



VMUN 2024

# United Nations Environment Programme

BACKGROUND GUIDE

Bulgaria



## VANCOUVER MODEL UNITED NATIONS

The Twenty-Third Annual Session | January 26–28, 2024

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Dear Delegates,

My name is Audrey Chan, and I am honoured to serve as your Director for the United Nations Environment Programme (UNEP) at Vancouver Model United Nations 2024. Joining me is your Chair, Yeonsoo Lee, and your Assistant Director, Eddy Zhou. Together, we extend our warmest greetings.

I'm currently a senior at Little Flower Academy, and this marks my third and final year in Model United Nations. My journey began as a delegate for the Social, Humanitarian and Cultural Committee at VMUN 2022, fostering a deep passion for international affairs. I encourage all of you to make the most of this opportunity at VMUN to meet new faces, take on the podium to share your ideas, and craft innovative resolutions for the world's most pressing environmental issues.

In this VMUN iteration, UNEP will be debating two pertinent issues: *Carbon Pricing* and *Sustainable Travelling*. Aligned with UNEP's mission to promote a green, inclusive economy, it is in your hands, as a body of leading global environmental authorities, to work collaboratively to find comprehensive solutions to these international challenges.

Whether this is your first Model UN conference or your tenth, I genuinely hope that you make the most of your weekend at VMUN 2024. Best of luck in your preparations and research, and should you have any questions, please feel free to contact me at [unep@vmun.com](mailto:unep@vmun.com). I eagerly anticipate meeting you all for a weekend of fruitful discussions and indelible memories.

Sincerely,

Audrey Chan  
UNEP Director

# Position Paper Policy

## What is a Position Paper?

A position paper is a brief overview of a country's stance on the topics being discussed by a particular committee. Though there is no specific format the position paper must follow, it should include a description of your positions your country holds on the issues on the agenda, relevant actions that your country has taken, and potential solutions that your country would support.

At Vancouver Model United Nations, delegates should write a position paper for each of the committee's topics. Each position paper should not exceed one page and should all be combined into a single document per delegate.

For the United Nations Environmental Programme, position papers, although strongly recommended, are not required. However, delegates who wish to be considered for an award must submit position papers.

## Formatting

Position papers should:

- Include the name of the delegate, their country, and the committee
- Be in a standard font (e.g. Times New Roman) with a 12-point font size and 1-inch document margins
- Not include illustrations, diagrams, decorations, national symbols, watermarks, or page borders
- Include citations and a bibliography, in any format, giving due credit to the sources used in research (not included in the 1-page limit)

## Due Dates and Submission Procedure

Position papers for this committee must be submitted by **11:59 PM PT on January 22, 2024**. Once your position paper is complete, please save the file as your last name, your first name and send it as an attachment in an email to your committee's email address, with the subject heading as "[last name] [first name] — Position Paper". Please do not add any other attachments to the email.

Both your position papers should be combined into a single PDF or Word document file; position papers submitted in another format will not be accepted.

Each position paper will be manually reviewed and considered for the Best Researched award.

The email address for this committee is *unep@vmun.com*.

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# Carbon Pricing

## Overview

Carbon emissions, derived from the combustion of fossil fuels that power our daily lives, are both a vital necessity and an imminent threat. While carbon emissions are crucial for generating electricity, heating homes, and powering vehicles, carbon emissions trap sunlight and heat the planet. They lead to drastic environmental changes such as rising sea levels and extreme weather events, increasing the risk of health emergencies.<sup>1</sup> Despite their environmental harm, many businesses and governments internationally rely on carbon-based fuel because of its affordability, seemingly shielded from the financial repercussions of the damage from emissions.

Carbon pricing is a strategy to curtail global warming emissions. It entails the world's main emitters paying for the pollution from using carbon-intensive energy sources.<sup>2</sup> Ideally, the monetary value of carbon prices will cover all the external costs of emissions that the public pays for.<sup>3</sup> This shift makes non-carbon emitting energy sources like solar and wind power more environmentally attractive. Additionally, it exerts financial pressure on emitters to reduce their carbon footprint or transition to renewable energy.<sup>4</sup>

Carbon pricing takes shape through different mechanisms, such as carbon taxes and a cap-and-trade system. In the realm of carbon taxes, emitters bear financial responsibility for each ton of emissions, rendering fossil fuels less economically favourable than cleaner energy alternatives.<sup>5</sup> Meanwhile, in a cap-and-trade system, the government establishes a maximum emissions “cap” and sells permits to emitters.<sup>6</sup> These permits or credits can be “traded” among the emitters, allocated to organizations, or sold through auction markets.<sup>7</sup> This market-driven approach allows entities with emissions offset needs to acquire permits from those able to reduce emissions, promoting an overall reduction below the set cap.

The revenue generated from carbon taxing can be redirected towards research in green energy and development, aiding vulnerable countries to adapt to climate change.<sup>8</sup> However, for carbon pricing to be truly effective, emissions must be priced high enough to ensure that the price truly reflects all the externalities of climate change.<sup>9</sup> Although carbon pricing mechanisms cannot miraculously decrease emissions overnight, they form a pivotal, long-term strategy essential to saving the planet.

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<sup>1</sup> “Consequences of climate change,” *European Commission*, n.d., [https://climate.ec.europa.eu/climate-change/consequences-climate-change\\_en](https://climate.ec.europa.eu/climate-change/consequences-climate-change_en).

<sup>2</sup> “Carbon Credits - What Are They and How Do They Work?” *South Pole*, n.d., <https://www.southpole.com/carbon-offsets-explained>.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> “Cap and Trade Basics,” *Center For Climate and Energy Solutions*, n.d., <https://www.c2es.org/content/cap-and-trade-basics/>

<sup>7</sup> “Emissions trading systems,” *OECD*, n.d., <https://www.oecd.org/environment/tools-evaluation/emissiontradingsystems.htm>

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

## Timeline

**1760** — The Industrial Revolution introduces the usage of fossil fuels—mainly coal, oil, and natural gas—improving the efficiency of industries like iron and steel production, textiles, transportation, and mining.<sup>10</sup> Alongside economic growth, the revolution also brings air and water pollution, deforestation and concerns about climate change due to greenhouse gas emissions.<sup>11</sup>

**July 1896** — Swedish scientist Svante Arrhenius publishes an article linking burning coal to increased carbon dioxide and a rise in the planet's average temperature, laying the groundwork for the scientific understanding of climate change.<sup>12</sup> The article also identifies human industrial activity as the source of new carbon dioxide into the atmosphere.<sup>13</sup>

**1912** — Economist Arthur Cecil Pigou creates the idea of a Pigouvian tax, suggesting that a tax should be imposed on activities that generate negative externalities, such as pollution, equal to the social cost they impose, similar to the concept behind modern carbon taxes.<sup>14</sup>

**January 1, 1990** — Finland becomes the first country in the world to implement a carbon tax as an instrument for climate change mitigation. Using the revenue generated from the tax, Finland reduces income taxes for low-income households.<sup>15</sup>

**June 12, 1992** — The United Nations Framework Convention on Climate Change (UNFCCC) emphasizes the importance of international efforts on climate change mitigation, leading to the creation of one of the first legally binding emission reduction targets in the Kyoto Protocol.<sup>16</sup>

**December 11, 1997** — The Kyoto Protocol introduces the world's first international carbon market system and the Clean Development Mechanism (CDM). The CDM allows industrialized countries to invest in emission reduction projects in developing nations, one of the first models of carbon credits.<sup>17</sup>

**January 1, 2005** — The European Union Emissions Trading System (EU ETS) becomes one of the world's first large-scale carbon trading initiatives, covering various sectors and establishing a market for buying and selling carbon allowances.<sup>18</sup>

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<sup>10</sup> Chen, James, "Industrial Revolution Definition: History, Pros, and Cons," *Investopedia*, May 23, 2023, <https://www.investopedia.com/terms/i/industrial-revolution.asp>.

<sup>11</sup> Ibid.

<sup>12</sup> Enzler, S.M., "History of the greenhouse effect and global warming," *Lenntech*, n.d., <https://www.lenntech.com/greenhouse-effect/global-warming-history.htm>.

<sup>13</sup> Weart, Spencer, "The Discovery of Global Warming," *Scientific American*, August 17, 2012, <https://www.scientificamerican.com/article/discovery-of-global-warming>.

<sup>14</sup> Kagan, Julia, "Pigouvian Tax: Definition, Purpose, Calculation, and Examples," *Investopedia*, August 17, 2023, <https://www.investopedia.com/terms/p/pigoviantax.asp>.

<sup>15</sup> "Carbon Tax System in Finland," *Sustainable!*, n.d., <https://blogs.ubc.ca/rosenluo/2013/02/07/finlands-carbon-tax-system/>.

<sup>16</sup> "What is the United Nations Framework Convention on Climate Change?" *United Nation Climate Change*, n.d., <https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change>

<sup>17</sup> "A Guide to UN Market-based Mechanisms," *United Nations Climate Change*, October 31, 2022, <https://unfccc.int/blog/a-guide-to-un-market-based-mechanisms>.

<sup>18</sup> "EU Emissions Trading System (EU ETS)," *European Commission*, n.d., [https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en)

**July 1, 2008** — Canada becomes the first country to implement a carbon tax. The revenue generated from the carbon tax is given back to the public through tax cuts, low-income climate action credits, and business tax reductions.<sup>19</sup>

**July 1, 2012** — Australia introduces a carbon tax on the country's largest emitters through the Clean Energy Act. However, it is later repealed on July 1, 2014 to reduce costs for businesses and consumers.<sup>20</sup>

**November 14, 2012** — California's cap-and-trade program is established, demonstrating the feasibility and effectiveness of using market-based approaches to achieve environmental goals at the state level.<sup>21</sup>

**December 19, 2013** — China launches seven pilot emissions trading schemes (ETS) to develop a nationwide carbon market and reduce emission levels by 40-45%. By 2020, China's carbon emissions decreased by 48.4%.<sup>22</sup>

**November 30, 2015** — The World Bank and the International Monetary Fund launch the Carbon Pricing Leadership Coalition (CPLC). The CPLC establishes benchmarks for a carbon price of \$50 to \$100 per ton by 2030 to achieve the goals set out in the Paris Agreement.<sup>23</sup>

**December 12, 2015** — The Paris Agreement is adopted at the 21st UNFCCC Conference of the Parties (COP21). This agreement establishes a global framework to limit global warming to below two degrees Celsius above pre-industrial levels.<sup>24</sup> Moreover, carbon pricing is recognized as an important tool for achieving emission reductions.

**December 11, 2019** — The European Commission establishes the European Green Deal, outlining an ambitious plan to make the EU carbon-neutral by 2050. As part of this plan, the EU and its member states are legally obligated to cut net greenhouse gas emissions in the EU by at least 55% by 2030.<sup>25</sup>

## Historical Analysis

Before carbon pricing existed, governments were primarily focused on driving economic growth, especially during the Industrial Revolution. However, this pursuit of economic growth frequently incurred environmental tolls. The transition from small, rural farming communities to organizing labour in factories brought about capitalist production and fueled technological change and innovation at an unprecedented rate.<sup>26</sup> Despite offering better wages than farming, factory jobs during this period subjected workers to harsh conditions, including long hours, inadequate remuneration, and minimal breaks. The surge in factories, powered by fossil fuels—coal, oil, and natural gas—led to urban pollution, with sewage flowing in the streets and factory waste

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<sup>19</sup> "A Brief History of the Canadian Carbon Tax," *EnergyNow.ca*, December 21, 2016, <https://energynow.ca/2016/12/brief-history-canadian-carbon-tax/>

<sup>20</sup> "About the mechanism," *Australian Government Clean Energy Regulator*, August 23, 2021, <https://www.cleanenergyregulator.gov.au/Infocenter/CPM/Pages/About-the-mechanism.aspx>.

<sup>21</sup> "13 things to know about California's Cap-and-trade Program" *The Mercury News*, n.d., <https://www.mercurynews.com/2012/11/29/13-things-to-know-about-californias-cap-and-trade-program/>.

<sup>22</sup> Wen, Hong-Xing, et al., "Environmental and economic performance of China's ETS pilots: New evidence from an expanded synthetic control method," *ScienceDirect*, November 2021, <https://www.sciencedirect.com/science/article/pii/S2352484721003036>

<sup>23</sup> "Carbon Pricing," *The World Bank*, n.d., <https://www.worldbank.org/en/programs/pricing-carbon>

<sup>24</sup> "The Paris Agreement," *United Nations Climate Change*, n.d., <https://unfccc.int/process-and-meetings/the-paris-agreement>

<sup>25</sup> "A European Green Deal," *European Commission*, n.d., [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

<sup>26</sup> Ibid.



being dumped into rivers. Although the Industrial Revolution was two centuries ago, its legacy can arguably be responsible for creating capitalism and polluted modern cities of today.<sup>27</sup>

Following this period, industrialization took place in Western Europe, with Belgium leading in textiles.<sup>28</sup> Influenced by Britain's developments, France and Germany followed suit, with the French Revolution shaping industrial growth and Germany focusing on technological innovation and education.<sup>29</sup> The United States experienced its Industrial Revolution through the expansion of its railroad system and the growth of the steel and manufacturing industries.<sup>30</sup> In Japan, the Meiji Restoration marked a period of rapid modernization and openness to Western technologies, leading to the adoption of Western industrial methods and imperialistic ambitions.<sup>31</sup>

After the Industrial Revolution, environmental advocacy gained momentum, as people began to recognize the environmental impact of industrial activities, including carbon emissions. In the 19th and 20th centuries, environmental movements, such as the Sierra Club founded by John Muir in 1892, played a crucial role in raising awareness about the environmental consequences of industrialization.<sup>32</sup> The measurement of atmospheric carbon levels by Charles David Keeling in 1958, known as the Keeling Curve, provided early evidence of increasing carbon dioxide concentrations and contributed to the understanding of climate change.<sup>33</sup> The first Earth Day in 1970 marked a significant moment in environmental advocacy, with millions of people protesting environmental degradation.<sup>34</sup> Furthermore, the oil crises of the 1970s prompted concerns about energy security and dependency on fossil fuels, prompting governments to begin researching renewable technologies, which focus on solar and wind power.<sup>35</sup>

Subsequently, the international push to reduce emissions gained prominence, notably with the Montreal Protocol in 1987 addressing ozone depletion and the Kyoto Protocol setting the stage for global collaboration on environmental issues.<sup>36</sup> Furthermore, individual nations shouldered the responsibility to implement carbon pricing mechanisms domestically, with some systems rendering themselves successful. Notably, Sweden and Finland successfully implemented a carbon tax in the early 1990s.<sup>37</sup> The key to these nations' success lies in the design of the tax rate, as both nations started with a relatively low tax rate, allowing businesses and consumers to gradually adjust.<sup>38</sup> Over time, the tax rate increased, providing a clear and predictable trajectory for reducing emissions.<sup>39</sup> Additionally, though Norway is not a member nation of the EU, Norway participated in the

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<sup>27</sup> Ibid.

<sup>28</sup> "The first Industrial Revolution," *Britannica*, n.d., <https://www.britannica.com/money/topic/Industrial-Revolution/The-first-Industrial-Revolution>.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

<sup>31</sup> "Meiji Restoration," *Britannica*, n.d., <https://www.britannica.com/event/Meiji-Restoration>.

<sup>32</sup> "About the Sierra Club," *Sierra Club*, n.d., <https://www.sierraclub.org/about-sierra-club>.

<sup>33</sup> "The Keeling Curve," *National Geographic*, n.d., <https://education.nationalgeographic.org/resource/keeling-curve/>.

<sup>34</sup> "The History of Earth Day," *Earth Day*, n.d., <https://www.earthday.org/history/>.

<sup>35</sup> "From oil crisis to energy revolution – how nations once before planned to kick the oil habit," *Rapid Transition Alliance*, April 16, 2019, <https://rapidtransition.org/stories/from-oil-crisis-to-energy-revolution-how-nations-once-before-planned-to-kick-the-oil-habit/>.

<sup>36</sup> "About Montreal Protocol," *UN Environment Programme*, n.d., <https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol>.

<sup>37</sup> "Sweden's Carbon Tax," *Government Offices of Sweden*, n.d., <https://www.government.se/government-policy/swedens-carbon-tax/swedens-carbon-tax/>.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

European Union Emissions Trading System in 2008, using the revenue generated to fund renewable energy and climate mitigation projects.<sup>40</sup>

Though carbon pricing advocacy continues to gain traction, carbon pricing may not be a viable solution for every country. Notably, in 2012, Australia's Labor Government implemented a cap-and-trade program that set a price on carbon of \$23 per ton.<sup>41</sup> Companies were required to purchase carbon credits or permits for their emissions, resulting in a nationwide reduction in emissions.<sup>42</sup> Despite the program's success in lowering emissions, it faced heavy opposition and criticism from industries such as manufacturing and mining.<sup>43</sup> Critics argued that the policy placed a burden on businesses, increased energy costs, and affected competitiveness.<sup>44</sup> Overall, the opposition forces led to the eventual repeal of the carbon pricing scheme in 2014.<sup>45</sup>

Nevertheless, the Paris Agreement in 2015 further underscored the importance of reducing greenhouse gas emissions, while encouraging nations to invest in cleaner energy sources.<sup>46</sup> These developments highlight the evolution of environmental advocacy in response to the challenges posed by industrialization and climate change.<sup>47</sup>

## Past UN/International Involvement

### Kyoto Protocol

The Kyoto Protocol was adopted on December 11, 1997, in Kyoto, Japan, and entered into force on February 16, 2005.<sup>48</sup> This international treaty set legally binding emission reduction targets for developed countries, collectively known as Annex I parties.<sup>49</sup> These targets varied among countries and were based on their historical contributions to greenhouse gas emissions. The Kyoto Protocol includes three market-based mechanisms to help countries meet their emission reduction targets more effectively. The Clean Development Mechanism (CDM) allowed industrialized countries to invest in emission reduction projects in developing countries and receive certified emission reduction credits.<sup>50</sup> Under this framework, Annex I parties can buy and sell assigned amount units to meet emissions reduction targets.<sup>51</sup>

The Kyoto Protocol achieved significant global participation, with many countries committing to emission reduction targets, through emissions trading and international collaboration.<sup>52</sup> The market-based mechanism,

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<sup>40</sup> "Norwegian Carbon Credit Procurement Program," *Government.no*, April 10, 2019, <https://www.regjeringen.no/en/topics/climate-and-environment/climate/innsiktsartikler-klima/norwegian-carbon-credit-procurement-program/id2415405/>.

<sup>41</sup> "Australia's carbon tax repealed after 2 years," *CBC*, n.d., <https://www.cbc.ca/news/world/australia-s-carbon-tax-repealed-after-2-years-1.2709642>.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

<sup>46</sup> "The Paris Agreement," *United Nations Climate Change*, n.d., <https://unfccc.int/process-and-meetings/the-paris-agreement>.

<sup>47</sup> "What is the Kyoto Protocol?" *United Nations Climate Change*, n.d., [https://unfccc.int/kyoto\\_protocol](https://unfccc.int/kyoto_protocol).

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Carla Tardi, "What Is The Kyoto Protocol? Definition, History, Timeline and Status," *Investopedia*, Sept 4, 2023, <https://www.investopedia.com/terms/k/kyoto.asp>.

particularly the CDM, facilitated the implementation of emission reduction projects and promoted sustainable development in developing countries.<sup>53</sup> However, the treaty only covered a subset of countries (Annex I parties), and major emitters like the United States did not ratify the protocol initially, limiting its overall effectiveness.<sup>54</sup> Moreover, the compliance system faced challenges in effectively addressing non-compliance, and the mechanisms had complexities that led to criticisms and concerns about their environmental integrity.<sup>55</sup>

## The Paris Agreement

The Paris Agreement is a legally binding international treaty on climate change. Adopted by 196 Parties at the UN Climate Change Conference (COP21) in 2015, the Paris Agreement entered into force in 2016.<sup>56</sup> The agreement aims to prevent the temperature from increasing more than two degrees Celsius.<sup>57</sup> If it exceeds the threshold, more than 70% of Earth's coastlines will experience sea-level rise that will result in increased coastal flooding, beach erosion, and salinization of water supplies.<sup>58</sup>

Since the inception of the Paris Agreement, governments and companies have begun developing their carbon standards. Under the Paris Agreement, countries are required to submit their nationally determined contributions (NDCs) every five years. NDCs are climate action plans that outline countries' targets and statistics regarding their progress across areas including energy, industry, agriculture, and transportation.<sup>59</sup> These climate action plans not only encompass the main areas but also provide detailed data on how a country is achieving its targets, supported by elaborate monitoring and verification systems to ensure they remain on course.<sup>60</sup>

Commencing in 2024, the Enhanced Transparency Framework (ETF), will require countries to report their climate change mitigation progress.<sup>61</sup> These reports will undergo scrutiny by countries and experts to ensure objectivity and transparency, with established international procedures for their review.<sup>62</sup> The information gathered through the ETF will feed into the Global stocktake, which assesses the collective progress toward the long-term climate goals. So far, all parties to the Paris Agreement have issued at least one NDC.<sup>63</sup> This helps countries understand and implement policies to reduce emissions. However, NDCs have limitations, with varying challenges due to a lack of adequate finance, capacity and insufficient political commitment.<sup>64</sup> Nevertheless, the transparency promoted by the ETF is crucial for building trust among nations and for assessing global progress toward the Paris Agreement's goals.

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<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> "The Paris Agreement," *United Nations Climate Action*, n.d., <https://www.un.org/en/climatechange/paris-agreement>

<sup>57</sup> Ibid.

<sup>58</sup> Buis, Alan, "A Degree of Concern: Why Global Temperatures Matter," *NASA*, June 19, 2019, <https://climate.nasa.gov/news/2865/a-degree-of-concern-why-global-temperatures-matter/>.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> "Moving Towards the Enhanced Transparency Framework," *United Nations Climate Change*, n.d., <https://unfccc.int/enhanced-transparency-framework>.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

## International Financial Support

The UN, in collaboration with the World Bank (WB), established the Carbon Pricing Leadership Coalition (CPLC), which is built from the voluntary partnership of governments, businesses and civil society organizations, aiming to promote the adoption of carbon pricing globally.<sup>65</sup> The CPLC provides a platform for knowledge sharing, capacity building and dialogue on carbon pricing policies and strategies.<sup>66</sup> Additionally, UN Climate Change is supporting countries in implementing cooperative initiatives, like the CPLC, as part of their national climate plans through the Regional Collaboration Centres (RCCs) around the world.<sup>67</sup> Moreover, the WB has collaborated with the International Monetary Fund (IMF), an organization committed to providing advice on increasing carbon taxes, reducing fuel subsidies, and helping countries diversify economies away from carbon-intensive industries.<sup>68</sup>

While the IMF and the WB do not directly fund carbon pricing mechanisms, they offer financial assistance and technical advice to countries interested in adopting and implementing carbon pricing policies. The IMF and the World Bank often collaborate with other international organizations and climate funds like the Green Climate Fund (GCF), which have more specific mandates and resources dedicated to climate change mitigation compared to the IMF and WB.<sup>69</sup> Overall, the efforts of the IMF and the World Bank have raised awareness, helped countries build capacity and facilitated international cooperation around carbon pricing that contribute to global climate goals.<sup>70</sup>

## UN Sustainable Development Goals

The United Nations (UN) has remained dedicated to reducing carbon emissions. In September 2015, the General Assembly adopted the 2030 Agenda for Sustainable Development which includes 17 Sustainable Development Goals (SDGs).<sup>71</sup> These Sustainable Development Goals feature specific targets related to reducing greenhouse gas emissions. For instance, Goal 12 advocates for ensuring “sustainable consumption and production pattern,” an objective parallel to carbon pricing, which promotes responsible consumption and production patterns by raising the cost of carbon-intensive activities.<sup>72</sup> Furthermore, Goal 13, calls for “urgent action to combat climate change.”<sup>73</sup> By placing a price on carbon, this approach serves as a tangible and effective means of mitigating climate change.

The UN actively promotes carbon pricing mechanisms through the adoption of the Paris Agreement, as the UN frequently hosts international climate conferences. The annual Conference of the Parties (COP) under the UN Framework Convention on Climate Change (UNFCCC) provides a platform for countries to negotiate and discuss climate policies.<sup>74</sup> Carbon pricing is a common topic of discussion and exchange of best practices during

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<sup>65</sup> “Net Zero Report Key Messages,” *Carbon Pricing Leadership Coalition*, n.d., <https://www.carbonpricingleadership.org/>

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> “What is the IMF?” *International Monetary Fund*, n.d., <https://www.imf.org/en/About/Factsheets/IMF-at-a-Glance>.

<sup>69</sup> “International Bank for Reconstruction and Development and International Development Association,” *Green Climate Fund*, n.d., <https://www.greenclimate.fund/ae/world-bank>.

<sup>70</sup> Ibid.

<sup>71</sup> “The 17 Goals,” *United Nations| Department of Economic and Social Affairs*, n.d., <https://sdgs.un.org/goals>

<sup>72</sup> “Ensure sustainable consumption and production patterns,” *United Nations*, n.d., <https://sdgs.un.org/goals/goal12>.

<sup>73</sup> “Take urgent action to combat climate change and its impacts,” *United Nations| Department of Economic and Social Affairs*, <https://sdgs.un.org/goals/goal13>.

<sup>74</sup> Kuh, K.F., “United Nations Framework on Climate Change,” *Science Direct*, n.d., <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/united-nations-framework-convention-on-climate-change>

these conferences, emphasizing the UN's role in promoting carbon pricing. By endorsing this international accord, the UN acknowledges and supports the implementation of carbon pricing as a crucial tool in achieving the outlined Sustainable Development Goals.

## Current Situation

### Carbon Tax Case Study: Canada

Prime Minister Justin Trudeau plans to reduce Canada's emissions by 30% below 2005 levels by 2030. Most revenue is refunded to Canadians on their tax bills; the Canadian government estimates that these refunds will offset higher energy costs for about 70% of citizens. One of the leading pioneers concerning carbon pricing mechanisms, Canada implemented a carbon tax on 70% of British Columbia's emissions in 2008, becoming the first country in North America to implement such a tax.<sup>75</sup> The tax started at CAD 10 per metric ton of carbon dioxide and increased to CAD 40, reducing the province's consumption of gasoline and natural gas and overall greenhouse gas emissions by 15%. Between 2008 and 2018, British Columbia's economy grew by 26%, eight points higher than the Canadian average.

However, some Canadian provinces, like Ontario and Alberta, have seen political shifts that led to the repeal or scaling back of carbon pricing programs. Alberta's economy heavily depends on the oil and gas industry and has argued that provincial governments should implement their carbon pricing mechanism. Saskatchewan was one of the most vocal opponents of the federal carbon tax and argued that the tax would disproportionately affect industries like agriculture and energy production. Ontario asserted that carbon taxes would raise costs for consumers and businesses.

Nevertheless, British Columbia has seen some success with its carbon-neutral plan, as it lowered income taxes to compensate for an increase in consumption taxes on fossil fuels, with the revenue generated from the carbon taxes. Moreover, the lowest two personal income tax rates were cut, low-income families received a tax credit, and the corporate tax rate was removed. Almost 70,000 jobs were created in the province between 2010 and 2014.

### National Cap-and-Trade Case Study: China

China, the world's largest emitter, has claimed that it plans to become carbon neutral by 2060, but it is still relying heavily on coal-burning power plants for economic growth.<sup>76</sup> Although China is the world's largest greenhouse gas emitter, since 2011, China has been experimenting with cap-and-trade programs in several cities, including Shanghai and Shenzhen. In 2021, China introduced the world's largest emissions trading system — three times larger than the European Union's.<sup>77</sup> Despite China's reliance on carbon-intensive industries, China is taking steps to transition toward a low-carbon economy, as China is a signatory to the Paris Agreement and China is

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<sup>75</sup> Leck, Sebastian, et "Carbon Pricing in Canada," *The Canadian Encyclopedia*, March 30, 2017, <https://www.thecanadianencyclopedia.ca/en/article/carbon-pricing-in-canada>

<sup>76</sup> McGrath, Matt, Climate change: China aims for 'carbon neutrality by 2060,'" *BBC News*, September 22, 2020, <https://www.bbc.com/news/science-environment-54256826>.

<sup>77</sup> Tan, Luyue, "The first year of China's national carbon market, reviewed," *China Dialogue*, February 17, 2022, <https://chinadialogue.net/en/climate/the-first-year-of-chinas-national-carbon-market-reviewed/>

interested in creating new economic opportunities in emerging markets like renewable energy and electric vehicles.

### **International Case Study: EU ETS**

The world's first major carbon market, the European Union Emissions Trading System (EU ETS) was adopted by the European Parliament and the Council of the EU in 2003.<sup>78</sup> Operating in all EU member states along with Iceland, Liechtenstein, and Norway, this system covers more than 10,000 installations in the power sector, the manufacturing industry, and airlines operating in the European Economic Area (EEA).<sup>79</sup>

The EU ETS functions as a “cap and trade” system, which sets an annual limit on the total greenhouse gas emissions of entities within the system.<sup>80</sup> The cap is progressively reduced each year to achieve emission reductions.<sup>81</sup> Market players can purchase or receive an initial amount of allowances.<sup>82</sup> Depending on the cost of carbon emission reduction or the financial costs of using less carbon-intensive resources, each entity in the EU ETS decides whether to cut emissions or buy allowances from other installations.<sup>83</sup> The European Commission estimates that the EU ETS reduced 43% of the GHG emissions from power generation and energy-intensive industries over the past 16 years, contributing to a decrease in the coal industry's role in the power sector.<sup>84</sup> However, the EU ETS faces challenges, including oversupplying allowances and low carbon prices.<sup>85</sup>

The EU ETS has been criticized for over-allocating permits, resulting in a surplus of emissions permits that lowered prices, undermining the incentive for emissions reductions.<sup>86</sup> Some companies received significant free allowances, leading to profits without driving emissions reductions.<sup>87</sup> Furthermore, a lack of infrastructure and market predictability increased EU gas emissions, making it challenging for businesses to plan and invest in emissions reduction projects.<sup>88</sup> Energy-intensive industries like steel and cement production are concerned about global competitiveness and their potential for carbon leakage, where companies relocate production to regions with weaker climate regulations to avoid paying for carbon credits.<sup>89</sup>

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<sup>78</sup> “EU Emissions Trading System (EU ETS),” *European Commission*, n.d., [https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en).

<sup>79</sup> “Countries in the EU and EEA,” *Gov.UK*, n.d., <https://www.gov.uk/eu-eea>

<sup>80</sup> Ibid.

<sup>81</sup> Ibid.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid.

<sup>84</sup> “Strengthening EU Emissions Trading Scheme to Back up Climate Ambitions,” *IISD SDG Knowledge Hub*, October 5, 2021, <https://sdg.iisd.org/commentary/guest-articles/strengthening-eu-emissions-trading-scheme-to-back-up-climate-ambitions/>

<sup>85</sup> Ibid.

<sup>86</sup> “Carbon Border Adjustments,” *Centre For Climate and Energy Solutions*, n.d., <https://www.c2es.org/content/carbon-border-adjustments/>.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

## Possible Solutions and Controversies

### Carbon Taxes

Due to the harmful greenhouse gas emissions produced by fossil fuels, governments often implement carbon taxes, which mandate emitters to pay a specified price per ton of emissions. This increases the cost of products and services derived from fossil fuels for businesses, making them more expensive to produce. Consequently, consumers experience higher prices when purchasing these products and services.

While carbon taxes hold the potential to offer environmental benefits, a significant concern is their regressive nature, imposing financial strain on low-income households and rural communities.<sup>90</sup> An example is the Yellow Vest Protests in France in 2018. The French government announced a 20% increase in 2019, aiming to protect the environment.<sup>91</sup> This decision triggered mass protests, with 300,000 demonstrators taking to the streets, setting up barricades, and deploying convoys of slow-moving trucks. A week later, the protest turned violent; looting, car torching, and clashes with the police ensued, resulting in 400 arrests and 4 deaths.<sup>92</sup> Despite French Prime Minister Macron ultimately suspending the planned increase, many sectors experienced revenue declines ranging from 15% to 50%.<sup>93</sup>

The regressive impact of carbon taxes can be significant. Carbon taxes on gasoline or fossil-fuel-generated electricity result in higher energy costs.<sup>94</sup> Given that low-income households allocate a higher percentage of their income to energy and transportation expenses, the burden of increased prices disproportionately falls on them.<sup>95</sup> In the Yellow Vest Movement, the majority of protestors were low-income workers in small towns and rural France who depended on commuting by car. These individuals, already struggling to make ends meet, would have received scant public services in exchange for some of the highest taxes in Europe. While measures exist to alleviate the impact on low-income households, policymakers must carefully calibrate carbon taxes to ensure their appropriateness and fairness.

### Cap-and-Trade System

In a cap-and-trade system, the government sets a limit on how many tonnes of emissions emitters can produce. The government then issues credits or permits to companies, with each permit allowing them to release a specific quantity of pollutants. These permits can be traded among companies themselves. For example, if one company finds a way to reduce its pollution below the permitted level, it can sell its “extra” permits to another company that might be struggling to stay within its limit. As there remains a limited supply of permits, companies are motivated to find ways to reduce their emissions. If companies lower their pollution levels, they can make money from selling extra permits, creating an incentive for businesses to become more environmentally friendly. Overall, when implemented correctly, the total pollution released by all companies in the cap-and-trade system will stay within the predetermined cap.

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<sup>90</sup> Ibid.

<sup>91</sup> “The ‘yellow vest’ movement explained,” *Aljazeera*, December 4, 2018, <https://www.aljazeera.com/news/2018/12/4/the-yellow-vest-movement-explained>.

<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

Despite the potential benefits of international carbon markets, they often face challenges related to harmonizing rules, verification processes, and maintaining the environmental integrity of offsets. One significant concern is carbon leakage, where industries relocate to regions with lax climate or environmental regulations to circumvent higher costs from emissions reduction policies.<sup>96</sup> This practice undermines the environmental benefits of such policies.<sup>97</sup> To counteract carbon leakage, governments can provide free emissions allowances, financial assistance, or exemptions to affected industries.<sup>98</sup>

## **Carbon Revenue Recycling**

Carbon revenue recycling, or carbon offsetting, involves strategically allocating the revenue generated from carbon pricing mechanisms to invest in renewable energy projects, including wind farms, solar power plants, and hydroelectric dams. The revenue can also be allocated towards energy efficiency programs, which can involve projects such as upgrading lighting systems or promoting energy-efficient appliances.<sup>99</sup>

Furthermore, the revenue can be used to implement technologies that capture carbon dioxide emissions from industrial processes or power plants and store them underground to prevent the gasses from being released into the atmosphere. A majority of carbon offsetting projects are based on planting trees (reforestation) and establishing new forests (afforestation), as trees are natural carbon absorbers that help clean the air.

The revenue from carbon offsetting can also be redirected to reduce individual and corporate income taxes, improve tax treatment for business investment, and address growing federal deficits. Switzerland, for example, utilized revenue generated from its carbon tax to reduce social security contributions for employers and employees.<sup>100</sup> By strategically reallocating funds, policymakers can ensure that the benefits of carbon pricing are achieved without unduly burdening vulnerable communities.

## **“Just Transition”**

A “just transition” refers to the idea that as the world transitions towards more sustainable and low-carbon economies, the process must be fair, inclusive, and considerate of the impacts on workers and communities that might be affected by the shift away from carbon-intensive energy sources. Revenue generated from carbon pricing could be reinvested into affected communities to support job training programs, create new employment opportunities in clean industries, or provide a social support system for workers transitioning from carbon-intensive sectors.

Moreover, some high-income countries with ambitious climate policies have contemplated imposing tariffs on carbon emissions of imported products. The goal is to protect domestic industries from foreign competitors that face less stringent climate policies. While border carbon adjustments (BCAs) could protect energy-intensive and

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<sup>96</sup> “What is Carbon Leakage?” *CLEAR Center Clarity and Leadership for Environmental Awareness and Research at UC Davis*, n.d., <https://clear.ucdavis.edu/news/what-carbon-leakage>.

<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

<sup>99</sup> “Revenue Recycling: Climate Change Connection.” *Climate Change Connection | Connecting Manitobans to climate change facts and solutions*, September 27, 2016. <https://climatechangeconnection.org/solutions/carbon-pricing/revenue-recycling/>.

<sup>100</sup> Landis, Florian, “Cost distribution and equity of climate policy in Switzerland,” *SpringerOpen*, n.d., <https://sjes.springeropen.com/articles/10.1186/s41937-019-0038-2>.



trade-exposed industries, they do not encourage enough emissions reductions to achieve global temperature goals.<sup>101</sup>

## Ensuring Compliance

Ensuring compliance with policies and solutions is essential for the effectiveness of carbon pricing policies. For effective international cooperation on carbon pricing, countries must accurately measure and report their emissions, comply with pricing requirements, and face penalties for non-compliance when necessary. Nevertheless, international attention and cooperation are crucial, as they motivate countries to implement carbon pricing mechanisms and expand the reach of carbon markets.

Carbon neutral agreements are commitments and pledges made by organizations, governments, or individuals to balance the amount of greenhouse gases they emit with an equivalent amount of emissions removed or offset. The goal is to achieve a net-zero carbon footprint, contributing to the global efforts to mitigate climate change. So far, many companies have committed to becoming carbon neutral as part of their sustainability goals, including implementing energy efficiency measures, adopting renewable energy sources, and purchasing carbon offsets. Governments often make carbon-neutral commitments as part of broader climate action plans, but more needs to be done to ensure compliance. Currently, there are various certification programs, such as the CarbonNeutral Protocol or PAS 2060, providing guidelines for organizations to achieve and maintain carbon neutrality.

## Bloc Positions

### Pro-Carbon Pricing

Countries in the EU have been at the forefront in striving to become climate neutral by 2050.<sup>102</sup> Member states view carbon pricing as an effective mechanism to drive emissions reductions, encourage innovation in low-carbon technologies, and steer investment towards sustainable alternatives. For instance, Germany has been a strong advocate for carbon pricing within the European Union. The country has actively supported the EU Emissions Trading System and has also implemented domestic measures such as carbon taxes and levies.<sup>103</sup> The German government plans to increase carbon taxes to EUR 40 and 50 per tonne for 2024 and 2025, up from EUR 35 and 45 in 2023.<sup>104</sup>

Despite concerns against carbon pricing, the EU has been constantly extending its reach and reforming the EU ETS to strengthen its effectiveness. In 2019, the EU ETS introduced a Market Stability Reserve to address surplus allowances by absorbing a portion of the surplus allowances and temporarily removing them from circulation in

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<sup>101</sup> “Carbon Border Adjustment Mechanism,” *European Commission*, n.d., [https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism\\_en](https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en).

<sup>102</sup> “EU Emissions Trading System (EU ETS),” *European Commission*, n.d., [https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en)

<sup>103</sup> Kyllmann, Carolina, “CO<sub>2</sub> pricing brings Germany record 13 billion euros in revenue in 2022,” *Clean Energy Wire Journalism for the energy transition*, Jan 3, 2023, <https://www.cleanenergywire.org/news/co2-pricing-brings-germany-record-13-billion-euros-revenues-2022>.

<sup>104</sup> Wettengel, Julian, “Germany’s carbon pricing system for transport and buildings,” *Clean Energy Wire*, n.d., <https://www.cleanenergywire.org/factsheets/germanys-planned-carbon-pricing-system-transport-and-buildings>.

the market.<sup>105</sup> The purpose of the Market Stability Reserve is to mitigate the imbalances in the supply and demand of emission allowances, ensuring a more stable and effective carbon pricing system.<sup>106</sup> Additionally, the EU has recently proposed the implementation of a Carbon Border Adjustment Mechanism (CBAM).<sup>107</sup> The CBAM aims to address the potential carbon leakage and ensure a level playing field for EU industries under the EU ETS.<sup>108</sup> The CBAM requires importers to purchase certain carbon allowances, thereby encouraging global partners to align with the EU's climate objectives.<sup>109</sup>

Many other nations have improved their carbon pricing mechanisms in the past few decades. Similar to the EU, Chile is also committed to implementing carbon pricing mechanisms and has had a carbon tax implemented since 2017; it is also considering introducing an ETS.<sup>110</sup> As well, Chile is planning on increasing its carbon price from USD 5 in 2023 to USD 80 per ton by 2040.<sup>111</sup>

Within North America, countries currently have varying perspectives on carbon pricing depending on the incumbent party. Thus far, Canada has implemented a national carbon pricing system, which includes both carbon taxes and emissions trading systems, and views carbon pricing as a vital tool for reducing emissions, promoting clean technology innovation, and meeting its climate change targets.

Although China is one of the world's largest emitters, China launched regional emissions trading systems in several provinces and cities, with the plans to eventually establish a nationwide carbon market.<sup>112</sup> China views carbon pricing as a tool to promote low-carbon development, enhance energy efficiency, and transition to a more sustainable economy.

## Neutral

The United States policy on carbon pricing varies among different states and political parties, with Democrats typically being more progressive and environmentally friendly, as members have advocated for carbon taxes and cap-and-trade systems.<sup>113</sup> On the other hand, Republicans have been historically more divided on the issue of carbon pricing, as members cited concerns about potential economic impacts on states that heavily rely on fossil fuels.<sup>114</sup> However, the United States supports the Regional Greenhouse Gas Initiative (RGGI) and has also implemented its carbon pricing mechanisms.<sup>115</sup> Yet, the US has seen and still sees varying levels of support and

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<sup>105</sup> "Fit for 55: Council adopts decision on market stability reserve," *European Council*, March 28, 2023,

<https://www.consilium.europa.eu/en/press/press-releases/2023/03/28/fit-for-55-council-adopts-decision-on-market-stability-reserve/>

<sup>106</sup> "Allowances," *Carbon Offset Guide*, n.d., <https://www.offsetguide.org/understanding-carbon-offsets/other-instruments-for-claiming-emission-reductions/allowances/>.

<sup>107</sup> "Carbon Border Adjustment Mechanism," *European Commission*, n.d., [https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism\\_en](https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en)

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.

<sup>110</sup> "Carbon Pricing Dashboard," *The World Bank*, n.d., [https://carbonpricingdashboard.worldbank.org/map\\_data](https://carbonpricingdashboard.worldbank.org/map_data).

<sup>111</sup> Ibid.

<sup>112</sup> Busch, Chris, "China's Emissions Trading System Will Be The World's Biggest Climate Policy. Here's What Comes Next," *Forbes*, April 18, 2022, <https://www.forbes.com/sites/energyinnovation/2022/04/18/chinas-emissions-trading-system-will-be-the-worlds-biggest-climate-policy-heres-what-comes-next/?sh=3190b6932d59>

<sup>113</sup> "Both parties used to love the carbon tax. So why are they giving up on it?" *PBS*, n.d., <https://www.pbs.org/wnet/peril-and-promise/2020/09/both-parties-used-to-love-the-carbon-tax/>.

<sup>114</sup> Ibid.

<sup>115</sup> "U.S. State Carbon Pricing Policies," *Center For Climate and Energy Solutions*, n.d., <https://www.c2es.org/document/us-state-carbon-pricing-policies/>.

opposition to carbon pricing due to the potential of carbon pricing policies harming certain industries and leading to job losses.<sup>116</sup> To add on, Southeast Asian nations, such as Thailand, Indonesia, and Vietnam, have been exploring carbon pricing to reduce emissions and align themselves with international climate standards.<sup>117</sup>

Furthermore, most nations in Africa are highly vulnerable to the consequences of climate change, including droughts, floods, and rising temperatures.<sup>118</sup> Thus, many countries recognize the necessity for action to mitigate greenhouse gas emissions. Carbon pricing could be a potential tool to incentivize emission reductions and support the transition to low-carbon development pathways.<sup>119</sup> However, regardless of all the potential obstacles, some African countries see carbon pricing as an opportunity to attract climate finance and foreign investments in clean technologies.<sup>120</sup>

### Anti-Carbon Pricing

In contrast, Poland has continued to oppose the implementation of carbon pricing mechanisms, due to their heavy reliance on coal for energy production.<sup>121</sup> Instead, Poland would rather support technological advancements and financial support to transition to cleaner technologies to avoid the potential economic impacts of carbon pricing.<sup>122</sup> Moreover, Russia has been cautious about endorsing carbon pricing, citing concerns over the competitiveness of its energy-intensive industries.<sup>123</sup> Russia also heavily relies on fossil fuel exports and has expressed reservations about the potential negative economic consequences of carbon pricing.<sup>124</sup> Therefore, Russia and Poland both favour a focus on energy efficiency measures and voluntary approaches to emissions reductions.

### Countries with Alternative Carbon-Reduction Programs

Though carbon pricing mechanisms have delivered some favourable outcomes, there are also other ways to reduce carbon emissions. Instead of carbon pricing, countries can start energy efficiency programs, set legally binding regulations, and provide subsidies for renewable energy. For example, Denmark has a significant share of its electricity generation coming from wind farms.<sup>125</sup> Denmark's efforts can inspire other countries to reduce emissions by implementing carbon pricing mechanisms and looking for alternative ways to generate energy, as fossil fuels mainly cause emissions. Even though the United Kingdom supports carbon pricing mechanisms, the

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<sup>116</sup> Ibid.

<sup>117</sup> "28 to 29 September - ASEAN Countries Meet for the Regional Dialogue on Carbon Pricing," *United Nations Climate Change*, n.d., <https://unfccc.int/about-us/regional-collaboration-centres/rcc-bangkok/28-to-29-september-asean-countries-meet-for-the-regional-dialogue-on-carbon-pricing>

<sup>118</sup> Gomera, Maxwell, "Africa needs carbon markets," *UNDP Climate Promise*, June 16, 2022, <https://climatepromise.undp.org/news-and-stories/africa-needs-carbon-markets>

<sup>119</sup> Ibid.

<sup>120</sup> Champions, Climate, "Africa Carbon Markets Initiative launched to dramatically expand Africa's participation in voluntary carbon market," *Race to Resilience Race to Zero*, November 8, 2022, <https://climatechampions.unfccc.int/africa-carbon-markets-initiative/>.

<sup>121</sup> Kosc, Wojciech, "Poland rakes in the carbon cash it pretends to hate," *Politico*, December 20, 2021, <https://www.politico.eu/article/poland-emission-trading-eu/>

<sup>122</sup> Simon, Frederic, "Poland takes hard line on EU carbon pricing for heating," *Euractiv*, Nove 24, 2022, <https://www.euractiv.com/section/emissions-trading-scheme/news/poland-takes-hard-line-on-eu-carbon-price-for-heating/>.

<sup>123</sup> L, Jennifer, "Russia Develops their own Carbon Credit Methodologies," *Carbon Credits.com*, March 9, 2023, <https://carboncredits.com/18-russian-carbon-credits-methodologies-are-underway/>

<sup>124</sup> Ibid.

<sup>125</sup> "Pioneers in clean energy," *denmark.dk*, n.d., <https://denmark.dk/innovation-and-design/clean-energy>.

UK also has legally binding carbon budgets that set emissions reduction targets for five-year periods.<sup>126</sup> As well, the UK has passed the Climate Change Act, which requires the government to reduce carbon emissions by a certain percentage by a certain time.<sup>127</sup> In India, the government has provided subsidies and incentives to promote renewable energy, especially solar power.<sup>128</sup> Fortunately, the country's solar sector has grown significantly as a result of these subsidies. Moreover, whether countries implement carbon pricing mechanisms or not, it is imperative for nations to gradually turn away from fossil fuels.

## Discussion Questions

1. What are the factors that build a country's position on carbon pricing? What are the initiatives that have been conducted individually by different countries? What policies have been implemented, and what would these individual countries plan to do in the future?
2. Why may nations choose a less ambitious NDC plan that can make a difference in carbon emissions? How can nations be incentivized to be more environmentally friendly?
3. What can hinder the efficiency of carbon pricing mechanisms? What minimizes the risks?
4. How can companies and governments be kept transparent and held accountable about emissions? How can the positive outcomes of these nations be applied elsewhere? How can the shortcomings of these systems be remedied?
5. Can countries reduce the long timeframe and immense fiscal commitments it takes to reduce carbon emissions? How viable is foreign aid in the case of carbon pricing? Can certain countries help lessen that burden for vulnerable countries?
6. Where should the revenue obtained through carbon credits go towards and why?
7. What alternative mechanisms could replace or add to carbon pricing? Are they sustainable, accessible, and viable? Could they be prioritized over carbon pricing mechanisms?

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<sup>126</sup> "Climate Legislation in the United Kingdom," *Canadian Climate Institute*, n.d., <https://climateinstitute.ca/publications/climate-legislation-in-the-united-kingdom/>.

<sup>127</sup> *Ibid.*

<sup>128</sup> "India's subsidies for renewable energy, EVs more than doubled in FY 2022: Report," *The Economic Times*, n.d., <https://economictimes.indiatimes.com/industry/renewables/indias-subsidies-for-renewable-energy-evs-more-than-doubled-in-fy-2022-report/articleshow/96376948.cms?from=mdr>.

## Additional Resources

Carbon Tax, Its Purpose, and How It Works:

<https://www.thebalancemoney.com/carbon-tax-definition-how-it-works-4158043>.

Carbon Markets and Their Importance:

<https://climatepromise.undp.org/news-and-stories/what-are-carbon-markets-and-why-are-they-important>

Carbon Credits and How They Can Offset Your Carbon Footprint:

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# Sustainable Travelling

## Overview

The United Nations Environment Programme (UNEP) defines sustainable travelling as “environmentally responsible travel and visitation to relatively undisturbed natural areas... that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations.”<sup>129</sup> In simpler terms, sustainable tourism prioritizes travel practices that minimize adverse effects on the environment and local communities.

Currently, global tourism is on the rise, and the environmental implications of this phenomenon cannot be ignored. According to the David Suzuki Foundation, a Canadian non-profit organization dedicated to preserving the environment, the global tourism industry currently accounts for eight percent of global emissions.<sup>130</sup> Tourism’s carbon footprint stems from various activities, including flights, souvenirs, and lodging.<sup>131</sup> Transportation stands out as the primary contributor, constituting 49% of the industry’s carbon footprint.<sup>132</sup> Furthermore, the energy-intensive systems in many hotels, homestays, and rental homes, such as heating, air conditioning, water heaters and electricity for various amenities, contribute significantly to carbon emissions.<sup>133</sup> Only 21% of hotels currently have on-site renewable energy, according to the Green Lodging Trends Report.<sup>134</sup> Additionally, building lodging facilities usually involves clearing natural areas like forests, which act as carbon sinks by absorbing emissions.<sup>135</sup> When carbon-rich vegetation is replaced with building resorts and airports, fewer plants absorb the carbon dioxide released into the atmosphere.

Tourism frequently exhibits wasteful practices, exemplified by all-you-can-eat hotel buffets and oversized restaurant portions. This excess contributes to substantial food waste, leading to methane emissions during decomposition in landfills—a gas 21 times more potent than carbon dioxide.<sup>136</sup> With food production responsible for 25% of the world’s emissions, the journey from farm to table incurs additional energy costs, particularly when food is imported internationally.<sup>137</sup> Likewise, souvenirs, often mass-produced in distant factories, accumulate environmental costs through transportation. All these contributors collectively result in water over-usage, land degradation, improper waste, disposal, and greenhouse gas (GHG) emissions. Additionally, the affordability of airfare in recent years has led to a surge in international travel, predominantly by visitors from high-income countries, exacerbating the industry’s environmental impact.

Fortunately, emerging technologies such as solar-powered water heaters, temperature control systems, and energy-efficient appliances offer viable alternatives to fossil fuels in the tourism industry. Nevertheless,

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<sup>129</sup> “Sustainable Travel In the United Nations,” *Sustainable United Nations*, n.d., <https://wedocs.unep.org/xmlui/handle/20.500.11822/7992>.

<sup>130</sup> “Air Travel and Climate Change,” *David Suzuki Foundation One Nature*, n.d., <https://david Suzuki.org/living-green/air-travel-climate-change/>.

<sup>131</sup> Ibid.

<sup>132</sup> Carbon Footprint of Tourism, “*Sustainable Travel International*,” n.d., <https://sustainabletravel.org/issues/carbon-footprint-tourism/>.

<sup>133</sup> Ibid.

<sup>134</sup> Ibid.

<sup>135</sup> Ibid.

<sup>136</sup> Ibid.

<sup>137</sup> Ibid.

projections indicate a potential increase in tourism emissions to 6.5 billion metric tons by 2025—a 44% increase from 2013 and equivalent to about 13% of current global greenhouse gas emissions.<sup>138</sup> Consequently, urgent action is imperative, necessitating collaborative efforts from local governments, tourism businesses, and individual travellers to reduce the industry's reliance on carbon-intensive sources of energy.

## Timeline

**July 5, 1841** — Thomas Cook, regarded as one of the pioneers of modern tourism, organizes one of the first-ever publicly advertised excursions. This excursion is a train journey from Leicester to Loughborough in England, marking the beginning of organized and affordable travel for the public.<sup>139</sup>

**Jan 1, 1913** — The world's first commercial airline flight in the United States takes place. The success of this inaugural commercial flight demonstrated the feasibility of commercial air travel, paving the way for the development of the aviation industry and the expansion of air services around the world in the decades that followed.<sup>140</sup>

**October 1987** — The Brundtland Report outlines the concept of sustainable development, emphasizing the interconnectedness of economic, social and environmental issues. It lays the foundation for international efforts and agreements related to sustainable development, including the UN Conference on Environment and Development of 1992.<sup>141</sup>

**June 3, 1992** — The United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, unites world leaders and representatives from NGOs to adopt Agenda 21, a plan to address environmental and developmental issues. The Earth Summit's legacy continues with subsequent international conferences, such as the Johannesburg Summit in 2002 and the Rio+20 Conference in 2012.<sup>142</sup>

**December 11, 1997** — The Kyoto Protocol, an international climate agreement, sets legally-binding emission reduction targets for 37 developed countries and economies. The protocol's progress leads to an average five percent emission reduction from 2008 to 2012.<sup>143</sup>

**October 6, 2008** — The Global Sustainable Tourism Council (GSTC) is established as a non-governmental organization and a large certification body with the support of the UNEP and the United Nations World Tourism Organization (UNWTO). The GSTC certifies organizations that meet a certain threshold concerning sustainability and social responsibility.<sup>144</sup>

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<sup>138</sup> Ibid.

<sup>139</sup> Charlie Hoyle, "Thomas Cook: Tourism and the rise of Britain's empire in the Middle East," *The New Arab*, September 26, 2019, <https://www.newarab.com/analysis/thomas-cook-and-rise-britains-colonial-empire>.

<sup>140</sup> "The fascinating story of the first commercial flight," *Tourism Teacher*, n.d., <https://tourismteacher.com/first-commercial-flight/>.

<sup>141</sup> "United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992," *United Nations*, n.d., <https://www.un.org/en/conferences/environment/rio1992>.

<sup>142</sup> "United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992," *United Nations*, n.d., <https://www.un.org/en/conferences/environment/rio1992>.

<sup>143</sup> "What is the Kyoto Protocol?" *United Nations Climate Change*, n.d., [https://unfccc.int/kyoto\\_protocol](https://unfccc.int/kyoto_protocol).

<sup>144</sup> "GSTC - Global Sustainable Tourism Council," *Control Union Certifications*, n.d., <https://certifications.controlunion.com/en/certification-programs/certification-programs/gstc-global-sustainable-tourism-council/>.

**December 12, 2015** — The Paris Agreement is adopted and signed by 196 parties. It aims to reduce carbon emissions and fuels further research and development in solutions that promote sustainable travelling.<sup>145</sup>

**December 14, 2015** — The UN declares 2017 as the International Year of Sustainable Tourism for Development in recognition of the tremendous potential of the tourism industry, which accounts for 10% of the world's economic activity.<sup>146</sup>

**December 2019** — During the COVID-19 pandemic, the global tourism industry plummets, leading to reduced carbon emissions from aviation. This causes economic challenges for many employees in the tourism sector.<sup>147</sup>

**2023** — Sustainable tourism gains prominence worldwide as travellers seek eco-friendly and responsible travel options. Governments, organizations, and travel companies continue to adopt green certifications and standards and encourage travelers to choose environmentally responsible options.

## Historical Analysis

For decades, periods of economic growth fueled the innovation of new transportation methods, igniting the rise of tourism culture. The Industrial Revolution, which spanned from the late 18th century to the mid-19th century, brought significant advancements in transportation that revolutionized the movement of goods and people. The widespread adoption of the steam engine and railways increased the efficiency of moving goods and people between industrial centres, mines, and ports. New developments in transportation made travelling more efficient, increasing the possibility of shorter vacations and cheaper travel, giving rise to global modern tourism.

Thomas Cook, a British travel pioneer, is said to have invented modern tourism during the Industrial Revolution.<sup>148</sup> Cook founded Thomas Cook and Son, a worldwide travel agency that organized the first publicly advertised excursion train. This train was capable of taking over 500 people from Leicester to Loughborough to attend a temperance meeting.<sup>149</sup> By the end of the 19th century, the company grew significantly, arranging travel to Palestine for 12,000 people. Evidently, the company's entrepreneurial spirit contributed immensely to contemporary patterns of tourism management.<sup>150</sup>

The tourism industry skyrocketed in the beginning of the 20th century with the introduction of commercial aviation on January 1, 1913. This milestone development in transportation made air travel more efficient, affordable, and accessible to a broader worldwide audience, thereby contributing to the globalization of tourism.<sup>151</sup> Following World War I, the Roaring Twenties witnessed a period of economic recovery that fostered the popularization of automobile travel. This led to the exploration of new destinations as people sought refuge from the post-war aftermath.<sup>152</sup> Similarly, the immediate post-World War II period was characterized by the

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<sup>145</sup> "The Paris Agreement," *United Nations Climate Change*, n.d., <https://unfccc.int/process-and-meetings/the-paris-agreement>.

<sup>146</sup> "UNESCO and the International year of Sustainable Tourism," *UNESCO*, n.d., <https://en.unesco.org/iyst4d>

<sup>147</sup> Behsudi, Adam, "Tourism-dependent economies are among those harmed the most by the pandemic," *International Monetary Fund*, December 2020, <https://www.imf.org/en/Publications/fandd/issues/2020/12/impact-of-the-pandemic-on-tourism-behsudi>.

<sup>148</sup> Charlie Hoyle, "Thomas Cook: Tourism and the rise of Britain's empire in the Middle East," *The New Arab*, September 26, 2019, <https://www.newarab.com/analysis/thomas-cook-and-rise-britains-colonial-empire>.

<sup>149</sup> "Thomas Cook," *Britannica*, November 18, 2023, <https://www.britannica.com/biography/Thomas-Cook>.

<sup>150</sup> Ibid.

<sup>151</sup> "The fascinating story of the first commercial flight," *Tourism Teacher*, n.d., <https://tourismteacher.com/first-commercial-flight/>.

<sup>152</sup> "A Brief History Lesson on Travel: Why, How, and Where We Travelled in the 1920s," *altexsoft*, n.d., <https://www.altexsoft.com/blog/travel-in-the-1920s/>.

need for reconstruction in war-torn regions. However, as economies recovered, a resurgence in travel occurred.<sup>153</sup> The late 1940s and 1950s saw the beginning of mass tourism, particularly in Western countries, where tourists had more disposable income and leisure time; this contributed to a surge in tourism as more people could afford to travel for leisure.<sup>154</sup>

In contrast to these historical trends, the environmental consequences of tourism have been increasingly apparent in popular destinations. The Maldives, renowned for its stunning coral reefs, has faced a plethora of challenges such as coral bleaching and degradation.<sup>155</sup> These issues stem from a combination of climate change and tourism-related activities, including overcrowded snorkeling and diving sites, and improper waste disposal.<sup>156</sup> Similarly, Phuket, Thailand, has also grappled with environmental problems, including coastal erosion and water pollution; these issues are largely attributed to unplanned development, deforestation, and inadequate waste management.<sup>157</sup> Venice, known for its cultural heritage, also faces the negative impacts of overtourism, manifesting in overcrowded canals and deteriorating historic buildings.<sup>158</sup> The influx of visitors contributes to water pollution, affecting the quality of the city's waterways.<sup>159</sup>

Given the detrimental effects of sustainable tourism on the environment, various individuals and organizations have laid the groundwork for sustainable tourism practices. The creation of the World Tourism Organization (UNWTO) provided a platform for international collaboration on tourism policies and practices.<sup>160</sup> Over time, the UNWTO has increasingly emphasized the importance of sustainable tourism in its programs and initiatives.<sup>161</sup> The Global Sustainable Tourism Council was established to develop and manage sustainable tourism standards.<sup>162</sup> The GSTC Criteria serves as a framework for businesses and destinations to implement sustainable tourism practices.<sup>163</sup> The Brundtland Report, officially known as "Our Common Future," was produced by the World Commission on Environment and Development (WCED).<sup>164</sup> The report introduced the concept of sustainable development and emphasized the need for responsible practices in tourism.<sup>165</sup> The United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, brought together world leaders to discuss environmental issues, including sustainable development. Agenda 21, a comprehensive plan of action, included recommendations for sustainable tourism development.<sup>166</sup> The International Ecotourism Society played a crucial role in promoting sustainable tourism practices, working to provide guidelines, standards, and educational resources to promote responsible travel and environmental

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<sup>153</sup> "Commerical Aviation at Mid-Century," *National Air and Space Museum*, n.d., <https://airandspace.si.edu/explore/stories/commercial-aviation-mid-century>.

<sup>154</sup> Ibid.

<sup>155</sup> "Maldives coral reefs under stress from climate change: research survey reveals over 60% of corals bleached," *IUCN*, August 8, 2016, <https://www.iucn.org/news/secretariat/201608/maldives-coral-reefs-under-stress-climate-change-research-survey-reveals-over-60-corals-bleached>.

<sup>156</sup> Ibid.

<sup>157</sup> "What is the Dark Side of Tourism in Phuket?" *Phuket Nature Reserve*, n.d., <https://phuketelephantnaturereserve.com/what-is-the-dark-side-of-tourism-in-phuket/>.

<sup>158</sup> "Overtourism in Venice," *Responsible Travel*, n.d., <https://www.responsibletravel.com/copy/overtourism-in-venice>.

<sup>159</sup> Ibid.

<sup>160</sup> "About UNWTO," *UNWTO*, n.d., <https://www.unwto.org/who-we-are>.

<sup>161</sup> Ibid.

<sup>162</sup> "About the Global Sustainable Tourism Council (GSTC)," *GSTC*, n.d., <https://www.gstccouncil.org/about/>.

<sup>163</sup> Ibid.

<sup>164</sup> Michelle E. Jarvie, "Brundtland Report," *Britannica*, n.d., <https://www.britannica.com/topic/Brundtland-Report>.

<sup>165</sup> Ibid.

<sup>166</sup> "United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992," *United Nations*, n.d., <https://www.un.org/en/conferences/environment/rio1992>.

conservation.<sup>167</sup> All these instances underscore the need for sustainable tourism practices to preserve natural and cultural assets for the benefit of present and future generations.

## Past UN/International Involvement

### UN Sustainable Development Goals

In September 2015, the United Nations Development Programme (UNDP) established the 17 Sustainable Development Goals (SDGs), an agenda aimed at achieving global sustainability by 2030.<sup>168</sup> Comprising 17 goals, including clean water and sanitation (SDG #6), affordable and clean energy (SDG #7), sustainable cities and communities (SDG #11), and responsible consumption and production (SDG #12), the SDGs form a comprehensive framework for addressing environmental challenges.<sup>169</sup>

The SDGs have inspired countries to implement policies that prohibit the use of unsustainable materials. They have inspired global efforts to focus on researching and developing sustainable aviation travel. A notable success story in aligning with the SDGs is United Airlines, who pledged to become 100% green by 2050 without relying on traditional carbon offsets.<sup>170</sup> Specifically, it has purchased 2.5 million gallons of Sustainable Aviation Fuel (SAF) from Neste, an alternative fuel made from non-petroleum feedstocks, to reach their 100% green goal.<sup>171</sup>

In 2017, the United Nations declared the year as the International Year of Sustainable Tourism for Development, recognizing tourism's significance which accounted for 10% of the world's economic activity.<sup>172</sup> The UN General Assembly highlighted "the importance of international tourism in fostering better understanding among peoples everywhere, in leading to a greater awareness of the rich heritage of various civilizations, thereby contributing to the strengthening of peace in the world."<sup>173</sup> The ongoing commitment of entities like United Airlines and the global focus on sustainable tourism support a change in policies, business practices, and consumer behavior toward a more sustainable tourism sector that can contribute effectively to the SDGs.<sup>174</sup>

### Climate Conferences

In June 1992, the United Nations Conference on Environment and Development was held in Rio de Janeiro, Brazil, bringing together political leaders, diplomats, scientists, representatives of the media and non-governmental organizations from 179 countries to present their visions of the world's future about the environment and socio-economic development.<sup>175</sup> The primary objective of this conference was to produce a broad agenda and a new blueprint for international action on environmental and developmental issues that could

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<sup>167</sup> "TIES Overview," *The International Ecotourism Society*, n.d., <https://ecotourism.org/ties-overview/>.

<sup>168</sup> "The SDGs In Action," *UNDP*, n.d., <https://www.undp.org/sustainable-development-goals>.

<sup>169</sup> *Ibid.*

<sup>170</sup> "Our Environmental Strategy," *United*, n.d., <https://crreport.united.com/environmental-sustainability/our-environmental-strategy>

<sup>171</sup> *Ibid.*

<sup>172</sup> "UNESCO and the International year of Sustainable Tourism," *UNESCO*, n.d., <https://en.unesco.org/iyst4d>

<sup>173</sup> *Ibid.*

<sup>174</sup> *Ibid.*

<sup>175</sup> "United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992," *United Nations*, n.d., <https://www.un.org/en/conferences/environment/rio1992>.

help guide international cooperation and development policy. The Rio de Janeiro conference highlighted how social, economic, and environmental factors affect a country's progress in sustainability. The conference also recognized that success in one sector requires action in other sectors to sustain them over time.<sup>176</sup> After this event, the UN Environment Assembly was established, becoming one of the world's high-level decision-making bodies on the environment. This concluded that sustainable development is an attainable goal for all global citizens.<sup>177</sup>

At a UN Biodiversity Conference (COP15) in Montreal, the World Travel Tourism Council (UNWTO) and the Sustainable Hospitality Alliance announced a plan to unite the public and private sectors. They hoped to work together towards a vision for travel and tourism to halt and reverse nature loss by 2030.<sup>178</sup> Signatories from the tourism industry pledged to adopt a nature-positive approach to tourism.<sup>179</sup> This includes integrating biodiversity safeguards such as recycling, reducing carbon emissions, mitigating the impact of pollution, curtailing the unsustainable use of resources, and protecting and restoring nature and wildlife.<sup>180</sup> This new alliance aims to inspire and support governments, businesses, and civil society in implementing the Post-2020 Montreal Global Biodiversity Framework, which aims to halt and reverse biodiversity loss by 2030.<sup>181</sup>

### Implementing International Regulations

Adopted in 1999 by the General Assembly of the World Tourism Organization, the Global Code of Ethics for Tourism is a comprehensive set of principles designed to guide key players in tourism development.<sup>182</sup> These principles are addressed to governments and specific industries in travel and tourism. The aim is to maximize the sector's benefits while minimizing its potentially negative impact on the environment, cultural heritage, and societies across the globe.<sup>183</sup> The Global Code of Ethics' 10 articles amplifies the importance of the economic, social, cultural, and environmental components of travel and tourism.<sup>184</sup>

In addition, the Kyoto Conference in December 1997 created research opportunities and the chance to start initiatives to work towards a sustainable transportation system. This tackles today's needs without hindering economic growth.<sup>185</sup> This conference was more effective than earlier meetings in Rio de Janeiro, Berlin, and Geneva, as those conferences set non-binding agreements. However, countries often ignore non-binding agreements if they hinder the economy's growth.

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<sup>176</sup> Ibid.

<sup>177</sup> Ibid.

<sup>178</sup> "The World Travel & Tourism Council Announce Collaboration with UNWTO And Sustainable Hospitality Alliance at COP15," UNWTO, December 13, 2022, <https://www.unwto.org/news/unwto-and-sustainable-hospitality-alliance-at-cop15>.

<sup>179</sup> Ibid.

<sup>180</sup> Ibid.

<sup>181</sup> Ibid.

<sup>182</sup> "Background of the Global Code of Ethics For Tourism," UNWTO, n.d., <https://www.unwto.org/background-global-code-ethics-tourism>

<sup>183</sup> Ibid.

<sup>184</sup> Ibid.

<sup>185</sup> Kevin Heanue and Susan B. Petty, "Sustainable Transportation: The Road from Kyoto," *U.S. Department of Transportation Federal Highway Administration*, n.d., <https://highways.dot.gov/public-roads/marchapril-1998/sustainable-transportation-road-kyoto>.

## Current Situation

### COVID-19 Pandemic

Before the COVID-19 pandemic, the tourism industry was one of the most significant sectors of the global economy. According to the International Monetary Fund, the tourism industry accounted for 10 percent of the global GDP and more than 320 million jobs around the world. However, the global travel and tourism market lost approximately 62 million jobs in 2020. While the situation improved in 2021, the tourism industry saw a decline in 44 million fewer jobs worldwide compared to 2019, according to Statista's Research Department.<sup>186</sup> Furthermore, tourism-dependent countries were the most negatively impacted, as travelling was vastly restricted during the pandemic. For instance, real GDP among African countries that were dependent on tourism shrank by 12%.<sup>187</sup> Even for countries not dependent on tourism, like the United States, some popular destinations like Hawaii saw one in every six jobs vanish.<sup>188</sup>

While the pandemic strained the global economy, the environment temporarily improved. The reduction of flights, cruises, and car rides reduced carbon emissions in the transportation sector.<sup>189</sup> This temporary decrease contributed to improved air quality and lower greenhouse gas emissions. Moreover, reduced tourism activity resulted in fewer pollutants like plastics, chemicals, and toxic sewage entering oceans, improving water quality.<sup>190</sup> In some areas, reduced human activity and disturbance allowed wildlife and natural ecosystems to heal and regrow; sensitive animal habitats experienced less human pressure. Places heavily affected by tourism, such as popular beaches and trails, had the opportunity to recover during the lull in visitors, allowing natural vegetation and habitats to restore themselves.

### Growing Demand For Sustainable Travelling

As the world nears the end of the COVID-19 pandemic, tourism is on the rise and is expected to reach about USD 17 billion in size by 2027 compared to USD 11 trillion prior to the pandemic.<sup>191</sup> The United Nations Environment Programme (UNEP) has indicated that the tourism industry will have a 154% increase in energy consumption, 131% increase in greenhouse gas emissions, 152% increase in water consumption and 251% increase in solid waste disposal by 2050.<sup>192</sup>

In addition to a growing demand for tourism, there is also an increasing appetite for sustainable tourism. Consumer surveys by some of the world's largest travel marketplaces and consulting groups, like Booking.com, Expedia, Euromonitor, IBM, and the Boston Consulting Group, reveal that tourists seek more sustainable travel

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<sup>186</sup> "Tourism and COVID-19 Unprecedented Economic Impacts," UNWTO, n.d, <https://www.unwto.org/tourism-and-covid-19-unprecedented-economic-impacts>.

<sup>187</sup> "Tourism-dependent economies are among those armed the most by the pandemic," *International Monetary Fund*, n.d., <https://www.imf.org/en/Publications/fandd/issues/2020/12/impact-of-the-pandemic-on-tourism-behsudi>.

<sup>188</sup> Ibid.

<sup>189</sup> "Positive environmental effects of the coronavirus 2020 episode: a review," *National Library of Medicine*, n.d., <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7859094/>

<sup>190</sup> Ibid.

<sup>191</sup> Jenny Davis-Peccound et al, "Sustainable Tourism: An Untapped Opportunity for Green Growth," *Bain & Company*, July 7, 2023, <https://www.bain.com/insights/sustainable-tourism-an-untapped-opportunity-for-green-growth/>.

<sup>192</sup> Ibid.



opportunities.<sup>193</sup> Specifically, a study conducted by Expedia Group Media Solutions surveyed 11,000 consumers from Australia, Brazil, Canada, China, France, Germany, India, Japan, Mexico, the United Kingdom, and the United States and found that nine in ten consumers were looking for sustainable options.<sup>194</sup> Additionally, seven in ten consumers have avoided a destination or transportation option because they felt it was not committed to sustainable places.<sup>195</sup> While consumers note that it costs extra to be more sustainable, nearly 70% of consumers said they would be willing to sacrifice convenience to be a more sustainable traveller.<sup>196</sup> However, 70% of people also reported feeling overwhelmed by starting the process of becoming a more sustainable traveller.<sup>197</sup> To learn how to be more sustainable while travelling, many consumers are turning to travel resources and providers, including destinations, lodging providers, transportation providers, travel agencies, and booking sites, for guidance to inform their decisions.

### **Impacts of Tourism on Indigenous Communities**

Tourism often creates conflict and resentment among local communities, leading to the displacement of Indigenous peoples from their ancestral lands. In East Africa, approximately 70% of national parks and game reserves, once belonging to the Maasai people, have become tourist destinations, putting 150,000 Maasai at risk of involuntary displacement without proper consent.<sup>198</sup> Similar instances occur in Southeast Asia, where beach hotels in Malaysia and Thailand displaced fishing communities.<sup>199</sup> The Mohawk uprisings in Canada were triggered by plans to extend a golf course to Mohawk burial grounds, exemplifying the clashes between tourism development and cultural heritage.<sup>200</sup> Sacred Indigenous burial sites in Hawaii and Bali have been desecrated by resorts, often without proper compensation or consultation with local communities.<sup>201</sup>

Moreover, tourism can impede the freedom of cultural expression among native communities.<sup>202</sup> As native communities adapt to meet the demands of tourists, there is a risk of deviating from their traditional ways of life centred around fostering a harmonious relationship with the environment. Nevertheless, positive efforts in countries like New Zealand, Canada, Australia, Sweden, and Guatemala showcase the potential for sustainable tourism practices that involve Indigenous communities. In Canada, for instance, Indigenous cultural tourism initiatives allow visitors to engage with diverse Indigenous cultures and learn about stewardship practices that protect the land and water.<sup>203</sup> This sustainable tourism industry contributed CAD 1.8 billion to the Canadian economy in 2019.<sup>204</sup> These examples highlight the importance of balancing tourism development with respect for cultural heritage and environmental sustainability.

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<sup>193</sup> Harold Goodwin, "There is growing demand for sustainable travel – don't miss out," *wtm Global Hub*, October 21, 2022, <https://hub.wtm.com/blog/responsible-tourism/wrtd-spotlight/there-is-growing-demand-for-sustainable-travel-dont-miss-out/>.

<sup>194</sup> Ibid.

<sup>195</sup> Ibid.

<sup>196</sup> Ibid.

<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

<sup>199</sup> McLaren Deborah Ramer, "The History of Indigenous Peoples and Tourism," *Cultural Survival*, n.d., <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/history-indigenous-peoples-and-tourism>.

<sup>200</sup> Ibid.

<sup>201</sup> Ibid.

<sup>202</sup> Ibid.

<sup>203</sup> Paula Duhatschek, "Indigenous tourism — which offers sustainability and cultural connection — is booming in Canada," *CBC*, June 27, 2023, <https://www.cbc.ca/news/canada/calgary/indigenous-tourism-sector-bounce-back-1.6888662>.

<sup>204</sup> Ibid.

## Possible Solutions and Controversies

### Regulations and Standards Limiting Tourists

Many countries have established regulations that set emission standards for vehicles, such as cars, trucks, and buses. These standards limit the amount of pollutants that the vehicles can emit, encouraging the use of cleaner and more fuel-efficient vehicles. In 2021, France abolished intercity domestic flights on routes shorter than two-and-a-half hours, promoting rail services to lower carbon emissions by forty percent by 2030.<sup>205</sup> The United Kingdom and Germany plan to follow suit by investing in high-speed rail.<sup>206</sup>

Some lawmakers require automakers to produce vehicles that meet specific mileage or emissions targets.<sup>207</sup> Additionally, eco-certification organizations evaluate and promote sustainable practices related to energy use, water conservation, waste management and community engagement.<sup>208</sup> International conventions, like the International Maritime Organization's MARPOL convention, set standards to limit pollution from ships, covering rules on sewage treatment, water management, and waste disposal.<sup>209</sup> Regulations may require industry associations and organizations to have codes of conduct for tour operators, promoting responsible tourism practices, cultural sensitivity, and wildlife conservation.

Tourism can also be developed within sustainable development parameters, tackling environmental limits to growth and climate change. Bhutan's "High-Value, Low-Impact" tourism policy serves as an exemplary model.<sup>210</sup> The government sets a minimum daily tariff for tourists, which includes accommodation, meals, transportation, and a sustainable development fee.<sup>211</sup> This approach helps control the number of visitors and ensures that tourism benefits local communities.

### Green Certifications

A green certification verifies that an organization's electricity comes from a renewable source. Several jurisdictions have established green certification to set legally binding standards for business. Notably, Green Globe is a prominent global certification program in the travel and tourism industry.<sup>212</sup> It assesses businesses based on their sustainability practices, covering environmental, social, cultural and economic aspects.<sup>213</sup> Additionally, the Global Sustainable Tourism provides global standards and criteria for sustainable tourism, with

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<sup>205</sup> Martie Bowser, "This European country has banned short domestic flights, replacing them with train rides," *Miami Herald*, June 1, 2023, <https://www.miamiherald.com/detour/article275981641.html>.

<sup>206</sup> Ibid.

<sup>207</sup> Arjun Kharpal, "What 'regulatory credits' are — and why they're so important to Tesla," *CNBC*, n.d., <https://www.cnbc.com/2021/05/18/tesla-electric-vehicle-regulatory-credits-explained.html>.

<sup>208</sup> "Green Rating Systems," *HDR*, n.d., <https://www.hdrinc.com/services/sustainability-resiliency/green-rating-systems>.

<sup>209</sup> "International Convention for the Prevention of Pollution from Ships (MARPOL)," *IMO*, n.d., [https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx).

<sup>210</sup> Jyoti Karki, "Safety In Bhutan," *Luxury Holidays Nepal*, March 29, 2023, <https://luxuryholidaynepal.com/blog/safety-in-bhutan>.

<sup>211</sup> Ibid.

<sup>212</sup> "Green Globe Certification," *Green Globe*, n.d., <https://www.greenglobe.com/green-globe-certification>.

<sup>213</sup> "Green Globe International Standard for Sustainable Tourism," *Green Globe*, n.d., <https://www.greenglobe.com/criteria-indicators>.

two main sets: the GSTC Criteria for Hotels & Tour Operators and the GSTC Criteria for Destinations.<sup>214</sup> The former focuses on businesses, requiring the implementation of a long-term sustainability management system.<sup>215</sup> The latter emphasizes the entire tourism ecosystem within the area, encouraging regular information sharing on sustainability issues among tourism-related enterprises.<sup>216</sup>

These certification programs play a crucial role in promoting and supporting sustainable travelling. They provide a framework for businesses in the tourism industry to demonstrate their commitment to sustainability. When companies fail to adhere to these guidelines, they risk losing their green certification, diminishing their credibility with travellers seeking sustainable accommodations. Green certifications assure travellers that businesses are certified and committed to sustainability, making them more appealing to conscious consumers.

## Green Infrastructure and Technology

Green infrastructure is a holistic approach that incorporates natural elements and environmentally friendly solutions to promote sustainable travel.<sup>217</sup> This strategy aims to create infrastructure with minimal environmental impact and a positive effect on biodiversity.<sup>218</sup> In transportation hubs, integrating green roofs, solar panels, and energy-efficient systems can help reduce energy consumption and carbon emissions associated with travel.<sup>219</sup> Urban planning in cities can embrace green infrastructure by establishing pedestrian-friendly zones, bike paths, and efficient public transportation.<sup>220</sup>

Hotels and resorts can adopt green infrastructure practices by implementing features such as energy-efficient lighting, rainwater harvesting, and natural landscaping.<sup>221</sup> Some accommodations go a step further by incorporating renewable energy sources to power their facilities, like solar-powered charging stations for electric vehicles or bicycles.<sup>222</sup> Green infrastructure can facilitate the development of nature-based tourism experiences, including walking trails, birdwatching areas, or eco-friendly activities that promote appreciation for the natural environment.<sup>223</sup> Waste recycling and composting facilities at travel destinations are also part of the green infrastructure approach.<sup>224</sup>

Given that air travel significantly contributes to carbon emissions, sustainable aviation strives to reduce the environmental impact of the aviation industry.<sup>225</sup> Some airlines explore blending sustainable aviation fuel with traditional jet fuel to encourage the adoption of cleaner fuels.<sup>226</sup> Research efforts in various countries focus on developing sustainable alternative fuels, including biofuels made from renewable sources like algae, used cooking

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<sup>214</sup> “GSTC Criteria Overview,” GSTC, n.d., <https://www.gstcouncil.org/gstc-criteria/>.

<sup>215</sup> Ibid.

<sup>216</sup> Ibid.

<sup>217</sup> “Engineering for Sustainable Tourism Infrastructure in Emerging Economies,” *Utilities One*, October 9, 2023, <https://utilitiesone.com/engineering-for-sustainable-tourism-infrastructure-in-emerging-economies>.

<sup>218</sup> Ibid.

<sup>219</sup> Ibid.

<sup>220</sup> Ibid.

<sup>221</sup> “Sustainability in the Hospitality Industry: Best Practices and Future Trends,” *Draft*, n.d., <https://draft.co/writing-samples/sustainability-in-the-hospitality-industry-best-practices-and-future-trends>.

<sup>222</sup> Ibid.

<sup>223</sup> Ibid.

<sup>224</sup> Ibid.

<sup>225</sup> “Developing Sustainable Aviation Fuel (SAF),” IATA, n.d., <https://www.iata.org/en/programs/environment/sustainable-aviation-fuels/>.

<sup>226</sup> Ibid.

oil, and agricultural waste.<sup>227</sup> These alternatives have the potential to reduce carbon emissions compared to traditional jet fuels. Innovations like hybrid and electric aircraft, while still in early stages, show promise, especially for shorter-haul flights.<sup>228</sup>

## Community Involvement

Community involvement is an integral element of sustainable tourism, playing a pivotal role in empowering residents and ensuring that the benefits of tourism extend to the entire community. To enhance community engagement in tourism planning, local discussions can be conducted on various aspects, including the types of tourism activities, infrastructure development, and overall vision for tourism in the area.<sup>229</sup>

Encouraging collaboration between the tourism industry and local businesses is a key strategy, enabling local entrepreneurs to capitalize on tourism-related opportunities.<sup>230</sup> This could involve offering authentic experiences, selling local products like handicrafts and locally sourced foods, and fostering understanding and respect between locals and tourists through workshops, cultural exchange programs, and awareness campaigns promoting environmentally responsible tourism.<sup>231</sup> Additionally, providing training and capacity-building programs for community members—covering language proficiency, hospitality skills, tour guiding and entrepreneurship—empowers them to actively participate in the tourism industry.<sup>232</sup>

Preserving and promoting cultural heritage with community involvement is equally valuable. This entails supporting traditional art forms, cultural events, and heritage conservation projects that contribute to the unique identity of the destination. Overall, engaging locals in the tourism industry will not only promote sustainable tourism but also provide economic opportunities for the residents of a destination.

## Bloc Positions

### Africa

Africa has been portrayed with a negative light and with stereotypes for many decades. However, there has been a recent shift in perspective as African safaris become more mainstream, showing their value to the world. Many African countries are now reliant on tourists flocking to popular national parks and reserves to see wildlife in their natural habitat.<sup>233</sup> Safeguarding these living attractions, especially wildlife threatened by poaching, has been a priority for many governments across Africa.<sup>234</sup> African tourism has struggled with differing concepts of culture; their value is often undermined and dismissed by Western travellers. As a result, many of their natural

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<sup>227</sup> “Sustainable Aviation Fuels,” *Office of Energy Efficiency & Renewable Energy*, n.d., <https://www.energy.gov/eere/bioenergy/sustainable-aviation-fuels>.

<sup>228</sup> Ibid.

<sup>229</sup> “Engaging Local Communities,” *Sustainable Travel International*, n.d., <https://sustainabletravel.org/our-work/community-engagement/>.

<sup>230</sup> Ibid.

<sup>231</sup> Ibid.

<sup>232</sup> Ibid.

<sup>233</sup> Vanessa Ratcliffe, “Sustainable Tourism On the Rise in Africa,” *African Safari Consultants*, September 1, 2021, <https://www.africansafaris.com/sustainable-tourism-rise-africa/>.

<sup>234</sup> Ibid.

ecosystems and attractions are not properly cared for. Nations in this bloc may focus on preservation projects for their local ecosystems or strengthen pre-existing implementations. Across the continent, there are many eco-friendly accommodation options like sustainable resorts that implement water conservation measures and waste reduction practices.<sup>235</sup> As such, promoting responsible wildlife viewing, anti-poaching initiatives, and responsible safari practices are of utmost importance to African countries.

### Scandinavian Countries

Scandinavian countries are often considered as leaders of sustainable tourism; they boast robust policies promoting eco-friendly travel, invest significantly in public transportation and renewable energy, and actively encourage responsible tourism. Notably, Sweden was ranked at the top of Euromonitor's International Sustainable Travel Index in 2020, the world's leading independent provider of strategic market research.<sup>236</sup> The index commended Scandinavian countries for "[their] engagement and awareness of sustainability," where 65% of travel businesses already have implemented some sort of a sustainability strategy.<sup>237</sup> In 2017, Sweden ensured that all public transport options run on 100% renewable energy.<sup>238</sup> Similarly, Norway also has a reliable history of environmentally friendly practices and established laws to decrease fossil fuel emissions released through cruise ships. Furthermore, Norway has pledged to enforce a zero-tolerance policy for fossil fuel emissions from ships between 2026–2030.<sup>239</sup> Ultimately, because of their past actions, countries in this bloc may take a guiding stance in the sustainability discussion.

### South America

South America is one of the most popular tourist destinations in the world, with volcanoes, beaches, and rainforests drawing flocks of people to the continent every year.<sup>240</sup> However, many South American countries suffer from deforestation; farming and logging have virtually wiped out most of the rainforests.<sup>241</sup> Such destruction has also displaced Indigenous tribes, leading to drinking water shortages, flash flooding, and mudslides.<sup>242</sup> Though environmental awareness is growing, sustainable tourism in South America is more important than ever. The growth of the sustainable tourism industry can potentially lead to increased employment opportunities for craft sellers, local guides and restaurants, and local food producers and fishing communities.<sup>243</sup>

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<sup>235</sup> Ibid.

<sup>236</sup> Eula Skiles, "Sustainable Tourism Potential in The Nordic Countries," *Sea Going Green*, August 5, 2022, <https://www.seagoinggreen.org/blog/sustainable-tourism-potential-in-the-nordic-countries..>

<sup>237</sup> Ibid.

<sup>238</sup> Ibid.

<sup>239</sup> Ibid.

<sup>240</sup> "Best destinations for ecotourism in Latin America right now," *Barcelo*, n.d., <https://www.barcelo.com/pinandtravel/en/ecotourism-in-latin-america-green-tourism/>.

<sup>241</sup> Ibid.

<sup>242</sup> Ibid.

<sup>243</sup> Ibid.

## Southeast Asia

Many Southeast Asian countries have made significant progress toward achieving more sustainable development.<sup>244</sup> With strong income and consumption growth in recent years, many Southeast Asian nations have seen positive results, including reduced poverty and improved health and education outcomes among the general public.<sup>245</sup> Most Southeast Asian countries have made efforts to preserve and protect national parks, wildlife reserves, and cultural heritage sites from over-tourism through green certification programs.<sup>246</sup>

In addition, Southeast Asian nations are investing in public transport infrastructure development, like buses, trains, and mass transit networks, which is vital to reducing the reliance on private vehicles and decreasing carbon emissions.<sup>247</sup> Certain Southeast Asian countries have invested in more fuel-efficient aircraft, exploring the use of sustainable aviation fuels and adopting air traffic management technologies to optimize flight routes.<sup>248</sup> Singapore, for instance, emphasizes sustainable urban development and green initiatives. Its government frequently invests in public transportation, green spaces, and eco-friendly practices in the hospitality sector. Likewise, Thailand has also encountered issues with overcrowded beaches, environmental degradation, and strain on infrastructure.

## Discussion Questions

1. Does your country's economy rely on tourism? If it does, is your country planning on employing sustainable travelling practices if it hasn't done so already?
2. Should there be global standards for sustainable travelling? How could these standards be implemented? Should they be legally binding?
3. How did the COVID-19 pandemic impact the transportation and tourism industries? How can your country recover from these impacts?
4. How can destinations balance the economic benefits of tourism with environmental and social considerations?
5. How will the use of electricity and other renewable resources impact the future of sustainable travelling?

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<sup>244</sup> "ASEAN and the IMF: Staying on Track with the Sustainable Development Goals," *International Monetary Fund*, November 8, 2018, <https://www.imf.org/en/News/Articles/2018/11/07/NA110718-ASEAN-and-the-IMF-Staying-on-Track-with-Sustainable-Development-Goals>.

<sup>245</sup> Ibid.

<sup>246</sup> Ibid.

<sup>247</sup> "Expanding Networks: Southeast Asia transport outlook," *Southeast Asia Infrastructure*, June 6, 2022, <https://southeastasiainfra.com/expanding-networks-southeast-asia-transport-outlook/>.

<sup>248</sup> Alex Hong, "Scaling sustainable aviation fuel in ASEAN: challenges and opportunities," *illuminem*, June 8, 2023, <https://illuminem.com/illuminemvoices/scaling-sustainable-aviation-fuel-in-asean-part-1-challenges-and-opportunities>.

## Additional Resources

Tourism's Impacts on Local Populations:

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1194&context=nebanthro>

Responsible Tourism:

<https://www.iberostar.com/en/inspiration-guide/responsible-tourism/what-is-sustainable-tourism/>

Sustainable Development:

<https://www.unwto.org/sustainable-development>

Sustainable Tourism:

<https://sdgs.un.org/topics/sustainable-tourism>

What is Sustainable Tourism?:

<https://youtu.be/oL-X2iQi864>

Are Electric Cars Better for the Environment than Gas-Powered Cars?:

<https://youtu.be/vn9Vl0G53lA>

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