18]

In addition to the carbon footprint, geopolitical tensions and trade uncertainties, particularly those arising from conflicts between major economies like the United States and China, have further propelled the trend of nearshoring. Tariffs imposed by the United States in 2018 have caused some businesses to look for alternative markets to reduce costs.

The United States-Mexico-Canada Agreement increased regional value content requirements for products to be considered as made in North America, giving producers an incentive to relocate their supply chains.

In general, due to the war in Ukraine, the continued ripple effect of global bottlenecks, rising costs and an increasingly difficult geopolitical climate in China, global supply chains are shifting.

Companies are now more inclined to mitigate risks associated with tariffs and trade barriers by bringing their supply chains closer to home. Nearshoring also offers enhanced quality control and easier compliance with regional standards, vital for industries where these aspects are crucial.

Contrary to past trends where offshoring was driven by the search for lower labor costs, the narrowing gap in labor costs between developed and developing nations, coupled with advancements in automation and technology, has diminished the emphasis on labor expenses in location decisions.

Moreover, the increasing consumer demand for sustainable and ethically sourced products has made nearshoring an attractive strategy to reduce the carbon footprint associated with long-distance transportation, aligning with environmental and social governance standards.

Additionally, technological advancements have simplified the process of setting up and managing supply chains in geographically closer regions, making nearshoring a more feasible and attractive option for businesses striving to adapt to the rapidly evolving global trade landscape.

[18] UNFCC. UN Helps Fashion Industry Shift to Low Carbon. 2018.

Empowering Sustainability: Clean Energy

In the quest for an environmentally sustainable future, the shift towards clean energy sources has become a cornerstone, echoing the global call to decouple economic growth from environmental degradation. To meet climate and global warming objectives, there must be a substantial increase in the adoption of renewables across all sectors, rising from the current 14% of total energy to approximately 40% by 2030.[19]

On the demand side, businesses around the world are already making this transition. Between 2010 and 2020, the demand for renewable energy grew on average by 4.7% per year. Within the industrial segment, the chemical manufacturing, mining, and pulp and paper industries, in particular, have invested in solar industrial heat.[20]

On the supply side, the share of renewables as an energy source is on the rise. In the year 2022, the renewable energy input from sources such as solar, wind, hydro, geothermal, and ocean experienced an almost 8% increase, elevating the collective share of these technologies in the overall global energy supply to 5.5%.[21]

According to the International Energy Agency, renewable energy, complemented by a resurgence in nuclear power, is poised to surpass the anticipated increase in electricity demand from 2022 to 2025.

This implies that lean-energy sources will start replacing fossil fuels and as a result, carbon emissions will start to plateau and ultimately decline.

From a cost and business sense perspective, renewable-based electricity has become the most cost-effective power choice in the majority of regions.

The global weighted-average levelized cost of electricity from newly established utility-scale solar photovoltaic (PV) projects saw an 85% reduction between 2010 and 2020.

Concurrently, concentrated solar power (CSP) costs dropped by 68%, onshore wind by 56%, and offshore wind by 48%. Consequently, renewables have become the default choice for adding capacity in the power sector across nearly all countries, dominating current investments.

Solar and wind technologies have solidified their prominence over time, and given the recent uptick in fossil fuel prices, the economic outlook for renewable power is unquestionably favorable.[22]

[19] IRENA
[20] Ren21. Renewables 2023 Global Status Report
[21] International Energy Agency
[22] IRENA. World Energy Transitions Outlook 2022

Adoption of Advanced Trade-Technology

In January 2023, the Director-General of the World Trade Organization emphasized a future of trade deeply rooted in services, underscored by the pillars of sustainability, digital innovation, and inclusivity. This vision is increasingly being realized as businesses globally align their operations with sustainable practices, significantly empowered by the advent and integration of cutting-edge technologies.

The synergy between technology and environmental sustainability is transforming the very fabric of modern trade. Technologies like Artificial Intelligence (AI), blockchain and Internet of Things (IoT) are revolutionizing supply chain management, enabling companies to optimize operations in ways that reduce environmental impact while also enhancing efficiency. In the trade value chain, the most pronounced impact is on transport and logistics.

The synergy between technology and environmental sustainability is transforming the very fabric of modern trade

In terms of reducing emissions, route optimization in shipping is a critical instrument for reducing the carbon footprint of trade. Examining real-time traffic patterns, weather conditions, and other dynamic variables allows artificial intelligence (AI) and sensors to recommend optimal routes for container ships and delivery trucks.

This not only cuts down on fuel usage but also lowers CO2 emissions, actively promoting environmental sustainability.

Moreover, for greener transport associated with trade, IoT can conduct predictive real-time maintenance of vehicles with a view at reducing pollution.

AI-driven energy management systems can also reduce carbon footprint significantly. In the realm of trade, warehouses, often characterized by their vast expanse, require substantial energy for lighting, heating, and cooling. AI-powered energy management systems can anticipate optimal times to activate or deactivate these systems, ensuring the efficient utilization of energy resources.

These technology solutions extend beyond mere operational enhancements. They empower businesses to continuously monitor and adapt their sustainability strategies, ensuring adherence to evolving green policies and regulations.

This real-time capability to manage and report on sustainability efforts provides a significant competitive edge in an increasingly eco-conscious market.

Governments worldwide are recognizing and supporting this shift. Policies incentivizing the adoption of green technologies, such as tax credits for renewable energy use or penalties for excessive carbon emissions, are increasingly common.

These governmental actions reflect a global acknowledgement of the crucial role technology plays in achieving sustainable trade objectives.

Moreover, this trend is yielding tangible benefits for businesses, from differentiating themselves in the market to realizing cost efficiencies. The use of renewable energy sources, for instance, not only reduces carbon footprint but can also lower long-term operational costs.

Trading Sustainably

Green and Inclusive Trade Growth

Trading Sustainably: Green and Inclusive Trade Growth

The nexus between trade and environmental sustainability forms a crucial intersection where economic considerations meet environmental responsibility. Simply reflecting on transport alone, and according to International Transport Forum (ITF) estimates, international trade-related freight transport currently accounts for around 30% of all transport-related CO2 emissions from fuel combustion, and more than 7% of global emissions.[23]

As global commerce escalates, intertwining sustainability with trade practices is not just beneficial; it's imperative for our collective future. Sustainable trade is not merely about mitigating the environmental impact of commercial activities, but about harmonizing the drive for economic prosperity with environmental prudence. This multidimensional approach ensures that the dividends of trade are not only widespread but also sustainably achieved. It encapsulates efficient resource utilization, carbon footprint minimization, and the upholding of equitable labor practices.

Green supply chains are at the heart of this sustainable trade paradigm. As products wend their way through the global marketplace, these chains emphasize eco-friendly production, ethical sourcing, and waste reduction. Such considerations are becoming increasingly crucial for companies, not only to meet the eco-conscious demands of consumers but to safeguard against evolving regulations and environmental contingencies that could affect their long-term viability.

The benefits of sustainable trade extend to broader environmental objectives, particularly in combating climate change. Instruments like carbon credits and offset schemes are propelling businesses towards greener operations, contributing to a global economy that's progressively low-carbon. This aligns with the goals set by international climate accords and national green policies that intertwine economic growth with ecological mindfulness.

However, this nexus is also fraught with challenges. Integrating environmental sustainability into global trade could mean significant restructuring of supply chains, potentially increasing costs and requiring new skill sets from the workforce. There is also the issue of balancing strict environmental regulations with the risk of trade protectionism, which could inadvertently stifle economic growth in developing nations.

Moreover, environmental considerations are reciprocally shaping trade policies. Governments are leveraging environmental standards as benchmarks for market entry, promoting exports of sustainable goods and services. This mutual reinforcement not only champions superior sustainability practices but also positions nations strategically in a market where conscientious consumerism is rapidly becoming the norm.

[23] The Carbon Footprint of Global Trade : Tackling Emissions from International Freight Transport . OECD. 2016.

In essence, the relationship between trade and environmental sustainability is evolving into a complex yet indispensable partnership. It is one that necessitates a nuanced understanding of both economic imperatives and ecological stewardship. As this interconnection deepens, the global trading system must embrace innovation and adaptability to thrive within these emerging paradigms, ensuring that growth is not just profitable but also protective and preservative of our planet's resources for future generations.

Pioneering the Green Frontier

Policy Innovations Shaping Environmentally Sustainable Trade

In essence, the intersection of trade and environment represents an opportunity to redefine economic success in a manner that respects planetary boundaries and promotes social well-being. It challenges traditional paradigms, urging stakeholders to view trade not as a zero-sum game but as a platform for collective progress where economic, environmental, and societal interests converge. Several countries are already taking the lead in promoting a more environmentally sustainable and responsible approach to international trade. While some of these innovations directly impact the trade value chain, others generate impact in a more indirect manner. Notable innovations are listed below:

Several countries are already taking the lead in promoting a more environmentally sustainable and responsible approach to international trade

Green Product Labeling and Certification Programs

Green product labeling and certification programs are pivotal in informing consumers about the environmental impact of products. By establishing recognizable markers of environmental performance, they foster sustainable consumer choices. Moreover, they create a competitive market where businesses strive to attain and display these certifications, fostering a culture of sustainability within industries and driving broader environmental responsibility.

Green product labeling and certification programs are becoming essential tools for consumers and businesses to identify products that meet certain environmental standards. Notable examples include the EU Ecolabel and Energy Star in the United States, both certifying products that meet specific environmental standards.

The EU Ecolabel, introduced by the European Union, stands as a flagship initiative in green product certification. This program goes beyond mere eco-labeling, incorporating a comprehensive approach to evaluating a product's environmental impact throughout its life cycle. Criteria cover aspects such as resource efficiency, reduced energy consumption, and minimal emissions. Manufacturers aspiring to affix the EU Ecolabel on their products must adhere to these stringent standards.

Energy Star in the United States similarly plays a crucial role in informing consumers about the energy efficiency of various products. Governed by the Environmental Protection Agency (EPA), the Energy Star program focuses primarily on reducing energy consumption. Products earning the Energy Star label, ranging from household appliances to electronic devices, meet or exceed strict energy efficiency guidelines. This not only aids consumers in making energy-conscious choices but also serves as a powerful incentive for manufacturers to innovate and adopt greener production methods.

Globally, there are several other key programs that have gained international recognition like the Energy Rating Label (Australia/New Zealand) which provides information on the energy efficiency of appliances, helping consumers choose products that save energy and money while reducing greenhouse gas emissions. China also has the China Environmental Labeling Program (CELP) which covers a wide array of products, promoting less harmful industrial production and consumption practices.

There are similar programs in Japan (Ecomark), Brazil (ABNT Ecolable), and the Green Label in Singapore. We are also witnessing global programs like the Green Seal which is a global non-profit organization that uses science-based programs to empower consumers, purchasers, and companies to create a more environmentally sustainable world. Although based in the US, its certifications are recognized globally.

Green Freight Programs

Recognizing the substantial contribution of transportation to carbon emissions, governments and industry stakeholders worldwide are increasingly embracing innovative initiatives to promote sustainability through greening freight programs. These programs not only contribute to reducing the carbon footprint of freight transport but also drive innovation in the sector. By incentivizing the adoption of energy-efficient technologies and practices, these programs play a pivotal role in the broader transition toward an eco-friendly transportation industry.

One notable example is the SmartWay program, administered by the Environmental Protection Agency (EPA) in the United States. This program stands as a holistic and collaborative initiative designed to enhance the sustainability of freight transport. At its core, the program seeks to reduce fuel consumption and minimize emissions by encouraging the adoption of cleaner, more energy-efficient technologies. By providing a suite of tools and technologies to participants, it enables them to comprehensively evaluate and improve their environmental performance. This includes sophisticated tracking and reporting systems that enable companies to assess their carbon footprint accurately. By leveraging data analytics and advanced tracking mechanisms, participants gain insights into their operational practices and identify areas for improvement. One of the distinctive features of SmartWay is its recognition and incentive structure. Freight carriers, shippers, and logistics companies that demonstrate significant reductions in fuel consumption and emissions are not only acknowledged for their commitment to environmental sustainability but also stand to benefit from financial incentives.

This dual approach, combining acknowledgment with tangible rewards, serves as a powerful motivator for participants to actively engage in green practices.

Another notable example of a Green Freight Program is the Green Freight Europe initiative. Launched in 2011, Green Freight Europe is aimed at improving the environmental performance of freight transport in Europe. This voluntary program brings together various stakeholders, including shippers, carriers, logistics service providers, and other companies, with the objective of reducing CO2 emissions, fuel consumption, and costs.

The program works by establishing a common platform for monitoring and reporting carbon efficiency in freight transport, encouraging the sharing of best practices, and recognizing improvements in environmental performance. The program provides tools and support to help companies measure, benchmark, and reduce their freight emissions. Participants can also benefit from increased transparency and the ability to make more informed decisions regarding their supply chain's environmental impact.

In this domain, there is a major role for the private sector in driving innovation and self-regulating. Many companies have taken various actions to implement green freight initiatives, aiming to reduce environmental impact and improve sustainability in logistics and transportation. Examples include DHL's GoGreen program, Maersk's Eco Delivery, FedEx's EarthSmart, UPS's Carbon Neutral Shipping, IKEA's Zero Emission Delivery, Walmart's Project Gigaton, and Nestlé's Lower-Emission Vessels.

Environmental Tariffs and Border Carbon Adjustments

The introduction of environmental tariffs and border carbon adjustments is an innovative approach to aligning the complexities of global trade with the urgent necessity for environmental sustainability. These mechanisms aim to internalize the environmental costs borne from the production processes of imported goods, essentially incentivizing greener manufacturing practices on a global scale.

The European Union, through its European Green Deal, is at the forefront of this movement, contemplating the establishment of a Carbon Border Adjustment Mechanism (CBAM) as a central feature. The intent of the CBAM is to charge importers for the carbon emissions associated with the production of imported goods, effectively mirroring the EU's internal carbon pricing structures. This policy is poised to prevent carbon leakage, where production might shift to countries with less stringent environmental regulations, thereby circumventing efforts to cut emissions. By equating the cost of carbon across borders, the CBAM would encourage non-EU producers to adopt greener technologies and processes if they wish to maintain competitive access to the EU market.

Similar initiatives are being considered globally. For instance, Canada has been exploring carbon adjustments at its borders, aligned with its domestic carbon pricing, to maintain trade competitiveness while pursuing ambitious climate goals. Meanwhile, Japan has initiated subsidies and tax incentives for green technologies, effectively reducing the carbon footprint of its industries, and could consider border adjustments as a complementary measure to protect its domestic industries.

The potential benefits of environmental tariffs and carbon border adjustments are significant. They can lead to a global leveling up of environmental standards, reduce the competitive disadvantages for businesses adhering to strict sustainability protocols, and stimulate investment in green technologies.

Moreover, these measures can motivate countries to set more ambitious climate targets, contributing to the global reduction of greenhouse gas emissions.

However, the implementation of such policies is not without challenges. It could lead to trade disputes, as countries affected by these tariffs may view them as protectionist measures. The World Trade Organization (WTO) must carefully scrutinize these mechanisms to ensure they comply with global trade rules and do not lead to arbitrary discrimination. Developing countries, which might lack the resources to rapidly transition to greener production methods, could find themselves at a disadvantage, potentially exacerbating global economic inequalities. There is also the risk of retaliatory trade measures, sparking a cycle of trade barriers that could harm the global economy.

Despite these challenges, the momentum for environmental tariffs and border carbon adjustments continues to grow as the global community seeks effective tools to incorporate environmental sustainability into the fabric of international trade. With thoughtful design and international cooperation, these mechanisms could serve as a cornerstone for a greener global economy, providing the incentives needed to embark on a collective journey toward a greener future.

Green Public Procurement Policies

Public procurement, representing a substantial portion of the global GDP, wields tremendous influence over the market, presenting unique opportunities to advance sustainability in consumption and production on a vast scale. When governments use their significant purchasing power to favor pro-environment and circular economy practices, they not only reduce their own environmental footprint but also set a precedent for the private sector to follow. This strategic alignment of procurement policies with environmental objectives can catalyze a market-wide shift towards sustainability, driving both demand and innovation in green products and services.

When governments use their significant purchasing power to favor pro-environment and circular economy practices, they not only reduce their own environmental footprint but also set a precedent for the private sector to follow

The United Nations Environment Programme (UNEP) has highlighted that green public procurement (GPP) can lead to a substantial reduction in CO2 emissions. For example, the implementation of GPP in the European Union could potentially lead to a reduction of 15 million tons of CO2 equivalent per year. This is because GPP influences market behavior, encouraging suppliers to develop green alternatives to meet the criteria established by governments.

Japan and South Korea offer instructive examples of how such policies can be implemented effectively. Japan's Green Purchasing Network (GPN), established in 1996, is an initiative that not only sets guidelines but also facilitates the sharing of information on environmentally friendly products among businesses and consumers.

The GPN has been influential in mainstreaming eco-friendly products in Japan's market. South Korea's Green Public Procurement program, backed by its Act on the Promotion of the Purchase of Eco-Friendly Products (2005), set ambitious targets. It aimed for 40% of all government and public organization procurement to be eco-friendly products, and by 2020, the program had achieved a rate of over 70%, according to the Korea Environmental Industry & Technology Institute (KEITI).

These policies are about more than just environmental benefits; they also have significant economic implications. The International Institute for Sustainable Development (IISD) notes that green procurement policies can stimulate economic growth by creating new markets for sustainable goods and services. They can also lead to cost savings in the long term due to the increased efficiency and reduced waste associated with sustainably produced products.

Despite the clear advantages, implementing GPP can be challenging. It requires the development of new criteria for product evaluation, training for procurement officials, and the establishment of a legal and institutional framework that supports such policies. Moreover, there is a need for international cooperation to ensure that these policies do not become barriers to trade but rather tools for promoting global environmental sustainability.

All told, green public procurement represents a powerful tool for governments to foster a greener economy. By leveraging their enormous purchasing power, governments can stimulate the development and dissemination of green technologies, influence market behavior, and set global benchmarks for sustainability. The success stories of countries like Japan and South Korea provide a roadmap for others to follow, with the promise of environmental, economic, and social benefits that extend well beyond their borders.

Circular Economy Promotion through Extended Producer Responsibility (EPR)

Extended Producer Responsibility (EPR) policies represent a paradigm shift in the way products are designed, consumed, and managed post-use. By making producers responsible for the entire lifecycle of their products, from manufacturing to disposal, EPR actively encourages greener production and waste management practices.

EPR, as a policy innovation, fosters a circular economy by minimizing waste and promoting resource efficiency. It establishes a direct link between producers and the environmental impact of their products, compelling a transformation toward more sustainable and responsible manufacturing practices.

In the European Union, which is the global leader in this space, EPR involves producers in taking financial and logistical responsibility for the collection and recycling of their products.

This not only ensures proper disposal at the end of a product's life but also incentivizes producers to design products with recyclability in mind.

The economic burden associated with waste management becomes a driving force for manufacturers to adopt eco-friendly materials and production processes.

In the context of trade, EPR extends the responsibility of producers beyond their domestic markets. Producers are mandated to manage the entire life cycle of their products, including the collection and recycling of discarded items.

This implies that manufacturers exporting goods to EU member states must adhere to EU EPR regulations, ensuring the environmentally sound disposal and recycling of their products.

Products designed with ease of disassembly and recyclability in mind not only comply with EPR regulations but also contribute to resource efficiency and waste reduction, aligning with the circular economy model.

As more and more producers adopt environmentally sustainable practices to get access to the EU market, these EPR policies can have a ripple international effect.

Other regions and countries may adopt similar measures or adapt their own policies to align with circular economy principles. For instance 2022 onwards, products sold in France or Germany required marketplaces to confirm that the manufacturer complied with the Extended Producer Responsibility (EPR) rules in the country where it sells the product.[24]

This harmonization of standards across borders can potentially create a global framework that encourages sustainable production practices and facilitates international trade based on environmentally responsible principles.

[24] EPR Info. Extended Producer Responsibility (EPR) How to get through the maze. 2021

Trade Facilitation for Renewable Energy Equipment

Shifting away from fossil-fuel energy towards low-carbon renewable sources is acknowledged as a crucial method for carbon emissions reduction; however, despite the abundant and free nature of renewable energy sources like sunlight and wind, the associated costs are high and necessitate advanced technologies. In light of this high comparative cost, domestic policies can either support or hinder renewable energy. This is exemplified by explicit trade barriers, such as import tariffs, which can needlessly increase equipment procurement costs, incentives for renewable energy generation affecting international trade dynamics, and significant impacts stemming from government support for fossil fuels and traditional electricity. Overcoming trade barriers introduced by these policies could facilitate the widespread adoption of renewable energy, aiding governments in addressing both climate change and extending sustainable energy access to millions in the developing world currently without grid connectivity. [25]

In 2020, Brazil adopted trade facilitation policies aimed at promoting the use and adoption of renewable energy equipment. A key step in this regard was the provision for duty-free import of certain renewable energy products, encouraging the adoption of clean energy technologies. Similarly, India is considering reducing the import tax on solar panels from 40% to 20%.[26]

This is a stance widely different from the position that India took in 2021, when the Indian government announced 25% basic customs duties on solar photovoltaic cells and 40% on solar photovoltaic modules in order to block Chinese imports and encourage indigenous manufacturing.[27]

[25] International Centre for Trade and Sustainable Development (ICTSD) . Removing Trade Barriers on Selected Renewable Energy Products in the Context of Energy Sector Reforms. 2013.

[26] Reuters (https://www.reuters.com/business/energy/india-may-cut-solar-panel-import-tax-make-up-domestic- shortfall-2023-05-30/)

[27] Reuters (https://www.reuters.com/business/energy/india-may-exempt-30-gw-solar-plants-equipment-duty- sources-2023-01-11/)

Environmental Performance Requirements in Free Trade Agreements

Environmental performance requirements embedded in free trade agreements (FTAs) represent a significant integration of environmental considerations into the realm of international trade. These requirements are strategically designed to ensure that trade partners adhere to specific environmental standards, promoting green and responsible environmental practices on a global scale. Countries and regions are recognizing the importance of integrating environmental considerations into trade agreements, reflecting a broader commitment to sustainable and responsible trade practices. Environmental provisions are being used as targeted policy tools to promote the green transformation and to leverage synergies between the economic and environmental effects of including environmental provisions in trade agreements.

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To illustrate, the United States-Mexico-Canada Agreement (USMCA), which replaced the North American Free Trade Agreement (NAFTA), includes a groundbreaking environmental chapter. This chapter addresses issues such as the illegal trade of wildlife, illegal fishing, and conservation of marine resources.

The agreement emphasizes the importance of effective enforcement of environmental laws and the adoption of measures to combat illegal trade, demonstrating a commitment to environmental stewardship in North American trade relations. Similarly, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) includes commitments related to environmental protection. The agreement acknowledges the importance of sustainable development, conservation of biodiversity, and the need to address climate change. Moreover, it encourages members to uphold their environmental laws and provides a platform for discussions on trade-related environmental issues.

Other notable agreements are the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. These are international agreements designed to regulate and control certain aspects of international trade for environmental and conservation purposes. CITES ensures that international trade in wildlife is sustainable and does not harm the conservation status of species. It involves a system of permits and certificates to monitor and control the trade of endangered species and their products. On the other hand, the Basel Convention regulates the export and import of hazardous waste and ensures that such waste is managed in an environmentally sound manner. It discourages the dumping of hazardous waste in developing countries, promoting responsible waste management practices.

Plurilateral agreements such as the Agreement on Climate Change, Trade and Sustainability (ACCTS) aim to generate momentum towards developing wider and globally agreed solutions to environmental challenges, in turn helping boost the uptake of environmental technologies and reduce the cost of environmental protection.[28]

ACCTS highlights the importance of maintaining the synergy between environmental goods and services during the process of trade liberalization.

On a bilateral level, the Australia-Singapore Free Trade Agreement includes a chapter on environmental cooperation. This chapter emphasizes the importance of sustainable development and environmental protection. By means of this Agreement, both countries have committed to effectively enforcing their environmental laws and promoting high levels of environmental protection.

28 Norway, New Zealand, Fiji, Iceland and Costa Rica

Policy considerations for the future of global trade

Policy considerations for the future of global trade

As the global economy forges ahead, the nexus of trade and environment becomes more pronounced and influential, heralding a shift that will define the future contours of international commerce. Recognizing the acute urgency of environmental challenges, there is a clear and present call to reorient the trade ecosystem towards a paradigm that seamlessly blends the exchange of goods and services with the principles of environmental sustainability. This pivot not only signifies a steadfast commitment to safeguarding our planet but also underscores the profound understanding that enduring economic success is inexorably tied to sustainable development.

Recognizing the acute urgency of environmental challenges, there is a clear and present call to reorient the trade ecosystem towards a paradigm that seamlessly blends the exchange of goods and services with the principles of sustainability

Within this transformative landscape, proactive policy considerations are crucial to ensure that trade remains buoyant, inclusive, digital, and green. Paramount among these is the pursuit of bilateral and multilateral agreements that explicitly lower barriers to the trade of sustainable goods. Such agreements are burgeoning as nations come to realize the intrinsic value of promoting environmentally sound trade practices.

Looking ahead, the World Trade Organization Director General recently noted in "The Economist" that open trade is crucial for decarbonization as it amplifies environmental policy action. [29] It is an indispensable means of pushing clean-energy technologies at speed and scale. In addition, trade is a strong force for increasing "carbon value for money"—that is, for maximizing emissions reduction per dollar spent. In fact, trade has been a big factor in the strongest cause for climate optimism today: the plummeting costs that have made wind and solar energy increasingly competitive with coal and gas.

[29] Nov 21, 2023

To ensure that global trade continues to grow, and -in parallel- evolves to meet the ambitious climate action goals, several key areas require dedicated policy focus to ensure a future where trade growth continues in an inclusive, digital, and green manner :

Strategic Agenda Setting: International trade bodies, notably the WTO, must prioritize sustainable trade in their discussions, embedding it deeply within their negotiation frameworks. This strategic agenda-setting will ensure that sustainability is not relegated to the sidelines but is integral to the development of trade policies and agreements.

Development and Harmonization of Standards: There is a pressing need to create a cohesive set of international standards for greener trade.

National Policy Reform: Countries should recalibrate their national trade policies to incorporate environmental sustainability as a core criterion, driving domestic industries towards greener production methods and encouraging international partners to engage in responsible trade practices. In many countries, especially LDCs, there will need to be a mechanism for technical assistance towards this end.

Digital Integration: As digital technologies become central to trade, policies must facilitate the digital transition in a way that promotes accessibility, mitigates the digital divide, and harnesses digital tools for efficient and sustainable trade logistics. Trade-Tech has the potential to achieve multiple objectives of inclusiveness, transparency, growth, efficiency, and sustainability.

Inclusive Growth: Trade policies should be designed to be inclusive, providing opportunities for small and medium-sized enterprises (SMEs) and marginalized communities to participate in global trade, thus ensuring that the benefits of trade expansion are widely and equitably shared. Green Trade should not become a protective measure, and add complexity that prohibits MSMEs from actively participating in global trade.

Capacity Building and Technical Assistance: Developing nations, in particular, require support to build the capacity to meet these new trade standards. Technical assistance, technology transfer, and financial aid are critical to enable these countries to integrate environmental sustainability into their trade frameworks effectively.

Sustainability-oriented Public-Private Partnerships: Encouraging collaborations between governments and the private sector can drive innovation and investment in green technologies, ensuring that trade growth does not come at an environmental cost.

Green Trade Finance: Reorienting trade finance to support environmentally and socially beneficial projects can significantly influence the global trading system's sustainability, encouraging a shift towards green investment.

Through these focused policy considerations, global trade can transform into a force for good that promotes not just economic growth but also contributes to a greener and more resilient global economy. The collective efforts in these key areas will be instrumental in shaping a future where trade is not only a catalyst for prosperity but also a guardian of our planet's well-being.

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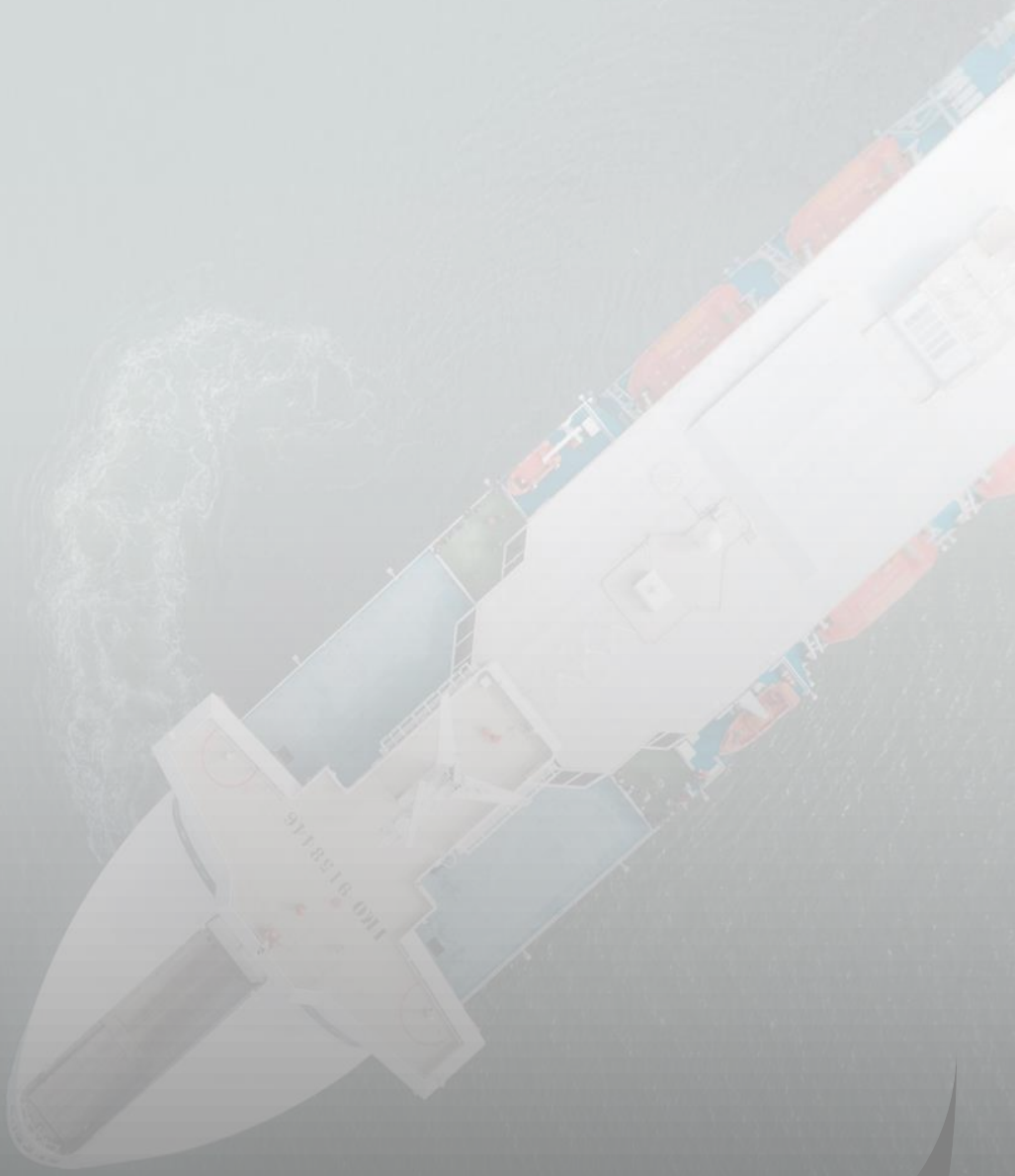

Navigating the Green Horizon

The Dynamics of Global Trade Sustainability