



# United Nations Environment Assembly Background Guide 2024

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# NATIONAL MODEL UNITED NATIONS

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Dear Delegates,

Welcome to the 2024 National Model United Nations Galápagos Conference (NMUN•Galápagos)! We are pleased to introduce you to our committee, the United Nations Environment Assembly (UNEA). This year's staff are: Director Tobias Dietrich and Assistant Director Karla Bayas. Tobias is from Regensburg, Germany. He graduated with a M.Sc. in Nanoscience from the University of Regensburg and currently works as a hardware developer for electric cars. He has been volunteering for NMUN staff since 2015 and most recently served as the Deputy Secretary-General for NMUN•NY in 2023. Karla is from Quito, Ecuador and has participated in Model United Nations since college. She currently works as a Fintech Lawyer in Bustamante Fabara within the area of Banking and Finance.

The topics under discussion for UNEA are:

1. Sustainable and Resilient Infrastructure
2. Biodiversity and Health

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the Bibliography to further your knowledge on these topics. In preparation for the Conference, each delegation will submit a Position Paper by 11:59 p.m. (Eastern) on 1 November 2024 in accordance with the guidelines in the [Position Paper Guide](#) and the [NMUN•Galápagos Position Papers](#) website.

Two resources, available to download from the [NMUN website](#), serve as essential instruments in preparing for the Conference and as a reference during committee sessions:

1. [NMUN Delegate Preparation Guide](#) - explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not start discussion on the topics with other members of their committee until the first committee session.
2. [NMUN Rules of Procedure](#) - include the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory [NMUN Conduct Expectations](#) on the NMUN website. They include the Conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated. If you have any questions concerning your preparation for the committee or the Conference itself, please contact Lauren Kiser at [dsg.galapagos@nmun.org](mailto:dsg.galapagos@nmun.org).

We wish you all the best in your preparations and look forward to seeing you at the Conference!

Sincerely,

Tobias Dietrich, Director  
Karla Bayas, Assistant Director

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## Committee Overview

### **Introduction**

The United Nations Environment Assembly (UNEA) is the primary governing body of the United Nations Environment Programme (UNEP) and is the international community's highest-level decision-making body on environmental matters.<sup>1</sup> In partnership with other United Nations institutions, it outlines the international environmental agenda and sets priorities for the international community.<sup>2</sup> Although its resolutions are not binding, UNEA brings together relevant international actors to address global environmental issues and shape environmental governance.<sup>3</sup>

### **Mandate, Functions, and Powers**

Twenty years after the adoption of the *Rio Declaration on Environment and Development* (1992), the United Nations Conference on Sustainable Development called for the strengthening and upgrading of UNEP so it could better execute its mandate.<sup>4</sup> UNEA was created in 2012 as the successor to UNEP's Governing Council.<sup>5</sup> Whereas the Governing Council was composed of 58 Member States and sat within UNEP, UNEA is structured as a distinct entity and enjoys universal membership with 193 Member States.<sup>6</sup> As a high-level governance body, UNEA reviews and coordinates the work of the international community on environmental matters while serving as a forum for and initiator of debates to be continued by other more specialized bodies.<sup>7</sup>

While the following list is not exhaustive, the mandate of UNEA can be summarized as:

- **UNEA will generally:** set broad priorities for global environmental policy; identify emerging themes in environmental governance; progressively develop international environmental law and begin negotiations on environmental treaties; define the work and priorities of UNEP; create ad-hoc committees and subsidiary bodies to further discussions on specific areas of environmental concern when necessary; make recommendations to Member States and other international organizations.<sup>8</sup>
- **UNEA will not generally:** engage in operational projects; complete negotiations on environmental treaties, but rather identify emerging issues and promote an architecture for future environmental governance.<sup>9</sup>

UNEA and UNEP are distinct entities: UNEA is the primary governing body and priority-setting mechanism of UNEP and does not operationalize these priorities itself.<sup>10</sup> In contrast, UNEP undertakes

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<sup>1</sup> United Nations Environment Assembly. *About the United Nations Environment Assembly*. N.d.

<sup>2</sup> Ibid.

<sup>3</sup> United Nations Environment Programme. *Q&A: UN Environment Assembly*. N.d.

<sup>4</sup> United Nations, General Assembly. *The future we want (A/RES/66/288)*. 2012. p. 18.

<sup>5</sup> United Nations Environment Assembly. *About the United Nations Environment Assembly*. N.d.

<sup>6</sup> Ibid.; United Nations Environment Programme, Governing Council. *Proceedings of the Governing Council at its Nineteenth Session (UNEP/GC.19/34)*. 1997.

<sup>7</sup> International Institute for Sustainable Development. *The United Nations Environment Assembly's Role as a Governance Architect*. 2022.

<sup>8</sup> United Nations Environment Programme. *What you need to know about the United Nations Environment Assembly*. N.d.

<sup>9</sup> Ibid.; International Institute for Sustainable Development. *The United Nations Environment Assembly's Role as a Governance Architect*. 2022.

<sup>10</sup> United Nations Environment Programme. *What you need to know about the United Nations Environment Assembly*. N.d.; Office of the United Nations Secretary-General's Envoy on Youth. *UNEP: United Nations Environment Programme*. N.d.

programs, projects, and awareness campaigns and provides support to national governments to achieve environmental obligations in line with the priorities set out by UNEA.<sup>11</sup>

### ***Governance, Structure, and Membership***

All 193 United Nations Member States are represented in UNEA.<sup>12</sup> The Assembly meets every two years to set priorities for global environmental policy, discuss developments in the area of environmental legislation, and assist in the implementation of the *2030 Agenda for Sustainable Development* (2015).<sup>13</sup>

Consisting of ten Ministers who each serve a two-year term and are selected based on geographical rotations, UNEA's Bureau is responsible for the general conduct of business.<sup>14</sup> UNEA also has a Committee of Permanent Representatives (CPR), a subsidiary inter-sessional organ of UNEA that meets at least four times a year.<sup>15</sup> The CPR contributes to the preparation of the UNEA agenda, holds an advisory role in policy matters, and monitors the implementation of decisions.<sup>16</sup> The CPR also holds discussions on key issues, promotes the inclusion of non-resident members of the Committee, and performs other tasks given by UNEA.<sup>17</sup> The CPR consists of all accredited Permanent Representatives to UNEP and is led by a five-member Bureau that is elected for two years.<sup>18</sup>

UNEP relies on three main financial sources: earmarked funds, the Environment Fund, and the United Nations's regular budget.<sup>19</sup> Earmarked funds, also known as earmarked contributions, are funds appropriated for specific projects, themes, or countries.<sup>20</sup> These funds aim to expand and/or replicate the results of United Nations Environment's work in more countries and in cooperation with more partners.<sup>21</sup> The Environment Fund aids in maintaining the capacity, balance, and efficiency needed for UNEP to function.<sup>22</sup> Earmarked contributions and the Environment Fund are comprised of voluntary contributions; hence, 95% of UNEP's income is received on a voluntary basis from Member States.<sup>23</sup> The United Nations' regular budget supports the regular work of UNEA and the UNEP Secretariat.<sup>24</sup>

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<sup>11</sup>Office of the United Nations Secretary-General's Envoy on Youth. *UNEP: United Nations Environment Programme*. N.d.

<sup>12</sup>United Nations Environment Assembly. *About the United Nations Environment Assembly*. N.d.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid.

<sup>15</sup>United Nations Environment Programme. *Committee of Permanent Representatives*. N.d.

<sup>16</sup>Ibid.

<sup>17</sup>Ibid.

<sup>18</sup>Ibid.

<sup>19</sup>United Nations Environment Programme. *How is UNEP funded*. N.d.

<sup>20</sup>Ibid.; United Nations Environment Programme. *Earmarked Contributions*. N.d.

<sup>21</sup>Ibid.

<sup>22</sup>United Nations Environment Programme. *How is UNEP funded*. N.d.

<sup>23</sup>Ibid.

<sup>24</sup>Ibid.

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## 1. Sustainable and Resilient Infrastructure

*“Infrastructure investment is a key tool for improving productivity, stimulating economic growth, generating decent jobs, addressing inequalities and building resilience. But infrastructure will only deliver on these objectives if sustainability is embedded at its core – increasing society’s resilience while reducing climate risk.”<sup>25</sup>*

### **Introduction**

The question of sustainable and resilient infrastructure is a multifaceted issue which can be addressed in different ways, but infrastructure is always a key tool towards sustainable and resilient cities and communities.<sup>26</sup> Infrastructure can be sustainable and resilient at the same time, but the focus on the two aspects can vary.<sup>27</sup> While the goal of sustainable infrastructure is important everywhere, the need for resilient infrastructure is dependent on climatic and geographical circumstances.<sup>28</sup> However, the importance of resilience of infrastructure is growing to ensure that already achieved progress towards sustainable development can be maintained.<sup>29</sup>

Infrastructure can be divided into hard infrastructure referring to physical assets like roads, buildings or energy grids and soft infrastructure, meaning the knowledge, policy frameworks, and institutions needed to allow infrastructure to function.<sup>30</sup> Infrastructure may additionally include areas such as healthcare, education, transportation, or information and communication technologies (ICTs) which are relevant for various areas of everyday life.<sup>31</sup> According to the United Nations Environment Programme (UNEP) “sustainable infrastructure (sometimes also called green infrastructure) systems are those that are planned, designed, constructed, operated and decommissioned in a manner that ensures economic and financial, social, environmental (including climate resilience), and institutional sustainability over the entire infrastructure life cycle.”<sup>32</sup> This definition illustrates how many aspects need to be evaluated when formulating a comprehensive sustainable infrastructure policy.<sup>33</sup>

Climate change has shown that the resilience of infrastructure is vitally important.<sup>34</sup> It is necessary that infrastructure is able to withstand influences which can occur during its life cycle.<sup>35</sup> While climate change is one of the biggest focuses in terms of resilient infrastructure, the impacts of other influences like natural disasters should not be neglected.<sup>36</sup> When designing resilient infrastructure, robust risk management and evaluation is often required to assess the circumstances, because it may not be possible to completely realize and mitigate all potential risks.<sup>37</sup> Risk management includes analyzing risks and defining reduction strategies that prevent new risks and reduce or manage existing ones.<sup>38</sup> While trying to make

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<sup>25</sup> United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022. p. 4.

<sup>26</sup> UBQ. *Beyond Green Spaces: Exploring Key Elements for Sustainable Infrastructure*. 2023.

<sup>27</sup> United Nations Office for Disaster Risk Reduction. *HLPF side event: Infrastructure resilience - safeguarding gains in sustainable development*. 2023.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022. p. 9.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> Organisation for Economic Co-operation and Development. *Climate-resilient Infrastructure: Policy Perspectives*. 2018.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> United Nations Office for Disaster Risk Reduction. *Disaster risk management*. N.d.

infrastructure resilient to all potential risks, it may be necessary to evaluate the cost of protection needed against the consequences which could be caused by damage to the infrastructure under consideration.<sup>39</sup>

Infrastructure is relevant in all areas of the world and making it more sustainable and resilient is a big task for the international community.<sup>40</sup> In 2019, United Nations Secretary-General António Guterres stated that by making infrastructure more resilient it is possible to save six dollars for every one dollar invested.<sup>41</sup> Climate resilience needs to play a central role when building infrastructure as investments in this area will be in the trillions of dollars within the next decade.<sup>42</sup> While the challenges vary depending on geographical and economic circumstances it will be necessary to pay more attention to these aspects, because infrastructure can be an invaluable catalyst as the world tries to achieve the Sustainable Development Goals (SDGs).<sup>43</sup>

### ***International and Regional Framework***

Within the context of sustainability, the United Nations' overarching framework is the *2030 Agenda for Sustainable Development* (2030 Agenda).<sup>44</sup> Adopted by the General Assembly in 2015 as resolution 70/1, it contains the 17 SDGs which the international community is striving to achieve by the year 2030.<sup>45</sup> SDG 9 (industry, innovation and infrastructure) is the goal which has the clearest relevance for sustainable and resilient infrastructure, however, infrastructure is linked to up to 92% of the 169 SDG targets according to the United Nations Office for Project Services (UNOPS).<sup>46</sup> While there has been progress towards the achievement of some of these goals, significant obstacles remain for other targets where progress has been weak or has even regressed.<sup>47</sup> Closely connected to the 2030 Agenda is the *Addis Ababa Action Agenda of the Third International Conference on Financing for Development* (Addis Ababa Action Agenda) which was also adopted in 2015.<sup>48</sup> Building on the 2002 *Monterrey Consensus of the International Conference on Financing for Development* the Addis Ababa Action Agenda serves as a framework to create an environment for financing sustainable development worldwide.<sup>49</sup> The Addis Ababa Action Agenda explicitly recognizes infrastructure as an important basis for sustainable development.<sup>50</sup> The implementation of the Addis Ababa Action Agenda is facilitated by the Inter-agency Task Force on Financing for Development and also through the annual ECOSOC Financing for Development Forum.<sup>51</sup>

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<sup>39</sup> Organisation for Economic Co-operation and Development. *Climate-resilient Infrastructure: Policy Perspectives*. 2018.

<sup>40</sup> United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022.

<sup>41</sup> United Nations Department of Global Communications. *For Every Dollar Invested in Climate-Resilient Infrastructure Six Dollars Are Saved, Secretary-General Says in Message for Disaster Risk Reduction Day*. 2019.

<sup>42</sup> Ibid.

<sup>43</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018.

<sup>44</sup> United Nations, General Assembly. *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. 2015.

<sup>45</sup> Ibid.

<sup>46</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018.

<sup>47</sup> United Nations Department of Economic and Social Affairs. *The Sustainable Development Goals Report: Special Edition*. 2023.

<sup>48</sup> United Nations, General Assembly. *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda) (A/RES/69/313)*. 2015.

<sup>49</sup> International Conference on Financing for Development. *Monterrey Consensus on Financing for Development*. 2003.

<sup>50</sup> United Nations, General Assembly. *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda) (A/RES/69/313)*. 2015.

<sup>51</sup> United Nations Department of Economic and Social Affairs. *About the IATF*. N.d; United Nations Department of Economic and Social Affairs. *Financing for Development Forum*. N.d.



In 2016 the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) held in Quito, Ecuador adopted the *New Urban Agenda* (NUA) which was later endorsed by General Assembly resolution 71/256 on the “New Urban Agenda.”<sup>52</sup> While infrastructure development is not limited to urban areas, cities are home to more than 50% of the global population with this share expected to increase to almost 70% by 2050 according to the World Bank.<sup>53</sup> The NUA stresses the importance of “equal access for all to public goods and quality services in areas such as [...] infrastructure, mobility and transportation.”<sup>54</sup> The *New Urban Agenda Illustrated Handbook* released in 2020 shows various types of infrastructure which can contribute to sustainable and resilient urban areas.<sup>55</sup> One example is that a focus on proper planning of infrastructure development can create a basis for economic development which in return allows for investment in other areas of urban development.<sup>56</sup>

While it may seem that the question of sustainable infrastructure is rather new, the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention) signed in 1979 under the aegis of UNEP shows that certain aspects of this topic have been addressed for many years.<sup>57</sup> For example, guidelines have been developed on how electrical power grids should be constructed to mitigate the impact on migratory birds.<sup>58</sup> It is important to understand that sustainability not only concerns the influence infrastructure has on humans, but also the impact on the environment including animals.<sup>59</sup>

A large aspect of resilience of infrastructure is often related to natural disasters and climate change.<sup>60</sup> To address these topics, the Third United Nations World Conference on Disaster Risk Reduction held in Sendai Japan in 2015 adopted the *Sendai Framework for Disaster Risk Reduction 2015-2023* (Sendai Framework).<sup>61</sup> The Sendai Framework recognizes the importance of improving resilience of existing infrastructure while also emphasizing the importance of thoroughly evaluating risks when building new infrastructure.<sup>62</sup> The framework explicitly refers to the need for resilience of critical infrastructure like water supplies, transportation, telecommunication, educational, and health facilities.<sup>63</sup> While improving existing infrastructure is key, the framework also stresses the importance of “building better from the start” to ensure that new infrastructure is planned in the right way.<sup>64</sup>

### **Role of the International System**

The first time that the United Nations Environment Assembly (UNEA) explicitly addressed the issue was in 2019 when it adopted resolution 4/5 on “Sustainable infrastructure.”<sup>65</sup> In addition to stressing the importance of the frameworks which are already in place to make infrastructure more sustainable, the resolution emphasizes the importance of international cooperation.<sup>66</sup> The resolution requests the Executive Director to utilize tools including best practice sharing, dialogue platforms, capacity building in

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<sup>52</sup> United Nations, General Assembly. *New Urban Agenda (A/RES/71/256)*. 2016.

<sup>53</sup> World Bank. *Urban Development*. 2023.

<sup>54</sup> United Nations, General Assembly. *New Urban Agenda (A/RES/71/256)*. 2016. p. 4.

<sup>55</sup> United Nations Human Settlements Programme. *The New Urban Agenda Illustrated Handbook*. 2020.

<sup>56</sup> Ibid. pp. 26-27.

<sup>57</sup> *Convention on the Conservation of Migratory Species of Wild Animals*. 1979.

<sup>58</sup> Prince et. al. *Guidelines on How to Avoid or Mitigate Impact of Electricity Power Grids on Migratory Birds in the African-Eurasian Region*. 2012.

<sup>59</sup> *Convention on the Conservation of Migratory Species of Wild Animals*. 1979.

<sup>60</sup> United Nations, General Assembly. *Sendai Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283)*. 2015.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

<sup>65</sup> United Nations Environment Assembly. *Sustainable Infrastructure (UNEP/EA.4/Res.5)*. 2019.

<sup>66</sup> Ibid.

public and private sectors, as well as strengthening public-private partnerships to address the issue.<sup>67</sup> At its fifth session in 2022, UNEA adopted resolution 5/9 on “Sustainable and resilient infrastructure.”<sup>68</sup> The title of the resolution indicates the increasing importance of making infrastructure not only sustainable but also resilient and the resolution addresses climate resilience as well as the importance of financing for resilient infrastructure.<sup>69</sup> The resolution also stresses the need to utilize already existing guidelines like the *International Good Practice Principles for Sustainable Infrastructure* published by UNEP in 2022.<sup>70</sup> Another key aspect stressed in the resolution is to ensure that environmental considerations are appropriately integrated into decision-making processes, because proper planning can ensure that necessary measures can be implemented with a much lower financial impact.<sup>71</sup> While these two resolutions address the topic of infrastructure directly, several other recent UNEA resolutions are also related to it.<sup>72</sup> Resolution 5/5 on “Nature-based solutions for supporting sustainable development” raises awareness of the possibilities of nature-based solutions like utilizing plants for flood protection which can be used in various areas also including infrastructure.<sup>73</sup> At its most recent session in early 2024, UNEA adopted resolution 6/4 which once again stresses the importance of international collaboration in the implementation of the existing multilateral environmental agreements.<sup>74</sup>

Aside from the work being done by UNEA, there are several other actors within the United Nations system which have addressed the issue.<sup>75</sup> General Assembly resolution 75/207 on “Promoting investments for sustainable development” explicitly discusses the important connection of sustainable and resilient infrastructure as it pertains to achieving the SDGs.<sup>76</sup> The resolution recognizes the need to create incentives and policies which encourage the private sector to adopt sustainable practices, while also encouraging foreign investment as a tool especially to support least developed countries.<sup>77</sup>

In 2022 the United Nations Office for Disaster Risk Reduction released their *Principles for Resilient Infrastructure* which are targeted at achieving the SDGs as well as the goals of the Sendai Framework.<sup>78</sup> The document focuses on the background of resilient infrastructure and then defines principles that should be taken into account when trying to make infrastructure more resilient.<sup>79</sup> The Organisation for Economic Co-operation and Development released a similar document in 2018 specifically focusing on climate-resilient infrastructure.<sup>80</sup>

On a regional level the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) is working to overcome hurdles in attracting investments in infrastructure within Latin America

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<sup>67</sup> United Nations Environment Assembly. *Sustainable Infrastructure (UNEP/EA.4/Res.5)*. 2019.

<sup>68</sup> United Nations Environment Assembly. *Sustainable and resilient infrastructure (UNEP/EA.5/Res.9)*. 2022.

<sup>69</sup> Ibid.

<sup>70</sup> United Nations Environment Assembly. *Sustainable and resilient infrastructure (UNEP/EA.5/Res.9)*. 2022; United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022.

<sup>71</sup> Ibid.

<sup>72</sup> United Nations Environment Programme. *Outcomes of UNEA-6*. N.d.

<sup>73</sup> United Nations Environment Assembly. *Nature-based solutions for supporting sustainable development (UNEP/EA.5/Res.5)*. 2022.

<sup>74</sup> United Nations Environment Assembly. *Promoting synergies, cooperation or collaboration for national implementation of multilateral environmental agreements and other relevant environmental instruments (UNEP/EA.6/Res.4)*. 2024.

<sup>75</sup> United Nations, General Assembly. *Promoting investments for sustainable development (A/RES/75/207)*. 2020.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid.

<sup>78</sup> United Nations Office for Disaster Risk Reduction. *Principles for Resilient Infrastructure*. 2022.

<sup>79</sup> Ibid.

<sup>80</sup> Organisation for Economic Co-operation and Development. *Climate-resilient Infrastructure: Policy Perspectives*. 2018.

and the Caribbean.<sup>81</sup> In a recent bulletin, ECLAC observed that the COVID-19 pandemic specifically led to a decrease in investments in infrastructure, hurting the region which was already struggling from lower levels of investments in comparison to other regions of the world.<sup>82</sup> ECLAC further stresses that investment packages started by governments are an important catalyst in bringing private investments back to a higher level which is key to economic growth in the region.<sup>83</sup>

In Europe, the European Commission allocated over €6 billion in grants from the Connecting Europe Facility.<sup>84</sup> This program was created by the European Union (EU) as a funding instrument to promote infrastructure development.<sup>85</sup> While the money is used for a wide range of initiatives, many of the projects are focused on cross-border rail connections.<sup>86</sup> Infrastructure projects in the EU are also supported by the European Investment Bank which was founded in 1958 and is owned by EU Member States.<sup>87</sup> The bank supports various projects which are related to sustainable infrastructure including clean energy, water management, transport, as well as sustainable health and education infrastructure.<sup>88</sup>

Aside from these intergovernmental organizations there are also non-governmental organizations (NGOs) which are supporting developments for more sustainable and resilient infrastructure.<sup>89</sup> The Global Infrastructure Hub (GI Hub) was created by the Group of Twenty (G20) in 2014 and has the goal of advancing the G20 infrastructure agenda.<sup>90</sup> GI Hub is providing analyses on sustainable infrastructure and supporting governments as well as the industry to develop and build more sustainable infrastructure.<sup>91</sup> A similar type of support is provided by the International Institute for Sustainable Development (IISD), which focuses on various aspects of the SDGs including infrastructure.<sup>92</sup> A project recently concluded by the IISD was focused on computer simulations to support a transformation toward sustainable mobility by creating an extensive analysis of different options.<sup>93</sup> These simulations reviewed frameworks, generated information on the benefits, and tried to make sure that this information is reaching decision making processes so the necessary steps for making transport more sustainable can be taken.<sup>94</sup>

### ***The Critical Relationship between Infrastructure and the SDGs***

Infrastructure serves a key role in achieving the SDG and it is important how it contributes to achieving the various goals and targets within the 2030 Agenda.<sup>95</sup> SDG 9 (industry, innovation and infrastructure) explicitly includes infrastructure within its title, however, the connection may not be as apparent within other goals.<sup>96</sup> UNOPS splits infrastructure in relationship with the SDGs into eight sections, referred to as pillars, which are transport, health, civic (e.g. governmental buildings or courts), water, education, energy,

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<sup>81</sup> United Nations, Economic Commission for Latin America and the Caribbean. *FAL Bulletin No. 389: Investing in sustainable, resilient and inclusive infrastructure for economic recovery*. 2021.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid.

<sup>84</sup> European Commission. *EU invests €6.2 billion in sustainable, safe and efficient transport infrastructure*. 2023.

<sup>85</sup> Ibid.

<sup>86</sup> Ibid.

<sup>87</sup> European Investment Bank. *Sustainable Infrastructure: Overview 2022*. 2022.

<sup>88</sup> Ibid.

<sup>89</sup> Global Infrastructure Hub. *About the GI Hub*. 2024.

<sup>90</sup> Ibid.

<sup>91</sup> Global Infrastructure Hub. *Sustainable Infrastructure*. 2024.

<sup>92</sup> International Institute for Sustainable Development. *Infrastructure*. 2024.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid.

<sup>95</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018.

<sup>96</sup> Ibid.

digital communication, and other infrastructure.<sup>97</sup> Looking at these pillars and the role infrastructure plays within them, connections to all of the SDGs can be found.<sup>98</sup>

SDG 1 (no poverty), target 1.4 focuses in part on access to basic services, ownership, and appropriate new technology and target 1.5 includes resilience against climate related extreme events.<sup>99</sup> Both of these targets can be addressed by building homes which have access to electricity, water, and sanitation and include facilities like a safe kitchen, which does not pose health hazards such as household air pollution.<sup>100</sup> This also supports progress towards SDG 11 (sustainable cities and communities) which addresses adequate, safe and affordable housing in target 11.1.<sup>101</sup> A country where 45 % of the population live under the national poverty line is Colombia.<sup>102</sup> UNOPS has been supporting a project in Colombia to improve the standard of homes across the country.<sup>103</sup> The responsibilities in the project are split between UNOPS and the local government.<sup>104</sup> While UNOPS is supporting the assessment of the existing homes and designing the plans to upgrade them, the local government works with communities to identify which homes have the biggest needs to be upgraded to benefit the population.<sup>105</sup>

In SDG 10 (reduced inequalities), the provision of infrastructure can be a way to reduce inequalities within communities.<sup>106</sup> For example, in many areas where the population needs to collect water and fuel manually, this is a task traditionally delegated to women and girls.<sup>107</sup> This however limits their ability to pursue a job outside the home or receive education, thereby creating an environment that poses challenges to meeting SDG 5 (gender equality).<sup>108</sup> By connecting these areas and tackling that lack of access to proper water or energy infrastructure, not only can it help reduce economic inequality, but at the same time, can also be a step towards addressing gender equality.<sup>109</sup> A project, led by the United Nations Development Programme, to rebuild infrastructure in Haiti after the earthquake in 2010 serves as another example which shows the connection between infrastructure and SDG 10.<sup>110</sup> With the need to rebuild homes, the United Nations and other international actors supported efforts to ensure that the new homes had suitable infrastructure.<sup>111</sup> Furthermore, the rebuild was done with a mostly local workforce which were also trained on how to maintain this infrastructure in the future.<sup>112</sup> This project thereby also supported progress towards SDG 8 (decent work and economic growth).<sup>113</sup>

SDG 16 (peace, justice and strong institutions) is a goal where the connection to infrastructure may not be initially apparent.<sup>114</sup> Building streets that also have electricity run along them can not only allow the police to respond to emergencies quicker, but street lighting can act as a deterrent of violence which may

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<sup>97</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018. p. 42.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid. p. 12.

<sup>100</sup> Ibid. p. 13.

<sup>101</sup> Ibid. 27.

<sup>102</sup> United Nations Office for Project Services. *Investing in Homes to Reduce Poverty and Hunger*. 2024.

<sup>103</sup> Ibid.

<sup>104</sup> Ibid.

<sup>105</sup> Ibid.

<sup>106</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018. p. 25.

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.

<sup>110</sup> United Nations Development Programme. *Haiti Rebuilds*. 2011.

<sup>111</sup> Ibid.

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018. p. 37.

prevent crimes in the first place.<sup>115</sup> Infrastructure also plays a role in allowing societal participation in decision making processes.<sup>116</sup> Citizens, for example, participate in elections and they need to be able to get to the polling stations in a reasonable amount of time, or need to have access to transportation for their mobility.<sup>117</sup>

### **Case Study: Successful Climate Resilient Infrastructure**

Copenhagen, the capital of Denmark, has created its first “climate resilient neighborhood” in Østerbro to better prepare for severe weather events that the city faces, which may also serve as a good model for other cities to learn from.<sup>118</sup> Copenhagen has encountered an increase in the frequency of cloudbursts, which are short but very intense rainfalls.<sup>119</sup> The main problem with cloudbursts is that the sewer systems are unable to cope with the large amounts of water that accumulate in a short period of time.<sup>120</sup> The expansion of the sewer system would be very expensive, so the city began exploring alternative solutions to deal with the excess rainwater.<sup>121</sup> One idea was to change asphalt areas into green areas, for example squares being changed into small parks.<sup>122</sup> Another option used in Copenhagen was to make streets narrower and create a “green corridor” which serves as a retention area for water and at the same time enhances the area for the inhabitants.<sup>123</sup> Copenhagen also introduced “cloudburst roads” which are streets that can serve as canals during cloudbursts to direct the water to retention areas like lakes or large park areas and away from buildings.<sup>124</sup> Aside from changes to public areas, the city also encouraged companies and residents to support the change towards being more climate resilient by implementing projects like rooftop gardens.<sup>125</sup> With these changes Østerbro is now considered a “sponge-city” meaning that it is able to retain the rainwater where it falls instead of disposing of it all to the sewer system.<sup>126</sup>

In another example, the La Gogue Dam in the Seychelles has been increased by six meters between 2018 and 2023.<sup>127</sup> The dam is one of two large water storages in the country and supplies the island with the majority of the population’s drinking water.<sup>128</sup> The construction to raise the dam was supported through a \$20 million loan by the African Development Bank.<sup>129</sup> With water scarcity becoming a major issue in many areas of the world due to climate change, the need to store water during dry periods is increasing.<sup>130</sup> The impacts of this project can be felt in different sectors.<sup>131</sup> With desalination plants being the backup solution if water from the dam is not available, the energy consumption in the Seychelles will

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<sup>115</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018. p. 37.

<sup>116</sup> Ibid.

<sup>117</sup> Ibid.

<sup>118</sup> Klimakvarter. *Copenhagen’s first Climate Resilient Neighbourhood*. 2016.

<sup>119</sup> Ibid.

<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

<sup>122</sup> Ibid.

<sup>123</sup> Ibid.

<sup>124</sup> Urbanisten. *Gro Nørrebro: Copenhagen*. 2016.

<sup>125</sup> Klimakvarter. *Copenhagen’s first Climate Resilient Neighbourhood*. 2016.

<sup>126</sup> Sieker. *The concept of “Sponge-city”*. 2024.

<sup>127</sup> International Coalition for Sustainable Infrastructure. *The Climate Resilient Infrastructure Report: A Focus on Implementation*. 2023. pp. 34-37.

<sup>128</sup> Ibid.

<sup>129</sup> Seychelles News Agency. *Seychelles’ La Gogue Dam back in operation with 60% increased capacity*. 2023.

<sup>130</sup> International Coalition for Sustainable Infrastructure. *The Climate Resilient Infrastructure Report: A Focus on Implementation*. 2023. pp. 34-37.

<sup>131</sup> Ibid.

decrease, because the need for these plants, which require a lot of electric energy, will decrease.<sup>132</sup> Furthermore desalination plants have negative impacts due to toxic waste which can harm nature and wildlife around the plant.<sup>133</sup> The project also led to job growth during the construction phase and there was a prioritization on gender equality to allow men and women to contribute and gain experience.<sup>134</sup> Lastly there will be a positive economic impact on industries like tourism which rely on a secured water supply.<sup>135</sup> With the conclusion of the work on the dam, work on a new water treatment plant will start to increase the amount of water which can be provided to increase the resilience against dry periods even further.<sup>136</sup>

### **Conclusion**

The topic of sustainable and resilient infrastructure is a complex one which requires unique approaches that are dependent on local and regional circumstances.<sup>137</sup> With the challenges due to inequalities worldwide and the increasing impact of climate change, infrastructure can be a tool to improve living conditions and resilience for the population.<sup>138</sup> It is important to have in mind that infrastructure can be more than streets and power grids, but can also include processes and institutions.<sup>139</sup> International support to develop more sustainable and resilient infrastructure is needed especially for developing countries.<sup>140</sup> UNEP together with many other international actors is trying to support the process through tools including information sharing, capacity building and facilitation of partnerships.<sup>141</sup> It is necessary to ensure that the work being done by such partnerships is also sustainable and can be continued by the local population at the end of the project.<sup>142</sup> Infrastructure as a key facilitator towards achieving the SDGs is a challenge but also an opportunity which the international community needs to use.<sup>143</sup>

### **Further Research**

As delegates conduct further research and consider how to address this topic, they should consider: How can investors be motivated to consider aspects of sustainability and resilience when building new infrastructure? How can the overall spending on sustainable infrastructure be increased? What factor can North-South or South-South partnerships play when building or renovating infrastructure? How can Member States determine which type of infrastructure they need to prioritize? What are ways to raise funding for expensive infrastructure projects?

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<sup>132</sup> International Coalition for Sustainable Infrastructure. *The Climate Resilient Infrastructure Report: A Focus on Implementation*. 2023. pp. 34-37.

<sup>133</sup> World Economic Forum. *The desalination process gives us freshwater – at a huge environmental cost*. 2022.

<sup>134</sup> International Coalition for Sustainable Infrastructure. *The Climate Resilient Infrastructure Report: A Focus on Implementation*. 2023. pp. 34-37.

<sup>135</sup> Ibid.

<sup>136</sup> Seychelles News Agency. *Seychelles' La Gogue Dam back in operation with 60% increased capacity*. 2023.

<sup>137</sup> United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022.

<sup>138</sup> Ibid.

<sup>139</sup> Peace Infrastructures.org. *Infrastructures for Peace*. N.d.

<sup>140</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018.

<sup>141</sup> United Nations Environment Assembly. *Sustainable and resilient infrastructure (UNEP/EA.5/Res.9)*. 2022; United Nations Environment Programme. *International Good Practice Principles for Sustainable Infrastructure*. 2022.

<sup>142</sup> Mongabay. *A Philippines NGO project aimed to protect villages from typhoons: What went wrong?*. 2023.

<sup>143</sup> United Nations Office for Project Services. *Infrastructure: Underpinning Sustainable Development*. 2018.

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## 2. Biodiversity and Health

*“Biodiversity weaves the intricate web of life where all living beings have a role to play. Bodies are not separate from nature for it is she that sustains humanity. Healthy societies stem from healthy ecosystems.”<sup>144</sup>*

### **Introduction**

According to the World Health Organization (WHO), health is not solely the lack of infirmity or disease but rather a complete state of well-being.<sup>145</sup> The United Nations Environment Programme (UNEP) defines biodiversity as the heterogeneousness of genes, species and ecosystems on earth grounding all aspects of human life.<sup>146</sup> Health and biodiversity share an intricate nexus where human health greatly depends on the services and products that ecosystems provide, thus, well-functioning ecosystems are crucial for their survival.<sup>147</sup> Nature provides medicine, fresh water, clean air, and food security while limiting diseases and stabilizing climate.<sup>148</sup> According to UNEP, 1.6 billion people depend on forests for survival because tropical rainforests are home to 80% of biodiversity and provide a quarter of all modern medicine.<sup>149</sup> However, biodiversity loss is occurring at an exponential and unprecedented rate, affecting human health globally, increasing health risks, economic challenges, climate change, food insecurity, ecosystem destruction, increase in vulnerability to natural disasters, and conflicts.<sup>150</sup>

The COVID-19 pandemic was a turning point for humanity, highlighting the complex correlation that exists between infectious diseases, shifting patterns in weather, food and water insecurity, exploitation of natural resources, health, and biodiversity degradation.<sup>151</sup> Currently, “60% of all infectious diseases that affect humans and 75% of the emerging infectious diseases are zoonotic, which is the spread of infection between people and animals.”<sup>152</sup> As natural ecosystems, like forests, are destroyed, closer human contact with both wild and domesticated animals increases, heightening the likelihood of zoonotic disease outbreaks by facilitating virus transmission among species.<sup>153</sup> The last century has been marked by the systematic and indiscriminate abuse of natural resources and their disposal.<sup>154</sup> United Nations Secretary-General António Guterres stated “My generation has declared war on nature [...] now nature is fighting back and we are facing a climate crisis where the next years will be decisive in determining human survival or self-destruction.”<sup>155</sup>

More than half of the world's gross domestic product depends on nature which has led to exponential levels of extraction, which is the withdrawal of materials from the environment for human use.<sup>156</sup> In 2024, alone, over 35 billion tons of resources have been extracted, “contributing to half of the total global greenhouse gas emissions and over 90% of biodiversity loss and water stress.”<sup>157</sup> By 2060, global resource extraction will increase by 110% while consumption is expected to grow by 60%, and

<sup>144</sup> World Health Organization. *Biodiversity and Health*. 2015. p. 1.

<sup>145</sup> World Health Organization. *Constitution*. 2024.

<sup>146</sup> United Nations Environment Programme. *UN Common Approach to Biodiversity*. N.d.

<sup>147</sup> World Health Organization. *Connecting Global Priorities: Biodiversity and Human Health*. 2015. p. ix.

<sup>148</sup> Ibid.

<sup>149</sup> United Nations Environment Programme. *UNEP and Biodiversity*. 2020.

<sup>150</sup> United Nations Department of Economic and Social Affairs. *UN Report: Nature’s Dangerous Decline ‘Unprecedented’; Species Extinction Rates ‘Accelerating’*. 2019.

<sup>151</sup> United Nations Environment Programme. *UNEP and Biodiversity*. 2020.

<sup>152</sup> Ibid.

<sup>153</sup> Rozenbaum. Understanding Animal Research. *The increase in zoonotic diseases: the WHO, the why and the when?*. 2020.

<sup>154</sup> Short. Zed Books Ltd. *Redefining Genocide: Settler Colonialism, Social Death, and Ecocide*. 2016.

<sup>155</sup> United Nations, Department of Global Communications. *Stop War on Nature, Secretary-General Urges in World Wildlife Day Message, Urging Bold Action to Protect Habitats, End Fossil-Fuel Pollution*. 2023.

<sup>156</sup> United Nations Environment Programme. *We’re gobbling up the Earth’s resources at an unsustainable rate*. 2019.

<sup>157</sup> United Nations Environment Programme. *We’re gobbling up the Earth’s resources at an unsustainable rate*. 2019.

greenhouse emissions by 43%.<sup>158</sup> As the rates of unsustainable practices such as extraction, consumption, and production rise, so do the cases of waste pollution and ecocide which are some of the main causes of biodiversity loss and health degradation, presenting serious challenges for the international community.<sup>159</sup>

Ecocide is the deliberate or negligent destruction or damage of the natural environment.<sup>160</sup> Waste pollution, on the other hand, is the waste humans produce that has not been managed in an appropriate way becoming an unintended byproduct of unsustainable consumption and production.<sup>161</sup> Both have enormous impact on the environment, human health, pollution, climate change, social disparity, and international conflict.<sup>162</sup>

### ***International and Regional Framework***

The *Universal Declaration of Human Rights* and the *Charter of the United Nations* emphasize that all people are entitled to economic, social, and cultural rights.<sup>163</sup> People have the right to an adequate standard of living, health, and well-being, without discrimination of any kind.<sup>164</sup> Biodiversity and health degradation are global challenges but the degree of impact is disproportionate depending on geographical location, income, ethnicity, or gender.<sup>165</sup>

In 1992, the United Nations Conference on Environment and Development reflected on the future of environmental governance and international cooperation, admitting that environmental, economic, and social challenges could no longer be ignored.<sup>166</sup> The *Rio Declaration on Environment and Development* (Rio Declaration) was adopted in June 1992, acknowledging the impact that biodiversity loss has on human health while emphasizing the need for sustainable development and environmental protection while eradicating unsustainable practices and enhancing quality of life for all.<sup>167</sup>

The *Convention on Biological Diversity* (1992) promoted the sustainable use of biological resources, recognizing the role they play in human survival, development, politics, science, and culture.<sup>168</sup> In response to the climate crisis, all Member States ratified the *United Nations Framework Convention on Climate Change* pledging cooperation to tackle climate change and promoting sustainable development.<sup>169</sup> This convention was the stepping stone for both the *Kyoto Protocol* of 1997, which embodies the commitment of reducing greenhouse gasses to combat global warming, especially caused by industrialized Member States, and the *Paris Agreement* of 2015 to prevent global warming from reaching 2°C, as collective effort of Member States to counteract the impacts of climate change.<sup>170</sup>

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<sup>158</sup> One Planet. *Natural-Resource Use and Environmental Impacts*. 2024; United Nations Environment Programme. *We're gobbling up the Earth's resources at an unsustainable rate*. 2019.

<sup>159</sup> One Planet. *Natural-Resource Use and Environmental Impacts*. 2024.

<sup>160</sup> Zierler. University of Georgia Press. *The Invention of Ecocide*. 2011.

<sup>161</sup> United Nations Environment Programme. *Waste Pollution 101*. N.d.

<sup>162</sup> Higgins. Shephard-Walwyn Ltd. *Eradicating Ecocide*. 2015.

<sup>163</sup> *Charter of the United Nations*. 1945.

<sup>164</sup> United Nations, General Assembly. *Universal Declaration of Human Rights (A/RES/217 A (III))*. 1948.

<sup>165</sup> World Economic Forum. *Global Risk Report 2024*. 2024.

<sup>166</sup> United Nations Conference on Environment and Development. *A new blueprint for international action on the environment*. 1992.

<sup>167</sup> United Nations Conference on Environment and Development. *Rio Declaration on Environment and Development (A/CONF.151/26/Rev.1(Vol.I))*. 1992.

<sup>168</sup> Conference for the Adoption of the Convention on Biological Diversity. *Convention on Biological Diversity*. 1992.

<sup>169</sup> United Nations Conference on Environment and Development. *United Nations Framework Convention on Climate Change*. 1992.

<sup>170</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change. *Kyoto Protocol to the United Nations Framework Convention on Climate Change*. 1997; Conference of the

The *Stockholm Declaration* (1972) outlines principles for environmental protection and sustainable development and implements the *Action Plan for the Human Environment* as a global strategy for promoting sustainable development and tackling environmental issues, recognizing that all people including future generations have the right to a healthy environment.<sup>171</sup> There is a shared but differentiated responsibility for Member States taking into consideration the role of developed Member States in the environmental crisis.<sup>172</sup> The *Action Plan for the Human Environment* calls all Member States to establish mechanisms and institutions to facilitate cooperation and to ensure the continued availability of natural resources.<sup>173</sup>

The international efforts to protect biodiversity and guarantee human health are embodied in the *2030 Agenda for Sustainable Development* (2030 Agenda) adopted in 2015, which contains the 17 Sustainable Development Goals (SDGs).<sup>174</sup> There are several SDGs that are important for Biodiversity and Health such as, SDG3 (good health and well-being), SDG 12 (responsible consumption and production), and SDG 13 (climate action).<sup>175</sup> The 2030 Agenda aims to safeguard earth from degradation, reinstate and encourage sustainable use of ecosystems, and stop and reverse biodiversity degradation to achieve the SDGs by 2030.<sup>176</sup> Moreover, at the Third International Conference on Financing for Development in 2015 a global framework called the *Addis Ababa Action Agenda of the Third International Conference on Financing for Development* (Addis Ababa Action Agenda) was adopted.<sup>177</sup> The Addis Ababa Action Agenda focuses on financing for sustainable development centering on developing Member States finding ways for inclusive development, global partnership, capacity building and policy coherence including mobilizing resources biodiversity conservation, and better healthcare system to prevent diseases and ecosystem degradation.<sup>178</sup>

In 2019, the European Commission introduced the European Green Deal, which seeks to transform environmental and climate challenges into opportunities for a sustainable economy.<sup>179</sup> A core part of the Green Deal outlines ambitious goals in its *Biodiversity Strategy for 2030* focusing on safeguarding nature, its ecosystems and resources so they may survive despite climate change.<sup>180</sup> Through global cooperation, this strategy aims at restoring ecosystems through green infrastructure and sustainable use of resources in order to generate zero pollution thus protecting nature.<sup>181</sup>

### ***Role of the International System***

The 2018 UNEA Resolution 3/4 on “Environment and Health” outlines key actions to strengthen policy on science and development while integrating a focus on the health-environment nexus.<sup>182</sup> It encourages investment that generates positive impact for health and biodiversity while requesting UNEP to strengthen

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Parties to the United Nations Framework Convention on Climate Change. *Paris Agreement*. 2015; Council on Foreign Relations. *Global Climate Agreements: Successes and Failures*. 2023.

<sup>171</sup> United Nations. *United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm*. 1972.

<sup>172</sup> Ibid.

<sup>173</sup> Ibid.

<sup>174</sup> United Nations Department of Economic and Social Affairs. *The 17 Goals*. N.d.

<sup>175</sup> Ibid.

<sup>176</sup> United Nations, General Assembly. *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. 2015.

<sup>177</sup> United Nations, General Assembly. *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda) (A/RES/69/313)*. 2015.

<sup>178</sup> Ibid.

<sup>179</sup> European Commission. *The European Green Deal*. N.d.

<sup>180</sup> European Commission. *Biodiversity strategy for 2030*. N.d.

<sup>181</sup> Ibid.

<sup>182</sup> United Nations Environment Assembly. *Environment and Health (UNEP/EA.3/Res.4)*. 2018.

its work on the environment-health interface.<sup>183</sup> The resolution further calls for cooperation, technological support, and financing for developing Member States to address health-environment challenges such as waste management, water quality, air pollution, chemical pollution, biodiversity loss, and urban health challenges.<sup>184</sup> UNEA resolution 5/3 adopted in 2022 on the “Future of the Global Environment Outlook” (GEO) to develop the seventh edition of the GEO, which is a comprehensive assessment of the state of the global environment and assess the effectiveness of environmental policies and actions.<sup>185</sup> The resolution addresses the future of the GEO and decided that the core function of the GEO would meet every four years, led by experts to assess current environmental trends, effectiveness of global environmental policy, and evaluate the drivers of environmental change.<sup>186</sup> Since the GEO is a global effort, the resolution reaffirmed the importance of Member States’ participation in the GEO alongside experts.<sup>187</sup>

UNEA Resolution 5/5 on “Nature-based solutions for supporting sustainable development” also adopted in 2022 recognizes nature-based solutions are needed to counterbalance environmental challenges, climate change, and biodiversity loss.<sup>188</sup> The World Bank Group defines nature based solutions as actions to sustainably manage, restore, or protect natural ecosystems while tackling social challenges such as human health, biodiversity loss, climate change, food and water security, and disaster risk reduction effectively and adaptively, while at the same time providing biodiversity benefits and human well-being.<sup>189</sup> The resolution calls Member States to implement strategies, actions, and policies to integrate nature-based solutions especially in key sectors, such as, urban environment, sustainable consumptions and production, chemicals and waste, and biodiversity, while enhancing access to finance, capacity building, and knowledge sharing.<sup>190</sup> The linkage between human health and biodiversity is conveyed in the 2022 UNEA resolution 5/6 on “Biodiversity and health” which shows the necessity of an integrated approach to conservation and public health to achieve the SDGs.<sup>191</sup> Furthermore, it recognizes that the degradation of biodiversity will increase the risk of zoonotic disease threatening human health.<sup>192</sup> Member States must work together to restore and conserve ecosystems and biodiversity, promote “One Health”, and increase financing on research and actions involving health and ecosystem and biodiversity integrity.<sup>193</sup>

The 2022 UNEA resolution 5/11 on “Enhancing the circular economy as a contribution to achieving sustainable consumption and production” calls upon the transition to a circular economy which is an economic system that aims to maximize resource efficiency and minimize waste, promoting sustainable production patterns and sustainable consumption.<sup>194</sup>

The topic has also been addressed by the General Assembly in resolution 75/271 “Nature knows no borders: transboundary cooperation - a key factor for biodiversity conservation, restoration and sustainable use” (2021), which emphasizes that ecosystems and biodiversity do not have geographic limits thus transnational cooperation is necessary to develop agreements, strategies, and action plans to

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<sup>183</sup> United Nations Environment Assembly. *Environment and Health (UNEP/EA.3/Res.4)*. 2018.

<sup>184</sup> Ibid.

<sup>185</sup> United Nations Environment Assembly. *Future of the Global Environment Outlook (UNEP/EA.5/Res.3)*. 2022.

<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

<sup>188</sup> United Nations Environment Assembly. *Nature-based solutions for supporting sustainable development (UNEP/EA.5/Res.5)*. 2022.

<sup>189</sup> World Bank Group. *What You Need to Know About Nature-Based Solutions to Climate Change*. 2022.

<sup>190</sup> United Nations Environment Assembly. *Nature-based solutions for supporting sustainable development (UNEP/EA.5/Res.5)*. 2022.

<sup>191</sup> United Nations Environment Assembly. *Biodiversity and health (UNEP/EA.5/Res.6)*. 2022.

<sup>192</sup> Ibid.

<sup>193</sup> Ibid.

<sup>194</sup> United Nations Environment Assembly. *Enhancing the circular economy as a contribution to achieving sustainable consumption and production (UNEP/EA.5/Res.11)*. 2022.

protect ecosystems and biodiversity.<sup>195</sup> In 2022, the General Assembly adopted resolution 76/300 on “The human right to a clean, healthy and sustainable environment” furthermore states that in order for people to enjoy human rights a healthy, clean, and sustainable environment is needed.<sup>196</sup>

In 2018 the Economic Commission for Latin America published the *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean* as the response to regional environmental challenges and a commitment outlined in the Rio Declaration, particularly advocating for environmental transparency and public involvement.<sup>197</sup> The agreement guarantees access to environmental information, environmental justice, and public participation in environmental decision-making processes.<sup>198</sup> It establishes provisions for financial and technical assistance for developing Member States, a conference of the parties, and the promotion of information exchange, capacity-building, and regional coordination.<sup>199</sup> It is the first binding regional agreement on environmental rights in the Caribbean and Latin America.<sup>200</sup> The *Declaration of the EU-CELAC (European Union-Community of Latin American and Caribbean States) Summit 2023* focused on the urgency of the climate crisis thus promoting sustainable management of natural resources, sustainable development, transition to renewable energy, and global solutions to world challenges while reaffirming good governance, the rule of law, democracy, and human rights.<sup>201</sup>

### ***The Impact of Waste Pollution on Biodiversity and Health with a North-South Perspective***

Proper waste management is paramount for human health and biodiversity because its inadequate disposal will have severe consequences.<sup>202</sup> Waste destroys biodiversity, eliminating ecosystems and habitats, and altering nature's composition.<sup>203</sup> Waste Pollution is defined as any component, substance, or pollutant that is introduced into the environment, causing an adverse modification in the soil, water, or air affecting the well-being and health of living beings.<sup>204</sup>

Solid waste emissions directly contribute to the rising levels of greenhouse gasses or gases that trap heat in the atmosphere and negatively modify the climate.<sup>205</sup> Waste can harm biodiversity because it can produce large amounts of carbon dioxide (CO<sub>2</sub>), nitrous oxide and methane, the main causes of the greenhouse effect that contributes to climate change and health deterioration.<sup>206</sup> According to the United Nations Climate Action, the consumption of fossil fuels and the extraction of gas, oil, and coal are the largest contributors to global climate change, accounting for over 75% of global greenhouse gas emissions and nearly 90% of all CO<sub>2</sub> and nitrous oxide emissions.<sup>207</sup> Climate change can cause severe weather pattern modifications, food and water insecurity, loss of biodiversity, health risks, all of which can

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<sup>195</sup> United Nations, General Assembly. *Nature knows no borders: transboundary cooperation – a key factor for biodiversity conservation, restoration and sustainable use (A/RES/75/271)*. 2021.

<sup>196</sup> United Nations, General Assembly. *The human right to a clean, healthy and sustainable environment (A/RES/76/300)*. 2022.

<sup>197</sup> United Nations, Economic Commission for Latin America and the Caribbean. *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean*. 2023.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> Ibid.

<sup>201</sup> Council of the European Union. *Declaration of the EU-CELAC Summit 2023*. 2023.

<sup>202</sup> World Health Organization. *Biodiversity and Health*. 2015.

<sup>203</sup> World Health Organization. *Compendium of WHO and other UN guidance on health and environment*. 2024.

<sup>204</sup> National Geographic. *Pollution*. 2024.

<sup>205</sup> Connecticut Department of Energy & Environmental Protection. *Climate Change and Waste*. 2020.

<sup>206</sup> United States Environmental Protection Agency. *Greenhouse Gasses: What are the trends in greenhouse gas emissions and concentrations and their impacts on human health and the environment?* 2024.

<sup>207</sup> United Nations Climate Action. *Causes and Effects of Climate Change*. N.d.

lead to displacement of peoples and conflict.<sup>208</sup> Humans are the only species capable of generating waste that cannot be recycled.<sup>209</sup> More than 2 billion tonnes of waste is generated annually and is expected to rise to nearly 4 billion tonnes by 2050.<sup>210</sup> Additionally, human actions have altered three quarters of the terrestrial environment and 66% of marine ecosystems.<sup>211</sup>

According to Professor Bruce Lanphear and Philip Landrigan, “16% of deaths in the world are caused by pollution, three times more deaths than AIDS, tuberculosis, and malaria combined; and 15 times more than all wars and other forms of violence.”<sup>212</sup> A disproportionate amount of pollution related deaths occur in lower and middle income Member States, accounting for 92% of these fatalities.<sup>213</sup> Furthermore, pollution by waste causes lethal consequences generating countless diseases for both humans and animals.<sup>214</sup> For example, according to WHO, air pollution can cause cancer or respiratory diseases, while land and water pollution lead to biodiversity destruction, food insecurity causing malnutrition, premature deaths, or deficiencies of organs, or the immune system.<sup>215</sup> Waste is not only disposed of on land, but also in water, changing its chemical composition, killing aquatic life, and ecosystems.<sup>216</sup> Contaminated water and soil contain harmful chemicals, pollutants, and heavy metals that can reduce fertility, among other negative health impacts, making it unsuitable for agriculture.<sup>217</sup> Contaminates disrupt soil structure leading to increased land degradation and contributing to soil erosion.<sup>218</sup>

The consequences of waste pollution differ in the Global North and South.<sup>219</sup> The Global North consumes and pollutes the most by disposing of their waste in developing Member States, particularly in poor urban areas.<sup>220</sup> For example, in 2022 China generated the most waste in the world equal to 15% of the world's waste, while the United States of America generated 12% and was the largest producer of waste per person.<sup>221</sup> In addition, less than 20% of waste is recycled each year which implies that 80% of waste is sent to landfills worldwide.<sup>222</sup>

Latin America and the Caribbean have become emerging destinations for global waste where most of it is deposited near low-income communities, people of color, indigenous communities, marginalized groups, or ethnic minorities.<sup>223</sup> The worst consequences are borne by racialized and marginalized people because there is no equitable distribution of how waste is handled.<sup>224</sup> Developed Member States export waste to

<sup>208</sup> United Nations Climate Action. *Causes and Effects of Climate Change*. N.d.

<sup>209</sup> World Bank Group. *Solid Waste Management*. 2022.

<sup>210</sup> Statista. *Global waste generation - statistics & facts*. 2023; United Nations Environment Programme. *Moving towards zero waste*. 2024.

<sup>211</sup> Intergovernmental Panel on Climate Change. *The evidence is clear: the time for action is now. We can halve emissions by 2030*. 2022.

<sup>212</sup> Brink. NPR. *Report: Pollution Kills 3 Times More than AIDS, TB And Malaria Combined*. 2017; Global Alliance on Health and Pollution. *Pollution and Health: A Global Public Health Crisis*. 2022.

<sup>213</sup> Global Alliance on Health and Pollution. *Pollution and Health: A Global Public Health Crisis*. 2022.

<sup>214</sup> Landrigan et al. National Library of Medicine. *Human Health and Ocean Pollution*. 2024.

<sup>215</sup> United Nations Environment Programme. *Soil pollution is a risk to our health and food security*. 2020; European Environment Agency. *Soil pollution and health*. 2022.

<sup>216</sup> Ahmad Bhat. Science Direct. *Vulnerability of municipal solid waste: An emerging threat to aquatic ecosystems*. 2022

<sup>217</sup> Münzel et al. Cardiovascular Research. *Soil and water pollution and human health: what should cardiologists worry about?*. 2023.

<sup>218</sup> Ibid.

<sup>219</sup> Generation Climate Europe. *Global North and Global South: How Climate Change Uncovers Global Inequalities*. 2022

<sup>220</sup> Generation Climate Europe. *Global North and Global South: How Climate Change Uncovers Global Inequalities*. 2022

<sup>221</sup> Statista. *Global waste generation - statistics & facts*. 2023.

<sup>222</sup> Ibid.

<sup>223</sup> Statista. *Global waste generation - statistics & facts*. 2023.

<sup>224</sup> Ibid.

poor and developing Member States in the Global South which could translate into colonialism in the sense that they are using the space and land of disadvantaged groups to deal with their waste by polluting these spaces causing contamination of these areas.<sup>225</sup> The Global South, especially, afro and indigenous communities, have become extremely vulnerable to the effects of environmental contamination.<sup>226</sup> They are five times more likely to die from exposure to waste pollution and, in 2022 the Climate and Global Change Center stated that they are 75% more likely to live in locations near plants, factories, or in garbage dumps.<sup>227</sup>

An example of this is the case of Ecuador and its Kichwa Indigenous communities in which the Member State was accused of ecocide due to waste pollution.<sup>228</sup> In April of 2020, at least 15,800 barrels of oil were spilled into the Napo river causing severe contamination of soil, water, plants, and wildlife provoking a series of health consequences for the Kichwa community.<sup>229</sup> Some of the effects were sterile soil, contaminated water, or ecosystem destruction.<sup>230</sup> This is the largest oil spill Ecuador has suffered in 16 years, affecting 120,000 people during the peak of the COVID-19 pandemic.<sup>231</sup> It is necessary for Member States to take action to overcome the waste crisis with the goal of counteracting the consequences that stem from waste pollution and inequality.<sup>232</sup>

### ***The Impact of Ecocide on Biodiversity and Health with a Perspective on International Conflict***

Ecocide is defined as an act that is carried out by a person, Member State, or company that causes or allows massive destruction of the natural environment or infringes irreparable damage done intentionally, by omission or negligence, in times of war or peace, having short, medium and long term effects.<sup>233</sup> The effects of ecocide are profound causing biodiversity loss, negative health impacts, food and water insecurity, or displacement and migration.<sup>234</sup> Ecocide is transnational because its effects do not respect borders, implying that there is the possibility that the consequences of an environmental disaster could potentially spread to other parts of the world which could lead to international conflicts.<sup>235</sup>

An example of this is the extraction of primary raw materials, which are defined as crude, unprocessed or minimally processed materials.<sup>236</sup> The paradox of plenty or the resource curse, is a phenomenon where Member States rich in natural resources tend to have less development, economic growth, and more corruption in comparison to Member States with fewer natural resources.<sup>237</sup> Member States in the Global South are often rich in natural resources, but can lack the infrastructure and technology to refine these materials, moving up the value chain of their production.<sup>238</sup> Therefore, these economies tend to extract and export the raw resources without fully realizing the economic value of the resources.<sup>239</sup> Oftentimes, there is a lack of proper governance and institutions in order to ensure that the extraction of natural

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<sup>225</sup> Fuller et al. Research Gate. *Plastics pollution as waste colonialism in Te Moananui*. 2022.

<sup>226</sup> Fernández-Llamazares et al. National Library of Medicine. *A State-of-the-Art Review of Indigenous Peoples and Environmental Pollution*. 2020.

<sup>227</sup> Bryant et al. Routledge. *Race And The Incidence Of Environmental Hazards*. 1992; University of Pittsburgh Climate and Global Change Center. *Environmental Injustice: Roots, Impacts, and Urgent Solutions*. 2022.

<sup>228</sup> Picq et al. Aljazeera. *An oil spill in the time of coronavirus*. 2020.

<sup>229</sup> Ibid.

<sup>230</sup> Ibid.

<sup>231</sup> Ibid.

<sup>232</sup> United Nations Environment Programme. *Eight ways to overcome the waste pollution crisis*. 2024.

<sup>233</sup> Short. Zed Books Ltd. *Redefining Genocide: Settler Colonialism, Social Death, and Ecocide*. 2016.

<sup>234</sup> Ibid.

<sup>235</sup> Ibid.

<sup>236</sup> Merriam-Webster Dictionary. *Raw material*. 2024.

<sup>237</sup> Natural Resource Governance Institute. *The Resource Curse*. 2015.

<sup>238</sup> Ibid.

<sup>239</sup> Ibid.



resources is more equitable, through labor laws, appropriate taxation, and oversight of international companies within the industry, to name a few.<sup>240</sup>

One of the main causes of environmental destruction is the consumption of primary energy, or the energy harvested from natural resources.<sup>241</sup> Among the most consumed are fossil fuels, such as oil, natural gas, and coal.<sup>242</sup> More than 90% of CO<sub>2</sub> emissions in the world come from the extraction of fossil fuels and the consumption of primary materials.<sup>243</sup> The group of Member States that consume the most primary materials are China, the United States of America and the European Union, while the largest exporters are Saudi Arabia, Russia, Iraq and Latin America.<sup>244</sup> Primary materials are the main cause of environmental pollution due to their destructive extraction processes, the significant amount of energy needed, and the waste that is being generated.<sup>245</sup>

Resource scarcity and high demand can provoke conflict over the control of the resources.<sup>246</sup> Professor Michael Klare, member of the board of directors of the Arms Control Association, stated that “in a fossil fuel world, control over oil and gas reserves is an essential component of national power.”<sup>247</sup> Armed conflict, ecocide, and human rights violations are the consequences of environmental wars and can lead to environmental destruction, deteriorating human health and well-being.<sup>248</sup> In many cases, environmental infrastructure such as forests, water supplies and agricultural land is intentionally targeted.<sup>249</sup> This leads to fragmentation, loss of habitats, pollution, overexploitation of natural resources, destruction of ecosystems, and augmenting vulnerability to environmental disasters.<sup>250</sup> Health, both human and non-human, is greatly affected, increasing the spread of diseases, infections, malnutrition, or shortage in food and water.<sup>251</sup>

Currently, the international community is immersed in a debate over how to address the matter of ecocide.<sup>252</sup> For many, the solutions reside in addressing ecocide after it has already occurred leaving aside the importance of preventing it from happening.<sup>253</sup> A solution that has been gaining support over the years is the recognition of ecocide as an international crime which focuses on both prevention and creating enforceable actions and consequences for the perpetration of ecocide.<sup>254</sup>

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<sup>240</sup> Natural Resource Governance Institute. *The Resource Curse*. 2015.

<sup>241</sup> Garside. Statista. *Primary energy consumption worldwide in 2023, by country*. 2024.

<sup>242</sup> Ibid.

<sup>243</sup> Ibid.

<sup>244</sup> Ibid.

<sup>245</sup> Dannreuther. Polity Press. *International security: The Contemporary Agenda*. 2007.

<sup>246</sup> United Nations Interagency Framework Team for Preventive Action. *Renewable Resources and Conflict*. 2012.

<sup>247</sup> Wang et al. Geoscience Frontiers. *Natural resource scarcity, fossil fuel energy consumption, and total greenhouse gas emissions in top emitting countries*. 2023.

<sup>248</sup> International Committee of the Red Cross. *The Environment and International Humanitarian Law*. 2024.

<sup>249</sup> Tignino. International Committee of the Red Cross. *The regulation of crimes against water in armed conflicts and other situations of violence*. 2023.

<sup>250</sup> Ibid.

<sup>251</sup> United Nations Children's Fund. *Intensifying conflict, malnutrition and disease in the Gaza Strip creates a deadly cycle that threatens over 1.1 million children*. 2024; Harada et.al. Environmental Health and Preventive Medicine. *Conflict-related environmental damages on health: lessons learned from the past wars and ongoing Russian invasion of Ukraine*. 2022.

<sup>252</sup> Stop Ecocide International. *Driving the Global Conversation on Ecocide Law*. N.d.

<sup>253</sup> Ibid.

<sup>254</sup> United Nations Department of Economic and Social Affairs. *To accelerate, via diplomatic convening and building of cross-sector networks and collaborations, the introduction of enhanced and enforceable legal protections for water (“ecocide law”) into international, national and regional legislative frameworks*. N.d.

### **Conclusion**

Biodiversity and health are affected immensely by waste pollution and ecocide.<sup>255</sup> It is imperative to promote equitable solutions that promote proper waste management so that both biodiversity and health are preserved.<sup>256</sup> Marginalized communities, especially those in the Global South, are disproportionately affected by waste pollution causing health disparities and exacerbating environmental degradation.<sup>257</sup> It is important to highlight systemic injustices that stem from unequal distribution of waste pollution.<sup>258</sup> Furthermore, ecocide emphasizes the gravity of environmental destruction caused by human action and the dire consequences this has on biodiversity and health.<sup>259</sup> It presents an urgency to address these challenges on a global scale since its ramifications transcend borders.<sup>260</sup> In order to address these challenges, the international community must work together to come up with action plans that mitigate the adverse consequences that stem from waste pollution and ecocide aiming to safeguard health and biodiversity.<sup>261</sup>

### **Further Research**

As delegates conduct further research and consider how to address this topic, they should consider: How are race and pollution connected? Is pollution a form of colonialism? How can the international community tackle cases of ecocide? How can the disparities in waste disposal be mitigated? What factors contribute to the inequalities that exist in North-South waste pollution? What are the consequences of waste pollution in the oceans? Is there a way for sustainable waste management to help improve human health and protect biodiversity? Why have past efforts to address the issue of health and biodiversity not been entirely successful? How can Member States address different types of waste like plastic or electronic waste successfully?

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<sup>255</sup> World Health Organization. *Biodiversity and Health*. 2015.

<sup>256</sup> Ibid.

<sup>257</sup> United Nations. *Plastic pollution disproportionately hitting marginalized groups, UN environment report finds*. 2021.

<sup>258</sup> Ibid.

<sup>259</sup> Higgins. Shephard-Walwyn Ltd. *Eradicating Ecocide*. 2015.

<sup>260</sup> Ibid.

<sup>261</sup> Ibid.

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