

# ***The WTO, Climate Change and Sustainable Development***

(accepted for publication to be published as IJSD 2024 V27 N3)

*Raymond Saner, Prof Titular, University of Basel  
Director of CSEND, Geneva*

4, place des Alpes  
1201 Geneva  
Switzerland

raymond.saner@unibas.ch  
saner@csend.org

Raymond Saner is a Titular professor at Basle University (Economics & Management Department) and taught environmental negotiations at Lüneburg University. He is a co-founder (1993) of the Centre for Socio-Eco-Nomic Development (CSEND), a Geneva-based NGO with ECOSOC accreditation and consultative status. He was a member of several Expert Group Meetings (EGM) on Global Sustainable Development at the UN in NY. He authored a chapter on the science-policy interface for the GSDR Report 2015, and has been curator and speaker at SDG seminars for UNOSD 2019-2023. He has published articles, book chapters, and a book on the SDGs and trade; organized panels at WTO on plurilateral agreements (2021), contributed to UNCTAD WIR 2011 on "Investing in a Low-Carbon Economy", authored "UNFCCC-COP 24 – need to go beyond "business as usual" to accelerate zero-carbon electricity generation (2019) and was lead author of the article "the 2030 agenda compared with six related international agreements: valuable resources for SDG implementation"

## **Abstract**

The author contributes to the trade & environment debate that so far excluded theoretical concepts such as the principle of mutual supportiveness of international agreements, the insights of public goods theory, and a positive trade & environment agenda.

Based on the inclusion of these new concepts, an enlarged frame of trade, environment, and development is proposed which forms the basis for a reinterpretation of standard WTO articles making a more inclusive approach possible to stop climate change. For instance, the Local Content Requirement is discussed as a means to support citizens of developing countries to generate their renewable energy sources combined with a reinterpretation of Intellectual Property Rights to make the transfer of technology possible of renewable energy in the less developed parts of the world

The suggested solution is a cross-régime/forum agreement to reduce climate risks by integrating trade into the 2030 Agenda and its 17 SDGs resulting in a reduction of climate

warming which is much less costly than the looming future costs and liabilities caused by climate change.

**Keywords:**

Trade in environmental goods and services, effective environmental policies, cross régime/forum, collective sovereign concessions, aligning WTO with the 2030 Agenda.

## **Purpose of article**

This paper was written as an essay and the method used is a reflection on the current WTO trade régime followed by a proposal on how trade and environment (T&E) could be made more mutually supportive and organized more effectively and comprehensively.

To make T&E more complementary, the mandate and rules of engagement in both fields need to be enlarged to make their interactions more complimentary and hence more mutually beneficial. Such an enlargement requires a re-assessment of the current contractual and legal obligations.

The author suggests that to slow climate warming, WTO member countries need to give up some of their sovereignty regarding their trading rights to enlarge the T&E space, to go beyond business as usual, and instead broaden the policy space of WTO T&E rules and articles.

The 2023 WTO World Trade Report (WTR) discusses the geopolitical fragmentation of the world due to the poly-crises characterized by wars in several parts of the world causing loss of life, destruction of infrastructure, and reduced space to trade for exemplified for instance by the scarcity of Ukrainian and Russian fertilizers impacting world trade in agriculture thereby causing food insecurity in a large number of low-income developing countries (LIDCs) and Least Developed Countries (LDCs)

The WTO World Trade Report addresses the risk of slow economic growth and suggests a re-globalization of the world economy through more trade and other accompanying trade policy measures expecting that more trade would help decrease the threat of stagnation and counter the risk of increasing poverty and socioeconomic hardship particularly in LIDCs and LDCs.

However, a re-globalization of trade would also mean renewed economic activities and a renewed higher risk of renewed depletion of natural resources depletion, more waste, and higher CO<sub>2</sub> emissions resulting in a further worsening of climate warming and climate change.

Being mindful of the risk on climate change that a re-globalization might cause, the World Trade Report proposes measures to decrease the environmental risk through a set of trade policies which promise to decrease environmental risks linked to a re-globalization of trade.

While these policy suggestions could help put global trade back on track, this could also increase the risk that more trade could increase climate change should no regulatory measures be agreed to mitigate climate risk due to renewed trade activities.

The 2023 report of the IPCC on climate change is very stern and most worrisome indicating that CO<sub>2</sub> emissions have increased and that the likelihood and risks of climate change can become soon unavoidable, irreversible or abruptly should no policies be in place to

mitigate climate change. Alarming news was also issued by the Stockholm Environment Institute in its Production Gap Report (2023) stating:

*“Governments, in aggregate, still plan to produce more than double the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C. The persistence of the global production gap puts a well-managed and equitable energy transition at risk.”* (p.2) <sup>1</sup>

In light of the plans of many governments to continue to produce energy through fossil fuels generating increases of CO<sub>2</sub>, the 1.5% maximum increase of warming will most likely not be kept and the likelihood of destructive consequences of climate change seems inevitable.

Energy is needed for human consumption and industrial production the latter being linked to the production of goods and services resulting in further increases of trade. It is hence of great urgency to decrease the use of fossil fuel and to offset strong or even increasing trade through trade policies which can contribute to slowing down climate warming.

Fragmentation due to geopolitical crises and climate change needs to be countered by strengthening a re-integration of fragmented trade and development and by integrating trade more effectively in the 2030 Agenda and its 17 sustainable development goals. A new globalization is needed, not a re-booting of the old globalization which has led to the impasse that we are facing today.

At the same time, corrective measures in the field of energy production and trade of goods should also take into account the needs of the LIDCs and LDCs<sup>2</sup> who need to get out of poverty and instead be integrated into a sustainable future. SDG 17.11<sup>3</sup> promised developing countries stated that the international community will:

*“Significantly increase the exports of developing countries, in particular with a view to doubling the LDCs share of global exports by 2020”.* <sup>4</sup>

This target date 2020 was not achieved. LIDCs and LDCs have not been able to increase their share of international trade. Practically all the countries that have signed the 2030 Agenda are also members of the WTO. In light of the worsening climate conditions and the increase of precariousness in LIDCs and LDCs, urgent solutions are needed for all countries to reduce the negative impact of globalization on climate conditions.

The WTR mentions research being done on trade and the environment to find means to reduce the climate impact of trade. This is a very timely effort but at the same time will have limited impact because all current aims to improve the trade-environment nexus are limited as long as the current WTO trade rules cannot be changed and made fit to allow for a carbon-free trade-environment linkage. Effective trade-environment improvement requires a change in the current trade rules.

As stated by Mavroidis & de Melo, J, (2015);

---

<sup>1</sup> Production Gap Report, Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises; Stockholm Environment Institute, Stockholm

[https://productiongap.org/wp-content/uploads/2023/11/PGR2023\\_web.pdf](https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web.pdf)

<sup>2</sup> LIDC and LDC definitions: <https://data.worldbank.org/?locations=XM-XL>

<sup>3</sup> [https://stats.unctad.org/Dgff2016/partnership/goal17/target\\_17\\_11.html](https://stats.unctad.org/Dgff2016/partnership/goal17/target_17_11.html)

<sup>4</sup> United Nations (2022) “Sustainable Development Goals: Knowledge Hub” NY. 2022  
<https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals/>

*“Needed changes at the multilateral level require delegation of sovereignty to move towards a contract that would require positive steps from the WTO membership in order to avert climate change” (p. 225).*

What follows are analyses and reflections on how the current WTO rules could be amended to make trade more aligned with the Paris Agreement and the 2030 Agenda thereby reducing the risk of climate.

## **Environment and Trade: Past and Present**

The difference between the dramatic fast paced destruction caused by climate change and the snail-paced negotiations on trade in environmental goods and services at the WTO is unfortunate. Without better alignment of trade with the Paris Agreement and the 2030 Agenda the risk increases of disruptions of GSCs and GVCs due to countries passing of environmental protection laws to prevent climate change that are not aligned with WTO trade rules.

WTO’s T&E need to be amended to better fit the Paris Agreement and other trade agreements which increasingly include rules pertaining to the environment such as FTAs and RTAs. To advance the current T&E negotiations, it is useful to revisit the treaty text of the WTO such as the preamble of the GATT, now WTO since 1995, which states:

*(PREAMBLE OF THE WTO AGREEMENT 1.1 Text of the Preamble) “ The Parties to this Agreement, Recognizing that their relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while 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”.<sup>5</sup>  
(Underlined by author)*

The drafters of the preamble agreed to focus on economic development through trade and that trade would also ensure full employment, optimal use of the world’s resources and protect the environment.

It is important to compare the WTO preamble’s statement on “optimal use of the world’s resources” with what can be read today on the WTO website regarding trade and environment issues and on sustainable development:

“It is the potential impact of economic growth and poverty alleviation that makes trade a powerful ally of sustainable development. The multilateral trading system is an important tool to carry forward international efforts aimed at achieving this goal. The purpose of trade liberalization and the WTO’s key principle of non-discrimination is a more efficient allocation of resources,

---

<sup>5</sup> [https://www.wto.org/english/res\\_e/publications\\_e/ai17\\_e/wto\\_agree\\_preamble\\_jur.pdf](https://www.wto.org/english/res_e/publications_e/ai17_e/wto_agree_preamble_jur.pdf)

which should be positive for the environment trade liberalization and the WTO's key principle of non-discrimination is a more efficient allocation of resources, which should be positive for the environment<sup>6</sup>. (Underlined by author)

The term “More efficient allocation of resources” means “more of the same” conditions of trade which in other words means a continuation of exchanging of goods without efforts to protect the overexploitation of natural resources resulting in the depletion of essential resources which is one of the key causes of climate warming (use of fossil fuels, frantic rush towards often un-sustained consumption, unchecked dumping of industrial waste etc.).

What is missing is the “effectiveness” of sustainable allocation of resources. Climate Warming will not be solved only through reducing tariffs on environmental goods and liberalizing access to environmental services since such tariff reductions would lead to more and faster production and consumption of natural resources generating more GHG emissions. Tariff reductions alone are measures that do not guarantee that CO2 emissions as well as other Green House Gases (GHG) would be reduced or at least that their use would be halted at current levels.

## **Inadequate approach to ensure environmental sustainability through trade<sup>7</sup>**

The link between trade and environmental protection — both the impact of environmental policies on trade and the impact of trade on the environment — was recognized as early as 1970. Towards the end of the Uruguay Round (1986–1994), attention was once again drawn to trade-related environmental issues, and the role of the soon-to-be-created World Trade Organization.<sup>8</sup> At the end of the Uruguay Round in 1994, trade ministers from participating countries decided to begin a comprehensive work Programme on trade and environment in the WTO. They created the Committee on Trade and Environment (CTE)<sup>9</sup>.

1. The CTE met formally six times in 1995 and seven times in 1996. Membership of the CTE was open to all WTO Members; observer governments and observers from inter-governmental organizations were invited to participate and informal meetings were also held, including a joint informal meeting with the Committee on Technical Barriers to Trade on the issue of eco-labeling, Stocktaking exercises were held in 1995 and 1996 and specific issues on the Items of the work program were identified and a very future-oriented comprehensive report of 45 pages and detailed annexes was published entitled “Report (1996) of the Committee on Trade and Environment”.<sup>10</sup> A lot of far-reaching work was done by a larger number of WTO member countries and delegates. Unfortunately, the progress made was not turned into a formal agreement and many years of trade negotiators' search for a meaningful solution

---

<sup>6</sup> [https://www.wto.org/english/tratop\\_e/envir\\_e/sust\\_dev\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/sust_dev_e.htm)

<sup>7</sup> [https://www.wto.org/english/news\\_e/news22\\_e/tessd\\_20jul22\\_e.htm](https://www.wto.org/english/news_e/news22_e/tessd_20jul22_e.htm)

<sup>8</sup> [https://www.wto.org/english/tratop\\_e/envir\\_e/envir\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envir_e.htm)

<sup>9</sup> [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/bey2\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm)

<sup>10</sup> Press release: [https://www.wto.org/english/thewto\\_e/minist\\_e/min96\\_e/environ.htm](https://www.wto.org/english/thewto_e/minist_e/min96_e/environ.htm); full report: <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/WT/CTE/1.pdf&Open=True>

to regulate trade and the environment was wasted.

The trade & environment division of the WTO provides service and support to WTO committees dealing with trade and environment and technical trade barriers. For Trade and Environment, it supports the work of the Committee on Trade and Environment (CTE) by providing technical assistance to WTO members; reporting to senior management and WTO members on discussions in other intergovernmental organizations (IGOs), including negotiation and implementation of trade-related measures in multilateral environmental agreements. The division maintains contacts and dialogue with NGOs and the private sector on issues of mutual interest in the area of trade and environment.<sup>11</sup>

The Trade and Environment Division also services the WTO Committee on Technical Barriers to Trade (TBT). However, attempts to reach concrete agreements on how to make trade and trading rules be effective in preserving the environment did not make much progress. The lack of concrete progress cannot be attributed to the T&E division, the T&D Committee, or the Forum on Trade, Environment & the SDGs (TESS) whose team is doing their best to ensure progress on trade & environmental issues.<sup>12</sup>

Progress in WTO trade negotiations is the prerequisite of the WTO members who have not been able to reach a consensus as to what could be done about the preservation of the environment and the unwavering aim to reach efficiency gains in trade. Many years have been wasted and concrete progress has not been possible so far leaving many stakeholders (government officials, NGOs, and some businesses) left frustrated if not despairing about the lack of progress given the alarming speed of increased climate change catastrophes.

### **Trade and Environmental Sustainability Structured Discussions (TESSD)**

Given the pressing climate change realities, a new effort was made by fifty WTO members who announced on 17<sup>th</sup> November 2020 their intention to intensify work on trade and environmental sustainability at the WTO by organizing “structured discussions” for interested WTO members as well as a dialogue with external stakeholders.<sup>13</sup> The Trade and Environmental Sustainability Structured Discussions (TESSD) are intended to complement the work of the T&D Committee and other relevant WTO bodies and to support the objectives of the Marrakesh Agreement Establishing the WTO, which envisages a global trading system that protects and preserves the environment in accordance with sustainable development.

The Ministerial Statement adopted in 2021 sets out future work for the initiative in areas such as trade and climate change, trade in environmental goods and services, circular economy, and sustainable supply chains.

There are currently 74 WTO members participating in the Trade and Environmental Sustainability Structured Discussions, including members from all regions and at all levels of

---

<sup>11</sup> [https://www.wto.org/english/thewto\\_e/secre\\_e/div\\_e.htm](https://www.wto.org/english/thewto_e/secre_e/div_e.htm)

<sup>12</sup> Birkbeck D.C., Bellmann, Ch, Lehmann, F.; 2023, “For a Trading System that Supports an Ambitious Climate Agenda, Climate-Resilient Development, and Just Transitions”; <https://tessforum.org/latest/for-a-trading-system-that-supports-an-ambitious-climate-agenda-climate-resilient-development-and-just-transitions>

<sup>13</sup> [https://www.wto.org/english/tratop\\_e/tessd\\_e/tessd\\_e.htm](https://www.wto.org/english/tratop_e/tessd_e/tessd_e.htm)

development: least developed countries (LDCs), developing countries and developed countries. Ambassador Nadia Theodore (Canada) and Ambassador Gloria Abraham Peralta (Costa Rica) jointly coordinate this initiative, which is open to all WTO members.

At a plenary meeting on 19-20 July 2022, WTO members taking part in the Trade and Environmental Sustainability Structured Discussions (TESSD) explored the next steps in preparing for a high-level event in December and proposals for outcomes. The year-end stocktaking event is intended to be a stepping-stone towards the 13th Ministerial Conference (MC13).

TESSD is organized around four informal working groups namely:

1. trade-related climate measures e.g. carbon pricing and carbon standards
2. Environmental goods and services, climate mitigation and environmental services including non-tariff barriers and technical barriers to trade.
3. Circular economy-circularity, trade policy aspects of trade and circular economy.
4. Subsidies. Industrial subsidies and the trade effects of green subsidies.

TESSD organized plenary meetings and several informal working group meetings in 2023 which indicates efforts by some countries to want to reach tangible results ideally before the next Ministerial WTO meeting. However, in view of the broad range of factors which impact climate change, it does not make sense to work in isolation.

Discussions on trade and environment involved in varying ways other International Organisations such as UNCTAD, UNIDO, WIPO, UNEP, UNDP, WB, IMF and Inter-governmental Organisations such as the South Center and NGOs with climate change related competences such as IISD, IUCN, WWF and others. Climate Warming is progressing with alarming speed. We do not have the luxury of working in silos about issues which are clearly intersect oral and multi-factor based.

To give an example, UNCTAD listed several very important concerns about trade in environmental goods and the impact of trade on climate warming in its 2021 Trade and Development Report. Martin Khor of the South Center (2010) wrote a policy paper on climate change and trade relations 13 years ago with many very relevant policy proposals and both Organisations organized a webinar series on Trade and Development in 2022<sup>14</sup>.

In response to the four working group's attempts to make progress in the T&E field, criticisms tabled by UNCTAD in its 2021 T&D report need to be responded to by the TESSD group. The UNCTAD report states the following:

*“These GHG emission account for around a quarter of global carbon emissions. This suggests that trade policy, and in particular international trade rules, will play a secondary role in reshaping the climate agenda. Rather than building a trade and environment agenda that pushes trade liberalization, such an agenda should focus on facilitating green technology transfers and providing climate finance to developing countries. Given that structural*

---

<sup>14</sup> <https://us5.campaign-archive.com/?u=fa9cf38799136b5660f367ba6&id=022fe37977>

*transformation in a climate constrained world requires a shift from high- to low (and no) -carbon technologies, it can only be achieved when it is approached in an integrated manner by an effective developmental State, with technological change occurring alongside productivity growth, expanding employment opportunities, and rising living standards.” (p. XII)*

The WTO secretariat announced on 9<sup>th</sup> November 2023 that there would be a first-ever trade Day at COP 28 in Dubai on 4<sup>th</sup> December in 2023 in cooperation with UNCTAD, ICC, the World Economic Forum, and the Abu Dhabi Department of Economic Development. After so many years of absence of official representation at all previous COPs<sup>15</sup>, it was laudable that the WTO was present during the discussion even though it cannot engage in substantive negotiations since WTO member countries reserve themselves the right to make any trade concessions to Organisations external to the WTO.

Complementary initiatives at the regional level could help advance the T&E negotiations for instance through FTAs. Policy suggestions for the African AfCFTA have been proposed in the African Union’s publication titled “African Union Climate Change and Resilience Development Strategy and Action Plan ” (2023)<sup>16</sup>.

*There is potential for the AfCFTA to enable Africa’s response to climate change through targeted trade related measures. For example: the exemption of environmental goods and technologies such as turbines and photovoltaic systems from sensitive and exclusion lists; prioritization of the liberalization of trade in environmentally related services since this sector is not among the five priority service sectors (i.e. business services, financial services, transport, communications and tourism) identified by AfCFTA negotiators for early liberalization; due attention given to the harmonization and strengthening of environmental standards and regulation under the relevant provisions of the AfCFTA Protocol on Trade in Goods and Protocol on Trade in Services as well as within the framework of the African Quality Standards Agenda; and the mainstreaming of climate friendly considerations into the negotiations on investment, intellectual property rights, competition policy and e-commerce.<sup>17</sup>*

The resilient Development and Strategy and Action Plan is built on the African Leaders’ Nairobi Declaration on Climate Change and Call to Action<sup>18</sup>. Such regional initiatives could be further strengthened by the plurilateral agreement called Investment Facilitation for Development (IFD) which is not yet agreed by all WTO member countries (consensus decision-making rule). While emphasizing that reaching a multilateral agreement would be the ideal scenario, IFD participants agreed to pursue the plurilateral pathway to seek the incorporation of the IFD Agreement into the WTO rulebook under Annex 4 on Plurilateral Trade Agreements as established in Article X.9 of the WTO Agreement.<sup>19</sup>

---

<sup>15</sup> [https://www.wto.org/english/news\\_e/news23\\_e/cop28\\_09nov23\\_e.htm](https://www.wto.org/english/news_e/news23_e/cop28_09nov23_e.htm)

<sup>16</sup> [https://au.int/sites/default/files/documents/41959-doc-CC\\_Strategy\\_and\\_Action\\_Plan\\_2022-2032\\_08\\_02\\_23\\_Single\\_Print\\_Ready.pdf](https://au.int/sites/default/files/documents/41959-doc-CC_Strategy_and_Action_Plan_2022-2032_08_02_23_Single_Print_Ready.pdf),

<sup>17</sup> Ditto, page 69

<sup>18</sup> [https://www.afdb.org/sites/default/files/2023/09/08/the\\_african\\_leaders\\_nairobi\\_declaration\\_on\\_climate\\_change\\_rev-eng.pdf](https://www.afdb.org/sites/default/files/2023/09/08/the_african_leaders_nairobi_declaration_on_climate_change_rev-eng.pdf)

<sup>19</sup> [https://www.wto.org/english/tratop\\_e/invfac\\_public\\_e/invfac\\_e.htm#discussions](https://www.wto.org/english/tratop_e/invfac_public_e/invfac_e.htm#discussions)



## **New policies needed to move the T&E discussions forward**

Reaching a more comprehensive green trade agreement at WTO requires new thinking that goes beyond established concepts and beliefs that hold mainstream trade economists and trade lawyers captive. New thinking includes considering the application of the principle of mutual supportiveness, of socio-economics, positive trade concepts, and a reassessment of LCR, TRIMS, and TRIPS all described in detail below.

### **1. Trade and Environment as Public Goods**

The international community has to move towards a more inclusive, transparent and participatory future of trade and development. As stated by Mark Halle (2015) *“[t]he multilateral trading system has been a faithful servant of the present economic paradigm – promoting neo-liberal economics based on the Washington consensus. If that model is a problem for the Global Goals, the trading system as currently conceived and organized is also a problem.*

*We cannot have, on the one hand, SDGs that call for a global transformation and a new economic paradigm and, on the other, a trading system that slavishly serves the older, failed paradigm. We need a new analysis: the governance of global trade as if implementing the SDGs really mattered.”* Building on Mark Halle’s witty and sardonic bon mot, what is needed is to make clear to the global community at large and to all its citizens that implementing the SDGs actually really matters!

A clean and healthy environment is an absolute public good and the 2030 Agenda with its emphasis on climate change by SDG 13 targets leaves no doubt as to what all actors of this planet are expected to do be they governments, enterprises or society at large. The overarching value of the SDGs is given by the concepts of public goods and common goods (Saner, 2016; Bardy et al, 2021; Stiglitz, 1999).

Economists and Social scientists have conceptualized the notions of Public Goods and Common Goods from different perspectives (Beat Bürgenmeier, 1992, 1999). The concept of Public Good evolved from a purely individualistic and market-oriented definition, to a concept that now includes the notion of society at the global level.

The notion that trade is based on contractual/transactional arrangements between buyers and sellers free of environmental and social costs is based on an abstraction from economic and trading reality. What is currently not factored into the price of traded goods are the external costs that occurred as a result of the production of the traded good.

The classic example of a negative externality is the selling of fossil fuel products which once bought and consumed generate important negative impacts such as CO<sub>2</sub> which is a main cause leading to climate warming. The current goal of putting a carbon tax on imported goods goes in the direction of internalizing into the price negative external costs. Another complementary policy measure could be reducing subsidies that encourage fossil fuel consumption.

The so-called negative externalities should be either factored into the price of a traded good or at least be listed on the product label as is already done in many countries about alerting a consumer/buyer of agricultural products as to what ingredients the purchased food product contains for instance regarding chemicals used in the agricultural food product or later on during the processing of the final food product.

Another example is the sales advertisement of apartments and real estate where the seller adds to the sales price information regarding CO2 emissions of the real estate object revealing the hidden costs of required heating and the CO2 effect such heating will generate.

*Rashmi Banga, Senior Economic Affairs Officer at UNCTAD* has been working closely with member states on a “Positive Trade and Environment Agenda” which proposes incentives rather than punitive actions at the WTO for greener and sustainable trade.<sup>20</sup> For example, to address plastic pollution, WTO can help in encouraging the trade of environmentally sustainable substitutes of plastics, which include jute, glass, pottery and ceramic, natural fibers, paper and cardboard, rice husks and organic wastes, milk protein and natural rubber.

These are the products that can also help in achieving the objective of increasing market access for developing countries as developing countries are the main exporters of these environmentally sustainable substitute products. To encourage trade in these products, incentives like “zero tariffs on Plastic Substitutes” could be discussed in the WTO.

She further explained that this “positive trade and environment agenda” can be a way forward in the WTO. It would include facilitating patent-free green technology transfers; providing additional finance for promoting trade of environmentally sustainable products e.g., through the Trade and Environment Fund; building technical capacities, especially of LDCs and SIDS, in setting up climate-smart infrastructure; providing incentives like preferential market access based on progress towards nationally committed goals; and ensuring adequate policy and fiscal space for developing countries for designing their trade policies seeking environmental goals.

After years of silence since the start of the 2030 Agenda, the WTO secretariat focuses on trade and the SDGs producing guidance notes, policy briefs, media events and plans for more analytical and practical work on the T&E and the Trade and SDG topics. The academic chairs Programme and the other research units of the WTO have done occasional work on these topics but could be guided to do more such research work to contribute more insights and suggestions on how the costs of public goods that are used for the production of goods and services could be measured and integrated into the pricing of goods and services and how lessons learned from the current attempt to install a carbon tax could also be applied in other domains of trade.

## **2. Solutions within WTO rules and agreement**

---

<sup>20</sup> UNCTAD (2023) “A Positive Trade and Environment Agenda for the BRICS”, UNCTAD-Geneva, <https://spotlight.ink/a-positive-trade-and-environment-agenda-for-the-brics-unctad/>

The WTO has general exception provisions that allow trade restrictions that would otherwise be inconsistent with mainstream obligations. Such public policy provisions for instance permit restrictions of trade to protect human (no slave labour), animal and plant life or health (Article XX (b) to conserve exhaustible natural resources. Such restrictive measures would though have to be used in a non-discriminatory way in both MFN and national treatment sense which in practice would be difficult and most likely be seen by some WTO member countries as being opportunistic or illegitimate thereby leading to a prolonged trade dispute settlement process.

However, some past WTO rules could be re-introduced or more broadly interpreted in the interest of stopping climate change as fast as possible. These re-interpretations and broadening concepts are as follows.

### **Local Content Requirements**

Given the speed of environmental hazards and disruptions caused by climate change, urgent action is needed to spread the knowledge as broadly as possible concerning producing, maintaining and further developing renewable technologies and other technologies that can be used to reduce greenhouse gases (GHG). This would include non-industrial sectors like agriculture and services. Established notions of intellectual property should be revised if proven to slow down too long remedial action against climate change or even prohibit technology transfer for notions of private property which is unreasonable in today's context of rapid climate change.

The actual production and maintenance of renewable technology should involve local workers and engineers instead of importing an external workforce which would take away jobs from locals but also keep local small and medium-sized enterprises outside the supply chain thereby reducing the likelihood of transfer of technology to local enterprises, workers and research centers.

To enable local SMEs to supply intermediary parts of solar panels and windmills would require investors to organize skills training and knowledge transfers through formal education and on-the-job training which would mean that foreign investors would have to absorb initial investment costs in people training but the transfer of knowhow at different skills level is crucial to create local capabilities and supplies. As stated by the IPCC report titled "Climate Change 2022-Mitigation of Climate Change-Summary for Policymakers":

"Climate governance, acting through laws, strategies and institutions, based on national circumstances, supports mitigation by providing frameworks through which diverse actors interact, and a basis for policy development and implementation (*medium confidence*). Climate governance is most effective when it integrates across multiple policy domains, helps realize synergies and minimize trade-offs, and connects national and sub-national policymaking levels (*high confidence*). Effective and equitable climate governance builds on engagement with civil society actors, political actors, businesses, youth, labour, media, Indigenous Peoples and local communities (*medium confidence*), E3", p45, (underlined by author)

Such transfer of skills and training could be done through local content requirement (LCR) which is a policy or regulation that stipulates a minimum percentage of a product's value that must be sourced locally. This could include using local labor, materials, or components in the production of goods or services.

Governments are often inclined to implement LCRs to promote domestic industries, create jobs, and enhance economic development thanks to LCR policies (Kuntze & Moerenhout, 2013). The WTO rules generally discourage the use of LCRs with reference to the Trade Related Investment Measures (TRIMs) agreement. However, LCRs might be justified under specific WTO rules such as those related to environmental protection or public health. However, if a country is member of the plurilateral Government Procurement Agreement (GPA), the use of LCR would be considered unacceptable.

Summarizing the key points of LCR practice and rules, Isabelle Ramdoo (2016) writes<sup>21</sup>:

*“Local content policies are critical to ensure that the maximum of benefits from production activities accrue to local economic actors. Yet, local content policies entail some distortionary effects in favor of local actors, which may be considered as too discriminatory if done in an unbridled manner. International trade and investment rules have, over time, disciplined the use of industrial policies, including local content policies. Developing countries still maintain numerous flexibilities and significant policy space to stimulate linkages development.”*

In light of the urgency to support LIDCs and LDCs in facing the effects of climate change, it could be a very important concession by the developed countries to include LCRs in all investments made in LIDCs and LDCs for instance by employing and training local employees in renewable energies, by sourcing materials from local SMEs for solar panels and windmills as well as other crucial investments and economy activities which could lead to knowledge and skills transfers to local populations.

## **Technology Transfer and IP sharing**

Besides strengthening capacity building in maintaining renewable energy systems in LIDC/LDCs through education, training and on-the-job learning, patents linked to renewable energy could be shared between patent holders and users of patents.

Speeding up the creation of local competence in anti-climate change know-how could be accomplished through revisiting the TRIPS agreement and to explore ways how to apply similar exceptions as are available for LDCs in the field of health.

---

<sup>21</sup> Ramdoo, Isabelle, (2016), “Local content, trade and investment: Is the policy space left for linkages development in resource-rich countries”, comprehensive analysis and discussion of Local Content Policies particularly table 4, pp 23-25

Faced with the full brunt of climate change like inundations, dryness and deforestation exceptions could be considered to allow LIDCs/LDCs to get access to technology from developed countries such as carbon-reducing machines through the clause of “compulsory licensing”. Such use of the “compulsory licensing” option could be a leverage for LIDCs/LDCs in their international negotiations for CC reduction. They could for instance agree to ambitious National Determined Contribution (NDC)<sup>22</sup> under the Paris Agreement and forgo the compulsory license option provided developed countries owning the IP of renewable energy sources help them implement their national GHG emissions reductions. Helping LIDCs/LDCs reduce their carbon emissions would also be beneficial for the developed countries since climate change does not stop at national borders.

Brazil has called for a Doha Declaration on Climate Change, applying the same logic to the global public good of climate mitigation as was applied in the area of medicines to human health, namely taking full advantage of the flexibility within TRIPS (WTO Agreement on Trade-related Aspects of Intellectual Property Rights) to grant compulsory licenses<sup>23</sup>.

Compulsory Licensing of anti-Climate Change technology would be difficult and contentious. Most companies in developed industrial countries including China, still considering itself a developing country, do not agree with a forced sharing of their patents. Still, cooperation in the sharing of renewable energy technology is urgently needed including sharing basic intellectual propriety as well as regarding the secondary production process IPs.

IPs are needed to implement and maintain technology products. The IPCC Climate Change 2023 Synthesis Report simply states:

*“Finance, technology and international cooperation are critical enablers for accelerated climate action. If climate goals are to be achieved, both adaptation and mitigation financing would need to increase manifold. There is sufficient global capital to close the global investment gaps but there are barriers to redirect capital to climate action. Enhancing technology innovation systems is key to accelerate the widespread adoption of technologies and practices. Enhancing international cooperation is possible through multiple channels.” (p.111)<sup>24</sup> (underlining by the author).*

Technology Transfer based on sharing of IP can be organized and agreed to by developing partners, advanced economies and LIDCS/LDCS with reference to the Sustainable Development Goal 17 titled "Strengthen the means of implementation and revitalize the global partnership for sustainable development"<sup>25</sup> which is about The UN document “Strengthen the means of implementation and revitalize the global partnership for sustainable development”

---

<sup>22</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs>

<sup>23</sup> [https://www.wto.org/english/tratop\\_e/trips\\_e/public\\_health\\_faq\\_e.htm](https://www.wto.org/english/tratop_e/trips_e/public_health_faq_e.htm)

<sup>24</sup> IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

<sup>25</sup> [https://en.wikipedia.org/wiki/Sustainable\\_Development\\_Goal\\_17](https://en.wikipedia.org/wiki/Sustainable_Development_Goal_17); <https://sdgs.un.org/goals/goal17>

that states:<sup>26</sup>

*“Sustainable Development Goals Targets 17.6 and 17.8 respectively aim to “Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism“ and to “fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology”. (underlined by the author).*

Transfer of technology to increase the availability of renewable energy should include both sharing of patents for the production of renewables as well as learning how to cope with redundant old solar panels whose highly toxic chemical content requires special technical knowledge and materials. Patent holders should share their IP for the production of renewable energy thereby helping the poor move towards less polluting energy sources contributing to the reduction of CO<sub>2</sub>. Sharing of IP and giving LIDCs/LDCs energy manufacturers the right to maintain, improve, and share new generations of renewable energy would be in the interest of all parties involved in such an IP sharing arrangement.

Cutting edge technologies subject to patents are not being shared willingly in general and compulsory licensing could discourage investors of developed countries holding patents to renewable energy technology. However, in the interest of fighting the global climate change threat, governments and MNE investors of developed and developing countries should be able to make concerted efforts to implement SDG 17.7 that states “Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed”<sup>27</sup>

### **3. Solutions outside the WTO context**

Trade agreements and negotiations are also conducted outside the WTO context. For instance, rules pertaining to maritime shipping are negotiated within the context of the International Maritime Organization (IMO). Fuel use in shipping is a major source of GHG. This is an environmental policy issue but becomes a trade issue if WTO member countries decide to prohibit market access (ports) for ships using primarily fossil fuel. Members of the IMO are currently discussing how they could reduce CO<sub>2</sub> emissions. Some members want stringent rules that would apply to all ships whether they are owned by a shipping country located in a developing country or developed country.

Members are also discussing solutions entailing emissions trading, use of a bunker levy, or trading energy efficient credits based on the efficiency performance of ships which could be an interesting example for other sectors to follow who are outside the WTO context. The IMO

---

<sup>26</sup> <https://sdgs.un.org/goals/goal17> and <https://sdgs.un.org/topics/science>;

<sup>27</sup> [https://sdgs.un.org/goals/goal17#targets\\_and\\_indicators](https://sdgs.un.org/goals/goal17#targets_and_indicators)

released this year a strategy for how it proposes to reduce GHG for global shipping which was adopted in July 2023<sup>28</sup>

Free trade agreements (FTAs) and Regional Trade Agreements (RTAs) are supposed to be complementary to WTO rules. However, the proliferation of FTAs has made it difficult to ensure that they do not contradict the respective members' WTO obligations. Some of the FTAs involving the US and the EU include provisions regarding the environment, climate change and labour (Saner et al. 2015). In other words, they go beyond what has been so far agreed within the WTO.

The same is true for Bilateral Investment Agreements (BITs) which are most of the time confidential and do not reveal the extent to which FDI is put into relation with low carbon investment and for instance to carbon reducing technology IPs. BITs are about protecting foreign investors subject to domestic (environmental) laws. Should a state pass new legislation in favour of more stringent environmental performance conditions, the MNC might threaten the viability of existing investments and sue their host states in external tribunals such as ISDS on the grounds that such legislation amounts to regulatory expropriation.<sup>29</sup>

There is a need for closer scrutiny of all these various trade agreements (FTAs, RTAs, and BITs). UNCTAD has many years of experience in researching the field of investment and hence could easily also add low-carbon investment to its portfolio.

In the end, the larger multilateral and multi-stakeholder negotiations suggested below should include a search for solutions to the BIT-related risks of investors taking countries to court should they improve on their trade & environmental laws and policies. Without stopping such threats, most developing countries remain hesitant to tighten their environmental laws which makes it difficult to limit anti-climate change risks due to current BIT-ISDS practices.

#### **4. Solutions including WTO and other International Organisations**

The disruptions and risks due to climate change cannot be controlled solely by more efficient trading in goods. Almost every day goes by with more bad news about climate change disruptions such as droughts, floods, tropical storms, multi-year droughts, and other CC-related disasters. We need a comprehensive agreement involving all norm-setting international institutions to set up new rules of trade and development- in other words, we need a new social contract for trade & development.

For example, in a most recent blog post, three authors from the IMF warn the readership that Panama's drought shows how trade disruptions from climate extremes can reverberate around the world and that climate change, droughts, floods, tropical storms and other disasters are becoming more common and pose a serious threat to maritime infrastructure<sup>30</sup>

To respond to this threat to trade and human settlements, the IMF created together with the University of Oxford, a platform called Port Watch which can prepare for trade disruptions

---

<sup>28</sup> <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Reducing-greenhouse-gas-emissions-from-ships.aspx>

<sup>29</sup> [https://de.wikipedia.org/wiki/Investor-state\\_dispute\\_settlement](https://de.wikipedia.org/wiki/Investor-state_dispute_settlement)

<sup>30</sup> "Climate Change is Disrupting Global Trade";2023,

<https://www.imf.org/en/Blogs/Articles/2023/11/15/climate-change-is-disrupting-global-trade>

caused by shocks like climate extremes and help decision-makers respond to them. While the initiative is very timely and useful, it only offers information about risks to maritime trade due to climate change disruptions.

How to revise and reconstruct the maritime trading route infrastructure is a much more fundamental challenge than only informing about risk or looking for efficient alternative routes. While the latter can be imagined, the countries left out by attempts to circumvent existing ports and maritime routes requires a much more fundamental investment and restructuring of maritime trade.

What is needed is a concerted action by the international community to improve maritime infrastructure, ensure alternative maritime transportation routes, and provide financial aid to LDC-LDC exporters who will not be able to cope with the ensuing losses caused by the disruptions of maritime trade. In other words, structural change is needed for a sustainable maritime trade infrastructure that is equitable, financially viable, and environmentally possible for exporters-importers, rich and poor countries alike.

### **Trade and Development as part of the 2030 Agenda**

The WTO secretariat started in 2018 to inform its member countries and the trading community at large about the Sustainable Development Goals with a well drafted document called “Mainstreaming trade to attain the Sustainable Development Goals”. An interview in 2022 of the WTO secretariat by UNDESA gives a good overview of WTO’s current positions, thinking and actions regarding the SDGs.<sup>31</sup>

The initial, detailed, informative and thoughtful WTO document introduces the theme and the intention as follows:

*The WTO is central to achieving the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), which set targets to be achieved by 2030 in areas such as poverty reduction, health, education and the environment. The SDGs put significant emphasis on the role that trade plays in promoting sustainable development and recognize the contribution that the WTO can make to the 2030 Agenda. By delivering and implementing trade reforms which are pro-growth and pro-development, and by continuing to foster stable, predictable and equitable trading relations across the world, the WTO will play an important role in delivering the Sustainable Development Goals, just as it did with the Millennium Development Goals before them.*

Further to the initial document, Raúl Torres of the Trade and Development Division of the WTO Secretariat continued to write short articles on trade and the SDGs<sup>32</sup> and organized exhibitions with gallery posters describing the 17 goals and explaining how trade interacts with them.

A second larger study came out this year titled “WTO’s contribution to attaining UN

---

<sup>31</sup> UNDESA (2022) „Interview with WTO secretariat about actions taken by the WTO regarding covid pandemic, climate change and the SDGs- 7 Questions”, UNDESA, NY <https://sdgs.un.org/un-system-sdg-implementation/world-trade-organization-wto-49246>

<sup>32</sup> [https://www.wto.org/english/thewto\\_e/coher\\_e/sdgs\\_e/sdgs\\_e.htm](https://www.wto.org/english/thewto_e/coher_e/sdgs_e/sdgs_e.htm)



Sustainable Development Goals: 2023 update to the High-Level Political Forum”. The 2023 Public Forum came out for the first time with a call for contributions that would mention trade and sustainable development without though explicitly referring to the 2030

Agenda. It was titled “*how trade and the WTO can help create a greener and more sustainable future. In particular, it will delve into how the services sector, digitalization and inclusive trade policies can support this objective*” without though clarifying what “greener and inclusive” means for the WTO.

Still, the signs are there that the WTO secretariat is reaching out towards the SDGs and UNFCCC and to more meaningful discussions on how trade can contribute to a reduction of climate warming e beyond simple trade efficiency gains. The WTO will participate for the first time at a UNFCCC COP namely COP 28 in Dubai inviting non-WTO stakeholders to engage the WTO representatives in meaningful discussions.

While these recent overtures are very much encouraging, the key stumbling block for any substantive changes of WTO rules in favor of substantive trade & CC are the member states who do not give up their sovereign rights easily. Any deeper discussion and negotiation of WTO trade rules would require the agreement of all 194 member countries and some of the members are not forthcoming regarding climate change – Nationally Determined Contributions to carbon reduction are modest if not insignificant- nor are all WTO member states actively involved in the 2030 Agenda.

For example, the USA, a major trading nation is one of the four of the 194 member countries of the UN that has never presented a Voluntary National review at the HLPF in New York. The other four are impoverished and conflict-ridden LDCs like Yemen, Haiti, South Sudan, and Myanmar.

Without inclusion of the LIDCs and LDCs’ needs and active participation in the negotiations, there will not be a sustainable global trade and environment agreement and the climate crisis will take its destructive turn to the detriment of all countries whether rich or poor. An equitable grand agreement should find proactive and inclusive solutions. Legitimate concerns of LIDCs and LDCs need to be taken into account and related traps be avoided. As outlined by Teehankee et al (2012) these risks could be:

- Using environmental measures for trade protection;
- Gaining market access through the guise of environmental reasons;
- Facing production that is subsidized in the industrialized world without being able to impose corrective measures;
- Limiting the policy space that developing countries have to promote their own green economy sectors;
- Facing technical standards that developing country exporters cannot meet;
- Imposing new conditionality on developing countries for aid, loans, and debt rescheduling or debt relief.

What is urgently needed are substantial commitments towards national de-carbonization and a major reorganization of trade, environment, energy and development beyond the current WTO rules and national commitments. Trade should allow countries to reach the 17 goals of the 2030 Agenda- an important one being SDG 13 “Take urgent action to combat climate change and its impacts”

## **5. A new social contract for trade, environment, energy and development**

Unrestricted trade leads to increases in climate warming if not given new parameters that embed trade in the SDGs. Limiting trade is not the objective of trade agreements rather it has been opening markets expecting that such opening of markets would generate economic growth, jobs, environmental sustainability, wealth, and well-being. This simple equation no longer holds. The results of unfettered trade is contributing to climate warming.

Making trade & environment agreements more effective in stopping climate warming is urgently needed and so are complementary policies such as more stringent laws by the environment ministers to establish more meaningful emissions reduction commitments and rigorous decisions by finance ministers to reduce and eliminate fossil fuel subsidies.

Given the accelerating climate warming and because attempts to make trade in environmental goods more efficient did not reduce climate warming. Stronger measures are needed than making the selling of environmental technology cheaper through reduced tariffs.

The main culprit causing climate warming are the worrisome increases of Green House Gases that trap the heat of the Earth's atmosphere leading to an alarming warming of the Earth's surface and causing increasing environmental disasters. The main greenhouse gases are: Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Water Vapor (H<sub>2</sub>O), : Ozone (O<sub>3</sub>) and Chlorofluorocarbons (CFCs).

CO<sub>2</sub> is the main cause of climate warming but the other GHG are also contributing factors to climate change. They should all be reduced and policy discussions about trade and the environment should go beyond focusing only on fossil fuels and their impact on climate warming.

Intense negotiations were expected at COP 28 in Dubai to phase out the most polluting sources causing climate change such as fossil fuels (coal, oil, gas) however there was no agreement reached for an immediate stop of fossil fuels rather than a gradual reduction over time. At least, for the first time, all nations formally agreed to move away from fossil fuels and rapidly ramp up renewable energy. Turning the goals expressed at COP28 into national action and ensuring the finance is there to implement them is left for further negotiations at COP 29 in Azerbaijan in 2024.<sup>33</sup> Importantly, these commitments must be seen as the floor — not the ceiling — in the fight against climate change. Climate-vulnerable communities and countries cannot afford to be shortchanged.

Anticipating no immediate agreement at COP28 to stop fossil fuels, some governments hope that new technology will help abate CO<sub>2</sub> for instance through sophisticated storage

---

<sup>33</sup> WRI, Unpacking COP 28, <https://www.wri.org/insights/cop28-outcomes-next-steps>

systems either in the ground or in space.

Gerrit Hansen (2023) writes that faced with the risk that countries will not deliver on promised carbon reductions resulting in a high risk increase of temperature beyond the maximum +1, 5 Celsius agreed at the Paris Agreement in 2015 and that discussions have heated up whether there should be a complete exit from all fossil fuels - or just a reduction in unmitigated use, i.e. without additional climate protection measures such as carbon capture and storage (CCS). She further observes that,

*“The role that reduced-emission fossil fuels can have in a climate-neutral economy is very controversial. In the long term, this depends on a successful ramp-up of CCS, the capture rates achieved and the availability of technologies for removing CO<sub>2</sub> from the atmosphere (Carbon Dioxide Removal, CDR) with which residual emissions can be offset. (p.1)*

Pascal Lamy, a former director general of the WTO and a former EU trade commissioner, now president of the Paris Peace Forum, said governments were increasingly likely to explore the possibilities of geoengineering, as efforts to cut greenhouse gas emissions have so far been inadequate. However he also warns:<sup>34</sup>

*“Geoengineering would involve trying to change the temperature or climate on Earth through methods such as whitening clouds, or injecting Sulphur particles into the atmosphere to reflect more sunlight, or spreading iron in the ocean to absorb carbon dioxide. Ideas such as launching a giant sunshade into space have also been suggested, along with more prosaic options including painting roofs white. None of these possibilities have yet been tried, and some could be dangerous: for instance, spraying Sulphur could cause acidification of the seas, cloud whitening could change rainfall patterns, and deflecting the sun’s rays could cause crops to fail.”*

The situation is dire. The objective of the Paris Agreement seems not reachable since an important number of governments cannot or do not want to reduce sufficiently their carbon footprint and hence climate crisis seems to be inevitable. Expectations are high to solve the high-risk dramatic increase of CO<sub>2</sub> through sophisticated Carbon Capture Storage (CCS) technology which is themselves of high risk see warning of Mr. Lamy above.<sup>35</sup>

On the other hand, the WTO together with likeminded international organizations and with the support of sustainability-oriented governments, private sector companies, and civils society members (academics, research NGOs, advocacy CSOs) could move trade in the direction of sustainable development for instance by doing their best effort in implementing actions against climate warming (SDG 13) but also by including other aspects of human and planetary life beyond climate change only. Implementing other SDGs would also generate a beneficial impact on climate change. For instance, by reducing unsustainable production and unsustainable consumption (SDG 12), the use of fossil fuels would be reduced and the risk of

---

<sup>34</sup> <https://www.theguardian.com/environment/2022/may/17/climate-geoengineering-must-be-regulated-says-former-wto-head>

<sup>35</sup> [https://en.wikipedia.org/wiki/Carbon\\_capture\\_and\\_storage](https://en.wikipedia.org/wiki/Carbon_capture_and_storage)

climate crisis diminished.

An alignment of trade with the SDGs would mean that the rules of trade should be questioned and amended. Trade practices that drastically increase climate warming should be prohibited or more tightly regulated as well as other current trade practices which undermine the achievement of sustainable growth and development. Trade practices which include for instance slave labor, trade in protected animal species, and dumping of dangerous waste should be prohibited or much more tightly regulated.

The WTO website with reference to the Committee on Trade & Development states:

*The WTO's committee says the most effective way to deal with international environmental problems is through the environmental agreements. It says this approach complements the WTO's work in seeking internationally agreed solutions for trade problems. In other words, using the provisions of an international environmental agreement is better than one country trying on its own to change other countries' environmental policies*<sup>36</sup>

Faced with the dilemma that current attempts to stop climate warming have not been successful and the SDGs not consistently included in trade policies, the WTO member countries should be invited to rethink trade agreements and prohibit trade of environmentally harmful products and services and trade that does not support sustainable development. In order to achieve a major structural reorganization of the current WTO rules and agreements, the following steps could be envisaged and implemented:

1. *Organization of a cross-régime/forum negotiation consisting of WTO and related norm-setting international organizations like UNFCCC, IPCC, UNEP, ILO, WHO, UNHCR, IMF, UNCTAD and FAO and all five Regional Economic Commissions.*
2. *Conducting a cross-institutional negotiation based on the method of the negative list used in WTO GATS negotiations but expanded to include also goods. The objective would be to identify which products should either be no longer traded or drastically contained by volume-restricting quotas.*
3. *The secretariats of Multilateral Environmental Agreements should be invited to participate in the cross-institutional negotiation which has a trade component*
4. *The goal of the cross-institutional negotiations should be based on the objective of making trade support the 2030 Agenda. The overall goal is to make trade serve the achievement of the 17 SDG goals, not the reverse.*
5. *And procedurally, such a large multi-actor negotiations should be based on multi-stakeholder participation meaning consisting of representatives of the concerned International Organisations, governments grouped by clusters (industrialized, developed, wealthy versus agricultural, low developed, poor); representatives of the private sector (transnational enterprises of all main sectors and associations of SMEs) and civil society (associations, NGOs, solidarity funds).*

The following MEAs should be invited since their activities have a bearing on trade. Other MEAs might also be added depending on their trade links. The following MEAs

---

<sup>36</sup> The Environment: A specific concern; WTO, accessed on 5<sup>th</sup> January 2024, [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/bey2\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm)

should be invited to participate:

1. *Cartagena Protocol on Biosafety: This protocol, under the Convention on Biological Diversity, addresses the safe transfer, handling, and use of living modified organisms (LMOs) resulting from modern biotechnology. It has implications for international trade in genetically modified organisms.*
2. *Montreal Protocol on Substances that Deplete the Ozone Layer: While primarily focused on phasing out substances that deplete the ozone layer, the Montreal Protocol has trade-related aspects, including the control of trade in ozone-depleting substances.*
3. *CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora): CITES regulates international trade in endangered species to ensure their survival. It does not ban trade but rather ensures that it is sustainable and does not threaten the survival of species.*
4. *Paris Agreement under the UNFCCC (United Nations Framework Convention on Climate Change): While not explicitly a trade agreement, the Paris Agreement includes provisions related to international cooperation, including the promotion of sustainable development and the consideration of the impact of responses to climate change on economies.*

A cross-régime/forum multi-institutional negotiation and coordination of all policies and issues that pertain to trade and the environment is urgently needed. Each of the institutions listed in the above section cannot adequately respond to the climate crisis and call for sustainable development since practically all important issues are interlinked with other issues. Each of international organization has a self-limiting scope making it impossible to aim for comprehensive solutions since the individual institutions' mandate does not allow for solutions that would encroach on the mandate of other International Organisations.

Each of the international organizations mentioned are intergovernmental organization. In other words, it is their member countries who have the final word on what is and what is not possible regarding an overarching cross-institutional deal on trade and environmental issues. Exploring cross régime/forum agreements will also require cross-ministerial policy coordination and consultation. For instance, matters about the WIPO might be in the hands of the national Ministry of Justice while issues of trade are often the perquisite of the Ministry of Trade or Commerce and FTAs/RTAs often are in the hands of the Ministry of Foreign Affairs.

Hence, the suggested pan-institutional negotiation will also necessitate intra-national policy consultation, coordination, and cooperation, and on top of this governments will have to engage in multi-stakeholder consultation with their main national stakeholder groups. While this sounds difficult, the wake-up calls from climate crisis events should generate enough goodwill and motivation to successfully engage and conclude such a comprehensive and complex negotiation.

## **6. Principles of Mutual supportiveness**

With the deepening of environmental negotiations and implementation of treaties at cross-régime/forum level, the risk of contradictions on environmental issues with trade related

elements increases for instance between the WTO and UNFCCC (Paris Agreement), Convention on Biological Diversity (CBD); Multilateral Environmental Agreements (MEAs such as Montreal Protocol, Stockholm prevention of pollutants, UN Law of the Sea, Trade in Endangered Species (CITES) and others MEAs<sup>37</sup>.

Most of the MEA agreements have been agreed to protect endangered species or regulate high-risk activities like the transportation of hazardous waste and their disposal. WTO's trade rules on the other hand favor progressive liberalization of markets and de-emphasize regulatory measures by national governments. The tension between the MEAs and the trade agreements (WTO, RTAs, FTAs, BITs) hinders the goal of achieving low carbon investment, low carbon economic activities, and the achievement of several of the 17 SDGs because of the potential exclusion of either WTO-related trade rules versus the MEAs priority goal of protecting the environment at large including slowing CO<sub>2</sub> emissions.

A solution to these potential treaty conflicts could be the application of the principle of mutual supportiveness which suggests that each international regime should take into account the scope and legal ramifications of other agreements.

The principle of mutual supportiveness is not a new proposal. The 2006 Report of the International Law Commission (ILC) on "Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law"<sup>23</sup> referred to mutual supportiveness only in two instances. However, the principle has emerged as a means to deal with the phenomenon of "fragmentation" of international law through mutual supportiveness developed in the context of the relationship between trade agreements and multilateral environment agreements.

Following Mbengue & Boisson de Chazournes (2011), Article 31.1 (General rule of interpretation) of the Vienna Convention on the Law of Treaties focuses on the "internal context" (rules and principles that parties to a treaty are bound to implement in light of a given treaty regime) of treaties and constitutes a pathway for mutual supportiveness.

Mutual supportiveness has its origin in a document adopted by the 1992 UN Conference on Environment and Development which outlines that "[t]he international economy should provide a supportive international climate for achieving environment and development goals by . . . making trade and environment mutually supportive."<sup>24</sup> This document calls the states to "promote and support policies, domestic and international, that make economic growth and environmental protection mutually supportive".<sup>25</sup>

References to mutual supportiveness can be found in the text of different international agreements and other legal instruments. As suggested by Pavoni (2010), although they have the character of political statements, they should not be dismissed for their normative significance. According to this author, "*mutual supportiveness seems to be characterized by two remarkable legal dimensions. The first is its interpretative dimension, which serves the purpose of disqualifying solutions to tensions between competing regimes involving the application of conflict rules. The second is the law-making dimension of mutual supportiveness which comes into play when efforts at reconciling competing rules have unsuccessfully been exhausted. This*

---

<sup>37</sup> [https://en.wikipedia.org/wiki/List\\_of\\_international\\_environmental\\_agreements](https://en.wikipedia.org/wiki/List_of_international_environmental_agreements)

*dimension implies a duty to pursue good faith negotiations aimed after law-making instruments, including treaty amendments, which clarify the relationship between the competing regimes at hand.” Pavoni 2010, p.1).*

Adequate domestic policies are critical to create mutual supportiveness. Former WTO Director General, Pascal Lamy, has stated the need for the WTO to support such domestic policies (Lydgate 2012). These domestic policies to address new challenges like climate change are interconnected and need to be tackled from a multi-disciplinary perspective (cross-sectors).

Governments, at the national level, need inputs from different ministries (involving different subjects) to develop efficient negotiating strategies. For instance, cross-institutional negotiations by WTO and UNFCCC remain urgently needed to strengthen the multilateral system at the WTO and UNFCCC to avoid full deadlock and possible major trade and environmental conflicts (Saner 2011).

The grand cross-régime/forum negotiations’ would also require WTO internal policy coordination, consultation, and cooperation between the divisions responsible for trade in the environment, trade in services, trade in energy products and services, and trade and development and the committees that are part of the respective divisions as well as the insights and directives of the WTO Director General.

## **Conclusion**

As stated by UNCTAD, structural transformation, characterized by a shift in the production structure from the primary sector to manufacturing, has traditionally been the most successful way of achieving sustained economic growth and rising living standards. This avenue was followed by the now-advanced economies, as well as a few successful late industrializers in East Asia. Their traditional fossil fuel-intensive model, however, cannot satisfy the aspirations of the many other developing countries that are trying to upgrade their national incomes through industrialization because it would take emissions and resource consumption beyond the limits of the planet’s ecological capacity.

The solutions presented and developed in this paper are meant to offer new ways to help developing countries develop while at the same time offering them changes of trade rules that would help them make the adjustments needed while at the same time contributing to the global effort to control climate warming.

The proposed solutions are an example of “thinking outside of the box” and of getting beyond “business as usual” with the intention of outlining ways to get maximum cooperation amongst the countries of this planet to combat climate change no matter what level of development they have been able to reach.

As stated by Mavroidis & de Melo, J, (2015) cited above; “Needed changes at the multilateral level require delegation of sovereignty to move towards a contract that would require positive steps from the WTO membership to avert climate change” (p. 225). This article provides several arguments that can be used to help WTO members move towards a positive trade and environment agreement.

Climate mitigation and adaptation activities could turn out to be inadvertently a form of wicked market dynamics because the climate and sustainability market could be targeted for competitive dominance by a group of leading green technology countries who have used subsidies of all sorts (industry subsidy, consumer subsidy) to help their innovative technology companies gain a competitive position in the world market of green technology. Any potential scheme for market dominance would make it difficult for newcomers to gain market entry thereby increasing the risk of rent-seeking by the dominant technology holders who might also refuse to give access to their technology (licensing).

Overall, a greening of the WTO framework is needed to reduce barriers to the global trade of environmental goods and services and concomitantly make access to green technology possible and affordable for developing countries who have to cope with the negative consequences of climate change as do developed countries but the developing countries and particularly the Least Developed Countries are severely hampered by their scarce financial resources and lack of access to green technology.

What is needed is transversal thinking. WTO members might not accomplish a new comprehensive trade agreement by the end of 2023 and the members of the UNFCCC might not make much progress at COP 28 in Dubai end of 2023 but a great majority of countries are attached to the WTO and UNFCCC and do not want to see them fail. An important number, if not the majority of member countries, care about combatting environmental degradation and hope to halt the nefarious impact of climate change but seem unable to agree on mitigation, adaptation, and new commitments at the COP meetings.

What is of prime importance for the survival of the planet and its people that inclusive agreement on trade and environmental issues to make trade and sustainability complementary goals that mutually reinforce each other. Mathias Cormann, OECD Secretary-General wrote in the preface to the OECD Climate Action Monitor 2023 “(It) shows current greenhouse gas emission targets are well below the emission reductions necessary to achieve the Paris Agreement temperature goal, and the evidence presented in this report suggests that overall national climate action slowed in 2022 compared to the previous two decades. More (emission reduction) is needed to translate ambition into real actions and real outcomes by ensuring the effective implementation of national policies – and there is no time to waste.”

As the saying attributed to Albert Einstein suggests “Insanity Is Doing the Same Thing Over and Over Again and Expecting Different Results”. All stakeholders in this world have to take into account that the climate crisis is a life-threatening situation for all countries and people. We have to venture into a climate-saving revolution that will be a planned disruption rather than a future of uncontrolled general destructive disruptions caused by an out-of-control climate crisis.

## References

Bardy R, Rubens A, Saner R, & Yiu L (2021). *Public Goods, Sustainable Development and the Contribution of Business*. Munich/Zurich: Cambridge Scholar Publishing, 316 pages

Burgenmeier, B, (1992) “Socio-Economics: An Interdisciplinary Approach: Ethics, Institutions, and



Markets, Kluwer Academic Publisher, Boston & Dodrecht.

Burgenmeier, B. (1999), “Globalization versus Sustainable Development: A Question of the Common Good”, *International Journal of Sustainable Development*, Volume 2, Issue 4, <http://www.inderscienceonline.com/doi/abs/10.1504/IJSD.1999.004348>

Halle, M. (2015), “Formulate trade policy as if the SDGs really matter” in ITC, “Trade and Sustainable Development Goals”, *International Trade Forum*, Issue 4, [http://www.tradeforum.org/uploadedFiles/Common/Content/TradeForum/Trade\\_Forum\\_4\\_2015\\_20160210.pdf](http://www.tradeforum.org/uploadedFiles/Common/Content/TradeForum/Trade_Forum_4_2015_20160210.pdf)

Hansen, Gerrit, (2023) “Extension for coal, oil and gas : The narrative of reduced-emission use of fossil fuels threatens to undermine the Paris climate goals”; SWP (Stiftung Wissenschaft und Politik), Berlin. SWP-Aktuell 2023/A 57, November 17, 2023, 8 pages, doi:10.18449/2023A57

IMF (2023) “Climate Change is Disrupting Global Trade”; Serkan Arslanalp, Robin Koepke, Alessandra Sozzi, Jasper Verschuur, IMF Blog, 15 Nov. 2023, Washington DC <https://www.imf.org/en/Blogs/Articles/2023/11/15/climate-change-is-disrupting-global-trade>

IMO (International Maritime Organisation) (2023) “ Revised GHG reduction strategy for global shipping adopted on 7<sup>th</sup> July 2023”, London <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Reducing-greenhouse-gas-emissions-from-ships.aspx>

IPCC (Intergovernmental Panel on Climate Change), 2007: *Climate Change 2007 – Impacts, Adaptation and Vulnerability*. New York: Cambridge University Press, 976 pp. See also IPCC’s Assessment Reports and Technical Reports available from

IPCC (Intergovernmental Panel on Climate Change), (2007), *Climate Change 2007 – Impacts, Adaptation and Vulnerability*, New York: Cambridge University Press, 976 pp. See also IPCC’s Assessment Reports and Technical Reports available from [http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data.shtml#1](http://www.ipcc.ch/publications_and_data/publications_and_data.shtml#1)

IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report*. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

IPCC, (2022) “Climate Change 2022-Mitigation of Climate Change-Summary for Policymakers”, P.R. Shukla et al, Cambridge University Press, Cambridge, UK and New York, NY, USA. Doi: 10.1017/9781009157926.001.

IPCC, *Climate Change 2023 Synthesis Report*, WMO-UNEP, Geneva, 2023; p. 18 [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf)

Khor, Martin, (2010) “The Climate and Trade Relation: Some Issues”, The South Centre, Geneva

Kotchen, M. (2012), “Public Goods, University of Yale”, <http://environment.yale.edu/kotchen/pubs/pgchap.pdf>

Kuntze, JC. and T. Moerenhout, (2013), “Local Content Requirements And The Renewable Energy Industry - A Good Match?”, ICTSD, [http://unctad.org/meetings/en/Contribution/DITC\\_TED\\_13062013\\_Study\\_ICTSD.pdf](http://unctad.org/meetings/en/Contribution/DITC_TED_13062013_Study_ICTSD.pdf)

Lydgate, E.B. (2012), “Sustainable development in the WTO: from mutual supportiveness to balancing”, *World Trade Review*; October, Vol. 11 Issue 4, p. 1.

Mavroidis, Petros; de Melo, J, (2015); “Climate Change Policies and the WTO: Greening the GATT, Revisited”, *FERDI and VoxEU*, pp. 225-238

Mbengue, M. and Boisson de Chazournes, B. (2011), “A ‘Footnote as a Principle’. Mutual Supportiveness and Its Relevance in an Era of Fragmentation”, *Liber Amicorum Rüdiger Wolfrum*, Springer, 2011.

OECD (2023) “The Climate Action Monitor 2023”, OECD, Paris (17<sup>th</sup> November 2023)  
<https://www.oecd.org/climate-action/ipac/the-climate-action-monitor-2023-60e338a2/>

Pavoni (2010), “Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the ‘WTO-and-Competing Regimes’ Debate?”, *The European Journal of International Law*, Vol. 21 no. 3, <http://www.ejil.org/pdfs/21/3/2072.pdf>

Production Gap Report, (2023) “Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises”; Stockholm Environment Institute, Stockholm  
[https://productiongap.org/wp-content/uploads/2023/11/PGR2023\\_web.pdf](https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web.pdf)

Ramdoo, Isabelle, (2016), “Local content, trade and investment: Is there policy space left for linkages development in resource-rich countries”, *ECDPM*, Nor 205, December 2016, pp 53

Saner, R. (2011) “International governance options to strengthen WTO and UNFCCC”, *CSEND Policy Brief*, available from [http://www.diplomacydialogue.org/component/docman/doc\\_download/109-20110611-international-governance-options-to-strengthen-wto-and-unfccc.pdf](http://www.diplomacydialogue.org/component/docman/doc_download/109-20110611-international-governance-options-to-strengthen-wto-and-unfccc.pdf)

Saner, R. (2013) “Greening WTO Agreement to stop climate warming”, *CSEND Policy Study No. 2* ISSN 2296-472X, Geneva,  
<https://www.csend.org/images/articles/files/20130706%20Greening%20WTO%20Policy%20Study%20nr%202.pdf>

Saner, R; Keith, A, Yiu, L; (2015), “Labour rights as human rights: evaluating the policy coherence of USA, EU and Australia through trade agreements and their participation in the universal periodic review”, *Trade, Law and Development*, Vol. VII, No. 2;  
<https://www.diplomacydialogue.org/images/files/243-729-1-PB.PDF>

Saner, R.; (2016) “Greening the WTO” *FEEM Press*, Milan, Italy,  
<https://www.diplomacydialogue.org/publications/environmental-diplomacy/greening-the-world-trade-organization.html>

Saner, R; Yiu, L; Kingombe, Ch; (2019); “The 2030 Agenda compared with six related international agreements: valuable resources for SDG implementation”, *Sustainability Science*, pp 1685-1716  
<https://doi.org/10.1007/s11625-019-00655-2>

Stiglitz, J. (1999), "Knowledge as a Global Public Good." In Kaul, I., I. Grunberg and M. A. Stern (eds.) *Global public goods: international cooperation in the 21st century*. NY: Oxford University Press, Inc, <http://web.undp.org/globalpublicgoods/TheBook/globalpublicgoods.pdf>

Stockholm Environment Institute, (2023) “Production Gap Report, Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises”; Stockholm  
[https://productiongap.org/wp-content/uploads/2023/11/PGR2023\\_web.pdf](https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web.pdf)

Teehankee, M., Jegou, I; Rodrigues R. J. (2012), “Multilateral Negotiations at the Intersection of Trade and Climate Change”, ICTSD Issue Paper no.2, page 137, <http://ictsd.org/downloads/2012/06/multilateral-negotiations-at-the-intersection-of-trade-and-climate-change.pdf>

TESSD (WTO Trade and Environmental Sustainability Structured Discussions) informal working group meeting held on 4-5 October 2022; Aide-Mémoire; accessed on 6<sup>th</sup> June 2023, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/INF/TESSD/R13.pdf&Open=True>

TESSD overview of 2023 priorities, accessed on 6<sup>th</sup> June 2023 [https://www.wto.org/english/tratop\\_e/tessd\\_e/tessd\\_overview\\_in\\_three\\_pages.pdf](https://www.wto.org/english/tratop_e/tessd_e/tessd_overview_in_three_pages.pdf)

UNDESA (2022) „Interview with WTO secretariat about actions taken by the WTO regarding covid pandemic, climate change and the SDGs- 7 Questions”, UNDESA, NY <https://sdgs.un.org/un-system-sdg-implementation/world-trade-organization-wto-49246>

WTO, (2018) “Mainstreaming trade to attain the Sustainable Development Goals”, WTO, Geneva

UNCTAD (2003), “Energy and Environmental Services: Negotiating Objectives and Development Priorities”, New York and Geneva, [http://unctad.org/en/Docs/ditctncd20033\\_en.pdf](http://unctad.org/en/Docs/ditctncd20033_en.pdf)

UN-DESA, UNEP, UNCTAD (2009), “World Trade Law and Renewable Energy: The Case of Non-Tariff Barriers”, [http://unctad.org/en/Docs/ditcted20085\\_en.pdf](http://unctad.org/en/Docs/ditcted20085_en.pdf)

UNCTAD (2012), “The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective”, Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development, [http://www.unep.org/greeneconomy/Portals/88/documents/research\\_products/UNDESA,%20UNCTAD%20Transition%20GE.pdf](http://www.unep.org/greeneconomy/Portals/88/documents/research_products/UNDESA,%20UNCTAD%20Transition%20GE.pdf)

UNCTAD, (2021) “Trade and Development Report 2021”, pages XII-XIII, [https://unctad.org/system/files/official-document/tdr2021\\_en.pdf](https://unctad.org/system/files/official-document/tdr2021_en.pdf)

UNCTAD (2021), Trade & Development, 2021, Overview VI, chrome-extension://efaidnbmnbbpqqcplglefindmkaj/[https://unctad.org/system/files/official-document/tdr2021\\_en.pdf](https://unctad.org/system/files/official-document/tdr2021_en.pdf)

UNCTAD (2023) “A Positive Trade and Environment Agenda for the BRICS”, Unctad-Geneva, <https://spotlight.ink/a-positive-trade-and-environment-agenda-for-the-brics-unctad/>

UNDESA, UNEP and UNCTAD (2012), Report by a Panel of Experts on “The Transition to a Green UNDP (2002), Providing Global Public Goods: Managing Globalization 25 Questions & Answers, <http://web.undp.org/globalpublicgoods/globalization/pdfs/ques-ans.pdf>

UNEP (2006), “Training Manual on International Environmental Law”, Chapter 3.8, [http://www.unep.org/environmental-governance/Portals/8/documents/training\\_Manual.pdf](http://www.unep.org/environmental-governance/Portals/8/documents/training_Manual.pdf) [http://www.unep.org/environmental-governance/Portals/8/documents/training\\_Manual.pdf](http://www.unep.org/environmental-governance/Portals/8/documents/training_Manual.pdf)

UNFCCC (2015),”The Paris Agreement”, <https://unfccc.int/resource/docs/2015/cop21/eng/109.pdf> and the Challenge of Sustainable Development”, [http://unsse.org/wp-content/uploads/2014/08/Position-Paper\\_TFSSE\\_Eng1.pdf](http://unsse.org/wp-content/uploads/2014/08/Position-Paper_TFSSE_Eng1.pdf)

UNIDO (2008), “Public Goods for Economic Development”, [https://www.unido.org/fileadmin/user\\_media/Publications/documents/Public%20goods%20for%20econ](https://www.unido.org/fileadmin/user_media/Publications/documents/Public%20goods%20for%20econ)

omic%20development\_sale.pdf

United Nations (2001), “Road Map towards the Implementation of the United Nations Millennium Declaration”, Report of the Secretary-General. 6 September. A/56/326. New York

UNRISD (2014), “Social and Solidarity Economy and the Challenge of Sustainable Development”, [http://www.unrisd.org/unrisd/website/document.nsf/\(httpPublications\)/4FB6A60F1DBA5995C1257D1C003DAA2A?OpenDocument](http://www.unrisd.org/unrisd/website/document.nsf/(httpPublications)/4FB6A60F1DBA5995C1257D1C003DAA2A?OpenDocument)

United Nations (2022) “Sustainable Development Goals: Knowledge Hub” NY. 2022  
<https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals/>

United Nations (2022) “Sustainable Development Goals: Knowledge Hub” NY.  
<http://www.un.org/sustainabledevelopment/climate-change-2/>

Utting, P. (2015), Social and Solidarity Economy: Beyond the Fringe,  
[http://www.unrisd.org/80256B3C005BCCF9/\(httpPublications\)/89748F9EB30DE128C1257E0E004889D4?OpenDocument](http://www.unrisd.org/80256B3C005BCCF9/(httpPublications)/89748F9EB30DE128C1257E0E004889D4?OpenDocument)

Varian, H.R. (2010), Intermediate microeconomics: a modern approach. New York, NY: W.W. Norton & Co. World Bank (2010),

World Development Report, <http://siteresources.worldbank.org/INTWDR2010/Resources/5287678-1226014527953/WDR10-Full-Text.pdf>

WTI Advisors (2013), Local Content Requirements & the Green Economy, UNCTAD’s Ad hoc Expert Group Meeting on Domestic Requirements and Support Measures in Green Sectors: Economic and Environmental Effectiveness and Implications for Trade,  
[http://unctad.org/meetings/en/Contribution/DITC\\_TED\\_13062013\\_Study\\_WTI.pdf](http://unctad.org/meetings/en/Contribution/DITC_TED_13062013_Study_WTI.pdf)

WTO Public Forum (2012), Session 29 organized by CSEND on “Plurilateralism Against Multilateralism? A Multi Stakeholder Perspective”, Geneva,  
[http://www.wto.org/english/forums\\_e/public\\_forum12\\_e/programme\\_e.htm](http://www.wto.org/english/forums_e/public_forum12_e/programme_e.htm).

WTO (2012), “WTO Dispute Settlement: One-Page Case Summaries 1995 – 2011”,  
[http://www.wto.org/english/res\\_e/booksp\\_e/dispu\\_summary95\\_11\\_e.pdf](http://www.wto.org/english/res_e/booksp_e/dispu_summary95_11_e.pdf), p. 7, 27 and 54

Wuyts, M. (1992), “Deprivation and Public Need”, in Macintosh, M. and M. Wuyts, Development Policy and Public Action. Milton Keynes: Oxford University Press.

WTO’ (2023), WTOs contribution to attaining UN Sustainable Development Goals: 2023 update to the High-Level Political Forum. WTO Geneva

WTO (2023) “WTO’s contribution to attaining UN Sustainable Development Goals: 2023 update to the High-Level Political Forum”, WTO, Geneva.