



The Human Right to Health and Climate Change: A Legal Perspective

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Authors:

Marlies Hesselman and Brigit Toebes
Department of Transboundary Legal Studies
Global Health Law Groningen Research Centre

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I. Linking Health and Climate Change

The current and future health effects of climate change are increasingly well-documented as **wide-ranging, diverse and overwhelmingly negative**.¹ Both the World Health Organization (WHO) and the Intergovernmental Panel on Climate Change (IPCC) support that climate change affects health **directly and indirectly**. *Direct effects* occur through increased exposure to heat, cold, floods, storms or ultra-violet radiation; *indirect effects* occur through (slow) disruption of normal life and livelihoods, including erosion of the *social and environmental determinants of health*, such as food, nutrition, water, shelter or clean air.² More specifically, WHO and IPCC see links between climate change and health in terms of:³

- Raised levels of ozone and other pollutants in the air, exacerbating **cardiovascular and respiratory disease**, including acute episodes of air pollution and exposure to pollen and other **aeroallergens** in the air, the latter **triggering asthma affecting 300 million persons**.
- Increased **frequency and intensity of slow- and sudden-onset weather-related natural disasters**, which severely **disrupt local lives and infrastructures for health**, incl. health care facilities, medicines access, water, food, electricity, shelter, or may lead to **traumatic displacement**, affecting **physical and mental health** generally. (ex. hurricanes, floods, droughts, rising sea levels, desertification).
- Increased effects of **food-, water- and vector-borne diseases**, i.e. through improved conditions for *vibrios*, bacteria, parasites and viruses, and a range of diseases transmitted through insects, snails or other cold blooded animals (e.g. **malaria, dengue fever, tick-borne diseases**). Concerns here are lengthened transmission seasons and altered geographical reach.

The WHO currently estimates that **the global health costs of climate change, by 2030**, amounts to approximately **2-4 billion USD annually**. Moreover, between 2030 and 2050, already **250,000 additional annual deaths** are estimated to occur: 38 000 due to heat exposure (in elderly people), 48 000 due to diarrhea, 60 000 due to malaria, and 95 000 due to childhood undernutrition.⁴

I.1 Responding to health challenges: adaptation or mitigation?

Acting against climate change and its negative health effects means employing different strategies, notably **strategies to prevent/mitigate climate change and its negative health effects**, or **strategies to adapt to climate change as it occurs**. Adaptation measures deal with the effects of climate change which cannot (or no longer) be prevented. Mitigation or prevention deals with measures to curb climate change in the first place. Emission reduction targets, but also combatting deforestation can be important tools for this. **Adaptation, importantly, is not a**

* We kindly thank Gijs Kreeft, Bert de Decker and Patrick Chilunga Chirwa for their research assistance.

¹ IPCC, 'Climate Change 2014: Impacts, Adaptation and Vulnerability', Chapter 11 on human health, well-being and security (2014) available at: http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap11_FINAL.pdf; WHO, 'Climate Change and Health' available at <http://www.who.int/mediacentre/factsheets/fs266/en/>. Last accessed 31 October 2014.

² See IPCC 2014, p. 741: 'Climate change affects health in three ways: (1) directly, such as the mortality and morbidity (including "heat exhaustion") due to extreme heat events, floods, and other extreme weather events in which climate change may play a role; (2) indirect impacts from environmental and ecosystem changes, such as shifts in patterns of disease carrying mosquitoes and ticks, or increases in waterborne diseases due to warmer conditions and increased precipitation and runoff; and (3) indirect impacts mediated through societal systems, such as undernutrition and mental illness from altered agricultural production and food insecurity, stress, and violent conflict caused by population displacement; economic losses due to widespread "heat exhaustion" impacts on the workforce; or other environmental stressors, and damage to health care systems by extreme weather events'.

³ WHO, 2015 (factsheet).

⁴ WHO, 2015 (factsheet).

substitute for mitigation or prevention, which comes first, and is still a main concern at this moment. Importantly, the 2014 IPCC report considers that:⁵

Most attempts to quantify health burdens associated with future climate change consider modest increases in global average temperature, typically less than 2°C. However, research published since AR4 raises doubt over whether it will be possible to limit global warming to 2°C above preindustrial temperatures.

In this respect, the IPCC stresses that **without mitigation, adaptation to life and health risks of climate change might no longer be possible.** The **limits of adaption** are specifically provided by: (a) physiological limits to human heat tolerance (i.e. wet-bulb temperatures above 35 C);⁶ (b) thermal tolerance of disease vectors; (c) limits to food production and human nutrition; (d) displacement and migration, including ‘trapped’ populations; (e) increased reliance on human-made infrastructures for air-co, water, electricity etc. (including high vulnerability to their failure).⁷ Therefore, **mitigation measures are vital for protecting human health.** This is discussed further below.

In terms of adaptation, the IPCC considers that ‘efforts to adapt to the health impacts of climate change can be **categorized as incremental, transitional, and transformational actions**’ [...]

*Incremental adaptation implies ‘improving public health and health care services for climate-related health outcomes, without necessarily considering the possible impacts of climate change’. Transitional adaptation implies ‘shifting attitudes and perceptions, leading to initiatives such as vulnerability mapping and improved surveillance systems that specifically integrate environmental factors’. Transformational adaptation, finally, means fundamental changes in systems, which so far have not permeated the organization of health systems.*⁸

II. The Legal Right to Health Framework for Climate Change

It seems now common place to state that climate change is a valid ‘human rights’ concern; or that **human rights will be ‘violated’ when climate change is not sufficiently mitigated or adapted to.**⁹ In this contribution we consider what *obligations* can be expected of States in protecting the human right to health, under international human rights law mostly.

We will address the links between human rights and climate change in three parts. Part One explores **the legal content of the ‘human right to health’**. It discusses the main obligations, concepts and tools that make up the human right to health and that help to implement it in practice. These contents derive from a range of legal human rights treaties¹⁰, including as they have been further interpreted by UN supervisory bodies (notably through General Comment 14 of the UN Committee on Economic, Social and Cultural Rights, but also in various Committee’s

⁵ IPCC 2014, p. 736.

⁶ See a new study this month which predicts that parts of the Middle-East will already suffer from lethal wet-bulb temperatures this century, at exposure of only six hours: http://www.nytimes.com/2015/10/27/science/intolerable-heat-may-hit-the-middle-east-by-the-end-of-the-century.html?_r=0.

⁷ IPCC 2014, p. 735-736.

⁸ IPCC 2014, p. 733. Emphasis added by authors.

⁹ See, e.g. OHCHR, ‘Human Rights and Climate Change’, via: <http://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx>

¹⁰ See: Article 12 ICESCR (1966); Article 12 and 14 CEDAW (1979); Article 24 of the Convention of the Rights of the Child (CRC, 1989); Article 5(e)(iv) CERD (1966) stipulates in general terms that States Parties are to prohibit and eliminate racial discrimination in the enjoyment of public health, medical care, social security and social service; Finally, also in the Conventions of the ILO the protection of occupational health is covered. An exception is Article 25 of ILO Convention No. 169 (1989), which explicitly recognises a right to health of indigenous and tribal peoples. Lastly, the Convention on the Rights of Persons with Disabilities (CRPD, 2006), also contains several references to the health of disabled persons, including Article 25 on the right to health of disabled persons.

Concluding Observations, or in the work of UN Special Procedures). Part Two of the contribution includes **a short analysis of some of the interpretations by UN bodies in practice**. Part Three submits that human rights and climate change discussions do not exist in a vacuum. Human rights practitioners and scholars have already deeply engaged with **related areas where human rights have been found applicable**, including the areas of “**the protection of persons in the event of disasters**” and “**human rights and the environment**” (also: the **right to a healthy environment**).¹¹ The principles of legal protection developed in case-law on these topics (may) highly overlap.

II.1. The right to health in international human rights law

The human right to health is legally recognized in international human rights treaties, as ratified by a large number of States.¹² It is equally protected through regional human rights law and domestic law. An important general formulation of the right to health in international law can be found in **Article 12 of the International Covenant on Economic Social and Cultural Rights (ICESCR)** (see box 1).

Box 1: Article 12 ICESCR on the Right to Health

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.

Article 12 ICESCR applies broadly to issues of climate change. For example, under the ‘right to improvement of all aspects of environmental hygiene’ (art. 12(2)(b)), GC 14 includes ‘the prevention and reduction of the population’s exposure to harmful substances [...] or **other detrimental environmental conditions that directly or indirectly impact upon human health**.’¹³ Similarly, art 12(2)(c) ICESCR implies the obligation to promote the ‘social determinants of good health, such as **environmental safety**, education, economic development and gender equity’, while ‘the right to treatment includes the creation of a **system of urgent medical care in cases of accidents, epidemics and similar health hazards**, and the **provision of disaster relief and humanitarian assistance in emergency situations**.’¹⁴

Applying a human rights to health approach to climate change means recognizing that:

- All individual human beings have a human *right* to the *highest attainable standard of physical and mental health*;
- This right derives from the *moral worth* of all human beings, their mutual *equality* and respect for basic *human dignity*, in a spirit of *brotherhood*;

¹¹ See e.g. ILC’s study on the protection of persons in the event of disasters, via: http://legal.un.org/ilc/guide/6_3.shtml. See further discussion and sources in Section IV.

¹² See supra. note 10.

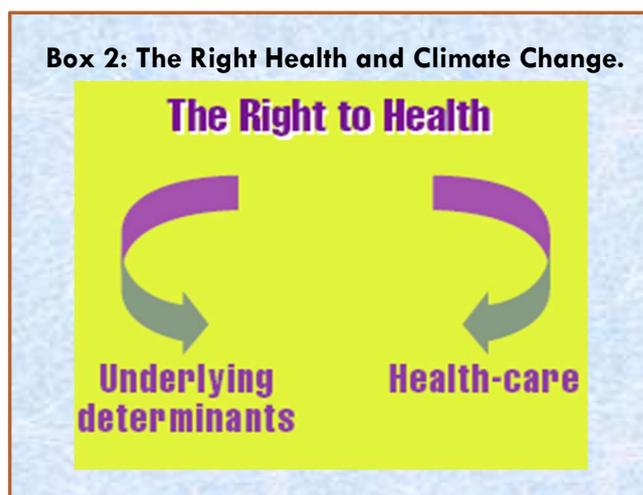
¹³ CESCR General Comment 14, The Right to the Highest Attainable Standard of Health (11 August 2000) UN Doc. E/C.12/2000/4, para 15.

¹⁴ CESCR General Comment 14, para 16.

- States (and potentially other actors) have *obligations to respect, protect and fulfil* the human right to health to the fullest;
- Some people may be at a *disadvantaged* position in the enjoyment of their rights already (the human rights concept of ‘*vulnerability*’);
- Adequate human rights implementation implies participation of those affected in decision-making, and the *accountability* of duty-bearers, whether (quasi)-judicially, administratively, or otherwise.

The right to health: health care and the underlying determinants of health

The right to health does not mean the right to be healthy, but it means access to opportunities to enjoy the highest attainable standard of health.¹⁵ Concretely, this means that the right to health embraces both (i) access to facilities, goods and services necessary to enjoy health *and* (ii) access to the necessary ‘underlying determinants’ of health, including matters such as ‘food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment’.¹⁶ **As a result, the right to health overlaps strongly with other human rights** e.g. (the human rights to) food, housing, work, education, human dignity, life, non-discrimination, equality, the prohibition against torture, private life and respect for the home, access to information, and the freedoms of association, assembly and movement.¹⁷ The ‘underlying determinants’ are closely connected, if not congruent to the ‘social determinants of health’ as defined by WHO.¹⁸



According to the WHO ‘climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter.’ In implementing the human right to health States are obliged to secure adequate access to the underlying determinants of health, incl. essential living conditions affected by climate change, such as access to adequate food and nutrition, housing, safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment.

At the 1993 World Conference on Human Rights, States decided that **all human rights are interdependent, interrelated and indivisible**; this means that the ‘international community must treat human rights globally in a fair and equal manner, on the same footing, and with the same

¹⁵ CESCR, General Comment 14, paras. 8-11.

¹⁶ CESCR, General Comment 14, para. 3, 7-11.

¹⁷ CESCR, General Comment 14, para. 3-4.

¹⁸ WHO, Social Determinants of Health, available at http://www.who.int/social_determinants/en/. Accessed October 2015.

emphasis'.¹⁹ It also implies that the **content of individual rights are not always clearly separable from each other**. In short: one right might still apply, where another right has stopped to be applicable. Jointly, the human rights framework means to protect the life and livelihoods of all humans, meeting essential human needs and capabilities.²⁰ The new Sustainable Development Goals (SDGs) framework adopted in September 2015, equally takes a people-centred approach, and States vowed in this new agenda to 'leave no one behind', and 'to reach the furthest behind first'.²¹ The 1993 Vienna Declaration also affirmed that 'the promotion and protection of all human rights and fundamental freedoms must be considered as a *priority objective* of the United Nations in accordance with its purposes and principles, in particular the purpose of international cooperation'.²² Human rights (law) made the enjoyment of protection, including of human health, a matter of 'rights' and 'obligations', not of personal 'chance', 'luck', 'charity' or 'desire'. Human rights law sets clear directions for and in some cases concrete boundaries to the decision-making power of States and their authorities. It implies that decision-making needs to respect, protect and fulfil healthy societies, for all to survive and flourish in freedom from fear and want, and 'to promote social progress and better standards of life in larger freedom'.²³

Unpacking the human right to health: which obligations for States?

In laying bare the obligations deriving from the current legal right to health framework, the following contents of the international right to health can be considered: the **'AAAQ'** standards of protection of the right to health; the **obligations to respect, protect and fulfil** the right to health; the **obligation to take steps progressively, alone and with others, and to cooperate internationally**.

These contents are derived mostly from **General Comment 14 on the right to health** by the Committee on Economic, Social and Cultural Rights, which interpreted Article 12 of the ICESCR. Another authoritative source for the definition of the right to health is **General Comment 15 on the right to health of children** (as stipulated in Article 24 of the Convention on the Rights of the Child).²⁴ This General Comment explicitly stresses that environmental interventions should address climate change, 'as this is one of the biggest threats to children's health and exacerbates health disparities. States should, therefore, put **children's health concerns at the centre of their climate change adaptation and mitigation strategies**'.²⁵ It also emphasizes that 'States have three types of obligations relating to human rights, including children's right to health: to respect freedoms and entitlements, **to protect both freedoms and entitlements from third parties or from social or environmental threats**, and to fulfil the entitlements through facilitation or direct provision'.²⁶

Our contribution will deal primarily with the range of obligations flowing from international human rights law for State actors; the **human rights responsibilities or obligations of non-State actors**, will not be discussed in detail here. States are still considered the prime duty-bearers in human rights law, but it is important to underscore that General Comment 14 equally

¹⁹ World Conference on Human Rights, 'Vienna Declaration and Programme of Action' (25 June 1993) UN Doc. A/CONF.157/23, para. 5.

²⁰ See e.g. also generally the work of the UN Special Rapporteur on Human Rights and Extreme Poverty, via: <http://www.ohchr.org/EN/Issues/Poverty/Pages/SRExtremePovertyIndex.aspx>.

²¹ UN General Assembly, 'Transforming our World: the 2030 Agenda for Sustainable Development', 18 September 2015, UN Doc. A/70/L.1 preambular para. 4.

²² World Conference on Human Rights, 'Vienna Declaration and Programme of Action' (25 June 1993) UN Doc. A/CONF.157/23, para. 4. (emphasis added)

²³ See e.g. preamble of the Universal Declaration of Human Rights, available here: <http://www.un.org/en/documents/udhr/>.

²⁴ General Comment 15 on the Right of the Child to the Highest Attainable Standard of Health (17 April 2013) UN Doc. CRC/C/GC/15, accessed on 23 October 2015 at:

http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CRC%2fC%2fGC%2f15&Lang=en ..

²⁵ CRC General Comment 15, para 50.

²⁶ CRC General Comment 15, para. 71.

stresses the **human rights responsibilities of ‘all actors in society’**.²⁷ Indeed, there are strong expectations, increasingly captured in national, regional or international legally binding obligations, that require other actors, **such as companies** to ‘respect’ citizens’ health across their operations.²⁸ An excellent example is the full range of environmental emission and pollution limits for industry.²⁹ At the same time, many companies blatantly flout or try to evade their social (human rights) responsibilities, or even the legal obligations that are in place to safeguard people’s (right to) health. An excellent example of this would be the recently exposed acts of **automobile companies**, such as **Volkswagen**, who willfully tamper with and (try to) evade relevant emissions limits. These acts **deserve to be understood through a lens of human rights protection**. Human rights, including the right to health as it relates to climate change and environmental health, cannot be hoped to be adequately guaranteed, when non-State actors willfully and grossly flout legally binding emission reduction targets, and (can) consistently deny their roles and obligations in this respect, or escape accountability. Companies can be understood as bearing these obligations directly, themselves, or as properly and legitimately regulated through the State.³⁰

II. 2. The ‘AAAQ’ framework of health

General Comment 14 on the right to health in Article 12 ICESCR (GC 14) starts with outlining the ‘normative content’ of art. 14 ICESCR, and it identifies firstly the following ‘interrelated and essential elements’ that inform the ‘right to health in all its forms and at all levels’, also known as the **‘AAAQ-framework’ of health protection**. As a result, the right to health is only fully guaranteed when all States have ensured that human beings have access to right to health, and more specifically to the related health goods, services, facilities and determinants, in a manner where they are **available, accessible, acceptable and of good quality**, in line with the considerations set out below.³¹ The AAAQ is a framework also applied in respect of other international human rights, such as the right to water.³²

Availability

First of all, GC 14 defines the element of ‘availability’ of health as the presence of (i) ‘functioning public health and health-care facilities, goods and services, as well as programmes’ **in sufficient**

²⁷ See CESCR General Comment 14, para. 42; also CRC General Comment 15, paras. 75-77, 80.

²⁸ See e.g. UN Guiding Principles on Business and Human Rights (2011), available here: www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf; Or, the current efforts to explore a binding human rights treaty for business actors through the ‘UN open-ended intergovernmental working group on transnational corporations and other business enterprises with respect to human rights’, available here: <http://www.ohchr.org/EN/HRBodies/HRC/WGTransCorp/Pages/IGWGOntnc.aspx>

²⁹ See e.g. also references to this in CRC, Concluding Observations on Germany (25 February 2014) UN Doc. CRC/C/DEU/CO/3-4, paras. 22-23 (concerned about the negative impact that coal emissions have on children’s health; recommending to States ‘a clear regulatory framework for the industries operating in the State party to ensure that their activities do not negatively affect human rights or endanger environmental and other standards, especially those relating to children’s rights; CRC Concluding Observations Russian Federation (25 February 2014) UN Doc. CRC/C/RUS/CO/4-5 paras. 20-21 (‘concerned about the negative impact on the health of children of the extraction of coal and the production of asbestos’; ‘Committee draws the State party’s attention to its general comment No. 16 (2013) on State obligations regarding the impact of the business sector on children’s rights and recommends that the State party establish and implement regulations to ensure that the business sector complies with international and national human rights, labour, environmental and other standards, with particular regard to children’s rights and in the light of Human Rights Council resolutions 8/7 (para. 4 (d)) and 17/4 (para. 6 (f))’; ‘provide timely reparation to limit ongoing and future damage to the health and development of the children affected and repair any damage done’; ‘ensure effective implementation by companies, especially industrial companies, of international and national environmental and health standards, and effective monitoring of the implementation of those standards, and appropriately sanction and provide remedies when violations occur, and ensure that appropriate international certification is sought’; ‘require companies to undertake assessments, consultations and full public disclosure of the environmental, health-related and human rights impacts of their business activities, and their plans to address such impacts’. Also see discussion in section II.3.

³⁰ See UN Guiding Principles *supra* note 28.

³¹ CESCR General Comment 14, para 12.

³² CESCR General Comment 15 on The Right to Water (Arts. 11 and 12 of the Covenant) (20 January 2003) UN Doc. E/C.12/2002/11.

quantity within a State, and (ii) the quantitative availability of the underlying determinants of health, including e.g. food, shelter or clean water, air and sanitation.

Relating this to climate change, this would imply, *inter alia*, that, States are expected to ensure the (national) availability of **sufficient quantity of essential medicines and other goods, facilities and services**, e.g. 'essential drugs, sanitation facilities, hospitals, clinics and other health-related buildings, trained medical and professional personnel receiving domestically competitive salaries'.³³ The element of 'availability' of health goods and services would at least imply ensuring the **adequate availability of vaccines, medicines on the WHO essential medicines list, or other relevant goods** to save the currently projected 250 000 premature climate change deaths between 2030 and 2050. This is an implication of the State's core-obligation³⁴ to 'prevent, treat or control diseases' (art 12(2)(c) ICESCR), including the projected climate change induced food-, water- and vector-borne diseases mentioned previously (also see GC 14 para. 19, 43(d)). Looking at the 'availability' of essential goods, services and facilities from the perspective of another set of environmental health risks due to climate change, such as the mortality from heat stress and too hot temperatures, effective protection of health could also imply ensuring the availability of basic infrastructures and essential goods, such as **cool spaces, fans, air-co units and the sufficient electricity supply to ensure their operations**. The importance of the availability of such goods to ensure health and survival have already been stressed in certain health studies, and in the report of the IPCC.³⁵

Turning to some of the underlying determinants of health more generally, such as food, water or clean air, it is also possible to derive from the right to health a minimum-core health obligation to **prepare emergency food stocks, water stocks, medicines, and emergency services in case of natural disasters – whether slow- or sudden-onset** (art. 12(2)(b) and (d); GC 14 paras. 19, 43 65). CteeESCR's GC 14, for example, specifically affirms that in the context of emergencies and disasters States have a joint and individual responsibility to ensure access to 'disaster relief and humanitarian assistance' for victims of disasters. (para 65). Obligations to prepare for natural disaster are also affirmed in Part IV. Finally, in terms of the provision of **clean air** for example, or the **protection of subsistence, health and livelihoods in the face of desertification and changed weather patterns and agriculture**, the right to health could imply protection of underlying determinants. It may entail an obligation on the state to make available of arable land, climate resistant plants or seeds, water and irrigation facilities, etc. (see also section III where such considerations appear affirmed in the work of UN human rights supervisory bodies).

Finally, it can be important to **make a distinction here again between adapting to the health impacts of climate change, and mitigating the health effects of climate change**. In so far as climate change leads to increased occurrence of diseases or health risks, already known or treated today, accepted responses could be applied and, arguably, should be prepared for in anticipation (e.g. greater availability of treatment, medicines, air-co's, infrastructures etc). Yet, when climate change-related health impacts can still largely be prevented through sufficient mitigation, **mitigation might not only be a feasible strategy, but also the most (cost-)effective way to ensure the (future) 'availability' of sufficient (underlying determinants of) health in a country, in particular in respect of arable land, food, water, clean air and healthy city environments**. This preventative approach seems important for climate change especially, considering the fact that adaptation measures might run into very real limits (e.g. physical maximum heat tolerance for humans, trapped populations or severe displacement; or a fatal reliance on – presently non-existent – essential infrastructures incl. water or electricity

³³ General Comment 14, para. 12.

³⁴ See section II.4 on the concept of 'core-obligations'.

³⁵ See supra note 6; IPCC 2014, 718, 734.

distribution).³⁶ For the effective protection of human lives and health, and in **ensuring the (future) availability of underlying determinants**, the international community actually already has engaged in and agreed upon a range of measures to protect human health, including in legal form, notably in the form of **nationally, regionally and internationally (legally binding) emissions reductions targets**. However, in many places, these targets appear not to be met by governments (and/or other private business actors) in many parts of the world. As a result, in the Netherlands, **a group of nearly 900 citizens recently sued their government for not implementing the Dutch emissions reduction targets**, showing too little commitment, lagging behind on protection promises for climate change, so closely intertwined with human rights and their health. Based on the Dutch State's current climate change policy, the Netherlands would only reduce emissions 17% at most in 2020, which is 'below the norm of 25% to 40% for developed countries deemed necessary in climate science and international climate policy'. According to the Hague District court, the Dutch State 'must do more to avert the imminent danger caused by climate change, also in view of its duty of care to protect and improve the living environment' and the fact that it is 'responsible for effectively controlling the Dutch emission levels'. As such the Hague District Court State ruled that the Dutch government has to ensure that the Dutch emissions in the year 2020 will be at least 25% lower than those in 1990.³⁷ That this is in line with further legal obligations to found in respect of protecting health in the human rights framework is also discussed further below.

Accessibility – Four Dimensions

Secondly, the element of ensuring the 'accessibility' of health opportunities, and the necessary goods, services and underlying determinants, has **four overlapping dimensions** according to GC 14.³⁸ It includes: (i) accessibility of health opportunities on the basis of the **principle of non-discrimination**; (ii) **physical accessibility** of goods, services, facilities and determinants; (iii) **economic accessibility** of these goods, services, facilities and determinants (i.e. health should be generally 'affordable' for people); taking into account (iv) the importance of '**information accessibility**'.³⁹

Principle of non-discrimination

The principle of **non-discrimination** and protection of **vulnerable persons** specifically, is a component often considered a distinct problem in the area of climate change and health. The WHO acknowledges the vulnerability of certain groups nationally and globally, as does the IPCC (e.g. elderly, children, poor people, indigenous peoples, rural dwellers).⁴⁰ Climate change does not create problems equally across the world, or impacts all persons equally. A challenge in terms of non-discrimination and climate change is especially the fact that **certain groups in society are more vulnerable than others to negative health effects, including through climate change, i.e. based on age, sex, prior health status, or geographical location**. Also the **poor and marginalized** tend to be more vulnerable to negative health effects.

The obligation of non-discrimination in (socio-economic) human rights protection is laid down in art. 2(2) ICESCR, and has been articulated further by the CteeESCR in General Comment 20.⁴¹ In international human rights law, the notion of non-discrimination has certainly come to include the notion of vulnerability. GC 14 on the right to health considers about the element of non-

³⁶ See for the poor access to electricity globally, e.g. the UN Sustainable Energy for All-initiative since 2011 (www.se4all.org); or the new SDG 7.1. on 'universal access to reliable, affordable, modern energy services'.

³⁷ See <http://www.uragenda.nl/en/climate-case/>; Ruling of Dutch Lower District Court ECLI:NL:RBDHA:2015:7196.

³⁸ CESCR General Comment 14, para 12.

³⁹ CESCR General Comment 14, para 12.

⁴⁰ IPCC 2014, p. 717-720; WHO 2015 (Factsheet).

⁴¹ CESCR General Comment 20, Non-discrimination in economic, social and cultural rights (art. 2, para. 2, of the International Covenant on Economic, Social and Cultural Rights) (2 July 2009) UN Doc. E/C.12/GC/20.

discrimination that: **‘health facilities, goods and services must be accessible to all, especially the most vulnerable or marginalized sections of the population, in law and in fact, without discrimination on any of the prohibited grounds’.**⁴² In terms of underlying determinants of health, here also the interaction with other rights comes into play, such as adequate standards of living on food, water, housing, etc, which are also subject to the ICESCRs non-discrimination clause. The discussion in Section III will also highlight various aspects of non-discrimination in the field of climate change, e.g. in respect of women and children, or indigenous people.

The IPCC, in its 2014 report, seems to support the practice of **‘vulnerability-mapping’ for the health effects of climate change.** In the scheme of how health systems are adapting to climate related health risks, this falls under the heading of ‘transformational adaptation’ to climate change, which might not yet be integrated into health systems across the world. In its 2014 report, the IPCC outlines a study on US communities’ vulnerability to heat stress, indicating needs for specific protection, including from a perspective of morbidity. The study revealed ‘four factors explaining most of the variance’ of vulnerability, including notably a ‘combination of social and environmental factors, social isolation, prevalence of air conditioning, and the proportion of the population who were elderly or diabetic.’ In this case, the IPCC suggested **local interventions in terms of city greening and other urban cooling measures** to deal with the effects. However, another option could be to assess and ensure the ‘availability’ and ‘(physical/economic) accessibility’ of air conditioned spaces, air-co units and reliable electricity supply on hot days.⁴³ Again, this is only seen from the perspective of adaption, not mitigation.

An underlying discriminatory problem to the practice of vulnerability mapping, might be the fact that countries and regions could have very disparate levels of access to climate change and health technologies. From a perspective of the international right to health, **differential access to protective technologies, could implicate obligations to ‘cooperate economically and technically’ for the right to health and climate change,** whether in bilateral relations or through multi-lateral international organizations. (see also **art. 15 ICESCR, right to science**) The obligation of international cooperation for human rights is further discussed in section II.4, and it can be duly noted that also new Frameworks such as the 2015 Sendai Framework on Disaster Risk Reduction [is linked to climate change] and the need for greater technology exchange in coping with further disasters It is suggested here that international cooperation can be of **special importance in the area of climate change** specifically, as the phenomenon is **so engrained with ‘common but differentiated’ inputs, concerns and responsibilities.**

All in all, different options to safeguard health for vulnerable persons might be available on the basis of different ranges of resources and local situations. Again, Section III provides further insights from the work from supervisory bodies on the principle of non-discrimination.

Physical and economic accessibility

According to GC 14 physical accessibility of health implies that medical services and underlying determinants also have to be **‘within safe physical reach, including in rural areas, [and] especially for vulnerable or marginalized groups’**⁴⁴ The latter is of importance for climate change, considering that climate change is able to lead to serious geographic alterations and displacement in areas where people are already greatly struggling to survive on their lands. Due to changing weather patterns, especially the underlying determinants for health may come (further) out of reach for some persons. This concern is also described in Section III where the effects of climate change for women is described in terms of depletion of arable land, or long distances to water or fuel resources. Mitigation strategies actually might be a prime solution here

⁴² CESCR General Comment 14, para.12.

⁴³ IPCC 2014, 733-734

⁴⁴ CESCR General Comment 14, para. 12.

to really ensure the continued physical accessibility of (underlying determinants of) health. Also the interrelatedness and indivisibility of the right to health and the rights to food and water comes into play again in this context. The General Comments on these particular rights offer further respective ideas and insights on the meaning and requirements of ‘physical and economic accessibility’ to these essential goods and services for humans, also as related to climate change.

In terms of economic accessibility, this generally refers to the **overall ‘affordability’ of goods and services, incl. medicines, vaccines, but also food, nutrition, water, clean air** etc. It deserves no reminder that health, even at a very minimum level for subsistence and survival, is already unaffordable for many people for many reasons, including the fact that health goods are too expensive and/or prices are left to local, regional or global markets. Is the unaffordability of essential goods a sufficient reason for individuals to not enjoy their rights? GC 14 suggests this is not the case. In fact, it seems assumed that **States have an obligation to protect the affordability of essential goods and services, protecting health, *inter alia*, by regulating the production and/or prices** of essential goods for health in a way that they become accessible to all. GC 14 does not refer to the regulation of affordability specifically, but stresses more generally that: **‘payment for health-care services, as well as services related to the underlying determinants of health, has to be based on the principle of equity, ensuring that these services, whether privately or publicly provided, are affordable for all**, including socially disadvantaged groups. Equity demands that poorer households should not be disproportionately burdened with health expenses as compared to richer households’. It also considers that ‘failure to regulate the activities of individuals, groups or corporations so as to prevent them from violating the right to health of others’ is a violation of the right to health.⁴⁵ Similarly, CESCR General Comment 15 on the right to water specifically affirms the importance of regulating prices for water.⁴⁶ Moreover, GC 14 also states that **‘States have a special obligation to provide those who do not have sufficient means with the necessary health insurance and health-care facilities, and to prevent any discrimination on internationally prohibited grounds in the provision of health care and health services, especially with respect to the core obligations of the right to health’**.⁴⁷ Finally, ‘inappropriate health resource allocation can lead to discrimination that may not be overt. For example, investments should **not disproportionately favour expensive curative health services** which are often accessible only to a small, privileged fraction of the population, **rather than primary and preventive health care benefiting a far larger part of the population**. A principle of **cost-effective and preventive health protection** is, thus, also stressed here.⁴⁸ Again, from a perspective of mitigation v. adaptation strategies, it well observed that diverting resources from mitigation now, may lead to a higher burden of care in the future. The question is whether such (public) spending priorities can really be defended from the perspective of the right to health. In this light, climate change policy making, and the practice of environmental budgeting should be viewed from the perspective of human rights law as well. This is not a common practice in many places though.

Calculating the concrete costs and burdens of climate change for health on the public budget, on household budgets (of vulnerable persons), or any disproportionate expenses made by certain groups might be challenging; yet, at the same time, it may be possible to analyze such costs based on the concept of vulnerability mapping, while equally, **the WHO seems able to estimate the costs for climate change and health at 2-4 billion USD per year by 2030, and has an idea on the numbers of deaths resulting**. Apart from the economic cost, we are clearly also dealing with the (immeasurable?) human cost of climate change. Again, mitigation strategies might ultimately ensure the most effective, most cost-efficient (both by economic and human measure) as well as equitable health benefits for all; if only because such measures will prevent

⁴⁵ CESCR General Comment 15, para. 51.

⁴⁶ CESCR General Comment 15, para. 24.

⁴⁷ CESCR General Comment 14, para. 19.

⁴⁸ CESCR General Comment 14, para. 19.

the many prospective negative health effects for people who are already vulnerable and would have to bear an even higher burden. Some aspects of the affordability of health in a context of climate change are also addressed in Section III.

Information accessibility

In terms of information accessibility GC 14 confirms **‘the right to seek, receive and impart information and ideas concerning health issues’**.⁴⁹ Especially the right to receive information regarding health and climate change can be important, since many people seem not fully aware of more specific health implications of climate change to date, even where the science seems in congruence on certain implications. In effect, the IPCC report, although well accessible (in the English language?), seems not well known amongst many ‘regular’ persons, which in some way is to be expected. Climate change is increasingly in the news, but the urgency of challenges and individual action to be taken by individuals in their personal lives, is difficult to convey, also because of the totality of States and actors implicated. The difficulties of information accessibility and provision is further highlighted in section II.3 on the obligation to ‘fulfil’ the right to health through information provision.

Quality

Finally, the ‘quality’ requirement in the context of the right to health refers to the fact that, **health facilities, goods and services must be culturally acceptable, scientifically and medically appropriate and of good quality**.⁵⁰ While this refers more to *inter alia* the scientific quality of medical personal, treatments or medicines, a valid question could be whether quality protection of the right to health also refers to **meeting health concerns in terms of the scientific measures and concerns for protection against harmful climate change as reported in the IPCC reports?** The IPCC report offers many scientific insights on the dangers of climate change for health, and perhaps the types of mitigation and adaptation measures necessary to protect human health in the face of climate change. To illustrate: can we assume that it is only really possible to protect the right to health in a sufficiently adequate way if collective State responses follow the scientific insights laid out in the IPCC report – including pronouncements on a need for further mitigation and maintaining safe health levels, such as the norm of 2 degrees Celsius?

Conclusion

Other examples of how the AAAQ framework might affect protection of health in the face of current and pending climatic change, in particular in relation to the availability and accessibility of health goods and services, and the underlying determinants could be plenty. Such insights will also develop as knowledge of the health impacts, and their urgency, develops in climate change and public health science.

The following sections will now add a few more layers to the protection of the human right to health in the face of climate change, i.e. per the obligations to **respect, protect and fulfill** the human right to health, and States **obligations to take steps, individually and jointly, and to cooperate internationally** for human rights protection.

II.3. Obligations to ‘respect’, ‘protect’ and ‘fulfil’ all human rights

The obligation to ‘respect, protect, and fulfil’ all human rights, including the human right to health, is now **firmly part and parcel of the current international human rights framework**. This

⁴⁹ CESCR General Comment 14, para. 12.

⁵⁰ CESCR General Comment 14, para. 12.

'tripartite typology' of human rights obligations was developed in response to earlier ideas regarding the **obligations of human rights protection** that proposed that civil and political rights are primarily negative (freedom) rights, and socio-economic rights are primarily positive and costly (welfare) rights.. The European Court of Human Rights has nuanced this understanding of civil and political rights already early on, on the basis of the **principle of 'effective protection'**. Hereby it does not distinguish any longer between notions of 'negative' or 'positive' State actions in the effective enjoyment of human rights, but rather, protection needs to be 'effective', whatever action this takes, e.g. effective provision of legal aid for example. The European Court also has seen no problem in requiring positive State action in terms of adequately regulating private persons, such as companies, in protection rights, which includes regulation in the area of environmental pollution.⁵¹ **At the international level**, insights on the practical implementation of human rights and the types of State obligations they entail have also been advanced in similar decades, and were **captured in the tripartite obligations to respect, protect and fulfil all human rights**, meaning the following for the right to health according to GC 14.

Obligation to respect

First of all, 'respecting' the right to health, entails that states are expected – as with all rights - to **abstain from interfering directly or indirectly in the right to health previously enjoyed**. Specifically, this entails, according to GC 14, refraining from denying or limiting equal access for all persons to preventive, curative and palliative health services; abstaining from enforcing (directly or indirectly) discriminatory practices as a State policy; or explicitly, **refraining 'from unlawfully polluting air, water and soil, e.g. through industrial waste from State-owned facilities'**. It can be argued that the right to health can also be violated through (unlawfully) **polluting of air, water and soil through greenhouse gas emissions harmful for health, e.g. in contravention of emissions limits designed to protect human health**. Such standards have been agreed already by States for climate change, and are subject to further discussions in December 2015 in Paris at the COP21. As suggested in the previous section, adherence to **the human right to health, and effective implementation, may dictate that States also take the findings on climate change and health, incl. emissions, from the latest IPCC seriously**, and seek to **safeguard health effectively by setting (new) appropriate targets, and meeting them**. In this respect, GC 14 also stipulates that 'failure of the State to take into account its legal obligations regarding the right to health when entering into bilateral or multilateral agreements with other States, international organizations and other entities, such as multinational corporations' entails a violation of the obligation to respect the right to health.⁵² Regulation of unlawful pollution is arguably both a task of States in respect of State-owned companies, but also in **giving permits to and regulating the emissions of private companies** within their jurisdiction or otherwise under their control (obligation to protect, see below). The role of internationally agreed safety levels for harmful emissions, e.g. by the WHO on air pollution or noise, but potentially also arguably as suggested by the IPCC, will normally play a substantial role in interpreting (un)acceptable infringements of human rights guarantees in other settings, e.g. before the European Court of Human Rights.⁵³

Obligation to protect

Secondly, in terms of 'protecting' the right to health, States Parties to ICESCR are obliged to **effectively take measures that prevent third parties from interfering with guarantees under the right to health**. This entails first and foremost to an obligation to regulate third parties, e.g. by **adopting legislation or to take other measures**. GC 14 affirms that the obligation to protect persons from negative interferences with their rights to health, would include the regulation of

⁵¹ See e.g. ECHR *Dubetska v. Ukraine*, No. 30499/03, 10 May 2011.

⁵² CESCR General Comment 14, para 50.

⁵³ See e.g. *Dubetska v. Ukraine*, No. 30499/03, 10 May 2011; Hesselman and Van de Venis (2011).

private third parties, such as companies, in terms of ‘failure to enact or enforce laws to prevent the pollution of water, air and soil by extractive and manufacturing industries’.⁵⁴ The list is not exhaustive and would certainly refer to the regulation of various greenhouse gas emissions and harmful air pollution, and the setting of adequate standards, or taking into consideration any widely internationally agreed health standards for shaping health and climate policies, including work from the WHO or the IPCC. An obligation to regulate private actors from preventing them to pollute water resources is specifically articulated in the CESCR General Comment 15 on the right to water.⁵⁵ It was also already affirmed earlier that CRC GC 15 on the right to health of children specifically sees that ‘States have three types of obligations relating to [...] children’s right to health: [including], to protect both freedoms and entitlements from third parties or from social or environmental threats, and to fulfil the entitlements through facilitation or direct provision. The CRC specifically considers that ‘business enterprises themselves are expected to identify, prevent and mitigate their negative impact on children’s right to health including across their business relationships and within any global operation’s.⁵⁶

Obligation to fulfil

Finally, the obligation to ‘fulfil’ the right to health consists of obligations to **‘adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures towards the full realization of the right to health.’** (GC 14, para 33) Concretely this includes giving **‘sufficient recognition to the right to health in the national political and legal systems,** preferably by way of legislative implementation, and to **adopt a national health policy with a detailed plan for realizing the right to health’.** (GC 14, para 36). Yet, it also entails ensuring **‘equal access for all to the underlying determinants of health,** such as nutritiously safe food and potable drinking water, basic sanitation and adequate housing and living conditions’, or adopting **‘measures against environmental and occupational health hazards and against any other threat as demonstrated by epidemiological data’.**

In the latter respect, GC 14 also affirms an **active duty to ‘formulate and implement national policies aimed at reducing and eliminating pollution of air, water and soil,** including pollution by heavy metals such as lead from gasoline’. Naturally, the formulations of such laws and policies can be done internationally as well, especially in respect of environmental challenges with an international character, such as climate change. The fact that negotiations on emissions limits, e.g. at **COP21, should be seen as directly covered by the human right to health of the population,** as well as other human rights, was already highlighted in the previous sections, including as a matter of ‘respecting’ the right to health.⁵⁷

Importantly, however, the obligation to ‘fulfil’ health also includes a range of more active and promotional obligations. One of these obligations is the requirement that States take **positive measures that enable and assist individuals and communities to enjoy the right to health,** especially when **‘individuals or a group are unable, for reasons beyond their control, to realize that right themselves by the means at their disposal’.** This also seems a core characteristic of the phenomenon of climate change: individuals or environmental groups cannot stop climate change by themselves, through their own individual behavior. It requires a strong State, a strong international community of States – along with responsible businesses – which commit to setting strict limits and regulation to business and harmful economic activity for the protection of health. **A major short coming here might also be the (manner in which)**

⁵⁴ CESCR General Comment 14, para 51.

⁵⁵ CESCR General Comment 15, para. 23-24.

⁵⁶ E.g. CRC General Comment 15, para. 80.

⁵⁷ See also CESCR General Comment 14, para 39: ‘To comply with their international obligations in relation to article 12, States parties have to respect the enjoyment of the right to health in other countries, and to prevent third parties from violating the right in other countries, if they are able to influence these third parties by way of legal or political means, in accordance with the Charter of the United Nations and applicable international law’.

provision of information of climate change by the State (takes place). As part of the obligation to fulfil (promote) GC 14 equally requires States ‘to undertake actions that create, maintain and restore the health of the population. Such obligations include, fostering recognition of factors favouring positive health results, e.g. research and provision of information’ or ‘supporting people in making informed choices about their health’.⁵⁸ **It seems a concern that communication about climate change to the wider public is difficult, not even allowing individual choices to be made.** Another aspect is the sometimes perceived lack of public support and understanding of climate change measures. The IPCC report, and its figures and conclusions, for example appear not actively or widely circulated, read or made known to the larger public, even though its contents are not hard to translate or grasp, even if extensive.

The **problem of communicating climate change properly** to the public should not prevent State authorities, who do have access to the information and understand the long-term implications, from taking greater efforts. State’s governments should take careful efforts in **informing persons in their country of the concrete health impacts of climate change for them** (without necessarily resorting to dying panda’s, or scorching earths, etc). If they feel that is it not possible to convey this larger message to the public, or see that they might be failing, there is a prime public task – in fact an obligation of human rights protection – in those situations to act in the well-being of its population on the basis of that information. In fact, in the case of **Öneryildiz v. Turkey before the European Court of Human Rights**, this Court arrived at similar considerations when it affirmed an obligation to criminally prosecute government officials for a failure to act on important (environmental) information about large and complex hazards and their mismanagement; precisely so, because **often only governments possess the ability, connections and responsibility to gather all important public and private information on health hazards**, and to protect their citizens on the basis of it.⁵⁹ This is a prime example of ‘fulfilling’ (providing) the human right to health, where individuals are, for various reasons, unable to protect their own health.

Finally, it is noteworthy that in the first ruling on the Dutch **Urgenda case**, the Dutch judges seem to accept that **individual States have an individual obligation to uphold their part of the bargain in international agreements on emissions reductions**. This would also comply with the reading of Article 2(1) ICESCR – now set out below in section II.4 – which obliges all States Parties to take steps according to maximum available resources, individually and jointly, as well as through international cooperation. The (joint and individual) regulation of private actors for reduced emissions, for example, seems to fall well within the ambit of this provisions.

II.4. The right to health implies ‘taking steps, individually and through international assistance and cooperation’.

Article 2(1) ICESCR requires *progressive realization* of the right to health through **individual and joint steps** by States according to **maximum available resources**, and through economic and technical **international cooperation with other States** and international organizations.

Box 3. Article 2(1) ICESCR – general obligations of human rights realization

1. Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.

⁵⁸ CESCR General Comment 14, para. 37.

⁵⁹ ECHR, Öneryildiz v. Turkey, No. 48939/99, 30 November 2004, para. 93.

First of all, on the **notion of progressive realization**, the CteeESCR is clear on its stance that ‘the progressive realization of the right to health over a period of time should not be interpreted as depriving States parties’ obligations of all meaningful content. Rather, progressive realization means that States parties have **a specific and continuing obligation to move as expeditiously and effectively as possible towards the full realization of article 12.**’ (GC 14, para 31). This means full a realization in line with the text of Article 12 ICESCR, and its substantive components as outlined in GC 14, and discussed in previous sections. It thus means moving ‘as expeditiously and effectively as possible’ to the highest attainable standard of physical and mental health for all, by means of ‘respecting, protecting and fulfilling’ access to health care and underlying determinants of health, on the basis of the AAAQ to the required relevant health goods, services and determinants.

There are two limits to this progressive realization. Firstly, progressive realization is limited by the existence of **core-obligations**, and their immediate realization and prioritization; secondly full realization can be legally curtailed by a State’s (technically, economically, etc.) **maximum available resources for human rights**. This maximum of resources refers both the **international and national availability of resources to any State**, since States are **obliged to cooperate for human rights both in terms of the core and beyond** (also see CteeESCR General Comment 3).⁶⁰ The minimum core for the human right to health exists of: access to essential medicines listed in the WHO Action Programme on Essential Drugs; access to health facilities, goods and services on a non-discriminatory basis, especially for vulnerable or marginalized groups; access to basic shelter, housing and sanitation, and an adequate supply of safe and potable water; equitable distribution of all health facilities, goods and services ; measures to prevent, treat and control epidemic and endemic diseases.⁶¹ Considering the severely disruptive nature of climate change, including the component of protection in terms of weather hazards, and the expectations of increase in diseases, the notion of minimum core obligations on medicines and essential underlying determinants seems important to stress. At the same time, while the notion of maximum available resources may seem to give considerable discretionary leeway to State, the **obligations of progressive realization are still quite strong**. GC 14 considers on the matter that:⁶²

it is important to distinguish the inability from the unwillingness of a State party to comply with its obligations under article 12. [...] A State which is unwilling to use the maximum of its available resources for the realization of the right to health is in violation of its obligations under article 12. If resource constraints render it impossible for a State to comply *fully* with its Covenant obligations, it has the burden of justifying that *every effort has nevertheless been made* to use all available resources at its disposal in order to satisfy, as a matter of priority, the obligations outlined above. It should be stressed, however, that a *State party cannot, under any circumstances whatsoever, justify its noncompliance with the core obligations [...], which are non-derogable.*[emphasis added]

In terms of specific obligations of international cooperation, GC 14 has so far recognized that: **‘States parties should recognize the essential role of international cooperation and comply with their commitment to take joint and separate action to achieve the full realization of the right to health’**. The emphasis is added to demonstrate that cooperation does not only refer to

⁶⁰ CESCR General Comment 14, para 38 : ‘States parties should recognize the essential role of international cooperation and comply with their commitment to take joint and separate action to achieve the full realization of the right to health. In this regard, States parties are referred to the Alma-Ata Declaration which proclaims that the existing gross inequality in the health status of the people, particularly between developed and developing countries, as well as within countries, is politically, socially and economically unacceptable and is, therefore, of common concern to all countries’. Also see paras 38-40, 45, 63-64 more generally; CESCR General Comment 3 (1990) on the nature of obligations of States Parties to the ICESCR, para. 10-11, 13.

⁶¹ CESCR General Comment 14, para. 43.

⁶² CESCR General Comment 14, para. 47; cf. CESCR General Comment 3, paras. 10-11.

the minimum core, but also to full realization. This reading is in line with the earlier General Comment 3 of the CteeESCR, outlining the general nature of State obligations in the area of socio-economic rights.⁶³ More specifically, as **relevant to climate change mitigation and adaption**, GC 14 also considers that:⁶⁴

States parties have to respect the enjoyment of the right to health in other countries, and to prevent third parties from violating the right in other countries, if they are able to influence these third parties by way of legal or political means, in accordance with the Charter of the United Nations and applicable international law. Depending on the availability of resources, States should facilitate access to essential health facilities, goods and services in other countries, wherever possible and provide the necessary aid when required. States parties should ensure that the right to health is given due attention in international agreements and, to that end, should consider the development of further legal instruments. In relation to the conclusion of other international agreements, States parties should take steps to ensure that these instruments do not adversely impact upon the right to health. Similarly, States parties have an obligation to ensure that their actions as members of international organizations take due account of the right to health.

Finally, the CteeESCR also stipulated in GC 14 specifically that all ‘States parties have a joint and individual responsibility, [...] to **cooperate in providing disaster relief and humanitarian assistance in times of emergency**, including assistance to refugees and internally displaced persons. Each State should **contribute to this task to the maximum of its capacities**. **Priority should be given to the most vulnerable or marginalized groups** of the population, in the provision of international medical aid, distribution and management of resources, such as safe and potable water, food and medical supplies, and financial aid.⁶⁵

Importantly, in recognizing the **responsibilities of other actors** as well, States Parties should **provide for an environment which facilitates the discharge of these responsibilities by other actors**. This is also captured in the notion of providing an ‘**enabling (international) environment**’ for socio-economic rights realization, per the ‘**2011 Maastricht Principles on Extra-Territorial Obligations in the Area of Economic, Social and Cultural Rights**’, which prove highly informative further guidance for the actions of States in the area of human rights and climate change as well.⁶⁶ For reasons of brevity, these principles are not fully explored here.

III. Climate Change in the Work of UN Supervisory Bodies

Looking beyond these general interpretative Comments, it is also worthwhile to include a brief analysis of the work already engaged in by UN Supervisory bodies (the right to) health and climate change specifically. **Is the aspect of climate change recognized in the context of the right to health, in the work of UN human rights supervisory bodies?**

The work of supervisory bodies in the field of climate change and human rights was recently broadly analyzed by the UN Special Rapporteur on human rights and a safe, healthy, clean and sustainable environment. In an elaborate **mapping report**, this UN Rapporteur highlighted references to climate change, across the full range of supervisory bodies and their various outputs in the human rights system, and across all rights.⁶⁷ The report did not focus specifically

⁶³ CESCR General Comment 3, para. 10, 13-14.

⁶⁴ CESCR General Comment 14, para. 39.

⁶⁵ CESCR General Comment 14, para. 40.

⁶⁶ Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights, adopted by ETO-consortium on 28 September 2011, via: <http://www.etoconsortium.org/en/library/maastricht-principles/>

⁶⁷ Via: <http://www.ohchr.org/EN/Issues/Environment/SREnvironment/Pages/MappingReport.aspx>. ‘Mapping Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment: Focus report on human rights and climate change’ (June 2014).

on health, but a closer reading does reveal many references the right to health. This contribution includes an update of that research, and partly an elaboration of finds. In addition, it focuses on a different aggregation of data: i.e. what references have been made to climate change in the context of the right to health to date (in terms of references to ‘climat’, ‘pollut’, ‘CO2’, ‘coal’, ‘greenhouse’, ‘mitiga’)? A focus placed on the **Concluding Observation by the CteeESCR, the Committee on the Elimination of Discrimination Against Women (CteeDAW) and the Committee on the Rights of the Child (CteeRC)**. Another search was also done for references to climate change in the annual reports of the **UN Special Rapporteur on the Right to Health**.

III.1. Concluding Observations CteeESCR, CteeDAW and CteeRC

Starting with the references specifically and directly made to the phenomenon of climate change by the UN treaty bodies in their Concluding Observations to date, we see that – other than the mapping report currently suggests – climate change was referenced in **5 Concluding Observations under CteeESCR** (Finland, Australia, Ukraine, Djibouti, Cambodia); **10 Concluding Observations under CteeDAW** (Saint Vincent and Grenadines; Vietnam, Maldives, Tuvalu, Solomon Islands, Peru, Seychelles, Cambodia, Jamaica and Grenada); and **9 Concluding Observations under CteeRC** (Jamaica, Saint Lucia, Fiji, Mauritius, The Seychelles, Tuvalu, Grenada, Namibia, Nigeria). Many references found pertain to small island states, but not all. A number of the Concluding Observations include quite specific references to measures to adapt to or mitigate climate change, but there are also more general references. Considering the ample references elsewhere to human rights and ‘natural disaster management’,⁶⁸ or human rights and other environmental phenomena, including other types of industrial pollution by companies,⁶⁹ in the human rights framework – including by these bodies – it seems that climate change implications of human rights are still fairly poorly understood, discussed and addressed in the human rights framework. This is, of course, one of the reasons why more elaborate studies into this topic are now commissioned by the Human Rights Council/OHCHR, including the present study.

CteeESCR

Starting our analysis of Concluding Observations with CteeESCR, this Committee has expressed concern in 2014 on ‘the lack of adequate measures to address the adverse effect of climate change on the Saami people’ in Finland and recommended to this country to take ‘**appropriate measures to address the adverse effect of climate change on the Saami people’s land and resources**’ (linked to art. 1 ICESCR).⁷⁰ More specific recommendations were given to Australia in 2009, when the CteeESCR expressed concerned about the ‘negative impact of climate change on the right to an adequate standard of living, including on the right to food and the right to water, affecting in particular indigenous peoples, in spite of the State party’s recognition of the challenges imposed by climate change’. Interestingly, here, the ‘right to health’ is not mentioned. The right to health was however mentioned in the CteeESCR’s very specific recommendation, in that:⁷¹

⁶⁸ See e.g. Marlies Hesselman, ‘Towards a Full ‘Cycle of Protection’ for Disaster Victims: Preparedness, Response and Recovery according to Regional and International Human Rights Supervisory Bodies’ (2013) 18 *Tilburg Law Review* 106-132.

⁶⁹ See the mapping of references to human rights and environment generally in the work of UN human rights bodies by the UN Special Rapporteur on human rights and a safe, healthy, clean and sustainable environment, in 2014, via: <http://www.ohchr.org/EN/Issues/Environment/SREnvironment/Pages/MappingReport.aspx>.

⁷⁰ CESCR, Concluding Observations on Finland (17 December 2014) UN Doc. E/C.12/FIN/CO/6, para 9.

⁷¹ CESCR, Concluding Observations on Australia (19 June 2009) UN Doc. E/C.12/AUS/CO/4, para. 27.

*the State party take all the necessary and adequate measures to ensure the enjoyment of the right to food and of the right to affordable drinking water and sanitation in particular by indigenous peoples, using a human-rights based approach, in line with the Committee's general comments No. 15 (2002) on the right to water, No. 14 (2000) on the right to the highest attainable standard of health and No. 12 (1999) on the right to food. It also recommends that the State party **intensify its efforts to address issues of climate change, including through carbon reduction schemes**. The State party is encouraged to **reduce its greenhouse gas emissions** and to **take all the necessary and adequate measures to mitigate the adverse consequences of climate change impacting the right to food and the right to water for indigenous peoples**, and put in place effective mechanisms to guarantee consultation of affected Aboriginal and Torres Strait-Islander peoples, so to enable them to exercise their rights to an informed decision as well as to harness the potential of their traditional knowledge and culture (in land management and conservation).*

Both sets of Concluding Observations for Finland and Australia were tied to art. 1(1) ICESCR, which deals with the right to self-determination of peoples, or 'the right to own and dispose of natural wealth resources' according to the Committee.⁷²

Apart from these more specific references on climate change action, a number of Concluding Observations more generally welcomed action on climate change (without necessarily tying it to a rights violation), or made a reference to climate and human rights (without necessarily implying climate change). To illustrate, in respect of Ukraine, the Committee welcomes '**the adoption by the State party of legislation on climate protection giving effect to the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change**', without commenting on any specific right.⁷³ In respect of Cambodia, the CteeESCR similarly celebrates '**the launching by the State party of a project for carbon credits for community forestry** under the Clean Development Mechanism and the Reduced Emissions from Deforestation and Forest Degradation of the United Nations Framework Convention on Climate Change'.⁷⁴ Finally, without an immediate reference to 'climatic change', the CteeESCR expressed concern over the position of nomadic people in Djibouti, in 'that drought has driven some nomadic communities to abandon their way of life based on seasonal migration' while there is a 'policy of settling nomadic populations in order to prevent a rural exodus.' The committee recommends on this matter that '**while aware of the climatic conditions and other difficulties facing the State party, the Committee encourages the State party to take the necessary measures to enable nomadic populations to preserve their traditional way of life**' (arts. 11 and 15).⁷⁵ This speak for the protection of traditional life styles in the face of climate change, and being able to accommodate these groups.

Summary

The references to climate change exist in the Concluding Observations of CteeESCR, even quite elaborately so in the case of Australia. Yet, this Committee, to date, does not very clearly elaborate the links between human rights and climate change, and certainly not the right to health. In fact, climate change concerns have been tied to other rights mostly, such as food or water, or self-determination. Food and water, as discussed prior, are also part of the underlying determinants of the right to health. Especially interesting and important, however, is the adamant confirmation of the CteeESCR that emissions reductions are a requirement for the protection of ICESCR- rights. Specific emphasis seems placed on the rights of indigenous peoples as well, as particularly vulnerable.

⁷² CESCR, Concluding Observations on Finland (17 December 2014) UN Doc. E/C.12/FIN/CO/6, para 9.

⁷³ CESCR, Concluding Observations on Ukraine (4 January 2008) UN Doc. E/C.12/UKR/CO/5, para. 4.

⁷⁴ CESCR, Concluding Observations on Cambodia (28 October 2013) UN Doc. CEDAW/C/KHM/CO/4-5, para. 40-41.

⁷⁵ CESCR, Concluding Observations on Djibouti (30 December 2013) UN Doc. E/C.12/DJI/CO/1-2, para. 36.

CteeEDAW

The CteeEDAW has more regularly referred to climate change and human rights in its Concluding Observations. It also seems to discuss climate change as a particular concern of rural women in the current drafting process on a **new General Recommendation on Rural Women (Article 14 CEDAW)**. In the concept note prepared for the general discussion day, a specific heading on **'the impacts of natural disasters and climate change on rural women'** as included. Under this heading matters it was raised that **'women in rural areas may experience the effects of climate change more acutely due to pervasive gender inequalities and structural disadvantages.'** Moreover, the note points out that **women often face restriction in land rights, making it difficult for them to access irrigation and other natural resources, in turn, making women farmers more reliant on rain-fed agriculture and farm on marginal lands.** Also considering some of the expected effects of climate change, i.e. erratic precipitation and scarcity of arable land, this means they **are more vulnerable compared to men, but also are limited in their capacity to adapt.** The concept note in this respect points out that women might need extra help, including financially, to **'adapt to environmental stress', including access 'to new varieties of plant types and animal breeds intended for higher drought or heat tolerance, and new agricultural technologies'**. Finally, the concept note also sees a health concern in that gender discrimination in the allocation of household resources, might put **women and girls at greater risk of lack of medicines, (mal)nutrition and morbidity when the effects of climate change, such as 'food-shortages or climate-sensitive diseases', strike.** Increased frequency and severity of natural disasters, and increased fuel and water shortages may also impact women's life and health in other ways, such as increased (physical) strain to carry out household tasks.

Most references in the **Concluding Observations** reflect at least part of these concerns. They pertain largely to the protection of women on **small island states**, and relate to the **natural disaster phenomena of climate change.** The majority of the paragraphs found make explicit references to **the disproportional vulnerability of (rural) women** and the requirement that **women participate actively in policy and decision-making on climate change policies, disaster prevention, preparedness and reduction strategies and are empowered in participating in adaptation and mitigation.** These are often not tied to a specific right, but rather mentioned under headings related to rural women, or climate change and natural disasters specifically. Candidate applicable rights are arts. 7 and 14 CEDAW. References to health specifically, were not encountered.

Looking at the specific contents of these Concluding Observations, we see, *inter alia*, CteeEDAW expressing concern over the vulnerability of women on St Vincent and the Grenadines **'to the effects of natural disasters, such as floods, hurricanes and volcanoes, as evidenced by the cases of Hurricane Ivan (2004), Hurricane Tomas (2010) and Tropical Storm Lili (2002), as well as the impact of climate change'**. It recommends this small island state to **'ensure that the development and implementation of policies and programmes on disaster preparedness, response to natural disasters and impacts of climate change, as well as other emergencies, are based on a comprehensive gender analysis and mainstream the concerns of women, especially those of rural women, and include them in the design and management of such programmes.** The Concluding Observations on Tuvalu similarly observe that this State is vulnerable and **'exposed to environmental threats, including coastal erosion and rising sea levels as a result of climate change, as well as natural disasters'**. The CteeEDAW observes, moreover, that many Tuvaluan citizens are increasingly **emigrating to neighbouring countries**, and acknowledges that the **'impact of climate change, the rise in sea levels and other climate-related disasters affect rural women disproportionately, given that they rely heavily on access to natural resources for their daily survival'**. Here a clear link between the right to health, right to life and climate change can be observed, even if not explicit. The CteeEDAW, moreover, notes **'a risk of further internal or international displacement that would give rise**

to statelessness'. Beyond this, there is little evidence, according to the CteeEDAW, 'that those affected, including women, have been **informed of or given opportunities to participate in decision-making processes to mitigate the impacts of climate change and in policymaking relating to them**'.⁷⁶ CteeEDAW recommends concretely to Tuvalu to '**develop disaster management and mitigation plans in response to potential displacement and/or statelessness arising from environmental and climate change and ensure that women, including those living on the outer islands, are included and may actively participate in planning and decision-making processes concerning their adoption**'. The CteeEDAW also sets the expectation that gender perspectives, comprehensive gender analysis and mainstreaming of concerns of women, especially those of rural women, are integrated into all sustainable development policies, including into the design of disaster preparedness, disaster risk reduction, post-disaster management and climate change policies and their implementation.⁷⁷ Similar concerns on participation and gender sensitivity were voiced in other reports, e.g. on the Maldives and Grenada. In the first case, CteeEDAW calls upon the State party '**to ensure that women are represented and participate in decision-making and policymaking regarding plans and policies aimed at disaster management and in response to the impact of climate change**'. The Committee also 'recommends that the State party promote gender equality as an explicit component of such plans and policies and **ensure that women, in particular rural women, are consulted in their development**'.⁷⁸ In respect of Grenada, the CteeEDAW stated that policies and programmes on climate change need to be 'based on a comprehensive gender analysis, and mainstream the concerns of women, particularly those of rural women'.⁷⁹ In the Concluding Observations on the Seychelles, the CteeEDAW further recommends similar courses of action under a heading called 'climate change and natural disasters' – despite apparently quite elaborate climate change adaptation plans and disaster action plans already being in place, or on the verge of adoption.⁸⁰ Finally, in the Concluding Observations on the Solomon Islands, the Committee additionally recommends that the **development of a national action plan on climate change, disaster response and risk reduction, should not target women 'as victims but also as active participants in the formulation and implementation of such policies'**.⁸¹ Again, these references are not specifically linked to health, although health is implicit in the CEDAW provision on the rights of rural women generally (Article 14 CEDAW). The recommendations on the Solomon Islands were also tied to a specific paragraph entitled 'impacts of climate change on women', similar to the Seychelles observations on 'climate change and natural disasters'. While it is remarkable that climate change gets specific attention, the aggregation of a range of human rights under a general heading might not necessarily do justice to the richness of potential obligations attaching to the human rights frameworks.

In terms of recommendations addressed to **non-small island states**, i.e. Peru, Cambodia and Vietnam, CteeEDAW first of all notes on the situation in Peru that there are '**differentiated gender impacts of climate change and recurring natural disasters**, including severe drought, landslides and earthquakes, on women'; it recommends to address this by 'stepping up its efforts to **empower rural women and women living in remote areas to cope with and adapt to climate change**'.⁸² Similarly, in the Concluding Observations on Cambodia the CteeEDAW stresses disparities in effects for women, and requests the State to 'ensure that women are actively involved in decision-making on the policies and programmes for disaster prevention and management, especially those relating to climate change adaptation and mitigation'.⁸³

⁷⁶ CEDAW, Concluding Observations on Tuvalu (10 March 2015) UN Doc. CEDAW/C/TUV/CO/3-4, para 31.

⁷⁷ CEDAW, Concluding Observations on Tuvalu (10 March 2015) UN Doc. CEDAW/C/TUV/CO/3-4, para. 31; CEDAW, Concluding Observations on Saint Vincent and the Grenadines (28 July 2015) UN Doc. CEDAW/C/VCT/CO/4-8, para. 41.

⁷⁸ CEDAW, Concluding Observations on Maldives (10 March 2015) UN Doc. CEDAW/C/MDV/CO/4-5, paras. 42-43.

⁷⁹ CEDAW, Concluding Observations on Grenada (22 March 2012) UN Doc. CEDAW/C/GRD/CO/1-5, para. 36 (b).

⁸⁰ CEDAW, Concluding Observations on Seychelles (28 October 2013) UN Doc. CEDAW/C/SYC/CO/1-5, paras. 36-37.

⁸¹ CEDAW, Concluding Observations on Solomon Islands (14 November 2014) UN Doc. CEDAW/C/SLB/CO/1-3, paras.. 40-41.

⁸² CEDAW, Concluding Observations on Peru (24 July 2014) UN Doc. CEDAW/C/PER/CO/7-8, paras. 37-38.

⁸³ CEDAW, Concluding Observations on Cambodia (28 October 2013) UN Doc. CEDAW/C/KHM/CO/4-5, paras. 40-41.

Finally, in Vietnam responses to climate change, involving expropriation or relocation programmes, have apparently negatively affected the livelihood of rural women. This does not attract a specific recommendation on climate change from the Committee, but rather a general appeal that women should not be rendered homeless and that any relocation needs to be guided by e.g. the **FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security** and the **Basic Principles and Guidelines on Development Based Evictions and Displacement**, developed by the Special Rapporteur on adequate housing.⁸⁴ These two documents serve as a good reminder that there might already be a range of standards available within the UN framework, which are or can be made applicable to climate change and human rights as well. Another good example might be the **UN Guiding Principles on Internal Displacement**.

Summary

The CteeDAW certainly acknowledges the impacts of climate change on the lives of people in developing countries, both for small island states and other states, and sees that women might be impacted disproportionately. The CteeEDAW's makes quite specific statements on women's reliance on the land's natural resources for daily survival, but also the difficulties of rising sea levels, lack of arable land, displacement, statelessness, coastal erosion or the impact of natural disasters. The links to health are somewhat less specifically made. This is different in the Concluding Observations from CtRC, discussed below. Another matter that stands out from the work of this Committee is the need for input, information and participation in decision-making, noting that women should be included in climate change plans and programmes not as 'victims', but as legitimate participants in decisions making.

CteeRC

About the interpretation of the Convention on the Rights of the Child, it was already pointed out that the CteeRC recently adopted **General Comment 15 on children and health**, which now pays explicit attention to climate change in a number of places. Particularly, the CteeRC acknowledges that **'children's health is affected by a variety of factors, many of which have changed during the past 20 years and are likely to continue to evolve in the future. [...] There is also a growing understanding of the impact of climate change and rapid urbanization on children's health'**.⁸⁵

The health concerns of climate change are also reflected in the CteeRC's Concluding Observations, with more specific references and headings on 'climate change and children's rights' increasingly included. Recent comments tend to be placed under an overall heading of **'disability, basic health and welfare'** specifically.

Looking at the contents Concluding Observations, again many references to climate change can be found in reports related to (small) island states. For example, the CteeRC notes in observations on Jamaica and Saint Lucia, in a similar manner, that **climate change and natural disasters have adverse impacts on the rights of the child, including the rights to education, health, adequate housing, safe and drinkable water and sanitation**.⁸⁶ More specifically, the CteeRC expresses concern about the fact that **'natural disasters have the potential to undermine the social safety net of the State party**, with negative consequences for children and families exposed to poverty'. It recommends to Jamaica and Saint Lucia, again in similar fashion, to **'develop strategies to reduce the vulnerabilities and risks for children and families which**

⁸⁴ CEDAW, Concluding Observations on Vietnam (24 July 2015) UN Doc. CEDAW/C/VNM/CO/7-8, para. 36.

⁸⁵ CRC General Comment 15, paras. 50, 71.

⁸⁶ CRC, Concluding Observations on Jamaica (10 March 2015) UN Doc. CRC/C/JAM/CO/3-4, paras. 50-51; CRC, Concluding Observation on Saint Lucia (7 July 2014) UN Doc. CRC/C/LCA/CO/2-4, paras. 52-53.

may be produced or exacerbated by climate change, including by **'mainstreaming child-specific and child-sensitive risk and vulnerability reduction strategies' into National Climate Change Policy and Adaptation Plans and disaster preparedness and emergency management.**⁸⁷ It also recommends these States to strengthen their 'social safety nets and social protection frameworks so as to mitigate the multiple social, economic and environmental impacts of climate change more effectively'.⁸⁸ Then, in another recent report in respect of *Mauritius*, the CteeRC has equally observed with concern that policies and programmes addressing climate change and disaster risk management, such as in the case of cyclones, do not address the special vulnerabilities and needs of children, and that **'data available to formulate policies do not identify the types of risk faced by children'**. As a result, it recommends to Mauritius to **collect 'disaggregated data identifying the types of risk faced by children [...so as to] formulate international, regional and national policies, frameworks and agreements accordingly'**, especially 'with a view to avoiding preventable death and injuries of children'.⁸⁹ This latter statement is interesting, as it affirms the obligations of States to engage in international cooperation on issues of climate change and disasters, including with a view to prevent preventable deaths and injuries. This seems highly relevant for the currently estimated 250 000 climate change victims now projected by the WHO between 2030 and 2050. In the Concluding Observations of Mauritius, the CteeRC goes even further, by also specifically requiring that **children's awareness and preparedness for climate change and natural disasters is increased, by incorporating them into the school curriculum and teachers' training programmes**, as well as by recommending that Mauritius seeks **'bilateral, multilateral, regional and international cooperation in implementing the above recommendations'**.⁹⁰ The observations on *Fiji* are also fairly specific and precise. In this case the CteeRC starts its observations by applauding the introduction of a new National Climate Change Policy by Fiji, as well as efforts to teach children about climate change and the measures that address it. At the same time, the committee expresses concerns about the **'insufficiency' of measures taken to enable children to contribute to decisions on climate change**. This is due to the fact that climate change seems to impact children and their families profoundly, especially in the **Fijian 'coastal and low-lying areas where climate change is resulting in the loss or salinization of land and fresh water resources, and reduced opportunities for agriculture and subsistence living.**⁹¹ The Committee also draws attention to reports indicating that **children face more acute risks from disasters and are more vulnerable to climate change than adults'**.⁹² Another similar specific remark can be observed in the report on the *Seychelles*, where CtRC considers that it 'is well aware that climate change is a major obstacle to the achievement of sustainable development goals in Seychelles, adding **pressure on scarce arable land, limited water resources and fragile biodiversity, all of which may have negative impacts on children and the enjoyment of their rights.**⁹³ Yet, contrary to the report of the Seychelles, where no recommendations follow, the CteeRC recommends to Fiji, that it **'ensure that the special physical and psychological vulnerabilities and needs of children, as well as their views, are taken into account, and that children are fully involved in the policy dialogue on climate change'**. Fiji should also 'finalize and implement national legislation and policies for sustainable safe water supplies and sanitation'; 'strengthen social protection systems to ensure that children and families affected by climate change will receive sufficient and adequate support'; 'increase children's awareness and preparedness for climate change and natural disasters by incorporating it into the school curriculum and teacher training programmes'; **'seek and strengthen bilateral, multilateral, regional and international cooperation in implementing**

⁸⁷ CRC, Concluding Observations on Jamaica (10 March 2015) UN Doc. CRC/C/JAM/CO/3-4, paras. 50-51; CRC, Concluding Observation on Saint Lucia (7 July 2014) UN Doc. CRC/C/LCA/CO/2-4, paras. 52-53.

⁸⁸ CRC, Concluding Observations on Jamaica (10 March 2015) UN Doc. CRC/C/JAM/CO/3-4, paras. 50-51.

⁸⁹ CRC, Concluding Observations on Mauritius (27 February 2015) UN Doc. CRC/C/MUS/CO/3-5, paras. 57-58.

⁹⁰ CRC, Concluding Observations on Mauritius (27 February 2015) UN Doc. CRC/C/MUS/CO/3-5, paras. 57-58.

⁹¹ CRC, Concluding Observations on Fiji (12 October 2014) UN Doc. CRC/C/FJI/CO/2-4, para. 55.

⁹² CRC, Concluding Observations on Fiji (12 October 2014) UN Doc. CRC/C/FJI/CO/2-4, para. 55.

⁹³ CRC, Concluding Observations on the Seychelles (23 January 2012) UN Doc. CRC/C/SYC/CO/2-4, para. 7, also see 20.

those recommendations'.⁹⁴ It is noted that the Fiji Concluding Observations date from 2014, and the Seychelles' Observations from 2012. It appears that later Concluding Observations have become more specific on climate change measures. For example, also in 2013 the CteeRC was much more elaborate in respect of Tuvalu. In this case, the CteeRC started by recognizing that **the 'continuing threat of climate change [...] can affect the survival of the country', but that 'these difficulties should not be regarded as a deterrent to the full implementation of the Convention'**.⁹⁵ Instead, the CteeRC expresses deep concern 'at the adverse impact of climate change and natural disasters on the rights of the child, **including rights to education, health, adequate housing, and safe drinking water and sanitation, among others.**' The right to health is thus specifically mentioned here, alongside other rights. The CteeRC subsequently joins the Special Rapporteur on the Right to Water in expressing concern that affected Tuvalan populations, mainly women and children, were not informed or given opportunity to participate in discussions on the impacts of climate change and policy making related to them.⁹⁶ It recommends therefore that the **special vulnerabilities and needs of children, as well as their views, are taken into account**, that safe water and sanitation access be protected, and that children's awareness of and preparedness for climate change be integrated in school curricula.⁹⁷ The CteeRC also explicitly stresses the need for international cooperation on two occasions, including in a separate recommendation on **international cooperation 'to enhance the implementation of the Convention [...] with respect to the constraints imposed by climate change'**, singling out the OHCHR, the UN Office for Disaster Risk Reduction, the UNOHCR, UNIFEC, the Office for the Coordination of Humanitarian Affairs and the Secretariat of the Pacific Community's Applied Geoscience and Technology Division as go-to entities.⁹⁸ Finally, in one of the earliest observations on climate change, on Grenada in 2010, the CteeRC included a general observation on climate change, simply noting 'with concern that the State party, as a small island State, is subject to the worst effects of climate change and that this has a negative impact on all areas of the lives of children', urging the government 'to be **extremely conscious in the development of programmes and policies of the need to manage their environmental dimensions, with the cooperation of regional and international partners, in order to reduce to the maximum extent possible the negative impact of climate change.** The Committee also encourages the State party to put in place natural disaster preparedness programmes'.⁹⁹

Before coming to a short summary, two further references to non-island States are in order. Notably, Namibia and Nigeria. First, in the Concluding Observations on Namibia the CteeRC takes note of the fact 'that the State party is **one of the countries most affected by climate change and the increasing impact of natural hazards, such as floods, storms and drought, leading to changes in the disease patterns, reduced agricultural outputs and food insecurity**', without making any further reference or recommendation.¹⁰⁰ However, in the report on Nigeria, the CteeRC notes under a heading on business and children's rights that it is 'concerned about the **negative effects on children of global climate change, including in the context of the desertification in the northern states**'.¹⁰¹ The Committee generally recommends on this that Nigeria 'increase, through the school curriculum and communication programmes, the **knowledge of children, parents, teachers and the public at large on environmental issues, including [...] growing desertification in the North and its related effects on the health of children, such as malnutrition**'.¹⁰²

⁹⁴ CRC, Concluding Observations on Fiji (12 October 2014) UN Doc. CRC/C/FJI/CO/2-4, para. 56.

⁹⁵ CRC, Concluding Observations on Tuvalu (30 October 2013) UN Doc. CRC/C/TUV/CO/1, para. 7.

⁹⁶ CRC, Concluding Observations on Tuvalu (30 October 2013) UN Doc. CRC/C/TUV/CO/1, para. 55.

⁹⁷ CRC, Concluding Observations on Tuvalu (30 October 2013) UN Doc. CRC/C/TUV/CO/1, paras. 55, 67.

⁹⁸ CRC, Concluding Observations on Tuvalu (30 October 2013) UN Doc. CRC/C/TUV/CO/1, paras. 55, 67.

⁹⁹ CRC, Concluding Observations on Grenada (22 June 2010) UN Doc. CRC/C/GRD/CO/2, paras. 51-52.

¹⁰⁰ CRC, Concluding Observations on Namibia (16 October 2012) UN Doc. CRC/C/NAM/CO/2-3, para. 7.

¹⁰¹ CRC, Concluding Observations on Nigeria (21 June 2010) UN Doc. CRC/C/NGA/CO/3-4, para. 46.

¹⁰² CRC, Concluding Observations on Nigeria (21 June 2010) UN Doc. CRC/C/NGA/CO/3-4, para. 47.

Summary

The CteeRC seems quite attentive to the issue of climate change in its Concluding Observations since 2010. The focus still lies mostly on (small) island States. Nevertheless, in more recent years, the attention of the CteeRC to climate change has intensified, in particular in respect of the boldness of recommendations on the issue. This is possibly a result of new General Comment 15 on children and health. The CteeRC does not hesitate to make fairly specific observations and recommendation on the effects of climate change (e.g. regarding salinification, desertification, flooding, reduced agricultural output, water access or arable land, and disease patterns) and any measures to be taken in response (including designing sensitive action plans with participation of affected groups, adapting school curricula, or ensuring social safety nets). A number of references to the right to health are included, while at any rate, health and access to the underlying determinants of health seem to be a prime concern. Great emphasis is also placed on the role of information, participation, education and school curricula.

III.2. Special Rapporteur on Right to Health

Finally, the work of the Special Rapporteur on the Right to Health deserves brief mention here, as a special procedure which has articulated the normative content of the right to health further. Through its annual reports and country visits, the Special Rapporteur on the Right to Health has been able to investigate in more detail important specific thematic issues for the right to health, or concerns extant at any country level. So far, there **has been no dedicated report on health and climate change**, which is a topic, seemingly, at the moment more firmly in the purview of the new Special Rapporteur on human rights and a safe, healthy, clean and sustainable environment since August 2012.¹⁰³ Nonetheless, there is **one annual report, dating from 2007, which has discussed aspects of climate change**. This report was very much concerned with the ‘regrettable tendency to devote disproportionate attention to medical care at the expense of the underlying determinants of health’.¹⁰⁴ To illustrate this, Rapporteur Paul Hunt zoomed in on two ‘illustrative underlying determinants of health: access to safe water and adequate sanitation’.

Looking at the pronouncements on climate change and health in more detail, Rapporteur Paul Hunt first observed that ‘the right to health requires a State to do all it can to ensure safe water and adequate sanitation is available to everyone in its jurisdiction. The quantity of water available for each person should correspond to the quantity specified by WHO. **Some individuals and groups may require additional water owing to health, climate and work conditions**, and the State should therefore ensure that water is available in sufficient quantities to fulfil the needs of such groups and individuals’. This observation was made under the heading ‘AAQ’.¹⁰⁵ In addition, he considers that **based on the principles of ‘non-discrimination and equality’ a State is also required ‘to give attention to individuals and groups who have special water and sanitation needs owing to health, climate or other conditions’**.

A specific heading on ‘global warming’, includes more specific statements on the links between climate change and (the right to) health, considering that:¹⁰⁶

¹⁰³ See the work of this Special Procedure so far, at:

<http://www.ohchr.org/EN/Issues/Environment/SREnvironment/Pages/SREnvironmentIndex.aspx>

¹⁰⁴ ‘Report of the Special Rapporteur on the Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health; Paul Hunt (8 August 2007) UN Doc. A/62/214., p. 2.

¹⁰⁵ *Idem.* para. 73.

¹⁰⁶ *Idem.* para. 100-101

Those living in poverty are disproportionately affected by the adverse effects of global warming. Not only has global warming led to a decline in dependable access to water, it has also led to a disruption in natural ecosystems. Warmer and wetter conditions resulting from climate change are increasing the range and season of vectors, such as mosquitoes and tsetse flies, which spread diseases such as malaria, dengue and yellow fever, and encephalitis.

Global warming will adversely affect the world's hydrological cycle and result in more droughts and floods. Drought poses serious threats to health. As clean water sources evaporate, people resort to more polluted alternatives that may lead to epidemics of water-borne diseases. Likewise, floods not only increase the risk of drowning and destroying crops, they also spread disease by extending the range of vectors and by washing agricultural pollutants into drinking water supplies.

The Special Rapporteur concludes by stating that **'despite these disturbing trends, the international community has not yet confronted the health threats posed by global warming. The failure of the international community to take the health impact of global warming seriously will endanger the lives of millions of people across the world.'**¹⁰⁷

In the section with recommendations, the Special Rapporteur calls upon the Human Rights Council 'to urgently study the impact of climate change on human rights generally and the right to the highest attainable standard of health in particular'. This seems to be object of the current analytical study, for which this report is also submitted. It seems advisable, and of interest for the normative development of the human right to health framework, that the Special Rapporteur on the Right to Health devote more attention to the issue of climate change in future reports.

IV. Situating Climate Change in other Human Rights Legal Developments: Disasters and Healthy Environment

Finally, a short note is place on the fact that the **links between human rights and climate change should not be understood in a legal vacuum**. While it is highly useful to scope out the implications of the human rights framework for climate change, and to reaffirm the links that exist, at the same time, the phenomenon of climate change is also highly linked to other topics which already have been more extensively discussed, and where legal obligations have been elaborated in more detail already. These topics include the **protection of persons in the event of (natural and man-made) disasters**, but also, climate change is highly related to the **regulation of negative effects of environmental pollution on human rights more broadly**, and the right to a healthy environment. This arguably includes protection against especially harmful pollution of the environment through greenhouse gas emissions. Discussions on human rights and climate change can and should certainly draw from the protective frameworks already established there.

IV.1. Protection of persons in the event of (natural and man-made) disasters

To illustrate more concretely on the linkages of climate change to disasters: the International Law Commission (ILC) is currently rounding up its work on the codification and development of international (human rights) law on the protection of person in the event of (natural) disasters, *inter alia*, affirming that: **'persons affected by disasters are entitled to respect for their human**

¹⁰⁷ Idem. para.102

rights', and that 'the purpose of the present draft articles is to facilitate an adequate and effective response to disasters that meets the essential needs of the persons concerned, with full respect for their rights'.¹⁰⁸ The ILC Draft Articles also came to include a **duty to reduce the risk of disasters, 'by taking the necessary and appropriate measures, including through legislation and regulations, to prevent, mitigate, and prepare for disasters'**. This also includes 'the conduct of risk assessments, the collection and dissemination of risk and past loss information, and the installation and operation of early warning systems'.¹⁰⁹ It seems that disaster risk reduction can be a way of adapting to climate change, but naturally, climate change mitigation is also way to prevent sudden- and slow-onset natural disasters in the future. In any case, the intimate links are also clear from the fact that the ILC Special Rapporteur on this topic has drawn from principles of climate change law, such as article 3 of the UNFCCC, which considers that **States 'should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects'**.¹¹⁰ There are many other interesting aspects to the work and discussions of the ILC, including in respect of international cooperation, which allegedly could be made relevant for the phenomenon of climate change as well.

In addition, specifically on human rights and disaster management, elsewhere important developments on this topic have taken place as well, notably in **the practice of regional and international human rights supervisory bodies**. Indeed, both regionally and internationally, there have been many pronouncements by courts and committees on the full range of human rights obligations for the adequate management of natural and man-made disasters. These will not be repeated here, but can be found extensively in earlier writings, including from the present authors.¹¹¹ It is noted that obligations of human rights protection stretch to all phases of disaster management: i.e. **prevention, preparation, response and recovery, and also cover rights and obligation in terms of international cooperation**.¹¹² It seems highly useful to also link this to climate change, especially in so far that climate change is also tied to weather events. Great examples of very specific cases in which the human rights obligations of States in response to (future) disasters and weather events have been affirmed, are the cases of *Öneryıldız v. Turkey* (2004), *Budayeva and others v. Turkey* (2008), *Kolyadenko and others v. Russia* (2012) and *Hadzhiyska v. Bulgaria* (2012) before the European Court of Human Rights for example.¹¹³

IV.1 Human Rights and A Safe, Healthy, Clean, Sustainable Environment

Similar to the discussion on human rights and disaster management, there is also an **extensive body of writing and case-law drawing up the links between human rights and a clean environment**. Again, this body of law will not be repeated here, but it seems important to affirm that despite first initial studies on the links between climate change and human rights now carried out by the Human Rights Council, the Office of the High Commissioner on Human Rights and Special Procedures, there has also been much attention for aspects related to harmful environmental pollution, especially in contravention of **environmental safety levels**, in human rights law. There are ample references to environmental pollution in the work of UN supervisory

¹⁰⁸ See Report of the International Law Commission on the Work of the Sixty-Third Session (2011), UN. Doc. A/66/10, para. 288. Articles 2 and 8.

¹⁰⁹ See Report of the International Law Commission on the Work of the Sixty-Fifth Session (2013), UN. Doc. A/68/10, para. 288, p. 75. Article 16.

¹¹⁰ See generally, ILC 'Sixth Report on the Protection of Persons in the Event of Disaster by Eduardo Valencia-Ospina, Special Rapporteur' (3 May 2013), UN Doc. A/CN.4/662, and specifically para. 91.

¹¹¹ E.g. see Marlies Hesselman, 'Towards a Full 'Cycle of Protection' for Disaster Victims: Preparedness, Response and Recovery according to Regional and International Human Rights Supervisory Bodies' (2013) 18 *Tilburg Law Review* 106-132; or Marlies Hesselman, 'Regional Human Rights Regimes and Humanitarian Obligations of States in the Event of Disaster', in: Andrej Zwitter et al, *Humanitarian Action: Global, Regional and Domestic Legal Responses* (CUP, 2014) 202-227.

¹¹² *Idem*.

¹¹³ ECHR, No. 48939/99, Reports-XII [GC]; ECHR, No. 15339/02, 20 March 2008; ECHR, No. 17432/05, 28 February 2012; ECHR No. 20701/09, 15 May 2012.

bodies – as also demonstrated by the work of the Special Rapporteur on Human Rights and Environment, e.g. in his mapping initiative,¹¹⁴ but again equally, in the work of the European Court of Human Rights and other regional systems.¹¹⁵ See also supra footnote 29 for references to some Concluding Observations on the CtRC in this respect. Again, it is not possible to be exhaustive here, but it is worthwhile to draw attention to the overlap between atmospheric pollution and climate change. In any case, work on human rights and environmental protection points the importance of respecting agreed safety standards for public health, which could include standards on global warming (emission limits, 1,5-2 degrees limit).

V. Conclusions

The impact of climate change on the health of human beings everywhere are and will be profound, wide-ranging and overwhelmingly negative in nature. As considered by the Office of the High Commissioner for Human Rights: **‘negative impacts caused by climate change are global, contemporaneous and subject to increase exponentially according to the degree of climate change that ultimately takes place’.**

This study has demonstrated that – potentially alongside a range of other human rights – the human right to health is without a doubt applicable to the phenomenon of climate change. The ‘human right to the highest attainable standard of health’ in international human rights requires that **everyone has access to equal opportunities for health, meaning equal access to health care (facilities, goods and services) in a manner that these facilities, services and goods are available, within safe physical reach, affordable and of good quality, but also that all people have access (in a similar manner) to the very important ‘underlying determinants of health’**, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment.

Unfortunately, this study shows that **despite the fact that the current human right to health framework has clear ramifications for the manner in which States and other responsible actors have to approach climate change, protecting peoples’ health effectively, the health threats of climate change appear not to have attracted broad attention so far in the human rights supervisory work of most UN human rights monitoring bodies.** The number of references to climate change in the work of CteeESCR, CteeEDAW and CteeRC is still limited, although the practice seems to pick up. This is no doubt related to the increasing awareness of the effects of climate change on human rights enjoyment. Our analysis shows that a range of Committees have made quite extensive references to (the non-existence of) effective measures for climate change on occasion. These references acknowledge a broad range of impacts, ranging from salinification of water, to erosion, to lack of water resources, arable land and reduced agricultural output, to natural disasters and desertification.

Of course, the current efforts of the UN Human Rights Council, Office of the High Commissioner of Human Rights and the new Special Rapporteur on Human Rights and a Safe, Healthy, Clean and Sustainable Environment improve the awareness of and attention to human rights implications of climate change further. This current study on ‘the human right to health and climate change’ fits in with and aims to support such efforts.

¹¹⁴ Reports available here: <http://www.ohchr.org/EN/Issues/Environment/SREnvironment/Pages/MappingReport.aspx>

¹¹⁵ See e.g. M. Hesselman and J. van de Venis/NJCM, ‘Human Rights and the Environment: Input for the Analytical Study on Human Rights and Environment by OHCHR’ (June 2011), available here: http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2207910_code1479678.pdf?abstractid=2207910&mirid=3

In line with Human Rights Council resolutions so far, and along with broader awareness on this issue, **this study emphasized that effective (legal) protection of people's health in the face of climate change, especially for vulnerable people, and especially in cases where people will not be able to enjoy health themselves without strong government action, requires more decisive action on applying the human right to health, as well as greater supervision.** In fact, the human right to health framework includes a range of legal obligations for the protection of access to health care and the underlying determinants which certainly affect discussions on the strategies that need to be taken for effective climate change mitigation and adaptation. In so far that negative health effects of climate change can be prevented through mitigation – certainly because 'adaptation', according to science, knows real human limitations, or leads to even stronger effects for vulnerable persons – mitigation measures seem a preferred option to respect and protect the right to health.

Very concretely, respecting, protecting and fulfilling the right to health in the face of climate change requires, *inter alia*, the following measures of States:

- **The 'obligation to respect' – esp. the underlying determinants of health – requires States to refrain from (unlawfully) polluting the air and climate, e.g. on the basis of known harmful climate change emissions and unhealthy environmental pollution (this counts especially for safety limits already agreed, i.e. a 1,5 - 2 degree limit and/or current emission reduction targets);**
- **The obligation to protect – esp. underlying determinants of health – requires States to effectively agree, set, implement and enforce climate change safety levels for health, in relation to third parties such as polluting industries;**
- **The obligation to respect/protect/fulfil/internationally cooperate, requires States to observe the right to health in international cooperation and assistance for health, including (or especially) in negotiations on agreements that directly negatively or positively affect the right to health (i.e. the right to health covers the UNFCCC COP21 meeting in Paris in December)**
- **The obligation to fulfil (also taking into account minimum core obligations) requires States, in case negative effects of climate change already occurred or can be predicted to occur concretely, to effectively prevent, treat and control climate change-related diseases by ensuring the availability of sufficient, accessible, affordable, good quality medicines; idem. adequate disaster preparedness, response and recovery; idem. food and water stock reserves; idem. essential climate infrastructures (e.g. electricity for cooling, air-co'ed spaces).**
- **The obligation to fulfil (also taking into account minimum core obligations) requires States, in case negative effects of climate change already occurred or can be predicted to occur concretely: to effectively ensure the availability and affordability of the 'underlying determinants of health', incl. ensuring (the right to) food and nutrition, (right to) water, or (right to) housing and private and family life (e.g. by enabling access to climate resistant plants or seeds, arable lands, water stocks etc.)**
- **The international human rights law framework, as outlined in General Comments, requires the effective participation by and information to persons concerned at all levels of decision-making, as well as taking into account their views, and the accountability for right to health violations.**

These measures are certainly not exhaustive; other right to health implications of climate change could be observed in the future. In addition, it remains **important to acknowledge that legal developments in the field of human rights and climate change do not occur in a legal vacuum**. Rich works on related topics already exist, such as human rights and natural and/or man-made disasters, or work in the field of human rights and environmental pollution generally. As scientific insights on climate change continue to unfold, the application of the right to health to this specific phenomenon should become more imperative and clear. In any case, the right to health demands that States and others actors assess their acts and omissions in respect of climate change through a lens of human rights law and its obligations, whether derived from national, regional and international law. **All human rights, including the legal normative content of the right to health, should be understood as both a key priority for human dignity and development, as well as a *legal imperative*.**