

# CLIMATE CHANGE LAW IN THE ASIA PACIFIC

**WORKING PAPER**

Linking Climate Change and International Human Rights:  
What Actions Can Taiwanese People Take?

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# Linking Climate Change and International Human Rights: What Actions Can Taiwanese People Take?

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## Abstract

Unlike the study set off in 2000 from the International Law Commission that focuses on the conflicts between various fields under the framework of international laws, climate change and human rights legal regimes seem to share some common themes where there is the existence of compatibility or supportability. E.g., the combat against climate change is the challenge facing international environmental law, while the fact that the adverse effects caused by climate change may pose threats or harm to human rights is an issue of great concern to international human rights law). If recognizing that climate change poses threats or harm to human rights, the human rights-based approach may provide important inspiration relating to coping with climate change (mitigation and adaptation). On the basis of the aforementioned description, it is questionable whether climate change really causes threat and harm to human rights. How will the human rights-based approach affect Taiwan in response to climate change? This paper argues that climate change indeed causes threat and harm to human rights — the right to life, health, adequate food, water, and adequate housing. After the domestication of five international human rights conventions, Taiwanese people can take actions to require the government of Taiwan to positively address the issues of threat and harm to human rights caused by climate change.

## Introduction

Although an overlapping and interplaying relationship between various fields of international laws has been in vaguely in existence for two or three decades or even longer, it wasn't until 2000 that the International Law Commission formally adopted this issue as a research work program,<sup>2</sup> establishing a study group and naming the research topic, "Fragmentation of international law: difficulties arising from the diversification and expansion of international law."<sup>3</sup> The study group focused on how to resolve the "conflicts" between various fields under the framework of international laws. The study group also recognized that, in the past, various specialized international laws, such as international trade law, international human rights law, international environmental law, law of the sea, European Union law, international investment law, and international refugee law, that once appeared to be governed by general international law, are becoming *sui generis*, that is, having their own principles and institutions, thereby generating conflicts between these laws or with general international law.<sup>4</sup> The study group discussed the conflict issue through dimensions of "special law, general law," "later law, previous law," "different status of law," and "different law based on regulating background and the forming connection," aiming to solve the conflicts between different law fields under the structure of international law.<sup>5</sup>

Unlike the study from the International Law Commission that focuses on the conflicts between various fields under the framework of international laws, climate change and human rights legal regimes seem to share some common themes where there is the existence of compatibility or supportability (e.g., The combat against climate change is the challenge facing international environmental law, while the fact that the adverse effects

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<sup>2</sup> Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 10 (A/55/10), chap. IX.A.1, para. 729.

<sup>3</sup> Official Records of the General Assembly, Fifty-seventh Session, Supplement No. 10 (A/57/10), chap. IX.A, paras. 492-94.

<sup>4</sup> ILC, Fifty-eight Session, A/CN.4/L.682, at 11.

<sup>5</sup> See generally ILC, Fifty-eight Session, A/CN.4/L.682.

caused by climate change may pose threats or harm to human rights is an issue of great concern to international human rights law). After recognizing that climate change poses threats or harm to human rights, the human rights-based approach will provide important inspiration relating to coping with climate change (mitigation and adaptation): (1) humans should not, for the sake of individuals or groups, emit greenhouse gases so as to impact, threaten, or harm other people's human rights; (2) if climate change has already posed threat or harm to human rights, priority must be taken to rectify that situation; (3) to avoid the threat and harm to human rights caused by climate change, countermeasures such as mitigation and adaptation should not be performed based on cost-benefit analysis; (4) countermeasures such as mitigation and adaptation should not pose any threat or harm to human rights; and (5) when climate change violates human rights, the aggrieved parties should be compensated.

On the basis of the aforementioned description, it is questionable whether climate change causes threat and harm to human rights. How will the human rights-based approach affect Taiwan in response to climate change? This paper argues that climate change indeed causes threat and harm to human rights – the right to life, health, adequate food, water, and adequate housing. After the domestication of five international human rights conventions, Taiwanese people are equipped to require the government of Taiwan to positively address the issues of threat and harm to human rights caused by climate change.

This paper comprises five parts. In addition to the introduction and conclusion, part II discusses the current developments in the international climate change and international human rights legal regimes and describes how the two fields are gradually coming into interplay. Part III confirms, with evidence, how climate change causes threat and harm to human rights. Part IV proposes what obligations the government of Taiwan should assume after the domestication of five international human rights conventions and requests that the government of Taiwan should accelerate its actions to address climate change issues in view of fulfilling human rights obligations.

## The Development and the Interplay of International Climate Change and International Human Rights Legal Regimes

### *The Development of the International Climate Change Legal Regime* **The UNFCCC and the Kyoto Protocol**

Since 1988, climate change has received increasing attention and has become an international environmental issue. In particular, the harmful effects of climate change as a result of global warming have raised many concerns among countries around the globe. In 1990, the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) set up the Intergovernmental Panel on Climate Change (IPCC) to assess climate change based on available scientific information and to evaluate the impacts on the environment and economic society. In reports, Working Group I assesses the physical scientific aspects of the climate system and climate change, Working Group II assesses the vulnerability of socio-economic and natural systems to climate change and options for adaptation to it, and Working Group III assesses options for mitigating climate change.<sup>6</sup> In 1990, the IPCC began successively submitting reports about climate change, respectively including the first report in 1990, the second report in 1995, the third report in 2001, the fourth report in 2007, and the fifth report in 2013/2014. The recent fifth report indicated that greenhouse gases emitted by human activities are extremely likely to be the dominant cause of global warming that has been occurring since the mid-20th century.<sup>7</sup>

To respond to climate change, a treaty was adopted (United Nations Framework Convention on Climate Change, UNFCCC) during the UN Conference on Environment and Development, held in Rio de Janeiro in 1992. It entered into force in 1994 and became the prologue of every nation's attempt to slow down global warming and decrease the potential of climate system collapse. The UNFCCC requires industrialized countries in Annex I (OECD members, European Union, Former Communist Eastern Europe, and the Russian Federation) to lower greenhouse gas emissions to the levels of 1990 by the year 2000 for the sake of keeping greenhouse gas concentration in the atmosphere in balance with the climate.

The Kyoto Protocol, adopted in 1997, entered into force on February 16, 2005, and formally obligates

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<sup>6</sup> *Working Group/Task Force, IPCC*, [http://www.ipcc.ch/working\\_groups/working\\_groups.shtml](http://www.ipcc.ch/working_groups/working_groups.shtml) (last visited May. 1, 2015).

<sup>7</sup> IPCC, CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS: SUMMARY FOR POLICY MAKER (Working Group I, The Fifth Assessment Report) 15 (2013).

industrialized countries in Annex B to reach individual targets for reducing greenhouse gas emissions from 2008 to 2012. Overall, these industrial countries are required to lower greenhouse gas emissions by 5.2%, compared to the total emissions of the 1990s. Additionally, there are 3 mechanisms in the Protocol designed to assist the Parties in achieving their goals of reducing greenhouse gas emissions; namely, Joint Implementation, Clean Development Mechanisms, and Emissions Trading.

### The Paris Agreement

In 2015, parties to the UNFCCC adopted an agreement to replace the Kyoto Protocol at COP 21 which is known as the Paris Agreement. Its aims are to limit the increasing temperature and strengthen parties' ability to overcome the adverse impact of climate change. After receiving ratifications from 55 countries which also contain at least 55 percent of global emissions, the Paris Agreement entered into force on November 4, 2016.<sup>8</sup> The Paris Agreement receives 195 signatures and there are 186 countries either ratified, accepted, approved or accessioned to the agreement by the year of 2019.<sup>9</sup>

To limit the range of increasing temperature well below 2 degrees Celsius above pre-industrial levels is a long-term goal of the Paris Agreement.<sup>10</sup> For the purpose of fulfilling low carbon future goals, it extends the duty of reducing greenhouse gas (GHG) emission to all the parties, including developed and developing countries.<sup>11</sup> On the basis of their nationally determined contributions (NDCs), every party should control its amount of GHG emission by its domestic measures.<sup>12</sup> Moreover, a "global stocktake" mechanism will be implemented from 2023 and taken place every 5 years to assess the progress toward climate change of all the parties.<sup>13</sup>

The Paris Agreement develops several frameworks in finance, technology and capacity-building support hoping that the developed countries may voluntarily assist developing and the most vulnerable countries to strengthen their ability to combat climate change. In the finance frameworks, besides the management of finance resource, it also contains climate change fund and 100 billion USD per year provided by the developed countries.<sup>14</sup> The technology framework not only strengthens further research, development and demonstration on technology but also request the subsidiary body to provide periodical assessment reports on technology development and transfer.<sup>15</sup> Under the capacity-building framework, it establishes the Paris Committee on Capacity-building to promote building capacity of the developing country parties and as a regulatory body on the 2016-2020 workplan.<sup>16</sup>

In addition to the goals and mechanisms mentioned above, the Paris Agreement also contains training, transparency and implementation and compliance provisions. Each party shall cooperate to provide climate change education and training and publish relevant information, such as anthropogenic emission reports, financial reports and information related to climate change impact etc., to its own citizens and other parties.<sup>17</sup> The implementation and compliance mechanism then establishes a committee to report parties' actions and progress annually.<sup>18</sup>

### COP

It is delineated in the UNFCCC, the Kyoto Protocol and the Paris Agreement that the Secretariat shall assist in convening the Conference of Parties to the UNFCCC (COP), the Meeting of the Parties to the Kyoto

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<sup>8</sup> *The Paris Agreement*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement> (last visited July. 8, 2019)

<sup>9</sup> UNITED NATIONS TREATY COLLECTION, [https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=XXVII-7-d&chapter=27&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en) (last visited July.8, 2019)

<sup>10</sup> The Paris Agreement, art. 2.1.(a).

<sup>11</sup> *The Paris Agreement*, *supra* note 7.

<sup>12</sup> *Nationally Determined Contribution*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs> (last visited July. 9, 2019)

<sup>13</sup> The Paris Agreement, art. 14.

<sup>14</sup> UNFCCC, Decision 1/CP. 21 (Jan. 2016)

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> The Paris Agreement, art. 12, 13.

<sup>18</sup> The Paris Agreement, art. 15.

Protocol (CMP), and the Meeting of the Parties to the Paris Agreement (CMP). To date, there have been 24 sessions of COP completed, along with 14 sessions of CMP and 1 session of CMA. The intention is to review the implementation of the treaty by all Parties, promote compliance, review relevant fund use and reports from subsidiary bodies, and provide relevant information and opportunities for exchange. Important results from recent sessions of the COP are as follows:

The international community shows high degrees of attention to the work of climate change adaptation at the COP 13 in 2007 (Bali Conference). The Bali Action Plan, adopted during this conference, established that both mitigation and adaptation are important in order to withstand the impacts of climate change.<sup>19</sup> This COP ensured the setup of the Adaptation Fund and proposed a scheme about technology development and transfer in order to assist developing countries to combat against the adverse effects of climate change.

The Copenhagen Accord, which is not legally binding, was agreed at COP 15 in 2009 (Copenhagen Conference). The main content of the Accord consists of five major decisions:<sup>20</sup> (1) emphasizing that the international community should act jointly on the requirement of preventing a global temperature increase of over 2 degrees Celsius; (2) establishing a comprehensive adaptation plan; (3) re-emphasizing that developed countries should provide funds to developing countries for the development of adaptation policies and plans; (4) requiring Annex I countries to submit quantified economy-wide emission targets for 2020; and (5) requiring Non-Annex I countries to submit the contents of mitigation actions.

The Cancun Agreement was reached at COP 16 in 2010 with 6 important decisions:<sup>21</sup> (1) recognizing that joint cooperation from all parties is required to address the anthropogenic climate change issues and that mitigation is equally important as adaptation; (2) establishing the Cancun Adaptation Framework; (3) providing assistance to developing countries in reducing deforestation and forest degradation; (4) adopting various methods to improve and accomplish cost-effective mitigation actions – voluntary emission reduction plans must comply with measurable, reportable, and verifiable (MRV) mechanisms; (5) providing funds and technology to developing countries for mitigation and adaptation; and (6) establishing a Green Climate Fund. Meanwhile, in the preamble of the Cancun Agreement, the COP observes resolution 10/4 of the UN Human Rights Council on human rights and climate change, which recognizes the direct and indirect adverse impacts of climate change on the enjoyment of human rights and the particularly harmful impacts on those who are already vulnerable due to geography, gender, age, minority status, or disability.

The Durban Package was created in 2011 at COP 17 (Durban Conference) with 3 major decisions:<sup>22</sup> (1) drafting legal documents, to be completed in 2015 and take effect in 2020, for the post-Kyoto era; (2) extending the Kyoto Protocol for at least five years; and (3) launching the Green Climate Fund.

COP 18 in 2012 (Doha Climate Gateway) extended the discussion of the resolutions from the previous COPs and reached 4 major decisions:<sup>23</sup> (1) ensuring that the second round of commitments of the Kyoto Protocol are extended until the end of 2020; (2) launching the "Durban Platform" negotiations, where dual tracks are underway: one is to discuss the framework for a new treaty, and the other is to discuss how to improve ambitions and actions of greenhouse gas emissions reduction; (3) negotiating the "loss and damage" operation model to ensure that developed countries will compensate for the loss that developing countries suffered due to climate change; and (4) committing the long-term funds for the Green Climate Fund, where developed countries will disburse 100 billion US dollars each year prior to 2020.

Major decisions reached at COP 19 in 2013 include (1) each Contracting Party, prior to the first quarter of 2015, should submit an intended nationally determined contribution plan concerning greenhouse gas reduction; (2) establishing Warsaw International Mechanism on Loss and Damage; (3) supporting developing countries with the climate change mitigation and adaptation funds; (4) reducing emissions that are generated from deforestation; and (5) assisting developing countries to gain additional progress in coping with climate change.

COP 20 in 2014 was considered the precursor to COP 21 (Paris Climate Conference). Due to the expectation of generating a new protocol in 2015, a draft protocol was completed in COP 20. In this decision, it was stated that the new protocol will adopt balanced measures to address issues of mitigation, adaptation, funding, technological development and transfer, capacity building, and action transparency.<sup>24</sup> In addition, it

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<sup>19</sup> UNFCCC, Decision 1/CP. 13 (Dec. 2007).

<sup>20</sup> UNFCCC, Decision 2/CP. 15 (Dec. 2009).

<sup>21</sup> UNFCCC, Decision 1/CP. 16 (Dec. 2010).

<sup>22</sup> UNFCCC, Decision 1/CP. 17 (Dec. 2011).

<sup>23</sup> UNFCCC, Decision 2/CP. 18 (Dec. 2012).

<sup>24</sup> UNFCCC, Decision 1/CP. 20 (Dec. 2014).

was agreed that, in reference to the decision concerning the Warsaw International Mechanism on Loss and Damage to initiate a two-year work plan to clarify the activities and requirements pertaining to loss and damage.<sup>25</sup>

The main themes of COP 22 in 2016 was to discuss methods of fully implementing the Paris Agreement. COP 22 in the end reached 4 major decisions: (1) enhancing the implementing effectiveness and transparency of the Paris Agreement;<sup>26</sup> (2) carrying out and review long-term climate finance, and strengthen the management of climate adaptation fund operation;<sup>27</sup> (3) encouraging each party to make national adaptation plans and also assist the developing countries to make plans in line with their abilities;<sup>28</sup> (4) reviewing the Warsaw International Mechanism, recommend that the reviews on loss and damage take place no more than 5 years apart and cooperate with both internal and external bodies of the Paris Agreement.<sup>29</sup>

COP 23 in 2017 (Bonn Climate Conference) extended the goals of Paris Climate Conference to keep implementing and promoting the Paris Agreement. There were 6 major decisions: (1) urging each Contracting Party to prepare climate change action plans and to stipulate technical and process rulebook of implementing the Paris Agreement;<sup>30</sup> (2) assisting Pacific island countries to enhance the adapting capacity of climate change; (3) phasing out the use of fossil fuel, mitigate carbon emission and accelerate energy transformation; (4) promoting sustainable agriculture; (4) strengthening the relationship between ocean and UNFCCC; (6) extending Climate Finance and the Adaptation Fund resource and allocate the use of the fund in stages.

The primary mission of COP 24 in 2018 was to decide the implementing way of the Paris Agreement. The Conference finally reached the consensus to make up a rulebook for the Paris Agreement. 4 key points appeared in the rulebook: (1) every Contracting Party agreed to use, from 2019, the guidelines for carbon emission inventories made by Intergovernmental Panel on Climate Change;<sup>31</sup> (2) every Contracting Party promised to make efforts to response to climate change and to ensure the transparency of information;<sup>32</sup> (3) developed countries should assist developing countries to acquire climate finance and deliver reports related to climate finance;<sup>33</sup> (4) every Contracting Party undertaked the global stocktake to the Paris Agreement every 5 years ensuring the implementation process in line with long-term goal.<sup>34</sup>

### *The Development of International Human Rights Legal Regime*

Since the establishment of the UN in 1945, a series of international human rights treaties and other documents have been adopted for the purposes of maintaining international peace and protecting human rights. In December 10, 1948, the UN adopted and published the Universal Declaration of Human Rights (UDHR), which begins with the proclamation that the declaration is to be "as a common standard of achievement for all peoples and all nations" and which for the first time clearly defines the fundamental rights that all mankind should enjoy. It is difficult to reach a consensus in the international community on a single treaty that covers civil and political rights and economic, social, and cultural rights at the same time. Therefore, to promote and implement human rights protection as delineated in the UN Charter and the UDHR, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR) were signed respectively in 1966. Both Covenants, entered into force in 1976, illustrate fundamental human rights and urge every country to actively implement human rights protection. The UDHR, the ICCPR, and the ICESCR are collectively known as the International Bill of Human Rights.

The scope covered by human rights gains clarity through the process of making specific treaties. Since the publication of the UDHR, there have been 9 core international human rights treaties, and each has an independent committee of experts overseeing the implementation of each treaty. The 9 core treaties are as follows:

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<sup>25</sup> UNFCCC, Decision 2/CP. 20 (Dec. 2014).

<sup>26</sup> UNFCCC, Decision 1/CP. 22 (Dec. 2016).

<sup>27</sup> UNFCCC, Decision 7/CP. 22 (Dec. 2016).

<sup>28</sup> UNFCCC, Decision 6/CP. 22 (Dec. 2016).

<sup>29</sup> UNFCCC, Decision 3/CP. 22 (Dec. 2016).

<sup>30</sup> UNFCCC, Decision 1/CP. 23 (Dec. 2017).

<sup>31</sup> UNFCCC, Rulebook, Article 4/CP.24 (Dec. 2018).

<sup>32</sup> UNFCCC, Rulebook, Article 13/CP.24 (Dec. 2018).

<sup>33</sup> UNFCCC, Rulebook, Article 9/CP.24 (Dec. 2018).

<sup>34</sup> UNFCCC, Rulebook, Article 14/CP.24 (Dec. 2018).

- The International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) was adopted in 1965. The Committee on the Elimination of Racial Discrimination (CERD) monitors the implementation of the Convention.
- The International Covenant on Civil and Political Rights (ICCPR) and the Optional Protocol to the ICCPR was adopted in 1966. The Second Optional Protocol to the ICCPR, aiming at the abolition of the death penalty, was adopted in 1989. The Human Rights Committee (CCPR) monitors the implementation of the Covenant.
- The International Covenant on Economic, Social, and Cultural Rights (ICESCR) was adopted in 1966. The Optional Protocol to the ICESCR was adopted in 2008. The Committee on Economic, Social and Cultural Rights (CESCR) monitors the implementation of the Covenant.
- The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was adopted in 1979. The Optional Protocol to the CEDAW was adopted in 1999. The Committee on the Elimination of Discrimination against Women (CEDAW) monitors the implementation of the Convention.
- The Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment (CAT) was adopted in 1984. The Committee Against Torture (CAT) monitors the implementation of the Convention. The Subcommittee on Prevention of Torture and other Cruel, Inhuman, or Degrading Treatment or Punishment (SPT) was set up by the 2002 Optional Protocol to the CAT to monitor detaining places of State parties.
- The Convention on the Rights of the Child (CRC) was adopted in 1989. The Optional protocol to the CRC on the involvement of children in armed conflict and the Optional protocol to the CRC on the sale of children, child prostitution, and child pornography were adopted in 2000. The Committee on the Rights of the Child (CRC) monitors the implementation of the Convention.
- The International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW) was adopted in 1990. The Committee on Migrant Workers (CMM) monitors the implementation of the Convention.
- The Convention on the Rights of Persons with Disabilities (CRPD) and the Optional Protocol to the Convention on the Rights of Persons with Disabilities was adopted in 2006. The Committee on the Rights of Persons with Disabilities (CRPD) monitors the implementation of the Convention.
- The International Convention for the Protection of All Persons from Enforced Disappearance (CPED) was adopted in 2006. The Committee on the Protection of All Persons from Enforced Disappearance (CED) monitors the implementation of the Convention.

In addition to international treaties on human rights, there are regional human rights treaties, such as the 1949 European Convention on Human Rights (ECHR), the 1969 American Convention on Human Rights (ACHR), the 1981 African Charter on Human and Peoples' Rights, and the 1990 Universal Islamic Declaration of Human Rights.

### ***Interplay of the Legal Regimes between International Climate Change and International Human Rights***

The international climate change legal regime has been gradually expanding, undergoing scientific discovery, issue forming, definition of problems, international negotiation, regulation formulation, and interaction with the field of human rights. Environmental degradation has been recognized as a human rights violation in European Court of Human Rights since 1995.<sup>35</sup> However, it is not until 2008 that the UN Human

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<sup>35</sup> See *Lopez Ostra v. Spain*, 20 Eur. Ct. H. R. 277 (1995); See *Hatton and Others v. UK*, Eur. Ct. H. R. (2001).

Rights Council expressed in Resolution 7/23 concerning "Human Rights and Climate Change" that "climate change poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights" and requested that the Office of the UN High Commissioner for Human Rights (OHCHR) perform an in-depth study on the relationship between climate change and human rights.<sup>36</sup>

In 2009, OHCHR submitted a study on the relationship between climate change and human rights (A/HRC/10/61). Subsequently, the UN Human Rights Council adopted resolution 10/4 concerning "Human Rights and Climate Change," which notes that "climate change-related impacts have a range of implications, both direct and indirect, for the effective enjoyment of human rights..."; that the effects of climate change "will be felt most acutely by those segments of the population who are already in a vulnerable situation..."; and that "effective international cooperation to enable the full, effective, and sustained implementation of the United Nations Framework Convention on Climate Change... is important in order to support national efforts for the realization of human rights implicated by climate change-related impacts."<sup>37</sup>

In 2011, the Human Rights Council adopted Resolution 18/22 concerning "Human Rights and Climate Change". This resolution was submitted by the Philippines and Bangladesh, supported by 43 co-sponsors, including the Maldives, Germany, Spain, and others.<sup>38</sup> Resolution 18/22 affirms that obligations, standards, and principles of human rights may be affected by climate change; recognizes that international and national policy-making in the field of climate change should be strengthened; recognizes that policy coherence, legitimacy, and sustainable outcomes should be improved; and appeals for the formulations of all actions and policies related to climate change to respect human rights and to strengthen the cooperation between human rights groups and climate change groups.

However, when compared to the efforts made by the UN Human Rights Council and OHCHR, the UNFCCC and its relevant bodies demonstrate a disappointing lack of attention to the interplay of legal regimes between climate change and human rights. Until now, only the preamble of the Cancun Agreement acknowledged the resolution 10/4 of the UN Human Rights Council and recognizes that the adverse effects of climate change have a range of direct and indirect implications for the effective enjoyment of human rights, especially for those who are already vulnerable owing to geography, gender, age, indigenous or minority status, or disability.<sup>39</sup>

## The Specific Impact, Threats, or Harm of Climate Change to Human Rights

### *The Right to Life*

The right to life is the foundation of all human rights. It is the supreme and inviolable right, which is not to be derogated, even if a country is under great emergency.<sup>40</sup> A state not only bears the passive obligation of not depriving an individual's right to life, but also bears the positive obligation of actively preventing the violation of an individual's right to life and of providing the necessary conditions for the existence of the right to life. The right to life is clearly defined in Article 3 of the UDHR<sup>41</sup>, Article 6.1 of the ICCPR<sup>42</sup>, and Article 6.1 of the CRC<sup>43</sup>.

The IPCC assessment report showed that, as the frequency increases of extreme weather events caused by climate change, such as tornados, typhoons, storms, forest fires, and heat waves, human life might directly be impacted.<sup>44</sup> The rising sea levels can flood coastal areas and result in people's drowning, injury, or other loss of

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<sup>36</sup> *Human Rights and Climate Change*, UNITED NATIONS HUMAN RIGHTS, <http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx> (last visited May 1, 2015); See generally, John H. Knox, *Linking Human Rights and Climate Change at the United Nations*, 33 HARV. ENV'T'L. L. R., 477-498 (2009).

<sup>37</sup> *Human Rights and Climate Change*, *supra* note 35.

<sup>38</sup> *Id.*

<sup>39</sup> UNFCCC, *supra* note 20.

<sup>40</sup> CCPR, General Comments No. 6 on Art. 6, para. 1.

<sup>41</sup> UDHR, art. 3: "Everyone has the right to life, liberty and security of person."

<sup>42</sup> ICCPR, art. 6.1: "Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."

<sup>43</sup> CRC, art. 6.1: "States Parties recognize that every child has the inherent right to life."

<sup>44</sup> IPCC, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION AND VULNERABILITY (Working Group II, The Fifth Assessment Report) 720-21 (2014).



life.<sup>45</sup> Furthermore, climate change may also increase the incidence of respiratory or cardiovascular problems.<sup>46</sup> Therefore, climate change can directly and indirectly affect and threaten human life. If a state does not implement the appropriate legislation, strategies, and policies required to address climate change and thereby protect an individual's right to life, the state can be accused of being violating its obligations under international human rights treaties.

### *The Right to Health*

The right to health refers to "the right to the enjoyment of the highest attainable standard of physical and mental health." As human society develops, humanity is no longer satisfied with simply being alive, but expects to live a healthy life. In addition to receiving medical services in a narrow sense, the right to health also refers to, in a broader sense, the satisfaction of all relevant elements that sustain a healthy life.<sup>47</sup> The right to health is defined as "the highest attainable standard" of physical and mental health because it takes into account the differences in individuals' physical and mental status, differences in individuals' life styles, deficiencies in individuals' social and economic conditions, and the prioritization of national resource allocation. Therefore, the right to health can be understood as a right with the "highest attainable standard."<sup>48</sup> It is clearly defined in Article 25 of the UDHR,<sup>49</sup> Article 12 of the ICESCR,<sup>50</sup> Article 12 of the CEDAW,<sup>51</sup> and Article 24 of the CRC.<sup>52</sup>

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<sup>45</sup> SIOBHÁN MCLNERNEY-LANKFORD, MAC DARROW & LAVANYA RAJAMAN, HUMAN RIGHTS AND CLIMATE CHANGE: A REVIEW OF THE INTERNATIONAL LEGAL DIMENSIONS 13-14 (2011).

<sup>46</sup> IPCC, *supra* note 43, at 723-29.

<sup>47</sup> JANUSZ SYMONIDES, HUMAN RIGHTS: CONCEPT AND STANDARDS 152 (2000).

<sup>48</sup> CESCR, General Comments No. 14, para. 9.

<sup>49</sup> UDHR, art. 25: "(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection."

<sup>50</sup> ICESCR, art.12:

1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:
  - (a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;
  - (b) The improvement of all aspects of environmental and industrial hygiene;
  - (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;
  - (d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.

<sup>51</sup> CEDAW, art. 12:

1. States Parties shall take all appropriate measures to eliminate discrimination against women in the field of health care in order to ensure, on a basis of equality of men and women, access to health care services, including those related to family planning.
2. Notwithstanding the provisions of paragraph 1 of this article, States Parties shall ensure to women appropriate services in connection with pregnancy, confinement and the post-natal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation.

<sup>52</sup> CRC, art. 24:

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
  - (a) To diminish infant and child mortality;
  - (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;
  - (c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of

The right to health is closely related to other human rights and is a basic human right integral to the exercising of other human rights. In order for people to enjoy a healthy life, various basic elements to health should be satisfied; for example, adequate food and nutrition, clothing, shelter, safe drinking water, adequate sanitation, safe working conditions, and a healthy environment.<sup>53</sup> In addition to being relevant to human health and infectious disease, occupational and other illnesses may also be related to the violation of the right to life.<sup>54</sup>

According to Article 1.1 of the UNFCCC, the definition of adverse effects of climate change is “changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.” Therefore, it has been proven that climate change has impacts and threats on human health.

Extreme weather causes crop failures, leading to malnutrition in children. Furthermore, global warming will increase the spread of diarrhea, heart and lung diseases, infectious diseases, malaria, or other mosquito or insect-transmitted diseases. It is clear that climate change poses a direct threat to human health.<sup>55</sup> The World Health Organization (WHO) also indicated the threats of climate change on humans’ right to health: “It is now generally acknowledged that the global climate is changing, as the earth becomes warmer. This change has the potential to affect human health in a number of ways, for instance by altering the geographic range and seasonality of certain infectious diseases, disturbing food-producing ecosystems, and increasing the frequency of extreme weather events, such as hurricanes.”<sup>56</sup> Therefore, if a state does not implement the appropriate legislation, strategies, and policies required to address climate change and thereby to protect an individual's right to health, the state can be accused of being violating its obligations under international human rights treaties.

### ***The Right to Adequate Food***

Food is the basic element of human survival. The CESCR comments that the right to adequate food is closely associated with human dignity and is indispensable to the realization of other human rights.<sup>57</sup> The right to food includes freedom from hunger, food insecurity, and malnutrition, which may directly or indirectly result in death and violate the right to life.<sup>58</sup> Also, if a state of constant, persistent, and indefinite access to a food supply in reasonable quantity and quality is not achievable, the right to physical and mental health cannot be realized. The right to adequate food is clearly defined in Article 25 of the UDHR,<sup>59</sup> Article 11 of the ICESCR,<sup>60</sup> Article 14.2(a), 14.2(e), 14.2(g), and 14.2(h) of the CEDAW,<sup>61</sup> and Article 24.2, 24.3,<sup>62</sup> and 27.3<sup>63</sup> of the CRC.

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environmental pollution;

(d) To ensure appropriate pre-natal and post-natal health care for mothers;

(e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;

(f) To develop preventive health care, guidance for parents and family planning education and services.

3. States Parties shall take all effective and appropriate measures with a view to abolishing traditional practices prejudicial to the health of children.

4. States Parties undertake to promote and encourage international co-operation with a view to achieving progressively the full realization of the right recognized in the present article. In this regard, particular account shall be taken of the needs of developing countries.

<sup>53</sup> CESCR, *supra* note 47, para. 4.

<sup>54</sup> William A. Schabas, *Right to Life*, in 3 ENCYCLOPEDIA OF HUMAN RIGHTS 1, 446 (David P. Forsythe ed., 2009).

<sup>55</sup> OHCHR, REPORT OF THE OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS ON THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND HUMAN RIGHTS 12 (2009).

<sup>56</sup> *Climate Change*, <http://www.who.int/topics/climate/en/index.html> (last visited May 1, 2019).

<sup>57</sup> CESCR, General Comments No. 12, para. 4.

<sup>58</sup> George Kent, *Right to Food and Adequate Standard of Living*, in ENCYCLOPEDIA OF HUMAN RIGHTS 225, 225-26 (David P. Forsythe ed., 2009).

<sup>59</sup> UDHR, art. 25.

<sup>60</sup> ICESCR, art. 11:

1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous

Regional and global crop productions are highly susceptible to the climate system. Extreme weather and global warming has led to a decline in global food production. As the temperature rises, the global population in hunger increases.<sup>64</sup> The IPCC assessment report showed that, without an increase in additional food production investment, the rate of malnutrition population in humans caused by climate change will increase by up to 29% by 2050 (the number of children under the age of five facing malnutrition will increase to about 25 million).<sup>65</sup> Meanwhile, the promotion of biofuel in order to reduce greenhouse gas emissions and to mitigate the speed of global warming may cause a rise in food prices and affect food supply.<sup>66</sup>

The CESCR considered that, “Even where a State faces severe resource constraints, whether caused by a process of economic adjustment, economic recession, climatic conditions or other factors, measures should be undertaken to ensure that the right to adequate food is especially fulfilled for vulnerable population groups and individuals.”<sup>67</sup> Accordingly, if a State does not implement the appropriate legislation, strategies, and policies to respond to climate change for protecting the right to adequate food, the State can be accused of being violating its obligations under international human rights treaties.

### *The Right to Water*

Water is a limited natural resource on which humans depend as a necessity to sustain life and health. It is also related to basic human needs for food, clothing, shelter, and medicine. However, today, there are more than 800 million people worldwide who are denied access to drinking water, and 2.5 billion people lack a

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improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent.

2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international co-operation, the measures, including specific programmes, which are needed:

(a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;

(b) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.

<sup>61</sup> CEDAW, art. 14.2:

2. States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right:

(a) To participate in the elaboration and implementation of development planning at all levels;

(b) To have access to adequate health care facilities, including information, counselling and services in family planning;

(c) To benefit directly from social security programmes;

(d) To obtain all types of training and education, formal and non-formal, including that relating to functional literacy, as well as, inter alia, the benefit of all community and extension services, in order to increase their technical proficiency;

(e) To organize self-help groups and co-operatives in order to obtain equal access to economic opportunities through employment or self employment;

(f) To participate in all community activities;

(g) To have access to agricultural credit and loans, marketing facilities, appropriate technology and equal treatment in land and agrarian reform as well as in land resettlement schemes;

(h) To enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications.

<sup>62</sup> CRC, art. 24.3.

<sup>63</sup> CRC, art. 27.3: “States Parties, in accordance with national conditions and within their means, shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programmes, particularly with regard to nutrition, clothing and housing.”

<sup>64</sup> MCLNERNEY-LANKFORD, DARROW & RAJAMAN, *supra* note 44, at 14-5.

<sup>65</sup> IPCC, *supra* note 43, at 513.

<sup>66</sup> *Id.*

<sup>67</sup> CESCR, General Comment No. 12, para. 28.

hygienic facility for drinking water.<sup>68</sup> Three major types of factors contribute to this phenomenon: economic factors (poverty), social factors (inequality and urbanization), and environmental factors (water pollution, water source depletion, and climate change).<sup>69</sup>

The right to water refers to "the right of everyone to sufficient, safe, acceptable, physically accessible, and affordable water."<sup>70</sup> Although not explicitly stated in international human rights treaties, the right to water is an independent human right. Based on the importance of the right to water and its necessary condition to realize other human rights (e.g., the right to health, adequate food, and adequate housing), the CESCR stated that the right to water is a human right and that it contains both freedoms and entitlements.<sup>71</sup> Such freedoms include the right to maintain access to existing water supplies and to be free from interference or disconnection, and the entitlements include the right to a system of water supply and management in equal opportunity.<sup>72</sup> The UN General Assembly adopted Resolution 64/292 and declared that enjoying sufficient, safe, and equitably accessed water is a basic human right.<sup>73</sup> Moreover, the right to water can also be presented as a kind of human right from Article 25.1 of the UDHR<sup>74</sup>, Articles 12.1 and 12.2 of the ICESCR,<sup>75</sup> Article 14.2(h) of the CEDAW,<sup>76</sup> and Article 24.2(c) of the CRC.<sup>77</sup>

The IPCC assessment report showed that 80% of the human population worldwide is feeling the impact of water shortage, and water resources available to about 600 million people will be reduced by more than 20% if the Earth's temperature rises by one degree Celsius over the average temperature of the 1990s.<sup>78</sup> The OHCHR also believes that loss of glaciers and reduction in snow cover severely impact 1.1 billion people who depend on such water resources and that extreme weather events (such as flood and drought) also impact the water resource supply.<sup>79</sup> Thus, climate change poses a severe threat to water supply, sanitation, and safety. Under the requirements of human rights conventions, a state has the obligation to respect, protect, and realize the right to water. If the state does not establish appropriate legislation, strategies, and policy to address climate change, thereby realizing the individual's right to water, the state can be accused of being violating its obligation.

### *The Right to Adequate Housing*

To enjoy the right to an adequate standard of living, in addition to sufficient food and adequate drinking water, adequate housing is also very important. According to UN statistics, more than 100 million people worldwide are homeless, and more than 1.1 billion people have no adequate housing or living environment.<sup>80</sup> Furthermore, being without adequate housing or a place to live may pose a threat to life and health.<sup>81</sup> Therefore, to guarantee the full enjoyment of human rights, the right to adequate housing is an essential human right. It is clearly defined in Article 25.1 of the UDHR,<sup>82</sup> Article 11.1 of the ICESCR,<sup>83</sup> Article 14.2(h) of the CEDAW,<sup>84</sup> and Article 27.3 of the CRC.<sup>85</sup>

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<sup>68</sup> U.N. Office of the High Commissioner for Human Rights, Fact Sheet No. 35, The Right to Water, Aug. 2010, *available at*: <http://www.refworld.org/docid/4ca45fed2.html> (last visited May 1, 2019).

<sup>69</sup> See generally U.N. Development Programme, HUMAN DEVELOPMENT REPORT 2006: BEYOND SCARCITY-POWER, POVERTY AND THE GLOBAL WATER CRISIS (Basingstoke, United Kingdom, Palgrave Macmillan, 2006).

<sup>70</sup> CESCR, General Comment No. 15, para. 2.

<sup>71</sup> *Id.* para. 10.

<sup>72</sup> *Id.*

<sup>73</sup> G.A. Res. 64/292 (Jul. 28, 2010).

<sup>74</sup> UDHR, *supra* note 48.

<sup>75</sup> ICESCR, *supra* note 49.

<sup>76</sup> CEDAW, *supra* note 40.

<sup>77</sup> CRC, *supra* note 51.

<sup>78</sup> IPCC, *supra* note 43, at 248-50.

<sup>79</sup> OHCHR, *supra* note 54, at 11.

<sup>80</sup> Giulia Paglione, *Right to Housing and Shelter*, in *ENCYCLOPEDIA OF HUMAN RIGHTS* 433, 433 (David P. Forsythe ed., 2009).

<sup>81</sup> *Id.*

<sup>82</sup> UDHR, *supra* note 48.

<sup>83</sup> ICESCR, *supra* note 59.

<sup>84</sup> CEDAW, *supra* note 60.

<sup>85</sup> CRC, *supra* note 62.

The right to adequate housing should not be interpreted in a narrow or restrictive sense. It is not merely having a roof over one's head or viewing shelters exclusively as a commodity. Rather, the right to housing should be adequate, that is, the right to live somewhere in security, peace, and dignity.<sup>86</sup> The criteria of adequate, social, economic, cultural, climatic, ecological, and other factors should be taken into consideration.<sup>87</sup> The explanation of “adequate housing” should include at least seven factors: (1) legal security of tenure<sup>88</sup>; (2) availability of services, materials, facilities, and infrastructure<sup>89</sup>; (3) affordability<sup>90</sup>; (4) habitability<sup>91</sup>; (5) accessibility<sup>92</sup>; (6) location<sup>93</sup>; and (7) cultural adequacy.<sup>94</sup>

The IPCC assessment report showed that, if no special protection measure is adopted, 70 million to 150 million people worldwide will be forced to leave their homes by 2100, due to coastal flooding and land loss as a result of climate change.<sup>95</sup> The OHCHR reports also showed that rising sea levels and storm surges will directly impact coastal areas and cause relocation of the residents in the Arctic region and in low-lying island states.<sup>96</sup> Therefore, climate change is in many ways a serious threat to the right to housing. Under the human rights treaties, a state has obligation to respect, protect, and realize the right to adequate housing. If the state stays passive without adopting appropriate legislation, strategies, and policies to address climate change, the state can be accused of being violating its obligation.

## International Climate Change Legal Regime, International Human Rights Legal Regime, and Taiwan

### *The Impact of International Climate Change Legal Regime on Taiwan* **Greenhouse Gas Emissions in Taiwan**

The level of greenhouse gas emissions in Taiwan in 1990 was 136.7 million metric tons of carbon dioxide equivalent; by 2012, the emissions reached 270.7 million metric tons of carbon dioxide equivalent.<sup>97</sup>

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<sup>86</sup> CESCR, General Comment No. 4, para. 7.

<sup>87</sup> *Id.* para. 8.

<sup>88</sup> *Id.* para. 8(a): “(a) *Legal security of tenure*. Tenure takes a variety of forms, including rental (public and private) accommodation, cooperative housing, lease, owner-occupation, emergency housing and informal settlements, including occupation of land or property. Notwithstanding the type of tenure, all persons should possess a degree of security of tenure which guarantees legal protection against forced eviction, harassment and other threats....”

<sup>89</sup> *Id.* para. 8(b): “*Availability of services, materials, facilities and infrastructure*. An adequate house must contain certain facilities essential for health, security, comfort and nutrition. All beneficiaries of the right to adequate housing should have sustainable access to natural and common resources, safe drinking water, energy for cooking, heating and lighting, sanitation and washing facilities, means of food storage, refuse disposal, site drainage and emergency services.”

<sup>90</sup> *Id.* para. 8(c): “*Affordability*. Personal or household financial costs associated with housing should be at such a level that the attainment and satisfaction of other basic needs are not threatened or compromised. Steps should be taken by States parties to ensure that the percentage of housing-related costs is, in general, commensurate with income levels....”

<sup>91</sup> *Id.* para. 8(d): “*Habitability*. Adequate housing must be habitable, in terms of providing the inhabitants with adequate space and protecting them from cold, damp, heat, rain, wind or other threats to health, structural hazards, and disease vectors. The physical safety of occupants must be guaranteed as well....”

<sup>92</sup> *Id.* para. 8(e): “*Accessibility*. Adequate housing must be accessible to those entitled to it. Disadvantaged groups must be accorded full and sustainable access to adequate housing resources. Thus, such disadvantaged groups as the elderly, children, the physically disabled, the terminally ill, HIV-positive individuals, persons with persistent medical problems, the mentally ill, victims of natural disasters, people living in disaster-prone areas and other groups should be ensured some degree of priority consideration in the housing sphere....”

<sup>93</sup> *Id.* para. 8(f): “*Location*. Adequate housing must be in a location which allows access to employment options, health-care services, schools, childcare centres and other social facilities. This is true both in large cities and in rural areas where the temporal and financial costs of getting to and from the place of work can place excessive demands upon the budgets of poor households. Similarly, housing should not be built on polluted sites nor in immediate proximity to pollution sources that threaten the right to health of the inhabitants.”

<sup>94</sup> *Id.* para. 8(g): “*Cultural adequacy*. The way housing is constructed, the building materials used and the policies supporting these must appropriately enable the expression of cultural identity and diversity of housing. Activities geared towards development or modernization in the housing sphere should ensure that the cultural dimensions of housing are not sacrificed, and that, inter alia, modern technological facilities, as appropriate are also ensured.”

<sup>95</sup> IPCC, *supra* note 43, at 381-82.

<sup>96</sup> MCLNERNEY-LANKFORD, DARROW & RAJAMAN, *supra* note 44, at 17.

<sup>97</sup> EPA, 2014 REPUBLIC OF CHINA (TAIWAN) NATIONAL INVENTORY REPORT 42-43 (2014).

According to the newest national GHG report published by Environmental Protection Administration (EPA), the greenhouse gas emissions reached 293.125 million metric tons of carbon dioxide equivalent by 2016.<sup>98</sup> The total emission volume increase about 112.26% in 25 years.<sup>99</sup> When observing the emissions rate in 2016 by type of gas, carbon dioxide (CO<sub>2</sub>) was the largest amount of gas emitted in Taiwan, with about 95.26% of the total, followed by methane (CH<sub>4</sub>), about 1.92%; nitrous oxide (N<sub>2</sub>O) at about 1.6%; sulfur hexafluoride (SF<sub>6</sub>), about 0.37%; perfluorocarbons (PFCs), about 0.36%; hydrofluorocarbons (HFCs), about 0.34%; and nitrogen trifluoride (NF<sub>3</sub>), about 0.15%.<sup>100</sup> When calculating the power consumption into each sector, the CO<sub>2</sub> emissions from the energy departments in Taiwan account for 12.72% of the total emissions from fuel combustion in 2017; industries, 49.78%; transportation, 13.82%; services industry, 11.3%; residential, 11.39%, and agriculture, 1.0%.<sup>101</sup>

According to IEA's statistical data on 2016's CO<sub>2</sub> emissions, the total CO<sub>2</sub> emissions in Taiwan in 2016 was 257.8 million tons, which was 0.79% of total global emissions.<sup>102</sup> Per capita emissions in Taiwan in 2016 was 10.98 metric tons that was 6 metric tons more than in the world.<sup>103</sup> Thus, when the whole world is facing the serious challenges of climate change, Taiwan cannot avoid the issue.

### Reactions from Taiwan

Taiwan has a unique international position in that, with the current international political reality, it is unable to join any international climate change regulatory system. On one hand, Taiwan is not bound by the common obligation to fulfill the reduction of greenhouse gas emissions; on the other hand, Taiwan cannot utilize the mitigation and adaptation mechanisms, established by the Convention, the Protocol, or COPs, to assist in the implementation of domestic mitigation and adaptation measures for climate change. However, the government of Taiwan declared that, being part of the international society, Taiwan will comply with the objective and principles of these treaties through the implementation of relevant domestic policies, legislation, and administrative measures, and thereby fulfill the UNFCCC.

Before the Greenhouse Gas Reduction and Management Act was enacted in 2015, Taiwan has made several active contributions to the global effort in reducing greenhouse gas emission. In 2006, the Greenhouse Gas Reduction Act was drafted to be the legal basis for mitigating climate change effects. "Sustainable Energy Policy Framework" was announced in 2008 with the aim to cut back emissions the 2000 level by 2025 and to 50% of the 2000 level by 2050.<sup>104</sup> To achieve the emissions reduction target, the "Master Action Plan of Energy Conservation and Carbon Reduction" with 10 strategy plans<sup>105</sup> adapted in 2009 to integrate the inter-ministerial power to guide Taiwan toward a low-carbon society.<sup>106</sup>

Because the legislative process of the Greenhouse Gas Reduction Act had not been completed, the EPA of Taiwan declared in May 2012 that, based on the Air Pollution Control Act, greenhouse gases are air pollutants, the inventory of which is required to be reported. Subsequently, the EPA formulated "the Greenhouse Gas Emissions Reporting Regulation" in December 2012 and promulgated "the Required Report by Public and Private Premises of Stationary Pollution Sources of Greenhouse Gas Emissions" that requires operators of high-energy-consumption industries and high-energy-intensive industries to provide report and verification for greenhouse gas emissions. Meanwhile, in February 2014 the EPA published the "Governing

<sup>98</sup> EPA, 2018 REPUBLIC OF CHINA (TAIWAN) NATIONAL GHG REPORT 31 (2018), [http://unfccc.saveoursky.org.tw/2018nir\\_new/uploads\\_nc/00\\_nir\\_full.pdf](http://unfccc.saveoursky.org.tw/2018nir_new/uploads_nc/00_nir_full.pdf) (last visited July 20, 2019).

<sup>99</sup> *Id.*

<sup>100</sup> *Id.* at 32.

<sup>101</sup> Bureau of Energy, 106 TAIWAN STATISTICS AND ANALYSIS OF CO<sub>2</sub> EMISSION FROM FUEL COMBUSTION 23 (2018), [https://www.moeaboe.gov.tw/ecw/populace/content/ContentDesc.aspx?menu\\_id=6998](https://www.moeaboe.gov.tw/ecw/populace/content/ContentDesc.aspx?menu_id=6998) (last visited July 20, 2019).

<sup>102</sup> IEA, KEY WORLD ENERGY STATISTICS 2018, at 29,34. Total CO<sub>2</sub> emissions in the world is 32316 million metric tons.

<sup>103</sup> *Id.*

<sup>104</sup> MOEA, SUSTAINABLE ENERGY POLICY GUIDELINE 1 (2008).

<sup>105</sup> 10 strategy plans include (1) Establish a sound regulatory framework; (2) Build low-carbon energy systems; (3) Foster low-carbon communities to achieve a low-carbon society; (4) Promote a low-carbon industrial structure; (5) Develop green transportation networks; (6) Promote green environments and green architecture; (7) Develop energy-saving, carbon-reduction technologies; (8) Reduce public construction projects' energy consumption and carbon emissions; (9) Strengthen education on energy conservation and carbon reduction; (10) Boost public awareness and encourage civic action.

<sup>106</sup> *Energy Saving and Carbon Reduction Policy*, EPA, <http://www.epa.gov.tw/ct.asp?xItem=9958&ctNode=31350&mp=epa> (last visited May 1, 2019).

Greenhouse Gas Accreditation and Verification Bodies Regulation" to ensure the accuracy of the data of greenhouse gas emissions.<sup>107</sup>

In 2015, the Greenhouse Gas Reduction and Management Act (hereinafter "the Act") was passed and implemented as the single legislation focusing on climate change. It contains 6 chapters with 36 articles : Chapter 1, General Principles (Article 1-7), stipulating the objectives, authorities, terms and definitions; Chapter 2, Government Agency Responsibilities (Article 8-15), stipulating responsibilities for relevant central authorities (EPA) and local authorities; Chapter 3, Reduction Measures (Article 16-23), stipulating greenhouse gas inventory, verification, registration, qualifications of verifiers, greenhouse gas performance standards, starting of cap-and-trade, and offset sale requirement for reserved allowance and early action projects; Chapter 4, Education and Promotion (Article 24-27), stipulating the education and promotion of all levels of governmental institutions and agencies; Chapter 5, Penalties (Article 28-32), stipulating the penalties for emissions over account credits, penalties for evasion, obstruction or refusal of inspection, penalties for false reporting, non-compliance for emissions permit, and trading; and Chapter 6, Supplements (Article 33-37), stipulating the governmental institution and agencies of setting detailed rules and the implementation date.

Under the Act, from each sector of the central government to local government has their own duties to come up with programs dealing with climate change. It hopes to reach the goals by creating a partnership between central and local government. In the first stage, our EPA stipulated "National Climate Change Action Guidelines" in 2017 to declare 10 principles<sup>108</sup> and policy on climate change adaptation and mitigation.<sup>109</sup> The EPA also created the GHG Reduction Action Plan (hereinafter "Action Plan") in 2018 to control greenhouse gas emission and define responsibility of each sector.<sup>110</sup> Six sectors<sup>111</sup> divided by Promotion Program should propose the GHG Emission Control Action Programs to illustrate their specific measures and expected outcome.<sup>112</sup> At last, the local government should draft GHG control implementation plans and establish a long-term partnership with EPA to assist the execution of climate change plan.<sup>113</sup>

The Act still has defects which need to be deal with as soon as possible. These defects are as follows: (1) Climate change adaptation is stipulated in Article 1, 3, 5, 8, 13, 19 and 27, but these articles only give the definition to climate change adaptation, impose obligations of setting adaptation strategies on the central government, and allocate climate change fund to adaptation measures and researches. The Act says nothing about local governments' obligations regarding climate change adaptation and has no detailed rules or guidelines about adaptation strategies and measures; (2) Article 4 notes that greenhouse gas emissions are to be cut back to 50% of the 2005 level by 2050. This emission reduction target is a very long term object and becomes plausible. It lacks specific schedules and targets for short term or medium term objects; (3) Chapter 3 (Article 16 to Article 23) regulates greenhouse gas reduction strategies. However, these articles pay most attentions to requiring high-energy-consumption industries and high-energy-intensive industries to provide report and verification for emissions. They lack clarity in the enforcement of total greenhouse gas volume control, and the cap and trade mechanism.

### ***The Impact of International Human Rights Legal Regime on Taiwan***

#### **The Signing, Ratification, Depositing, and Domestication of International Treaties on Human Rights**

Since the withdrawal from the UN in 1971, Taiwan is unable to complete the ratifying procedure and to become one of the Contracting Parties of international treaties on human rights. In 1967, Taiwan signed the

<sup>107</sup> *Rule Making*, EPA, <http://www.epa.gov.tw/ct.asp?xItem=10051&ctNode=31351&mp=epa> (last visited May 1, 2019).

<sup>108</sup> 10 principles include: (1) comply with the provisions of the Paris Agreement and the Kigali Amendment to the Montreal Protocol; (2) consider environmental con-benefits; (3) implement green finance and cap-and-trade scheme; (4) comply with nuclear-free homeland objective; (5) consider mitigation and adaptation strategies in EIA; (6) enhance resilience development; (7) improve resource utilization; (8) establish communication platform; (9) boost international cooperation and authentic participation; and (10) increase public awareness and capacity.

<sup>109</sup> National Climate Change Action Guidelines, EPA, <https://www.epa.gov.tw/DisplayFile.aspx?FileID=390CA869717924B7&P=a94bc824-0114-4e92-a49e-9ac061defc12> (last visited July 29, 2019).

<sup>110</sup> EPA, 2018 REPUBLIC OF CHINA (TAIWAN) NATIONAL GHG REPORT 74 (2018), [http://unfccc.saveoursky.org.tw/2018nir\\_new/uploads\\_nc/00\\_nir\\_full.pdf](http://unfccc.saveoursky.org.tw/2018nir_new/uploads_nc/00_nir_full.pdf) (last visited July 20, 2019).

<sup>111</sup> Six sectors are energy sector, manufacturing sector, transportation sector, residential and commercial sector, agriculture sector and environment sector.

<sup>112</sup> EPA, *supra* note 109, at 78-80.

<sup>113</sup> *Id.* at 80.

ICCPR and the ICESCR. The Legislative Yuan ratified the aforementioned two treaties in 2009. In 2007, the Legislative Yuan ratified the CEDAW; however, when depositing all relevant instruments of ratification of these treaties, the UN Secretariat refused to accept those instruments submitted by Taiwan with the reason that the government of People's Republic of China is the sole legitimate representative of China. As a result, all three treaties on human rights did not have effects on Taiwan.

Although Taiwan cannot become a Contracting Party of any international human rights conventions, the Legislative Yuan of Taiwan enacted "The Act to Implement the International Covenant on Civil and Political Rights and the International Covenant on Economic Social and Cultural Rights" in 2009, "The Act to Implement the International Convention on the Elimination of Discrimination against Women" in 2011, "The Act to Implement the International Convention on the Rights of the Child," and "The Act to Implement the International Conventions on the Rights of Physical and Mental Disabilities" in 2014. These acts transformed the international human rights conventions into domestic laws based on raising the human rights standards of Taiwan to be in line with the international human rights system.

The structure and the content of four implementation acts of international human rights treaties are very similar. Hence, taking "The Act to Implement the International Covenant on Civil and Political Rights and the International Covenant on Economic Social and Cultural Rights" for instance:

Article 1 provides the legislative purpose and explains the legislative reasons for transforming the two Covenants into domestic law.

Article 2 provides that human rights protection provisions in the two Covenants have domestic legal status.

Article 3 provides that applications of the two Covenants should make reference to their legislative purposes and interpretations by the Human Rights Committee.

Article 4 provides that whenever exercise their functions all levels of governmental institutions and agencies should confirm to human rights protection provisions in the two Covenants; avoid violating human rights; protect the people from infringement by others; positively promote realization of human rights.

Article 5 provides that all levels of governmental institutions and agencies should take the responsibility for preparing, promoting and implementing human rights protection provisions in the two Covenants within their functions that are governed by existing laws and regulations. When multi functions are involved distinct governmental institutions and agencies should contact and coordinate themselves to carry out their responsibilities. The government should cooperate with other national governments and international non-governmental organizations and human rights institutions to realize promotion and protection of human rights provisions in the two Covenants.

Article 6 provides that the government should set up a human rights reports system in accordance with the two Covenants.

Article 7 provides that all levels of governmental institutions and agencies should preferentially allocate funds to implement human rights protection provisions in the two Covenants according to their financial status, and take steps to enforce.

Article 8 provides that all levels of governmental institutions and agencies should review laws, regulations, directions and administrative measures within their functions according to the two Covenants. All laws, regulations, directions and administrative measures incompatible to the two Covenants should be amended within two years after the Act enters into force by new laws, law amendments, law abolitions and improved administrative measures.

Article 9 provides the date for these directives to come into force.

### **Taiwan's Obligations**

Article 2 in all four Implementation Acts delineates that the provisions of human rights protection of each treaty have the same effect as those of domestic laws. Article 3 delineates that, when domestically implementing the provisions of those international treaties, the purpose of each treaty and the general comments made by the committee of each treaty must be referenced. Therefore, under the provisions of four Implementation Acts, Taiwan should assume relevant legal obligations to protect human rights.

In terms of civil and political rights, the government of Taiwan must respect and ensure the enjoyment of the treaties' rights to all individuals in its territory and subject to its jurisdiction.<sup>114</sup> Additionally, such national obligations are binding to all branches of the government of Taiwan, including the central government

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<sup>114</sup> CCPR, General comment 31, para. 3.



(executive branch, legislative branch, and judicial branch) and local governments.<sup>115</sup> "Respect" refers to preventing government agencies from violating relevant rights, while "ensure" refers to preventing private individuals or entities from impeding the rights to be realized between individuals or entities; for example, adopting appropriate measures or performing due diligence to prevent, punish, and investigate or to give redress to private individuals or entities who are harmed.<sup>116</sup> Where domestic legislation or measures lack provisions to implement relevant treaties' rights, the government of Taiwan must formulate necessary legislation or measures that give effect to those treaties' rights<sup>117</sup> and to offer effective remedies when such rights are violated.<sup>118</sup>

Taiwan must bear general legal obligations with regard to economic, social and cultural rights, where general legal obligations include immediate obligations and progressive obligations. The immediate obligations include the following: (1) Taiwan must ensure that individuals can exercise economic, social, and cultural rights in non-discriminatory conditions and (2) Taiwan must take appropriate actions (in particular, by providing legislative measures or judicial remedies) and expedite these actions.<sup>119</sup> Progressive obligations require Taiwan to take steps towards the full realization of economic, social, and cultural rights and, in principle, with no retrogressive measures.<sup>120</sup>

There are more obligations extended from progressive obligations: specific legal obligations, core obligations, and international obligations. Specific legal obligations have three types: (1) obligations to respect: The government of Taiwan cannot directly or indirectly interfere with the enjoyment of relevant rights; (2) obligations to protect: The government of Taiwan must prevent third parties from interfering in any way with the enjoyment of the relevant rights; (3) obligations to fulfill: The government of Taiwan must adopt the necessary measures to fully realize relevant rights.<sup>121</sup> Core obligations require that the government of Taiwan must ensure that the fulfillment of each right is reached at the minimum essential level.<sup>122</sup> International obligations require that the government of Taiwan facilitates the full realization of the relevant rights with the help of international cooperation and assistance.<sup>123</sup>

## Human Rights Reports

Article 6 in the Implementation Act of two Covenants requires the government of Taiwan to provide national human rights reports (the Report). According to the Compilation of Guidelines on the Form and Content of Reports to be Submitted by States Parties to the International Human Rights Treaties, the Report should include the common core document which contains nation's general information, legal structure and treaty approval situation, and the treaty-specific document that shows how states implement the treaties.<sup>124</sup> Taiwan started to write the Report by distinguishing writing scope of every sector.<sup>125</sup> A couple of experts and NGOs were invited to join the review conference in order to bring in as many opinions as possible in the Report.<sup>126</sup> After the Report released, several international human rights experts reviewed the report and give advice on what Taiwan can do to protect human rights fully.<sup>127</sup>

Taiwan has finished international reviews of the Report in 2013 and 2017. The third international review of the Report is now preparing. In the second Report, matters related to the environment were provided and explained by the EPA. According to EPA's information, the government of Taiwan has enacted some laws to deal with environmental protection problems, hold environmental protection competitions and provided

<sup>115</sup> *Id.* para 4.

<sup>116</sup> *Id.* para 8.

<sup>117</sup> ICCPR, art. 2(b).

<sup>118</sup> *Id.* art. 2(c).

<sup>119</sup> CESCR, General comment 3, para 1-5.

<sup>120</sup> *Id.* para. 9

<sup>121</sup> CESCR, General comment 15, para. 20-29.

<sup>122</sup> CESCR, *supra* note 85, para. 10.

<sup>123</sup> *Id.* para. 13; Knox, *supra* note 35, at 492-93.

<sup>124</sup> UNITED NATION, COMPILATION OF GUIDELINES ON THE FORM AND CONTENT OF REPORTS TO BE SUBMITTED BY STATES PARTIES TO THE INTERNATIONAL HUMAN RIGHTS TREATIES, paras. 24, 27, 29 (2007).

<sup>125</sup> MINISTRY OF JUSTICE, COMMON CORE DOCUMENT FORMING PART OF THE REPORTS-SECOND REPORT UNDER THE ICCPR AND ICESCR, at vi, vii (2016) [hereinafter "COMMON CORE DOCUMENT"].

<sup>126</sup> *Id.*

<sup>127</sup> *Id.* at vii; Human Rights in Taiwan, Concluding Observations and Recommendations of the Second National Report, para. 8, <http://www.humanrights.moj.gov.tw/lp-555-205.html> (last visited Oct. 17, 2019).

awards for enterprises.<sup>128</sup> Moreover, the government of Taiwan also set the water quality and volume reserve areas to fulfill people's water right, and strengthened the public participation in the environmental assessment procedure.<sup>129</sup>

Although the government of Taiwan had made some progress in environmental matters, the discussions and efforts on how to respond to climate change and how climate change affects human rights are quite limited. In the Report, rights which have a deep connection with climate change, such as the right to life, right to health, right to food and so on, were mentioned. However, no information was provided about how to prevent climate change from impairing those human rights. Since human rights have been affected by climate change, it is necessary and essential to take actions to dealing with climate change.

### **Regulation Review and Amendment**

To improve the standard of human rights protection and to reintegrate into the international human rights system, Taiwan is willing to abide by the ICCPR and the ICESCR. The government of Taiwan has duties to ensure that all laws, regulations, directions and administrative measures are consistent with those two covenants. According to article 8 of the Implementation Act of two Covenants, this reviewing and amending obligation should be fulfilled by each sector not only in the national government but also in the local governments. Also, Article 8 asks the government of Taiwan to finish regulation amendment and improvement no later than two years of the Act enacted. But, it doesn't mean the review and amendment process is a one-time task. Regulation review and amendment process should continue until no improvement is needed.

To implement the regulation review and amendment task effectively, the Executive Yuan Human Rights Protection Promotion Group of Taiwan has invited human rights experts to re-examine if doubtful laws, regulations and directions chosen from each government sector and NGOs are consist with two covenants. If the laws protecting certain human rights are already existing but unable to provide effective protection for people, amending the laws will be necessary. If human rights are prejudiced because of lacking relevant laws, the legislature should draft and enact the new laws as soon as possible. In terms of administrative measures that fails to meet protecting standard of the two covenants, the government should improve administrative measures to stop damaging people's human rights.

In recent years, people's rights to life, health, clean water, food, and so on are threatened by extreme weather caused by the global warming, such as rainstorms, hurricanes and heat wave. Nonetheless, most current environmental regulations of Taiwan deal with environmental pollution prevention and reduction, and somewhat greenhouse gases reduction. Regulations related to climate change mitigation and adaptation are still quite limited. The government of Taiwan should strengthen and improve relevant regulations as soon as possible in order to protect human rights from being prejudiced by climate change.

### ***The Human Rights Based Approach Requiring Taiwan to Make Efforts in Coping with Climate Change*** **The Specific Impacts, Threats, or Harm of Climate Change to Human Rights in Taiwan**

Taiwan is an island state with a population of 23 million, a land mass of 36,000 square kilometers, two-thirds of which are mountains. Forest resources are the primary product of the land and account for about one half of the total area of the island. Agriculture follows, with about 20% usage, and the remainder is used for urban architecture, transportation, waterworks, and other purposes. The average annual temperature in Taiwan is about 22 degrees Celsius, and the average annual rainfall is about 2500 mm. Oil, coal, and natural gas, 99% of which are imported, are the main sources of energy and account for 90% of all energy supplies.<sup>130</sup>

Taiwan, being an island, is the most vulnerable type of land mass with regard to climate change. Between the years of 1897 and 2008, the average temperature in Taiwan has risen 0.8 degree Celsius, where a fairly significant warm up took place in the last 30 years, with a 0.23 to 0.4 degrees Celsius rise in temperature every

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<sup>128</sup> COMMON CORE DOCUMENT, *supra* note 124, para. 169.

<sup>129</sup> Human Rights in Taiwan, implementation of the International Covenant on Economic, Social and Cultural Rights, paras. 209, 227, 228, <http://www.humanrights.moj.gov.tw/lp-554-205.html> (last visited Oct. 17, 2019).

<sup>130</sup> EPA, SECOND NATIONAL COMMUNICATION OF THE REPUBLIC OF CHINA (TAIWAN) UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE EXECUTIVE SUMMARY 2-3 (2012).

decade.<sup>131</sup> Specific impacts and threats of climate change to Taiwan are that: (1) hot weather in Taiwan increases from 30 days a year to 40 to 50 days, which increases the mortality rate caused by cardiovascular diseases, strokes, and hypertension and accelerates the breeding of dengue-fever vector mosquitos; (2) the rainfall of rainy and dry seasons in Taiwan is polarized, and so the occurrence rate of torrential and heavy rains increases; (3) the occurrence rate of typhoons increases from an average of 3.3 to 4.2 times per year, which reduces reservoirs' capacity for water retention and flood control and thereby increases the frequency of flood and drought; (4) agricultural crops are suffering from the impacts of cold damage, high heat, drought, flood and typhoons, so crops supplies are unstable.<sup>132</sup>

Furthermore, the impacts of extreme climate events on human rights in Taiwan are even more evident. For Example, Typhoon Morakot in 2008 brought 3,000mm of rainfall in a day to the mountain area, which produced floods and landslides, damaging roads, bridges, houses, and schools.<sup>133</sup> Agricultural losses were about NT\$164 billion, and more than 700 people were dead or missing.<sup>134</sup> In 2016, Taiwan suffered from a sudden low temperature in January which brought unusual sleet to many flatland areas and affected people's right to health or right to life.<sup>135</sup> In 2018, Typhoon Maria hit northern Taiwan in July and forced more than 3400 people to leave their homes.<sup>136</sup> In the same year on August 23, tropical depression damaged southern Taiwan seriously by torrential rain of over 500 mm precipitation records and caused more than NT\$ 871 million loss on agriculture.<sup>137</sup>

### Actions Which Taiwanese People Can Take

The fact that climate change causes threats and harm to human rights, such as the right to life, health, adequate food, water and adequate housing, has been established in Part III.<sup>138</sup> In Taiwan, as indicated in the evidence aforementioned, climate change has indeed caused threats and harm to such human rights. As the government of Taiwan is not active enough to address the climate change issues, this apathy could lead to violations of its obligations associated with international human rights treaties.

State-owned enterprises of Taiwan, such as the Taiwan Power Company, CPC Corporation Taiwan, China Steel Corporation, and CSBC Corp Taiwan, which emit most of the greenhouse gases of Taiwan, are not required to reduce their emissions, and neither are some large private enterprises (particularly companies in science and technology industries or the petrochemical industry). Therefore, the government of Taiwan can be accused of being violating its obligations to respect and ensure the right to life and its specific legal obligations (under progressive obligations) to respect and protect the right to health, adequate food, water, and adequate housing.

On the other hand, due to the fact that Taiwan indeed took some measures to reduce greenhouse gas emissions, the government of Taiwan seems to be congruent with the immediate obligations, core obligations, and international obligations under ICESER. For example, setting targets to reduce emissions in the Sustainable Energy Policy Framework in 2008, passing the Master Action Plan of Energy Conservation and Carbon Reduction in 2009, issuing the greenhouse gas emissions regulations about report, inventory, and verification in 2012, enacting the Greenhouse Gas Reduction and Management Act in June 2015, and announcing Intended Nationally Determined Contribution in September 2015 (to reduce greenhouse gases emissions by 50 percent from that year's projected BAU level by 2030) .

Because Taiwan is not a Contracting Party to any human rights treaties, any violations of the mentioned human rights obligations do not increase the state responsibility of Taiwan. However, according to four

<sup>131</sup> *Id.* at 9.

<sup>132</sup> *Id.*

<sup>133</sup> EPA, EXTREME EVENT AND DISASTERS ARE BIGGEST THREAT TO TAIWAN 5 (2009).

<sup>134</sup> *Id.*

<sup>135</sup> Chung Lan Cheng, *The Cold Current is Spreading-Northern Taiwan Rarely Become a Silver World*, BBC NEWS (CHINESE), January 24, 2016, available at [https://www.bbc.com/zhongwen/trad/china/2016/01/160124\\_taiwan\\_snow](https://www.bbc.com/zhongwen/trad/china/2016/01/160124_taiwan_snow) (last visited Sept. 5, 2019).

<sup>136</sup> National Science and Technology Center for Disaster Reduction, *Typhoon Maria and Torrential Rain hit Taiwan*, NCDR NEWSLETTER, September 28, 2018, at 1, available at <https://www.ncdr.nat.gov.tw/Files/NewsLetter/20190104155302.pdf> (last visited Sept. 5, 2019).

<sup>137</sup> *Id.* at 2.

<sup>138</sup> Arguably, climate change could pose threats on more human rights, such as right to privacy and family life, right to property, and right to self-determination. Sara C. Aminzadeh, *A Moral Imperative: The Human Rights Implications of Climate Change*, 30 HASTINGS INT'L & COMP. L. REV. 231, 246-56 (2007).

Implementation Acts, Taiwanese people can ask the government of Taiwan take further and robust actions to ensure and respect, or ensure, protect and fulfill their human rights: (1) Under Article 4 and 5 of the Implementation Act of the two Covenants, for example, Taiwanese people can ask the government of Taiwan to address greenhouse gas emissions issues and implement and enforce the Greenhouse Gas Reduction and Management Act;<sup>139</sup> (2) Under Article 5 of the Implementation Act of the two Covenants, Taiwanese people can ask the government of Taiwan to enhance domestic and international cooperation to strengthen mitigation and adaptation ability;<sup>140</sup> (3) Under Article 7 of the Implementation Act of the two Covenants, Taiwanese people can ask the government of Taiwan to take priority in the planning of budgets for implementing greenhouse gas reduction and establish special funds as a compensation mechanism in the event of human rights impingement caused by climate change;<sup>141</sup> (4) Under Article 8 of the Implementation Act of the two Covenants, Taiwanese people can ask the government of Taiwan to review and amend current legislative and administrative measures to strengthen the control of greenhouse gas emissions and consider adopting command and control mechanisms and economic incentive mechanisms;<sup>142</sup>; and (5) Under Article 6 of the Implementation Act of the two Covenants, Taiwanese people can ask the government of Taiwan to encompass the description of threats and harm to human rights caused by climate change in national reports concerning human rights and description of combat measures taken by the government of Taiwan.<sup>143</sup>

## Conclusion

Since the 1950s, it has been proven that the anthropogenic emissions of greenhouse gases are very likely the main cause of global warming (In the third assessment report in 2001, IPCC stated that the possibility was more than 66% of the anthropogenic factor as the cause for global warming; in the fourth assessment report in 2007, it was stated that the possibility was more than 90%; in the fifth assessment report in 2013, it was stated that the possibility was more than 95%). By comparison, climate change issues have been getting increasing attention since 1988. These issues have evolved from the phases of scientific discovery, issue forming, definition of problems, and international negotiation to now entering the phase of regulation formulation. Since the UN Human Rights Council adopted Resolution 7/23 concerning "Human Rights and Climate Change" in 2008, climate change issues have expanded to overlap and interact with the human rights legal regime.

It is recognized that the adverse effects of climate change pose direct or indirect threats or harm to the enjoyment of human rights. Extreme climate events caused by climate change, such as increased intensity and rate of the occurrence of tornados, typhoons, exceptional floods, forest fires, droughts, and heat waves as well as the expanded spreads, transmissions, and occurrences of various diseases, have posed unequivocal threats and harm to human rights to life, health, water, adequate housing, and adequate food. Since Taiwan's domestication of five international human rights treaties in succession from 2009 onwards, the government of Taiwan has the obligation to formally address the issue that climate change poses threat and harm to human rights.

Compared to the traditional approach, which treats climate change issues from the international environmental perspective, the human rights-based approach is a relatively new approach, and its essential notion has yet to be fully understood and put into application. Although the executive and legislative branches may serve a certain mechanism in the exploration and application of this new approach, international judicial tribunals or the domestic judicial branch can play even stronger key roles through case-docketing, fact-finding, legal interpretation, and judicial decision making so that the theoretic basis of this new approach may be established in a shorter time.

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<sup>139</sup> See the Act to Implement the International Covenant on Civil and Political Rights and the International Covenant on Economic Social and Cultural Rights, arts. 4 & 5.

<sup>140</sup> See *id.* art. 5.

<sup>141</sup> See *id.* art. 7.

<sup>142</sup> See *id.* art. 8.

<sup>143</sup> See *id.* art. 6.

This series of working papers is based on the Berkeley Law Conference *Climate Change Law in the Asia-Pacific*. The conference sought to explore the hard questions of climate change law in the Asia-Pacific region to advance the efficacy of climate change law.

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