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## NPT Review Conference Background Guide 2020

Written by: Adam Wolf and Eileen Austin, Directors  
Olivia Alphons and Marlene Terstiege, Assistant Directors



# NATIONAL MODEL UNITED NATIONS



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Dear Delegates,

Welcome to the 2020 National Model United Nations New York Conference (NMUN•NY)! We are pleased to introduce you to our committee, the Nuclear Non-Proliferation Treaty Review Conference (NPT Review Conference). This year's staff is: Directors Adam Wolf (Conference A) and Eileen Austin (Conference B), and Assistant Directors Olivia Alphons (Conference A) and Marlene Terstiege (Conference B). Adam is from Wisconsin and currently a Communications Officer with The HALO Trust, the world's largest humanitarian landmine clearance non-governmental organization. He holds a bachelor's degree in International Studies and currently lives in Washington, DC. Eileen is a Staff Accountant for Danone North America in White Plains, NY. She is currently working on a master's degree in Accounting. Olivia is enrolled in the master's program on Peace and Conflict Studies in Magdeburg. Marlene is currently studying for a master's degree in International Relations in Amsterdam.

The topics under discussion for Nuclear Non-Proliferation Treaty Review Conference are:

1. Peaceful Uses of Nuclear Energy
2. Strengthening Measures towards General and Complete Nuclear Disarmament

The NPT Review Conference plays a unique role within the United Nations, as an opportunity for States parties to the NPT to discuss disarmament, non-proliferation, and peaceful uses of nuclear technology. Its near-universal membership allows the Conference to promote consensus on key international issues related to both development and peace and security. This consensus usually leads to an outcome document, which consists of a summary of the work program discussed at the conference as well as a list of recommendations for action for the States parties and various international and civil society organizations. It is intended to strengthen the implementation of the NPT.

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 Annotated Bibliography and 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 March 2020 in accordance with the guidelines in the [Position Paper Guide](#) and the [NMUN•NY Position Papers](#) website.

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

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 the Under-Secretaries-General for the Peace and Security Department, Natalie Keller (Conference A) and Martina Vetrovcova (Conference B), at [usg.ps@nmun.org](mailto:usg.ps@nmun.org).

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

Sincerely,

**Conference A**

Adam Wolf, *Director*

Olivia Alphons, *Assistant Director*

**Conference B**

Eileen Austin, *Director*

Marlene Terstiege, *Assistant Director*

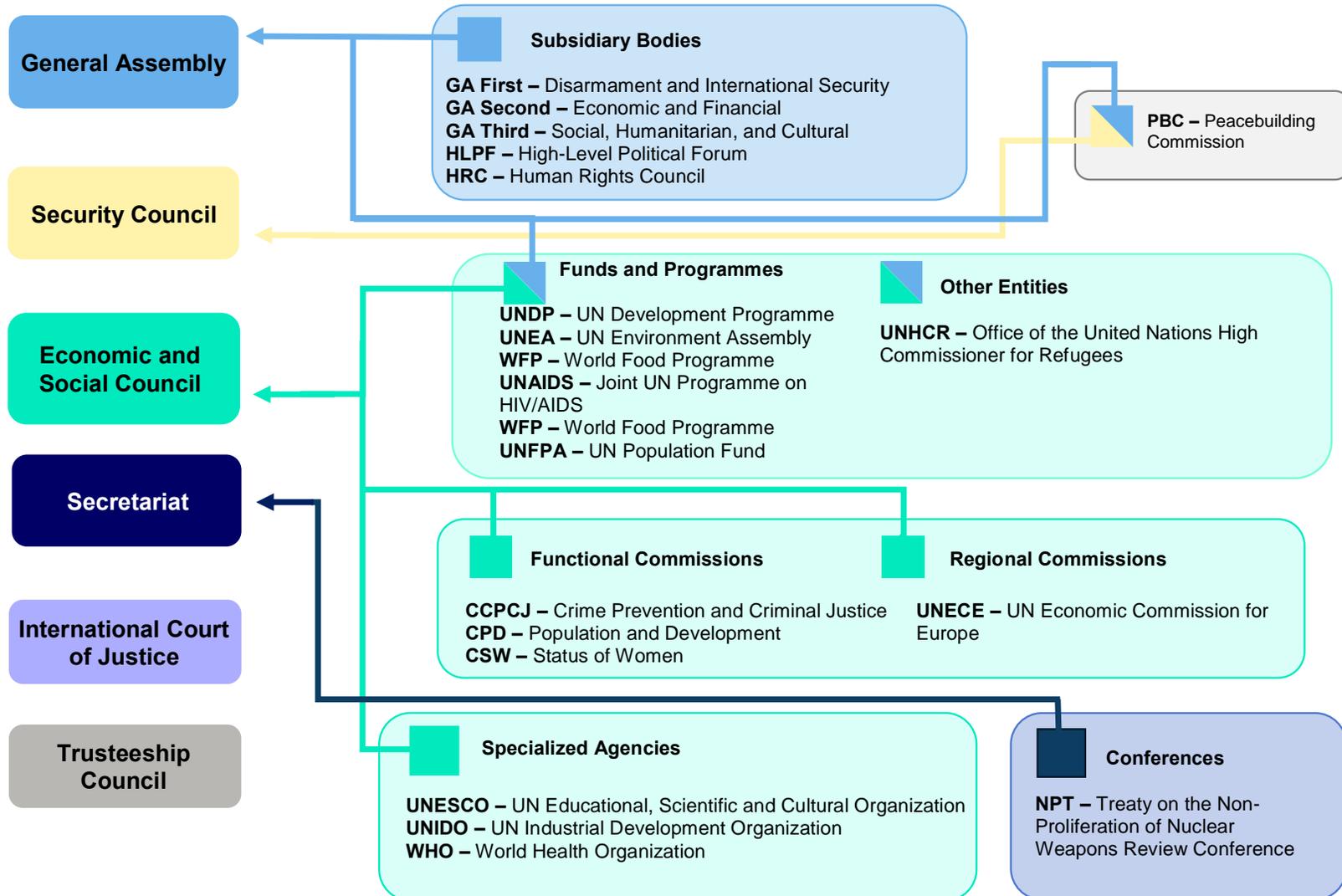


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## United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee's position, purpose, and powers within the UN system.



## Committee Overview

### Introduction

The *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), which entered into force in 1970, is considered to be the cornerstone of the international nuclear non-proliferation regime.<sup>1</sup> In addition to preventing further spread of nuclear weapons and weapons technology, the treaty was designed to achieve the goal of nuclear disarmament and general and complete disarmament, and to foster the peaceful uses of nuclear energy.<sup>2</sup> The adoption of the treaty was preceded by several attempts to regulate the development and use of nuclear material.<sup>3</sup> The first proposal for international regulation of nuclear material was made by the United States in 1946.<sup>4</sup> The Baruch Plan, presented to the United Nations (UN), suggested that the United States turn over its nuclear material, including weapons, to a new UN body, and that no countries would be allowed to possess nuclear weapons.<sup>5</sup> However, the plan failed due to opposition from the Soviet Union.<sup>6</sup> In 1953, United States President Dwight Eisenhower proposed the establishment of a treaty to control nuclear activities, which resulted in the negotiation of the Statute of the International Atomic Energy Agency (IAEA), creating an international organization for the purpose of inspecting nuclear facilities and providing technical assistance to states seeking to use nuclear energy.<sup>7</sup> Following the Cuban Missile Crisis of 1962, the United States and the Soviet Union began negotiations on nuclear weapons testing, followed by further negotiations on the draft text of the NPT, ultimately agreeing on the final text in 1968.<sup>8</sup> The NPT opened for signature in the same year, with the United States, the Soviet Union, and the United Kingdom acting as depositories, and it formally entered into force two years later in 1970.<sup>9</sup>

To discuss the implementation of the three pillars of disarmament, non-proliferation, and peaceful uses of nuclear energy on a global level, the first Review Conference of the Parties to the Treaty (RevCon) took place in 1975 in Geneva, Switzerland.<sup>10</sup> Despite disagreements regarding the lack of a concrete timeline for nuclear disarmament, the States parties adopted a Final Declaration by consensus, which set the precedent for working to achieve this type of result at all future RevCons in the spirit of diplomacy.<sup>11</sup> The Final Declaration declared a “strong common interest in averting the further proliferation of nuclear weapons” and recommended greater attention and support to be given to the IAEA safeguards regime.<sup>12</sup> This document provided the foundation for recommendations made at future RevCons.<sup>13</sup> Since the first meeting, the NPT RevCon was held every five years, with all States parties to the NPT invited to discuss the implementation of the treaty.<sup>14</sup> The year 1995 was an important since there was the added responsibility of deciding the future of the NPT.<sup>15</sup> As decided by Article X of the NPT, the purpose of the 1995 RevCon was to discuss whether the treaty would continue for a fixed number of years, or if it should remain in force indefinitely.<sup>16</sup> It was the first RevCon held since the dissolution of the Soviet Union, and also the first conference attended by all five nuclear weapon states (NWS) identified in the NPT, which are the United States, the Russian Federation, the United Kingdom, France, and China.<sup>17</sup> Although the

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<sup>1</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons*.

<sup>2</sup> *Ibid.*

<sup>3</sup> Bunn & Rhineland, *Looking Back: The Nuclear Nonproliferation Treaty Then and Now*, 2008.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968, Art. 8.

<sup>11</sup> Reaching Critical Will, *History of the NPT 1975-1995*, 2014.

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

<sup>14</sup> Reaching Critical Will, *Nuclear Non-Proliferation Treaty*, 2014.

<sup>15</sup> Reaching Critical Will, *History of the NPT 1975-1995*, 2014.

<sup>16</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968, Art. 10.

<sup>17</sup> Reaching Critical Will, *History of the NPT 1975-1995*, 2014.

Conference failed to adopt a Final Declaration on the review of the treaty, since the decision of the future of the NPT was so pressing and controversial, it did agree to extend the NPT indefinitely.<sup>18</sup> The 2020 RevCon will begin on 27 April 2020.<sup>19</sup>

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

With near-universal membership, the RevCon is also a primary forum for discussion of other issues related to nuclear weapons and technology, including disarmament, non-proliferation, nuclear energy, the establishment of Nuclear-Weapons-Free Zones (NWFZ), NPT compliance, and possible changes to the NPT.<sup>20</sup> The Democratic People's Republic of Korea (DPRK), India, Israel, Pakistan, and South Sudan are the only states that are not party to the treaty and do not participate in the RevCons.<sup>21</sup> The DPRK is a former party to the treaty, having withdrawn in 2003.<sup>22</sup> Israel, India, and Pakistan have never been party to the treaty and are unlikely to become such due to the international community's suspicions of their possession of nuclear weapons.<sup>23</sup> South Sudan, which was founded as a state in 2011, has not yet become a part to the treaty, but it might join the NPT in the future.<sup>24</sup>

Every RevCon is preceded by three two-week Preparatory Committee meetings, which outline the body of work to be discussed at the respective RevCon, generate statements and working papers, and address administrative matters such as the budget or the selection of the RevCon president.<sup>25</sup> The president for the 2020 RevCon will be Rafael Mariano Grossi from Argentina.<sup>26</sup> The Preparatory Committee is also responsible for beginning the process of assessing the implementation of the NPT.<sup>27</sup> To this end, the Preparatory Committee serves as a forum for States parties to share their individual progress reports, outlining the steps they have taken to fulfill their treaty obligations.<sup>28</sup> At the RevCon, negotiations typically center around the same key issues discussed at the Preparatory Committee meetings.<sup>29</sup> The third Preparatory Committee to the 2020 Review Conference, which took place from 29 April to 10 May 2019 at UN Headquarters in New York, produced a final report that decided there would be three Main Committees at the RevCon, with States parties allowed to participate in all three.<sup>30</sup> Main Committee I, to be chaired by Syed Md Hasrin Syed Hussin of Malaysia, will discuss non-proliferation, disarmament, and security assurances.<sup>31</sup> Main Committee II, to be presided by Poland's permanent representative to the UN Office and international organizations in Vienna, Adam Bugajski, will deal with non-proliferation, safeguards, and NWFZ.<sup>32</sup> And Main Committee III, to be chaired by Henk Cor Van der Kwast of the Netherlands, will discuss peaceful nuclear technology and other aspects of the treaty.<sup>33</sup> The three Main Committees reflect the three pillars of the NPT, with Main Committee I discussing primarily disarmament,

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<sup>18</sup> Reaching Critical Will, *History of the NPT 1975-1995*, 2014.

<sup>19</sup> Altaf, NPT Review Conference 2020: Prospects and Challenges, *Foreign Policy News*, 2018.

<sup>20</sup> Reaching Critical Will, *Nuclear Non-Proliferation Treaty*, 2014.

<sup>21</sup> UNODA, *Status of the Treaty*, 2014.

<sup>22</sup> Arms Control Association, *Chronology of U.S.-North Korean Nuclear and Missile Diplomacy*, 2014.

<sup>23</sup> Miller & Scheinman, *Israel, India, and Pakistan: Engaging the Non-NPT States in the Nonproliferation Regime*, 2003.

<sup>24</sup> ILPI, *Africa & Nuclear Weapons*.

<sup>25</sup> Collina et al., *Stage Set for 2015 NPT Review Conference*, 2014.

<sup>26</sup> UN Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, *Final Report of the Preparatory Committee for the 2020 Review Conference of the Parties to the NPT (NPT/CONF.2020/1)*, 2019, p. 7.

<sup>27</sup> UNODA, *2019 Preparatory Committee for the 2020 Nuclear Non-Proliferation Treaty Review Conference - Background Information*.

<sup>28</sup> Collina et al., *Stage Set for 2015 NPT Review Conference*, 2014.

<sup>29</sup> Reaching Critical Will, *History of the NPT 1975-1995*, 2014.

<sup>30</sup> UN Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, *Final Report of the Preparatory Committee for the 2020 Review Conference of the Parties to the NPT (NPT/CONF.2020/1)*, 2019, p. 34.

<sup>31</sup> *Ibid.*, p. 45.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Ibid.*, p. 46.

Main Committee II non-proliferation, and Main Committee III the peaceful uses of nuclear energy.<sup>34</sup> While the working groups often form based on regional blocs, it is also common for the NWS to band together against accusations that they have abandoned nuclear disarmament.<sup>35</sup> As the RevCon continues, the president and committee chairs typically take on the role of mediators, finding areas of agreement between the various groups and negotiating compromises.<sup>36</sup> Because the final document is adopted by consensus, the success of the RevCon hinges on the ability of the States parties to compromise.<sup>37</sup>

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

The RevCon was established by article VIII of the NPT, which states that conferences of the States parties will be held every five years “in order to review the operation of this Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized.”<sup>38</sup> Every RevCon aims to produce a final outcome document, which outlines the current state of NPT implementation and lists action items for the following five years.<sup>39</sup> However, a consensus is not always reached, meaning that an outcome document is not always produced.<sup>40</sup> When there is an outcome document, it is sent to the Secretary-General of the UN and the Director General of the IAEA.<sup>41</sup> Nevertheless, the final outcome documents are not legally binding and are therefore not always fully implemented.<sup>42</sup> The outcome documents consist of a summary of the work program considered during the Conference as well as a list of recommended actions and their justification for the States parties and various international and civil society organizations.<sup>43</sup> These recommended actions typically focus on the three pillars of the NPT but often address also other policy areas and concrete issues such as regional cooperation or the denuclearization of the Middle East.<sup>44</sup> The NPT places no restrictions on the issue areas to be addressed in the outcome document or the types of recommendations made, and future RevCons therefore have the option to promote action on other issue areas, such as technical assistance for countries developing research programs for nuclear applications in medicine and agriculture.<sup>45</sup>

While all States parties to the NPT are part of the UN General Assembly, consensus is often hampered in that body by the presence of non-States parties to the NPT that possess nuclear weapons.<sup>46</sup> The RevCon does not have an operations arm and relies upon the States parties, the IAEA, the UN Office for Disarmament Affairs (UNODA), and other UN agencies to carry out the actions listed in its outcome documents.<sup>47</sup> Although the RevCon is a separate entity from the UN and the IAEA, due to the similar membership of the three entities and the more regular meeting schedules and increased operational capacity of the UN and the IAEA, the RevCon works very closely with the other two organizations to implement its outcome documents.<sup>48</sup> As the organization statutorily responsible for monitoring many aspects of NPT implementation through its safeguards system and owing to its focus on the peaceful uses of nuclear technology, IAEA is invited to attend the RevCon meetings.<sup>49</sup> As the primary UN body that aims to support the use of atomic energy for peaceful purposes, the IAEA works closely with the

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<sup>34</sup> Ibid., pp. 45-46.

<sup>35</sup> Johnson, *Politics and Protection: Why the 2005 NPT Review Conference Failed*, 2005.

<sup>36</sup> Ibid.

<sup>37</sup> Mukhatzhanova, *Rough Seas Ahead: Issues for the 2015 NPT Review Conference*, 2014.

<sup>38</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968, Art. 8.

<sup>39</sup> Reaching Critical Will, *Nuclear Non-Proliferation Treaty*, 2014.

<sup>40</sup> Ibid.

<sup>41</sup> IAEA, *Key Roles*, 2014.

<sup>42</sup> Reaching Critical Will, *Nuclear Non-Proliferation Treaty*, 2014.

<sup>43</sup> Reaching Critical Will, *2014 NPT Preparatory Committee Briefing Book*, 2014.

<sup>44</sup> Ibid.

<sup>45</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968, Art. 8.

<sup>46</sup> UN DGC, *Capping Intensive Disarmament Committee Session, General Assembly Adopts 53 Texts on Wide Range of Pressing International Security Concerns (GA/11463)*, 2013.

<sup>47</sup> Choubey, *Understanding the 2010 NPT Review Conference*, *Carnegie Endowment for International Peace*, 2010.

<sup>48</sup> IAEA, *Key Roles*, 2014.

<sup>49</sup> Ibid.; Reaching Critical Will, *2014 NPT Preparatory Committee Briefing Book*, 2014.

RevCon to ensure that the NPT is utilized to reduce the use of nuclear energy for weapons creation.<sup>50</sup> The States parties also work closely with UNODA, particularly with its Weapons of Mass Destruction Branch, which provides both substantive and administrative support.<sup>51</sup> UNODA utilizes the NPT to promote global disarmament and eliminate weapons of mass destruction.<sup>52</sup> Several intergovernmental and non-governmental organizations focused on nuclear disarmament and technology also help spread information about the NPT and assist with its implementation worldwide.<sup>53</sup>

### **Recent Sessions and Current Priorities**

The 2020 RevCon, which will begin on 27 April 2020, will follow the 2015 RevCon, during which the body was unable to reach a consensus and produce a final outcome document.<sup>54</sup> The States parties were having disagreements during the 2015 RevCon particularly about the topic of attaining a NWFZ in the Middle East.<sup>55</sup> Furthermore, it was expected that the States parties would be further along in implementing the 64-point Action Plan that was agreed upon at the 2010 RevCon.<sup>56</sup> The 2020 RevCon will likely face similar challenges, since the issues that were discussed at the 2015 RevCon have not yet been resolved and the ongoing tensions might impair the negotiations.<sup>57</sup> Additionally, it appears that the five NWS are not any closer to denuclearizing, and there is currently an impasse in the discussions around achieving a Weapons of Mass Destruction Free Zone in the Middle East.<sup>58</sup>

The recent meetings of the Preparatory Committee have established many of the current priorities for the 2020 RevCon, and these meetings have resulted in several national reports and working papers to prepare for the upcoming RevCon.<sup>59</sup> Key areas of focus at these meetings included nuclear disarmament, regional cooperation, and treaty universality.<sup>60</sup> The 2020 RevCon will also most likely continue the discussions surrounding the peaceful uses of nuclear technology, which finds its application in many areas such as, but not limited to, human health, agriculture, and water management.<sup>61</sup> The RevCon is also committed to furthering the discussions on a NWFZ in the Middle East.<sup>62</sup> This would require all states that are within the Middle East to adhere to the NPT as well as observe all IAEA safeguards.<sup>63</sup>

In 2017, the General Assembly adopted a follow-up document to the *Comprehensive Nuclear-Test-Ban Treaty* (1994) that reiterated the ambition of ending nuclear weapons testing globally.<sup>64</sup> With the ultimate goal of achieving nuclear non-proliferation and total international peace and security, the General Assembly recognizes that there are still Member States that do not adhere the treaty.<sup>65</sup> In late 2017, the DPRK launched a ballistic missile towards the Sea of Japan, which was in direct violation of multiple UN resolutions, but especially of the NPT.<sup>66</sup> As a consequence, the Security Council reinforced the idea that

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<sup>50</sup> UN Conference on the Statute of the IAEA, *The Statute of the IAEA*, 1956, Art. III; UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968.

<sup>51</sup> Nuclear Threat Initiative, *United Nations Office of Disarmament Affairs*, 2014.

<sup>52</sup> UNODA, *Vision*.

<sup>53</sup> Nuclear Threat Initiative, *United Nations Office of Disarmament Affairs*, 2014.

<sup>54</sup> Altaf, NPT Review Conference 2020: Prospects and Challenges, *Foreign Policy News*, 2018.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*

<sup>57</sup> Cronberg & van der Meer, *Working Towards a Successful 2020 Review Conference*, 2017.

<sup>58</sup> *Ibid.*

<sup>59</sup> UN Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, *Final Report of the Preparatory Committee for the 2020 Review Conference of the Parties to the NPT (NPT/CONF.2020/1)*, 2019, pp. 1-6.

<sup>60</sup> *Ibid.*, pp. 5-6.

<sup>61</sup> UN Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, *Peaceful Uses of Nuclear Energy (NPT/CONF.2020/PC.I/WP.8/Rev.1)*, 2017.

<sup>62</sup> UN Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, *Establishment of a Middle East Zone Free of Nuclear Weapons (NPT/CONF.2020/PC.I/4)*, 2017.

<sup>63</sup> *Ibid.*

<sup>64</sup> UN General Assembly, *Comprehensive Nuclear-Test-Ban Treaty (A/RES/71/86)*, 2017, pp. 1-3.

<sup>65</sup> *Ibid.*

<sup>66</sup> UN Security Council, *Non-proliferation/Democratic People's Republic of Korea (S/RES/2397 (2017))*, 2017, p. 1.

the use of nuclear weapons and weapons of mass destruction presented a major threat to international peace and security, and with the launch of the ballistic missile the DPRK was hindering the efforts of the international community to achieve peace and stability in the region.<sup>67</sup> Moreover, in 2015, the Security Council implemented the *Joint Comprehensive Plan of Action (JCPOA)*, an agreement between China, France, Germany, the Russian Federation, the United Kingdom, the United States, the High Representative of the European Union for Foreign Affairs and Security Policy (P5+1), and Iran with the goal of achieving a permanent solution to the issue of nuclear weapons development in Iran.<sup>68</sup> Through Security Council resolution 2231 (2015) on “Joint Comprehensive Plan of Action (JCPOA) on the Islamic Republic of Iran’s Nuclear Programme,” Iran agreed to cease development and acquisition of nuclear weapons.<sup>69</sup> In the years since the JCPOA was implemented, Iran has adhered to this resolution by allowing international inspectors into its nuclear facilities to monitor the progress, as well as by dismantling most of its nuclear program.<sup>70</sup> However, in 2018, the United States withdrew its support of the JCPOA, and the consequences have weakened the agreements made by the participating parties.<sup>71</sup>

In the years following the 2015 RevCon, the UN and its bodies have worked toward achieving the *2030 Agenda for Sustainable Development (2015)*.<sup>72</sup> All the work that is done by NPT, IAEA, and other actors in relation to nuclear energy can be applied to Sustainable Development Goal (SDG) 16, which aims to achieve “peaceful and inclusive societies for sustainable development.”<sup>73</sup> The contribution of nuclear disarmament to the implementation of SDG 16 can be exemplified by reallocating financial and other resources away from nuclear weapons development to other, more peaceful purposes.<sup>74</sup> In addition, the production of nuclear weapons has a negative impact on the environment, since there is a release of a large quantity of radioactive materials with each test, causing great harm to the surrounding habitat.<sup>75</sup> Evidence of this can be found in the groundwater surrounding nuclear test sites, which contains radioactive isotopes that have negative health impacts on the people in the communities that utilize the water.<sup>76</sup> SDG 3, which aims to achieve good health and well-being for people of all ages, and SDG 6, which strives to achieve sustainable management of water and sanitation and ensure its availability for all, are in turn negatively impacted by nuclear testing.<sup>77</sup> Peaceful uses of nuclear energy can, on the other hand, prove very beneficial to achieve the 2030 Agenda.<sup>78</sup>

## **Conclusion**

The NPT RevCon is the international body charged with bringing together all the States parties to the NPT to discuss its implementation and future actions.<sup>79</sup> The 2020 RevCon will consider many important issues in its deliberations, including nuclear disarmament and the peaceful uses of nuclear technology, while working to reach a consensus and adopt a final document by acclamation.<sup>80</sup> This final document will be the foundation for NPT implementation in the following five years and will affect actions taken by the Member States, the IAEA, and the UN.<sup>81</sup> Despite ongoing contention on certain topics, such as the pace

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<sup>67</sup> Ibid.

<sup>68</sup> UN Security Council, *Joint Comprehensive Plan of Action (JCPOA) on the Islamic Republic of Iran’s Nuclear Programme (S/RES/2231 (2015))*, 2015, p. 1.

<sup>69</sup> Ibid.

<sup>70</sup> Laub, What is the Status of the Iran Nuclear Agreement?, *Council on Foreign Relations*, 2019.

<sup>71</sup> Ibid.

<sup>72</sup> International Peace Bureau et. al., *Move the Nuclear Weapons Money*, 2016, pp. 4-5.

<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

<sup>75</sup> Prävălie, *Nuclear Weapons Tests and Environmental Consequences: A Global Perspective*, 2014.

<sup>76</sup> Ibid.

<sup>77</sup> UN General Assembly, *Transforming our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

<sup>78</sup> UN DGC, *Nuclear Energy Could Hold Key to Sustainable Development Gains, Delegates Tell General Assembly, as It Considers international Atomic Energy Agency Report (GA/11972)*, 2017.

<sup>79</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons*.

<sup>80</sup> Altaf, NPT Review Conference 2020: Prospects and Challenges, *Foreign Policy News*, 2018.

<sup>81</sup> Ibid.

of disarmament, past successes give hope that delegates will be able to work together to achieve consensus at the 2020 RevCon.<sup>82</sup>

### Annotated Bibliography

United Nations, General Assembly, Twenty-second session. (1968). *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2345 (XXII))*. Retrieved 13 August 2019 from:

[https://www.undocs.org/A/RES/2373\(XXII\)](https://www.undocs.org/A/RES/2373(XXII))

*By reviewing this founding document of international law related to nuclear weapons, non-proliferation, and disarmament, delegates should gain a thorough understanding of the NPT. The NPT established the nuclear disarmament regime upon its entry into force in 1970 and continues to promote the three pillars mentioned above. Each article describes a different aspect of the treaty, and all of them relate back to disarmament, non-proliferation, and peaceful uses of nuclear energy. With near-universal ratification, the NPT is the most-ratified arms control treaty and continues to play an important role in the UN system, and delegates should therefore be familiar with this landmark document.*

United Nations, General Assembly, Seventy-first session. (2017). *Comprehensive Nuclear-Test-Ban Treaty (A/RES/71/86)*. Adopted on the report of the First Committee (A/71/456). Retrieved 21 July 2019 from: <https://undocs.org/A/RES/71/86>

*This resolution was recently adopted by the General Assembly as a follow-up to the original Comprehensive Nuclear-Test-Ban Treaty that was adopted in 1994. The goal of this document is to completely eradicate nuclear weapons development and testing. It is an essential document for delegates to utilize since it is an example of what updating an UN treaty is like and what it entails. This document can act as a guide for delegates throughout the research process, as well as providing relevant substantive information.*

United Nations, Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. (2017). *Peaceful Uses of Nuclear Technology (NPT/CONF.2020/PC.I/WP.8/Rev.1)*. Retrieved 21 July 2019 from:

<https://undocs.org/en/NPT/CONF.2020/PC.I/WP.8/Rev.1>

*This source is an outcome document from the first Preparatory Committee meeting of the 2020 RevCon. It is a working paper by the European Union and shows the perspective of 28 states that are advocating for nuclear non-proliferation. This document outlines the current stance of the parties to the Conference regarding the peaceful use of nuclear technology. It also establishes the importance of this topic within the scope of the RevCon. This source will allow delegates to understand how this topic fits into the mandate of the RevCon. By reviewing a Preparatory Committee document, delegates will also be able to gain an understanding of how the RevCon is prepared and organized in the years leading up to the Conference.*

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<sup>82</sup> Ibid.

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## I. Peaceful Uses of Nuclear Energy

### **Introduction**

In the early 20th century, nuclear energy was discovered through nuclear fission, which refers to the splitting of atoms.<sup>83</sup> On the one hand, this discovery enabled the creation of a dangerous weapon, the nuclear bomb, but on the other hand, it also served as a new resource for improving people's lives by introducing the cost-friendly generation of electricity.<sup>84</sup> Currently, civil nuclear technologies belong to more diverse fields than just power generation.<sup>85</sup> There is indeed a lengthy list of existing non-power applications that include, among others, climate, health, water, food safety, and space exploration.<sup>86</sup>

The risks of proliferation and the tensions during the Cold War led to the signing of the *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)* in 1968, constituting a major milestone for the maintenance of international security and designed to put an end to the nuclear arms race.<sup>87</sup> Under article IV of the NPT, all States parties are entitled "to develop research, produce, and use nuclear energy for peaceful purposes."<sup>88</sup> Yet this can only be done under the premise of safeguarding measures undertaken by the International Atomic Energy Agency (IAEA).<sup>89</sup> According to a study by Jonas and Braunstein from 2018, even though a global rationale on how to separate the harmful uses of nuclear materials from the peaceful ones does not exist, some key rules defining which states can legitimately run their nuclear reactors have evolved.<sup>90</sup> If a state is a signatory to the NPT and it endorses verification schemes, it is manifestly willing to be transparent about its nuclear activities and can prove their peacefulness.<sup>91</sup> Whereas a nuclear site, which has not accepted a control mechanism and enriches uranium to high levels, is perceived as precarious in terms of proliferation and thus cannot be justified under article IV.<sup>92</sup> However, as scholars have pointed out, this division is not always clear because states might seem to comply with article IV and, at the same time, covertly develop weapons in an undeclared facility.<sup>93</sup>

States parties do agree that progress in nuclear cooperation needs to be made since the issues on which nuclear energy can have a beneficial impact are of universal concern.<sup>94</sup> For example, in the fight against global warming, nuclear energy constitutes a valuable alternative for electricity production as it generates less CO<sub>2</sub> emissions than traditional fossil fuels.<sup>95</sup> Before further exploring the link between nuclear energy and sustainable development and discussing matters of safety standards and cooperation in the nuclear field, the background guide will introduce the major framework documents that govern the rightful use of nuclear energy internationally as well as regionally and present different actors concerned with nuclear energy and its peaceful purposes.<sup>96</sup> To illustrate to which extent article IV can be debated, this background guide also includes a short case study dealing with the *Joint Comprehensive Plan of Action (JCPOA)* concluded in 2015.<sup>97</sup>

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<sup>83</sup> World Nuclear Association, *Outline History of Nuclear Energy*, 2019.

<sup>84</sup> Ibid.

<sup>85</sup> World Nuclear Association, *The Many Uses of Nuclear Technologies*, 2017.

<sup>86</sup> Ibid.

<sup>87</sup> Atomic Heritage Foundation, *Nuclear Non-Proliferation Treaty (NPT)*, 2016.

<sup>88</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*, 1968, Art. IV.

<sup>89</sup> Ibid.

<sup>90</sup> Jonas & Braunstein, *What's Intent Got to Do with It? Interpreting "Peaceful Purpose" in Article IV.1 of the NPT*, 2018.

<sup>91</sup> Arms Control Association, *Section 3: Understanding the JCPOA*, 2015.

<sup>92</sup> Carnegie Endowment for International Peace, *Toward a Nuclear Firewall: Bridging the NPT's Three Pillars*, 2017.

<sup>93</sup> Jonas & Braunstein, *What's Intent Got to Do with It? Interpreting "Peaceful Purpose" in Article IV.1 of the NPT*, 2018.

<sup>94</sup> Atlantic Council, *Session 1: The Global Future of the Peaceful Use of Nuclear Energy*, 2017.

<sup>95</sup> IAEA, *Nuclear Power in a Clean Energy System*, 2019.

<sup>96</sup> UN ECOSOC, *Concept Note – The Role of Nuclear Energy in Sustainable Development: Entry Pathways (ECE/ENERGY/GE.3/2019/6)*, 2019.

<sup>97</sup> Crisis Group, *The Iran Nuclear Deal: A Timeline*, 2019.

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

### *Peaceful Uses of Nuclear Energy*

Under article IV of the NPT, all States parties are granted the inalienable right to peacefully use nuclear energy.<sup>98</sup> However, this right has to be exercised in accordance with articles I and II of the NPT, which prohibit the proliferation of nuclear weapons and other nuclear explosive devices to other states.<sup>99</sup> Article III sets forth limitations and restrictions on the acquisition and development of nuclear technology, while making clear that these safeguards should not be utilized to prevent states from developing nuclear energy for peaceful uses.<sup>100</sup> The NPT further calls upon those States parties, which are capable of acquiring nuclear facilities and materials, to share their scientific knowledge about peaceful nuclear applications and to devise bilateral, regional, or international agreements, so that all States parties can profit from the advantages of nuclear energy.<sup>101</sup>

In addition, back when the NPT was drafted and adopted, the possibility of employing nuclear energy for peaceful nuclear explosions (PNEs) was included in article V.<sup>102</sup> PNEs can be used for the production of electricity, spacecraft propulsion, or construction of ports and canals, and were hence believed to be a practical means for infrastructure development.<sup>103</sup> Nevertheless, debates concerning the prohibition of such atomic detonations, in particular due to the radiation emitted from splitting atoms, have resulted in the *Comprehensive Nuclear-Test-Ban Treaty* (CTBT), adopted by the United Nations (UN) General Assembly in its resolution 50/245 in 1996.<sup>104</sup> Since the CTBT has not yet entered into force, nuclear test explosions, whether they are taking place under peaceful or military intentions, are not prohibited and continue to pose a threat to security and people's health.<sup>105</sup>

While the aforementioned frameworks govern the general and fundamental boundaries of peaceful nuclear energy usage, there are also some regional and multilateral frameworks, which have been set up to supervise the rules of civil purposes and cooperation in specific parts of the world.<sup>106</sup> The *Regional Cooperative Agreement* (RCA), for example, was the first intergovernmental agreement signed in 1972 under the auspices of IAEA, which provides Asian countries with a framework for research, development, and training related to nuclear science and technology.<sup>107</sup> This was replaced in 2017 by an updated version of the RCA, in which the Asian States parties pledged to assist each other and cooperate in the field of nuclear energy exclusively within the frames of peaceful objectives.<sup>108</sup> Similar regional conventions are the *African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology* (AFRA) (1990), the *Regional Cooperation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean* (ARCAL) (1984), and the *Cooperative Agreement for Arab States in Asia for Research, Development and Training Related to Nuclear Science and Technology* (ARASIA) (2002).<sup>109</sup>

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<sup>98</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons* (A/RES/2373 (XXII)), 1968, Art. IV.

<sup>99</sup> Ibid., Art. I-II.

<sup>100</sup> Ibid., Art. III.

<sup>101</sup> Nuclear Energy Institute, *The Advantages of Nuclear Energy*, 2019; UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons* (A/RES/2373 (XXII)), 1968, Art. IV.

<sup>102</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons* (A/RES/2373 (XXII)), 1968, Art. V.

<sup>103</sup> Ibid.; World Nuclear Association, *Peaceful Nuclear Explosions*, 2018.

<sup>104</sup> Kimball, *Revitalizing Diplomatic Efforts to Advance CTBT Entry into Force*, 2018; UN General Assembly, *Comprehensive Nuclear-Test-Ban Treaty* (A/RES/50/245), 1996; World Nuclear Association, *Peaceful Nuclear Explosions*, 2018.

<sup>105</sup> Kimball, *Revitalizing Diplomatic Efforts to Advance CTBT Entry into Force*, 2018, p. 1.

<sup>106</sup> IAEA, *Regional/Cooperative Agreements*, 2019.

<sup>107</sup> Regional Cooperative Agreement, *About Us – Our History*, 2017.

<sup>108</sup> IAEA, *The Text of the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology* (INFCIRC/919), 2017, Art. IX.

<sup>109</sup> IAEA, *Regional/Cooperative Agreements*, 2019.

### *Nuclear Safety*

Similar to the peaceful uses, the NPT is also the primary framework to govern the safe use of nuclear energy.<sup>110</sup> In order for states to exercise their right under article IV, technical assistance must be prioritized to allow states to advance nuclear energy, while adhering to safety standards.<sup>111</sup> In 1961, the IAEA introduced *The Agency's Safeguards* to set the first practical guidelines for the safe running of nuclear facilities.<sup>112</sup> Such safeguards enable the IAEA to inspect and verify the peacefulness of a state's nuclear activities by collecting nuclear material samples at the sites, installing surveillance cameras, or taking satellite images of the area.<sup>113</sup> States that sign a country-specific *Comprehensive Safeguards Agreement* (CSA) with the IAEA can furthermore endorse an *Additional Protocol* to the CSA, which strengthens the IAEA's control measures by granting the Agency more frequent access to the reactors.<sup>114</sup>

In 1994, the IAEA adopted the *Convention on Nuclear Safety*, which stipulated in more detail the safety standards related to the choice of the location of a reactor, its construction, and its operation.<sup>115</sup> When generating nuclear energy, states encounter challenges regarding the safe running and general operation of the power plants.<sup>116</sup> As a result, the IAEA adopted the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* in 1997, which legally binds States parties that produce atomic energy to store their spent fuels in a way that inhibits calamities and protects surrounding areas from deadly radiation.<sup>117</sup> The secure disposal of such nuclear waste, however, constitutes a question mark concerning the future of nuclear sites because existing solutions still lack a long-term evaluation of their effectiveness with regard to storing radioactive materials.<sup>118</sup>

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

The first body to formally recognize the importance of an exclusively peaceful usage of nuclear energy was the General Assembly through its first resolution 1(I) in 1946.<sup>119</sup> This resolution was a precursor to the NPT, stating that the newly installed UN Atomic Energy Commission should strengthen exchanges between Member States related to scientific progress on civil nuclear technologies and control existing atomic energy programs.<sup>120</sup> Thirty years later, the General Assembly considered the IAEA's *Annual Report for 1976* and adopted in the aftermath of its debates resolution 32/50 on the "Peaceful Use of Nuclear Energy for Economic and Social Development," preparing thus the ground for the development and installation of nuclear applications that are specifically designed for helping achieve the Sustainable Development Goals (SDGs).<sup>121</sup> The SDGs, which were adopted in 2015 by the General Assembly resolution 70/1 as part of the *2030 Agenda for Sustainable Development*, are 17 fields of action that target specific issues of global prosperity, and how peaceful uses of nuclear energy can contribute to many of the SDGs' focal areas.<sup>122</sup>

<sup>110</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Document (NPT/CONF.2010/50.Vol.I)*, 2010, pp. 14-17; UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*, 1968.

<sup>111</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Document (NPT/CONF.2010/50.Vol.I)*, 2010, pp. 14-17.

<sup>112</sup> IAEA, *The Agency's Safeguards (INFCIRC/26)*, 1961.

<sup>113</sup> *Ibid.*

<sup>114</sup> IAEA, *Additional Protocol*, 2019; IAEA, *IAEA Safeguards Overview*, 2019.

<sup>115</sup> IAEA, *Convention on Nuclear Safety (INFCIRC/449)*, 1994.

<sup>116</sup> IAEA, *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (INFCIRC/546)*, 1997.

<sup>117</sup> *Ibid.*

<sup>118</sup> IAEA, *Speech by Former IAEA Director General Yukiya Amano on the Challenges in Nuclear Verification at the Center for Strategic and International Studies on 5 April 2019, in Washington*, 2019.

<sup>119</sup> UN General Assembly, *Establishment of a Commission to Deal with the Problem Raised by the Discovery of Atomic Energy (A/RES/1(I))*, 1946, Art. V.

<sup>120</sup> *Ibid.*

<sup>121</sup> UN General Assembly, *Peaceful Use of Nuclear Energy for Economic and Social Development (A/RES/32/50)*, 1977.

<sup>122</sup> UN DESA, *Sustainable Development Goals*; UN General Assembly, *Transforming our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

Nuclear energy for peaceful purposes constitutes one of the cornerstones of the NPT.<sup>123</sup> Article VIII of the NPT describes the review process undertaken by the parties to the treaty in order to evaluate the treaty's implementation and make recommendations on how to further strengthen compliance with the NPT's provisions.<sup>124</sup> In accordance with this provision, the Review Conference (RevCon) assesses the status quo, the benefits, and the risks of peaceful nuclear applications every five years.<sup>125</sup> To ensure non-discriminatory availability of nuclear energy to all states and thereby fulfill the obligations under articles IV.2 and V, over the years, several principles have emerged, including safeguarding mechanisms and a donation-based system to fund transnational projects in peaceful nuclear research.<sup>126</sup>

The leading actor in the nuclear policy field on a governmental level is the IAEA, which was established in 1957 and works not only for the promotion of peaceful uses of nuclear technology, but also for nuclear safety and non-proliferation.<sup>127</sup> In 2002, the IAEA's board of governors issued an evaluation of the 1997 *Technical Co-operation Strategy*, which forecasted that the emphasis would shift towards developing nuclear technologies for achieving the objectives of sustainable development.<sup>128</sup> One of the major instruments to gather support in the form of extrabudgetary contributions and promote research and cooperation in the nuclear field is the IAEA's *Peaceful Uses Initiative (PUI)*, which was launched in 2010.<sup>129</sup> Moreover, in 2011, the Agency issued the *IAEA Action Plan on Nuclear Safety*, which defined several guidelines across the nuclear field and provided recommendations on how to strengthen emergency response capacities to natural disasters and other catastrophes.<sup>130</sup>

Within the UN system, there are some other bodies besides the IAEA that work towards implementing article IV of the NPT, including the Food and Agriculture Organization, the UN Development Programme, the UN Environment Programme, and the World Health Organization.<sup>131</sup> Furthermore, the NPT Review Conference collaborates with the UN Office for Disarmament Affairs (UNODA) in order to communicate and coordinate their actions related to the NPT.<sup>132</sup>

Apart from these UN entities, there are some transnational alliances dealing with the peaceful uses of nuclear energy either separately or jointly.<sup>133</sup> One contemporary international partnership is the *International Framework for Nuclear Energy Cooperation*, which provides its participants with a forum to discuss the benefits of a peaceful and safe usage of nuclear energy.<sup>134</sup> On a regional level, examples include ROSATOM, Russia's biggest company for nuclear power, the European Atomic Energy Community, established by the Euratom Treaty in 1957, or the Nuclear Energy Agency (NEA), functioning as the Organization for Economic Co-operation and Development's (OECD) specialized agency.<sup>135</sup> In

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<sup>123</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*, 1968, Art. IV.

<sup>124</sup> *Ibid.*, Art. VIII; UNODA, *Background Information*.

<sup>125</sup> Franceschini, *The NPT Review Process and Strengthening the Treaty: Peaceful Uses*, 2012, p. 3; UNODA, *Vision*.

<sup>126</sup> IAEA, *IAEA Safeguards Overview*, 2019; UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*, 1968, Art. IV-V.

<sup>127</sup> IAEA, *IAEA Bulletin*, 2019; IAEA, *Statute*, 1989, Art. II; IAEA, *The "Atoms for Peace" Agency*, 2019.

<sup>128</sup> IAEA, *Policy Basis of the Technical Cooperation Program*, 2019; IAEA, *Technical Co-Operation Strategy (GOV/INF/824)*, 1997.

<sup>129</sup> IAEA, *PUI Stories - 2017 Edition*, 2017; IAEA, *What is the Peaceful Uses Initiative (PUI)*, 2019.

<sup>130</sup> IAEA, *IAEA Action Plan on Nuclear Safety*, 2011.

<sup>131</sup> FAO, *Seven Examples of Nuclear Technology Improving Food and Agriculture*, 2017; IAEA, *United Nations System*, 2019.

<sup>132</sup> UNODA, *Vision*.

<sup>133</sup> World Nuclear Association, *Cooperation in Nuclear Power*, 2019.

<sup>134</sup> International Framework for Nuclear Energy Cooperation, *History*.

<sup>135</sup> European Parliament, *European Atomic Energy Community (Euratom) – Structures and Tools*, 2017; Nuclear Energy Agency, *The Nuclear Energy Agency (NEA)*; ROSATOM, *ROSATOM*.

February 2019, the European Union (EU) and IAEA agreed to further support research projects and the development of peaceful nuclear applications.<sup>136</sup>

In addition, several non-governmental and civil society organizations deal with the peaceful usage of nuclear energy and work towards fostering cooperation and safety within the nuclear power industry on a more practical level.<sup>137</sup> The World Association of Nuclear Operators (WANO) works to establish the highest possible standards of safety in the nuclear industry and improve the safety of commercial nuclear power plants all over the world.<sup>138</sup> The World Nuclear Association speaks for the nuclear industry and strives to constantly improve the policies regarding nuclear commerce and Women in Nuclear Global strives to strengthen the role of female professionals in various fields of nuclear energy.<sup>139</sup>

### ***Nuclear Energy and the Sustainable Development Goals***

Earlier in 2019, Secretary-General António Guterres pointed out that there have been advances made with regard to the 2030 Agenda since 2015, however, major challenges remain, which require “urgent collective action.”<sup>140</sup> As nuclear energy can contribute to many of the SDGs’ focal areas, the Non-Proliferation and Disarmament Initiative (NPDI), a convocation of state ministers, submitted a working paper at the third Preparatory Committee for the 2020 RevCon in April 2019, which underlined the importance of promoting the benefits of atomic energy, such as its carbon-free character and the low costs of applications that can use nuclear power.<sup>141</sup> Some of the SDGs are particularly suited to be accomplished by employing diverse nuclear-related techniques in order to do research on, for example, the cleanliness of water, targeted by SDG 6 (water and sanitation for all), or the preservation of land and plants, tackled by SDG 15 (sustainable use of ecosystems).<sup>142</sup>

The 2019 NPDI working paper also emphasized that it is necessary to consider nuclear energy as an integral part of a state’s development strategy and that barriers accessing it need to be reduced.<sup>143</sup> According to the Power Reactor Information System, there are currently 450 nuclear power reactors active around the world and additional 52 reactors are being built.<sup>144</sup> Yet, African and Latin American countries lag behind in establishing a nuclear energy infrastructure and have on average only three reactors per region, while other parts of the world have five times more facilities at their disposal.<sup>145</sup> For nuclear energy applications to contribute to the SDGs in less developed provinces, these countries need to receive support for initiating a peaceful nuclear program in the first place.<sup>146</sup> Nevertheless, many more countries of the world remain without an opportunity to incorporate nuclear power into their development

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<sup>136</sup> European Commission, *EU and IAEA Review Progress and Agree on Priorities in Nuclear Cooperation at Annual Meeting*, 2019.

<sup>137</sup> World Nuclear Association, *Cooperation in Nuclear Power*, 2019.

<sup>138</sup> World Association of Nuclear Operators, *Our Mission*, 2019.

<sup>139</sup> Women in Nuclear, *Welcome to Women in Nuclear Global*, 2019; World Association of Nuclear Operators, *Compass 2018-2022: Guiding the World’s Nuclear Operators on Their Path to Excellence*, 2017.

<sup>140</sup> UN DESA, *The Sustainable Development Goals Report 2019*, 2019, p. 2.

<sup>141</sup> Nuclear Energy Institute, *The Advantages of Nuclear Energy*, 2019; Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Promotion of the Peaceful Use of Nuclear Technology: A Tool to Achieve the Sustainable Development Goals (NPT/CONF.2020/PC.III/WP.22)*, 2019.

<sup>142</sup> IAEA, *Atoms for Peace and Development: How the IAEA Supports the Sustainable Development Goals*, 2015; Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Promotion of the Peaceful Use of Nuclear Technology: A Tool to Achieve the Sustainable Development Goals (NPT/CONF.2020/PC.III/WP.22)*, 2019.

<sup>143</sup> Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Promotion of the Peaceful Use of Nuclear Technology: A Tool to Achieve the Sustainable Development Goals (NPT/CONF.2020/PC.III/WP.22)*, 2019, p. 2.

<sup>144</sup> IAEA, *Nuclear Power Reactors in the World*, 2019.

<sup>145</sup> Ibid.

<sup>146</sup> Dyck, IAEA Meeting Discusses Nuclear Power Options in Latin America, *International Atomic Energy Agency*, 2015.

plan.<sup>147</sup> Hence, stronger initiatives that support entering the nuclear market safely would make a significant step towards achieving SDG 7 (ensure access to affordable, reliable, sustainable and modern energy for all).<sup>148</sup>

Next to generating electricity, nuclear energy is used in different technologies that can make a huge difference with regards to malnutrition and human well-being, which are at the intersection of SDG 2 (zero hunger worldwide), and SDG 3 (addressing global health issues).<sup>149</sup> It is alarming that the prevalence of obesity is growing and affecting nearly 6% of the world's children under five years old as of 2018, thus making them prone to cardiovascular diseases and other health problems.<sup>150</sup> To tackle this risk, doctors and researchers working together towards decreasing obesity rates have created nuclear isotopes of water, which, given to children as a fluid to drink, are stored in the child's fat-free cells and can help calculate the amount of fat a child's body has stored and determine the level of dangerous overweight a child has.<sup>151</sup>

Nuclear energy can further help with tackling climate change.<sup>152</sup> Since climate change is exacerbated mainly by the increase in global greenhouse gas emissions, nuclear energy poses a real alternative, as it is a low-carbon, clean source of energy.<sup>153</sup> One concrete field where nuclear techniques can help is climate-smart agriculture, which enables farmers, who normally fertilize the soil with chemicals, to rely on organic substances such as nitrogen.<sup>154</sup> In order to assess the effect of climate-smart agriculture, calculating the weight of nuclear isotopes is the only method to find out what kinds of climate-endangering gases are being released and how much carbon is stored in the fertilized soil, which can ultimately lead to reduced emissions of greenhouse gases from agriculture.<sup>155</sup>

### **Safety and Cooperation in Nuclear Energy Usage**

After the devastating consequences of the reactor accident in Chernobyl, Ukraine in 1986 and again in the aftermath of the catastrophe in Fukushima, Japan in 2011, the international community started to focus on tailoring methods to improve the safe operation of nuclear power plants.<sup>156</sup> One concern relates to the ongoing structural shift within the nuclear industry.<sup>157</sup> As WANO pointed out, there has been a significant decrease in nuclear production in the geographically Western part of the world, while states in the East as well as on the African continent are increasingly signaling their aspirations to participate in the "nuclear revival."<sup>158</sup> The construction of new nuclear sites in Asia and Africa provides the chance to install more up-to-date safety standards.<sup>159</sup> Overall, to combat nuclear inequality, cooperation between developed and developing parts of the world is needed to provide financial aid for a safe and high-quality

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<sup>147</sup> UN DESA, *The Sustainable Development Goals Report 2019*, 2019, pp. 36-37; World Association of Nuclear Operators, *Compass 2018-2022: Guiding the World's Nuclear Operators on Their Path to Excellence*, 2017, pp. 17-18.

<sup>148</sup> IAEA, *Atoms for Peace and Development: How the IAEA Supports the Sustainable Development Goals*, 2015.

<sup>149</sup> Gil, *Chile Combats Obesity in Children Using Nuclear Techniques*, 2017, p. 7.

<sup>150</sup> UN DESA, *The Sustainable Development Goals Report 2019*, 2019, p. 25.

<sup>151</sup> Gil, *Chile Combats Obesity in Children Using Nuclear Techniques*, 2017, pp. 6-7.

<sup>152</sup> UN DESA, *The Sustainable Development Goals Report 2019*, 2019, p. 48.

<sup>153</sup> IAEA, *Nuclear Power in a Clean Energy System*, 2019; Müller, *The Role of Nuclear Techniques in Climate-Smart Agriculture*, 2018, pp. 24-25.

<sup>154</sup> Müller, *The Role of Nuclear Techniques in Climate-Smart Agriculture*, 2018, pp. 24-25.

<sup>155</sup> Ibid.

<sup>156</sup> World Nuclear Association, *Safety of Nuclear Power Reactors*, 2019.

<sup>157</sup> World Association of Nuclear Operators, *Compass 2018-2022: Guiding the World's Nuclear Operators on Their Path to Excellence*, 2017, p. 5.

<sup>158</sup> Carlson, *Strengthening Governance for Peaceful Uses of Nuclear Energy in Asia Pacific*, 2015, p. 1; World Association of Nuclear Operators, *Compass 2018-2022: Guiding the World's Nuclear Operators on Their Path to Excellence*, 2017, p. 5.

<sup>159</sup> World Association of Nuclear Operators, *Compass 2018-2022: Guiding the World's Nuclear Operators on Their Path to Excellence*, 2017, p. 5.

nuclear infrastructure, for installing strong guidelines defining the limits of peaceful uses of nuclear energy, and for transferring expertise on matters of waste storage.<sup>160</sup>

Other challenges regarding the safety of nuclear energy usage include the continued amassing of waste material in all nuclear reactors and the increasing number of new nuclear sites in the global South-East.<sup>161</sup> This impedes the IAEA's work, since more facilities require more inspections, which in turn puts high pressure on the Agency's financial and human resources.<sup>162</sup> Furthermore, questions of how to improve international cooperation in the nuclear field arise regularly, as most recently discussed at the 2019 Preparatory Committee.<sup>163</sup> It was suggested to use intergovernmental agreements as a strategic umbrella for the development of a more precise and versatile framework.<sup>164</sup> The responsible working group recommended that such a new framework should not only deal with the advocacy for nuclear energy programs in times of growing energy needs, but much more with "the beneficial, sustainable, safe, and secure use of nuclear technologies."<sup>165</sup>

### **Case Study: Iran and the Joint Comprehensive Plan of Action**

Despite the numerous advantages of nuclear energy, the risk of proliferation and unofficial development of dual-use materials remains high.<sup>166</sup> The prolonged international negotiations following in the aftermath of the revelation of Iran's undeclared atomic facilities in 2002 illustrate this problem.<sup>167</sup> During the 13 years of discussions, Iran emphasized repeatedly its right to possess a peaceful nuclear program according to article IV of the NPT.<sup>168</sup> Besides, Iran explained its need for nuclear enrichment with the usage of radioisotopes for cancer treatment.<sup>169</sup> Nevertheless, Iran failed to comply with the IAEA's safeguard agreements.<sup>170</sup> As there were claims that Iran was conducting reprocessing activities at non-official nuclear facilities, questions over whether Iran was planning to build missiles or weapons arose on the other side of the negotiation table, where the P5+1, consisting of France, the United Kingdom, the United States, China, and Russia plus Germany, and the EU, sat.<sup>171</sup>

The P5+1 responded by implementing strict sanctions against Iran, which included putting a ban on delivering technology to Iran that were claimed to be used for the reactors and freezing the bank accounts of several Iranians and Iranian organizations that were thought to be involved in Iran's nuclear program.<sup>172</sup> After many years of struggling to achieve a compromise, through diplomacy and mediation, the conclusion of the JCPOA was possible in 2015.<sup>173</sup> The agreement prohibits Iran from enriching uranium at higher levels, thus decreasing the probability of installing a weapons development program, and yet preserves Iran's peaceful nuclear energy production.<sup>174</sup> Furthermore, by signing this deal, Iran

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<sup>160</sup> Alger & Trevor, *Strengthening Global Nuclear Governance*, 2010.

<sup>161</sup> IAEA, *Speech by Former IAEA Director General Yukiya Amano on the Challenges in Nuclear Verification at the Center for Strategic and International Studies on 5 April 2019, in Washington*, 2019.

<sup>162</sup> Ibid.

<sup>163</sup> Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Framework for Peaceful Nuclear Cooperation (NPT/CONF.2020/PC.III/WP.7/Rev.1)*, 2019.

<sup>164</sup> Ibid.

<sup>165</sup> Ibid., p. 2.

<sup>166</sup> Miller & Sagan, *Nuclear Power Without Nuclear Proliferation?*, 2009, p. 13.

<sup>167</sup> Crisis Group, *The Iran Nuclear Deal: A Timeline*, 2019.

<sup>168</sup> Ibid.

<sup>169</sup> Nuclear Threat Initiative, *Iran*, 2019.

<sup>170</sup> Davenport, *Timeline of Nuclear Diplomacy with Iran*, 2019.

<sup>171</sup> Laub, *What is the Status of the Iran Nuclear Agreement?*, 2019.

<sup>172</sup> Davenport, *Timeline of Nuclear Diplomacy with Iran*, 2019; Nuclear Threat Initiative, *Iran*, 2019.

<sup>173</sup> Crisis Group, *The Iran Nuclear Deal: A Timeline*, 2019.

<sup>174</sup> Arms Control Association, *Section 3: Understanding the JCPOA*, 2015.

agreed to extended safeguarding measures conducted by the IAEA in order to better monitor the country's nuclear activities.<sup>175</sup>

In the case of Iran, the work of the JCPOA reiterated the cornerstones of the NPT through demanding the exclusively peaceful purposes of Iran's nuclear program.<sup>176</sup> The signing of this agreement served also as an affirmation of the red line of the initially discussed ambivalent understanding of peaceful uses and emphasized that any production of highly enriched uranium is not included in the right under article IV.<sup>177</sup> After the closure of the deal, Iran abided by the rules set out in the JCPOA for some years and could hence exercise its right to use nuclear energy for peaceful purposes, such as through enriching uranium on low levels to generate fuel for electricity and medical applications.<sup>178</sup> Despite the US' withdrawal from the JCPOA, the continued commitment of the remaining signatories is seen by policy analysts as a step towards strengthening the NPT.<sup>179</sup>

### **Conclusion**

The peaceful uses of nuclear energy have a lot to offer when it comes to ensuring global sustainable development.<sup>180</sup> But at the same time, as incidents such as the IAEA's revelation of Iran's stockpile of highly enriched uranium showed, the dangers of a hidden production of heavy weapons or risks of radiation due to fuel reactor accidents will remain.<sup>181</sup> In addition to higher financial contributions to the PUI and other nuclear research projects, better implementation of safeguards agreements, stricter safety requirements for newly-built nuclear sites, educating people, and raising public awareness about the diversity and advantages of nuclear applications will be among the major tasks for the international community to fulfill henceforth.<sup>182</sup> Moreover, innovative and sustainable solutions concerning the disposal of nuclear waste are needed if peaceful uses of nuclear energy shall play a great role in the future.<sup>183</sup> In conclusion, prejudices about the atom and collective knowledge gaps need to be tackled for everyone to understand that nuclear energy is "a valuable, even an irreplaceable, part of the solution to the greatest energy threat in the history of humankind."<sup>184</sup>

### **Further Research**

Once delegates research this topic, they should ask themselves what the RevCon needs to discuss and negotiate in order to further implement the third pillar of the NPT. The following questions can guide delegates when they begin reading and researching about the peaceful uses of nuclear energy: Where does the right to have a peaceful nuclear program start and where does it end? How can the public and political awareness of the usefulness of nuclear energy for achieving the SDGs be increased? Which civil nuclear applications have recently been innovated but lack financial support? How can the ongoing geographical change of nuclear power generation from Western locations to the East be supported and safeguarded at the same time? What roles do aspects such as the digital age, cyber security, and the modern start-up culture play with respect to both the SDGs and nuclear safety?

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<sup>175</sup> Ibid.; UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*, 1968, Art. IV.

<sup>176</sup> European External Action Service, *Joint Comprehensive Plan of Action*, 2015, Art. A.

<sup>177</sup> Laub, *What is the Status of the Iran Nuclear Agreement?*, 2019.

<sup>178</sup> Ibid.

<sup>179</sup> Arms Control Association, *Section 3: Understanding the JCPOA*, 2015; Laub, *What is the Status of the Iran Nuclear Agreement?*, 2019.

<sup>180</sup> UN ECOSOC, *Concept Note – The Role of Nuclear Energy in Sustainable Development: Entry Pathways (ECE/ENERGY/GE.3/2019/6)*, 2019.

<sup>181</sup> Ferguson, *Proliferation Risks of Nuclear Power Programs*, *Nuclear Threat Initiative*, 2007.

<sup>182</sup> IAEA, *Speech by Former IAEA Director General Yukiya Amano on the Challenges in Nuclear Verification at the Center for Strategic and International Studies on 5 April 2019, in Washington*, 2019.

<sup>183</sup> Amano, *The Importance of Safe, Secure and Sustainable Spent Fuel Management*, 2019.

<sup>184</sup> Rhodes, *Why Nuclear Power Must Be Part of the Energy Solution*, *Yale Environment* 360, 2018.

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[https://undocs.org/NPT/CONF.2010/50%20\(VOL.I\)](https://undocs.org/NPT/CONF.2010/50%20(VOL.I))

*In 2010, the NPT RevCon issued this document as their final outcome. Besides to the actual review, it contains a 64-point action plan with recommendations for further implementation of the NPT. This action plan is expected to be discussed and promoted at the 2020 RevCon. As the 2015 RevCon ended without a final document, this one is the most updated resource in terms of the committee's work itself. It is especially useful because the review focused in that year more on the issue of peaceful uses than on non-proliferation and disarmament. Therefore, this document will enable delegates to get an idea of the status of the implementation of the NPT and to identify which aspects of peaceful nuclear energy usage are still underdeveloped.*

International Atomic Energy Agency. (2017). *PUI Stories - 2017 Edition*. Retrieved 20 July 2019 from:

[https://www.iaea.org/sites/default/files/puibrochure\\_2017edition.pdf](https://www.iaea.org/sites/default/files/puibrochure_2017edition.pdf)

*This brochure shows the impact of the IAEA's work on cooperation in the nuclear energy field by illustrating eight examples of concrete initiatives, financed through the Peaceful Uses Initiative. Similar to the bulletin issued by IAEA, this document gives delegates an idea about what technically and practically happens when the international community talks about peaceful uses of nuclear energy. It is especially helpful because it informs the reader about the states that receive support and specifies which agencies or organizations are providing such support. Moreover, delegates can learn what kind of nuclear policy and research areas lack financial and human resources.*

International Atomic Energy Agency. (2019). *IAEA Bulletin*. Retrieved 19 July 2019 from:

<https://www.iaea.org/publications/magazines/bulletin>

*This document is a regularly updated IAEA publication with regards to the Agency's work in the fields of peaceful uses of nuclear technology and nuclear safety. Published quarterly, it offers scholarly articles, research findings, and impact stories of funded projects. Each edition is addressing a specific theme within the broad range of nuclear energy usage. In addition, the format is very compact, easy to read, and small info boxes provide delegates with a quick overview of the technical aspects regarding a certain use. When researching about both subtopics, this resource is a helpful tool for delegates to find out what appliances have been invented and what perspectives exist as of now.*

Jonas, D., & A. Braunstein. (2018). What's Intent Got to Do with It? Interpreting "Peaceful Purpose" in Article IV.1 of the NPT. *Emory International Law Review*, 32 (3): 351-376. Retrieved 16 July 2019 from:

<http://law.emory.edu/eilr/documents/volumes/32/3/jonas-braunstein.pdf>

*This article explores the interpretation of the NPT's article IV and sheds light on the definitional ambiguity of its provisions. In a very detailed manner, the authors de-cluster several perspectives and inform about what can certainly be excluded as a peaceful purpose or why it might be a rather vague peaceful usage. As a resource, the article stimulates thinking "outside of the box," and delegates can get a highly analytical and differentiated viewpoint on interpreting article IV by reading this document. It allows them to challenge others' perspectives, go behind a standardized research on substantive matters related to sustainability or cooperation, and develop an understanding for the bigger global controversy regarding the topic. This will be helpful since negotiating requires knowing about other stakeholders' stances too.*

World Association of Nuclear Operators. (2017). *Compass 2018-2022: Guiding the World's Nuclear Operators on Their Path to Excellence*. Retrieved 20 August 2019 from:

<https://www.wano.info/getmedia/9c0e7b67-ad54-4bf5-9855-a000f9233449/Compass-2018-2022.pdf.aspx>

*By analyzing the status quo of WANO's focus areas dealing with the operation of nuclear power plants and the challenges lying ahead until 2022, this document gives a detailed*

*insight into what needs to be done in terms of nuclear reactor safety. It reviews four main action fields that are related to the standards of a high performance of the world's existing nuclear reactors, a professional workforce, an increased effectiveness of WANO, and superior guidelines for new units and industry entrants. Furthermore, it provides recommendations to itself as an association as well as to its members on how to improve critical aspects, such as building highly qualified personnel in the nuclear field or providing greater support to new actors entering the nuclear market. Since the safety of nuclear power plants and an overall strengthening of the nuclear market are vital in order to support the SDGs, delegates can use this resource to understand what kind of difficulties the industry is facing on a practical level and prepare for their exchange with those civil society representatives working on a non-governmental level in the nuclear sphere.*

United Nations, Economic and Social Council. (2019). *Concept Note – The Role of Nuclear Energy in Sustainable Development: Entry Pathways (ECE/ENERGY/GE.3/2019/6)*. Retrieved 15 August 2019 from: <http://undocs.org/ECE/ENERGY/GE.3/2019/6>

*This outline document illustrates the scope of a suggested report titled “The Role of Nuclear Energy in Sustainable Development: Entry Pathways.” It was written by the Expert Group on Resource Management within the Committee on Sustainable Energy of the Economic Commission for Europe and addresses very concisely aspects that need to be considered if nuclear energy is to be deployed for the achievement of the 2030 Agenda. Since the whole report is planned to be published at the end of 2019, delegates can follow up on this resource and use it as a very up-to-date expert document to learn about the linkages between the SDGs and nuclear energy.*

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## II. Strengthening Measures Towards General and Complete Nuclear Disarmament

“A world free of nuclear weapons would be a global public good of the highest order.”<sup>185</sup>

### Introduction

Globally, nuclear weapons and their proliferation pose a great danger to international peace and security.<sup>186</sup> Aware of this threat after the bombings of Hiroshima and Nagasaki in 1945, the United Nations (UN) General Assembly adopted its very first resolution 1(I) in 1946, calling for the controlled use of nuclear energy and the elimination of nuclear weapons.<sup>187</sup> Since the Cold War period, the number of global nuclear weapons has declined considerably from around 70,300 in 1986 to an estimated 13,890 in 2019.<sup>188</sup> Yet, approximately 9,330 warheads are still in military stockpiles, around 3,600 are ready for operation, and 1,800 are on “high alert”, meaning that they are immediately deployable.<sup>189</sup>

As of today, nine UN Member States are known to possess nuclear weapons and another 30 own the technological ability to produce them.<sup>190</sup> While acknowledging the importance of nuclear disarmament, nuclear weapon states (NWS) “continue to modernize their nuclear arsenals, including in ways that may give them new military capacities.”<sup>191</sup> This continuously poses a challenge for the international nuclear non-proliferation regime and thus, great importance is attached to disarmament in order to prevent further spreading of nuclear weapons.<sup>192</sup> Adopted in 1968, The *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) is considered a “landmark international treaty” within the international nuclear regime.<sup>193</sup> Its preamble underlines the significance to end the nuclear arms race and agrees to “general and complete disarmament under strict and effective international control” in Article VI.<sup>194</sup> Over the years, a number of legal instruments followed the NPT in order to strengthen the nuclear disarmament regime.<sup>195</sup>

According to the UN, nuclear weapons are facing international stigmatization since the international community has been promoting a strong norm against their use.<sup>196</sup> Yet, in the 2018 document *Securing our Common Future – An Agenda on Disarmament*, UN Secretary-General António Guterres emphasized that nuclear weapons “pose a continuing threat to the world” and humanity, putting nuclear disarmament and non-proliferation “at the center of the work of the United Nations.”<sup>197</sup> While the process of nuclear disarmament refers to eliminating nuclear weapons or committing to not producing them, nuclear non-proliferation is the effort of reducing the spread of nuclear weapons and their technology, as well as reducing existing stockpiles.<sup>198</sup> Keeping in mind that the risk of a global nuclear war has declined, the risk of regional instability and tensions in terms of nuclear proliferation increases.<sup>199</sup> Consequently, especially in the NPT review regime, the establishment of Nuclear Weapon-Free Zones (NWFZ), regions comprising of several countries, which undertake not to possess, acquire, manufacture, or test nuclear weapons,

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<sup>185</sup> UN, Office of the Secretary-General, *Secretary-General’s Address to the East-West Institute Entitled “The United Nations and Security in a Nuclear-Weapon-Free World”*, 2008.

<sup>186</sup> UNODA, *Nuclear Weapons*.

<sup>187</sup> UN General Assembly, *Establishment of a Commission to Deal with the Problems Raised by the Discovery of Atomic Energy (A/RES/1(I))*, 1946, p. 9.

<sup>188</sup> Kristensen & Korda, *Status of World Nuclear Forces*. *Federation of American Scientists*, 2019.

<sup>189</sup> *Ibid.*

<sup>190</sup> CFR, *The Global Nuclear Nonproliferation Regime*, 2012.

<sup>191</sup> UN, Office of the Secretary-General, *Securing Our Common Future - An Agenda for Disarmament*, 2018, p. 17.

<sup>192</sup> Kristensen & Korda, *Status of World Nuclear Forces*. *Federation of American Scientists*, 2019.; NTI, *2018 Annual Report*, 2018, p. 9; UNODA, *Nuclear Weapons*.

<sup>193</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*.

<sup>194</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968.

<sup>195</sup> UN DGC, *International Day for the total Elimination of Nuclear Weapons 26 September*.

<sup>196</sup> UNRIC, *The UN has Been Instrumental in the Development of a Norm for Nuclear Non-Proliferation*, 2017.

<sup>197</sup> UN, Office of the Secretary-General, *Securing Our Common Future - An Agenda for Disarmament*, 2018, pp. 7-10.

<sup>198</sup> VERTIC, *The IAEA and Nuclear Disarmament Verification: A Primer*, 2015, p. 8; NTI, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Overview*, 2019.

<sup>199</sup> NTI, *2018 Annual Report*, 2018, p. 9.

gain importance.<sup>200</sup> The achievement of these objectives, and thus realizing global nuclear disarmament and non-proliferation, does to a large extent depend on the determination of the Member States to comply with the legal regime of nuclear weapons treaties.<sup>201</sup>

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

Upon today, a large number of multilateral treaties have been established to prevent nuclear testing and proliferation, thereby promoting global nuclear disarmament.<sup>202</sup> One of the longest standing documents is the NPT, which aims at halting the spread of nuclear weapons, fosters the aim of general and complete nuclear disarmament, and furthers the peaceful use of nuclear energy.<sup>203</sup> In order to achieve global non-proliferation, NPT Articles I and II highlight that States parties to the Treaty should not “transfer”, “receive” or “manufacture” nuclear weapons.<sup>204</sup> Acknowledging the necessity of nuclear disarmament, Article VI emphasizes the obligation of States parties to achieve the “cessation of the nuclear arms race at an early date.”<sup>205</sup> Izumi Nakamitsu, UN High Representative for Disarmament, recently stated that balancing these goals is of importance, “with backward movement of the one resulting in the same on the other.”<sup>206</sup>

Two other essential treaties in the international nuclear disarmament regime are the 1996 *Comprehensive Nuclear-Test-Ban Treaty* (CTBT) and the 2017 *Treaty on the Prohibition of Nuclear Weapons* (TPNW).<sup>207</sup> The CTBT aims at halting the nuclear arms race and furthering the norm against nuclear testing.<sup>208</sup> Although being supported by the international community, the CTBT has not yet entered into force.<sup>209</sup> Article XIV of the Treaty states that it will not enter into force until all states listed in its annex have signed and ratified the CTBT.<sup>210</sup> Yet, eight states have not complied with this requirement.<sup>211</sup> In *Securing Our Common Future – An Agenda for Disarmament*, the UN Secretary-General appealed to these states to ratify the Treaty.<sup>212</sup> Increasing stigmatization of nuclear weapons resulted in the adoption of the TPNW in 2017.<sup>213</sup> The TPNW signifies an “important step” for the growing legal framework prohibiting the use of nuclear weapons and has already been ratified by 32 out of the 50 needed states for the Treaty to enter into force.<sup>214</sup> It is the most recent and also the first multilateral legally binding treaty in the sphere of international nuclear disarmament, advanced mainly by non-nuclear weapons states (NNWS).<sup>215</sup> The Treaty prioritizes the strengthening and redefining of disarmament, thus reaffirming the NPT’s so far unimplemented disarmament pillar: Article VI.<sup>216</sup> The TPNW prohibits the “deployment of nuclear weapons on national territory and the provision of assistance to any state on the conduct of prohibited activities” and emphasizes the importance of cooperation between NWS and the

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<sup>200</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010, p. 2; ACA, *Nuclear-Weapon-Free Zones (NWFZ) at a Glance*, 2017.

<sup>201</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968.

<sup>202</sup> UNODA, *Nuclear Weapons*.

<sup>203</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*.

<sup>204</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968.

<sup>205</sup> *Ibid.*

<sup>206</sup> UN DGC, *New Approach Crucial for Eliminating Atomic Bombs, Speakers Tell Security Council, Warning Dangerous Rhetoric about Nuclear Weapons Use Is Eroding Disarmament Gains (SC/13761)*, 2019.

<sup>207</sup> UNODA, *Comprehensive Nuclear-Test-Ban Treaty (CTBT)*; UNODA, *Treaty on the Prohibition of Nuclear Weapons*.

<sup>208</sup> UN, Office of the Secretary-General, *Securing Our Common Future - An Agenda for Disarmament*, 2018, p. 21.

<sup>209</sup> *Ibid.*, p. 22.

<sup>210</sup> UN General Assembly, *Comprehensive Nuclear-Test-Ban Treaty*, 1996.

<sup>211</sup> NTI, *Comprehensive Nuclear-Test-Ban Treaty (CTBT) Overview*, 2018.

<sup>212</sup> UN, Office of the Secretary-General, *Securing Our Common Future - An Agenda for Disarmament*, 2018, p. 22.

<sup>213</sup> Hamel-Green, *The Nuclear Ban Treaty and 2018 Disarmament Forums: An Initial Impact Assessment*, 2018, p. 448.

<sup>214</sup> UNRIC, *The UN has Been Instrumental in the Development of a Norm for Nuclear Non-Proliferation*, 2017; UN Conference to Negotiate a Legally Binding Instrument to Prohibit Nuclear Weapons, Leading Towards Their Total Elimination, *Treaty on the Prohibition of Nuclear Weapons (A/CONF.229/2017/8)*, 2017.

<sup>215</sup> *Ibid.*; UN DGC, *International Day for the total Elimination of Nuclear Weapons 26 September*.

<sup>216</sup> Erästö, *The NPT and the TPNW: Compatible or Conflicting Nuclear Weapons Treaties?*, *Stockholm International Peace Research Institute*, 2019.

International Atomic Energy Agency (IAEA) to eliminate nuclear weapons.<sup>217</sup> Although the Treaty has not been ratified or signed by the NWS, eventual and “strong stigmatization of nuclear weapons in the Treaty”, might be a possible approach to promote this, according to a recent study led by the Stockholm International Peace Research Institute.<sup>218</sup>

The General Assembly adopted a number of key foundational resolutions on the issue of global nuclear disarmament and non-proliferation of nuclear weapons.<sup>219</sup> In 1946, the General Assembly adopted its very first resolution on the “Establishment of a committee to deal with the problems raised by the discovery of atomic energy.”<sup>220</sup> This resolution called for the elimination of all nuclear weapons, the creation of a commission to control the use of atomic materials, and identified nuclear disarmament “as a leading goal of the United Nations.”<sup>221</sup> In 1959, it unanimously adopted resolution 14/1378 calling for complete nuclear disarmament to be added as a comprehensive goal of general UN disarmament goals under international control.<sup>222</sup> It was the first resolution sponsored by all Member States in the General Assembly.<sup>223</sup> General Assembly resolution 1653 (1961) on the “Prohibition of the use of nuclear and thermo-nuclear weapons” serves as a principle to prevent the use of nuclear weapons to avoid a negative impact on mankind and further the goal of disarmament.<sup>224</sup>

The establishment of a NWFZ is considered a successful approach in promoting frameworks diminishing nuclear weapons on a regional level and pursuing nuclear safety.<sup>225</sup> Currently, there are five treaties establishing regional NWFZs: the *Treaty of Tlatelolco* (1967) on establishing a NWFZ in Latin America and the Caribbean, the *Treaty of Rarotonga* (1985) for a South Pacific NWFZ, the *Treaty of Bangkok* (1995) to create a NWFZ in Southeast Asia, the *Treaty of Pelindaba* (1996) for a NWFZ in Africa, and the *Treaty of Semipalatinsk* (2006) for a Central Asian NWFZ.<sup>226</sup>

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

The Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (RevCon) is held every five years and serves as a platform for the States parties to review the operation of the NPT in order to assure the objectives set and the state of its implementation.<sup>227</sup> The first NPT RevCon in 1975 laid the foundation for mutual responsibility, especially for NWS, to implement NPT Article VI as soon as possible, thus advancing nuclear disarmament.<sup>228</sup> With near-universal membership of UN Member States, the RevCon discusses issues related to the NPT’s three pillars as well as nuclear disarmament, nuclear technology, nuclear proliferation, and nuclear weapons.<sup>229</sup> It is preceded by an annual Preparatory Committee (PrepCom) that is responsible for considering principles to promote the full implementation of the NPT while making recommendations to the subsequent RevCon.<sup>230</sup> In a final

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<sup>217</sup> UN Conference to Negotiate a Legally Binding Instrument to Prohibit Nuclear Weapons, Leading Towards Their Total Elimination, *Treaty on the Prohibition of Nuclear Weapons (A/CONF.229/2017/8)*, 2017.

<sup>218</sup> Erästö, The NPT and the TPNW: Compatible or Conflicting Nuclear Weapons Treaties?, *Stockholm International Peace Research Institute*, 2019.

<sup>219</sup> UN Library and Archives at Geneva, *Nuclear Weapons*.

<sup>220</sup> UN General Assembly, *Establishment of a Commission to Deal With the Problems Raised by the Discovery of Atomic Energy (A/RES/1(I))*, 1946.

<sup>221</sup> *Ibid.*, p. 9; UN DGC, *International Day for the total Elimination of Nuclear Weapons 26 September*.

<sup>222</sup> UN General Assembly, *General and Complete Disarmament (A/RES/14/1378)*, 1959, p. 3; UN DGC, *International Day for the total Elimination of Nuclear Weapons 26 September*.

<sup>223</sup> UN DGC, *International Day for the total Elimination of Nuclear Weapons 26 September*.

<sup>224</sup> UN General Assembly, *Declaration on the Prohibition of the use of Nuclear and Thermo-Nuclear Weapons (A/RES/1653 (XVI))*, 1961, pp. 4-5.

<sup>225</sup> UNODA, *Nuclear-Weapon-Free-Zones*.

<sup>226</sup> *Ibid.*

<sup>227</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*.

<sup>228</sup> RCW, *History of the NPT 1975-1995*, 2019.

<sup>229</sup> RCW, *Nuclear Non-Proliferation Treaty*, 2019.

<sup>230</sup> UNODA, *2019 Preparatory Committee for the 2020 Nuclear Non-Proliferation Treaty Review Conference Background Information*.

document, every RevCon assesses the current implementation status of the NPT and outlines actions for the following five years.<sup>231</sup> According to Sérgio Duarte, former UN High Representative for Disarmament Affairs, more than half of the RevCons have so far “failed to produce a consensus final document.”<sup>232</sup> The last Conference to file an outcome document was the 2010 RevCon.<sup>233</sup> Member States adopted the *2010 NPT Review Conference Action Plan*, in which they committed to firming the NPT’s review process and reaffirmed the 1995 *NPT Review Conference Middle East Resolution* to establish a NWFZ in the region.<sup>234</sup> Yet, implementing both the Action Plan and the Middle East resolution remains a challenge due to a lack of consensus among the States parties, hampering the process of an effective review process and the establishment of a NWFZ in the Middle East.<sup>235</sup> With a view to the forthcoming NPT RevCon in April 2020, the 2019 PrepCom highlighted three key issues in its final document concerning the NPT’s provisions to be discussed at the 2020 Conference: nuclear disarmament and security guarantees by the NWS, peaceful use of nuclear energy, and the implementation of the Middle East resolution.<sup>236</sup>

The UN Office on Disarmament Affairs (UNODA), established in 1998, is a key UN body focusing on disarmament measures, and works to address the humanitarian impact of weapons of mass destruction (WMD) by furthering dialogue, regional disarmament efforts, transparency-building among Member States, and providing information on UN disarmament efforts.<sup>237</sup> It has a WMD Branch under which fosters multilateral efforts towards general and complete nuclear disarmament in cooperation with the IAEA, the General Assembly and the Conference of Disarmament (CD), through regional disarmament and monitoring activities.<sup>238</sup> The CD is the sole multilateral negotiation forum on topics related to arms control and disarmament.<sup>239</sup> In the field of nuclear disarmament, it aims, amongst other things, at the “cessation” of the nuclear arms race, the prevention of a nuclear war, and the promotion of transparency in disarmament programs.<sup>240</sup> The CD was also key in negotiating vital nuclear instruments such as the NPT and the CTBT.<sup>241</sup> While the CD reports annually to the General Assembly, the UN Disarmament Commission works under the mandate of the Security Council on issues related to the elimination of WMD, for instance through the publication of special guidelines.<sup>242</sup> Although it conducts annual meetings, the CD remains at an impasse since the conclusion of the negotiations on the CTBT, as it cannot agree on a work program for a fissile material cut-off treaty, which would prohibit the production of fissile material for nuclear weapons.<sup>243</sup> Over the years, this has been reaffirmed by UN Member States in General Assembly debates.<sup>244</sup>

In terms of strengthening the NPT as an instrument of nuclear disarmament, the General Assembly conducted the first ever High-Level Meeting on Nuclear Disarmament on September 26, 2013, an initiative furthered by NNWS.<sup>245</sup> The meeting served as an opportunity for Member States to reflect upon

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<sup>231</sup> RCW, *Nuclear Non-Proliferation Treaty*, 2019.

<sup>232</sup> Duarte, *Unmet Promise: The Challenges Awaiting the 2020 NPT Review Conference*, *Arms Control Association*, 2018.

<sup>233</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010.

<sup>234</sup> *Ibid.*, p. 1.

<sup>235</sup> Mukhatzhanova, *Implementation of the Conclusions and Recommendations for Follow-on Actions Adopted at the 2010 NPT Review Conference*, 2013, p. 1; UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*.

<sup>236</sup> Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Report (NPT/CONF.2020/1)*, 2019, p. 6.

<sup>237</sup> UNODA, *About Us*; NTI, *United Nations Office of Disarmament Affairs Background*, 2018.

<sup>238</sup> *Ibid.*

<sup>239</sup> UNOG, *An Introduction to the Conference*.

<sup>240</sup> *Ibid.*

<sup>241</sup> *Ibid.*

<sup>242</sup> UNOG, *An Introduction to the Conference*; UNODA, *United Nations Disarmament Commission*.

<sup>243</sup> NTI, *Nuclear Disarmament Resource Collection*, 2018.

<sup>244</sup> UN DGC, *At Crossroads on How to Overcome Disagreement Machinery Deadlock, First Committee Delegates Debate Paths Towards Revitalization (GA/DIS/3588)*, 2017.

<sup>245</sup> Kmentt, *How Divergent Views on Nuclear Disarmament Threaten the NPT*, *Arms Control Association*.

the present challenges in abolishing nuclear weapons.<sup>246</sup> Based on this meeting, Member States were encouraged to take action and ban nuclear weapons.<sup>247</sup> In 2015, the General Assembly adopted resolution 70/40, reaffirming NPT Article VI and calling on all NWS to further transparency on their nuclear disarmament efforts and undertake “total elimination of their nuclear arsenals” to reach global nuclear disarmament.<sup>248</sup> It further notes that states should seek bilateral and multilateral agreements to reduce global stockpiles, increase confidence, and establish new NWFZs.<sup>249</sup> Two years later, in 2017, the General Assembly adopted resolution 72/31 on “Taking forward multilateral nuclear disarmament negotiations”, calling for unified signing and ratification of both the TPNW and CTBT.<sup>250</sup> It stresses the importance of the NPT for the elaboration of “effective legal measures” to strengthen the universal commitment to achieving general nuclear disarmament and non-proliferation.<sup>251</sup>

The IAEA, established in 1957, is the “world’s Atoms for Peace” organization with the aim to promote secure, safe and peaceful nuclear technologies, thus contributing to global “peace, health and prosperity.”<sup>252</sup> Under the NPT, the IAEA has the role of managing international safeguards to prevent the use of nuclear energy for other than peaceful purposes.<sup>253</sup> Considering that NPT Article VI reaffirms Member States’ rights to the research and development of nuclear energy for peaceful purposes only, the NPT endorses cooperation with the IAEA to apply the IAEA safeguards on peaceful nuclear activities.<sup>254</sup> Besides facilitating the access to peaceful nuclear technologies for its Member States, the IAEA’s Department of Nuclear Safety and Security provides them with safety standards, highlighting how they can ensure the secure installation, transport and use of radioactive material.<sup>255</sup> The IAEA and UNODA share close cooperation to strengthen the non-proliferation of WMD under UNODA’s Weapons of Mass Destruction Branch.<sup>256</sup> Together with the UN, the IAEA is also tasked with monitoring the compliance of Iran with the 2015 *Joint Comprehensive Plan of Action* (JCPOA), a treaty that is considered successful in terms of maintaining the disarmament process of a potential nuclear weapon state.<sup>257</sup> Under the JCPOA, UN economic sanctions on the country are lifted while IAEA inspectors oversee Iran’s nuclear program under the IAEA safeguards.<sup>258</sup> Since the withdrawal of the United States from the Treaty in May 2018, the parties to the JCPOA cooperate on overcoming the resulting deadlock and avoiding further sanctions.<sup>259</sup>

Both, the North Atlantic Treaty Organization (NATO) and the Organization for Security and Co-operation in Europe (OSCE) are regional bodies, which have taken steps towards disarmament, control, and non-proliferation of nuclear forces by cooperating with the UN and the European Union.<sup>260</sup> Since the Cold War, NATO has reduced its nuclear weapons “by more than 95 percent.”<sup>261</sup> Yet, NATO explains that it “is not party to any treaty” in the nuclear disarmament system, since it uses nuclear weapons as a

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<sup>246</sup> Acheson & Fihn, *High-level Meeting Issues Resounding Call for Banning and Eliminating Nuclear Weapons*, 2013.

<sup>247</sup> *Ibid.*

<sup>248</sup> UN General Assembly, *United Action with Renewed Determination Towards the Elimination of Nuclear Weapons (A/RES/70/40)*, 2015, pp. 3-5.

<sup>249</sup> *Ibid.*

<sup>250</sup> UN General Assembly, *Taking Forward Multilateral Nuclear Disarmament Negotiations (A/RES/72/31)*, 2017, pp. 3-4.

<sup>251</sup> *Ibid.*

<sup>252</sup> IAEA, *History*.

<sup>253</sup> IAEA, *Key Roles*.

<sup>254</sup> UN General Assembly, *Treaty on the Non-Proliferation of Nuclear Weapons*, 1968.

<sup>255</sup> Mikhailova, *Strengthening International Standards for Nuclear Safety: IAEA Safety Publications Restructured. International Atomic Energy Agency*, 2019; IAEA, *Road to Disarmament: IAEA Safeguards: A Fundamental Pillar of the NPT Regime*, 2009, p. 8.

<sup>256</sup> UNODA, *UNODA Structure*.

<sup>257</sup> Masterson, *Timeline of Nuclear Diplomacy with Iran*, *Arms Control Association*, 2019; *Iran Nuclear Deal: Key Details*, BBC, 2019.

<sup>258</sup> Masterson, *Timeline of Nuclear Diplomacy with Iran*, *Arms Control Association*, 2019.

<sup>259</sup> *Iran Nuclear Deal: Key Details*, BBC, 2019; Masterson, *Timeline of Nuclear Diplomacy with Iran*, *Arms Control Association*, 2019.

<sup>260</sup> NATO, *Arms Control, Disarmament and Non-Proliferation in NATO*, 2019; OSCE, *Non-Proliferation of Weapons of Mass Destruction*.

<sup>261</sup> NATO, *Arms Control, Disarmament and Non-Proliferation in NATO*, 2019.

deterrence and defense strategy.<sup>262</sup> The OSCE stresses its aim to ensure non-proliferation of nuclear weapons by providing trainings, peer reviews, and funds to its Member States.<sup>263</sup> An additional regional framework on nuclear non-proliferation and disarmament is the *2019 G7 Statement on Non-Proliferation and Disarmament*, which calls for promoting verifiable nuclear arms control as a base for international security and reducing nuclear stockpiles.<sup>264</sup> The *New Agenda Coalition* (NAC) is an initiative existing in the framework of the NPT consisting of six NNWS, namely Egypt, Brazil, Ireland, South Africa, Ireland and New Zealand.<sup>265</sup> It has pushed for a TPNW within the NPT review cycle since 2014, as it would be “an effective measure to implement Article VI.”<sup>266</sup> Besides that, the NAC strives for the universalization of both the NPT and CTBT, aims at renegotiating a fissile material cut-off treaty and developing a verification regime, and intends to address the procedural block of the CD.<sup>267</sup>

Besides intergovernmental organizations, civil society organizations (CSOs) are also involved in international nuclear disarmament negotiations.<sup>268</sup> The International Campaign to Abolish Nuclear Weapons (ICAN) is a coalition of non-governmental organizations (NGOs) that works towards universal adoption of the TPNW.<sup>269</sup> ICAN was instrumental in negotiating the TPNW and serves as a coordinator for civil society and like-minded governments on conferences focusing on the humanitarian impact of nuclear weapons.<sup>270</sup> It organizes awareness-raising events and advocates for survivors of the nuclear catastrophes in Hiroshima and Nagasaki.<sup>271</sup> For these efforts, it was awarded the Nobel Peace Prize in 2017.<sup>272</sup> Reaching Critical Will (RCW) works towards promoting the “prohibition and elimination” of nuclear weapons as well as enhancing dialogue between governments and civil society to increase transparency.<sup>273</sup> In addition, RCW acts as a link between the UN and NGOs during disarmament negotiations by monitoring and reporting on their progress and facilitating access to the conferences for other CSOs.<sup>274</sup>

### ***Implementing the 2010 NPT Review Conference Action Plan***

#### *Lack of Transparency*

The *2010 NPT Review Conference Action Plan* outlines 64 actions on the three pillars of the NPT: nuclear disarmament, nuclear non-proliferation, and peaceful use of nuclear energy.<sup>275</sup> 22 actions specifically concern nuclear disarmament.<sup>276</sup> It is the last outcome document that has been decided at a NPT RevCon.<sup>277</sup> The majority of these actions are subject to implementation by the NWS, such as ratifying the CTBT, committing to denuclearization and transparency for security concerns, and preventing the use of nuclear weapons.<sup>278</sup> Member States also agreed on supporting the IAEA in its

<sup>262</sup> NATO, *Arms Control, Disarmament and Non-Proliferation in NATO*, 2019; NATO, *NATO's Nuclear Deterrence Policy and Forces*, 2019.

<sup>263</sup> OSCE, *Keeping a Lid on Nuclear, Chemical and Biological Weapons*, 2016.

<sup>264</sup> G7, *2019 G7 Statement on Non-Proliferation and Disarmament*, 2019, pp. 4-6.

<sup>265</sup> Hamel-Green, *The Nuclear Ban Treaty and 2018 Disarmament Forums: An Initial Impact Assessment*, 2018, p. 448.

<sup>266</sup> Hamel-Green, *The Nuclear Ban Treaty and 2018 Disarmament Forums: An Initial Impact Assessment*, 2018, p. 448.

<sup>267</sup> NTI, *New Agenda Coalition*, 2018.

<sup>268</sup> ICAN, *Campaign Overview*.

<sup>269</sup> *Ibid.*

<sup>270</sup> *Ibid.*

<sup>271</sup> *Ibid.*

<sup>272</sup> ICAN, *Campaign Overview*.

<sup>273</sup> RCW, *What we do*, 2019.

<sup>274</sup> *Ibid.*; RCW, *Who we are*, 2019.

<sup>275</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010.

<sup>276</sup> *Ibid.*

<sup>277</sup> *Ibid.*

<sup>278</sup> Mukhatzhanova, *Implementation of the Conclusions and Recommendations for Follow-on Actions Adopted at the 2010 NPT Review Conference*, 2013, p. 1; 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010, pp. 1-4.

safeguard policy and cooperating with governments to achieve regional disarmament.<sup>279</sup> The Action Plan's first article underlines the importance of the NPT's "full and effective implementation", which lies within the competence of the IAEA and the States parties to the NPT, in order to promote international peace and security.<sup>280</sup> It represents a set of follow-on measures to strengthen the NPT review process and to increase mutual responsibility and transparency in terms of nuclear disarmament and non-proliferation.<sup>281</sup> Implementing the 2010 Action Plan would therefore go hand in hand with furthering the implementation of the NPT.<sup>282</sup>

However, in view of the upcoming 2020 NPT RevCon, the Action Plan is still awaiting implementation, which, according to former UN High Representative for Disarmament Affairs, it can be traced back to a lack of consensus amongst the States parties.<sup>283</sup> This, as Lewis Dunn, independent consultant for the Nuclear Threat Initiative (NTI) underlines, results from absent transparency between NWS and NNWS, which also hampers the review process.<sup>284</sup> Enhancing transparency is vital to build trust, mutual understanding, and form cooperation among NWS and NNWS in order to guarantee the full implementation of the NPT.<sup>285</sup> Although, according to Dunn, NWS have agreed to Action 5 of the Action Plan, reaffirming the commitment of all States parties to the effective implementation of the NPT, a comprehensive list of all actions taken is still absent.<sup>286</sup> This is accompanied by an inconsistent signing of the Treaty by all NWS, which has prevented the effectiveness of the NPT.<sup>287</sup> Moreover, four NWS are not party to the Treaty at all.<sup>288</sup> According to Kate Hudson, General Secretary of the Campaign for Nuclear Disarmament, the absence of these states from all NPT review processes significantly slows down the process of realizing NPT Article VI and thus general nuclear disarmament.<sup>289</sup> Furthermore, NNWS consider that the reaffirmation by NWS of previous commitments, and not pledging new actions, is inadequate in terms of advancing disarmament.<sup>290</sup> For the 2020 RevCon, the 2019 PrepCom has recommended the States parties to fully implement the 2010 Action Plan in order to increase attention on nuclear disarmament.<sup>291</sup>

### ***Establishing a Nuclear-Weapons-Free Zone in the Middle East***

The General Assembly first called for the establishment of a NWFZ in the Middle East based on a proposal made by Iran and Egypt in 1974.<sup>292</sup> In 1995, the NPT RevCon called for the establishment of a zone in the Middle East free of WMD such as nuclear, chemical, and biological weapons, which is called a Weapons of Mass Destruction Free Zone (WMDFZ).<sup>293</sup> In this zone, states shall not use, possess, test,

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<sup>279</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010, pp. 1-4.

<sup>280</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Document Volume 1 (NPT/CONF.2010/50)*, 2010, p. 2; UNIDIR, *Promoting Implementation of the NPT Action Plan*.

<sup>281</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010.

<sup>282</sup> *Ibid.*

<sup>283</sup> Duarte, *Unmet Promise: The Challenges Awaiting the 2020 NPT Review Conference*, *Arms Control Association*, 2018.

<sup>284</sup> Dunn, *Discussion Paper: Transparency-Options for Cooperative Engagement*, 2019, p. 1.

<sup>285</sup> *Ibid.*

<sup>286</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *2010 NPT Review Conference Action Plan*, 2010; Dunn, *Discussion Paper: Transparency-Options for Cooperative Engagement*, 2019, p. 3.

<sup>287</sup> Hudson, *50 Years of the NPT*, *Campaign for Nuclear Disarmament*, 2018.

<sup>288</sup> UNODA, *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)*.

<sup>289</sup> Hudson, *50 Years of the NPT*, *Campaign for Nuclear Disarmament*, 2018.

<sup>290</sup> Dhanapala & Duarte, *Is There a Future for the NPT?*, 2015.

<sup>291</sup> Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final Report (NPT/CONF.2020/1)*, 2019, p. 5.

<sup>292</sup> ACA, *WMD-Free Middle East Proposal at a Glance*, 2018.

<sup>293</sup> *Ibid.*

acquire or manufacture any WMD.<sup>294</sup> The 1995 Middle East resolution moreover specifically called for the creation of a NWFZ in the region and asked for the accession to the NPT by every state in the Middle East region as well as their full regional application of IAEA nuclear safeguards.<sup>295</sup> Until now, the majority of the Arab countries has acceded to the NPT.<sup>296</sup> However, despite international and regional support as well as a vast amount of General Assembly resolutions on the topic, neither the full application nor the creation of the NWFZ has been accomplished so far.<sup>297</sup> The latter can particularly be traced back to missing consensus among Israel and the Arab states concerning the conditions for its establishment, such as a common understanding on how to define and face nuclear delivery systems.<sup>298</sup>

At the 2010 NPT RevCon, the State parties for the first time agreed on a five-step approach on how to implement the resolution, including a WMD-FZ Facilitator and a conference in the Middle East in 2012 to discuss the issue with all parties affected.<sup>299</sup> Yet, due to missing consensus on a possible agenda, this conference was postponed indefinitely.<sup>300</sup> In 2004, the UN Institute for Disarmament Research stated that a WMD-FZ in the Middle East is likely to “reduce tensions and conflicts in the region.”<sup>301</sup> And, just recently in 2017, the General Assembly adopted resolution 72/24 on “The Establishment of a NWFZ in the Region of the Middle East”, which again confirmed the overall support of Member States.<sup>302</sup> In 2018, the General Assembly First Committee decided to renew the intentions of the 2010 NPT RevCon and scheduled a conference on the establishment of a NWFZ in the Middle East from 18 to 22 November 2019 at the UN Headquarters in New York.<sup>303</sup> The conference’s aim is to elaborate “a legally binding treaty establishing a Middle East zone free of nuclear weapons and other weapons of mass destruction.”<sup>304</sup> All Member States will have the opportunity to participate at this conference.<sup>305</sup> Two possible approaches for the establishment of the NWFZ are to be debated at the Conference: the first does not include Israel, as the region’s only NWS, in the establishment process.<sup>306</sup> This would mean that the remaining countries would commit to arms control commitments within the NWFZ without Israel.<sup>307</sup> The second approach aims to include the WMD-FZ in a larger regional security framework, meaning that the JCPOA would also be brought into focus.<sup>308</sup> The Conference will take place every 12 months after this year’s Conference until a NWFZ in the Middle East is achieved.<sup>309</sup>

## Conclusion

While there have been successes in reducing the overall nuclear weapons, certain challenges to total nuclear disarmament remain.<sup>310</sup> The lack of participation of all NWS in vital international nuclear

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<sup>294</sup> Ibid.

<sup>295</sup> FAS, *Middle East Nuclear-Weapon-Free Zone*, 2013.

<sup>296</sup> Erästö, *The Lack of Disarmament in the Middle East: A Thorn in the Side of the NPT*, 2019, p. 3.

<sup>297</sup> IAEA, *Introductory Statement to the Board of Governors by Cornel Feruta, IAEA Acting Director General on 9 September 2019, in Vienna*, 2019; ACA, *WMD-Free Middle East Proposal at a Glance*, 2018.

<sup>298</sup> ACA, *WMD-Free Middle East Proposal at a Glance*, 2018.

<sup>299</sup> Ibid.

<sup>300</sup> Vienna Center for Disarmament and Non-Proliferation, *Establishing a WMD-Free Zone in the Middle East: Current Status and Prospects*, 2019.

<sup>301</sup> Cserveny et al., *Building a Weapons of Mass Destruction Free Zone in the Middle East: Global Non-Proliferation Regimes and Regional Experiences*, 2004, p. 106.

<sup>302</sup> UN General Assembly, *Establishment of a Nuclear-Weapon-Free Zone in the Region of the Middle East (A/RES/72/24)*, 2017.

<sup>303</sup> Vienna Center for Disarmament and Non-Proliferation, *Establishing a WMD-Free Zone in the Middle East: Current Status and Prospects*, 2019.

<sup>304</sup> UN General Assembly, *Convening a Conference on the Establishment of a Middle East Zone Free of Nuclear Weapons and Other Weapons of Mass Destruction (A/C.1/73/L.22)*, 2018, p. 1.

<sup>305</sup> Hussain, *Why all regional States should attend the November 2019 Conference on the Middle East WMD Free Zone*, *BASIC*, 2019.

<sup>306</sup> Erästö, *The Lack of Disarmament in the Middle East: A Thorn in the Side of the NPT*, 2019, p. 21.

<sup>307</sup> Ibid.

<sup>308</sup> Ibid.

<sup>309</sup> ACA, *WMD-Free Middle East Proposal at a Glance*, 2018.

<sup>310</sup> CFR, *The Global Nuclear Nonproliferation Regime*, 2012.

frameworks hampers mutual agreement on disarmament and non-proliferation measures.<sup>311</sup> Consequently, the NPT review cycle is key in strengthening the NPT regime and establishing a NWFZ in the Middle East.<sup>312</sup> Fostering this NWFZ can enhance regional arms control mechanisms, contributing to regional and ultimately global nuclear disarmament.<sup>313</sup> That is why, according to the NTI, the adoption of the *2010 NPT Review Conference Action Plan* remains vital.<sup>314</sup> At the upcoming 2020 NPT RevCon, the state parties to the review cycle will have to encounter the different recommendations made by the 2019 PrepCom, including the strengthening of NPT Article VI and the establishment of a NWFZ in the Middle East.<sup>315</sup>

### **Further Research**

Given the current challenges, delegates should consider the following questions when conducting more research on the topic: Which incentives can the international community use to encourage all states to access the NPT? How can transparency and collaboration among NWS and NNWS be enhanced? How can all states be encouraged to sign the TPNW? What measures can help to effectively implement the *2010 NPT Review Conference Action Plan*? How can NPT Article VI and thus NPT pillar three on nuclear disarmament effectively be implemented? What measures can be taken to strengthen the international disarmament regime? How can consensus on a Middle Eastern NWFZ be reached?

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*This article discusses the circumstances that led to the adoption of the NPT. Moreover, it critically elaborates the review process of the Treaty within the UN system and focuses on the challenges ahead for the upcoming NPT RevCon in 2020. Lastly, it gives an outlook to how the NPT, TPNW, and CTBT may interact within the legal nuclear framework. This article includes current issues of the nuclear disarmament regime the 2020 NPT RevCon will face and explains the significance of the Conference. Delegates will also find it useful to know under what conditions the NPT was implemented.*

Erästö, T. (2019). The NPT and the TPNW: Compatible or Conflicting Nuclear Weapons Treaties?. *Stockholm International Peace Research Institute*. Retrieved 5 October 2019 from: <https://www.sipri.org/commentary/blog/2019/npt-and-tpnw-compatible-or-conflicting-nuclear-weapons-treaties>

*This research article gives a comprehensive overview on the interplay between the NPT and the TPNW in the current regime of nuclear frameworks. It compares both treaties in terms of legal compatibility and impact on the current non-proliferation efforts. Delegates will find this article useful in order to dig deeper into a critical view on both treaties.*

Nuclear Threat Initiative. (2018). *Nuclear Disarmament Resource Collection*. Retrieved 16 September 2019 from: <https://www.nti.org/analysis/reports/nuclear-disarmament/>

*This article chronologically assesses the international nuclear disarmament regime. It provides in-depth information on important frameworks as well as bilateral and multilateral efforts towards disarmament pursued by Member States, CSOs and intergovernmental organizations. Delegates will find this article helpful in getting a full*

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<sup>311</sup> Hudson, *50 Years of the NPT, Campaign for Nuclear Disarmament*, 2018.

<sup>312</sup> Dunn, *Discussion Paper: Transparency-Options for Cooperative Engagement*, 2019, p. 1.

<sup>313</sup> Erästö, *The Lack of Disarmament in the Middle East: A Thorn in the Side of the NPT*, 2019, p. 21.

<sup>314</sup> Dunn, *Discussion Paper: Transparency-Options for Cooperative Engagement*, 2019, p. 1.

<sup>315</sup> Duarte, *Unmet Promise: The Challenges Awaiting the 2020 NPT Review Conference*, *Arms Control Association*, 2018.

*image of the international nuclear disarmament regime while being informed about current challenges.*

Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. (2019). *Final Report (NPT/CONF.2020/1)*. Retrieved 4 October 2019 from: <https://undocs.org/NPT/CONF.2020/1>

*This report outlines the 2019 PrepCom's recommendations made for the 2020 NPT RevCon. It stresses three issues of importance for the conference: the implementation of NPT Article VI, the application of IAEA safeguards in NWS and establishment of further NWFZ and promoting peaceful uses of nuclear energy. This report also gives basic facts for the 2020 RevCon such as a provisional agenda, financing, rules of procedure, and important outcome documents of previous PrepComs. It is important for delegates to know about this report and its content, as it is the most recent document in the NPT review regime and gives insightful information on the 2020 RevCon preparation process.*

Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. (2010). *2010 NPT Review Conference Action Plan*. Retrieved 29 August 2019 from: <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2010/2010NPTActionPlan.pdf>

*The 2010 NPT Review Conference Action Plan contains actions underlining the importance of the full and soon implementation of the NPT by all states, especially Article VI on disarmament as well as the establishment of a NWFZ in the Middle East and compliance with IAEA safeguards. It reaffirms the state parties' commitment to the NPT and therefore to general nuclear disarmament. This action plan represents the last consensus document reached by a RevCon but has not been implemented so far. Delegates will find this action plan helpful in gaining an understanding of what is essential for the upcoming 2020 NPT RevCon.*

United Nations, Department of Global Communications. (n.d.). *International Day for the total Elimination of Nuclear Weapons 26 September*. Retrieved 2 October 2019 from: <https://www.un.org/en/events/nuclearweaponelimination/background.shtml>

*This article gives an understandable timeline of essential steps the UN has taken to halt nuclear disarmament and non-proliferation of nuclear weapons, such as the adoption of resolutions, the establishment of treaties or the framing of the topic in UN discourse. Moreover, the International Day for the Elimination of Nuclear Weapons serves as a platform for public awareness on the topic of nuclear disarmament and non-proliferation and is therefore an important date to know about. Delegates will find this overview helpful as a first start for their research on the topic.*

United Nations, General Assembly, Twenty-second session. (1968). *Treaty on the Non-Proliferation of Nuclear Weapons (A/RES/2373 (XXII))*. Retrieved 29 August 2019 from: [https://undocs.org/A/RES/2373\(XXII\)](https://undocs.org/A/RES/2373(XXII))

*The NPT is the key international nuclear disarmament framework to this topic. It aims to prevent the spreading of nuclear weapons and technology, thus proclaiming complete nuclear disarmament under Article VI. It therefore sets restrictions on the development and production of nuclear weapons and established a review system to ensure that Member States follow its provisions. Delegates will gain an understanding of the Treaty's key requirements and their significance for the international nuclear disarmament system.*

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*This resolution was adopted during the Cold War and is one of the first calling for general and complete international nuclear disarmament. It builds the basis for future deliberations and negotiations for decreasing the number of nuclear weapons. It introduces nuclear disarmament as a comprehensive goal of general disarmament under*

*international control. It is important for delegates to be familiar with this resolution, as it can serve as a great basis for discussion and when drafting working papers.*

United Nations, Office of the Secretary-General. (2019). *Securing Our Common Future - An Agenda for Disarmament*. Retrieved 30 August 2019 from: <https://www.un.org/disarmament/sg-agenda/en/>  
*This agenda discusses the need for disarmament in the 21<sup>st</sup> century. It talks about disarmament for the sake of humanity, saving lives, and future generations. Additionally, it details how to strengthen partnerships for disarmament, including WMDs, conventional arms and future weapon technologies. It outlines the importance of disarmament for lasting peace and security. Delegates will find this agenda useful in understanding the context of nuclear disarmament frameworks and its impact on future generations.*

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