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# Green Deals and Implications for the Global South

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**TWN**  
Third World Network

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## CHAPTER ONE

# INTRODUCTION

WHILE not new, the idea of “greening” the economy – e.g., to make national economies “green” through the lowering of greenhouse gas (GHG) emissions associated with economic production and consumption patterns in various sectors of the economy and make the economy more environmentally sustainable – has risen in prominence over the past decade-and-a-half in response to the increasing recognition that the climate change crisis has arrived and is increasing in terms of the scale and reach of its impacts and the rapidity of its occurrence. For example, in the run-up to the 2012 Rio+20 UN Conference on Sustainable Development, the incorporation of concepts relating to the “green economy” was a highly controversial issue between the developed and the developing countries which was only resolved through a compromise in which the concept was referred to in the outcome document in a non-prescriptive way.<sup>1</sup>

In recent years, particularly since 2015 after the launch of the 2030 Agenda for Sustainable Development and the adoption of the UN Framework Convention on Climate Change’s (UNFCCC) Paris Agreement, this idea of a “green” economic framework has found expression in various policy initiatives and pronouncements at the national, regional and global levels. These include, for example, the European Union’s “Green Deal”<sup>2</sup> and recent proposals<sup>3</sup> concerning their climate policy platforms and frameworks from US political figures who could be influential in the new US administration.

How economies can be made “green” is very complex, and any use of the terms “green economy” or “green deal” does not have any international consensus, as the meanings of these terms are going to be context-specific. In the current international arena, key parts of that context would

include each country's national circumstances, international policy guidance frameworks such as Agenda 2030 and the Sustainable Development Goals (SDGs),<sup>4</sup> and agreed treaty frameworks relating to global public environmental goods such as the UNFCCC and its Paris Agreement. This clearly shows that there is no single approach towards how countries can “green” their economies or make these more environmentally sustainable.

For developing countries, many issues may arise concerning how these concepts can be applied to their circumstances. These include “whether the attainment of such an economy constrains other aspects (including economic growth of poor countries, social development such as poverty eradication and job creation); how to identify and deal with the trade-offs; what are the appropriate combinations between these aspects and at different stages of development as well as stages in the state of the environment; what is the role of the state in regulation and investments and defining frameworks; how compatible is a green economy with the free market and what is the appropriate way to address the role of the private sector; how to build an economy that is more environmentally-friendly, and how to handle the transition from the present to the greener economy?”<sup>5</sup>

Responses to the questions posited above have to be contextualized in today's world that is marked by high levels of inequality – between developed and developing countries and within countries – and unsustainable resource use.

Although global income inequality between developed and developing countries has decreased between 1990 and 2016, with more people from (mostly Asian) developing countries getting higher incomes, virtually all of the world's poor population remain concentrated in developing countries and a majority of the world's high-income earners live in developed countries.<sup>6</sup> A UN Department of Economic and Social Affairs report noted that “[i]n relative terms, income inequality among countries is declining. After a prolonged period of rising international inequality, the relative gap in mean national incomes is shrinking. ... Strong economic growth in Asia has been the main driver of this decline. Despite this positive trend,

absolute disparities among countries are still very large. The average income of people living in the European Union is 11 times higher than that of people in sub-Saharan Africa; the income of people in Northern America is 16 times higher than that of sub-Saharan Africans. While low-income countries are growing faster than high-income countries, the absolute gap between the mean per capita incomes of high- and low-income countries increased from about \$27,600 in 1990 to over \$42,800 in 2018.”<sup>7</sup>

As the UN Conference on Trade and Development (UNCTAD) pointed out in its *Trade and Development Report 2020*, “broadly speaking, both in the world as a whole and within the majority of countries, income inequality is higher today than it was 40 years ago, and wealth inequality sharply higher. Moreover, despite a general recognition that heightened inequality was a contributing factor to the global financial crisis of 2008-09, the past decade has not seen any significant reversal of these trends and on some measures the situation has actually worsened. COVID-19 is likely to widen income and wealth gaps even further.”<sup>8</sup>

This inequality between developed and developing countries extends even to ecological resource use, in which most developed countries are in ecological deficit – their population’s ecological footprint (the total level of consumption of natural resources) exceeds the biocapacity available in their territory, largely because per capita resource consumption is high even if their populations are relatively small.<sup>9</sup> The same situation of ecological deficit is reflected in many developing countries in Central America, the Middle East, Sub-Saharan Africa and Asia – but this is largely due to the fact that many of these developing countries have big populations (hence increasing aggregate resource consumption requirements even if resource consumption per capita is low) relative to the biocapacity available in their territory.<sup>10</sup>

This inequality – in income and in resource use as well as in overall economic development – between developed and developing countries has historical and current roots arising from the resource-extractive colonialism undertaken by many of today’s developed countries between the 16th and mid-20th centuries<sup>11</sup> and the resource-extractive and financialized hyperglobalization of recent decades.<sup>12</sup>

## CHAPTER TWO

# DEVELOPMENT CHALLENGES

DESPITE the great development advances that have been achieved in many developing countries, there continue to be obstacles, many of which are systemic and structural, that make it difficult for these countries to rapidly achieve their development objectives and economic diversification efforts.<sup>13</sup> These include the following features that are largely characteristic of many developing countries:<sup>14</sup> a reliance on only a few economic sectors that are highly vulnerable to the adverse effects of climate change, the impacts of response measures<sup>15</sup> (such as on agriculture and fishing, other natural resource extraction activities including fossil fuel extraction/production and export, low-end manufacturing, and informal subsistence-level or small-scale economic activities), and other external economic shocks; domestic income distributions with high levels of inequality; domestic trade and investment policy frameworks that were liberalized in the 1980s and 1990s at the height of structural adjustment programmes, resulting in the loss of domestic industries unable to compete with foreign firms; relatively low levels of public infrastructure needed to support domestic production and growth; difficulties in raising domestic revenue and in restraining capital outflows (including through repatriation of corporate profits and speculative capital and illicit financial flows); significant levels of unemployment and underemployment due to insufficient economic activities; increasing population growth; and brain drain in the case of migrant-sending countries and absorption issues in the case of migrant-receiving countries.

- Finance and technology gaps – Lower levels of income often mean that economic actors in developing countries tend to use relatively older technologies as part of their production processes more, as



both the technologies and their inputs tend to be less expensive, more widely available, or else can be more easily adapted to local conditions that may be marked by lower levels of technological capacity as a consequence of less developed educational sectors;<sup>16</sup>

- Vulnerable domestic markets – Lower levels of overall national economic activity, greater income gaps and inequalities, physical infrastructure deficiencies, oftentimes small populations with low income levels, and in many cases national economies that are often dependent on only a few and often informal economic sectors, tend to make domestic markets in developing countries generally significantly smaller and often more vulnerable to external shocks as compared to developed countries. Regional integration efforts among developing countries in the same region may help alleviate the problem of having small domestic markets for many developing countries;<sup>17</sup>
- Commodity export dependence, often on products with high carbon content and oriented towards markets that require long-distance transportation by air or sea – Dependence on a single or a few commodity exports as the main sources of international trade-generated national income often characterizes the economies of many developing countries. These commodities often are primary natural resource commodities that have undergone no or minimal value-added processing but whose production, extraction, and transport often are geared towards filling consumer demand in richer overseas markets, including agricultural and horticultural products, metals and metallic ores, minerals (including fossil fuels such as coal, oil, and gas), gems, other natural resource products (such as timber), and fishing and aquaculture products.

This commodity export dependence in a few select sectors in many developing countries is often the result of structural conditions shaped since colonial times and continued under post-colonial international arrangements that pushed developing countries to export commodities rather than invest in in-country processing to produce higher-

value-added and more diversified products from such commodities. These arrangements include bilateral or international treaty arrangements that give preferential market access treatment (such as regarding tariffs, rules of origin, technical regulations, sanitary and phytosanitary measures, or prohibitions on domestic content requirements) to lower-value-added commodity exports from developing countries and restrict market access for higher-value-added products. These arrangements then often make it more attractive for developing-country producers and exporters to concentrate production and export on raw commodities even if marginal profits might be low rather than invest in processing and adding higher domestic value to export products that may not, in the end, be able to access export markets. At the same time, there is also the structural problem arising from the control that many developed-country-based transnational corporations have in the food, energy, and commodity global value chains (including in the extraction and production stage in developing countries, transport and shipping, and value-added refining and final-stage production in developed countries) that often concentrate developing-country producers into the primary and lower-value-added parts of these global value chains.<sup>18</sup>

## CHAPTER THREE

# **SUSTAINABLE DEVELOPMENT AND POVERTY ERADICATION AS IMPERATIVES**

IN addition to having to address such structural and systemic constraints, a key element for developing countries when addressing these issues is the need to ensure that considerations of environmental sustainability are conceptualized, understood, and implemented within the context of an integrated approach to sustainable development and poverty eradication. This is consistent with the longstanding framework since the 1992 Rio Principles on Environment and Development of sustainable development as having three key interrelated pillars – environmental protection, economic development, and social development.

This framework linked the environmental crisis, the need for deep reforms of production and consumption patterns, ensuring sustainability, the achievement of the right to development with the development needs and priorities of developing countries (including social development goals), and the relationship between national action and international policies and cooperation.<sup>19</sup> The 1992 Rio sustainable development framework explicitly recognized that “countries played different roles in contributing to the environmental crisis, that countries are at different stages of development, and that these must lead to key principles and have important implications for actions and the international cooperation framework.”<sup>20</sup>

In the context of addressing environmental crises and climate change, for example, this recognition that countries are at different development stages and have different historical contributions is best encapsulated by the principle of common but differentiated responsibilities (CBDR). As Khor has pointed out, “It recognised that the major contribution to pollution (in-

cluding Greenhouse Gas emissions) and resource depletion was by developed countries, and that developing countries are now disadvantaged because there is little ‘environmental space’ left, which has implications for their future development.”<sup>21</sup> Khor further highlights that:

“In concrete terms, the implications of the above were as follows:

“First, the North would change its production and consumption patterns. It would take the lead in improving environmental standards, reduce pollution and the use of toxic materials, and cut down the use and waste in natural resources, including through changing lifestyles. By ‘putting its own house in order’, the North would show an example to the rest of the world that there is a need for a change in economic and social behaviour in order to solve the environment crisis;

“Second, the North would help the South with financial aid and technology transfer, and through partnership in bringing about a more favourable international economic environment (through more equitable terms of trade, debt relief, etc). This would enable the South to have greater resources and a larger ‘development space’ that would in turn facilitate a change in the development model that would be more environmentally sustainable;

“Third, the South, having more financial and technological resources, would manage its economy better, give priority to policies that meet people’s needs, improve pollution standards and reduce depletion of resources such as forests.

“Fourth, international agencies and structures would help further this process; for example, by reducing the debt problem of developing countries and reviewing the content of structural adjustment policies, by ensuring that the trade system brings about more favourable results for developing poor countries, by helping to mobilise financial resources and providing technical aid in improving environmental standards.

“Fifth, issues requiring an integration of economic and environmental concerns (such as the interaction of trade and environment; and the relation between intellectual property rights and environmental technology and indigenous knowledge) should be resolved through North-South partnership in which the development needs of the South would be adequately recognised.”<sup>22</sup>

The different national conditions and circumstances of developing countries mean that there is no single path towards sustainable development that can be prescribed as the magic development formula. Different countries will therefore require different national strategies towards development. At the same time, however, certain development imperatives are common to developing countries. These include the need to rapidly eradicate poverty, eradicate domestic income and social inequalities, expand decent livelihood and income opportunities for the poor, and develop their national economies in ways that would be more environmentally sustainable, more climate change-adapted, more resilient to climate change impacts, and as much as possible be more diversified in terms of productive economic sectors and activities. In the context of any form of “greening” the economy, the 2012 Rio+20 outcome document recognized that this concept may be differentially understood and applied.<sup>23</sup>

## CHAPTER FOUR

# GREENWASHING ECONOMIC COMPETITIVENESS

HOWEVER, the discussion in developed-country policy circles and multilateral institutions around having a “green economy”, or a “green recovery”, or a “green new deal”, often tends to focus on the environmental aspects of the issue and tends to disregard or downplay the economic and equity challenges and impacts. In doing so, the policy rhetoric creates a dynamic in which the primary objective is to make domestic economies go “green” as the response to climate change and other global environmental crises, rather than support long-term sustainable development and address poverty eradication.

The environmental aspect of this issue, at least concerning climate change, is based on the issue of “carbon leakage” – i.e., relocation of carbon-intensive industries from countries with stringent climate change-related rules such as GHG emission restrictions (leading to lower emissions) to countries with less stringent rules or without such rules (leading to increased emissions or no net decrease in such emissions).<sup>24</sup> These industrial sectors – especially iron and steel, cement, chemicals – form the backbone for industrial diversification and the development of a manufacturing base for higher-value-added products. Many developing countries, particularly those that are reliant on exports as a main source of revenue, are concerned that developed countries want to use the “carbon leakage” argument to put in place measures that could make it more expensive and more difficult for developing countries to develop and economically benefit from such industries as part of their long-term development strategies.

In raising the “carbon leakage” issue, developed countries also seek to address issues relating to adverse shifts in the competitiveness of their industries versus often lower-cost competing industries in developing countries. The argument of carbon-based “competitiveness” advocates in developed countries is that if their industries or companies have to incur additional cost to address climate concerns (for example, through having to meet national carbon standards or pay carbon permits to exceed a standard), they would unfairly be at a cost-competitive disadvantage vis-à-vis companies in another country that do not have to comply with similar standards. To address both the perceived carbon leakage issue and the perceived competitive disadvantage, climate-related trade measures are being pushed in developed countries such as the US and the European Union on the products of the countries that either do not have climate measures similar to theirs (such as a cap-and-trade system) or do not comply with the standards set for their nationally-based firms and industries.

Given that developing countries (especially those which are middle-income or which are seen to be competitive in global export trade in goods, including in fossil fuels) are often perceived by developed-country policymakers to be less proactive or ambitious in undertaking stringent domestic measures to avoid or reduce GHG emissions, developing countries are often seen as the potential targets of these climate-related trade measures. This is even though most developing countries in aggregate and per capita terms currently emit less GHGs compared to developed countries,<sup>25</sup> while the latter have generally emitted more historically since 1750<sup>26</sup> and therefore used up more than their fair share of the global carbon budget relating to the UNFCCC and Paris Agreement’s mitigation objectives.<sup>27</sup> In effect, such trade measures could be used as coercive policy instruments by developed countries against developing countries to force the latter to comply with stronger climate-related disciplines such as GHG emission reductions, as well as against those countries that are seen by developed countries as not having taken on sufficient mitigation commitments under the Convention and its Paris Agreement.

Hence, this focus gives rise to the risk that going “green” can be inappropriately used to justify unilateral trade measures against the products of

developing countries as policy response measures by developed countries to the climate change crisis. These could include, for example, proposals or plans to impose a “carbon tariff” or “border adjustment tax” on products because the GHG emissions during the production process exceeded a certain level or the exporting country does not have emission controls of a standard deemed adequate by the importing country. As has been pointed out elsewhere,<sup>28</sup> developing countries are strongly opposed to such “green” trade measures due to the ease with which they can be misused for unilateral trade protectionism and penalize developing countries that do not have financial resources or access to low-emission technologies (even though such measures arguably are not consistent with the CBDR principle and Article 3.5 of the UNFCCC as well as World Trade Organization (WTO) rules).



## CHAPTER FIVE

# **“GREEN” ECONOMIC POLICIES AS CLIMATE CHANGE RESPONSE MEASURES**

THE measures that governments take to combat climate change and its impacts at the global, national, and regional levels are called “response measures” in the UNFCCC context. These may include legislation, rules, regulations, policies, standards, financial, technological, or other measures or actions that are intended to avoid, reduce or capture GHG emissions, stabilize atmospheric GHG concentrations, adapt to the adverse effects of climate change, or avoid emissions leakage.

In this regard, developed countries have proposed various policy response measures to address climate change, including domestic technological development; increased investment and subsidies in cleaner technologies; development and application of standards, regulations, and bans; putting in place emission caps; and imposing taxes on carbon. Depending on how these response measures are designed and implemented, they may have positive or unintended and adverse economic and social consequences for developing countries’ economies, most often on the poorest and most vulnerable sectors of those economies.

Understanding the economic and social consequences of such actual and potential response measures is, therefore, very important for all developing countries. Their positive effects may arise from measures that support improved access to energy, health care, poverty reduction, and decent and quality employment in developing countries. On the other hand, they could have negative effects, particularly if they result in transferring the burden of reducing or avoiding GHG emissions onto developing countries or they result in disproportionately and inappropriately altering national and social conditions. These negative and adverse impacts of response mea-

asures would hence be an additional burden that developing countries should not have to bear as these could impair their economic and social development and poverty eradication efforts. These adverse impacts are also contrary to the practical implementation of the principles of the Convention about equity and common but differentiated responsibilities and respective capabilities.

The legal basis for the work undertaken in the UNFCCC concerning response measures can be traced back to its Preamble, its principles,<sup>29</sup> the commitments of Parties thereunder,<sup>30</sup> and the work of the Subsidiary Body on Implementation (SBI).<sup>31</sup> Under these provisions, Parties are to take into full consideration, in the implementation of the commitments of the Convention, the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures. Discussions on how to address the economic and social consequences of the implementation of response measures have been a longstanding agenda item in both the SBI and the Conference of the Parties (COP) to the UNFCCC, with many conclusions and decisions having been taken by these bodies since the entry into force of the UNFCCC in 1994.<sup>32</sup>

Sustainable development is the agreed basis in the UNFCCC that should shape how the impact of response measures should be addressed. This is mandated in paragraph 54 of the UNFCCC COP's Decision 1/CP.18:

“... Reaffirming that Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change; measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade,

“Also reaffirming the importance of avoiding or minimizing negative impacts of response measures on social and economic sectors, promoting a just transition of the workforce, the creation of decent

work and quality jobs in accordance with nationally defined development priorities and strategies, and contributing to building new capacity for both production and service-related jobs in all sectors, promoting economic growth and sustainable development, ...” (emphasis added)

The Paris Agreement reaffirmed the importance of response measures, further strengthened the responsibility of Parties to exercise care concerning the impacts of response measures, and deepened the institutionalization of the work on the impact of the implementation of response measures in the UNFCCC.<sup>33</sup> In Decision 1/CP.21, the Forum on the Impact of the Implementation of Response Measures would continue under the Paris Agreement and serve it, and the subsidiary bodies of the COP were tasked to come up with a work programme to address the effects of the implementation of response measures under the Paris Agreement.<sup>34</sup>

Response measures come in a wide variety depending on the circumstances in which they would be developed and applied. However, for developing countries, the key issue when it comes to response measures to address climate change is whether such measures, whether applied domestically or applied by other UNFCCC Parties, promote (or at least do not prevent) sustainable development and poverty eradication in developing countries. This is because while many response measures may be justified in terms of their climate change mitigation or adaptation results, there could be instances in which their economic and social impacts can impair sustainable development and poverty eradication efforts in developing countries. These impacts of response measures also often cut across multiple economic sectors, other than being used to respond to climate change.

Developing countries can also adopt climate change response measures of their own to enhance national economic stability and resilience by promoting and supporting economic diversification into other industries that could be better adapted or made more resilient to climate change impacts and also by addressing a just transition to a low-carbon pathway. For example, a developing country could put in place domestic climate change

response policies or regulations that promote expansion into new sectors and products that enhance the use of clean energy and improve efficiency that can conceivably both address the climate change crisis and support national sustainable development efforts. At the same time, however, such response measures may be rendered ineffective without any corresponding shift or changes in other countries' policies or other measures that may prevent developing countries from being able to obtain and develop the necessary technologies or products to effectively carry out economic diversification efforts. This example is particularly relevant in the technology arena, when the rigid enforcement of strong intellectual property protection prevents either technology acquisition or reverse engineering, both activities which are needed for the endogenous development of technologies in developing countries.

Response measures can also be multidimensional, ranging from the local to international and from policy design to implementation approaches. They can be community-focused – such as infrastructure projects to enhance climate adaptation and resilience or avoid or reduce emissions – as well as be national or international in focus – such as trade-related and energy-related measures that may have national and/or international impacts. For each response measure, there can be a range of implementation approaches, including transition periods, exemptions, sliding scales based on income, and compensation. Those that could have cross-border impacts should be assessed and discussed between the countries wishing to deploy such response measures and those countries that are likely to be affected by them to avert any negative economic or social impacts.

Given that the primary driver of today's global warming leading to climate change is the emission of GHGs from human activities, root cause responses to climate change would require avoiding or reducing such emissions as much as possible when undertaking economic production and consumption activities. In this context, most anthropogenic GHG emissions come from the use of fossil fuels (coal, oil, and gas) for energy either directly or indirectly. This is the case particularly in most developing countries – i.e., their economies are dependent on fossil fuels, either

as energy sources or as revenue sources, through the extraction and domestic use, importation, or exportation of fossil fuels.

To address this fossil fuel dependency, and thereby contribute to reducing or avoiding fossil-fuel-derived GHG emissions, there are several areas of particular importance that need to be looked at. The first is to shift energy supply away from fossil fuels, including accelerating the shift to renewable energy. The second is scaling up the levels of energy efficiency at various stages of the production and consumption cycle so that less energy is used to produce a given unit of economic output. The third is to ensure that energy access and supply is adequate to meet energy demand requirements that are consistent with national development needs and goals. The fourth is to ensure that the transition from fossil fuel dependency is done in a way and within a timeframe in which the adverse social and economic impacts are avoided or minimized and long-term sustainable development prospects and opportunities are safeguarded and expanded. These should be considered as part of a single integrated package that needs to be addressed together at the same time.

#### **A. Need for Assessing the Impact of Climate Change Response Measures**

These response measures that are intended to avoid or reduce GHG emissions are economic in nature and therefore are likely to have economic impacts. As such, they are likely to affect – through trade outcomes, employment outcomes and financing flows – the sectors which developing countries' economies may be dependent on for livelihood generation, revenues, and exports and in which these countries may have a competitive advantage due to lower production costs.

In doing so, such response measures could have a direct impact on livelihoods and employment and a longer-term impact on the decline in the availability of resources developing countries could use for investing in new sectors and economic diversification. Because of this, the design and implementation of response measures to climate change should ensure that the possible adverse impacts both domestically and overseas are

planned to be averted or minimized as much as possible, particularly for developing countries. This can be done through the development of an impact assessment checklist for response measures.

For example, in a November 2017 paper, Khor et al. suggested that such a checklist could be developed to assess future response measures with multiple impacts “during design and before deployment” as follows:

“An assessment checklist can be developed in the following way:

- What, if any, and how much, is the net global climate change impact of the measure? (science basis)
- What are and how much are the adjustment costs that affected countries have to bear on the implementation of a response measure?
- What are the trade impacts of the measure? Are they consistent with multilateral rules? How much is the impact of the measure on net foreign exchange earnings of and industrial development policies in developing countries?
- What is the impact of the measure on the fiscal and investment resources of the developing countries? What and how much are the impacts of reduced resources on investment and on the growth of potential national output? What are and how much are the impacts on reduced resources on social development?
- What is the impact of the measure on developing country access to clean technology?”<sup>35</sup>

Having such an assessment system for the impacts of response measures would be crucial to ensure that developing countries are not adversely impacted because, as Khor et al. point out, “A variety of response measures are already being implemented by developed countries. But in national reports, apart from the description of response measures, there is no assessment and analysis of the impact on developing countries. Thus,

we do not know how much of the global mitigation burden developing countries are bearing involuntarily at present. This is the cost of delays in the application of assessment methodologies.”<sup>36</sup>

The possible cross-sectoral and multidimensional impacts of response measures, particularly concerning their economic and social consequences, need to be addressed if developing countries’ ability to achieve their development objectives and poverty eradication imperatives is to be supported. In this context, the UNFCCC regime concerning response measures should also be considered in relation to its interlinkages with other relevant multilateral regimes, particularly the multilateral trade regime, and the response measure impact assessment would therefore need to also look at the possible adverse economic implications of trade-related measures on developing countries.

Some of these response measures that can be considered as trade-related include subsidies, standards and labelling, or the imposition of additional taxes or levies based on the carbon content of a product. These will be discussed at greater length later in this paper. But it might be useful to quickly highlight how a response measure impact assessment methodology could be used to illustrate the positive or negative economic or social consequences of these kinds of response measures.

For example, providing domestic subsidies for clean technology development could have the positive effect of spurring the emergence of new, cleaner technologies. However, undertaking an impact assessment that also looks at broader trade- and economy-related aspects could also bring to the fore possible disadvantages to developing countries wanting to enter and compete in the same technological sector.

These could include constraints that may be imposed by the strong enforcement of intellectual property rights (IPRs) (such as patents and industrial designs) over such technologies, or because developing countries due to their more limited financial resources are unable to provide the same kind of subsidies to their domestic industries, or because they may have limited capacity to do so due to various types of prohibitions on

providing subsidies that may be contained in international agreements (such as the WTO's Agreement on Trade-Related Investment Measures, the WTO's Agreement on Subsidies and Countervailing Measures, or regional or bilateral trade or investment agreements).

Product standards and labelling regulations can spur technological innovation by forcing product manufacturers to make their products more energy-efficient, less carbon-intensive, etc. (this is often called the technology-forcing role of regulations). However, a thorough impact assessment could potentially show that applying more strict standards and labelling regulations, particularly if applied unilaterally, could also lead to trade distortions that result in restricting the ability of developing-country exports to enter the markets of the (usually) developed country imposing the more stringent standards or labelling requirements.

This in turn could lead to adverse economic effects on the developing countries whose economies may be reliant on the exports whose market access has now been restricted. The same adverse impacts could arise even if the product standards or labelling requirements are based on or adapted from internationally agreed standards. This is because developing-country governments tend to be underrepresented and less active in international standard-setting bodies such as the International Standardization Organization (ISO) and their domestic industries would generally have less economic or technical or technological capacity to upgrade their production processes and infrastructure to be able to meet more stringent standards. In the WTO, disciplines on treating like products in the same way exist<sup>37</sup> and the response measure impact assessment methodology could use those approaches to identify the impact of discriminatory trade practices.

Imposing a carbon tax – i.e., a tax on the carbon content of a product, whether based on its direct carbon content or the imputed carbon content arising from its production – is often seen as a possible price-based policy tool that can disincentivize and hence result in restricting or limiting the production and use of GHG-emitting products. Using an impact assessment methodology for this response measure could show that it can pro-



vide higher fiscal revenues to the state, which can be used to reduce other taxes and be applied to environmental, developmental, and social objectives.

However, a thorough impact assessment of these measures should also include their impact on the export earnings of countries dependent on tourism, commodity, and agricultural exports and the resulting possible adverse impacts on their ability to generate revenue and transform and diversify their economies through investment. For example, imposing a carbon tax on air travel and thereby increasing airfares could adversely affect the tourism markets of many developing countries that are dependent on North American or European tourists. Imposing carbon taxes on bunker fuels for international shipping could adversely affect developing countries' exports that are dependent on international shipping transport by making such transport more expensive. Additionally, if applied in developing countries, such carbon taxes could make the cost of access to modern energy sources prohibitive, and increase poverty incidence and the use of non-priced resources by the poor.

The flipside of imposing a carbon tax is to remove existing subsidies being provided to the production or use of high-carbon-content products, such as subsidies for fossil fuel (oil, coal, gas) production or use. While doing so could have the effect of increasing the price of such products, hence disincentivizing the production and use thereof, it could, at the same time, like carbon taxes which have adverse impacts on energy access by the poor, adversely affect economic activity, and hamper development efforts. A thorough impact assessment would hence be useful in ascertaining what these positive and negative effects could be and thereby equip policymakers with information that would be needed to decide whether to go ahead with the measure and whether to put in place ancillary measures (such as financial or technical assistance, transitional support, etc.) to address any adverse effects.

Additionally, because climate change-related technology sectors (particularly in the energy field) may be at the current technological frontier, response measures that could have the effect of providing additional eco-

nomic advantages to developed-country enterprises could result in solidifying and prolonging their technological first-mover market advantage over possible competitors from developing countries. An impact assessment could highlight the possibility that prolonging such first-mover advantage could have the long-term effect of decreasing the ability of developing countries to improve productivity of their domestic industries and improve incomes, thereby decreasing, in turn, developing countries' ability to contribute more to the global climate change mitigation and adaptation effort.

## **B. Border Adjustment Measures**

The use of trade measures with the effect of blocking developing countries' goods on climate grounds can potentially deal a near-fatal blow to the multilateral trading system, as well as adversely affect multilateral climate policymaking and implementation under the UNFCCC and its Paris Agreement.

These trade measures could include the following: “*Punitive tariffs or quantitative measures* could be imposed to ban or limit market access for products that are seen as harming the climate or failing to internalize the costs of climate-related environmental measures; *Anti-dumping duties* could be applied to the exports of foreign producers drawing on the argument that their goods that are produced in a manner that does not internalize the full (carbon-related) costs of their production, are exported at below their normal value and cause material injury to competing domestic industries. This seems to be the basis of “environmental dumping” arguments; *Countervailing measures or “Anti-subsidy duties”* could also be applied drawing on the argument that the failure by a government to impose suitable regulations, carbon taxes or carbon cap-and-trade systems constitutes a financial contribution that confers a benefit on industries or regions which causes an ‘injury’, ‘serious prejudice’ or a ‘nullification of benefits’ expected from the GATT [General Agreement on Tariffs and Trade]; *Border adjustment measure* linked to a domestic regulation or system that applies equally to foreign and domestic products. Such a border adjustment measure could include the application of domestic carbon

taxes to imported products or require the purchase of domestic carbon credits or other forms of emission allowances as a condition of entry into the market; *Standards and domestic regulations* could be used to increase barriers to trade in products from developing countries that do not meet energy- or carbon-efficiency standards imposed nationally, or agreed through regional or international processes (including a sector-based agreement).”<sup>38</sup>

For example, the carbon border adjustment proposal included in the EU’s Green Deal<sup>39</sup> as well as similar proposals contained in the US Democratic Party’s<sup>40</sup> climate change-related campaign pronouncements for the 2020 US national elections<sup>41</sup> would be among the more recent policy pronouncements in developed countries for such climate-related trade measures that would be highly controversial and likely to be opposed by developing countries. Put simply, a carbon border adjustment measure would be an additional tax, duty, fee, or other measure imposed on imported goods at the border based on the imputed carbon content of the imported goods associated with the processes and methods used to produce such goods.

The basic idea behind carbon border adjustment measures is that they would help prevent “carbon leakage” and would push countries (primarily developing countries) wishing to export goods to the EU and the US to upgrade their production processes and methods to reduce the carbon content of their exported products. Such upgrades would, conceivably, be done by having developing-country manufacturers of exported goods invest in newer production technologies that would be less carbon-intensive or shift their power generation from fossil fuels to clean fuels to produce export goods with lower carbon content and hence avoid having the carbon border adjustment measure applied to such exports – but this would be at the expense of the developing-country manufacturer in effect increasing its costs of production due to having to invest in upgrading. Without upgrading (and hence avoiding additional expenditures), the exported goods would continue to have higher carbon content and hence be subject to the carbon border adjustment measure, which in turn would then raise the price of the exported good relative to its domestic counterpart.

However, proponents of carbon border adjustment measures often fail to take into account other considerations that are present in developing countries which may make it difficult for developing countries to rapidly and painlessly adjust their production processes and methods and their energy sources to ones that are less carbon-intensive. These include, for example, the following:

- Economic growth imperatives, large populations and rapid population growth, and low per capita income levels often mean that developing countries prioritize or rely on the cheap and proven energy from fossil fuels to provide energy to their peoples and producers;
- The current global value chains dominated by developed-country transnational corporations often lock in the developing-country part of the value chain to reliance on more carbon-intensive but lower value-added commodity extraction and production (such as mining and agriculture) which tend to require high levels of cheap energy inputs derived from fossil fuels; and
- The historical offshoring of carbon-intensive and GHG-emitting industries from developed countries to developing countries from the 1980s to the present has allowed developed countries to have lower domestic GHG emissions levels while increasing the GHG emissions levels in the new host countries of the offshored industries.

Many developing countries would hence consider carbon border adjustment measures to be inequitable, insensitive, hypocritical and as an attempt by developed countries to evade their commitments under the UNFCCC and its Paris Agreement to take the lead in combating climate change and to provide financial and technological assistance to developing countries, and instead shift the burden of climate change action onto these developing countries. As Khor has highlighted, “these measures would in effect be to punish developing countries for being less developed. They face barriers such as IPRs (owned mainly by rich countries’ companies), lack of technology cooperation, and little funds, that prevent

them from having low-emission industrial production. The developing countries thus become double victims – of the effects of climate change, and of the developed countries’ measures that push the adjustment burden onto them.”<sup>42</sup>

As such, carbon border adjustment measures, particularly when applied unilaterally by developed countries, “represent the latest form of economic imperialism and are antithetical to the principles of equity enshrined in the Paris Agreement.”<sup>43</sup> They could end up becoming economic sanctions imposed on developing countries that developed countries deem as not being “ambitious” enough in undertaking climate change action – e.g., if the EU’s carbon border adjustment measures are applied to the exports of a country that it thinks does not have an ambitious mitigation component to its nationally determined contribution (NDC) under the Paris Agreement, such measures would effectively be like “climate-based sanctions”, as suggested by Ravikumar.<sup>44</sup> Doing so would be inconsistent not only with the principle of equity and CBDR under the UNFCCC and its Paris Agreement, but also with the non-punitive nature of the UNFCCC and its Paris Agreement<sup>45</sup> and Article 3.5 of the UNFCCC, and would violate both the “national treatment” and “most-favoured nation” provisions of GATT 1994.

Since the 1990s, energy-intensive industries in developed countries have become subject to carbon taxes and higher energy efficiency standards. Although the competitiveness impacts of domestic carbon-based taxation and regulation in developed countries on their energy-intensive industries may in most cases not be significant or are indirect and oftentimes mitigated by exemptions or subsidies, developed countries still seek to address perceived adverse competitiveness impacts arising from asymmetrical carbon-based taxation and regulation through carbon-based border adjustment measures.<sup>46</sup>

Developing countries are rightly concerned at the potential of having their exports discriminated against because of such border adjustment measures. The ability to access developed-country markets for their exported goods remains a major component in many developing countries’ devel-

opment strategies. Hence, as pointed out above, carbon-based border adjustment measures are likely to be seen as disguised protectionist measures that would arguably be contrary to UNFCCC Article 3.5 and various WTO rules.<sup>47</sup> Border barriers to their exports will have adverse implications on the extent to which developing countries will be able to generate trade-derived capital surpluses to invest domestically in building up improved development-oriented physical, human and financial infrastructures. Such measures would also likely have detrimental effects on the ability of developing countries to implement their Paris Agreement NDCs.

Imposing extra tariffs or financial charges on imports at the border based on how the products are produced (“processes and production methods” or PPMs in technical jargon) is hence very controversial and likely to be highly politically divisive at the multilateral level between developed and developing countries. These measures have been consistently rejected by developing countries at the WTO since 1996 as a form of protectionism, on the grounds that they will unfairly curb developing countries’ exports and that they are against WTO rules.

As most developing countries often lack technological capacity and finance, their industries do not have the means to match the emission standards of developed countries or the performance of the latter’s firms. The imposition of border adjustment measures on climate change grounds also highlights an element of hypocrisy in developed countries’ policymaking, given that they have not fulfilled their UNFCCC commitment to provide the finance and technology required by developing countries.

If implemented by developed countries as envisioned under the EU Green Deal or US proposals on a Green New Deal, for example, it could open the floodgates to further exercises of unilateral trade protectionism by blocking developing-country products based on how they are made. At a time when national response measures to combat the COVID-19 coronavirus pandemic have caused many national economies, especially in developing countries, to contract and go into a deep recession, coupled with the increasingly adverse impacts of climate change and other external shocks, climate-related unilateral trade protectionism against devel-

oping countries could exacerbate the impact of these external shocks on developing countries. This could result in developing countries losing, even more, the domestic financial and technological capacity and resources to pursue their sustainable development goals, eradicate poverty, and implement (much less even enhance) their Paris Agreement NDCs. This will, in turn, reduce the scale of the global effort to combat climate change by eroding the multilateral trust and international cooperation that is needed for all countries to work together to combat climate change, address the impacts of the coronavirus pandemic, and achieve the SDGs within the next decade.

At present, the most discussed border adjustment measure is the use of a carbon tax levied based on the imputed carbon content of the imported product, or else requiring the importer of goods with an imputed carbon content above a certain level to first purchase an emission permit as a condition for importation. There is, however, considerable debate on whether such border adjustment measures would be consistent with WTO rules, especially GATT Article III on non-discrimination and GATT Article XX on exceptions. Currently, most legal scholars seem to conclude that border adjustment measures are likely to encounter problems of consistency with GATT Article III, but that such inconsistency might be cured by seeking recourse to GATT Article XX provided the many conditions in Article II are complied with.<sup>48</sup>

However, even if the border adjustment measures are designed or implemented in a manner that is found to be justified as an exception under GATT Article XX, developing countries are likely to continue to raise concerns about the fairness of developed countries being able to resort to the GATT's environment exception in the sense that while environmental protection has been accorded priority status to be allowed as a GATT general exception, development concerns are not accorded the same status such that developing countries could justify GATT-inconsistent measures on development grounds. As Khor has pointed out, "Developing countries are at a disadvantage when only the environment is accorded a general exception status, since they are at a lower economic and technological level and thus unable to match the developed countries in pollu-

tion control. Therefore, having environment but not development as part of the general exceptions is unfair, as it enables the uneven playing field to be tilted even more against the developing countries. If there is an exception clause granted to environmental concerns, there should also be a general development exception clause in the GATT.”<sup>49</sup> Khor further adds that developing countries “are also likely to argue that the measures are unfair and violate the UNFCCC’s principle of common but differentiated responsibilities, and the principle of historical responsibility, whereby it is recognised that the developed countries are mainly responsible for the accumulation of greenhouse gases in the atmosphere, are legally bound to reduce their emissions and to assist developing countries to take mitigation and adaptation measures. ... [S]ubjecting developing countries’ imports to the same tax treatment as their domestic products, when the developing countries’ financial resources and technological level are so much below those of the developed countries, would be seen not as leveling the playing field but on the contrary as tilting the already unlevel playing field to an even much more uneven level against the developing countries.”<sup>50</sup>

In this context, it is important to highlight that the relationship between trade and climate change measures in the climate regime is governed by, among others, Article 3.5 of the UNFCCC which states that “measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.” This language reflects Article XX of the GATT, which allows WTO members to adopt measures that may be inconsistent with their WTO obligations if such measures are, *inter alia*, “necessary to protect human, animal or plant life or health” or are related “to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”, provided that these measures “are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.”



Before the situation deteriorates even further, developed countries should reconsider their moves on this issue. Such unilateral actions can be expected to meet with strong opposition from developing countries in general. While the introduction and use of such climate-related trade measures may be reasonable politically in developed countries taking into account their domestic constituencies, such measures will however exacerbate existing tensions between developed and developing countries in both the UNFCCC/Paris Agreement and WTO regimes. This is because, for developing countries whose overriding priority continues to be the pursuit of economic development,<sup>51</sup> measures that are likely to affect their development prospects will be opposed. From the perspective of developing countries, trade measures are not the best nor the most appropriate means for addressing climate change. Rather, there is great concern that the use of trade measures by developed countries ostensibly to address climate change concerns may have the effect of restricting the market access of developing-country products in developed countries and enhancing the competitive edge that developed countries have in global trade, thereby “locking in” the current inequitable development gap between developed and developing countries.

To avoid this situation of a potential breakdown in multilateral cooperation in both the climate change and international trade regimes, it would be better if developed countries seek other mechanisms rather than the trade measures envisaged to meet their domestic concerns relating to carbon leakage and competitiveness, including mechanisms such as enhanced international cooperation to assist, through finance and technology, developing countries to develop technologies, diversify their economies away from GHG-intensive sectors, and upgrade their industrial output to meet more stringent GHG emission regulations.

In this debate, developing countries have equity, development priorities, and the language of the UNFCCC itself on their side. In the ultimate analysis, issues of trade competitiveness and climate change are about the sharing of the shrinking global emissions budget. These issues are therefore a reflection of a broader global policy debate over the developing countries’ role and influence in global governance.

## C. Subsidies

The provision by governments of publicly funded subsidies to their domestic manufacturers or research institutes to undertake research and development (R&D) into environmentally sound technologies can have both positive and negative impacts. On one hand, such subsidies can spur the development and eventual dissemination of such technologies, which in turn could lead to lower environmental impacts (including GHG emissions). However, most of such subsidies are provided by developed-country governments rather than developing countries. This situation puts developing countries at a competitive disadvantage as their inability to provide subsidies to their domestic industries means that these industries would not be able to compete in terms of technological development and innovation, thereby resulting in developing countries not being able to compete effectively in the new technology markets that would be developed.

Despite the potential competitive market impact of such R&D subsidies that are being provided by developed-country governments to their industries, such subsidies, if made available to firms on a non-specific and industry-wide basis and if not conditioned on export performance or domestic content, are allowed under the WTO's Subsidies and Countervailing Measures (SCM) Agreement.<sup>52</sup> Much like the provision by developed countries of agricultural subsidies under the WTO Agreement on Agriculture, the ability of developed-country governments to provide R&D subsidies to their technology industries, when coupled with their consistent push for the strong enforcement of intellectual property rights over such technologies, allows them to create and maintain technological market leadership and control, effectively limiting developing countries and their firms to being technology buyers in large part.

Additionally, even in cases where developing countries have sought to provide subsidies to their domestic industries to promote renewable energy, developed countries have brought these developing countries to WTO dispute settlement proceedings.<sup>53</sup>

## **D. Standard Setting and Technical Regulations**

The adoption of more stringent environmental standards and technical regulations (including eco-labelling) for various consumer products, for example, concerning fuel efficiency, GHG emissions, carbon content, etc., in various countries is among the measures that can also be used to push industries to technologically innovate on their products and embark on more environmentally sustainable production processes and methods, and to shape consumer behaviour. In this regard, regulatory standard setting can perform “technology forcing” and “consumer shaping” functions.

For example, fuel and energy efficiency standards have been employed to promote the use of cars with more fuel-efficient engines in the US, Japan, the EU, and China, encourage industries and consumers to move to energy-efficient products (such as shifting away from incandescent to CFL and LED lighting), and change energy producer and consumer behaviour. However, there are great variations in terms of the methodologies, technical bases, testing modalities and procedures, and enforcement processes in defining and implementing such standards. In this context, developing countries have generally stressed that the development of such standards must be consistent with the WTO Agreement on Technical Barriers to Trade.

Furthermore, due consideration must be given to the specific national circumstances of developing countries when such standards and technical regulations are to be applied. The UNFCCC recognizes the need to ensure that such standard setting does not adversely impact developing countries. In shaping international standards, developing-country participation must be ensured. Also, standards must provide for flexibility to allow developing countries to reflect in such standards their development context. This is because the adoption of more stringent product standards on both domestic and imported products may create downstream adverse effects on developing countries whose exported products may not be able to comply with such standards (thus effectively reducing their access to their export markets). Hence, while such more stringent environmental standards and technical regulations may produce environmental, economic,

and social benefits in the country adopting them, the possible adverse effects of such measures on developing countries should also be taken into account and addressed.

In this context, while all countries are free and encouraged to adopt more stringent environmental standards and technical regulations for the economic, social, and environmental benefits that they may bring, there should also be bilateral and international cooperation mechanisms developed and put in place to assist developing countries, in the form of finance, technology, and capacity building, to upgrade their own domestic and export industries' environmental technology and standards. Without such support mechanisms, the adoption of such standards or technical regulations particularly in developed-country markets may simply end up penalizing developing countries and hampering their development efforts by effectively imposing technical barriers to trade.

Additionally, the full and effective participation of developing countries in setting international standards is also needed as many important standards are currently "globalized" from those of developed countries without the concomitant support to developing countries to assist them to comply with such standards.

## **E. Liberalization in Environmental Goods Trade**

Another key issue relating to economic measures used to address environmental issues is the longstanding push by developed countries to reduce or eliminate barriers to international trade in environmental goods and services. This push was given a multilateral mandate under the WTO's Doha Ministerial Declaration, which initiated negotiations on the liberalization of trade in environmental goods and services (EGS) as part of the Doha Round of multilateral trade talks.<sup>54</sup> The lack of progress under this mandate led a group of developed and developing countries to launch plurilateral negotiations at the WTO for an Environmental Goods Agreement (EGA).<sup>55</sup> More recently, negotiations for an Agreement on Climate Change, Trade, and Sustainability (ACCTS) were launched by New Zealand with Costa Rica, Fiji, Iceland, and Norway.<sup>56</sup>

In all of these initiatives, countries are being asked to eliminate tariffs on a broad range of so-called “environmental goods.” There is, however, no definition of an “environmental good.” The proponents, led by the EU and the US in the WTO EGS negotiations, by the EU concerning the EGA, and New Zealand concerning the ACCTS, generally argue that liberalizing trade in environmental goods would spur the spread of “green” technologies globally and thereby bring about global environmental benefits in the form of lower pollution and reduced GHG emissions. However, this push has been criticized by some developing countries for essentially being an expanded version of earlier proposals that were more about the ambition of developed countries to expand market access of these goods in developing countries and less about assisting developing countries to tackle climate change.

In a 2011 analysis relating to the WTO EGS negotiations<sup>57</sup> (which analysis would apply to the EGA and ACCTS as well), Yu pointed out that full trade liberalization in environmental goods, without any commensurate measures to support developing countries, would create a development “loss” for developing countries. Since developed countries already apply quite low or zero tariffs on most industrial goods, including environmental goods, their burden of effective tariff reductions would be relatively much less than for developing countries, which would have to reduce their applied and bound tariffs on such goods by much more than what developed countries would be required to reduce.

Yu also pointed out that developing countries’ applied tariffs (as of 2011) on such products average more than 8% (with most low- and middle-income developing countries having applied tariffs around 15-30%) and their bound tariffs around 32%.<sup>58</sup> Reduction of these tariffs would move the environmental negotiations away from reflecting the principles of less than full reciprocity and special and differential treatment that rightfully favour developing countries. More seriously, cutting developing-country tariffs to zero for environmental goods would result in a surge of imports into developing countries and make them dependent on these imported goods, making it difficult or impossible for local industries producing

environmental goods to survive or develop. The developing countries would also become technologically dependent unless other measures are put in place to ensure that developing countries can obtain and design the technologies themselves.

Furthermore, because of their more modern technology, ability to subsidize research and development, and market power brought about by a combination of transnational corporate dominance and intellectual property rights enforcement, developed countries tend to have a significant lead in producing and exporting environmental goods. In light of the climate change and environmental pollution crises globally, this sector is likely to grow in scale and scope.

Hence, if full trade liberalization in the environmental sector based on a list of internationally-traded “environmental” goods and services is achieved, developing countries will essentially be providing generous market access to imports of such products and services, disadvantaging their future potential in developing their capabilities in these industrial and services sectors. This could lead to increased imports of such goods and inhibit the development of domestic environmental goods producers and the consequent economic diversification, thereby locking developing countries into dependence on foreign technology. This is largely why developing countries have mostly objected to having to eliminate their tariffs on environmental goods, since they wish to preserve the policy space to be able to produce these goods and their infant industries would need protection at least initially.<sup>59</sup>

In response to developed-country proposals, some developing countries have put forward other suggestions on how to conclude the WTO environmental goods negotiations, including the following:

- Special and Differential Treatment in Environmental Goods and Services, by Argentina and Brazil (30 June 2010);<sup>60</sup>
- WTO Negotiations on Environmental Goods and Services: Addressing the Development Dimension for a “Triple-Win” Outcome, by China and India (15 April 2011).<sup>61</sup>

As pointed out above, rushed and unwarranted market opening by developing countries to developed countries' environmental goods and services through tariff and non-tariff barrier elimination outside of their development context could stifle developing countries' domestic innovation and development of such goods and services and lead to a situation of technology dependency in which developing countries depend on developed countries as the providers of such goods and services. A more appropriate approach requires the promotion of broader policy measures designed to support developing countries' ability to adopt, adapt, develop and innovate on such goods and services (such as flexibilities in innovation and intellectual property regimes, non-commercial technology and skills transfers, support to research and education, support to infrastructural development, and the provision of adequate financing and technology transfer) as part of their economic development and diversification efforts.

## **F. Intellectual Property Rights**

Closely linked to climate-related trade issues, including trade in environmental goods and border adjustment measures, is the issue of intellectual property rights and the impact of their enforcement on the ability of developing countries to afford, acquire, develop, produce and disseminate their own endogenous environmental and climate change-related technologies.<sup>62</sup> In the UNFCCC regime, including under its Paris Agreement, international cooperation in technology development and diffusion, including technology transfer, is a key element in the implementation framework for avoiding or reducing GHG emissions and adapting to the adverse impacts of climate change. In UNFCCC Article 4.5, developed country Parties and other developed Parties included in Annex II of the Convention committed themselves to taking practical steps to promote transfer of environmentally sound technologies. However, despite this longstanding recognition of the importance of technology development and transfer from developed to developing countries as a part of global action and cooperation on climate change, its full potential has not yet been realized. This is because aside from a marked reluctance by developed countries to fully implement their technology transfer commitments under the UNFCCC, there are also some barriers that prevent or limit actual technology transfers.

As pointed out by Shashikant, “Several conditions have to be present for technology transfer and development to take place. The absence of such conditions can form barriers to technology transfer. Among the barriers that are normally listed are poor infrastructure, inadequate laws and regulations, shortage of skilled personnel, lack of finance, ignorance of technology issues, high cost of certain technology agreements, problems created by equipment suppliers, and intellectual property rights. ... Whether IPRs constitute a barrier or an important barrier depends on several factors, such as whether the particular technology is patented, whether there are viable and cost-effective substitutes or alternatives, the degree of competition, the prices at which it is sold, and the degree of reasonableness of terms for licensing.”<sup>63</sup>

In general, IPRs create a proprietary interest in an invention by giving rights of exclusive use, manufacture, and sale to the owner of an invention, and by providing legal recourse against infringement (that is, unauthorized use, manufacture, or sale).<sup>64</sup> In effect, IPRs have the idea of exclusive control as its essence, an idea that is directly opposite to the open accessibility needed for the rapid and mass diffusion of climate technologies.

There is an increasing number of patents on climate-related technologies, especially concerning energy technologies, as corporations seek to secure exclusive market control over such new climate change-related mitigation and adaptation technologies that are likely to be more and more needed as climate change intensifies. This trend poses serious concerns about the adverse effect of patents on climate-related technology transfer. The problem here is that patent owners acquire, under such patents, exclusive first-mover market power and control over lead times, dictate prices and determine the level of royalties. This could therefore limit access by developing countries to such technologies that are mainly patented in developed countries as the royalty and licensing fees that may be charged by the patent holder could severely increase the cost of the technology. This is hence an increasingly serious barrier to the flow of technology transfer and would arguably be inconsistent with the provisions of the UNFCCC and its Paris Agreement for technology transfer from developed to developing countries.



Aside from exclusive price and royalty control, patents and other IPRs also give the IPR holder the following powers:

- The ability to refuse to license the technology – There have already been examples in which patent holders have refused to license the technology or withheld technical information concerning the technology because of concerns that licensing could allow others to eventually become competitors in the technology.<sup>65</sup>
- The ability to impose high royalties and licensing fees – Royalties and licence fees directly correspond to data on international earnings from patents, trademarks, copyrights, and trade secrets for developed countries. More than four-fifths of royalty and licence fee revenues for environmental technologies accrue to developed countries (especially the US, Western Europe, and Japan). Developing countries, being generally technology importers, are all net payers of royalties and licence fees, with net payments rising.
- The ability to patent spin-off technologies – While the underlying concepts and original designs for many climate-related technologies tend to be off-patent, new technologies developed from such concepts and designs are increasingly being patented, particularly by corporate holders based in developed countries. This trend enables patent holders to retain exclusive market control over the development, dissemination, and use of such patented technologies.
- The ability to impose barriers to follow-on innovation – Strong IPR regimes for climate-related technologies could create economic disincentives for other innovators, especially from developing countries, to invent new follow-on technologies, as existing patent holders could in many cases erect competitive barriers and raise transaction and innovation costs. In many cases, any benefit of strong patent laws accruing to local innovators in developing countries is overwhelmingly outweighed by the high cost of importing patented technologies from developed countries. Overly protective IPR regimes may thus inhibit follow-on innovations, thus slowing down technological development, particularly in developing countries.

## G. “Green” Conditionalities

There is also a risk that “green deal”, “green recovery” or “green economy” approaches could be used by developed countries as new conditionalities on developing countries for the provision of official development assistance (ODA), the provision of development loans, or the grant of debt rescheduling or debt relief. This could include provisions in multilateral, regional, or bilateral trade agreements or other policy instruments that require the adoption or implementation by the parties of climate change- or environment-related policy measures that may not be appropriate to the developing-country parties’ national circumstances, or which may effectively constitute an extra-territorial application of the developed-country parties’ environmental standards without any corresponding support package, or which may bring about inappropriate environmental goods and services market opening in developing countries at the expense of the development of their domestic industries for such environmental goods and services.

It is of course important for all countries to encourage each other to aspire to and implement the highest environmental standards and policies, to join multilateral environmental agreements to protect global environmental commons and to be more ambitious in implementing the UNFCCC, its Kyoto Protocol, and its Paris Agreement. However, in doing so, developed countries must always recognize that the CBDR principle continues to be applicable as articulated in, for example, the 1992 Rio Declaration on Environment and Development and the UNFCCC and its related legal instruments.

The CBDR principle requires that the historical responsibility of developed countries as a result of their historical development pathways giving rise to today’s global environmental challenges (including biodiversity loss and climate change) be recognized and respected as an integral part of global cooperative action to solve these global environmental challenges. This principle requires, *inter alia*, that developed countries take the lead domestically in changing their domestic patterns of production and consumption to be more environmentally friendly and sustainable

and, at the same time, provide the needed financing, technology, and capacity-building assistance and support to developing countries so that the latter can be assisted in avoiding or moving away from the historically environmentally damaging development pathways that the developed countries used in the course of their development.

From the perspective of encouraging cooperation and global action on climate change, quasi-punitive approaches such as the imposition of conditionalities or sanctions, particularly when these are unilateral and when seen to excessively impinge on national sovereignty, often do not bring about the desired results. Instead, the targets of such conditionalities are likely to view them as burdensome impositions. The success of multilateral environmental agreements that imposed restrictions on trade in covered substances vis-à-vis non-parties, such as the Montreal Protocol, owes much to the fact that there were built-in technical, financing, and technology transfer assistance obligations to help developing-country parties to these agreements to comply with their obligations.<sup>66</sup>

Multilateral cooperation and action would be better enhanced through the provision of support packages (technical assistance, finance, technology transfer) for developing countries to be enabled to better implement environmental and climate action good practices – this is the approach that can be seen in, for example, Article 4.7 of the UNFCCC and Article 20.4 of the Convention on Biological Diversity (CBD).<sup>67</sup>

However, it should be stressed that such support packages for climate action by developing countries must be new and additional (with finance being provided mostly in the form of grants rather than loans) to any other support being provided by developed countries to developing countries such as ODA or support being provided under other multilateral treaty regimes such as the CBD.<sup>68</sup> Current attempts to create “synergy” between the different multilateral environmental agreements (e.g., UNFCCC, CBD, and the Convention to Combat Desertification), including through the common use of a “nature-based solutions” framework among these three conventions, should not be used to justify allowing support being provided to developing countries under one of these treaties for one purpose

(e.g., addressing biodiversity under the CBD) to also be counted as having been provided for other purposes under the other treaties (e.g., for climate finance or to combat desertification) – doing so is unfair to developing countries and not conducive to the strengthening of these multilateral regimes in a balanced way.<sup>69</sup>

## CHAPTER SIX

# **ECONOMIC DIVERSIFICATION IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT AND POVERTY ERADICATION IN THE SOUTH**

ENSURING that the economic and social consequences of climate change response measures are equitable and do not adversely affect developing countries should be seen as a key element in the overall global strategy to combat climate change under the UNFCCC and its Paris Agreement. The success of developing countries' sustainable development and poverty eradication efforts, especially through economic diversification efforts, will depend on being able to have the policy space and flexibility to experiment with different national economic policies to find the policy mix that is best and most appropriate for their national context.

Promoting and accelerating a rapid transition away from fossil fuels, including by stopping the further expansion of fossil fuel production, as part of the package of urgent climate change response measures that need to be undertaken within the next five years will require that developing countries, including their governments and civil society, fully understand the necessity, scale, speed and practical means by which such transition can be done in a manner that will also address their longer-term sustainable development objectives, including the need to ensure equitable energy access for a growing population and domestic economic growth in these developing countries.

Even as countries continue to deal with the COVID-19 pandemic and, in some cases, start to deal with the post-pandemic recovery phase, the urgency and the scale of the need to continue actions to combat climate change have remained. At current rates of anthropogenic greenhouse gas

emissions from fossil fuel production and use, the remaining emissions budget commensurate to the 1.5°C goal under the Paris Agreement will be exceeded between 2025-2030.<sup>70</sup>

Climate change impacts such as extreme weather events, long-term regional climatic shifts, sea level rise, desertification, and ecosystems loss are now undermining and will pose significant constraints to meeting sustainable development and poverty eradication in many developing countries due to the loss and damage that they bring to critical economic and human infrastructure but also to the long-term shifts in economic production that they will entail.

At the same time, the COVID-19 pandemic has laid bare and, in many cases, exacerbated longstanding structural economic and multilateral policy challenges that have kept most developing countries continuously fossil fuel-dependent (whether in terms of imports, exports, or energy use) and with substantial levels of chronic poverty among their population.

As pointed out above, these challenges include: a reliance on economic sectors that are highly vulnerable to the adverse effects of climate change and the impacts of response measures; high levels of domestic income inequality; liberalized domestic trade and investment policy frameworks that leave their economies vulnerable to external economic shocks; relatively low levels of public economic infrastructure; difficulties in raising domestic revenue and in restraining capital outflows; significant levels of unemployment and underemployment; population growth; as well as brain drain in the case of migrant-sending countries and absorption issues in the case of migrant-receiving countries.

The measures put in place by governments, and the rapid changes in societal and individual behaviour, in response to the COVID-19 pandemic all show that rapid policy and behavioural changes can be undertaken given sufficient stimulus and motivation. Furthermore, the fiscal stimulus packages rapidly put in place by many governments to cushion their economic sectors from the adverse impacts of pandemic response measures show

that financing can be made available when needed. These lessons from the pandemic can be applied to the climate change context, particularly in terms of achieving global climate change goals under the UNFCCC and its Paris Agreement by fostering a rapid and deep transition away from fossil fuel dependence and towards clean energy, including through promoting large-scale economic diversification and just transition policies, initiatives, and actions by all countries.

These challenges are all interlinked and form the context within which developing countries are to implement the NDCs that they have put forward under the Paris Agreement. Taken together, these challenges impose significant capacity constraints on most developing countries that, if not addressed, may ultimately hamper their ability to effectively implement such NDCs, enhance their ambition in subsequent NDCs, and accelerate the transition away from fossil fuels towards a clean energy future.

In this context, the developed countries, in light of their historical responsibility, current capabilities, and continued high per-person emissions, must continue to take the lead in reducing global greenhouse gas emissions through domestic emissions reductions and in providing climate finance and technology transfer to developing countries. Developing countries also will have to ensure that their long-term sustainable development prospects are climate-proofed and made more climate-resilient by putting in place needed adaptation and economic diversification policies and strategies, in a manner that is socially and economically equitable. This would imply looking at, inter alia:

- The energy access and energy infrastructure transformation to clean/renewable energy possibilities for developing countries, in light of their sustainable development objectives;
- The technological and financing (including investment) needs for such transformation and ensuring that a just transition takes place, particularly in developing countries concerning their workforce and their marginalized and vulnerable populations and ensuring that social and economic conditions for their populations remain stable or

are improved and that national development objectives will be achieved;

- Identification of the economic diversification and transition sectors that could be developed in the economies of those developing countries that are likely to be adversely affected by emission reduction-focused response measures of other countries, particularly in light of current economic contexts and existing sectoral dependencies and avoiding non-solutions (such as bio-energy carbon capture and storage, carbon trade markets, and geoengineering), or by initiatives to halt further expansion of fossil fuel production;
- Identification of key equity considerations from a developing-country context in terms of the extent of diversification, financing requirements, technology requirements, social impacts, economic impacts, and transition costs, and other considerations associated with ensuring that there is a just transition in countries from today's fossil fuel-dependent economies (whether in terms of export or import dependence or energy dependence) to ones that are more climate-resilient and adapted;
- Identification of international cooperation arrangements under the UNFCCC and its Paris Agreement that need to be enhanced or scaled up to better address equity, economic diversification, just transition for the workforce and other marginalized sectors, and the impact of response measures (including in climate finance, technology transfer, adaptation financing, and loss and damage financing).

Because of the economic nature of the systemic and structural changes that are needed to rapidly undertake effective economic diversification in the context of sustainable development and poverty eradication, national and multilateral climate change policy response measures need to be robust but at the same time equitable and flexible. They should allow for sufficient and appropriate policy space for developing countries to ensure that their climate change efforts are appropriate to their national circumstances and supportive of their development efforts. Doing so would be



consistent with the principle of CBDR embedded in the UNFCCC and its Paris Agreement.

This is particularly important for those developing countries whose economies rely on fossil fuels, whether in terms of imports for energy, exports as commodities, or for domestic energy use (e.g., for industry, transportation, aviation, heating/cooling, residential power, or desalination). For such countries, the key question that needs to be answered is how the economic needs that are currently filled by fossil fuels can be met – e.g., providing cheap usable energy to fuel the economy and, for exporters, obtaining income from fossil fuel production and exports that is often used to provide income support to their populations and thereby maintaining internal civil stability.

Corollary questions would include what economic sectors would be viable target sectors to diversify to, at what speed the transition and diversification should take place taking into account the specific economic, resource endowment, political, and social circumstances of the country, and what can be done with the fossil fuel-oriented infrastructure and other assets in the country to ensure their contribution to economic productivity. Connected to this is the question of what then should be the commensurate support measures that should be put in place at the international level through international cooperation under the Paris Agreement to address these concerns and ensure that economic diversification and just transition take place in a manner that promotes rather than negates sustainable economic, political, and social development in developing countries.

This is why proactive engagement by fossil fuel-dependent developing countries on issues relating to economic diversification and just transition is very important as part of these processes, particularly to define the policy, economic, and support measures that need to be undertaken to achieve effective economic diversification and just transition. Indeed, an essential part of response measures to climate change is the fundamental question of energy as the critical enabler of development and good health. Shifting from dirty to clean energy is a vital step towards integrating health,

energy, climate, and other priorities. In this context, the model of energy provision is key. Decentralized, demand-driven, clean, and renewable energy can power rural and peri-urban economic activities, health facilities, and systems for sanitation and hygiene, and enable effective irrigation and farming everywhere. Better access to clean energy makes communities more resilient to health and other shocks and is essential for economic development and the process of economic diversification.

Climate justice and equity will be key issues raised by many stakeholders, particularly concerning mitigation and adaptation burden-sharing, the reflection of historical and differentiated responsibility and capability, addressing loss and damage, provision of the means of implementation to developing countries, and ensuring the survival and development of vulnerable local communities and marginalized sectors despite climate change impacts. In a recent paper by Muttitt and Kartha,<sup>71</sup> they point out that different countries will have different challenges when it comes to transitioning away from fossil fuel dependence because of different national circumstances. They highlight that equity considerations applied to fossil fuel dependency mean that richer and more diversified economies (such as those in developed countries) are better able to phase out fossil fuels fastest and that fossil fuel-dependent developing countries should prioritize industrial policies that can engender rapid economic diversification in a manner that provides for a societally just and equitable transition.

Addressing climate justice and equity considerations is a key step towards being able to ensure that global climate action is taken in a manner that is just and equitable, supporting an effective and just transition for communities, workers, and marginalized sectors in developing countries in a manner that also addresses social and economic inequalities on a long-term and sustainable basis.

## CHAPTER SEVEN

# CONCLUSION: DEVELOPING AN EQUITABLE “GREEN NEW DEAL” FOR THE SOUTH

TO ensure that equity is reflected in global climate change response measures and their impacts, and taking into account the number of serious problems arising from present development trends as well as historical colonialism and globalization,<sup>72</sup> the elements for an alternative, equity-oriented and ecologically-harmonious development focus for the South include the following:

- **At the national level, pursue a strategic and proactive approach to shaping and reshaping national economic development policies and pursuing an equity-oriented international cooperation regime at the international level** – These equity- and ecology-oriented economic policies, including the development of appropriate regulatory regimes, for sustainable development in the South would include policies that incorporate the three aspects of sustainable development (environmental sustainability, economic development, and social development) into an integrated and multi-dimensional policy package:<sup>73</sup>
  - o Recognizing the economic and social value of environmental resources
  - o Conserving resources and restoring damaged environments and ecosystems
  - o Enabling prices to better reflect their environmental value, while ensuring access by the poor to basic goods and services
  - o Prioritizing and funding the critical role of the public sector to promote environmental and economic diversification objectives through financial, industrial, and technological policies

and measures, including subsidies, incentives, use of government investment and budget, and placing limits on pollution and over-use of resources through regulation and other policies

- o Regulating the market
  - o Recognizing and addressing the link between livelihoods and living conditions of rural communities and the environment
  - o Promoting sustainable consumption patterns and its link to the environment, poverty, and equity
  - o Ensuring food security, rural livelihoods, and sustainable agriculture
  - o Avoiding environmental and natural resource management policy approaches in which ecosystems and natural resource sectors (such as forests, coastal areas, land) become the basis for investment in or the development and sale of speculative financial instruments secured by ownership, usufructuary, or exploitation rights by private sector agents over such ecosystems or natural resource sectors
  - o Strengthening international policies and mechanisms to support developing countries' policies and efforts towards sustainable development.
- **At the international level, pursue international cooperation and support as essential elements to ensure that the national development efforts of the South are not undermined or undone** – The three key aspects for international cooperation and support include:
    - o **Ensuring that at the multilateral level, developing countries' development policy space is not constrained or limited by multilateral rules, particularly in the international trade, investment, finance, and taxation arenas** – This could include, for example:<sup>74</sup>
      - Implementing and enhancing IPR flexibilities for environmental goods (including the use of compulsory licensing by developing countries)

- Reflecting and operationalizing special and differential treatment for developing countries in international trade agreements
  - Explicit prohibition of unilateral trade protectionism, including border adjustment measures, as environmental or climate change response measures
  - Ensuring fairer treatment for developing-country subsidies
  - Having a “peace clause” on engaging in dispute settlement (including in the WTO) concerning trade-related environmental measures of developing countries
- o **Ensuring transfer of environmentally-sound and climate change-related technologies to developing countries** – It is now widely recognized that developing countries require significant transfers of finance and technology if they are to implement their Paris Agreement NDCs and make the shift to more equitable and ecologically harmonious and sustainable development. Technology transfer is essential for meeting the human and sustainable development objectives of providing people and enterprises in developing countries with the means to create employment based on principles and practices that are both environmentally sound and economically efficient. Technology transfer has to be undertaken beyond the commercial arena, and a proactive role of public policy at national and international levels is required to enable developing countries’ access to technology, particularly given that technology transfer is not merely the import or purchase of machines and other hardware at commercial rates. A central aspect of technology development and transfer is the building of local capacity so that people and institutions in developing countries can design and make technologies that can be diffused into the domestic economy.<sup>75</sup>

- o **Ensuring adequate financial support to developing countries for climate change actions, sustainable development, and economic diversification** – Given the fiscal constraints present in many developing countries, international financial support under longstanding commitments from developed countries to do so under the UNFCCC and other multilateral frameworks should be fully implemented and enhanced. Recent estimates of the financial needs of developing countries in undertaking effective climate change mitigation and adaptation actions that would be compatible with their sustainable development needs and priorities range into trillions of dollars of financing and investment required annually, well above the \$100 billion annually by 2020 pledged by developed countries under the UNFCCC and also well above annual ODA flows and foreign direct investment flows from developed to developing countries.

The impact of the COVID-19 pandemic on developing-country economies increases the need for financial support to flow from developed to developing countries. The additional financial support can come in the form of liquidity injections through reallocating Special Drawing Rights (SDRs) at the International Monetary Fund (IMF) and issuing new SDR allocations to developing countries; the cancellation of developing countries' sovereign external debt owed to developed-country creditor governments, and restructuring or cancellation of developing countries' debt owed to private sector creditors; supporting and adopting countercyclical fiscal stimulus policies and avoiding the imposition of austerity measures; global and national regulation of financial trading transactions to limit speculation and arrest declines in currency and asset prices; stopping further trade liberalization negotiations; and developing multilateral macroeconomic and financial surveillance mechanisms under the United Nations. At the same time, additional resources could be mobilized domestically in developing countries if the channels through which scarce financial resources flow out of de-

veloping countries are restricted – e.g., through the use of capital controls to stem speculative capital outflows, illicit financial flows, sovereign and private debt payments, and payments for luxury consumption imports;<sup>76</sup> the use of progressive tax measures domestically; and strengthening the regulatory power of the State over corporate profiteering activities. The imposition of new “green” conditionalities on the provision of financial support to developing countries should be avoided.

## Notes

- <sup>1</sup> Paragraph 56 of the Rio+20 outcome document entitled “The Future We Want”, endorsed by the UN General Assembly in its Resolution 66/288 on 11 September 2012, states: “We affirm that there are different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development in its three dimensions which is our overarching goal. In this regard, we consider green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development and that it could provide options for policymaking but should not be a rigid set of rules.” See UN General Assembly, The Future We Want, Resolution 66/288, UN Doc. A/RES/66/288, 11 September 2012, at [https://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/66/288&Lang=E](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E). The same Rio+20 outcome document, in its paragraph 58, provided for a set of policy parameters that “green economy” policies should follow in order for such policies to be in the context of sustainable development and poverty eradication. This set of parameters within which “green economy” policies are supposed to operate was proposed by and is important for developing countries to ensure that such policies support and do not adversely affect developing countries’ sustainable development and poverty eradication efforts.
- <sup>2</sup> See European Commission, The European Green Deal, at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX:52019DC0640>
- <sup>3</sup> See, e.g., Bernie Sanders, at <https://berniesanders.com/issues/green-new-deal/>; US House of Representatives Resolution No. 109, at <https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolution%20on%20a%20Green%20New%20Deal.pdf>; and US House Select Committee on the Climate Crisis, Solving the Climate Crisis: The Congressional Action Plan for a Clean Energy Economy and a Healthy, Resilient, and Just America – Majority Staff Report, at <https://climatecrisis.house.gov/sites/climatecrisis.house.gov/files/Climate%20Crisis%20Action%20Plan.pdf>. See also David Roberts, There’s now an official Green New Deal. Here’s what’s in it, Vox, 7 February 2019, at <https://www.vox.com/energy-and-environment/2019/2/7/18211709/green-new-deal-resolution-alexandria-ocasio-cortez-markey>; and Ella Nilsen, Read: Alexandria Ocasio-Cortez and Ed Markey’s Green New Deal Resolution, Vox, 7 February 2019, at <https://www.vox.com/2019/2/7/18215290/alexandria-ocasio-cortez-ed-markey-green-new-deal>.
- <sup>4</sup> See UN General Assembly, Transforming our world: the 2030 Agenda for Sustainable Development, Resolution 70/1, 21 October 2015, at [https://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=E](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E)
- <sup>5</sup> Martin Khor, The Risks and Use of the Green Economy Concept in the Context of Sustainable Development, Poverty and Equity, South Centre Research Paper 40, July 2011, p. 1.
- <sup>6</sup> See, e.g., World Inequality Lab, *World Inequality Report 2018*, Figures 2.1.5 and 2.1.6, pp. 52-53, at <https://wir2018.wid.world/files/download/wir2018-full-report-english.pdf>; Christoph Lakner and Branko Milanovic, Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession, World Bank Policy Research Paper, December



- 2013, at <https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-6719>; and Our World in Data, Global income inequality increased for 2 centuries and is now falling, at <https://ourworldindata.org/global-economic-inequality#global-income-inequality-increased-for-2-centuries-and-is-now-falling>
- <sup>7</sup> UNDESA, *World Social Report 2020*, p. 22, at <https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/02/World-Social-Report2020-FullReport.pdf>
- <sup>8</sup> UNCTAD, *Trade and Development Report 2020*, p. 64, at [https://unctad.org/system/files/official-document/tdr2020\\_en.pdf](https://unctad.org/system/files/official-document/tdr2020_en.pdf). UNCTAD also noted that “[b]eyond country-specific factors, the strong common forces behind the rise in inequality are fiscal austerity as the blanket policy response to macroeconomic imbalances (TDR 2017; TDR 2019) and the emergence of hyperglobalization, especially in the form of growing financialization of the world economy and rising concentration of corporate power in production, finance (TDR 2017) and international trade.”
- <sup>9</sup> See Global Footprint Network, Ecological Deficits and Reserves Map, at <https://data.footprintnetwork.org/#/>. As the GFN explains, “[a]n ecological deficit occurs when the Ecological Footprint of a population exceeds the biocapacity of the area available to that population. A national ecological deficit means that the nation is importing biocapacity through trade, liquidating national ecological assets or emitting carbon dioxide waste into the atmosphere. An ecological reserve exists when the biocapacity of a region exceeds its population’s Ecological Footprint.”
- <sup>10</sup> *Id.*
- <sup>11</sup> See, e.g., Daron Acemoglu and James Robinson, The economic impact of colonialism, VOX EU and CEPR, 30 January 2017, at <https://voxeu.org/article/economic-impact-colonialism>; Joseph McQuade, Earth Day: Colonialism’s role in the overexploitation of natural resources, The Conversation, 18 April 2019, at <https://theconversation.com/earth-day-colonialisms-role-in-the-overexploitation-of-natural-resources-113995>; Oasis Kodila-Tedika, Albert Tcheta-Bampa and Patrick Lusenge-Ndungu, Colonial Extraction and Institution in Africa: Empirical Test of the Hypothesis of Acemoglu-Johnson-Robinson, SSRN, 28 November 2018, at <https://ssrn.com/abstract=3292189> or <http://dx.doi.org/10.2139/ssrn.3292189>; James Murombedzi, Inequality and natural resources in Africa, *World Social Science Report 2016*, 2016, pp. 59-62, at <https://unesdoc.unesco.org/ark:/48223/pf0000245936>; Darryl Reed, Resource Extraction Industries in Developing Countries, *Journal of Business Ethics*, 39:3, pp. 199-226 (2002), at <https://www.jstor.org/stable/25074839>; and Tendani Achiume, Global extractivism and racial equality: Report of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance, UN Doc. No. A/HRC/41/54, 14 May 2019, paras. 7-8, at [https://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session41/Documents/A\\_HRC\\_41\\_54.docx](https://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session41/Documents/A_HRC_41_54.docx)
- <sup>12</sup> See, e.g., UNCTAD, *Trade and Development Report 2017*, at [https://unctad.org/system/files/official-document/tdr2017\\_en.pdf](https://unctad.org/system/files/official-document/tdr2017_en.pdf)
- <sup>13</sup> See, e.g., Douglas H. Brooks et al., Closing Development Gaps: Challenges and Policy Options, ADB Economics Working Paper Series No. 209, July 2010, at <https://www.adb.org/sites/default/files/publication/28416/economics-wp209.pdf>. This study calculated, inter alia, the number of years required for developing-country regions to catch up with OECD countries on selected development indicators assuming that the

average growth rates for the period 2000-2007 were sustained. It estimated that “it will take the world 25.3 years to catch up with the current OECD per capita income (in 2007); sub-Saharan Africa, 93.9 years; and developing Asia, 34.5 years.”

- <sup>14</sup> For these characteristics, see, e.g., Prateek Agarwal, Characteristics of Developing Economies, Intelligent Economist, at <https://www.intelligenteconomist.com/characteristics-of-developing-economies/>; and Nuwairah Nuwairah Nadwah, Characteristics of Developing Countries, 5 September 2020, at <https://businessfinancearticles.org/characteristics-of-developing-countries>
- <sup>15</sup> “Response measures” are the mitigation and adaptation policies and actions undertaken by Parties to the UNFCCC and its Paris Agreement to address climate change and its impacts. In the context of the implementation of the UNFCCC and its Paris Agreement, this issue “concerns the adverse impacts on developing countries [of] response measures undertaken by developed countries aimed at mitigating climate change”. See, e.g., UNFCCC, Response Measures, at <https://unfccc.int/topics/mitigation/workstreams/response-measures/response-measures>
- <sup>16</sup> See, e.g., United Nations, Financing Gap Hampering Sustainable Development Efforts for Low, Middle-Income Countries, UN Doc. No. GA/EF/3473, 3 October 2017, at <https://www.un.org/press/en/2017/gaef3473.doc.htm>; Djeneba Doumbia and Morten Lykke Lauridsen, Closing the SDG Financing Gap – Trends and Data, EM Compass Note 73, October 2019, at <https://www.ifc.org/wps/wcm/connect/842b73cc-12b0-4fe2-b058-d3ee75f74d06/EMCompass-Note-73-Closing-SDGs-Fund-Gap.pdf?MOD=AJPERES&CVID=mSHKl4S>; Fekitamoeloa ‘Utoikamanu, Closing the Technology Gap in Least Developed Countries, UN Chronicle, at <https://www.un.org/en/chronicle/article/closing-technology-gap-least-developed-countries>; HW Singer, The technology gap and the developing countries, *International Journal of Environmental Studies*, 3:1-4, pp. 119-123 (1972), at <https://doi.org/10.1080/00207237208709502>; United Nations – Economic and Social Council, Report of the Secretary-General – Bridging the Technology Gap Between and Within Nations, UN Doc. No. E/CN.16/2006/2, 31 March 2006, at [https://unctad.org/system/files/official-document/ecn162006d2\\_en.pdf](https://unctad.org/system/files/official-document/ecn162006d2_en.pdf); Fulvio Castellacci, Closing the Technology Gap?, Norwegian Institute of International Affairs Working Paper 777, 2010, at <https://www.files.ethz.ch/isn/122553/WP-777-Fulvio%20Castellacci.pdf>; and UNCTAD, Transfer of Technology and Knowledge Sharing for Development: Science, technology and innovation issues for developing countries, UNCTAD Current Studies on Science, Technology and Innovation No. 8, 2014, at [https://unctad.org/system/files/official-document/dtlstict2013d8\\_en.pdf](https://unctad.org/system/files/official-document/dtlstict2013d8_en.pdf)
- <sup>17</sup> See, e.g., Wim Naude, Mark McGillivray and Amelia U. Santos-Paulino (eds.), *Vulnerability in Developing Countries*, UNU Press, 2009, at <https://www.wider.unu.edu/publication/vulnerability-developing-countries-3> and <https://collections.unu.edu/eserv/UNU:2548/ebrary9789280811711.pdf>; Dennis Essers, Developing country vulnerability in light of the global financial crisis: Shock therapy?, *Review of Development Finance*, 3, pp. 61-83 (2013), at <https://www.sciencedirect.com/science/article/pii/S1879933713000043>; and Economic vulnerability of developing countries, *The Adelphi Papers*, 17:136, pp. 11-14 (1977), at <https://doi.org/10.1080/05679327708448482>.
- <sup>18</sup> See, e.g., UNCTAD, State of Commodity Dependence 2019, UN Doc. No. UNCTAD/

TDITC/COM/2019/1 (2019), at [https://unctad.org/system/files/official-document/ditcom2019d1\\_en.pdf](https://unctad.org/system/files/official-document/ditcom2019d1_en.pdf); UNCTAD, Note by the UNCTAD Secretariat: Managing commodity price risk in commodity-dependent developing countries, UN Doc. No. TF/B/C/I/MEM.2/46, 4 February 2019, at [https://unctad.org/system/files/official-document/cimem2d46\\_en.pdf](https://unctad.org/system/files/official-document/cimem2d46_en.pdf); IISD, UNCTAD: Commodity-dependent Countries Must Diversify to Avoid Economic Collapse, 17 September 2019, at <https://sdg.iisd.org/news/unctad-commodity-dependent-countries-must-diversify-to-avoid-economic-collapse/>; UNCTAD, Commodity dependence, growth and human development, UN Doc. No. UNCTAD/SUC/2017/5, 2017, at <http://www.fao.org/3/BU496/bu496.pdf>; FAO, Dependence on single agricultural commodity exports in developing countries: magnitude and trends, at <http://www.fao.org/3/Y3733E/y3733e0d.htm>; and Janvier D. Nkurunziza, Komi Tsowou and Sofia Cazzaniga, Commodity Dependence and Human Development, *African Development Review*, 29:S1, pp. 27-41 (February 2017), at <https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-8268.12231>

<sup>19</sup> For an excellent discussion of this Rio framework on sustainable development, see Martin Khor, The Risks and Use of the Green Economy Concept in the Context of Sustainable Development, Poverty and Equity, South Centre Research Paper 40, July 2011, pp. 3-4.

<sup>20</sup> Id., p. 3.

<sup>21</sup> Id., p. 3.

<sup>22</sup> Id., pp. 3-4.

<sup>23</sup> See endnote 1.

<sup>24</sup> “Carbon leakage” is a term often used in discussions in describing how, when industries move from a country that has emission caps (usually taken to be a developed country) to a country that does not have caps (usually taken to be a developing country), there may be no significant change in overall greenhouse gas emissions, as the products will still be produced and exported to the developed country. However, the developed country’s emissions will go down as the associated emissions will now occur outside its borders in a developing country.

<sup>25</sup> In 2019, 38 gigatonnes of carbon dioxide (GtCO<sub>2</sub>) were emitted globally, of which developing countries in aggregate emitted almost two-thirds while developed countries (i.e., those that are members of the OECD) emitted a little over one-third. Among the developing countries, China and India are the biggest aggregate national emitters (largely because of their huge populations and rapid economic growth). See, e.g., Union of Concerned Scientists, Each Country’s Share of CO<sub>2</sub> Emissions, 12 August 2020, at <https://www.ucsusa.org/resources/each-countrys-share-co2-emissions>; and European Commission, Fossil CO<sub>2</sub> emissions of all world countries: 2020 Report, at <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/fossil-co2-emissions-all-world-countries-2020-report>. Global GHG emissions in 2019 without land use change amounted to 52.4 gigatonnes of carbon dioxide equivalent (GtCO<sub>2</sub>eq) (or 59.1 GtCO<sub>2</sub>eq with land use change); see UNEP, *Emissions Gap Report 2020*, Table 2.1, p. 5, at <https://wedocs.unep.org/handle/20.500.11822/34426>

<sup>26</sup> Historically from 1750 to until the last two decades of the 20th century, “global emissions were dominated by Europe and the United States. In 1900, more than 90% of emissions were produced in Europe or the United States; even by 1950, they accounted for more

than 85% of emissions each year ... In the second half of the 20th century we see a significant rise in emissions in the rest of the world, particularly across Asia, and most notably, China. The US and Europe now account for just under one-third of emissions.” See, with respect to fossil CO<sub>2</sub> emissions historically from 1750 to 2019, Our World in Data, CO<sub>2</sub> emissions by region (1750-2019), at <https://ourworldindata.org/co2-emissions>. For GHG emissions data per country between 1990 and 2016, see <https://ourworldindata.org/greenhouse-gas-emissions>

<sup>27</sup> See, e.g., Martin Khor, The Equitable Sharing of Atmospheric and Development Space: Some Critical Aspects, South Centre Research Paper 33, November 2010, at [https://www.southcentre.int/wp-content/uploads/2013/05/RP33\\_Equitable-Sharing-of-Atmospheric-and-Development-Space\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2013/05/RP33_Equitable-Sharing-of-Atmospheric-and-Development-Space_EN.pdf); Thiagarajan Jayaraman and Tejal Kanitkar, Equity in Long-Term Ambition, 2019, at <https://oxford.universitypressscholarship.com/view/10.1093/oso/9780199498734.001.0001/oso-9780199498734-chapter-6>; Anil Agarwal and Sunita Narain, Global Warming in an Unequal World, 2019, at <https://oxford.universitypressscholarship.com/view/10.1093/oso/9780199498734.001.0001/oso-9780199498734-chapter-5>; Christian Holz, Sivan Kartha and Tom Athanasiou, Fairly Sharing 1.5 – National Fair Shares of a 1.5°C-compliant Global Mitigation Effort, *International Environmental Agreements: Politics, Law and Economics*, 18, Special Issue: Achieving 1.5°C and Climate Justice, pp. 117-134 (2018), at <https://10.1007/s10784-017-9371-z> and [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3072045](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3072045); Christian Dorninger et al., Global patterns of ecologically unequal exchange: Implications for sustainability in the 21st century, *Ecological Economics*, 179, 106284 (2021), at <https://doi.org/10.1016/j.ecolecon.2020.106824>; Jason Hickel, Quantifying national responsibility for climate breakdown: an equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary, *Lancet Planet Health*, 4, pp. 399-404 (2020), at [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(20\)30196-0/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30196-0/fulltext); Niklas Hohn and Jakob Wachsmuth, Fair contributions versus fastest possible reductions: equity considerations in the context of the Paris Agreement and the climate emergency, New Climate Institute Project No. 317022, August 2020, at [https://newclimate.org/wp-content/uploads/2020/08/Fair-contributions-versus-fastest-possible-reductions\\_August2020.pdf](https://newclimate.org/wp-content/uploads/2020/08/Fair-contributions-versus-fastest-possible-reductions_August2020.pdf); and Vicente Paolo Yu III, The Gap Between Commitments and Implementation: Assessing the Compliance by Annex I Parties with their Commitments under the UNFCCC and its Kyoto Protocol, South Centre Research Paper 25, October 2009, at [https://www.southcentre.int/wp-content/uploads/2013/05/RP25\\_OPEC-Annex-I-Compliance-Full-Paper\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2013/05/RP25_OPEC-Annex-I-Compliance-Full-Paper_EN.pdf)

<sup>28</sup> See, for example, Martin Khor, The Climate and Trade Relation: Some Issues, South Centre Research Paper 29, May 2010, at [https://www.southcentre.int/wp-content/uploads/2013/05/RP29\\_Climate-and-Trade-Relation\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2013/05/RP29_Climate-and-Trade-Relation_EN.pdf); Arvind P. Ravikumar, Carbon Border Taxes are Unjust, *MIT Technology Review*, 27 July 2020, at <https://www.technologyreview.com/2020/07/27/1005641/carbon-border-taxes-eu-climate-change-opinion/>; Vicente Paolo Yu III, Developing Country Perspectives on Carbon-Based Competitiveness, Trade and Climate Change Linkages, Chatham House Energy, Environment and Development Programme Paper 09/04, October 2009, at [www.chathamhouse.org/sites/default/files/public/Research/](https://www.chathamhouse.org/sites/default/files/public/Research/)

Energy,%20Environment%20and%20Development/1109pp\_yu.pdf; and Karsten Neuhoff, Roland Ismer and Vicente Paolo Yu, International Cooperation to Limit the Use of Border Adjustment, Climate Strategies, November 2008, at <http://www.jstor.com/stable/resrep15916>. See also South Centre's *South Bulletin*, Issue 40, 10 September 2009, at [https://www.dropbox.com/sh/nk3hcf2c9fnyq3/AAD5eVI8dP\\_RGD4ndJlbd\\_Goa/SB%2040\\_The%20Rise%20of%20Climate%20Protectionism?dl=0&preview=SB+40.pdf](https://www.dropbox.com/sh/nk3hcf2c9fnyq3/AAD5eVI8dP_RGD4ndJlbd_Goa/SB%2040_The%20Rise%20of%20Climate%20Protectionism?dl=0&preview=SB+40.pdf), containing the following articles: Martin Khor, The Rise of 'Climate Protectionism'; Martin Khor, Threat to Block South's Exports on Climate Grounds; Vicente Paolo Yu, New Climate Protectionism: Analysis of the trade measures in the US climate bill; Vicente Paolo Yu, Competitiveness, Trade and Climate Change Linkages: Developing Countries' Perspectives; and Sangeeta Shashikant, Climate-technology Protectionism and IPRs.

<sup>29</sup> UNFCCC, Art. 3.4 and 3.5.

<sup>30</sup> UNFCCC, Art. 4.8 and 4.10.

<sup>31</sup> UNFCCC, Art. 10.

<sup>32</sup> See UNFCCC, at <https://unfccc.int/topics/mitigation/workstreams/response-measures>

<sup>33</sup> The preamble to the Paris Agreement recognizes "that Parties may be affected not only by climate change, but also by the impacts of the measures taken in response to it." Article 4.15 of the Paris Agreement states "that Parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties".

<sup>34</sup> UNFCCC, Decision 1/CP.21, paras. 33-34.

<sup>35</sup> Martin Khor, Manuel F. Montes, Mariama Williams and Vicente Paolo Yu III, Promoting Sustainable Development by Addressing the Impacts of Response Measures on Developing Countries, South Centre Research Paper 81, November 2017, p. 6, at [https://www.southcentre.int/wp-content/uploads/2017/11/RP81\\_Promoting-Sustainable-Development-by-Addressing-the-Impacts-of-Climate-Change-Response-Measures-on-Developing-Countries\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2017/11/RP81_Promoting-Sustainable-Development-by-Addressing-the-Impacts-of-Climate-Change-Response-Measures-on-Developing-Countries_EN.pdf)

<sup>36</sup> Id., pp. 5-6.

<sup>37</sup> Such as in the WTO's Agreement on Sanitary and Phytosanitary Measures, the WTO's Agreement on Technical Barriers to Trade, and the General Agreement on Tariffs and Trade (GATT) 1994's provisions with respect to national treatment.

<sup>38</sup> See Martin Khor, The Climate and Trade Relation: Some Issues, South Centre Research Paper 29, May 2010, pp. 20-21, at [https://www.southcentre.int/wp-content/uploads/2013/05/RP29\\_Climate-and-Trade-Relation\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2013/05/RP29_Climate-and-Trade-Relation_EN.pdf), citing Matthew Stilwell, Improving institutional coherence: Managing interplay between trade and climate regimes, Global Economic Governance Programme Working Paper 2009/49, University College, Oxford. Oxford: Department of Politics and International Relations.

<sup>39</sup> In its Green Deal communication, the European Commission stated that "As long as many international partners do not share the same ambition as the EU, there is a risk of carbon leakage, either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports. If this risk materialises, there will be no reduction in global emissions, and this will frustrate the efforts of the EU and its industries to meet

the global climate objectives of the Paris Agreement. ... Should differences in levels of ambition worldwide persist, as the EU increases its climate ambition, the Commission will propose a carbon border adjustment mechanism, for selected sectors, to reduce the risk of carbon leakage. This would ensure that the price of imports reflect more accurately their carbon content. This measure will be designed to comply with World Trade Organization rules and other international obligations of the EU. It would be an alternative to the measures that address the risk of carbon leakage in the EU's Emissions Trading System." The EU is proposing to develop its border adjustment mechanism by 2021. See European Commission, The European Green Deal, at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1596443911913&uri=CELEX:52019DC0640#document2>

<sup>40</sup> See, e.g., US House of Representatives Resolution No. 109, Sec. 4(K) stating that "a Green New Deal will require the following goals and projects – (K) enacting and enforcing trade rules, procurement standards, and border adjustments with strong labor and environmental protections – (i) to stop the transfer of jobs and pollution overseas; and (ii) to grow domestic manufacturing in the United States", at <https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolution%20on%20a%20Green%20New%20Deal.pdf>. See also US House Select Committee on the Climate Crisis, Solving the Climate Crisis: The Congressional Action Plan for a Clean Energy Economy and a Healthy, Resilient, and Just America – Majority Staff Report, pp. 262-263, at <https://climatecrisis.house.gov/sites/climatecrisis.house.gov/files/Climate%20Crisis%20Action%20Plan.pdf>, stating that "To address carbon leakage issues from trade, Congress should implement complementary border adjustment mechanisms ... If Congress enacts domestic performance standards for emissions-intensive industries or a carbon price, Congress should also enact a border adjustment mechanism, such as import tariffs and export subsidies, for key emissions-intensive industries, including EITE [energy-intensive and trade-exposed] goods. The design of the border adjustment mechanism should be such that an imported good with a higher emissions intensity than the benchmark would be charged a tariff, prorated by the difference between the emissions intensity of the good compared to the benchmark. Conversely, an exported good with a lower emissions intensity compared to the subsector standard set by the receiving country (or the average subsector emissions intensity within the country, if no standard exists) would be given a subsidy, prorated by the difference between the emissions intensity of the good compared to the standard of the receiving country. The federal government should use revenue from the tariffs to offset the export subsidy and direct any excess revenue to (1) domestic manufacturers of EITE goods to invest in technologies and equipment to reduce their emissions, (2) RDD&D [research, development, demonstration and deployment] support for technologies to reduce industrial emissions, as detailed above, and (3) communities most affected by the transition away from fossil fuels. ... An independent, expert panel should determine the emissions intensities of imported goods and average emissions intensities of sectors in other countries for calculating the tariff or subsidy. This panel should review and revise these determinations on a regular basis to incentivize other countries and international manufacturers to continue to reduce their emissions.

Congress should follow international trade rules and the principles of non-discrimination in implementing this policy.”

<sup>41</sup> These campaign pronouncements will likely be put into US policy with the November 2020 electoral victory and subsequent inauguration in January 2021 of new US President Joe Biden.

<sup>42</sup> Martin Khor, The Rise of ‘Climate Protectionism’, and Martin Khor, Threat to Block South’s Exports on Climate Grounds, *South Bulletin*, Issue 40, 10 September 2009, at [https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAD5eV18dP\\_RGD4ndJlbd\\_Goa/SB%2040\\_The%20Rise%20of%20Climate%20Protectionism?dl=0&preview=SB+40.pdf](https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAD5eV18dP_RGD4ndJlbd_Goa/SB%2040_The%20Rise%20of%20Climate%20Protectionism?dl=0&preview=SB+40.pdf)

<sup>43</sup> Arvind P. Ravikumar, Carbon Border Taxes are Unjust, *MIT Technology Review*, 27 July 2020, at <https://www.technologyreview.com/2020/07/27/1005641/carbon-border-taxes-eu-climate-change-opinion/>. As Ravikumar states in his article, “The decision to impose such taxes on developing countries reflects the colonial practice of wealth transfer from the developing to the developed world. Without due consideration to historical harms, carbon border adjustments perpetuate a cycle in which the developing world suffers for the actions of the developed one.”

<sup>44</sup> Ravikumar, op. cit.

<sup>45</sup> See Paris Agreement, Art. 15.2.

<sup>46</sup> See Vicente Paolo Yu III, Developing Country Perspectives on Carbon-Based Competitiveness, Trade and Climate Change Linkages, Chatham House Energy, Environment and Development Programme Paper 09/04, October 2009. In this paper, Yu points out that studies have suggested that addressing carbon competitiveness concerns using a system of border adjustment measures may not necessarily be effective, especially in light of the “administrative requirements, costs and technical practicality” of border adjustments that serve as the “greatest barriers to their implementation,” nor in terms of meeting any objective they might have of getting other countries to adopt more stringent carbon emission regulations – especially if the trade flows of the countries concerned with respect to the products covered by the measures are not large or significant to the exporting country.

<sup>47</sup> As early as 1994, as pointed out by Khor, the Third World Network had in a paper already argued that the proposals to legitimize trade-related environmental measures (TREMs) “would add another burden of adjustment to the already-burdened South, and could ‘change the basic principles of non-discrimination and the character of the multilateral trading system and change the basic rules of the game and the conditions of competition under the guise of protecting the environment ... In practice it will add additional burdens on the South’. The three related concepts of PPMs [processes and production methods], eco-dumping and internalization of costs, in the WTO context, would imply that if a country has lower environmental standards in an industry, the cost of the product is not internalized and the prices are too low and that country is practicing eco-dumping. Thus, the importing country has the right to impose trade penalties such as countervailing duties. The paper described several examples of how these concepts would be difficult or impossible to be implemented and how they would unfairly be biased against the developing countries. ‘There is the danger, if not the likelihood, that through particular and narrow definitions of the trade-environment link, the powerful nations will try to shift the economic burden of ecological adjustment

to the weaker parties in order to preserve and expand their own unsustainable consumption patterns,' argued the TWN. It suggested that the initiatives to introduce TREMs and legitimize PPMs in the WTO be abandoned. It proposed instead that any trade measures linked to the environment should be addressed by negotiations for an international treaty and any treaty containing obligations on developing countries must have provisions for technology transfer and financial resources as an integrated contractual obligation." See Martin Khor, *The Climate and Trade Relation: Some Issues*, South Centre Research Paper 29, May 2010, p. 6, citing Third World Network, *Trade and environment position*, 1994.

<sup>48</sup> See Martin Khor, *The Climate and Trade Relation: Some Issues*, South Centre Research Paper 29, May 2010, pp. 28-31, for a discussion of how GATT Art. III and XX could be applied to border adjustment measures.

<sup>49</sup> *Id.*, pp. 30-31. This is an argument made by Chakravarthi Raghavan, Editor Emeritus of the *South-North Development Monitor*, in conversation with Martin Khor in 2010.

<sup>50</sup> *Id.*, p. 31.

<sup>51</sup> As stressed in Art. 4.7 of the UNFCCC, in implementing climate change-related actions, the first and overriding priority of developing countries is economic and social development and poverty eradication. This priority underlines, shapes, and influences developing-country perspectives, positions and actions on climate change. Initiatives, proposals, or suggestions that may adversely impact on the ability of developing countries to promote and achieve their development objectives would, hence, be reacted to negatively.

<sup>52</sup> See WTO SCM Agreement, Arts. 1-3.

<sup>53</sup> In 2010, the US brought China to WTO dispute settlement over China's provision of grants, funds, or awards to Chinese enterprises manufacturing wind power equipment, on the grounds that such subsidies were contingent on the use of domestic over imported content. The EU and Japan subsequently joined the case. In mid-2011, China stopped the challenged subsidy programme. See WTO, *China – wind power*, at [https://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/ds419\\_e.htm](https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds419_e.htm). See also Doug Palmer, *US challenges China wind power aid at WTO*, Reuters, 22 December 2010, at <https://www.reuters.com/article/us-usa-china-windpower/u-s-challenges-china-wind-power-aid-at-wto-idUSTRE6BL3EU20101222>; and BBC, *China ends wind power subsidies after US challenge*, 8 June 2011, at <https://www.bbc.com/news/business-13692255>. In another case, albeit not about subsidies, the US challenged India's measures requiring that certain types of solar cells and modules used by Indian solar panel developers be made in India as being inconsistent with India's national treatment obligations under GATT Art. III and the Agreement on Trade-Related Investment Measures by imposing domestic content requirements. See WTO, *India – solar cells*, at [https://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/ds456\\_e.htm](https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm), [https://www.wto.org/english/tratop\\_e/dispu\\_e/cases\\_e/1pagesum\\_e/ds456sum\\_e.pdf](https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds456sum_e.pdf), and [https://www.wto.org/english/tratop\\_e/dispu\\_e/456abr\\_e.pdf](https://www.wto.org/english/tratop_e/dispu_e/456abr_e.pdf).

<sup>54</sup> See WTO, 2001 Doha Ministerial Declaration, para. 31(iii).

<sup>55</sup> Eighteen participants representing 46 WTO members account for most of the global trade in environmental goods. Since January 2014, they have been engaged in negotiations to slash duties on products used in a variety of environmentally-related



functions including: generating clean and renewable energy; improving energy and resource efficiency; reducing air, water and soil pollution; managing solid and hazardous waste; noise abatement; and monitoring environmental quality. The EGA participants are: Australia; Canada; China; Costa Rica; the European Union (representing Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom); Hong Kong, China; Iceland; Israel; Japan; Korea; Liechtenstein; New Zealand; Norway; Singapore; Switzerland; Chinese Taipei; Turkey; and the United States. See WTO, Environmental Goods Agreement, at [https://www.wto.org/english/tratop\\_e/envir\\_e/ega\\_e.htm#:~:text=Introduction,wind%20turbines%20and%20solar%20panel](https://www.wto.org/english/tratop_e/envir_e/ega_e.htm#:~:text=Introduction,wind%20turbines%20and%20solar%20panel) and [https://www.wto.org/english/news\\_e/news16\\_e/ega\\_04dec16\\_e.htm](https://www.wto.org/english/news_e/news16_e/ega_04dec16_e.htm)

<sup>56</sup> See New Zealand Foreign Affairs and Trade, at <https://www.mfat.govt.nz/en/trade/free-trade-agreements/climate/agreement-on-climate-change-trade-and-sustainability-accts-negotiations/>

<sup>57</sup> Vicente Paolo Yu III, Environment Talks in WTO: Assisting the South or Making it Dependent on Imports of Technology?, *South Bulletin*, Issue 54, 15 April 2011, at [https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAAFpM57BeZQVTmuy5mdFq-va/SB%2054\\_Behind%20The%20Impasse%20In%20The%20WTOs%20Doha%20Negotiations?dl=0](https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAAFpM57BeZQVTmuy5mdFq-va/SB%2054_Behind%20The%20Impasse%20In%20The%20WTOs%20Doha%20Negotiations?dl=0)

<sup>58</sup> Id.

<sup>59</sup> For more discussion on the multilateral environmental goods liberalization issue, see Martin Khor, The Climate and Trade Relation: Some Issues, South Centre Research Paper 29, May 2010, pp. 14-15, at [https://www.southcentre.int/wp-content/uploads/2013/05/RP29\\_Climate-and-Trade-Relation\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2013/05/RP29_Climate-and-Trade-Relation_EN.pdf); Martin Khor, Manuel F. Montes, Mariama Williams and Vicente Paolo Yu III, Promoting Sustainable Development by Addressing the Impacts of Response Measures on Developing Countries, South Centre Research Paper 81, November 2017, pp. 28-32, at [https://www.southcentre.int/wp-content/uploads/2017/11/RP81\\_Promoting-Sustainable-Development-by-Addressing-the-Impacts-of-Climate-Change-Response-Measures-on-Developing-Countries\\_EN.pdf](https://www.southcentre.int/wp-content/uploads/2017/11/RP81_Promoting-Sustainable-Development-by-Addressing-the-Impacts-of-Climate-Change-Response-Measures-on-Developing-Countries_EN.pdf); Vicente Paolo Yu III, Environment Talks in WTO: Assisting the South or Making it Dependent on Imports of Technology?, *South Bulletin*, Issue 54, 15 April 2011, at [https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAAFpM57BeZQVTmuy5mdFq-va/SB%2054\\_Behind%20The%20Impasse%20In%20The%20WTOs%20Doha%20Negotiations?dl=0](https://www.dropbox.com/sh/nk3hcif2c9fnyq3/AAAFpM57BeZQVTmuy5mdFq-va/SB%2054_Behind%20The%20Impasse%20In%20The%20WTOs%20Doha%20Negotiations?dl=0); and Vicente Paolo Yu III, Repackaging Old Positions: The “Bold New” US-EU Proposal on Trade Liberalization of Climate-Friendly Goods and Services, South Centre Informal Note, 5 December 2007 (on file with author).

<sup>60</sup> WTO Doc. No. TN/TE/W/76

<sup>61</sup> WTO Doc. No. TN/TE/W/79

<sup>62</sup> See Vicente Paolo Yu III and Nirmalya Syam, Intellectual Property Issues Affecting Climate Change Related Technology Transfer to Developing Countries under the UNFCCC, South Centre Informal Note 38, 5 December 2008 (on file with author); Martin Khor, The Climate and Trade Relation: Some Issues, South Centre Research Paper 29, May 2010, pp. 15-41; Martin Khor, Manuel F. Montes, Mariama Williams and Vicente Paolo Yu III, Promoting Sustainable Development by Addressing the

Impacts of Response Measures on Developing Countries, South Centre Research Paper 81, November 2017, pp. 32-36; and Sangeeta Shashikant, Climate-technology Protectionism and IPRs, *South Bulletin*, Issue 40, 10 September 2009.

<sup>63</sup> See Sangeeta Shashikant, Climate-technology Protectionism and IPRs, *South Bulletin*, Issue 40, 10 September 2009. See also Martin Khor, The Climate and Trade Relation: Some Issues, South Centre Research Paper 29, May 2010, pp. 34-41; Martin Khor, Manuel F. Montes, Mariama Williams and Vicente Paolo Yu III, Promoting Sustainable Development by Addressing the Impacts of Response Measures on Developing Countries, South Centre Research Paper 81, November 2017, pp. 32-36; and Vicente Paolo Yu III and Nirmalya Syam, Intellectual Property Issues Affecting Climate Change Related Technology Transfer to Developing Countries under the UNFCCC, South Centre Informal Note 38, 5 December 2008.

<sup>64</sup> Cameron Hutchison, Does TRIPS facilitate or impede climate change technology transfer into developing countries?, *University of Ottawa Law & Technology Journal*, 3 (2006), pp. 517-537, at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1019365](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1019365)

<sup>65</sup> See, e.g., Korean Trade Promotion Agency, Case Study 4: The Republic of Korea and the Montreal Protocol, and Jayashree Watal, Case Study 3: India: The Issue of Technology Transfer in the Context of the Montreal Protocol, in Veena Jha and Ulrich Hoffmann (eds.), *Achieving Objectives of Multilateral Environmental Agreements: a package of trade measures and positive measures*, United Nations Conference on Trade and Development Doc. No. UNCTAD/ITCD/TED/6, pp. 49, 54 and 62, at [http://www.unctad.org/en/docs/itcdted6\\_en.pdf](http://www.unctad.org/en/docs/itcdted6_en.pdf). In the Korean case, the study states that “In the opinion of Korean firms, the exorbitant high royalties are an expression of a lack of intention to transfer the alternative technology on the part of technology owners.”

<sup>66</sup> See, e.g., Montreal Protocol on Substances that Deplete the Ozone Layer, Arts. 5.2, 5.3 and 10.1, at <https://treaties.un.org/doc/publication/unts/volume%201522/volume-1522-i-26369-english.pdf>

<sup>67</sup> Art. 4.7 of the UNFCCC states: “The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.” Art. 20.4 of the CBD, in virtually identical language to that of the UNFCCC, states as follows: “The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties.”

<sup>68</sup> The current situation in which developed countries overstate the climate finance that they provide to developing countries should be avoided. See, e.g., Oxfam, *Climate Finance Shadow Report 2020: Assessing Progress Towards the \$100 Billion Commitment*, 2020, at <https://unfccc.int/sites/default/files/resource/bp-climate-finance-shadow-report-2020-201020-en.pdf> and <https://www.oxfam.org/en/press-releases/true->

value-climate-finance-just-third-reported-developed-countries. In 2013, EU officials, for example, admitted that EU climate finance was being double-counted as both climate finance and ODA. See Arthur Neslen, EU admits double-counting climate finance and development aid, EURACTIV, 20 September 2013, at <https://www.euractiv.com/section/development-policy/news/eu-admits-double-counting-climate-finance-and-development-aid/>. The Indian Ministry of Finance in a 2015 paper found “serious problems on all counts” with respect to the OECD climate finance reporting’s accuracy, methodology, and verifiability. See Dipak Dasgupta and Climate Change Finance Unit Staff, Climate Change Finance, Analysis of a Recent OECD Report: Some Credible Facts Needed, Department of Economic Affairs – India Ministry of Finance Discussion Paper, 27 November 2015, at [https://dea.gov.in/sites/default/files/ClimateChangeOEFDReport\\_0.pdf](https://dea.gov.in/sites/default/files/ClimateChangeOEFDReport_0.pdf)

<sup>69</sup> Examples of proposals, presentations, and academic papers relating to synergy between the Rio Conventions include: CBD, Egyptian initiative for a coherent approach for addressing biodiversity loss, climate change, and land and ecosystem degradation, UN Doc. No. CBD/COP/14/INF/47, 25 November 2018, at <https://www.cbd.int/doc/c/f0c4/e7c4/d3f574418b051b944b0578dc/cop-14-inf-47-en.pdf>; GEF, Facilitating synergies in implementing multilateral environmental agreements towards sustainable development (presentation), July 2017, at [https://www.thegef.org/sites/default/files/events/ECW%20Tonga\\_Synergies%20among%20MEAs\\_0.pdf](https://www.thegef.org/sites/default/files/events/ECW%20Tonga_Synergies%20among%20MEAs_0.pdf); Sakhile Koketso, Synergies in implementing the CBD and other MEAs (CBD secretariat presentation), at [https://www.thegef.org/sites/default/files/events/CBD-synergies\\_0\\_0.pdf](https://www.thegef.org/sites/default/files/events/CBD-synergies_0_0.pdf); Joshua Roberts, Linking Climate Change with Biodiversity-Related Multilateral Environmental Agreements, IDLO Legal Working Paper Series No. 12, December 2010, at [https://www.files.ethz.ch/isn/137512/12\\_RobertsJosh%20linkingclimatechangewithbiodiversityrelatedmultilateralenvironmenta%20agreements.pdf](https://www.files.ethz.ch/isn/137512/12_RobertsJosh%20linkingclimatechangewithbiodiversityrelatedmultilateralenvironmenta%20agreements.pdf); and Sandrine Maljean-Dubois and Matthieu Wemaere, Climate Change and Biodiversity, in Elisa Morgera and Jona Razzaque, *Biodiversity and Nature Protection Law III*, Elgar Publishing, 2017, at <https://halshs.archives-ouvertes.fr/halshs-01675503/document>.

<sup>70</sup> IPCC, Landmark United in Science Report informs Climate Action Summit, 22 September 2019, at <https://www.ipcc.ch/2019/09/22/united-in-science-report-climate-summit/>

<sup>71</sup> Greg Muttitt and Sivan Kartha, Equity, climate justice and fossil fuel extraction: principles for a managed phase out, *Climate Policy*, 2020, at <http://www.tandfonline.com/10.1080/14693062.2020.1763900>

<sup>72</sup> See, e.g., Vijay Kolinjivadi, Why a ‘Green New Deal’ must be decolonial, Aljazeera, 7 December 2019, at <https://www.aljazeera.com/indepth/opinion/green-deal-decolonial-191202134707310.html>

<sup>73</sup> For a more in-depth discussion of these parameters, see Martin Khor, The Risks and Use of the Green Economy Concept in the Context of Sustainable Development, Poverty and Equity, South Centre Research Paper 40, July 2011, pp. 14-28.

<sup>74</sup> See Martin Khor, Manuel F. Montes, Mariama Williams and Vicente Paolo Yu III, Promoting Sustainable Development by Addressing the Impacts of Response Measures on Developing Countries, South Centre Research Paper 81, November 2017, pp. 42-48.

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- <sup>76</sup> See Martin Khor, *The Risks and Use of the Green Economy Concept in the Context of Sustainable Development, Poverty and Equity*, South Centre Research Paper 40, July 2011, pp. 34-38; Richard Kozul-Wright and Kevin Gallagher, *The Fierce Urgency of Now*, Progressive International, 15 June 2020, at <https://progressive.international/blueprint/4330257f-781e-42b4-9751-ab57b22c3252-kozul-wright-gallagher-the-fierce-urgency-of-now/en>; Jayati Ghosh, *How to Build the Global Green New Deal*, Progressive International, 7 May 2020, at <https://progressive.international/blueprint/80b03a68-68ca-4322-a3ad-c91775f167b9-jayati-ghosh-how-to-build-the-global-green-new-deal/en>; and UNCTAD, *Trade and Development Report 2019: Financing a Global Green New Deal*, UNCTAD/TDRE/2019, 2019, at [https://unctad.org/en/PublicationsLibrary/tdr2019\\_en.pdf](https://unctad.org/en/PublicationsLibrary/tdr2019_en.pdf).

## GREEN DEALS AND IMPLICATIONS FOR THE GLOBAL SOUTH

A number of initiatives for a “green economy”, “Green Deal” or “Green New Deal” have been advanced at national, regional and international levels with the stated aim of putting more environmentally friendly economic arrangements in place. Such plans would see policies being crafted to, among others, respond to climate change and other global environmental crises.

Depending on how these response measures are designed and implemented, they may have positive or unintended and adverse economic and social consequences for developing countries’ economies, most often for the poorest and most vulnerable sectors of those economies.

Understanding the economic and social consequences of such actual and potential response measures is thus very important for all developing countries. Their positive effects may arise from measures that support improved access to energy, health care, poverty reduction, and decent and quality employment in developing countries. On the other hand, they could have negative effects, particularly if they result in transferring the burden of reducing or avoiding greenhouse gas emissions onto developing countries or result in disproportionately and inappropriately altering national and social conditions. These negative and adverse impacts of response measures would hence be an additional burden that developing countries should not have to bear as these could impair their economic and social development and poverty eradication efforts. These adverse impacts are also contrary to the practical implementation of the principles of the UN climate treaty about equity and common but differentiated responsibilities and respective capabilities.

In going “green”, therefore, there is a need to consider equity as well as economic and environmental considerations. Within such a framework, developed countries should support, not impede, developing countries’ efforts to make their economies more environmentally sustainable and climate-resilient, including through provision of financial and technological assistance.

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