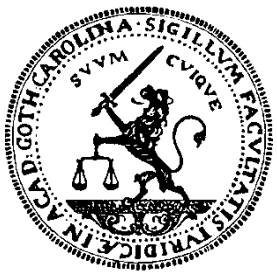

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The Price of Food

Evaluating the effectiveness of the international human rights framework in regulating the impacts of agribusinesses on the right to food amidst the climate crisis

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Table of Contents

Summary **5**

Acknowledgements **6**

Abbreviations **7**

I. Introduction **8**

1. A Few Words 8
2. Purpose and Research Questions 11
3. Limitations and Terminology 12
4. Methodology 13
5. Materials 13
6. Structure 14

II. The Right to Food Explained **16**

1. Introduction 16
2. Understanding the Right to Adequate Food 16
   - 2.1. The international human rights framework 16
   - 2.2. Defining the right to adequate food 20
3. Core Elements of the Right to Food 22
   - 3.1. Availability 22
   - 3.2. Accessibility 23
   - 3.3. Adequacy 24
4. Conclusion 25

III. Climate Change **26**

1. Introduction 26
2. Understanding a Few Key Concepts 26
   - 2.1. Climate and weather 26
   - 2.2. Ecosystems and biodiversity 28
3. Drivers of Climate Change and the Human Factor 30
4. Consequences 32
   - 4.1. The ocean and the cryosphere 32
     - 4.1.1. The cryosphere 33
     - 4.1.2. The global ocean 34

4.2. Land 37
5. Concluding Remarks 42

IV. The Agribusiness' Impacts on Food and Climate Change 44
1. Introduction 44
2. Agribusiness 45
2.1. What it is 45
2.2. Why it matters 47
3. The Impacts of the Agribusiness 50
4. Illustrative Example: the case of soybean production 55
4.1. The value of soybeans 55
4.2. Impacts on the right to food and contribution to climate change 57
4.2.1. Loss of natural lands 58
4.2.2. Soil, water, and resource use 61
4.2.3. Monoculture, and social impacts 64
4.2.4. Human rights 65
5. Final Remarks: a need for change 66

V. The Right Food and Climate Change: Agribusinesses' Obligations 69
1. Introduction 69
2. Existing Obligations for Agribusinesses as Non-State Actors 71
2.1. State responsibility to regulate corporate behaviour 72
2.1.1. Principles 72
2.1.2. Ensuring compliance 76
2.2. Direct obligation 79
2.2.1. Through international human rights law 80
2.2.2. Soft law instruments: the UN Guiding Principles 82
2.2.3. Codes of conduct and voluntary guidelines 88
2.2.4. The Oslo Principles on Global Climate Change Obligations 90
3. Discussion 91
4. The Way Forward 93
5. Conclusion 98

Bibliography 100

Summary

This thesis is concerned with the relationship between agribusinesses and the right to food and examines how the international framework of human rights law regulates the impact of the industry's activities on this right. Considering the contemporary challenges that climate change poses to the right to food (and all human rights for that matter), and how the human rights framework as a whole must adapt to take into account how this would affect current and future generations' enjoyment of their rights, this thesis also looks into the role agribusinesses have played in fuelling the climate crisis and how that also affects the right to food. This thesis thus examines the adequacy of the international human rights framework in regulating agribusinesses, who are non-state actors, and protecting the right to food against the industry's direct impacts on the right and its contribution to climate change.

To answer the questions that arise from the topic chosen, this thesis first examines research and publications on the subjects of climate change and the agribusiness industry in order to establish the connection between agribusinesses and climate change and show the relevance of giving attention to the matter by assessing how they impact the right to food, both together and individually.

The second part of the thesis focuses on the international framework of the right to food, examining how existing international legal instruments and mechanisms operate to protect this right when it comes to acts perpetrated by non-actors and the principles behind the concept of non-state actors obligations. During this process, the thesis identifies and discusses the strengths and limitations of the current system.

In light of the assessment made, in previous sections, of the impacts of the agribusiness industry on climate change and the right to food, and drawing from the publications of established jurists and human rights institutions, the argument is made that the international framework of the right to food (and of human rights as a whole) must evolve a step further and change its approach to non-state actors' obligations. This thesis also discusses possible avenues of change for the international framework of human rights and addresses the feasibility of these proposals as well as the potential challenges of their implementation.

Keywords: Agribusinesses, the right to food, climate change, non-state actor obligations, international human rights framework

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Abbreviations

ACHPR	African Charter on Human and Peoples' Rights 1989 / African Commission on Human and People's Rights
ARSIWA	Articles on the Responsibility of States for Internationally Wrongful Acts 2001
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women 1979
CESCR	Center for Economic, Social and Cultural Rights
CESCR	Committee on Economic, Social and Cultural Rights
CRC	Convention on the Rights of the Child 1989
ECHR	European Court of Human Rights
EITI	Extractive Industries Transparency Initiative
ETI	Ethical Trading Initiative
FAO	Food and Agriculture Organisation
GACSA	Global Alliance for Climate Smart Agriculture
GHGs	Greenhouse gases
ICC	International Criminal Court
ICCPR	International Covenant on Civil and Political Rights 1966
ICESCR	International Covenant on Economic, Social and Cultural Rights 1966
ILO	International Labour Organization
OEIGWG	Open-ended intergovernmental working group
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
SERAC	Social and Economic Rights Action Center
SRSG	Special Representative of the Secretary-General
UDHR	Universal Declaration of Human Rights 1948
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change 1994
WHO	World Health Organisation
WWF	World Wildlife

I. Introduction

1. A Few Words

While human rights hold different meaning and value for different people, they are, above else, also grounds for duties. In international human rights law, both treaties and customary international law, the primary bearers of duties are states.[1] After all, international law, at its core, is made for and by states. Furthermore, the concept and support for human rights developed from the idea that individuals need to be protected from abuses of power by states.[2] As a result, the whole of the international human rights framework has been based on the responsibility of states, and on developing how they are expected to discharge their human rights obligations.[3] It is thus well established that states must *respect*, *protect*, and *fulfil* human rights, and what each of these obligations entail.[4]

However, in recent decades, non-state actors have become 'a force to be reckoned with'.[5] This includes businesses, which can have tremendous impacts on the enjoyment of one's human rights as some can even surpass states in terms of economic power and influence.[6] Consequently, the human rights discourse has expanded to address these actors.[7] However, in its early years the response of the international human rights law framework to non-state actors has been qualified as 'unbalanced' or 'far from uniform'.[8]

This paper is thus concerned with instances when agribusinesses, as non-state actors, act in ways that impede or threaten one's enjoyment of human rights; specifically the right to food as defined and protected in international human rights law. While the focus will be on the

[1] Christian Tomuschat, *Human Rights: Between Idealism and Realism* (Third edition, Oxford University Press 2014) 119.
[2] Jan Klabbers, *International Law* (2nd edn, Cambridge University Press 2018) 120.
[3] Daniel Moeckli and others (eds), *International Human Rights Law* (Third edition, Oxford University Press 2018) 97.
[4] ibid 97–98.
[5] Philip Alston (ed), *Non-State Actors and Human Rights* (Oxford University Press 2005) 5.
[6] Jan Wouters and Leen Chanet, 'Corporate Human Rights Responsibility: A European Perspective' (2007) 6 Northwestern University Journal of International Human Rights 262, 262–263.
Philip Alston (n 5) 11–14 and 17.
[7] Jan Klabbers (n 2) 90–97.
Daniel Moeckli and others (n 3) 111.
Andrew Clapham, *Human Rights Obligations of Non-State Actors* (Oxford University Press 2006) 25.
[8] Wouters and Chanet (n 6) 263.
Clapham (n 7) 25.

right to food as recognized in Article 11 of the International Convention on Economic, Social and Cultural Rights, this thesis also looks into the broader range of international instruments that contribute to the building block of international human rights protection in order to account for the variety of circumstances and actors engaged by human rights obligations. In that regard, this thesis is examining, specifically, how the interactions between the right to food and agribusinesses are regulated in international human rights law, both in terms of the latter's human rights responsibilities towards this right and how they impact it. Furthermore, as law does not operate in a vacuum, this study of the relationship between the right to food and the agribusinesses will be done in consideration of the current climate change crisis.

The choice to focus on these three elements in this thesis comes from a number of reasons. First, food is so essential to humans as living organism that, as it was aptly put by Asbjørn Eide, 'without food there is no life, and with the wrong food life is shorter and more prone to ill-health'.[9] Protecting the right to food is thus paramount for one's wellbeing.

Secondly, climate change is a phenomenon that greatly affects food in many ways and, as a result, the right to food itself.[10] In fact, the crisis is such that the alarm bells have increasingly been ringing over it. William Nordhaus, who won the 2018 Nobel Memorial Prize in Economic Sciences, has called it the 'ultimate challenge for economics' and has described it as a 'Colossus' that 'menaces our planet and looms over our future'.[11] The Pope too has spoken about the issue and declared a global climate emergency, calling for urgent action to be taken and warning that failure to do so would be 'a brutal act of injustice toward the poor and future generations'.[12] And younger generations are certainly voicing their concerns and demanding that states take appropriate and swift action, in some cases also launching legal actions against governments.[13] Human rights bodies too are grappling with the impacts of climate change on

[9] Asbjørn Eide, '*Adequate Standard of Living*' in Daniel Moeckli and others (n 3) 190.
[10] Hilal Elver, 'Interim Report of the Special Rapporteur on the Right to Food: Impacts of Climate Change on the Right to Food' (Human Rights Council 2015) A/70/287 <https://www.ohchr.org/Documents/Issues/Food/A-70-287.pdf> accessed 26 April 2020.
[11] William Nordhaus, 'Climate Change: The Ultimate Challenge for Economics' (2019) 109 American Economic Review 1991, 1992.
[12] Fiona Harvey and Jillian Ambrose, 'Pope Francis Declares "climate Emergency" and Urges Action' *The Guardian* (14 June 2019) <https://www.theguardian.com/environment/2019/jun/14/pope-francis-declares-climate-emergency-and-urges-action> accessed 28 May 2020.
[13] Sacchi et al. v. Argentina et al, 2019, Communication to the Committee on the Rights of the Child.
Laura Parker, 'Greta Wasn't the First to Demand Climate Action. Meet More Young Activists.' (*National Geographic Magazine*, 25 March 2020) <https://www.nationalgeographic.com/magazine/2020/04/greta-

human rights, and are calling for a better response to the crisis while trying to guide states on how to fulfil their human rights obligations while facing this situation.[14]

When it comes to agribusinesses, their activities are shown to affect both the right to food and climate change.[15] While these will be discussed in greater details in the next chapters, a few lines will be given to clarify the claim. Indeed, agribusiness relevant activities like agricultural farming (which will also be the specific branch in agribusiness this thesis will be focusing on) are an important part of human use of land, which was identified as a driver of climate change.[16] And since climate change itself impacts the right to food, the agribusiness industry contributes to these impacts by fuelling the climate crisis. Furthermore, agribusiness activities themselves can negatively affect the right to food, as it will be shown in **Chapter IV**. As a result the adverse effects of the agribusiness industry pose what one could call a double threat to the right to food, directly through its own activities and by fuelling climate change.

On account of the significant impacts agribusinesses can have on the right to food, of both current and future generations, the thesis is interested in examining how the international human rights framework protects the right to food against such a non-state actors, as well as assessing whether this framework is adequate in the given circumstances.

The research question and this thesis thus contribute to furthering the current debate on the nature of the obligations of non-state actors and whether they should have a more binding effect, especially in the case of businesses. This thesis also has the particularity of engaging in the discussion by taking into account the current climate crisis. And while the agribusinesses and the right to food are the subject of this thesis, the discussion engaged in here will be of relevance to the wider category of human rights, and of businesses as non-state actors.

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thunberg-wasnt-the-first-to-demand-climate-action-meet-more-young-activists-feature/> accessed 28 May 2020.

[14] See for example: Philip Alston, 'Report of the Special Rapporteur on Extreme Poverty and Human Rights: Climate Change and Poverty' (Human Rights Council 2019) A/HRC/41/39 <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G19/218/66/PDF/G1921866.pdf?OpenElement> accessed 28 May 2020.
Hilal Elver (n 10).
Human Rights Council, 'Analytical Study on the Relationship between Climate Change and the Human Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health' (2016) A/HRC/32/23 <https://www.refworld.org/docid/576b85424.html> accessed 20 May 2020.

[15] Hilal Elver (n 10).

[16] 'Climate Change 2014: Synthesis Report - Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (Intergovernmental Panel on Climate Change 2014) 44–45 <https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf> accessed 20 April 2020.

2. Purpose and Research Questions

The thesis is concerned with how the international human rights framework regulates the relationship between agribusinesses and the right to food in order to prevent violations and ensure accountability, specifically in terms of defining agribusinesses' human rights obligations; and if that framework takes into consideration the added challenge of climate change. As a result, another objective of this thesis is to establish not only the impacts of climate change and of the agribusiness sector on the right to food, but also the link between agribusiness activities and climate change for these impacts.

These are the facts and circumstances against which research will be conducted for this thesis, with the aim of developing an understanding of the existing human rights obligations imposed on agribusinesses and which instruments and mechanism(s) work to address these issues, thus forming the international framework of the right to food. Of course, figuring this out is not all. This thesis also seeks to examine the effectiveness and adequacy of this framework and to explore the possibility of an alternative or changes to that framework where the need is identified.

In order to achieve the aforementioned aims, the thesis is guided by the following research question:

> In light of the agribusiness' impacts on climate change and, ultimately, on the right to food, how adequate is the international human rights framework's when it comes to regulating the interactions between non-state actors and human rights?

In order to focus the research, the following sub-questions have been formulated:

- Why is climate change considered of concern for the right to food? (Chapter III)
- How does the agribusiness impact the right to food, and what is the link with climate change? (Chapters IV)
- What is the basis of protection of the international human rights framework for the right to food in the circumstances described in Chapters III and IV, considering that agribusinesses are non-state actors? (Chapter V)
- In light of the research done, should changes be considered, and which? (Chapter V)

3. Limitations and Terminology

The thesis revolves around examining the human rights obligations of private agribusinesses as non-state actors, and how this is regulated under international human rights law. This means that the obligations of states are not the concern of this thesis, except for the ones that relate to the regulation of businesses as part of the current international framework protecting human rights against the adverse impacts of their activities. As a result state-owned companies are also not considered. The reason for this is that the nature of the subject of this thesis (agribusinesses) is that of non-state actors; and as per the rules of state responsibility, wrongful acts committed by an entity that can be considered an organ of the state, according to its internal laws, will generally be attributable to that state and will constitute a breach of a state obligation.[17] Which is a separate matter than that of non-state actors' obligations

Furthermore, the thesis will be looking at a specific branch of the agribusiness industry, which is that of agricultural farming. There are few reasons for this delimitation. One is that human use of land is a major contributor to climate change, and agricultural farming and farming methods play a significant role in that. The connection between agribusiness activities and climate change is thus easily established. Another reason is that agricultural farming is an activity that one can easily relate to the concept of food and, as a result, to the right to food. Therefore, agricultural farming is the perfect medium for looking at how the adverse effects of agribusiness activities cause this triangular chain of reaction by affecting not only the right to food but also climate change which also affects the right to food.

This thesis is about assessing the international human rights framework itself in regard to non-state actors. As a result, national and regional mechanisms are considered separate frameworks and are not part of the assessment. Although the role they play in the overall human rights system is acknowledged and taken into account where relevant.

In terms of terminology, this thesis was written with the awareness that efforts to regulate business activities at an international level often focuses on transnational corporations. However, recognizing that any business can commit human rights violations, throughout this thesis the term 'business' is used so as to encompass all businesses, regardless of size.

[17] Articles on the Responsibility of States for Internationally Wrongful Acts 2001

Finally, the assumption is that the likely readers of this paper would have a certain minimum knowledge and understanding of international law and/or of international human rights. As such, certain legal terminologies (e.g. soft-law instruments versus hard-law instruments) are not expanded on where it is not deemed necessary for the purpose of this thesis. However, this paper also touches on subjects from non-legal discipline, and it has to resort to technical terms that the reader might not be familiar with. In those cases, explanations are provided either in text or in the footnotes.

4. Methodology

This thesis' methodology is inspired by the idea that law must be examined in the social context it is to be applied, that it interacts and influence social life, and vice versa. Accordingly, any assessment of a legal framework should be done on the background of the circumstances this framework would be applicable to. This thesis also involves a number of different research questions and answering each will require looking into varying sources and using different research methods.

As a result, there are many facets to the overall methodology used for this paper. One consists of taking an explanatory and holistic approach in order to describe topics key to the thesis: climate change, the agribusiness industry, and the legal international framework of the right to food. Another side of the methodology is that it borrows from legal doctrine in the sense that the international framework of the right to food is the subject of inquiry and, at the same time, also provides the normative framework for analysis of the identifiable issues. However, the thesis also retains a human rights lens throughout the various chapters, drawing links between agribusiness activities and human rights, and examining the relationship between agribusinesses as duty-bearers and everyone else as right-holders.

5. Materials

The elements that comprise this thesis originate from different disciplines, which means that this paper has had recourse to a wide range of sources and materials. For identifying and discussing components of the international human rights framework of the right to food, the

thesis looks to international treaties, resolutions and reports of qualified and respected international institutions (such as the Human Rights Council, the Committee on Economic, Social and Cultural Rights, and the Food and Agriculture Organization), and relies on the work of regarded and well published legal academics and jurists.

When it comes to climate change and agribusinesses, both topics require looking for sources in their respective disciplines to complement legal materials. Research has thus been conducted in the areas of climate change science and agribusiness, respectively, in order to draw out reliable and authoritative sources.

Finally, throughout the chapters, where appropriate, examples are provided of past and contemporary events to illustrate and support the information provided. As a result, occasional reference is also made to well established newspapers' articles.

6. Structure

The thesis is divided into six chapters, the introductory chapter included.

The first step of this thesis is to explain, in **Chapter II**, how the right to food is construed in international law, and what are the constitutive elements required for it to be fulfilled; which facilitates the identification of circumstances where the right to food is breached or at risk, according to international human rights law, in subsequent chapters.

In **Chapter III** the focus goes to climate change. The purpose of this chapter is to explain what climate change is and what role human activities, which include activities related to food production, are playing in fuelling the crisis. The chapter also strives to clarify concepts necessary to understanding the challenges and threats that climate change creates for the right to food by affecting the natural environment as well as human communities and activities. By doing so, it highlights the reliance of humans on a healthy environment, and demonstrate how climate change's impacts on the environment affects people and the right to food.

Chapter IV first provides an explanation of the concept of 'agribusiness' as an industry, as well as an overview of the activities a business of this kind would be involved in, and the significance of these activities. The second part of the chapter establishes the link between

the industry's activities and climate change and the right to food by describing and discussing the impacts they have directly on the right to food (by affecting the availability, adequacy and accessibility of food), as well as indirectly by contributing to the climate change crisis. Considering the agribusiness industry's many branches and sectors, the case of the soy production is presented as an illustrative example of the impacts of agribusinesses activities, as well as the financial and political influence of agribusiness actors, in a given context.

Chapter V is divided in three parts. The first part reviews the existing international human rights instruments for the nature of the obligations of businesses towards the right to food, how they are expected to fulfil them and through what means compliance is ensured in international human rights law. The second part of the chapter discusses the information collected in order to answer the questions set out in this thesis and identify existing issues. The third part continues the discussion by examining which steps could be taken in order to improve the international human rights framework.

II. The Right to Food Explained

1. Introduction

One of the core part of this thesis consists of looking into how climate change and the agribusiness together impact the right to food as understood within international human rights law. Therefore, it seems appropriate to first start by explaining what the right to food means in international human rights law, and the elements required for it to be fulfilled, so that the subsequent chapters dealing with the impacts of climate change and the agribusiness industry are clear and easily understood in relation to food as a human right.

This chapter starts, in Section 2, with explaining the meaning and extent of protection of the right to food. This is done by setting out the international human rights framework by which the right to food was shaped, with a focus on the 1966 International Covenant on Economic, Social and Cultural Rights (or ICESCR or the Covenant), the main international instrument of this thesis in relation to understanding the concept of the human right to food; and by explaining how the right to food is defined and understood in international human rights law. Section 3 examines the components key to achieving the right to food, which also serve as the benchmarks against which the impacts of climate change and of agribusiness activities can be assessed.

2. Understanding the Right to Adequate Food

2.1. The international human rights framework

The right to food is derived from and is a core part of the right to an adequate standard of living, which first appeared in international human rights law through the Universal Declaration of Human Rights (UDHR) as follow:

> 'Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of

> unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.'[18]

Article 25(1) of the Universal Declaration of Human Rights is, along with a few other rights, credited as the inspirational legacy of US President Franklin D Roosevelt's 'Four Freedoms' address to Congress in 1941.[19] This is also expressly recognized in the preamble to the Universal Declaration of Human Rights.[20]

While the Universal Declaration of Human Rights does not establish any binding obligations, the principles contained within were further elaborated in two major, binding, treaties: the 1966 International Covenant on Civil and Political Rights (ICCPR) and the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR). It is worth noting that this divide of the principles formulated by the Universal Declaration on Human Rights between these two Covenants has created an assumption that the sets of rights they each reproduce are different in nature and, as a result, needed different instruments.[21] Related to this is another assumption that civil and political rights are 'justiciable', as in it is easier to apply them in courts and similar institutions, whereas economic, social and cultural rights are more of a policy nature.[22] There is also a belief that implementing civil and political right do not cost much financially, whereas the realization of economic, social and cultural come at a higher price because it means that the state will have to provide welfare.[23] While this debate is beyond the scope of this paper, it is essential to recall that, regardless of one's stance, and as stated in the United Nations (UN) General Assembly's 1993 Vienna Declaration, 'All human rights are universal, indivisible and interdependent and interrelated. The international community must treat human rights globally in a fair and equal manner, on the same footing, and with the same emphasis.'[24]

Resuming with the right to food, as stated above, it is part of the right to an adequate standard of living, which was further elaborated in Article 11 of the aforementioned 1966 International

[18] Universal Declaration on Human Rights 1948, article 25(1).
[19] Daniel Moeckli and others (n 3) 186.
[20] Universal Declaration on Human Rights 1948, second preambular para.
[21] Wenche Eide Barth and Uwe Kracht, *Food and Human Rights in Development: Volume I: Legal and Institutional Dimensions and Selected Topics.* (Intersentia 2005) 101; Daniel Moeckli and others (n 3) 136–137.
[22] Eide Barth and Kracht (n 21) 101.
[23] ibid.
[24] UN General Assembly, 'Vienna Declaration and Programme of Action', (12 July 1993) A/CONF.157/23, para 5.

Covenant on Economic, Social and Cultural Rights. In Article 11(1) of the ICESCR, it is stated that states parties to the Convention recognize 'the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing, and housing, and to the continuous improvement of living conditions'. Of course, the words "for himself and his family" do not imply that the text of the article is limited in its application only to a certain category of individuals or to households. This has been clarified by the Committee on Economic, Social and Cultural Rights (or CESCR) in its General Comment No. 12 where it has pointed out that: "the human right to adequate food is of crucial importance for the enjoyment of all rights. **It applies to everyone**…" (emphasis added).[25]

In the subsequent paragraph of the same article, states parties acknowledge that, in pursuance of all individuals' right to also be free from hunger, they should take measures, individually and through international cooperation, and including specific programmes, which are needed:

(a) 'To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;
(b) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.'[26]

Considering that conditions differ greatly between states, the implementation of these measures are expected to have to be done in the manner most appropriate/compatible to the level of capabilities and the circumstances of each governments and their territories.[27] Finally, in order to monitor states parties' compliance with the Covenant, the CESCR (mentioned

[25] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12: The Right to Adequate Food (Art. 11 of the Covenant)' para 1 <https://www.refworld.org/docid/4538838c11.html> accessed 11 February 2020.
[26] International Covenant on Economic, Social and Cultural Rights 1966, article 11(2)
[27] Daniel Moeckli and others (n 3) 192–193.

above) was created.[28] This institution, incidentally, provides important clarifications on the breadth and depth of the articles contained in the ICESCR.

While the ICESCR is probably more specific and detailed, and the main legally binding human rights instrument referred to in this paper, there are other international human rights instruments which also contain the right to food. There is, for example, article 12(2) of the 1979 Convention on the Elimination of All Forms of Discrimination Against Women and articles 24 and 27 of the 1989 Convention on the Rights of the Child. Some regional instruments too include the right to food, for instance article 12 of the 1988 Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural Rights ('Protocol of San Salvador'). While there is no express mention of the right to food in the 1992 African Charter on Human and Peoples' Rights (ACHPR), its existence within has been confirmed by the African Commission on Human and People's Rights in its decision on a case involving the Nigerian government where it implied that because the right is so inextricably linked to human dignity and indispensable for the enjoyment of other rights, it is implicit in the ACHPR.[29]

Furthermore, in an attempt to regulate the human rights impacts of corporations, guidelines and principles aiming to protect human rights, or specific categories of rights, have developed. These instruments are more of a soft-law instrument sort and, while there is none specifically addressed to the right to food, they still provide useful guidance in regard to the general expectations and standards of behaviour set on certain non-state actors such as businesses when it comes to human rights. It serves better the purpose of this thesis to consider this in the final chapter of the paper.

Lastly, the international human rights framework is not strictly self-contained. Instruments from other sub-branches of international law (e.g. international humanitarian law) can be of relevance for the protection and fulfilment of the right to food in specific circumstances. In the context of this thesis, there is the United Nations' (UN) climate change action framework which is considered to be a key international forum to deal with climate change, and which

[28] Economic and Social Council resolution 1985/17, 28 May 1985

[29] African Commission on Human and Peoples' Rights, '155/96 Social and Economic Rights Action Center (SERAC) and Center for Economic and Social Rights (CESR) / Nigeria' para 65 <https://www.achpr.org/sessions/descions?id=134> accessed 23 February 2020.

also acknowledges the necessity to ensure food security and the protection of food production against the impacts of climate change and in any actions adopted by member states to fight it.[30] The framework is comprised of three key instruments: the 1994 United Nations Framework Convention on Climate Change (UNFCCC) and its implementing mechanism, the Kyoto Protocol, and the 2015 Paris Agreement.

2.2. Defining the right to adequate food

People need food to live, it is one of our most basic and universal truth. Throughout every stage of the evolution of human civilizations, securing access to adequate food and food security has been a primary concern; and food eventually became part of the concept of human rights.[31] The importance of food as a right is further reinforced by Article 1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), which provides on the right of peoples to self-determination. A key aspect of that right is the ability of all peoples to "…freely dispose of their natural wealth and resources", and that "**In no case may a people be deprived of its own means of subsistence**." (emphasis added)[32] According to the Committee on Economic, Social and Cultural Rights (CESCR), the right to food will be realized when "every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or means for its procurement."[33]

In a 2001 report, Jean Ziegler, the then Special Rapporteur on the right to food, defined the right to food as:

> "…the right to have regular, permanent and free access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear."[34]

[30] United Nations Framework Convention on Climate Change 1994, Article 2
Paris Agreement 2015, para 9 of the preamble and Article 2(b)
[31] Daniel Moeckli and others (n 3) 190.
[32] International Covenant on Economic, Social and Cultural Rights 1966, article 1(2)
[33] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 6.
[34] Jean Ziegler, 'Report by the Special Rapporteur on the Right to Food' (UN Commission on Human Rights 2001) E/CN.4/2001/53 para 14 <https://www.refworld.org/docid/45377ab90.html> accessed 11 February 2020.

This definition highlights a number of elements important for the fulfilment of the right to food, such as the availability of food and its quality. It also aims to convey the extent of human suffering, both physical and psychological, that comes with a lack or a total absence of food, which is often not included in formal texts on food security.[35] This is a pertinent point as hunger is still a serious issue for several countries, especially in Africa, North Korea and South Asia, and not because not enough food is being produced, but because of a combination of inequality of access to it and enormous food waste.[36] Additionally, as it will be seen in the next two chapters, food security is threatened by climate change and the adverse impacts of agribusiness practices.[37]

The concept of food security directly relates to the right to food, and can even be said to be essential to it.[38] Ziegler explains it with a definition drawn from the World Food Summit Plan of Action: "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."[39] As a result, threats to food security can also be perceived as threats to the right to food.

How much food is needed to meet the requirements of food security will depend on age, with the amount of food being measured in terms of calories.[40] However, this does not mean that having access to the minimum amount of calories, proteins and other nutrients will be sufficient to fulfil the right to food. A person must have access to **all the nutrition** they need in order to lead a healthy and active life while also having the means to obtain them.[41] As a result, livelihoods (sources of income and/or of other necessities of life) are also essential in

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[35] Jean Ziegler and others, *The Fight for the Right to Food: Lessons Learned* (Palgrave Macmillan 2011) 18.
[36] Daniel Moeckli and others (n 3) 192.
[37] Klaus von Grebmer and others, 'Global Hunger Index: The Challenge of Hunger and Climate Change' (Concern Worldwide and Welthungerhilfe 2019) Peer-Reviewed Annual Report 14 <https://www.globalhungerindex.org/pdf/en/2019.pdf> accessed 15 February 2019.
[38] Ibid, para 15.
[39] The 1996 World Food Summit Plan of Action is available here: < http://www.fao.org/3/w3613e/w3613e00.htm> accessed 01 March 2020
[40] Ibid.
"Calorie" is a term used in physics; it is the unit used to measure the amount of energy consumed by the body. For more information on human energy requirements, see 'Human energy requirements'. Report of a Joint FAO/WHO/UNU Expert Consultation. FAO Food and Nutrition Technical Report Series No. 1. Rome: Food and Agriculture Organization, 2004. < http://www.fao.org/3/y5686e/y5686e00.htm> accessed 11 February 2020.
[41] UN Office of the High Commissioner for Human Rights (OHCHR), 'Fact Sheet No. 34, The Right to Adequate Food' (April 2010) 2 <https://www.refworld.org/docid/4ca460b02.html> accessed 14 February 2020; UN Committee on Economic, Social and Cultural Rights (CESCR) (n 2) para 6 and 9.

one's ability to fulfil their right to food, and any impact on people's livelihoods within a region would also have effects on their ability to fulfil their right to food.

Incidentally the Food and Agriculture Organisation (FAO) describes hunger as synonymous to 'chronic undernourishment' which it has defined as a "state, lasting for at least one year, of inability to acquire enough food, defined as a level of food intake insufficient to meet dietary energy requirements."[42] As such, it is generally recognized that the minimum requirement to be achieved under the right to food is freedom from hunger.

3. Core Elements of the Right to Food

3.1. Availability

Food must be *available* in both quantity and quality, which are *sufficient to meet dietary* needs while also being *acceptable within a given culture* and *clear of any harmful substances*.[43] For food to be considered available, it must be possible for individuals to access it either directly from the land or other natural resources, or through a distribution system (processing and selling) that transport foodstuffs from productions sites to places where the demand exist.[44] As it will be seen in **Chapter IV**, agribusinesses are involved in such distribution system by engaging in the manufacturing, transportation, storage, distribution and sale of food products.

According to the Committee on Economic, Social and Cultural Rights (CESCR), to meet *dietary needs* as required to fulfil the right to food, an appropriate diet must not only contain the nutrients needed for their mental and physical wellbeing, growth and development, but it should also include sufficient physical activity in order to meet the needs of human mental health throughout the different stages of life and in accordance with an individual's gender and occupation.[45] Consequently, as per their obligations under Article 11 of the ICESCR, the CESCR has clarified that state parties may need to implement measures in order to "maintain, adapt or strengthen dietary diversity and appropriate consumption and feeding patterns,

[42]FAO, IFAD and WFP, *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress (2015)* FAO. http://www.fao.org/3/a-i4646e.pdf accessed 15 February 2020

[43] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 8.

[44] ibid 12.

[45] ibid 9.

including breastfeeding".[46] This must be done while taking into account changes in the availability and ease of access to food supplies, with adjustments made when necessary so as it does not impact negatively on individuals.[47]

When it comes to the *cultural acceptability* of food, the CESCR has clarified that this implies a necessity to take into account, as far as possible, the cultural values attached to food and its consumption, as well as making available information on the nature of accessible food supplies so as to address consumer concerns.[48]

Finally, the obligation that food be *free of any harmful substances* establishes requirements for food safety. With this comes the necessity of protective measures in order to prevent the contamination of food through adulteration and/or through bad hygiene practices or inappropriate handling both in the environment or throughout the different stages of the food production chain.[49] The CESCR specified that these protective measures included those for identifying and avoiding or destroying naturally occurring toxins.[50]

3.2. Accessibility

Food must be both *economically* and *physically* accessible to people.[51] For economic accessibility to be achieved, it requires that the price of food necessary for an adequate diet be at such level that it does not threaten or compromise the acquisition of such food by individuals or households[52] The Committee on Economic, Social and Cultural Rights (CESCR) has insisted that economic accessibility not only applies to any entitlement or pattern through which people acquire food, but that it also serves as a mean to gauge to what extent said entitlement or pattern serve to fulfil one's enjoyment of the right to adequate food.[53] Attention has also been drawn to socially vulnerable groups, which may need further support through special programmes.[54]

[46] ibid.
[47] ibid.
[48] ibid 11.
[49] ibid 10.
[50] ibid.
[51] ibid 13.
[52] ibid.
[53] ibid.
[54] ibid.

When it comes to the physical accessibility of adequate food, in its General Comment 12, the CESCR has stated that such food must be "accessible to everyone, including physically vulnerable individuals, such as infants and young children, elderly people, the physically disabled, the terminally ill and persons with persistent medical problems, including the mentally ill."[55] The CESCR also highlighted the vulnerability of particular social groups (such as people living in disaster-prone areas and indigenous people) in circumstances of natural disasters which may need special attention and, at times, to be given priority in terms of access to food.[56] As it will be shown in the next chapter, climate change increases the likelihood of and exacerbates natural disasters, thus increasing the vulnerability of certain social groups and the necessity to ensure their access to food.

3.3. Adequacy

When it comes to the right to food, emphasize is given to the significance of the concept of adequacy.[57] According to the CESCR, adequacy is "…to a large extent determined by prevailing social, economic, cultural, climatic, ecological and other conditions…".[58] For food to be considered adequate, it must satisfy the dietary needs of a person and be nutritious, it must also be safe for human consumption, free of any harmful substances and be culturally acceptable.[59] Its importance thus lies in the fact that it must be taken into account when determining whether "particular foods or diets that are accessible can be considered the most appropriate under given circumstances for the purposes of article 11 of the Covenant."[60]

While not particularly elaborated on by the CESCR in General Comment 12, a 2015 report on the impacts of climate change on the right to food, by the Special Rapporteur on the right to food, highlights the importance of the concept of sustainability in fulfilling the right to food.[61]

Sustainability is intrinsically linked to the concept of food adequacy and food security, thus implying that food must be accessible for both present and future generations.[62] It also

[55] ibid.
[56] ibid.
[57] ibid 7.
[58] ibid.
[59] Hilal Elver (n 10) para 15.
[60] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 7.
[61] Hilal Elver (n 10) paras 19–24.
[62] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 7.

involves and links to the concepts of availability and accessibility of food described above.[63] What is more, sustainability also emphasizes on principles of participation, non-discrimination, transparency and empowerment and is, thus, included in policies and strategies aimed at reducing hunger.[64]

4. Conclusion

This chapter is relatively short and mostly descriptive. But its content is crucial in understanding the next chapters dealing with the impacts of climate change and agribusiness. Key concepts touched upon here, such as the elements of the right to food (adequacy, accessibility, and availability) and food security, will be repeated again throughout the thesis. They are also important for highlighting the issues related to climate change and the agribusiness, because when either is affected, then it is the right to food as a whole that is threatened.

Hilal Elver (n 10) para 20.

[63] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 7.

[64] Hilal Elver (n 10) para 19. para 19

III. Climate Change

1. Introduction

Climate change, as experienced nowadays, represents the setting of this thesis' research. It is a phenomenon that has come to gather increased attention and raise concern among the general public; and all are affected one way or another, with the consequences set to grow worse if the issue is not duly addressed. The purpose of this chapter is, thus, to explain what climate change is, how it affects humans both directly and indirectly and how that in turn affects the right to food, which will be shown by referring to the elements of the right to food explained in **Chapter II** (availability, accessibility and adequacy).

Accordingly, Section 2 clarifies a few concepts key to understanding climate change and how negative changes in the environment affect the human population. Section 3 then explains what exactly climate change is and how humans have contributed to the climate change phenomenon currently experienced. Section 4 goes into the impacts of climate change on the environment and, as a consequence, on human communities and the right to food, providing examples along the way to illustrate the effects of these impacts.

2. Understanding a Few Key Concepts

2.1. Climate and weather

While weather and climate should not be confused as the same, the two phenomenon are linked. A weather is a mixture of meteorological events that happen each day in the earth's atmosphere, it can also change in a matter of minutes or weeks.[65] Meanwhile, climate is the result of the interactions of various components, as well as a cumulation of atmospheric conditions and weather phenomena, occurring near the earth's surface, for an extended

[65] Steven I. Dutch, *Encyclopedia of Climate Change*, vol 2 (2nd edn, Salem Press 2016) 1143–1146. 'What's the Difference Between Weather and Climate?' (*National Centers for Environmental Information (NCEI)*, 9 March 2018) <http://www.ncei.noaa.gov/news/weather-vs-climate> accessed 19 April 2020.

period of time in a given area.[66] As such, the climate represents what the weather is like in a given region over a long period of time.[67]

The benefits of climate and weather vary by region, but there are relative similarities, all essential to the way humans interact with the natural environment around them. Perhaps the most important and apparent benefit of weather and climate is precipitation in the form of rain, snow, sleet, or hail. [68] This provides, for many places in the world, a fairly consistent source of water, which is essential for the survival of nearly every single organism on earth, humans included.[69] In the case of our specie in particular, the absence or decline in such a steady source of water has significant impacts on crops and animal farming and thus, on the availability and accessibility of food.[70]

Another benefit of climate (and incidentally, weather) is the diversity it displays in different parts of the world.[71] This diversity enables a wide range of plant and animal life, minerals and metals to develop, which humans have learned to exploit for economic purposes.[72] A prime example can be found within the agribusiness, through the development of which crops grown in one region of the world are transported and sold elsewhere. There are also plants with medicinal uses that, due to the climate, are grown in specific regions, and are valuable to the pharmaceutical industry.[73]

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[66] Steven I. Dutch, *Encyclopedia of Climate Change*, vol 1 (2nd edn, Salem Press 2016) 231–232.
Thomas F. Stocker and others, 'Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (Intergovernmental Panel on Climate Change 2013) 1450
<https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf> accessed 18 April 2020.
'What's the Difference Between Weather and Climate?' (n 65).
[67] Ibid.
[68] National Geographic Society, 'Rain' (*National Geographic Society*, 12 May 2011)
<http://www.nationalgeographic.org/encyclopedia/rain/> accessed 19 April 2020.
National Geographic Society, 'Precipitation' (*National Geographic Society*, 7 August 2019)
<http://www.nationalgeographic.org/encyclopedia/precipitation/> accessed 19 April 2020.
[69] Lennart Bengtsson and others, *The Earth's Hydrological Cycle.* (Springer Netherlands 2014) 5–6.
[70] ibid.
[71] Steven I. Dutch (n 65) 1145.
[72] Steven Earle, *Physical Geology* (2nd edn, BCcampus 2019) 51–53
<https://opentextbc.ca/physicalgeology2ed/> accessed 19 May 2020.
Chang-Bae Lee and Jung-Hwa Chun, 'Environmental Drivers of Patterns of Plant Diversity Along a Wide Environmental Gradient in Korean Temperate Forests' (2016) 7 FORESTS 1–2.
[73] Jean P Dzoyem, Emmanuel Tshikalange and Victor Kuete, 'Medicinal Plants Market and Industry in Africa' in Victor Kuete (ed), *Medicinal Plant Research in Africa* (Elsevier 2013)
<http://www.sciencedirect.com/science/article/pii/B9780124059276000242>.

Finally, a stable climate also benefits human health, as it affects the quality of the air we breathe, the water we drink, the food we eat and the weather we experience.[74] A negative disturbance on any of these elements can create severe health risks for people.

2.2. Ecosystems and biodiversity

'An ecosystem is a geographic area where plants, animals, and other organisms, as well as weather and landscapes, work together to form a bubble of life.'[75] As a result, ecosystems exist in a wide variety, and a single one can contain several smaller ecosystems, which makes each of them unique.[76] There are many ways by which ecosystems can be categorized, some ecosystems are *natural*, and some are *modified and managed by humans* (lands used for agricultural purposes, such as pastures and wheat fields, are a prime example of an ecosystem that is dependent on human activities for their maintenance and existence).[77] Nevertheless, all ecosystems fall within one of two types of ecosystems: terrestrial or aquatic.[78] As per their names suggest, terrestrial ecosystems are found on land (typical examples are forests and the tundra); whereas aquatic ecosystems can be either inland (e.g. lakes, rivers and ponds) or marine (for example seas, oceans and coral reefs).[79]

Ecosystems do not just exist, they provide goods and services from which the environment, of which we humans are a part of, greatly benefits from. These are known as 'ecosystem services' and they are divided into four types: provisioning, regulating, cultural and supporting.[80] According to the Food and Agriculture Organization (FAO), provisioning services are goods gained from ecosystems, such as food, fresh water and raw materials.[81] As for regulating

[74] ORD US EPA, 'Air Quality and Climate Change Research' (*US EPA*, 18 June 2014) <https://www.epa.gov/air-research/air-quality-and-climate-change-research> accessed 20 April 2020.
World Health Organization, 'Climate Change and Human Health - Risks and Responses.' (*World Health Organization*) <https://www.who.int/globalchange/summary/en/> accessed 20 April 2020.
[75] National Geographic Society, 'Ecosystem' (*National Geographic Society*, 15 August 2011) <http://www.nationalgeographic.org/encyclopedia/ecosystem/> accessed 20 April 2020.
[76] Christine Gibb, Reuben Sessa and Neil Pratt (eds), *The Youth Guide to Biodiversity* (1st edition, Food and Agriculture Organization 2013) 58 <http://www.fao.org/3/i3157e/i3157e.pdf> accessed 20 April 2020.
[77] ibid.
[78] ibid 58–59.
[79] ibid 59.
[80] ibid 61.
[81] ibid.
Julie Bélanger and Dafydd Pilling (eds), *The State of the World's Biodiversity for Food and Agriculture* (FAO Commission on Genetic Resources for Food and Agriculture 2019) 19–20.

services, they involve climate regulation, disease control, erosion control, pollination, and the regulation of natural events such as floods and forest fires.[82] Meanwhile cultural ecosystem services are immaterial and consist of spiritual, recreational and cultural benefits.[83] For example, outdoors activities such as hiking are greatly beneficial for human physical and mental health, and nature is also at the core of many human communities, especially indigenous people.[84] Finally, supporting services provided by the ecosystem are these services essential for maintaining conditions needed for life to thrive on earth and are, incidentally, necessary for the production of every other categories of ecosystem services.[85] Examples of supporting services include soil formation and habitat provision and retention.[86]

This brings us to biodiversity. Biodiversity is a term used to refer to the variety of living organisms (both within and between species) on earth, and of the ecosystems that host them.[87] Biodiversity is, on the one hand, a property of ecosystems and a prerequisite for a number of ecosystem services; and on the other hand it can also be the product of ecosystem services.[88] Therefore, biodiversity is essential to the wellbeing and safety of humans, as well as for our food production system.[89] For example, biodiversity is key for developing medicines and for medical researches; two important drugs, the anti-cancer drug Taxol and the anti-malaria drug quinine, are derived respectively from the Pacific yew tree as well as some types

[82] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 61.
Bélanger and Pilling (n 81) 20–22.
[83] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 61.
Bélanger and Pilling (n 81) 22–23.
[84] UN Environment, 'Indigenous People and Nature: A Tradition of Conservation' (*UN Environment*, 21 July 2017) <http://www.unenvironment.org/news-and-stories/story/indigenous-people-and-nature-tradition-conservation> accessed 20 April 2020.
Bélanger and Pilling (n 81) 22–23.
[85] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 61.
Bélanger and Pilling (n 81) 20–22.
[86] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 61.
Bélanger and Pilling (n 81) 22.
[87] Bélanger and Pilling (n 81) 4 and 10.
Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 1–3.
[88] Olaf Bastian, 'The Role of Biodiversity in Supporting Ecosystem Services in Natura 2000 Sites' (2013) 24 Ecological Indicators 12, 12.
[89] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 63–64.
Bélanger and Pilling (n 81) 4–5.
Sandra Díaz and others, 'The Global Assessment Report on Biodiversity and Ecosystem Services - Summary for Policymakers' (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2019) <https://ipbes.net/global-assessment> accessed 20 April 2020.

of fungus, and from the cinchona tree.[90] Furthermore, biodiversity is important for the ability of food production systems to cope with shocks and adapt to changes like climate change.[91]

Consequently, when ecosystems collapse and biodiversity is in decline, it is not an issue just for the animal and plant species affected, it is very much a problem that engages our survival in several ways, including through the availability of accessible and adequate food.[92] Protecting the natural environment means protecting the right to food. It is thus important to understand what these terms mean and their importance, as they will be mentioned several times throughout not only this chapter, but the entire thesis.

3. Drivers of Climate Change and the Human Factor

Climate change is a phenomenon that may occur naturally on periods that can span from decades to thousands of years or longer, and it has occurred many times already in the earth's history.[93] However, the oddity about climate change as currently experienced is that it is happening at a much faster rate than it does under natural circumstances; and it has been proven that human population growth and economic activities have played a significant role in driving such rapid changes.[94] As a result, climate change, as discussed in this paper, is understood as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.'[95]

Human influence on climate change can be traced back to as early as the pre-industrial era.[96] The climate change currently being experienced is the result of increasing levels of greenhouse

[90] Christine Gibb, Reuben Sessa and Neil Pratt (n 76) 63.
[91] Bélanger and Pilling (n 81) 24.
[92] See this report by the Special Rapporteur on the right to food: Hilal Elver, 'Critical Perspective on Food Systems, Food Crises and the Future of the Right to Food' para 38 <https://undocs.org/A/HRC/43/44> accessed 19 May 2020.
[93] Steven I. Dutch (n 66) 234.
[94] 'Climate Change 2014: Synthesis Report - Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (n 16) 45–48.
According to the IPCC, 'it is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcings together.' page 48
[95] United Nations Framework Convention on Climate Change (UNFCCC) 1992, article 1 (2)
[96] Steven I. Dutch (n 66) 69.

gases (GHGs), which are produced by the burning of fossil fuels such as coal and oil, the production of natural gas like methane by the animal farming industry and the use of natural land (for example for agricultural purposes, which will be discussed further in **Chapter IV**), though to a lesser extent compared to other human activities (but not less important).[97] GHGs trap the heat radiated by the sun and this results in an unusually rapid increase of global temperatures in both the atmosphere and the oceans (global warming).[98] An extensive study conducted by the Intergovernmental Panel on Climate Change (IPCC) has confirmed that the concentrations of GHGs in the atmosphere have reached levels that are unprecedented in at least the past 800,000 years.[99]

Concerns and warnings about climate change are not a modern phenomenon. Indeed 124 years ago (in 1896) Swedish scientist Svante Arrhenius described how the burning of fossil fuels, and the resulting increase of carbon dioxide, could lead to global warming.[100] In the following decades, further researches were conducted on GHGs; but it was not until 1938 that it was first demonstrated, by Guy Callendar, how the planet's temperature was already increasing.[101] Researches on climate change have since steadily built up, scientists warning on numerous occasions of the dangers of increasing global temperatures to both humanity and the earth's natural ecosystems.[102] Yet, even with these warnings and increasing evidence of

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'Climate Change 2014: Synthesis Report - Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (n 16) 44.

[97] Steven I. Dutch (n 66) 4 and 237.
'Climate Change 2014: Synthesis Report - Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (n 16) 44–45.

[98] Steven I. Dutch (n 66) 4.
Paul H Carr, 'What Is Climate Doing to Us and for Us?' (2018) 53 Zygon 443, 444–446.
The Intergovernmental Panel on Climate Change's (IPCC) 2014 Synthesis Report demonstrates clearly the role of human activity in fuelling climate change. The report is available here https://archive.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf (last accessed 20 April 2020)

[99] 'Climate Change 2014: Synthesis Report - Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change' (n 16) 44.

[100] Marit-Solveig Seidenkrantz, 'Concern for global warming is not a new craze' (*ScienceNordic*, 5 June 2018) <https://sciencenordic.com/climate-change-denmark-forskerzonen/concern-for-global-warming-is-not-a-new-craze/1456317> accessed 20 April 2020.

[101] ibid

[102] Union of Concerned Scientists, '1992 World Scientists' Warning to Humanity' (*Union of Concerned Scientists*) <https://www.ucsusa.org/resources/1992-world-scientists-warning-humanity> accessed 20 April 2020. A PDF of the original letter is available here <https://www.ucsusa.org/sites/default/files/attach/2017/11/World%20Scientists%27%20Warning%20to%20Humanity%201992.pdf> accessed 20 April 2020
William J. Ripple and others, 'World Scientists' Warning of a Climate Emergency' (2020) 70 BioScience 8.

climate change impacts being a reality, states and businesses have been largely ineffective in tackling the issue despite the commitments made.[103]

4. Consequences

Having explained climate change and clarified the role of human activities in fuelling this phenomenon, the next step is to dive into what makes climate change such an issue, especially when it comes to food. The impacts of climate change are multiple and affect virtually every region on earth and, in turn, all life that depend on these regions' ecosystems. In order to relay the decades of research accumulated as clearly and comprehensively as possible, this section will be divided in further sub-sections, each dealing with different ways by which climate change is affecting life on earth and food.

4.1. The ocean and the cryosphere

The ocean and the cryosphere each play an essential role in regulating climate and weather on earth.[104] The ocean can act as a carbon sink and absorb a significant amount of heat, an ability that has helped slow the warming that human population and ecosystems on land have been experiencing.[105] Similarly, snow and ice are a reflective surface, which diminish the amount of energy absorbed on earth from the sun.[106] Furthermore, in addition to being a life support for the ecosystems relying on them, both the ocean and the cryosphere are a source

William J. Ripple and others, 'World Scientists' Warning to Humanity: A Second Notice' (2017) 67 BioScience 1026.

[103] William J. Ripple and others, 'World Scientists' Warning of a Climate Emergency' (n 102).
See also for example: Committee on Economic, Social and Cultural Rights, 'Concluding Observations on the Fourth Periodic Report of Switzerland' (2019) E/C.12/CHE/CO/4 paras 18–19.
Committee on Economic, Social and Cultural Rights, 'Concluding Observations on the Sixth Periodic Report of Germany' (2018) E/C.12/DEU/CO/6 paras 18–19.
Committee on Economic, Social and Cultural Rights, 'Concluding Observations on the Sixth Periodic Report of the Russian Federation' (2017) E/C.12/RUS/CO/6 paras 42–43.
Committee on Economic, Social and Cultural Rights, 'Concluding Observations on the Fifth Periodic Report of Australia' (2017) E/C.12/AUS/CO/5 paras 11–12.

[104] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate' (Intergovernmental Panel on Climate Change 2019) 80 <https://www.ipcc.ch/srocc/> accessed 20 April 2020.
Cryosphere is a collective name for the frozen parts of the Earth, see Annex I, at page 682 of the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.

[105] ibid.

[106] ibid.

of food and water security, livelihoods and cultures for hundreds of millions of people around the world.[107]

4.1.1. The cryosphere

As described above, the climate change currently experienced is causing the global surface temperature to rise. This does not simply mean balmier winter. With ever rising temperatures, ice sheets and glaciers worldwide are melting.[108] This has resulted in a continuous rise of global sea levels, which, in a chain of causality, has contributed to extreme wave heights, which in turn contribute to extreme sea level events, coastal erosion and flooding.[109] These events adversely impact both natural ecosystems and human population.

The gradual loss of ice cover in polar regions and high mountains implies a shrinking habitat for the species that depend on it, such as polar bears, thus threatening their survival and disrupting the ecosystem in these regions.[110] For human populations living in and around these areas, especially the indigenous communities, these changes have impacted food and water security by disrupting their access to herding, hunting, fishing, and gathering areas, affecting the livelihoods, cultural identity and food availability of the people living in these regions.[111] For example the Sámi people, an indigenous people of the Lapland region of the Nordic countries and Russia, practice reindeer herding as a core part of their culture and a source of livelihood.[112] However, disruptions to the region's natural environment created by

[107] ibid.
[108] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (Intergovernmental Panel on Climate Change 2019) 6 <https://www.ipcc.ch/srocc/> accessed 20 April 2020.
[109] ibid 10–11.
[110] ibid 11–12.
'Polar Bear Habitat Loss Is Pushing Them over the Edge' (*World Wildlife Fund*, Fall 2015) <https://www.worldwildlife.org/magazine/issues/fall-2015/articles/polar-bear-habitat-loss-is-pushing-them-over-the-edge> accessed 20 April 2020.
[111] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 15.
[112] Neil Kent, *The Sámi Peoples of the North: A Social and Cultural History.* (C Hurst & Co Ltd 2018) 5–6, 19, 79–85, 103, 215–220.
Veli-Pekka Lehtola, *The Sámi People: Traditions in Transition.* (Rev 2 ed, University of Alaska Press 2004) 23–27 and page 42.
Svensk information, *The Sámi - an Indigenous People in Sweden.* (Sami Parliament 2005) <http://www.samer.se/2137> accessed 21 April 2020.
Jouni JK Jaakkola, Suvi Juntunen and Klemetti Näkkäläjärvi, 'The Holistic Effects of Climate Change on the Culture, Well-Being, and Health of the Saami, the Only Indigenous People in the European Union.' (2018) 5 Current Environmental Health Reports 401.

climate change is causing the starvation of entire herds of reindeers,[113] threatening the Sámi's way of life and a source of livelihood.

Of course, the negative impacts of a shrinking cryosphere on food security, water resource, water quality and livelihoods is not limited to indigenous people, the general population is affected too.[114] The decline of snow cover and receding glaciers has affected tourism and recreational activities, such as skiing, hiking and mountaineering, industries that are a source of employment for people living in the Artic and high mountains areas, thus affecting people's ability to economically access food.[115] Furthermore, as a result of the adverse effects of climate change on the cryosphere, there has been an increase in the risk of food and waterborne diseases in these regions, as well as malnutrition, injury, and mental health challenges for the communities impacted.[116] An important part of the element of availability as part of the right to food is food safety, which will be harder to guarantee with an increase in the risk of food related diseases.

4.1.2. The global ocean

Global warming also means that the global ocean has been warming as it absorbs the excess of heat in the climate system.[117] Additionally, as oceans continuously absorb more and more

[113] Jaakkola, Juntunen and Näkkäläjärvi (n 112) 406.
Jon Henley, 'Sweden's Reindeer at Risk of Starvation after Summer Drought' *The Guardian* (22 August 2018) <https://www.theguardian.com/world/2018/aug/22/sweden-reindeer-herders-risk-starvation-climate-change-arctic> accessed 21 April 2020.
Josh Gabbatiss, 'Climate Change in Lapland: The Impact of Global Warming in the Land of Santa Claus' (*The Independent*, 23 December 2017) <http://www.independent.co.uk/environment/climate-change-lapland-santa-claus-father-christmas-reindeer-global-warming-a8113041.html> accessed 21 April 2020.
'Is Climate Change Threatening the Saami Way of Life?' (*World Wildlife Fund (WWF)*, 2020) <https://arcticwwf.org/newsroom/the-circle/arctic-tipping-point/climate-change-culture-change/> accessed 21 April 2020.
[114] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 15–16.
[115] ibid.
Tomaso Clavarino, 'Seduced and Abandoned: Tourism and Climate Change in the Alps' *The Guardian* (9 December 2019) <https://www.theguardian.com/environment/2019/dec/09/seduced-abandoned-tourism-and-climate-change-the-alps> accessed 21 April 2020.
[116] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 15.
'Climate Change and Health' (*World Health Organization*, 1 February 2018) <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health> accessed 23 April 2020.
Jaakkola, Juntunen and Näkkäläjärvi (n 112) 406 and 410–413.
[117] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate' (n 104) 450 and 457.

carbon dioxide, they are also undergoing oxygen loss and surface acidification.[118] These alterations in their natural environment have caused many marine species to undergo changes in their geographical range, seasonal activities and interactions; which has had cascading effects on the structure and functioning of the global ocean's ecosystem.[119] Coral bleaching events have become one of the faces of the climate change impacts on marine life, with rising temperatures causing this harmful phenomenon to occur on a "near-annual" basis.[120] As coral reef ecosystems collapse, species already at-risk could face extinction, whereas others' survival would be threatened.[121]

Consequences of the aforementioned climate change impacts on the global ocean include decreased fish and shellfish populations and biodiversity, which affect food security and food safety through fisheries, local cultures, and livelihoods.[122] Again, indigenous peoples and local communities that depend on fisheries are particularly affected. For instance, 98% of the Pacific Island countries and territories depend on marine resources as a vital source of food security, livelihoods and economic development, and 'this dependence has become deeply intertwined with cultural identity, religious beliefs and social structures'.[123] Fisheries are a primary or secondary source of income for an average of 50% of households in the Pacific region;[124] and

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[118] ibid 450,456 and 471–473.
Denise Breitburg and others, 'Declining Oxygen in the Global Ocean and Coastal Waters' (2018) 359 Science <https://science.sciencemag.org/content/359/6371/eaam7240> accessed 21 April 2020.
[119] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 12.
[120] Joshua Eli Cinner and others, 'A Framework for Understanding Climate Change Impacts on Coral Reef Social-Ecological Systems' (2016) 16 Regional Environmental Change 1133, 1136.
'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 13.
Graham Readfearn, 'Climate Crisis May Have Pushed World's Tropical Coral Reefs to Tipping Point of "near-Annual" Bleaching' *The Guardian* (31 March 2020) <https://www.theguardian.com/environment/2020/apr/01/climate-crisis-may-have-pushed-worlds-tropical-coral-reefs-to-tipping-point-of-near-annual-bleaching> accessed 21 April 2020.
[121] Cinner and others (n 120).
'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate' (n 104) 453.
'Everything You Need to Know about Coral Bleaching—and How We Can Stop It' (*World Wildlife Fund*, 2020) <https://www.worldwildlife.org/pages/everything-you-need-to-know-about-coral-bleaching-and-how-we-can-stop-it> accessed 21 April 2020.
[122] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 12 and 16.
Cinner and others (n 120).
Sandra Díaz and others (n 89) 13 and 37.
[123] Johanna E Johnson and others, 'Impacts of Climate Change on Marine Resources in the Pacific Island Region' in Lalit Kumar (ed), *Climate Change and Impacts in the Pacific* (Springer International Publishing 2020) 361 <https://doi.org/10.1007/978-3-030-32878-8_10>.
[124] ibid 362.

healthy coral reefs are popular tourism attractions, providing a source of income for local communities.[125] As a result of the climate change impacts on marine life highlighted above, the way of life, the social structure, and the survival of the Pacific region's communities are threatened.[126] As the fish population in the region declines, people will less and less be able to rely on them as a source of food or employment, which will affect the elements of availability and accessibility of the right to food; similarly, as coral reefs suffer from bleaching, the communities will lose a tourism attraction, which means a loss of a source of income and of their ability to economically access food.

Moreover, an estimated 3 billion people among the global population rely on fish as a source of nutrient;[127] and around 820 million people worldwide rely on fisheries and aquaculture as a source of income, many of whom already struggle to maintain adequate livelihoods to provide for basic necessities.[128] As a result, negative impacts on fish populations affect food availability, accessibility and adequacy.[129]

In addition to marine life, marine vegetations and coastal plants are affected by climate change too. As per the Intergovernmental Panel on Climate Change (IPCC), 'vegetated coastal systems protect the coastline from storms and erosion and help buffer the impacts of sea level rise'.[130] Some, like seagrass, also operate as major carbon stores, through which they contribute to ensuring a stable climate and could potentially alleviate climate change.[131] However, the combined effects of human pressures, sea level rise, global warming and

[125] ibid 362–365.
[126] ibid 378–386.
[127] Food and Agriculture Organization (ed), *The State of World Fisheries and Aquaculture 2018 - Meeting the Sustainable Development Goals* (Food and Agriculture Organization 2018) 113–114 <http://www.fao.org/documents/card/en/c/I9540EN/>.
[128] Food and Agriculture Organization, 'Decent Rural Employment - Fisheries and Aquaculture' (*Food and Agriculture Organization*, 2020) <http://www.fao.org/rural-employment/agricultural-sub-sectors/fisheries-and-aquaculture/en/> accessed 21 April 2020.
Food and Agriculture Organization, *The State of World Fisheries and Aquaculture 2018 - Meeting the Sustainable Development Goals* (n 127) 30.
[129] Hilal Elver (n 10) paras 7–14.
[130] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 43) 13.
[131] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 13.
U. N. Environment Programme, 'Seagrass—Secret Weapon in the Fight against Global Heating' (*UN Environment Programme*, 11 January 2019) <http://www.unenvironment.org/news-and-stories/story/seagrass-secret-weapon-fight-against-global-heating> accessed 21 April 2020.

extreme climate events are undermining the ability of coastal and marine plants to provide these key ecological and human services.[132]

Climate change and human activities induced drivers (such as runoff of nitrogen and other nutrients from agricultural production system) have also combined to cause more frequent instances of algal blooms in coastal areas since the 1980s.[133] Unfortunately, these algae are harmful and some of these 'blooms' produce toxins that can kill fish, mammals and birds, and may cause human illness or even death in extreme cases.[134] For those algae who are nontoxic, they consume all the oxygen available in the area where they have bloomed, creating dead zones which can cause fish, shellfish, corals, and aquatic plants to die;[135] and clog the gills of fish and invertebrates, or smother corals and submerged aquatic vegetation (they basically suffocate to death).[136] The largest marine dead zone (63,700-square-mile and still growing) is located in the Gulf of Oman.[137] What's more, an analysis published in 2018 has reported at least 500 dead zones near coasts, compared to fewer than 50 in 1950.[138]

4.2. Land

Borrowing the definition utilized by the IPCC, land is understood as 'the terrestrial portion of the biosphere that comprises the natural resources (soil, near surface air, vegetation and other biota, and water), the ecological processes, topography, and human settlements and

[132] 'IPCC Special Report on the Ocean and Cryosphere in a Changing Climate: Summary for Policymakers' (n 108) 13.
[133] ibid 16.
[134] ibid.
US Department of Commerce National Oceanic and Atmospheric Administration, 'What Is a Harmful Algal Bloom?' (*NOAA*, 27 April 2016) <https://www.noaa.gov/what-is-harmful-algal-bloom> accessed 21 April 2020.
[135] US Department of Commerce National Oceanic and Atmospheric Administration, 'Hypoxia' (*National Ocean Service NOAA*, 30 March 2020) <https://oceanservice.noaa.gov/hazards/hypoxia/> accessed 21 April 2020.
US Department of Commerce National Oceanic and Atmospheric Administration (n 134).
Jenny Howard, 'Dead Zones, Explained' (*National Geographic Society*, 31 July 2019) <https://www.nationalgeographic.com/environment/oceans/dead-zones/> accessed 21 April 2020.
[136] US Department of Commerce National Oceanic and Atmospheric Administration (n 134).
[137] 'Scientists Confirm Florida-Sized Dead Zone in the Gulf of Oman' (*YaleEnvironment360*, 30 April 2018) <https://e360.yale.edu/digest/scientists-confirm-florida-sized-dead-zone-in-the-gulf-of-oman> accessed 21 April 2020.
The Gulf of Oman border Saudi Arabia, Iran, Pakistan and Oman.
[138] Denise Breitburg and others (n 118).

infrastructure that operate within that system'.[139] Land, as used in this section, refers thus to ice-free areas.

Human use of land negatively impacts it and contributes to climate change however, this topic will be discussed at a later stage in **Chapter IV** on the agribusiness' impacts on the right to food and climate change. This section is thus focusing on the impacts of climate change on land and how it affects human populations.

As aptly put by the IPCC, 'Land provides the principal basis for human livelihoods and well-being including the supply of food, freshwater and multiple other ecosystem services, as well as biodiversity.'[140] It is also the basis for functions and services, such as cultures and ecosystem, all essential and valuable for humanity.[141] Moreover, while land is a sink of greenhouse gases, it is also a source of GHGs (mostly because of human use of land) thus contributing to the cycle of climate change impacts and drivers.[142]

Focusing on how climate change affects land, warming temperatures have contributed to, and can exacerbate, land degradation and desertification in many regions in the world, thus adversely affecting food security and terrestrial ecosystems.[143]

Land degradation is defined as 'a negative trend in land condition, caused by direct or indirect human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of at least one of the following: biological productivity, ecological integrity or value to humans.'[144] Furthermore, since land also acts as a carbon store, the impacts of climate change and land degradation are two-ways, creating a vicious cycle of aggravating one

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[139] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (Intergovernmental Panel on Climate Change 2019) 349 <https://www.ipcc.ch/srccl/> accessed 28 March 2020.

[140] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (Intergovernmental Panel on Climate Change 2019) 7 <https://www.ipcc.ch/srccl/> accessed 22 April 2020.

[141] ibid.

[142] ibid.

[143] ibid 9–10.
'The IPBES Assessment Report on Land Degradation and Restoration' (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2018) 224–226 <https://ipbes.net/sites/default/files/2018_ldr_full_report_book_v4_pages.pdf> accessed 22 April 2020.
Sandra Díaz and others (n 89) 13.

[144] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 349–350.

another.[145] Nevertheless, types of land degradation processes include all types of erosion (climate change affects coastal erosion in particular through sea level rise and increased storm frequency and intensity), changes in soil quality and properties, waterlogging of dry ecosystems and drying of wet ecosystems, increase of wildfires etc.[146]

A study published in 2018 shows that more than 2.7 billion people are affected by desertification.[147] As per the IPCC's Special Report on Climate Change and Land, desertification is understood as 'land degradation in arid, semi-arid, and dry sub-humid areas resulting from many factors, including climatic variations and human activities'.[148] According to the IPCC's estimations, 46 of the 54 African countries are vulnerable to desertification, with some already affected, whereas 38 of 48 countries in Asia are found to currently be affected by desertification.[149]

Climate change has also exacerbated the impacts of natural disasters in the form of extreme weather events of flooding, drought and other forms of natural disasters.[150] Extreme weather events can disrupt food distribution and make it more difficult to put in place and carry out adequate responses to increasing emergencies, thus negatively affecting the availability and accessibility requirements of the right to food and the ability of states to fulfil their obligations under article 11 of the ICESCR.[151] According to the IPCC, global warming has increased the frequency, intensity and duration of heat-related events, such as heatwaves and wildfires, in most regions.[152] The likelihood and intensity of droughts have also increased in parts of the world (e.g. west Asia, much of Africa, many parts of South America), while the intensity of

[145] 'The IPBES Assessment Report on Land Degradation and Restoration' (n 143) 226.
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 353.
[146] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 354–359.
[147] 'The IPBES Assessment Report on Land Degradation and Restoration' (n 143) 142.
[148] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 254.
[149] ibid 363.
[150] 'Climate Impacts: The Consequences of Climate Change Are Already Here.' (*Union of Concerned Scientists*, 2020) <https://www.ucsusa.org/climate/impacts> accessed 22 April 2020.
[151]Hilal Elver (n 10) paras 8 and 14.
[152] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 9.

global heavy precipitation events (such as snowfall and rainfall) has also gone up.[153] For example, 2019 was registered as the second warmest year on record after 2016, which brought two 'extraordinary' heatwaves in Europe with the hottest ever recorded temperatures in several countries.[154] Studies of the events have concluded that the two heatwaves were made more intense and more likely by human-induced climate change.[155] This is a cause of concern because droughts are detrimental to the nutritional quality of food, and warmer weather makes more problematic to store food, thus impacting the requirement of adequacy for fulfilling the right to food.[156]

Furthermore, since January 2020, swarms of locusts have risen in east Africa (Somalia, Ethiopia, Kenya, South Sudan, Uganda and the Republic of Tanzania), Yemen and Iran, damaging tens of thousands of hectares of croplands and pastures.[157] The plague is putting millions more at risk of food insecurity and threatens their livelihoods, and it is also occurring at a time when the world is struggling to deal with the Covid-19 virus outbreak.[158] Here too climate change has been linked to the current locust crisis.[159]

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[153] ibid.
'Mapped: How Climate Change Affects Extreme Weather around the World' (*Carbon Brief*, 15 April 2020) <https://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world> accessed 22 April 2020.
[154] 'WMO Confirms 2019 as Second Hottest Year on Record' (*World Meteorological Organization*, 15 January 2020) <https://public.wmo.int/en/media/press-release/wmo-confirms-2019-second-hottest-year-record> accessed 22 April 2020.
Jeff Masters, 'The Top 10 Weather and Climate Stories of 2019' (*Scientific American Blog Network*, 3 January 2020) <https://blogs.scientificamerican.com/eye-of-the-storm/the-top-10-weather-and-climate-stories-of-2019/> accessed 22 April 2020.
[155] Masters (n 154).
[156] Hilal Elver (n 10) para 16.
[157] 'Alarm over Desert Locusts Increases as New Generation of the Destructive Pests Starts Breeding in Horn of Africa' (*Food and Agriculture Organization*, 20 January 2020) <http://www.fao.org/news/story/en/item/1258877/icode/> accessed 22 April 2020.
'Desert Locust: Situation Update 21 April 2020' (*Food and Agriculture Organization*, 21 April 2020) <http://www.fao.org/ag/locusts/en/info/info/index.html> accessed 22 April 2020.
[158] 'Fight against Desert Locust Swarms Goes on in East Africa despite Coronavirus Crisis Measures' (*UN News*, 9 April 2020) <https://news.un.org/en/story/2020/04/1061482> accessed 22 April 2020.
'Alarm over Desert Locusts Increases as New Generation of the Destructive Pests Starts Breeding in Horn of Africa' (n 157).
[159] U. N. Environment Programme, 'Locust Swarms and Climate Change' (*UN Environment Programme*, 6 February 2020) <http://www.unenvironment.org/news-and-stories/story/locust-swarms-and-climate-change> accessed 22 April 2020.
Kaamil Ahmed, 'Locust Crisis Poses a Danger to Millions, Forecasters Warn' *The Guardian* (20 March 2020) <https://www.theguardian.com/global-development/2020/mar/20/locust-crisis-poses-a-danger-to-millions-forecasters-warn> accessed 22 April 2020.

When it comes to freshwater supply, climate change's impacts are generally summarized in the following manner: wet areas are expected to become wetter and dry areas drier.[160] Neither prospects are good for the regions that are currently affected or will be affected in the future as, on the one hand more intense precipitation means increased likelihoods of floods and runoffs pollution of waterways, as well as lower quality of crops as a result of fungal infections; and on the other hand increased instances of severe droughts will impact crops yield and exacerbate water scarcity, with 2 billion of the world's population already affected by high water stress .[161] Water scarcity is a major issue for farming. These events affect the elements of availability, accessibility, and adequacy of the right to food.

These additional stresses on land exacerbate existing risks to biodiversity and ecosystems, livelihoods, human health and infrastructure, and food systems.[162] The stability of the food supply is projected to decrease as food chains are disrupted by increasingly frequent extreme weather events, thus affecting the availability and accessibility of food.[163] Crops and livestock productivity is expected to decline in some regions of the world, leading to higher food prices – which means less people being able to economically access food and maintain an adequate diet – and increased risk of food insecurity and hunger.[164] Water supplies are also expected to be further affected as droughts intensifies, leaving an estimated 178 million people vulnerable to water scarcity by 2050.[165] Furthermore, the impacts of climate change on land are expected

[160] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140).
'Water and Climate Change' (*Union of Concerned Scientists*, 24 June 2010) <https://www.ucsusa.org/resources/water-and-climate-change> accessed 23 April 2020.
[161] Jahangir MD Alam and Dushmanta Dutta, 'Predicting Climate Change Impact on Nutrient Pollution in Waterways: A Case Study in the Upper Catchment of the Latrobe River, Australia' (2013) 6 Ecohydrology 73.
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 17–18.
United Nations, 'Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation' (United Nations 2018) 10, 12, 19 and 71 <https://www.unwater.org/publication_categories/sdg-6-synthesis-report-2018-on-water-and-sanitation/> accessed 23 April 2020.
Hilal Elver (n 10) para 16.
[162] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 17–18.
[163] ibid.
[164] ibid.
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 273 and 379–380.
[165] ibid.

to affect socio-economic development and contribute to poverty.[166] Finally, as natural resources become scarce, competition to secure them could result in or exacerbate conflicts and/or migration, leading to further social, economic and human rights issues.[167]

5. Concluding Remarks

As seen from the information available on the impacts of climate change, every aspects of the right to food are affected; whether it be the availability of food, its accessibility or adequacy. As of now, human activities have caused global temperatures to rise about 1.0°C above the levels they were during the pre-industrial era,[168] and these are the consequences humans are already faced with. However, according to a report released by the Intergovernmental Panel on Climate Change, global warming is expected to reach 1.5°C between 2030 and 2052 if temperatures continue to rise at their current rate, and the situation can only be expected to worsen.[169]

It is quite right and undramatic to say that the situation is dire. Counting from the year 2020, this gives humans between 10 to 32 years to drastically change how we exploit the environment and conduct our activities in the hope of mitigating climate change impacts. As reported, the necessity to address these issues by governments and key non-state actors (such as businesses) have been continuously stressed by scientists and legal professionals alike for years.[170] It would be fair to say that these warnings have been heeded to a certain extent, at least by states, as a number of international instruments have been adopted with the specific aim of addressing the issue of climate change, and with a recognition of the threat it poses to

[166] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139) 272–273.
[167] ibid 380–381.
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 18.
[168] 'Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty' (Intergovernmental Panel on Climate Change 2018) <https://www.ipcc.ch/sr15/> accessed 28 April 2020.
[169] ibid.
[170] Hilal Elver (n 10).
William J. Ripple and others, 'World Scientists' Warning to Humanity' (n 102).
William J. Ripple and others, 'World Scientists' Warning of a Climate Emergency' (n 102).

the right to food and food security. These instruments are the 1994 United Nations Framework Convention on Climate Change (UNFCCC), the 1997 Kyoto Protocol and, most recently, the 2015 Paris Agreement.

Furthermore, the adverse impacts of climate change on the right to food have been addressed by the Committee on Economic, Social and Cultural Rights (CESR) and by the Special Rapporteur on the right to food on numerous occasions.[171] Each time, they have declared the urgency and necessity for states to take action, and highlighted the measures they deemed necessary or adequate for dealing with climate change issues.

However, one would be right to question the effectiveness of this international legal framework supposed to address the issue of climate change, because between 1994 and now, 2020, the situation has only gotten worse. And not only that, but businesses, whose activities have been called out for fuelling the climate crisis, remain largely unmentioned in these documents, even though their cooperation could very well be essential in addressing the situation. Certainly, common reasoning would dictate that, as entities with such power and influence, they should occupy a more visible position on the legal scene of climate change action. Nevertheless, this is a discussion for later chapters, with the upcoming one examining how exactly the agribusiness affect the right to food both by its own activities and by exacerbating the climate crisis.

[171] Hilal Elver (n 10).
Hilal Elver (n 92) paras 52–55.
'Climate Change and the International Covenant on Economic, Social and Cultural Rights: Statement of the Committee on Economic, Social and Cultural Rights' (*UN Office of the High Commissioner for Human Rights*, 8 October 2018) <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=23691&LangID=E> accessed 19 May 2020.
'Five UN Human Rights Treaty Bodies Issue a Joint Statement on Human Rights and Climate Change.' (*UN Office of the High Commissioner for Human Rights*, 16 September 2019) <https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=24998&LangID=E> accessed 19 May 2020.

IV. The Agribusiness' Impacts on Food and Climate Change

1. Introduction

In the preceding chapter, we have looked at climate change, how it impacts humans' way of life and how human activities have contributed to this phenomenon and its consequences. It was thus shown that, while our ability to fulfil our right to food is dependent on the health of our environment and is impacted by climate change, our very use of the natural world is backfiring by fuelling the climate crisis. This includes our use of land for agricultural purposes, which was mentioned in **Chapter III**, but not discussed in further details. Indeed, the methods we employ to grow our food are also problematic to the right to food and climate change. It is, thus, in this chapter that a more in-depth look will be given to how human use of land, in the form of agricultural agribusiness activities, impacts climate change and the right to food.

The aim of this chapter is to give the reader a comprehensive view and a clear understanding of why agribusinesses deserve such attention, what it is about the way agribusiness is conducted that presents a risk for people's ability to get food and the quality of the food they consume, and provide more information on the industry's concerning contribution to climate change and how that adds to its impacts on the right to food. Much of it comes down to damaging agricultural practices being encouraged by agribusinesses and the political influence that some of these corporations possess, which enables them to sway national policies their way.

The issues are complex and the materials discussing them are abundant. But this chapter tries to sort through as many sources as possible to present how the complex web of activities and structures that make up the agribusiness system impacts human lives through food, both on its own and by contributing to the climate change crisis. The goal is not to vilify the agribusiness industry since it does play a role within the food system. But it is crucial to acknowledge and take into account the issues that come with practicing agribusiness, and it is simply not possible for it to carry on the way it currently does, for the consequences are already there and will only worsen. And, while this paper focuses on the right to food, this should not distract from the fact that many other rights are also impacted.

This chapter starts, in Section 2, with an explanation of what exactly agribusiness is, the extent of the sectors it encompasses, and how it contributes to both the global economy and to feeding the world population. Section 3 gives an overview of how an industry of this scale impacts human life and the environment, both through its own activities and by contributing to the climate change crisis. Using the case of the soy production industry to give more focus to the chapter, Section 4 illustrates how the machinery of agribusiness can impact the right to food, and what roles governments and agribusiness actors have in making things better or worse.

2. Agribusiness

2.1. What it is

Defining agribusiness can be complicated, not for a lack of appropriate explanation for the industry, but rather because of the difficulty in establishing what are its boundaries.[172] Nevertheless, tracing back to its origins, the term 'agribusiness' was coined in 1957 by two Harvard Economists, Johan Davis and Ray Goldberg.[173] Agribusiness, which is a portmanteau word for 'agriculture' and 'business', was defined by them as:

> 'the sum total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; and the storage, processing and distribution of farm commodities and items made from them'.[174]

According to this early explanation, agribusiness is thus a sector of business which includes farming and farming-related commercial activities. However, there have been several more explanations of the term and related industry ever since, and the scope of it seems to have expanded. For instance, the Food and Agriculture Organization (FAO) has defined agribusiness as 'the collective business activities that are performed from farm to table. It covers agricultural input suppliers, producers, agroprocessors, distributors, traders, exporters,

[172] Julian Roche, *Agribusiness: An International Perspective* (Routledge 2020) 1.
[173] John H. Davis and Ray A. Goldberg, *A Concept of Agribusiness* (Division of Research, Graduate School of Business Administration, Harvard, 1957), page 2. Accessible at < https://hdl.handle.net/2027/uc1.32106006105123> last accessed 6 February 2020.
[174] Ibid
This definition seems to be the most popular in terms of how frequently it is cited.

retailers and consumers.'[175] Another relevant example would be the explanation put forward by the Agribusiness Council of Australia, which has been formulated as two concepts as follow:

(i) 'In the context of agribusiness management in academia, each individual element of agriculture production and distribution may be described as agribusiness. However, the term 'agribusiness' most often emphasizes the 'interdependence' of these various sectors within the production chain'; and

(ii) 'Among critics of large-scale, industrialized, vertically integrated food production, the term agribusiness is used negatively, synonymous with corporate farming. As such, it is often contrasted with smaller family-owned farms.'[176]

What is more, nowadays, it is understood that agribusiness also includes 'all businesses whose raw materials are primarily products of the land and the sea'.[177]

The definitions above highlight an important aspect of the agribusiness, which is that it is layered and comprised of several sectors, often interdependent. As a result, there is a distinction between three types of agribusiness, which illustrate the production, processing and distribution stages that make up the process of sending an agricultural product to the market. There is the primary agribusiness, which includes agriculture, livestock and forestry production.[178] Manufacturing agribusiness is another category, and it includes ten types of traded products to reflect their variety (canned; cereals; drinks; leather; meat; oils; paper; tobacco; wood; other).[179] Furthermore, there are service agribusinesses among which notably figure supermarkets.[180] Finally, traders and investors also are part of the agribusiness structure.[181]

Lastly, when it comes to agricultural faming, the majority of agribusinesses seem to not be involved in the actual process of growing food. In fact, a report produced by the FAO in 2014 has confirmed that more than 80% of the world's food supply (in terms of raw materials such

[175] Gabor Konig, Carlos A Da Silva and Nomathemba Mhlanga, *Enabling Environments for Agribusiness and Agro-Industries Development: Regional and Country Perspectives* (Food and Agriculture Organization of the United Nations 2013) 5–6.
[176] Agribusiness Council of Australia (ACA) (2018) Advancing Agribusiness in Australia. Available at: www.agribusiness.asn.au/ (as cited in Roche (n 172) 2.)
[177] ibid.
[178] ibid.
[179] ibid.
[180] ibid.
[181] ibid.

as grains) are grown by small-scale, often called family farms.[182] Agribusinesses, meanwhile, produce materials used for agricultural purposes such as fertilizers, pesticides, seeds and machineries; and they are also involved in the transportation of raw agricultural products between countries, their transformation into food and other products, and their eventual commercialization.[183]

Taking into account these various explanation of 'agribusiness', in the context of this thesis the term is employed to address actors involved in business activities related to the use of land for the purpose of agriculture, and which are primarily concerned with the production, processing, marketing and distribution of raw agricultural products into foodstuff and other materials for human consumption and use, as well as the manufacturing of materials and equipment used in the production of the aforementioned foodstuff and other materials. Such actors also includes traders and investors.

2.2. Why it matters

As seen above, agribusiness in truth does not exactly play a major role in growing food, it does not 'feed the world' as it is often claimed.[184] Yet, agribusiness matters because food is a necessity and, as such, the industry plays a significant role in shaping our interactions with the natural environment, and how we make use of the resources it provides to satisfy that need. Throughout our history, humans have demonstrated incredible ingenuity and creativity just for the sole purpose of securing easy and constant access to food, and the agribusiness regime is one of the latest examples of our specie's efforts in that direction. As a result, one must first understand the extent to which humans have transformed and made use of the natural resources available on earth for that purpose.

Indeed, in order to provide for themselves, our specie began as nomadic hunters and gatherers, progressively moving to farming.[185] In 'traditional' farming, which came before the

[182] Food and Agriculture Organization (ed), *The State of Food and Agriculture: Innovation in Family Farming* (Food and Agriculture Organization 2014) xvi <http://www.fao.org/publications/sofa/2014/en/> accessed 22 April 2020.
[183] Timothy A Wise, *Eating Tomorrow: Agribusiness, Family Farmers, and the Battle for the Future of Food.* (The New Press 2019) 4–5.
[184] Wise (n 183).
[185] Roche (n 172) 2.

introduction of modern agricultural systems (which include agribusiness), every aspects of the food production (inputs, processes and products) were dealt with by individual farmers.[186] As human civilisations developed through the ages, crops also became part of the commercial system and entered cross-border trades;[187] and the introduction of a variety of technical innovations in farming during the Industrial Revolution pushed the development of agribusiness.[188] As per Roche's words "The use of grains and the development of more productive crops were central to population growth.'[189] And grow it did, from about 1-10 million around 10-15,000 years ago to about 7 billion today, and it is still growing despite a decline in birth rates in most countries.[190] In response to that growth, the agribusiness sector developed and food production increased, which led to the processing, manufacturing and distribution of that food to become the jurisdiction of agribusinesses and related actors; thus marking the rise in power of 'modern agriculture' over traditional farming.[191] Studies of the relationship between people and agricultural systems, therefore, demonstrate a definite and close correlation between agricultural development and population growth.[192]

Of course, feeding a human population of 7 billion individuals (and fast growing) demands a vast amount of food, which leads to the inevitable argument that growing always more food is a necessity, which in turns leads to the exploitation of more natural resources. The earth's surface is made of 71% water and 29% land, of which 71% of land is habitable.[193] Out of these 71% of habitable land, **agriculture as we know it today alone occupies 50% of it**.[194] This compares to just 4% of habitable land used for agriculture a 1000 years ago.[195] Even within

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[186] Allison Gray and Ron Hinch, 'Agribusiness, Governments and Food Crime: A Critical Perspective' in Ragnhild Aslaug Sollund (ed), *Green Harms and Crimes: Critical Criminology in a Changing World* (Palgrave Macmillan UK 2015) 101–102 <https://doi.org/10.1057/9781137456267_6> accessed 6 February 2020.
[187] Ibid.
[188] Gray and Hinch (n 186) 102.
[189] Roche (n 172) 2.
[190] Batool Zaidi and S. Philip Morgan, 'The second demographic transition theory: A Review and appraisal' (2017) Annual Review of Sociology 43, 471-492. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5548437/, last accessed 7 February 2020. [as cited in Roche (n 1)]; ibid 2–3.
[191] Gray and Hinch (n 186) 102.
[192] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 7.
[193] Hannah Ritchie and Max Roser, 'Land Use' [2020] Our World in Data <https://ourworldindata.org/land-use> accessed 27 March 2020.
[194] ibid.
[195] Hannah Ritchie and Max Roser, 'Environmental Impacts of Food Production' [2020] Our World in Data <https://ourworldindata.org/environmental-impacts-of-food> accessed 27 March 2020.

human use of land for agricultural purposes, the distribution between crops grown for human consumption and livestock is highly uneven. Only 23% of global farming land is used to grow crops for human consumption, whereas the remaining staggering 77% (which combines both grazing land and land used to grow crops to produce animal feed) is used for livestock farming. This leaves only 37% of habitable lands for forests; 11% for grasslands and shrubs; 1% as freshwater coverage. The remaining 1% is made of built-up urban areas, which includes cities, towns, villages, roads, and other human infrastructure – a much smaller portion than most would suspect.[196]

Naturally, the expansion in size and scale of the agricultural sector (including forestry, fishing and aquaculture together with crops and animal production) is reflected in the amount of workforce necessary for it to operate, and the industry alone employs around **38% of the world's population**, and it is also a source of livelihoods for over 85% of rural people.[197] As a result, the impacts of climate change on agriculture will also affects the livelihoods of thousands of rural workers around the world, thus negatively affecting their ability to economically and physically access food.[198] In its 2012 Statistical Yearbook, the FAO noted that, while employment in the agriculture sector is falling in developed countries, the 'labour force participation rates are usually highest in the poorest countries.'[199] But, it does not have the safest working conditions, having been flagged by the FAO and the International Labour Organization (ILO) as one of the most dangerous sectors for employment in terms of workers' health and safety and for also having a high percentage of child labourers (around 59% of all child labourers work in agriculture).[200]

Finally, the agribusiness industry, as explained at the beginning, involves providing farmers with products aimed at facilitating and boosting agricultural production; the processing, marketing and distribution of agricultural products; as well as service companies such as that of transportation, refrigeration, storage, credit, finance, insurance and AgTech.[201] These also

[196] Ritchie and Roser, 'Land Use' (n 193).
[197] Sisay Alemahu, *Regulating Labour and Safety Standards in the Agriculture, Forestry and Fisheries Sectors* (Food and Agriculture Organization 2018) <http://www.fao.org/publications/card/en/c/CA0018EN> accessed 14 March 2020.
[198] Hilal Elver (n 10) 31.
[199] Food and Agriculture Organization, 'FAO Statistical Yearbook 2012' (Food and Agriculture Organization 2012) 18 <http://www.fao.org/3/i2490e/i2490e00.htm> accessed 17 March 2020.
[200] Sisay Alemahu (n 197).
[201] Roche (n 172) 1–2, 34.

play a significant role in our ability to access and acquire food, as well as the quality of the food we consume. As such, the food and agribusiness regime is the largest economic sector of the global economy, boasting 50% of global assets, 50% of the global labour and 50% of global consumer spending.[202] This gives significant economic power to agribusiness companies, especially the largest ones, and economic power translates into political power, which allows these entities to influence and sometimes dictate national and international policies relating to food.[203] Such political clout enables putting profits before human and environmental wellbeing and, as it will be shown in the subsequent sections, this is reality not a hypothetical possibility.

3. The Impacts of the Agribusiness

Section 2.2 demonstrated the importance and enormous size of agriculture related activities, and how agribusiness operates as a part of it. The impacts of an industry of this scale, positive and negative, cannot be overlooked. The most obvious positive impacts of the agribusiness industry is how easily accessible and readily available it has made a wide variety of food to be. As massive livestock farms, intensive agriculture, and the development of genetically modified foods[204], are increasingly considered to be the future of agriculture the world now produces more food than ever before, and distances are no longer a barrier. Mangos grown in Peru can be purchased in supermarkets in Sweden, yoghurts produced in France are available in stores in Benin. The agribusiness regime has also provided people with a source of revenue, enabling many to provide for themselves and their families. In spite of that, one has to wonder, what are the costs of a worldwide industry that operates on a principle of ever-maximized yield potentials and profits? And is it safe to let it carry on as it already does?

Wise (n 183) 4–7.
AgTech is defined by the United States Studies Centre as 'products and/or services which contain or are enabled by patented technology into the agriculture value chain.' See: United States Studies Centre, 'What Is AgTech?' (*United States Studies Centre*, 22 August 2018) <https://www.ussc.edu.au/analysis/what-is-agtech> accessed 28 March 2020.

[202] Roche (n 172) 34.

[203] Wise (n 183) 5–7.
Gray and Hinch (n 186) 103–104.

[204] World Health Organization, 'Food, Genetically Modified' (*World Health Organization*) <https://www.who.int/westernpacific/health-topics/food-genetically-modified> accessed 28 March 2020.

Agriculture and, by incidence, agribusinesses are first and foremost based on a human exploitation of nature, and the way we have expanded our agricultural activities has had a tremendous impact on the environment. It is known and proven that environmental issues are not confined by territorial borders and, as it has been explained in **Chapter III**, damages to the natural environment negatively affect humans, the right to food especially. What happens in one country or region can have worldwide consequences; and few industries impact the environment as severely as agriculture together with the agribusiness industry do.[205] Entire studies and books have been dedicated to documenting and researching the impacts of agribusinesses and agriculture. While they could not all be reproduced in this paper, it is possible to identify and go through the main global impacts of agribusinesses and agriculture.

The main impact of the agribusiness industry and of agriculture is how much land and resources are used to produce the food we eat. As stated above, and it cannot be emphasized enough, agriculture takes up half of the earth's habitable land, and even within this share the distribution of land use between livestock and crops for human consumption is highly unequal.[206] The extraordinary expansion that agriculture has experienced and the methods through which it is practiced have resulted in tremendous pressures on the natural world's biodiversity. [207] In a recently finalized study, the IPBES reports that human activities are threatening 25% of assessed animal and plant species, and around 1 million species are already facing extinction.[208] This steady decline in biodiversity impacts human life both directly (availability and quality of fresh water, food and fuel sources) and indirectly (livelihoods, accessibility of food, incomes, local migration); and, sometimes, can even cause political conflict.[209] On a nutritional level, biodiversity plays a significant role as our access to a nutritious variety of food and the productivity of the soils on which we grow our crops are dependent on a biodiverse ecosystem.[210]

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[205] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
J Poore and T Nemecek, 'Reducing Food's Environmental Impacts through Producers and Consumers' (2018) 360 Science 987.
[206] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
[207] ibid.
[208] Sandra Díaz and others (n 89) 11–12.
[209] 'Climate Change and Human Health: Biodiversity' (*World Health Organization*) <https://www.who.int/globalchange/ecosystems/biodiversity/en/> accessed 28 March 2020.
Bélanger and Pilling (n 81).
Sandra Díaz and others (n 89) 12.
[210] 'Climate Change and Human Health: Biodiversity' (n 209); Bélanger and Pilling (n 81).

Secondly, the global food system is responsible for over a quarter (26%, though the IPCC gives an estimate of 21%-37%) of global greenhouse gas emissions (GHG), thus significantly contributing to the climate change crisis.[211] The contribution by different sectors of agriculture and agribusiness can be broken down as follow:

- **Livestock and fisheries** together contribute to 31% of food GHG emissions (the figure does not include emissions generated by land use changes, the supply chain, or the production of crops for animal feed).[212]
- **Crop production** generates 24% of the agribusiness' GHG emissions.[213]
- **Land use** for agricultural production accounts for 24% of food GHG emissions. Land use for livestock results in twice more emissions (16%) than crops grown for human consumption (8%). The conversion of forests and grasslands into pastures and cropland also results in GHG emissions and affects the environment's capacity to capture these emissions.[214]
- **Supply chains** include food processing (transforming farm produces into final products), transport, packaging, and retail. Each of these steps require energy and resources, bringing the GHG emissions of the supply chains to 18%.[215]

Thirdly, how we use land and natural resources, and the kind of materials we have equipped ourselves to do so are problematic. Agricultural activities are responsible for about 70% of freshwater withdrawals, an important number considering that only 1% of the water on earth is suitable for human consumption.[216] Some food products (e.g. cheese and nuts) also require

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[211] Poore and Nemecek (n 205); Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems' (n 139). Report by the IPCC, September 2019
'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 10.
Sandra Díaz and others (n 89) 26.
As seen in **Chapter III** on the effects of climate change, GHGs are the principal driver of climate change
[212] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
[213] Ibid
[214] Ibid
[215] Ibid
[216] 'Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems - Summary for Policymakers' (n 140) 7.
Food and Agriculture Organization, *The State of the World's Land and Water Resources for Food and Agriculture: Managing Systems at Risk* (1st edn, Routledge 2013) 3.

more freshwater than others (e.g. root vegetables and soybeans).[217] This is relevant as the availability and abundance of freshwater differs greatly among the world's regions, and pollution and degradation of freshwater sources caused by agricultural practices diminish further the amount and quality of freshwater available, not just for agriculture but also for human consumption and the environment's health.[218] To this adds climate change which, as highlighted in the chapter above, has negative impacts which include the increase of risks of water stress in some regions. As a result, the global food system together with climate change combine to create water related pressures and risks that impacts populations now and are expected to continue doing so in the future if things stay as they currently stand. This affects the right to food as the right to water is regarded as connected to that of food, and humans also rely on water to produce and have access to food.

Eutrophication (the pollution of water sources and ecosystems with excess nutrients) is another example of how materials provided and promoted by agribusinesses for the purpose of agriculture, affect our natural environment and, in turn, us. Eutrophication is a major environmental issue to which agriculture is a leading contributor because of the runoff of nitrogen and other nutrients into the surrounding environment and waterways.[219] The consequences of this phenomenon include toxicity effects and oxygen deficiency in bottom waters, which would lead, on the long term, to a depletion in fish stocks and which will impact the fishery industry and the availability of fish as food.[220] It is without saying that all of this eventually affect the right to food by making some products unavailable, physically or economically inaccessible or inadequate.

Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).

[217] Charts and further information can be found here: <https://ourworldindata.org/environmental-impacts-of-food>

[218] Food and Agriculture Organization, *The State of the World's Land and Water Resources for Food and Agriculture* (n 216).

Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).

Sandra Díaz and others (n 89) 28.

[219] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).

European Commission, 'Our Oceans, Seas and Costs: Eutrophication' (*European Commission*, 7 August 2019) <https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-5/index_en.htm> accessed 28 March 2020.

[220] ibid

Finally, around one-third of the food produced in the world is either lost or wasted.[221] Of course, there are circumstances, such as unexpected harsh climatic conditions or even the coronavirus pandemic currently sweeping through the world,[222] where food loss and food waste may be difficult to avoid within the food system. There are also factors such as consumer choices as well as labour costs and availability for harvesting that have effects on how much food is lost or wasted that cannot be attributed as a fault within the global food system.[223] However, it seems to be accepted that a certain level of food loss or waste is unavoidable if actors within the food supply chains (for example producers and retailers) make 'rational decisions to maximize their profit'.[224] As a result, a food producer may reason that some food loss can be afforded if the cost of investing in better machinery or better operational management outweighs the value of the food that would have been recovered.[225] Similarly, a lot of retailers, especially in high-income countries, have aesthetic standards (in terms of perceived "perfect" colour, size, shape, etc.) for the food they sell, which means that the products that do not meet these standards are discarded, causing further frivolous and avoidable food waste.[226] This is hard to make sense of when hunger and undernourishment are still an issue for millions.[227] Considering that the minimum requirement for the right to

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[221] Food and Agriculture Organization, 'Food Loss and Food Waste' (*Food and Agriculture Organization*) <http://www.fao.org/food-loss-and-food-waste/en/> accessed 28 March 2020.
Food and Agriculture Organization, 'Global Food Losses and Food Waste: Extent Causes and Prevention' (Food and Agriculture Organization 2011) <http://www.fao.org/3/mb060e/mb060e00.htm> accessed 28 March 2020.
Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
According to the FAO, '**food loss**' refers to 'any food that is discarded, incinerated or otherwise disposed of along the food supply chain from harvest/slaughter/catch up to, but excluding, the retail level, and does not re-enter in any other productive utilization, such as feed or seed.' Whereas '**food waste**' refers to 'refers to the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service providers and consumers'.
[222] Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture. Moving Forward on Food Loss and Waste Reduction* (Food and Agriculture Organization 2019) 27 <http://www.fao.org/3/ca6030en/ca6030en.pdf> accessed 24 April 2020.
'Race against Time: Overcoming COVID-19 Challenges to Get Seeds to Farmers in South Sudan' (*Food and Agriculture Organization*, 24 April 2020) <http://www.fao.org/fao-stories/article/en/c/1271822/> accessed 24 April 2020.
'Five Ways Coronavirus Is Disrupting the Food Industry' *BBC News* (13 April 2020) <https://www.bbc.com/news/world-52267943> accessed 24 April 2020.
Susie Cagle, '"A Disastrous Situation": Mountains of Food Wasted as Coronavirus Scrambles Supply Chain' *The Guardian* (9 April 2020) <https://www.theguardian.com/world/2020/apr/09/us-coronavirus-outbreak-agriculture-food-supply-waste> accessed 24 April 2020.
[223] Food and Agriculture Organization of the United Nations (n 222) 13 and 28–31.
[224] ibid 13.
[225] ibid.
[226] ibid 37–38.
[227] Max Roser and Hannah Ritchie, 'Hunger and Undernourishment' [2013] Our World in Data <https://ourworldindata.org/hunger-and-undernourishment> accessed 28 March 2020.

food to be fulfilled is that freedom from hunger is achieved, reaching that goal may be impossible if, as a society, we choose to discard food rather than finding a way to redistribute it so that it is not wasted while others hunger. Furthermore, this food that is never eaten, or made use of in any way whatsoever, also results into 6% of global GHG emissions, thus contributing to the climate crisis.[228]

While this provides an appropriate overview of the issues and inefficiencies of the current agribusiness regime, it seems that, in its generality, this information might also be a bit abstract in showing what it is about these issues that affect the right to food, and how much of a role humans and our institutions (governments and businesses in particular) play in it. Therefore the following section will look into soybeans production and use it as an illustrative example.

4. Illustrative Example: the case of soybean production

4.1. The value of soybeans

There is a reason for choosing soybean as an illustrative example. There is a particular duality to soy in that there are benefits and consequences to its use, which perfectly illustrate how the agribusiness industry, as part of the global food system, can affect the right to food. Crowned the "king of beans" by the World Wildlife Fund (WWF), the soybean is a global commodity ubiquitous in our lives.[229] High in protein and energy, it is described by the Food and Agriculture Organization (FAO) as 'one of the most important world crops' with a significant role to play in the fight against world hunger.[230]

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[228] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).

[229] 'Soy Industries' (*World Wildlife Fund (WWF)*) <https://www.worldwildlife.org/industries/soy> accessed 28 March 2020.
World Wildlife Fund, 'The Growth of Soy: Impacts and Solutions' (WWF International 2014).

[230] Food and Agriculture Organization, 'Crop Information - Soybean' (*Food and Agriculture Organization*) <http://www.fao.org/land-water/databases-and-software/crop-information/soybean/en/> accessed 28 March 2020.
P. Thoenes, 'The Role of Soybean in Fighting World Hunger' <http://www.fao.org/publications/card/en/c/ea0e7b93-fb20-4c62-b8fd-6e7b076dfa79/> accessed 28 March 2020.

A century ago, soybeans were virtually unknown to the world outside of Asia however, today, nearly everyone eats it in one form or another.[231] The soybean is used to produce food for human consumption such as tofu, soy sauce, and meat substitutes; but most of it is consumed in a more indirect manner as a great share of soybeans are made into soybean meal[232], which (while also eaten by humans) is widely used as animal feed in the animal farming sector.[233] Soybeans are also used to make soy oil, which accounts for around 27% of worldwide vegetable oil production and is used both for human consumption and for biodiesel production.[234] Additionally, soy derivatives, like the emulsifier lecithin and soy additives, are used in the making of a wide variety of processed foods such as chocolate, ice cream, baked goods and mayonnaise.[235]

Soybeans are an exceptional source of nutrients, especially when it comes to protein as it produces more protein per hectare than any other major crops.[236] They also easily outdo many animal products in that regard, with soybeans containing 36.49g of protein per 100g compared to 25.9g for 100g of beef and 23.3g for 100g of cheddar cheese.[237]

Furthermore, crop breeding has made of soybean a crop easy to grow in both temperate and tropical climates, thus making it available to almost any country who would be interested in growing it.[238] As a result, the global production of soybean has increased fifteen times over

[231] World Wildlife Fund (n 229) 4.
[232] The FAO defines 'soybean meal' as the following: 'Soy flours are products obtained by finely grinding full-fat dehulled soybeans or defatted flakes made from dehulled soybeans. To be called soy flour, at least 97% of the product must pass through a 100-mesh standard screen.' See: 'FAO Term Portal - Soybean Meal' (*Food and Agriculture Organization*) <http://www.fao.org/faoterm/viewentry/en/?entryId=84534> accessed 29 March 2020.
[233] World Wildlife Fund (n 229) 4 and 14–15.
In the period of 2013-2014, 75% of the soy produced worldwide was used for animal feed. See: WWF, 'Soy: The Biggest Food Crop We Never Talk About' *World Wildlife Fund* <https://www.worldwildlife.org/magazine/issues/winter-2015/articles/soy-the-biggest-food-crop-we-never-talk-about> accessed 29 March 2020.
[234] World Wildlife Fund (n 229) 14–15.
[235] ibid. See also chart on page 16
[236] ibid 4.
[237]Soybeans: 'FoodData Central - Soybeans' (*U.S. Department of Agriculture*, 4 January 2019) <https://fdc.nal.usda.gov/fdc-app.html#/food-details/174270/nutrients> accessed 29 March 2020.
Beef: 'FoodData Central - Beef' (*U.S. Department of Agriculture*, 4 January 2019) <https://fdc.nal.usda.gov/fdc-app.html#/food-details/174032/nutrients> accessed 29 March 2020.
cheddar cheese: 'FoodData Central - Cheddar Cheese' (*U.S. Department of Agriculture*, 4 January 2019) <https://fdc.nal.usda.gov/fdc-app.html#/food-details/328637/nutrients> accessed 29 March 2020.
[238] World Wildlife Fund (n 229) 14.

since the 1950s and it is still expanding rapidly as demand is ever-increasing.[239] However, just six countries produce around 90% of the world's soybeans (Brazil, the USA, Argentina, China, India and Paraguay).[240] According to the FAO the production of soy is likely to almost double by 2050,[241] showing the use and economic value of the crop; and, as soy production does expand, more agricultural land will also be needed to enable such growth.

4.2. Impacts on the right to food and contribution to climate change

In many ways, soybeans contribute to fulfilling the right to food and it has even been identified by the Food and Agriculture Organization as having an important role to play in fighting world hunger.[242] Indeed, considering their beneficial nutritional content, soybeans easily fit within an appropriate and healthy human diet if directly consumed. Furthermore, the extraordinary expansion of its production and linked activities has made of the soybean a high value and economically profitable crop both at international and national levels, especially for the countries who specialise in its production.[243] As a result, the whole regime of soybean production, technically speaking, participates in the creation of employment, thus contributing to people's ability to secure for themselves necessities such as food.[244] What is more, the soybean's benefits can be said to extend to animal farming, as much of the soy produced is used to feed livestock, thus contributing in bringing meat and other animal derived products in our plates. Nevertheless, the manner soybeans are produced, and how

[239] Nikos Alexandratos and Jelle Bruinsma, 'World Agriculture towards 2030/2050: The 2012 Revision' (2012) ESA Working Paper No. 12-03 FAO 154; World Wildlife Fund (n 229) 20; Jelle Bruinsma, 'The Resource Outlook to 2050: By How Much Do Land, Water and Crop Yields Need to Increase by 2050?' (FAO Expert Meeting., Rome, 24 June 2009) 5–6 <http://www.fao.org/3/a-ak971e.pdf>.
[240] World Wildlife Fund (n 229) 4.
Hannah Ritchie and Max Roser, 'Agricultural Production' [2020] Our World in Data <https://ourworldindata.org/agricultural-production> accessed 29 March 2020.
[241] Nikos Alexandratos and Jelle Bruinsma (n 239) 96 and 120; World Wildlife Fund (n 229) 14.
[242] P. Thoenes (n 230).
[243] ibid 4–7.
[244]Jonas Chianu, Franklin Mairura and Justina Chianu, 'Soybean Situation and Outlook: The Case of Kenya' 28 <https://www.researchgate.net/publication/267720481_SOYBEAN_SITUATION_AND_OUTLOOK_ANALYSIS_THE_CASE_OF_KENYA> accessed 29 March 2019.
Peter Richards and others, 'Soybean Development: The Impact of a Decade of Agricultural Change on Urban and Economic Growth in Mato Grosso, Brazil' (2015) 10 PLoS ONE <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4412665/> accessed 29 March 2020.

they are used and consumed pose issues that threaten peoples' right to food. Various aspects of how the soy production industry affect the right to food and contribute to climate change will be discussed in turn below.

4.2.1. Loss of natural lands

As mentioned above, soybeans production has increased rapidly over the past decades, and this growth is predicted to continue. However, growing soybeans puts enormous pressure on the environment as millions of hectares of forest, savannah and grasslands have been destroyed in recent decades to make way for farmlands for the purpose of growing soy.[245] Not only does this threaten biodiversity and valuable ecosystems, but it also emits vast amount of carbon dioxide which, in turn, contributes to climate change and its impacts.

With most of the soy being grown in North and South America, the region has been experiencing losses of natural lands related to soy production at an alarming rate. The most famous example would be the Amazon forest, which represents one-third of the world's tropical forests and stretches across parts of Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname and French Guiana.[246] It is incredibly diverse in the amount of animal, insect and plant species it houses, and more than 30 million people inhabit the region, and the livelihoods of many depend on the forest and its rivers.[247] The Amazon also plays a crucial role in regulating the planet's climate by storing huge amounts of carbon dioxide and by affecting rainfall patterns.[248]

Until some years ago, the Amazon was deemed unsuitable for growing soy. But progresses in crop breeding and other areas having increased soy's yield potential, the soy now contributes to the forest's deforestation as chunks of the Brazilian Amazon are regularly converted to make way for soy farms.[249] Soy also contributes to the Amazon's deforestation in a more indirect manner, as the livestock it feeds, especially the cattle, accounts for a disturbing 80%

[245] World Wildlife Fund (n 229) 34.
[246] ibid 39.
[247] Ibid.
[248] Ibid.
[249] World Wildlife Fund (n 229) 39–40.

of rainforest destruction in Brazil.[250] The deforestation of the Amazon inevitably negatively impacts the ecosystems within and the biodiversity of this environment.[251] As it has been shown in **Chapter III** (subsection 2.2), any negative impacts to ecosystems and biodiversity affects the availability and accessibility of adequate food by undermining the vital ecosystem services and natural resources they provide to the communities who rely on them.

While one of the solutions to soy production's deforestation of the Amazon could be to cultivate on now degraded pastureland, there is a danger that, without the proper safeguards this practice could lead to more conversion of Amazon lands into pasture for cattle ranching.[252]

Appropriate institutional responses can be key in remedying the issue, and it has been shown in the actions taken by the Brazilian government when deforestation reached unprecedented rates in 2004.[253] Government policies, such as private sector incentives and stricter enforcement, have resulted in a drop of deforestation.[254] However, deforestation has merely slowed in rate, not stopped; and the damage done is still there.

Furthermore, the stance of Brazil's current president, Jair Bolsonaro, on exploiting the Amazon (for mining, logging and agriculture) raises valid concerns over the future of the forest under a government who is not intent on protecting it or heeding the warnings of scientific experts.[255] Ever since Bolsonaro has come to power, institutions dedicated to the protection

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[250] Yale School of Forestry & Environmental Studies, 'Cattle Ranching in the Amazon Region' (*Global Forest Atlas*, 2020) <https://globalforestatlas.yale.edu/amazon/land-use/cattle-ranching> accessed 29 March 2020. See also: World Wildlife Fund (n 229) 15.

[251] Xingli Giam, 'Global Biodiversity Loss from Tropical Deforestation' (2017) 114 Proceedings of the National Academy of Sciences 5775.

[252] World Wildlife Fund (n 229) 79.

[253] Rhett Butler, 'Calculating Deforestation in the Amazon' (*Mongabay*) <https://rainforests.mongabay.com/amazon/deforestation_calculations.html> accessed 29 March 2020. See also: Daniel Nepstad and others, 'Slowing Amazon Deforestation through Public Policy and Interventions in Beef and Soy Supply Chains' (2014) 344 Science 1118.

[254] World Wildlife Fund (n 229) 39–40.

[255] Anna Lappé, 'Follow the Money to the Amazon' (*The Atlantic*, 4 September 2019) <https://www.theatlantic.com/ideas/archive/2019/09/follow-money-amazon/597319/> accessed 29 March 2020.
Herton Escobar, 'There's No Doubt That Brazil's Fires Are Linked to Deforestation, Scientists Say' (*American Association for the Advancement of Science*, 26 August 2019) <https://www.sciencemag.org/news/2019/08/theres-no-doubt-brazils-fires-are-caused-deforestation-scientists-say> accessed 29 March 2020.
See also a report produced by Amazon Watch: Amazon Watch, 'Complicity in Destruction II: How Northern Consumers and Financiers Enable Bolsonaro's Assault on the Brazilian Amazon' (*Amazon Watch*, 2019) <https://amazonwatch.org/news/2019/0425-complicity-in-destruction-2> accessed 29 March 2020.

of the environment and indigenous people rights have suffered devastating cuts, restructuring and loss of autonomy; and legislations are being pushed to open indigenous lands to industrial agriculture and mining, as well as ease the approval of agribusiness and major infrastructure development at the detriment of proper environmental assessment.[256] While this threatens the indigenous peoples of the Amazon's way of life, their wellbeing and, as a result, their right to adequate food, it also encourages the negative impacts linked to the forest's exploitation. Just last year, in 2019, the Amazon rainforest was plagued with fires throughout the year until October 2019 (which is the latest data available on the 2019 fires), peaking at 30,901 individual fires in August, which was three times more than the year before.[257] This number is the highest since 2010, and scientists have already declared that there was no doubt that the fires were linked to deforestation.[258]

Yet, the responsibility to act appropriately (and not to act irresponsibly) should also fall on the companies involved in the soy industry.[259] Indeed, an analysis conducted by Amazon Watch[260] shows that, with Brazil being increasingly economically dependent on foreign markets through investments or the purchase of export commodities, 'Foreign investors have enormous influence over what happens in the Brazilian Amazon. In particular, big banks and large investment companies play a critical role, providing billions of dollars in lending, underwriting and equity investment to **soy** and cattle companies.' (emphasis added)[261]

Consequently, market pressure and international trading partners, global agribusinesses in particular (e.g: Archer Daniels Midland, Bunge, and Cargill), very much have the power of deciding what will be the fate of the Amazon: continued destruction, or protection and, perhaps, eventual restoration. Unfortunately, at this point, this is a matter of emergency. For over a decade now, experts have been warning that if deforestation continues at current

[256] Amazon Watch (n 255) 8–9.
[257] Roland Hughes, 'What's the Latest with the Fires in Brazil?' *BBC News* (12 October 2019) <https://www.bbc.com/news/world-latin-america-49971563> accessed 20 May 2020; Alejandra Borunda, 'See How Much of the Amazon Is Burning, How It Compares to Other Years' (*Environment*, 29 August 2019) <https://www.nationalgeographic.com/environment/2019/08/amazon-fires-cause-deforestation-graphic-map/> accessed 20 May 2020.
[258] Hughes (n 257); Alejandra Borunda (n 257).
[259] Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework 2011, Principle 13.
[260] It is a non-profit organization, based in the USA, and which works to protect the rainforest and advance the rights of indigenous peoples in the Amazon Basin: https://amazonwatch.org/work
[261] Amazon Watch (n 255) 11–19.
See also: Bélanger and Pilling (n 81) 74–76.

rates, not only will a significant portion of the Amazon (estimates range from 37% to 55%) will be lost, but the demand for agricultural products will also aggravate a vicious circle of climate change impacts, such as increased droughts and forest fires.[262]

This is no longer an estimation of the future, but very much our present. In these past six years, rising temperatures have led to increasingly warmer days and months, the latest record being held by this January 2020 as the warmest January since temperature record keeping began in 1880.[263] One of the latest example of the impacts of these warmer days is Australia's 2019-2020 fire-season which, fuelled by record-breaking temperatures and months of severe drought, saw a series of massive bushfires across the country.[264] An analysis conducted by the World Weather Attribution consortium has found that climate change (global warming) has increased the risk of the hot and dry weather likely to cause bushfires by 30%, and that such conditions are four times more likely to happen if global temperatures rise by 2°C or more.[265] The bushfires have killed thousands of animals, destroyed homes, and the smoke they generate both is a major health hazard and contributes to climate change.[266] And so continues the vicious cycle of climate change impacts and human land use.

4.2.2. Soil, water, and resource use

Intensively grown, soy is a crop with high demands on resources such as soils, water, agrochemicals, and energy.[267] Soils are fundamental to life on earth, they are more than just dirt. It is on their good health that depends the productivity of our crops and thus our capacity

[262] World Wildlife Fund (n 229) 39–40.
[263] Rebecca Lindsey and LuAnn Dahlman, 'Climate Change: Global Temperature' (*NOAA Climate.gov*, 16 January 2020) <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature> accessed 29 March 2020.
Jeff Masters, 'Earth Had Its Second Warmest Year in Recorded History in 2019' (*Scientific American Blog Network*) <https://blogs.scientificamerican.com/eye-of-the-storm/earth-had-its-second-warmest-year-in-recorded-history-in-2019/> accessed 29 March 2020.
'Assessing the Global Climate in January 2020' (*National Centers for Environmental Information (NCEI)*, 13 February 2020) <http://www.ncei.noaa.gov/news/global-climate-202001> accessed 29 March 2020.
[264] 'A Visual Guide to Australia's Bushfire Crisis' *BBC News* (31 January 2020) <https://www.bbc.com/news/world-australia-50951043> accessed 29 March 2020.
[265] Geert Jan van Oldenborgh and others, 'Attribution of the Australian Bushfire Risk to Anthropogenic Climate Change' [2020] Natural Hazards and Earth System Sciences Discussions 1. A summary of the key findings can be found here: <https://www.worldweatherattribution.org/bushfires-in-australia-2019-2020/>
[266] 'A Visual Guide to Australia's Bushfire Crisis' (n 264).
[267] World Wildlife Fund (n 229) 62. page 62

to feed ourselves and future generations.[268] Changing a place of natural vegetations or pasture into land for farming crops is likely to disturb the soil and increase its erosion, and soybeans are no exception.[269] In a few words, soil erosion reduces the quality of soil as a result of which productivity of natural, agricultural and forest ecosystems also decreases.[270] When soil is damaged, not only does it threaten food security, but it also affects the diversity of plants and the survival of animals and microbes in the soil.[271] And when food security is affected, so is the right to food as the two concepts are related as explained in **Chapter II**. Industrial agriculture is not the only way by which erosion occurs, but it is significant enough for it to be of concern.[272]

Additionally, modern farming makes intensive use of agrochemicals (pesticides, herbicides, and chemical fertilizers). The use of these agrochemicals is one of the main environmental threats associated with soy production, regardless of the size of the farm.[273] An example is the pollution of waterways, which leads to eutrophication, an issue that soil erosion also contributes to.[274]

Agrochemicals can also pose a risk to human health, either directly or indirectly. Impacts to health are also of concern for the right to food since, in some cases, the health conditions can be such that they can hinder one's ability to exercise a livelihood and, as a result, affect their ability to access an adequate diet either physically or economically. For example, a study in Mato Grosso (Brazil) has tested 62 samples of breast milk and found traces of one or more toxic agrochemicals in all of them (soybeans are one the major exports of the region).[275] This

[268] Food and Agriculture Organization and Intergovernmental Technical Panel on Soils, *Status of the World's Soil Resources: Main Report.* (FAO and ITPS 2015).
[269] World Wildlife Fund (n 229) 62. page 62
David Pimentel, 'Soil Erosion: A Food and Environmental Threat' (2006) 8 Environment, Development and Sustainability 119.
[270] David Pimentel (n 269).
[271] Ibid.
Food and Agriculture Organization and Intergovernmental Technical Panel on Soils (n 268).
[272] Food and Agriculture Organization, *Soil Erosion: The Greatest Challenge for Sustainable Soil Management* (Food and Agriculture Organization 2019) <http://www.fao.org/3/ca4395en/ca4395en.pdf>.
World Wildlife Fund (n 229) 62.
Susan Cosier, 'The World Needs Topsoil to Grow 95% of Its Food – but It's Rapidly Disappearing' *The Guardian* (30 May 2019) <https://www.theguardian.com/us-news/2019/may/30/topsoil-farming-agriculture-food-toxic-america> accessed 29 March 2020.
[273] World Wildlife Fund (n 229) 63.
[274] Food and Agriculture Organization, *Soil Erosion* (n 272) 21.
Food and Agriculture Organization and Intergovernmental Technical Panel on Soils (n 268) 17.
[275] World Wildlife Fund (n 229) 63.

is a potential breach of the right to food, as the element of availability within the right to food (explained in **Chapter II**) includes that food must be free from harmful substances and, in this case, the breastmilk that the mothers provided to their infants as food has been found to be contaminated with agrochemicals.

Another example illustrating a more direct link between the use of agrochemical and human health issues is that of Monsanto's (acquired in 2018 by agri-chemical multinational Bayer) herbicide brand Roundup, the world's most widely used weedkiller.[276] The product is suspected of exposing users to risks of cancer, and three lawsuits have already been successfully brought against Monsanto (now owned by AG Bayer) by plaintiffs who got cancer after using Monsanto' herbicide; and a fourth trial is set to begin soon.[277] What is more is that investigations have shown that Monsanto secretly funded academic studies emphasizing the necessity of using the herbicide for the sake of farming and the environment, and to defend the safety of its main ingredient, glyphosate (a chemical that was declared 'probably carcinogenic to humans' by the World Health Organization's cancer agency).[278] Some of these researches were used by the National Farmer's union and others to successfully lobby against a ban of Monsanto's herbicide in Europe in 2017.[279] On top of that, it has been reported that the decision to renew the license of the controversial herbicide was made by the European Union Regulators on the basis of an assessment report, prepared by the German Federal

[276] Damian Carrington, 'Revealed: Monsanto's Secret Funding for Weedkiller Studies' *the Guardian* (12 March 2020) <http://www.theguardian.com/environment/2020/mar/12/revealed-monsantos-secret-funding-for-weedkiller-studies-roundup> accessed 29 March 2020.
Carey Gillam, 'Landmark Lawsuit Claims Monsanto Hid Cancer Danger of Weedkiller for Decades' *the Guardian* (22 May 2018) <http://www.theguardian.com/business/2018/may/22/monsanto-trial-cancer-weedkiller-roundup-dewayne-johnson> accessed 29 March 2020.
Sam Levin, 'Monsanto Must Pay Couple $2bn in Largest Verdict yet over Cancer Claims' (*the Guardian*, 13 May 2019) <http://www.theguardian.com/business/2019/may/13/monsanto-cancer-trial-bayer-roundup-couple> accessed 29 March 2020.
[277] Damian Carrington (n 276); Carey Gillam (n 276); Sam Levin (n 276).
Tina Bellon, 'Bayer Faces Fourth U.S. Roundup Cancer Trial in Monsanto's Hometown' *Reuters* (24 January 2020) <https://www.reuters.com/article/us-bayer-glyphosate-lawsuit-idUSKBN1ZN0D9> accessed 29 March 2020.
[278] Damian Carrington (n 276); Carey Gillam (n 276); Sam Levin (n 276).
International Agency for Research on Cancer (IARC), 'Q&A on Glyphosate' <https://www.iarc.fr/wp-content/uploads/2018/11/QA_Glyphosate.pdf> accessed 29 March 2020.
Example of the studies, funded by Monsanto, asserting the 'very severe impacts' of banning Roundup: Sarah C Wynn, Sarah K Cook and James H Clarke, 'Glyphosate Use on Combinable Crops in Europe: Implications for Agriculture and the Environment' (2014) 25 Outlooks on Pest Management; Sarah K Cook, Sarah C Wynn and James H Clarke, 'How Valuable Is Glyphosate to UK Agriculture and the Environment?' (2010) 21 Outlooks on Pest Management.
[279] Damian Carrington (n 276).

Institute for Risk Assessment, that had allegedly merely copy-and-pasted Monsanto's own studies of their own product.[280] This raises concern over not only multinational corporations' influence on national and international policies, but also on the ability of governments to conduct independent assessments of companies' claims over the safety of products they wish to put on the market for human use, which is a crucial part of the process of regulating and holding these companies into account.

Finally, the impact of soybeans on water use varies from one region to another, as water is not evenly available everywhere. While soy does not use as much water as other food products,[281] it has been suggested that intensive soy cultivation could reduce the availability of water in transitional tropical rainforest regions in the long term.[282] And, as it has been indicated above, water quality and quantity is heavily affected by soil erosion and contamination with agrochemical residues, which impacts the communities that rely on the affected waterways.

4.2.3. Monoculture, and social impacts

Monoculture means growing only one specific kind of crop or tree in an area throughout the year.[283] This practice is common in industrial farming systems.[284] In the specific case of soy, the scale of monoculture is unprecedented.[285] While this has contributed to increased efficiency in cultivating and improving the yield of that specific crop, continuous use of this practice is environmentally unsustainable.[286] Issues include new or growing pest and disease problems, and the reduction of particular nutrients in the soil.[287] These are more situations

[280] Stefan Weber and Helmut Burtscher-Schaden, 'Detailed Expert Report on Plagiarism and Superordinated Copy Paste in the Renewal Assessment Report (RAR) on Glyphosate' (2019) <https://www.greens-efa.eu/files/doc/docs/298ff6ed5d6a686ec799e641082cdb63.pdf>.
Arthur Neslen, 'EU Glyphosate Approval Was Based on Plagiarised Monsanto Text, Report Finds' (*the Guardian*, 15 January 2019) <http://www.theguardian.com/environment/2019/jan/15/eu-glyphosate-approval-was-based-on-plagiarised-monsanto-text-report-finds> accessed 29 March 2020.
[281] Ritchie and Roser, 'Environmental Impacts of Food Production' (n 195).
[282] World Wildlife Fund (n 229) 63.
[283] Shirley A. Micallef and Debabrata Biswas, *Safety and Practice for Organic Food* (Academic Press 2019) 26.
[284] ibid.
[285] World Wildlife Fund (n 229) 64.
[286] ibid.
Shirley A. Micallef and Debabrata Biswas (n 283) 26.
[287] World Wildlife Fund (n 229) 64.
Shirley A. Micallef and Debabrata Biswas (n 283) 27–28.

that impact the availability of food and people's ability to access food in adequate quality and quantity. Additionally, a study by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) predicts that monocultures, along with other intensive plantations, will likely impact biodiversity, food and water security, and local livelihoods too.[288]

When it comes to the social impacts of soy cultivation, especially at an industrial scale, the effects can be varied and require continuous researching. In 2011 studies, it was found that the expansion of the soy industry in the Amazon and the Cerrado biome had reduced several poverty indicators while raising median rural incomes however, inequality levels and the concentration of land ownership into the hands of few people also saw a rise.[289] Without efficient cooperative systems between smallholders and more dominant actors, the control of important areas of land by the latter can put the former at a disadvantage in the market.[290] Additionally, as medium and large scale producers expand their activities, this can also stimulate land concentration, which in turn can displace local people and deprive them of their livelihoods.[291] As stated in **Chapter II**, livelihoods play an important role in helping people fulfil their right to food by enabling economic and physical access to food. As a result, losses of these livelihoods will negatively impact the people affected and, in turn, their right to adequate food.

4.2.4. Human rights

The main focus of this paper is the right to food; however, other human rights are also at risk under the current agribusiness regime and it is important to remember them through a quick summary. When it comes to human right abuses associated with soy production, local and international Non-Governmental Organizations (NGOs), as well as newspapers, have reported land evictions, misuse of pesticides, illegality and use of slaves, violent suppression of land

[288] Sandra Díaz and others (n 89) 18.
[289] World Wildlife Fund (n 229) 64.
Mendelson Lima, Margaret Skutsch and Gerlane de Medeiros Costa, 'Deforestation and the Social Impacts of Soy for Biodiesel: Perspectives of Farmers in the South Brazilian Amazon' (2011) 16 Ecology and Society art4.
[290] World Wildlife Fund (n 229) 64.
[291] ibid 64–65.

protests, land grabbing, land conflicts, and the eviction of indigenous communities from their land, threatening their very survival.[292]

5. Final Remarks: a need for change

There is no denying that the agribusiness industry has carved itself a significant place within the global food system, from driving food production to the processing, transportation, and commercialization of food. However, there is a price to be paid – economic, social, and environmental – for the way agribusiness is conducted today, one that encourages unsustainable agricultural practices that degrade the earth's natural environment and negatively impacts the right to food of many. In fact, the combination of the adverse impacts of agricultural activities (on climate change and natural resources) and of continuing population growth have strangely resulted in the view that current industrial methods of agriculture should be intensified and expanded.[293] Such methods have even been viewed as contributing towards the development of countries. However, as stated by the Committee on Economic, Social and Cultural Rights, it is possible for activities carried out in the name of "development" to end up having adverse and counter-productive effects on human rights.[294] It is important to recognize and face such situations, and the case of agribusiness practices clearly displays parts that are harmful and are already undermining our own wellbeing and that of the planet; it is simply not how any system should work. It is basically self-defeating.

Alternatives exist, ones that encourage sustainable practices, are mindful of our ecosystems, and are capable of reducing the industry's climate change impact. Agroecology is one such alternative, it is an ecological approach to agriculture by integrating it with the ecosystems impacted.[295] Agroecology is a system that focuses on optimizing the use of local resources for sustained yields, while keeping to a minimum the adverse environmental and socioeconomic impacts of the modern technologies used in agriculture, thus reducing the contribution of

[292] ibid 65–66.
[293] Hilal Elver (n 10) para 84.
[294] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 2: International Technical Assistance Measures (Art. 22 of the Covenant)' para 7 <https://www.refworld.org/docid/47a7079f0.html> accessed 20 May 2020.
[295] Hilal Elver (n 10) para 73.

agriculture in fuelling climate change.[296] It favours crop diversity and locally developed crops have proven to be extremely adaptable and resilient to difficult ecological and social conditions, which are much needed in the face of the challenges that climate change poses to our food system.[297] Agroecology also does not make use of synthetic inputs, such as synthetic fertilizers and pesticides, genetically modified seeds etc., thus avoiding the negative effects of relying on them.[298]

The successes, benefits, and potentials of agroecological practices are known, both for the right to food and in contributing to the mitigation of the impacts of climate change. Protecting and upholding the right to food and addressing climate change thus go hand in hand. The adoption by states of agroecological practices is, therefore, promoted and encouraged by various actors such as the Special Rapporteur on the right to food and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).[299]

In spite of that, many governments, development agencies, donors and policy-makers still choose to rely and invest on the current agricultural system "because of existing political biases, trade rules and policies that limit the ability of Governments to support smallholder farmers and agroecological practices through investment, research funding and legal solutions to land tenure."[300] Furthermore, their financial wealth give agribusiness corporates significant political influence on governments policies to uphold these measures that benefits their interests, with little regard for the short- and long-term consequences for human communities and the environment. While the example examined was that of the soy production in Brazil, it is not the only one. For example, in the USA, agribusiness corporates reportedly invested $138 million in lobbying representatives elected to craft the 2014 Farm Bill so that they vote against regulations perceived as a threat to their industry.[301] More recently in the European Union, amid the coronavirus COVID-19 crisis, the farmers' association COPA-COGECA has been

[296] Sandra Díaz and others (n 89) 18.
Hilal Elver (n 10) para 73.
[297] Hilal Elver (n 10) 74–75.
Sandra Díaz and others (n 89) 18.
[298] Hilal Elver (n 10) 73.
[299] ibid 88.
Sandra Díaz and others (n 89) 18 and 42.
[300] Hilal Elver (n 10) para 80.
[301] Alexandra Norris, 'The Agricultural Iron Triangle' (*Dartmouth Law Journal Online*, 26 May 2018) <https://dartmouthlawjournal.org/dljonline/?tag=agribusiness-lobby> accessed 26 April 2020.
Wise (n 183) 115–119.

calling for a further postponement of the European Union's Farm to Fork strategy, which aims at making the entire food chain of the European Union more sustainable and less harmful in its impacts on the environment;[302] whereas in Germany, its farming lobby is reportedly pushing for an easing of environmental standards, especially those restricting the use of pesticides, which are aimed at reducing pollution.[303]

Finally, the agricultural trading system, as it currently operates, allows a handful of international traders to have 'indirect control over large amounts of land and production without having to internalize long-terms environmental costs'.[304] Therefore, agribusiness-driven approaches to food production keeps on being pushed despite their obvious failures and the need to do things differently.[305]

Seeing how all of this affects the right to food, this thesis has come to ask: how does the international human rights framework destined to protect the right to food deals with the responsibility of the agribusiness industry in causing such damages, if at all? Surely, when an entity comes to have such a massive influence in people's ability to fulfil their right to food, both in the present and future, there should be an equal amount of responsibility on them to not negatively impact this right, as well as some form of accountability. After all, it is by following that same logic that it has been accepted that states should be bound under human rights obligations. The answer to that question will be sought in the next chapter as it examines the responsibilities of businesses in international human rights law when it comes to the right to food.

[302] Natasha Foote, 'Farmers Association and NGOs at Odds over Postponement of New EU Food Policy' (*www.euractiv.com*, 7 April 2020) <https://www.euractiv.com/section/agriculture-food/news/farmers-association-and-ngos-at-odds-over-postponement-of-new-eu-food-policy/> accessed 26 April 2020.
John Binns, 'Farm to Fork Strategy for Sustainable Food' (*European Commission*, 10 December 2019) <https://ec.europa.eu/food/farm2fork_en> accessed 26 April 2020.
[303] Damian Carrington, 'Polluter Bailouts and Lobbying during Covid-19 Pandemic' *The Guardian* (17 April 2020) <https://www.theguardian.com/environment/2020/apr/17/polluter-bailouts-and-lobbying-during-covid-19-pandemic> accessed 26 April 2020.
[304] World Wildlife Fund (n 229) 25.
[305] Timothy A. Wise, *Eating Tomorrow*

V. The Right Food and Climate Change: Agribusinesses' Obligations

1. Introduction

For centuries states have been regarded as the only subjects of international law and, as such, the only ones capable of bearing rights and obligations.[306] Nowadays, even though states remain widely regarded as the main subjects of international law, other entities, known as non-state actors, have come to be acknowledged as participants of international law who may bear certain obligations and/or rights under international law.[307]

In this thesis, obligations are a particular point of concern for, as the plain English meaning of the word shows, they are 'something that a person feels morally or legally forced to do'.[308] As a result, a state or any other entity that agrees to take on certain obligations, or is recognized to have such obligations, in theory can be expected to honour them. In international law, the primary way of establishing obligations is through treaties, after which there is customary international law, *jus cogens* norms, general principles of law, judicial decisions, and the writings of jurists.[309] In addition to these formal sources of international law other sources have been identified which are the work of treaty bodies (e.g. the Committee on Social, Economic, and Cultural rights), the resolutions of international institutions (e.g. the UN General Assembly), and soft-law instruments (e.g. guidelines and codes of conduct).[310] Obligations thus play a crucial role in determining the roles and positions of actors engaged in or concerned by international law rules and principles, whether they be states or non-state actors. The breach of an international obligation also engages the responsibility of the actors on whom the obligation is imposed which, in principle, will make them accountable for that breach.

[306] Jan Klabbers (n 2) 72–73.
[307] ibid 90–97.
Daniel Moeckli and others (n 3) 111.
[308] 'Obligation - Meaning in the Cambridge English Dictionary' (*Cambridge Dictionary*, 2020) <https://dictionary.cambridge.org/dictionary/english/obligation> accessed 25 May 2020.
[309] Statute of the International Court of Justice 1945, article 38(1).
[310] Daniel Moeckli and others (n 3) 78–83.

In international human rights law in particular, obligations are regarded as having a 'special character'.[311] This 'special character' is difficult to define, but it is argued that this specialness stems from the fact that the obligations they create on states are towards individuals, not another state, and objective in nature for the fact that states do not have any personal benefit in agreeing to these human rights instruments; and that the objective character of human rights obligations actually give them an *erga omnes* status.[312] Regardless, they are key to determining who are the duty-bearers and who are the right-holders.[313] It is through the concept of international obligation that we know that states must *protect*, *respect*, and *fulfil* the human rights of people; and each of these primary obligations have been further elaborated and clarified in terms of what states should and should not do to abide by them, and there are mechanisms in place to monitor states' compliance and provide remedy to individuals who suffer breaches of their rights.[314] Obligations also play an important role in the fight against climate change, as states agree to new ones in order to face the climate crisis, while their existing human rights obligations ensure that these measures remain in compliance with human rights. Furthermore, as it was stated in the **Chapter IV**, compliance with human rights obligations and climate change actions will be mutually beneficial. However the same clarity is lacking when it comes to non-state actors.

This brings us to the crux of this thesis, which is to examine how the international human rights framework of the right to food operates to protect it and regulate non-state actors when their activities adversely impact this right. It goes without saying that one must wonder what are the obligations imposed on non-states actors like the agribusinesses so that they do not engage into activities that adversely affect the right to food, and why is it that human rights violations occur in spite of them. It must be clarified at this point that this chapter does not argue that the reason behind this lies solely in how the international human rights framework is constructed. The regional and national frameworks also play an important role in regulating

[311] ibid 889.
[312] ibid 89–91.
Reservations to the Genocide Convention (Advisory Opinion) 1951, ICJ Rep 15, para 23
Austria v Italy (Pfunders Case) (European Commission of Human Rights) 1961, 4YB 116, para 138
The Effect of Reservations on the Entry into Force of the American Convention (Arts 74 and 75), IACtHR Series A No 2 (24 September 1982), OC-2/82, paras 29-30
Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain) (New Application: 1962) 1970, ICJ Rep 3, para 33.
[313] Daniel Moeckli and others (n 2) 111.
[314] ibid 97–99.

the relationship between non-state actors and individuals, and both have their own complex issues. What this thesis is doing is looking at the issues specific to the international framework and examines whether and how they could be addressed.

First, in Section 2, this chapter endeavours to identify by which instruments, principles and mechanism(s) is the relationship between agribusinesses and the right to food governed, and the nature and characteristic of the obligations that exist on agribusinesses, as non-state actors, for the sake of the right to food. The combination of these elements is considered to constitute the international framework of the right to food and, in Section 3, the paper will engage in a discussion of the effectiveness of this framework and what would be its weaknesses. Finally, in Section 4, possibilities of changes to the framework will be debated.

2. Existing Obligations for Agribusinesses as Non-State Actors

As stated above, despite the emergence of non-state actors as subjects of international law, states still remain the main actors within international law. In a book on economic, social and cultural rights, Olivier de Schutter aptly notes that "international human rights has largely developed through treaties States – and, almost without exception, States alone – may accede to, and that are not addressed to international organizations."[315] His remark highlights a problematic gap in between the theory of human rights obligations and the actual practical implementation, as the history of human rights shows us that they were created with the intent of protecting individuals against abuses of power by states.[316] However, in this era of globalization and transnational corporations, private actors (large private transnational corporations in particular) have come to hold great power, in some cases greater than most states.[317]

[315] Olivier de Schutter, *Economic, Social and Cultural Rights as Human Rights* (Edward Elgar 2013) xiiv.
[316] Daniel Moeckli and others (n 3) 3–20.
[317] Jean Ziegler, 'Report of the Special Rapporteur on the Right to Food (Main Focus: Defining the Right to Food in an Era of Globalization)' (UN Commission on Human Rights 2006) E/CN.4/2006/44 para 46; Dorothée Baumann-Pauly and Justine Nolan (eds), *Business and Human Rights: From Principles to Practice.* (Routledge 2016) 32.

Furthermore, as shown in **Chapters III** and **IV**, non-state actors like agribusinesses have tremendous impacts on people's ability to fulfil their right to food, not only through their activities and contribution to climate change, but also by influencing policies. And yet, the primary obligations to *respect*, *protect* and *fulfil* the right to food have always been viewed as the responsibility of national governments, whether it be in their own territory or abroad.[318] To 'respect' requires of states that they 'refrain from interfering with the enjoyment' of the right to food; to 'protect' means that states must 'prevent others from interfering with the enjoyment' of that right; and to 'fulfil' means that states must 'adopt appropriate measures towards the full realization of the right'.[319] Nevertheless, some scholars argue that, through these obligations vested on states, it is possible to hold corporations accountable without having obligations directly imposed on them.[320] This denotes one of two ways by which the international human rights framework of the right to food operates in order to ensure that non-state actors like businesses do not negatively impact the right to food.

The second manner by which businesses are made to abide with the international human rights framework of the right to food comes with the increasing understanding of the extent of corporations' impacts on human rights as a whole, and that they can also be held, and should be held, accountable for them. As a result, there has been developments in international human rights law in the direction of corporate human rights obligations identified by treaty bodies and international institutions and formulated in soft-law instruments.

Each of these two methods will be further considered in detail in the sub-sections below.

2.1. State responsibility to regulate corporate behaviour

2.1.1. Principles

As previously stated, the right to food creates three kinds of obligations on states: the obligations to respect, protect and fulfil the right to food.[321] According to Ziegler, in the

[318] Eide Barth and Kracht (n 21) 106–112; UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) paras 14–15.
[319] Office of the United Nations High Commissioner for Human Rights (n 41) 17–19.
[320] Ziegler and others (n 35) 94.
[321] Eide Barth and Kracht (n 21) 103–112; UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) paras 14–15 and 36–39; Ziegler and others (n 35) 94.

context of regulating businesses' impacts on human rights through states, the most relevant state obligation is that of protection as it requires that governments regulate corporations in order to see to it that they do not commit human rights violations.[322] This argument requires a deeper look into the meaning of the obligation to protect which, according to the 1997 Maastricht Guidelines is the following:

> "The obligation to protect includes the State's responsibility to ensure that private entities or individuals, including transnational corporations over which they exercise jurisdiction, do not deprive individuals of their economic, social and cultural rights. States are responsible for violations of economic, social and cultural rights that result from their failure to exercise due diligence in controlling the behaviour of such non-state actors."[323]

The Committee on Economic, Social and Cultural Rights (CESCR) provides similar guidelines in its General Comment 12 where it emphasized that the obligation to protect puts a requirement on states to make sure that neither businesses nor individuals, through their activities, do not deny people their access to adequate food.[324] The CESCR also specified that the obligation to protect includes as well that states undertake the necessary measures to make sure that private businesses and civil society remain in conformity with the right to food in their activities.[325]

Considering the inherent link between the right to water and the right to food, the CESCR's General Comment 15 is also relevant. As it underlines the fundamental importance of water for life and health, the CESCR here too affirms that the obligation to protect includes "…adopting the necessary and effective legislative and other measures to restrain, for example, third parties from denying equal access to adequate water; and polluting and inequitably extracting water resources, including natural sources, wells and other water distribution systems."[326] Such measures also include a monitoring system where water services are operated or controlled by third parties.[327]

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[322] Ziegler and others (n 35) 94.
[323] Maastricht Guidelines on Violations of Economic, Social and Cultural Rights 1997, Principle 18
[324] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 15.
[325] ibid 27.
[326] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)' paras 1 and 23.
[327] ibid 24.

From the above, it is evident that the primary mean by which respect for the right to food (and the right to water) by non-state actors, businesses in particular, can be ensured in international law is by relying on states and their efforts in guaranteeing an effective domestic legislative framework and by providing administrative and judicial remedies.[328]

Beyond the confines of states' physical territories, there is also an obligation on home states to monitor and regulate the activities of their transnational corporations abroad by putting in place domestic mechanisms for regulating, monitoring, and providing effective remedies for violations of the right to adequate food if such occurs.[329] Cooperation amongst states is regarded as essential for these measures to be more effective, and is thus encouraged.[330]

Furthermore, home states have the duty to not put any pressure on host states to get them to not regulate the activities of their transnational corporations.[331] As an example of the manifestation of this requirement in international law, the Organisation for Economic Co-operation and Development's (or OECD) Guidelines for Multinational Enterprises stipulates that member states agree that "Governments have the right to prescribe the conditions under which multinational enterprises operate within their jurisdictions, subject to international law", and that companies, while taking into full account the policies established in the countries in which they operate, should "respect the human rights of those affected by their activities consistent with the host government's international obligations and commitments."[332] Interestingly, the 2000 version of the Guidelines (the current edition is from 2011) used to require that enterprises " Respect the internationally recognised human rights of those affected by their activities *consistent with the host government's international obligations and commitments*"[333], and the reason why the italicized passage was removed is

[328] Ziegler and others (n 35) 95.
[329] ibid.
[330] Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights 2012, Principle 19
International Covenant on Economic, Social and Cultural Rights 1966, Article 2(1)
UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 3: The Nature of States Parties' Obligations (Art. 2, Para. 1, of the Covenant)' para 14
<https://www.refworld.org/docid/4538838e10.html> accessed 20 May 2020.
[331] Ziegler and others (n 35) 95.
[332] Organization for Economic Cooperation and Development, *OECD Guidelines for Multinational Enterprises, 2011 Edition* (OECD 2011) para I.8 and II.2 <https://www.oecd-ilibrary.org/governance/oecd-guidelines-for-multinational-enterprises_9789264115415-en> accessed 22 February 2020.
[333] Organization for Economic Cooperation and Development, *2011 Update of the OECD Guidelines for Multinational Enterprises: Comparative Table of Changes Made to the 2000 Text* (OECD 2012) 13 <https://www.oecd.org/daf/inv/mne/49744860.pdf> accessed 23 February 2020.

unclear. But this should not affect the fact that, by agreeing to the Guidelines, OECD member states consent that they are to use their power to protect human rights, the right to adequate food included, from possible violations by transnational corporations in host states and hold them accountable should such violations occur.[334]

Finally, a little more outside of the realm of international human rights law, but relevant to the right to food and climate change, is the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC, along with its implementing mechanism, the Kyoto Protocol, and the more recent 2015 Paris Agreement, is the main international forum (though not the only one) addressing the negative impacts of climate change.[335] It requires of member states that they implement national and regional policies and programmes to mitigate and adapt to the impacts of climate change, and also calls on them to take precautionary measures in order to anticipate, prevent or minimize these impacts.[336] Member states also have 'the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.'[337]

Crucially, the UNFCCC and the 2015 Paris Agreement also acknowledge the necessity to ensure food security and the protection of food production against the impacts of climate change and in any actions adopted to fight it.[338] Despite this, these elements are not taken into account by the ideologies that animate climate change action policymaking.[339] This was pointed out by the Special Rapporteur on the right to food, Hilal Elver, who also stressed that '… many of the principles and commitments outlined in the Convention fall short of what is needed, owing to vagueness and the absence of enforcement mechanisms.'[340]

Furthermore, the UNFCCC, woefully lacks of a rights-based approach, thus failing to take into account human rights violations and to appropriately address the impacts of climate change on food security and, as a result, on the right to food.[341] Nevertheless, this was partially

[334] Ziegler and others (n 35) 95.
[335] Hilal Elver (n 10) para 47.
[336] United Nations Framework Convention on Climate Change 1994, article 4 (1)(b) and 3(3)
Hilal Elver (n 41) para 48
[337] United Nations Framework Convention on Climate Change 1994, para 9 of the preamble.
[338] United Nations Framework Convention on Climate Change 1994, Article 2
Paris Agreement 2015, para 10 of the preamble and Article 2(b)
[339] Hilal Elver (n 10) para 49.
[340] ibid.
[341] ibid 49–50.

addressed by the 2015 Paris Agreement, which reminds member states to 'respect, promote and consider their respective human rights obligations' as they tackle the issues posed by climate change.[342] Surprisingly though, businesses remain unmentioned explicitly in the UNFCCC, the 2015 Paris Agreement, and the Kyoto Protocol, despite their role in fuelling climate change and their potential to be part of the solution, thus leaving them largely uninvolved in the UNFCCC's global efforts to address and mitigate the impacts of climate change, relying instead on the national policies that states will adopt to deal with the businesses operating on their territories.

Finally, it is important to mention that, in certain circumstances the activities of a business can be attributed to a state and incur its responsibility for violations committed by said business. These have been elaborated in international law in the 2001 Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA) produced by the International Law Commission. Conducts attributable to states include instances where elements of governmental authority have been delegated by the state and the violation was perpetrated while the business was acting in that capacity; or the business had acted on the instructions of, or under the direction or control of the state.[343] Where the business' activities or conducts are not attributable to the state, the latter can still be held responsible under international law if that state acknowledges and adopts said activities/conducts as its own.[344] However, even then, the question still remains of if businesses themselves have any responsibility of their own when acting on behalf or under the direction of states when the human rights abuses occur.

2.1.2. *Ensuring compliance*

When it comes to states' regulation of companies so as they comply with human rights standards, it is only through the national monitoring, regulating and remedies providing mechanisms mentioned above as required of states. National mechanism have varying degree of efficacy depending on the country, how human rights have been integrated within the laws in place, and the ability of the state's organs to enforce them. For example, the South African

[342] Paris Agreement 2015, para 12 of the preamble
[343] Articles on the Responsibility of States for Internationally Wrongful Acts 2001, Articles 5 and 8
[344] Articles on the Responsibility of States for Internationally Wrongful Acts 2001, Article 11.

Constitution establishes specific human rights obligations on private parties, which could potentially be interpreted as including non-state actors of such a character, and the South African Constitutional Court does take progressive steps to enforce the Constitution.[345] Another example of a rather effective national mechanism is the United States' Alien Tort Claims Act, which is for foreign plaintiffs the main avenue of litigation against transnational corporations, with a business presence in the United States, for human rights violations committed abroad.[346] On the other hand, there is then the example of the Brazilian government discussed in **Chapter IV** whose policies favour agribusiness actors and also actively undermines the institutions put in place to regulate them.

As for ensuring that governments themselves keep to their requirements to regulate and monitor the activities of businesses so that they do not violate the right to food, there are a number of monitoring mechanisms such as national and regional courts (e.g. the European Court of Human Rights and the Inter-American Court of Human Rights), human rights institutions, international mechanisms (amongst which the CESCR), and the Commission on Human Rights' special procedures.[347] Regional courts and institutions, in particular, play an important role in the enforcement of international human rights, and their monitoring mechanisms and remedies have more success than compared to their global counterparts.[348] However, the regional institutions too only hear cases regarding allegations of violations by a member state. As a result, there is a well-established jurisprudence for the obligation to protect human rights at both national and regional levels in that regard.

Meanwhile, in the context of the right to food in international law, the Committee on Economic, Social and Cultural Rights (CESCR) is probably the main monitoring mechanism as it is in charge of keeping an eye on the implementation of the ICESCR by member states.[349]

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[345] The Constitution of the Republic of South Africa 1996
Anna R Welch, 'Obligations of State and Non-State Actors Regarding the Human Right to Water under the South African Constitution' (2005) 5 Sustainable Development Law & Policy 58.

[346] John Gerard Ruggie, *Just Business: Multinational Corporations and Human Rights* (W W Norton & Co 2013) 31–35, 45–46 and 55.

[347] Example of monitoring and regulating mechanisms: Committee on Economic, Social and Cultural Rights; Committee against Torture; African Commission on Human and Peoples' Rights; European Court of Human Rights.

[348] Daniel Moeckli and others (n 3) 412.

[349] United Nations Economic and Social Council, 'Review of the Composition, Organization and Administrative Arrangements of the Sessional Working Group of Governmental Experts on the Implementation of the International Covenant on Economic, Social and Cultural Rights'.

Not only do member states have to submit reports to the CESCR on the status of the implementations of the relevant human rights, but the Committee has also been empowered to hear complaints from individuals about violations of their rights under the ICESCR by their government.[350] However, exactly as it sounds, the CESCR mechanism concerns only states, non-state actors such as businesses are not addressed by it unless their actions can be attributed to the member state as per the principles of state responsibility under international law.[351]

Another example showing a monitoring mechanism affirming governments' obligation to protect by monitoring and regulating the activities of businesses would be the decision of the African Commission on Human and Peoples' Rights (or the African Commission), which monitors member states' compliance with the African Charter on Human and Peoples' Rights (or the African Charter), on a case brought against Nigeria by the Social and Economic Rights Action Center (SERAC) and the Center for Economic, Social and Cultural Rights (or CESCR).[352] In the communication, the SERAC and the CESCR argued that the Nigerian government had failed in its obligations to monitor and regulate the activities of the Nigerian National Petroleum Company and of the Shell Development Corporation in Ogoniland, which resulted in several serious human rights violations and environmental degradation, the latter still affecting both the land and the people today.[353] Among the several violations of the African Charter found by the African Commission there also was that of the right to food of the Ogoni people.[354] The African Commission ruled that 'Governments have a duty to protect their citizens, not only through appropriate legislation and effective enforcement but also by protecting them from damaging acts that may be perpetrated by private parties…' and that '… the minimum core of the right to food requires that the Nigerian Government… should not

[350] 2008 Optional Protocol to the International Covenant on Economic, Social and Cultural Rights
[351] Articles on the Responsibility of States for Internationally Wrongful Acts 2001, Articles 5, 7, 8, 9, and 11
[352] African Commission on Human and Peoples' Rights (n 29) paras 1–9.
[353] ibid; Amnesty International, 'Nigeria: Petroleum, Pollution and Poverty in the Niger Delta' (30 June 2009) <https://www.refworld.org/docid/4a4a1dfc2.html> accessed 23 February 2020; United Nations Environment Programme, *Environmental Assessment of Ogoniland* (United Nations Environment Programme 2011); United Nations Environment Programme, 'Nigeria Launches $1 Billion Ogoniland Clean-up and Restoration Programme' (*UN Environment*, 8 July 2017) <http://www.unenvironment.org/news-and-stories/story/nigeria-launches-1-billion-ogoniland-clean-and-restoration-programme> accessed 23 February 2020.
[354] African Commission on Human and Peoples' Rights (n 29) para 64.

allow private parties to destroy or contaminate food sources, and prevent peoples' efforts to feed themselves.'[355]

In its conclusions, the African Commission made several recommendations to the Nigerian Government to ensure the protection of the Ogoni people and provide relief, compensation and redress.[356] Its condemnation of the actions of Nigeria and the oil companies involved was clear and unequivocal, it was a welcome and positive judgement that contributes and promotes stronger protections for economic, social and cultural rights. However, even with such positive example of the African Commission's work there are a few issues that undermine the efficiency of the institution. First there is no follow-up procedure to ensure compliance by states with their recommendations.[357] Furthermore, despite the relatively low number of cases they receive, the African Commission often takes more than five years to provide a decision, and it has given about 200 decisions since it was created in 1987.[358] This is a surprisingly low number considering the size of the continent and the human rights violations that routinely occur in many African countries.

2.2. Direct obligation

It has been shown in this chapter that the primary responsibility of protecting and upholding human rights falls on states. The European Court of Human Rights (ECHR) has once declared that a state "cannot absolve itself from responsibility by delegating its obligations to private bodies or individuals".[359] Christian Tomuschat makes a similar point by emphasizing that 'in human rights discourse, the State is the key actor'.[360] However, Tomuschat also conceded that, by the same token, a 'concept that would visualize human rights exclusively as a burden on the governmental apparatus would be doomed from the very outset'.[361] As a result, an approach that revolves so heavily around states is unlikely to be able to properly address the equally great impacts of non-state actors on human rights.

[355] ibid 57 and 65.
[356] ibid Holding.
[357] Daniel Moeckli and others (n 3) 474.
[358] ibid.
[359] *Costello-Roberts v The United Kingdom* [1993] European Court of Human Rights 13134/87 [27].
[360] Philip Alston (n 5) 23.
[361] ibid.

As it will be seen in the following sub-sections, it is clear from existing international documents, intergovernmental institutions' instruments, voluntary commitments, as well as legal academic discussion that there is a definite intent to set a certain minimum standard of obligations on businesses in regard to their relationship with human rights. For this purpose, at an international level, a number of instruments have built up over the years, all with the purpose of setting out and regulating the obligations of businesses towards human rights. However, a significant number of these instruments are soft laws, making them legally non-binding. Going through each and every one of them will not be possible in this paper for practical reasons, as a result the focus will be on those deemed most relevant.

2.2.1. Through international human rights law

Starting with the earliest modern international law piece on human rights, the Universal Declaration of Human Rights (UDHR) affirmed that not only states but also '*every individual and every organ of society*', meaning non-state actors, have an obligation 'to promote respect for these rights and freedoms' and 'to secure their universal and effective recognition and observance.[362] This passage already reveals that the primary obligation of non-state actors is to respect human rights. Had the states had no belief in this declaration, certainly it would not have found its way in the document. In fact, the United Nations General Assembly has confirmed this declaration in its resolution 42/115 where it supported the Commission on Human Rights' urging of transnational corporations 'to ensure that their activities do not adversely affect the process of implementing human rights in developing countries'.[363] This shows a base minimum requirement on transnational corporation to refrain from activities that could impede human rights protection or lead to their violation.

While it is arguable that, because of its non-binding status, the principles laid out in the UDHR are human rights entitlement and the expression of a desire that corporations might 'strive' to promote respect for human rights, rather than actual binding obligations, subsequent topic-specific treaties have included more explicitly stated human rights obligations. Among these

[362] Universal Declaration on Human Rights 1948, final preambular para.
[363] UN General Assembly, *The impact of property on the enjoyment of human rights and fundamental freedoms*, 7 December 1987, A/RES/42/115; UN Commission on Human Rights, *Resolution 1987/18 on the Impact of Property on the Economic and Social Development of Member States*, 10 March 1987, 1987/18, para 4

treaties there are the aforementioned ICCPR and ICESCR, as well as the conventions of the International Labour Organization (ILO),[364] agreements on slavery[365] and racial discrimination[366], as well as the rights of particular groups such as women[367], children[368] and migrant workers[369]. All these international documents demonstrate a recognition within the global community of the impacts of non-state actors, which include businesses, on human rights; and an intention to create a minimum threshold of obligations on these actors.

As the main international instrument of this paper, the International Covenant on Economic, Social and Cultural Rights, in Article 2(1), emphasises the importance of "international assistance and co-operation, especially economic and technical" for the realisation of all economic, social and cultural rights; a point that was repeated in Article 11(2) where states parties are urged to take the necessary measures "individually and through international co-operation" to protect everyone's fundamental right to be free from hunger. Thus, the Covenant possibly indicates an acknowledgement that the involvement of certain international actors other than states, non-states actors, will be required in order to help states in their efforts to abide by their obligations under Article 11 of the Covenant.

When it comes specifically to the right to adequate food, there seem to be established a minimum of direct/actual obligations on non-state actors, businesses included. In General Comment 12, the Committee on Economic, Social and Cultural Rights (CESCR) has declared that "**all members and actors of society** – individuals, families, local communities, non-governmental organisations, civil society organisations, and the **private business sector** – also have responsibilities in the realization of the right to adequate food" (emphasis added).[370] Specific mention is also made of both national and international businesses in General Comment 12, as the CESCR calls for them to conduct their activities within "the framework of

[364] Examples of these International Labour Organisation conventions include: The Convention Concerning Forced or Compulsory Labour (C29) 1930; the Convention Concerning Freedom of Association and Protection of the Right to Organise (C87) 1948; and the Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour (C182) 1926.
[365] League of Nations, *Convention to Suppress the Slave Trade and Slavery*, 25 September 1926, 60 LNTS 253
[366] International Convention on the Elimination of All Forms of Racial Discrimination 1965.
[367] Convention on the Elimination of All Forms of Discrimination against Women 1979
[368] Convention on the Rights of the Child 1989; See also UN Committee on the Rights of the Child (CRC), 'Report of the UN Committee on the Rights of the Child, Thirty-First Session (Geneva, 16 September-4 October 2002)' (2002) CRC/C/121 paras 630–653.
[369] International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families 1990.
[370] UN Committee on Economic, Social and Cultural Rights (CESCR), 'General Comment No. 12' (n 25) para 12.

a code of conduct conducive to respect of the right to adequate food, agreed upon jointly with the Government and civil society."[371] However, responsibility ultimately falls on States to ensure the accountability of these actors and also to create "an environment that facilitates implementation of these responsibilities."[372] This the reality of most, if not all, international human rights treaties.

Finally, in regard to the threat that climate change poses, the CESCR has declared that, because they have a responsibility to respect human rights and 'to do no harm', '… businesses must be accountable for their climate impacts and participate responsibly in climate mitigation and adaptation actions that fully respect human rights.'[373]

2.2.2. Soft law instruments: the UN Guiding Principles

Intertwined with international human rights law are soft-law instruments that have been adopted, at international and regional levels, in order to regulate business activities and bring them in compliance with human rights standards. Though most may be soft-law, these documents serve to crystallize important principles of international law, even if they do not have the same legal and binding force as hard-law instruments. This has, in a way, created a branch of international law of its own that is generally known as business and human rights.

Some of these instruments are geared towards specific types of human rights, such as labour rights. This is the case of the International Labour Organisation's (ILO) Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy, which is aimed not only at governments but also at multinational and national corporations as well as employers and workers' organizations; and provides guidance to these actors on social policy and inclusive, responsible and sustainable practices in the workplace.[374] Meanwhile, other instruments are not focused on any human rights in particular, instead they aim to secure the protection and recognition of all when and where they would be impacted by business activities.[375] However,

[371] ibid 20.
[372] ibid.
[373] Human Rights Council, 'Analytical Study on the Relationship between Climate Change and the Human Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health' (n 14) para 36.
[374] Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy, 5th Edition, 2017
[375] See for example: OECD Guidelines for Multinational Enterprises, Declaration on International Investment and Multinational Enterprises 2011; UN Guiding Principles on Business and Human Rights 2011

going through each one of them is not possible within the practical limits of this paper. Instead, this thesis has chosen to focus on the United Nations' (UN) Guiding Principles on Business and Human Rights (UN Guiding Principles). But, before proceeding, a characteristic common to most business and human rights instruments, if not all, is to be highlighted: they establish non-binding principles and standards aimed at getting companies to adopt responsible business practices in compliance with all applicable laws, as well as respecting, promoting and securing the fulfilment of human rights.[376]

The UN Guiding Principles were adopted in 2011 by the UN Human Rights Council, and are the end result of years of foundational work and important research carried out by Professor John Ruggie, the expert appointed as UN Special Representative of the Secretary-General (SRSG) from 2005 to 2008, and again from 2008 to 2011. Pr. Ruggie's mandate was to identify and clarify standards of corporate responsibility and accountability in regards to human rights.[377] The UN Guiding Principles was the second document submitted by Pr. Ruggie to receive unanimous endorsement from the Human Rights Council, the first being the 'Protect, Respect, Remedy' Framework, which now serves as the pillars of the UN Guiding Principles.[378] As a result, the UN Guiding Principles and the 'Protect, Respect, Remedy' Framework should be viewed together.

The way to best summarize the 'Protect, Respect, Remedy' Framework is in Ruggie's own words:

> 'The Framework rests on three pillars. The first is the State duty to protect against human rights abuses by third parties, including business enterprises, through appropriate policies, regulation, and adjudication. The second is the corporate responsibility to respect human rights, which means that business enterprises should act with due diligence to avoid infringing on the rights of others and to address adverse impacts with which they are involved. The third is the need for

[376] See for example: ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy, 5th Edition, 2017; UN Guiding Principles on Business and Human Rights 2011; UN Global Compact Ten Principles 2000; OECD Guidelines for Multinational Enterprises, Declaration on International Investment and Multinational Enterprises 2011

[377] See: 'Special Representative of the Secretary-General on Human Rights and Transnational Corporations and Other Business Enterprises - Overview' (*Office of the United Nations High Commissioner for Human Rights*, 2020) <https://www.ohchr.org/EN/Issues/Business/Pages/SRSGTransCorpIndex.aspx> accessed 20 May 2020.

[378] Human Rights Council, 'Human Rights and Transnational Corporations and Other Business Enterprises' (2011) A/HRC/RES/17/4 <https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/G11/144/71/PDF/G1114471.pdf?OpenElement> accessed 21 May 2020.

> greater access by victims to effective remedy, both judicial and non-judicial. Each pillar is an essential component in an inter-related and dynamic system of preventative and remedial measures: the State duty to protect because it lies at the very core of the international human rights regime; the corporate responsibility to respect because it is the basic expectation society has of business in relation to human rights; and access to remedy because even the most concerted efforts cannot prevent all abuse.'[379]

The second pillar, which is that of the corporate responsibility to respect human rights, is of particular relevance for this thesis. On this second pillar, Pr. Ruggie has specified that it is a well-established and well institutionalized social norm and that this responsibility 'exists independently of States duties and variations in national law.'[380] Furthermore, in researching the matter, Ruggie found that as much as companies claimed to respect human rights, very few had in place systems that validated these claims.[381] Therefore, as part of the second pillar, acting in due diligence has been explained by him as an ongoing process 'whereby companies become aware of, prevent, and mitigate adverse human rights impacts.'[382] Four elements were identified as core to human rights due diligence: 'having a human rights policy, assessing human rights impacts of company activities, integrating those values and findings into corporate cultures and management systems, and tracking as well as reporting performance.'[383]

Building up on these three pillars, the UN Guiding Principles elaborate on the content of each and set out the principles that comprise them and should be followed by concerned actors, which are businesses and states.[384] They do not create new principles or laws. Instead, Pr. Ruggie, as a UN Special Representative of the Secretary-General (SRSG), opted for identifying

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[379] John Ruggie, 'Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework' (Human Rights Council 2011) A/HRC/17/31 para 6 <https://www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf> accessed 21 May 2020.

[380] John Ruggie, 'Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises: Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework' (Human Rights Council 2009) A/HRC/11/13 para 48 <https://www2.ohchr.org/english/bodies/hrcouncil/docs/11session/A.HRC.11.13.pdf> accessed 21 May 2020. See also: UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 11 Commentary

[381] ibid 49.

[382] ibid.

[383] ibid.

[384] UN Guiding Principles on Business and Human Rights 2011, General Principles, page 1

and restating relevant human rights obligations and bringing them together to create soft law standards.[385] Businesses are directly addressed within the UN Guiding Principles in its Chapter II, which declares that they have a 'corporate responsibility to respect human rights'.[386] This standard of conduct is expected of them regardless of their structure, size, sector, and of the location of their activities, and does not depend on states' abilities or willingness to comply with their own human rights obligations.[387] This responsibility applies to all human rights recognized in international law, which includes the right to food as contained in the International Covenant on Economic, Social and Cultural Rights.[388]

The UN Guiding Principles enjoins businesses to not only 'Avoid causing or contributing to adverse human rights impacts through their own activities…', but to also 'Seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts.'[389] A 'business relationship' is explained as relationships with business partners, actors with whom a business will work with within the value chain, and any other non-state or state organ that is directly linked to its business operations, products or services.[390]

In order to abide by the responsibility to respect human rights, the UN Guiding Principles have identified two elements that businesses must take up. The first one is that businesses should make clear, through a statement, their commitment to this responsibility.[391] Secondly, businesses should exercise due diligence in order to 'identify, prevent, mitigate and account for how they address their adverse human rights impacts…'.[392] This human rights due diligence is expected to be initiated as soon as possible at the start of a new activity or of a new business relationship; it should be ongoing and adapt to evolving and changing circumstances; negative human rights impacts should be addressed (stopped or prevented) by businesses when they arise; and the response to these impacts should be communicated to concerned stakeholders,

[385] John Ruggie, 'Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework' (n 379) para 14.
[386] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 11
[387] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 11 Commentary and Principle 14
[388] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 12
[389] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 13
[390] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 13 Commentary
[391] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 16 and Commentary
[392] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 17

and monitored in order to assess their effectiveness.[393] Furthermore, where delayed action would make a human right impact irremediable, The UN Guiding Principles have provided that businesses should prioritize preventing and mitigating those.[394]

The UN Guiding Principles do not deal with the issue of climate change. This is understandable as this was not part of the mandate of the SRSG. Some thoughts are still given to the environment, which is linked and relevant to both climate change and the right to food. While it is not dealt with in particular details by the UN Guiding Principles, businesses are reminded the necessity to prevent and address the environmental and social impacts of their activities, for the benefit and protection of human rights.[395] However, that is the extent of what the UN Guiding Principles have to say in regard to the environment, which is not enough considering how seriously business activities can negatively affect it, and how these impacts in turn also affect human rights.

So, why focusing on the UN Guiding Principles and not another business and human rights instruments?

First, the endorsement of the UN Guiding Principles by the UN Human Rights Council was unanimous, marking the first time United Nations (UN) member states have come to such a consensus in regard to standards of behaviours for businesses towards human rights.[396] This is important for two reasons. The first one is that the UN as a whole is a good indicator of what is the stance of the international community of states towards certain matters, boasting a membership of a total of 193 states as of May 2020.[397]

The second reason relates to the circumstances around the initiation of the project for formulating the principles. The mandate was created following the failure of a previous similar effort, the 2003 Draft Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with regard to Human Rights (the 2003 Draft Norms), which failed to

[393] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principles 17 to 21 and their Commentaries.
[394] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 24
[395] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 18 Commentary 19-20
[396] Radu Mares (ed), *The UN Guiding Principles on Business and Human Rights: Foundations and Implementation.* (Martinus Nijhoff 2011) 1.
[397] Data on states membership to the United Nations is available here: <https://www.un.org/en/member-states/> accessed 21 May 2020

garner any support from the UN Human Rights Commission[398]. The 2003 Draft Norms were more ambitious than the UN Guiding Principles in terms of the nature of the obligations they imposed on businesses, aiming for legally binding obligations and corporate accountability through international treaties and periodic monitoring, and national regulations.[399] The 2003 Draft Norms also proposed that businesses not only be required to 'respect' human rights, but that they also 'promote', 'secure' and 'ensure respect' of human rights 'within their sphere of influence'.[400] While the 2003 Draft Norms had the support of Non-Governmental Organizations (NGOs) and human rights advocates; the UN Human Rights Commission declined to act on them, and businesses presented a strong opposition to the Norms, believing that such human rights obligations belonged only to states.[401] More than that, businesses simply did not want to be held accountable for the human rights abuses they commit themselves or are directly involved with, and the 2003 Draft Norms were seen as a step towards realizing such accountability.[402]

However, that is not to say that the UN Guiding Principles are, in the end, a weak compromise to the 2003 Draft Norms. Instead, the UN Guiding Principles, taking into account the apparent lack of will to go down a path of stronger legal and enforceable obligations on businesses, chose a more rationally feasible and pragmatic route, and present a thoughtful and clear view of the existing human rights standards and expectations placed on both states and businesses. Furthermore, Ruggie makes a valid point in regards to the 2003 Draft Norms as he remarks that businesses are not 'democratic public institutions' and imposing on businesses human rights obligations and duties that equal that of states 'may undermine efforts to build indigenous social capacity and to make Governments more responsible to their own citizenry.'[403] Moreover, having to distinguish between the obligations of states and that of

[398] The UN Human Rights Commission is the predecessor of the UN Human Rights Council.
[399] Working Group on the Working Methods and Activities of Transnational Corporations, 'Draft Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights' (UN Commission on Human Rights 2003) E/CN.4/Sub.2/2003/12 paras 1 and 15-17 of the Draft Norms provisions <https://digitallibrary.un.org/record/498842?ln=en> accessed 21 May 2020.
[400] ibid 1 of the Draft Norms provisions.
[401] Ruggie (n 346) xvii.
Radu Mares (n 396) 1–2.
[402] David Kinley and Rachel Chambers, 'The UN Human Rights Norms for Corporations: The Private Implications of Public International Law' (2006) 6 Human Rights Law Review 447, 491.
Radu Mares (n 396) 54.
[403] John Ruggie, 'Interim Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (UN Commission on Human Rights 2006) E/CN.4/2006/97 para 68 <https://undocs.org/E/CN.4/2006/97> accessed 21 May 2020.

businesses 'would invite endless strategic gaming on the ground about who is responsible for what.'[404] Besides, what is to guarantee that businesses would comply with their own obligations when states themselves frequently fail to do so?

As a result, the adoption of the UN Guiding principles is generally perceived as confirming an acceptance, by the international community, that there exist a responsibility for businesses to respect human rights that is not only complementary to states' duties to protect human rights, but also independent of it.[405] Further adding weight to the value of the UN Guiding Principles is the fact that it has been drawn on for the creation of other international instruments aiming at regulating businesses' human rights impacts such as the 2011 OECD Guidelines for Multinational Enterprises,[406] and it has also been taken up by other agencies like the European Commission for its Sector Guides.[407]

2.2.3. Codes of conduct and voluntary guidelines

Businesses themselves also adopt human rights policies and Codes of conduct in order to abide by human rights.[408] In 1999, a study by the Organisation for Economic Cooperation and Development (OECD) recorded as many as 233 codes of conduct, mainly created by individual corporations.[409] For example, Shell Corporation has adopted a policy on human rights

[404] John Ruggie, 'Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (Human Rights Council 2008) A/HRC/8/5 para 55 <https://www.business-humanrights.org/sites/default/files/reports-and-materials/Ruggie-report-7-Apr-2008.pdf> accessed 21 May 2020.

[405] Dorothée Baumann-Pauly and Justine Nolan (n 317) 33.
Human Rights Council, 'Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, Report of the Special Representative of the Secretary General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (2011) A/HRC/17/31 <https://undocs.org/A/HRC/17/31> accessed 20 February 2020.

[406] OECD Guidelines for Multinational Enterprises, Declaration on International Investment and Multinational Enterprises 2011, page 3

[407] See: Employment & Recruitment Agencies Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights 2013; Oil and Gas Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights 2013; ICT Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights 2013.

[408] Ziegler and others (n 35) 98; Dorothée Baumann-Pauly and Justine Nolan (n 317) 44–46.

[409] Organisation for Economic Co-operation and Development, Working Party of the Trade Committee, 'Codes of Corporate Conduct: An Inventory' (1999) TD/TC/WP(98)74/FINAL.

protection,[410] and, following a high-profile scandal on its baby formula in the 1970s,[411] Nestlé has incorporated into its business principles the standards established by the ILO conventions, the World Health Organisation (WHO) and the Global Compact principles.[412]

While many of these codes of conduct were, at first, company or industry specific, concerns over the content, legitimacy and accountability of these codes led to a development of 'multi-stakeholder' codes of conduct.[413] These multi-stakeholder initiatives, as they are called, 'bring together a multiplicity of stakeholder to work together to achieve their goals collectively', and their membership can be diverse as it may include worker representatives, consumer groups, investors, non-governmental organisations (NGOs), businesses, customers, and governments.[414] Examples of such multi-stakeholder initiatives are the Global Alliance for Climate Smart Agriculture (GACSA), the Ethical Trading Initiative (ETI), and the Extractive Industries Transparency Initiative (EITI).

There are also codes of conducts formulated by international organizations, designed to provide standards of good practices in specific areas. Relevant examples include the Food and Agriculture Organization's (FAO) 2003 International Code of Conduct on the Distribution and Use of Pesticides, which formulates voluntary standards of conduct for both public and private entities involved in the distribution and/or use of pesticides.[415] There is also the FAO's 1995 Code of Conduct for Responsible Fisheries, which is directed towards fishing entities and is also voluntary but, some of the principles it sets out are based on rules established in international law, such as that of the United Nations Convention on the Law of the Sea 1982.[416]

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[410] Elaborated on by Shell Corporation on their website: Shell Corporation, 'Human Rights Policy' (2020) <https://www.shell.com/sustainability/transparency/human-rights.html> accessed 29 February 2020.
[411] See: Mike Muller, 'Nestlé Baby Milk Scandal Has Grown up but Not Gone Away' *The Guardian* (13 February 2013) <https://www.theguardian.com/sustainable-business/nestle-baby-milk-scandal-food-industry-standards> accessed 29 February 2020.
Mike Muller, 'The Baby Killer: A War on Want Investigation into the Promotion and Sale of Powdered Baby Milks in the Third World.' (1974) <http://archive.babymilkaction.org/pdfs/babykiller.pdf> accessed 29 February 2020.
[412] See: Nestlé Global, 'Breast-Milk Substitute Marketing Compliance Record' (*Nestlé Global*, 2020) <https://www.nestle.com/csv/performance/compliance-record> accessed 29 February 2020.
[413] Dorothée Baumann-Pauly and Justine Nolan (n 317) 45.
[414] ibid.
[415] FAO International Code of Conduct on the Distribution and Use of Pesticides 2003, available at <http://www.fao.org/3/y4544e/y4544e00.htm#Contents> accessed 21/05/2020
[416] FAO Code of Conduct for Responsible Fisheries 1995, available at <http://www.fao.org/3/v9878e/v9878e00.htm#TABLE> accessed 21/05/2020

2.2.4. The Oslo Principles on Global Climate Change Obligations

The place of the Oslo Principles on Global Climate Change Obligations (the Oslo Principles) in this thesis has been a bit difficult to decide. The reason is that the Oslo Principles are not exactly a human rights instrument and are focused on climate change, but the topic and obligations they set out are relevant to this thesis and address both states and businesses directly, and the threat to human rights that climate change and inappropriate action create is taken into account.[417] As a result, it was decided that it would best fit as the last topic of the soft-law instruments sub-section of this chapter.

The Oslo Principles, adopted in 2015 by international and environmental legal experts, emphasize the seriousness of climate change and the urgency of addressing it.[418] They focus not only on the obligations of states and businesses to address climate change, but also on the resources and factors they will need to meet these commitments.[419] While the document is not legally binding, it draws from an ensemble of legal sources, human rights included, to provide a solid foundation for the principles it puts forwards.[420]

As part of their obligations, the Oslo Principles declare that businesses '… have to defend and protect the Earth's climate and, thus, its biosphere…'.[421] Furthermore, regardless of their contribution to greenhouse gases (GHGs) emissions, businesses must take the necessary measures that will ensure that the global temperature never go above pre-industrial levels by more than two degrees Celsius.[422] They also call for the banking and financing sectors to 'take into account the GHG effects of any projects they consider financing.'[423]

[417] Expert Group on Global Climate Obligations (ed), *Oslo Principles on Global Climate Change* (Eleven International Publishing 2015) 3 <https://climateprinciplesforenterprises.files.wordpress.com/2017/12/osloprincipleswebpdf.pdf> accessed 21 May 2020.
[418] Expert Group on Global Climate Obligations (n 417).
[419] ibid.
[420] ibid 21–47.
[421] ibid Preamble.
[422] ibid Principles 6 to 9.
[423] ibid Principle 30.

3. Discussion

In the introduction of this thesis, four sub-questions have been presented with the aim of answering the research question selected for this paper. It is now time, to look at the answer of the third sub-question which, as a reminder, is the following: What is the basis of protection of the international human rights framework for the right to food in the circumstances described in **Chapters III** and **IV**, considering that agribusinesses are non-state actors?

The answer contains several parts. The first one tells us that, in international human rights law, the basis for protection against adverse impacts from businesses' activities lies in only one primary obligation, which is to respect human rights. But that obligation only requires them to not engage in or support any activities that will get in the way of people's enjoyment of the right to food. This is where other branches of international law, concerned with environmental protection, climate, and business and human rights, among other things, come into play, adding further pieces to complete the framework of the right to food. Through mostly soft-law instruments, thus non-binding, agribusinesses are provided with guidelines on what sorts of conducts and measures are expected from them so that they prevent, mitigate, address and account for breaches of human rights occurred through their activities; these constitutes what one can call sub-obligations to agribusinesses' primary obligation to respect the right to food, though they lack in terms of binding power by the nature of soft-law instruments.

This leads to some limitations to this framework. First, soft-law instruments have no legally binding force on businesses, which means that they have no legal obligation to abide by their rules and principles or follow their guidelines. One can argue for a moral obligation but, as cynical as that may sound, businesses seem more likely to be spurred into action if it is a question of preserving public image and their profits than out of genuine concern for the human rights abuses caused or could be caused by their activities. Therefore, while there is an obligation to respect the right to food, there is no motivating force, outside of preserving their own interests, for businesses to follow through with it.

It must be recognized that there are businesses who do make efforts to comply with human rights standards. However, when it is the corporate instinct to put the maximizing of profits

above compliance with human rights programme,[424] then blind trust that every businesses will do the right thing is, put simply, foolish in the face of the human rights at stake and the urgency of the climate crisis.

Secondly, the international framework is lacking in terms of enforcement mechanisms to ensure compliance from businesses. As a result, it must rely on states to internalise human rights norms, and deploy the policies and mechanisms necessary to regulate and hold agribusinesses accountable when they are in breach of their obligation to respect the right to food. In theory, this is not an issue, it is actually part of states' own human rights obligations and of how international law has always operated. However, and unfortunately, sometimes states are simply unable or unwilling to properly regulate the activities of businesses as pointed out throughout this thesis, and this includes that of agribusinesses too. This means that the activities of these businesses are difficult to monitor and regulate, and accountability is often impossible to pursue.[425]

Finally, when it comes to the impacts of agribusiness activities and practices on climate change, the right to food's international framework does recognize the link between that and the consequences for the right to food, and the necessity for businesses to assume responsibility for their role and also to be held accountable. But then again, it is only states that have the regulatory power to ensure accountability. Considering the evolution of the climate crisis, which is only getting worse, and how agribusinesses still adversely affect both climate change and the right to food, the inevitable conclusion is that, somewhere along the line, states are failing to ensure that agribusinesses do not breach their obligation towards the right to food, and states are also failing to hold them accountable for the abuses that result from this breach. Accordingly, the international framework of the right to food, in its reliance on states for enforcement, does not have any effective power of its own to protect the right to food against agribusinesses' abuses. This does not exactly mean failure, but more like an inadequacy, or an insufficiency, within the system.

[424] Clapham (n 7) 197.

[425] Dorothée Baumann-Pauly and Justine Nolan (n 317) 32–33 and 34–35; John Ruggie, 'Protect, Respect and Remedy: A Framework for Business and Human Rights, Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (Human Rights Council 2008) A/HRC/8/5 para 3.

A change of approach must, therefore, be considered. The rules and principles are there, but the international framework itself does not have sufficient legal force to directly bind agribusinesses, thus lacking enforceability; there are no effective international mechanism to hold agribusinesses accountable for their violation of the right to food, even less in relation to climate change; and the relevant instruments are too scattered across the various sectors of international law, which makes them hard to access unless one knows what they are looking for, otherwise they must search and comb through each in order to piece the information together.

4. The Way Forward

This paper identifies two manners of reinforcing, or reforming, the international framework for the right to food. One would be by creating a brand new human rights instrument that takes into account the impacts of climate change (or at the very least emphasises on environmental protection as part of the fulfilment of human rights), impose on businesses a legally binding obligation to respect human rights (right to food included) and to account for their role in fuelling the crisis; and by creating a mechanism with the power of enforcing this new instrument as well as monitoring and holding businesses accountable for breaches of human rights and associated obligations. However, there is a risk that in the process of negotiating this new instrument, existing norms end up being diluted, marking a regression from all the advances made in the agreed current standards of protection.

The other option would be to consolidate the current framework by compiling every instruments, binding or non-binding, into one common database for easier access for concerned and interested actors and organizations; reinforcing key instruments such as the ICESCR, the UN Guiding Principles and the Oslo Principles, by amending them to highlight the interrelation between the rules and principles they set out, and by making them legally binding on businesses; and, finally, reinforcing existing human rights mechanisms, like the CESCR, or creating a new one that will be tasked with monitoring businesses and hold them accountable for breaches that violate human rights obligations as established by the key instruments. Furthermore, in both cases, the enforcement mechanism's power should include the ability to hear and decide cases brought by victims of human rights violations against businesses, the same way the CESCR is currently mandated to do in regards of states.

Both suggestions come with many questions in regard to their feasibility and the technicalities of achieving either. While this paper does not claim to be able to pick up on all of these issues, or to be able to address them all, it still identifies some and discusses them.

The first issue will be about updating the existing obligation to respect human rights to make it legally binding on businesses. There will certainly be resistance from the community of businesses, as well as valid worries about the implications of extending to them responsibilities that have always been seen as exclusive to states. However, there are insufficiencies in relying solely on states obligations, and international human rights law must evolve to palliate these gaps in time.[426] Furthermore, there seems to be some renewed efforts towards a legally binding instrument to regulate the activities of businesses, as the Human Rights Council has adopted a resolution establishing the open-ended intergovernmental working group (OEIGWG).[427] The OEIGWG is mandated to 'elaborate an international legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises.'[428] The working group is currently working on a draft treaty, and the document applies to all human rights and takes into account environmental rights and remediation.[429] However, it is not clear if the document will be binding on businesses too or it is solely addressed to states. While it does reiterate the obligations of businesses to respect human rights, the provisions of the documents are largely focused on what states should accomplish at a domestic level and through international cooperation to hold businesses accountable.[430] While this draft treaty could be a sign that the international community is closer to being accepting of legally binding obligations in relation to businesses and human rights, the content would not really address the issues identified in this thesis.

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[426] Nicolás Carrillo-Santarelli, 'Corporate Human Rights Obligations: Controversial but Necessary' (*Business & Human Rights Resource Centre*, 2020) <https://www.business-humanrights.org/en/corporate-human-rights-obligations-controversial-but-necessary> accessed 21 May 2020.

[427] '26/9 Elaboration of an International Legally Binding Instrument on Transnational Corporations and Other Business Enterprises with Respect to Human Rights' (Human Rights Council 2014) A/HRC/RES/26/9.

[428] ibid.

[429] 'Legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other businesses', OEIGWG Chairmanship Revised Draft, 17 July 2019. <https://www.ohchr.org/Documents/HRBodies/HRCouncil/WGTransCorp/OEIGWG_RevisedDraft_LBI.pdf> accessed 27 May 2020

[430] Ibid.

When it comes to imposing a stronger obligation on businesses, one could think that it could be done unilaterally or by incentivizing businesses to willingly bind themselves. The former option may sound unlikely, but it is not entirely unheard of. Indeed, the realm of international criminal law provides us with a rather close example of a treaty negotiated by states and that has applicability on third parties. It is the Rome Statute of the International Criminal Court (Rome Statute), which establishes direct private obligations – such as the obligations to not commit genocide, war crimes, and crimes against humanity – that are also linked to specific human rights like the right to life and the right to food.[431] However, the Rome Statute gives jurisdiction to the International Criminal Court (ICC) only over natural persons, which means that a business as an entity cannot be tried in the ICC, but individuals who are members of the organization can be investigated and prosecuted.[432]

Consideration thus will need to be given to who exactly this binding human rights obligation will apply, the business as an entity or the individuals who are part of it, and the implications for any potential mechanism for accountability. Having said that, for the sake of adding strength and efficiency to the framework, it would be best to have businesses cooperate and willingly endorse a legally binding obligation.

Concerning the latter point on the implications of a binding obligation to respect, they can include valid concerns of such an obligation weakening the human rights framework or giving excessive power to businesses. However, it will first be remarked that international obligations do not necessarily grant powers to nor change the status of the entity they are imposed on, as shown in Common Article 3 of the Geneva Conventions of 1949.[433] In fact, the existence of binding obligations on businesses could encourage the monitoring of their activities by the authorities and bodies tasked with implementing international law, and give victims of human rights violations more tools to hold businesses accountable, especially in cases where the odds of protection are low because of a lack of sufficient substantive legal

[431] Radu Mares (n 396) 57.
Rome Statute of the International Criminal Court 2002, Articles 6, 7 and 8
[432] Rome Statute of the International Criminal Court 2002, Article 25
[433] Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention) 1949; Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (Second Geneva Convention) 1949; Convention relative to the Treatment of Prisoners of War (Third Geneva Convention) 1949; Convention relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention) 1949.

arguments and basis.[434] It is therefore proposed that a binding obligation to respect should follow similar guidelines as the ones prescribed by Ruggie's UN Guiding Principles, as they require that businesses both abstain from engaging into activities that would cause human rights violations, and also actively take action to 'identify, prevent, mitigate and account for how they address their adverse human rights impacts…'.[435] Furthermore, as part of his work as UN Special Representative of the Secretary-General (SRSG), Pr. Ruggie has examined the question of extending businesses' human rights obligations to include those of promoting and securing human rights and has explained why it would be not wise to do so.[436] This was related in **subsection 2.2.2** of this chapter. It is also suggested that the Oslo Principles be considered for elaboration of what the obligation to respect human rights would entail in regard to climate change and the needed environmental protection and restoration.

A few paragraphs above was mentioned the time restriction of addressing climate change. This leads us to another issue which is that of how long it would take to negotiate or implement either of the reforms proposed. It can take a long time for a human rights treaty to be negotiated and then enter into force. For example, it took eighteen years for the ICESCR to be negotiated and implemented, whereas the Declaration on the Rights of Indigenous Peoples was finalized after twenty-six years.[437] Unfortunately, climate change as an added factor leaves us with a much more limited deadline to act. As a result, going down the route of a brand-new international instrument, as well as a mechanism for enforcement and monitoring, might be counter-productive for these issues that need immediate solutions. While it would still be time consuming to restructure and consolidate the existing framework, it would probably be the faster route.

Speaking of a mechanism, this leads to the issue of a body that would be entrusted with not only monitoring businesses, but also ensuring accountability, much like a court. Although,

[434] Nicolás Carrillo-Santarelli (n 426).
[435] UN Guiding Principles on Business and Human Rights 2011, Chapter II, Principle 17 and Commentary
[436] John Ruggie, 'Interim Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (n 403) para 68.
John Ruggie, 'Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises' (n 404) para 55.
[437] Office of the United Nations High Commissioner for Human Rights, 'Fact Sheet No.2 (Rev.1): The International Bill of Human Rights' <https://www.ohchr.org/EN/PublicationsResources/Pages/ArchivesFS.aspx> accessed 21 May 2020.
Ruggie (n 346) 57.

perhaps the duties of monitoring and acting as a court are better entrusted to two different institutions. Nevertheless, the idea of an international judicial body is not a novelty. It has been floated since 1947 when Australia made a proposal for the creation of such a body and was even brought up during the creation of the ICESCR and the ICCPR.[438] Even more recently, in 2010, the proposal of a draft statute for a World Court of Human Rights, which was sponsored by the Swiss government and endorsed by some of the world's leading human rights lawyers, has been submitted.[439]

The suggestion of an international judicial body is not made lightly in this thesis, it is acknowledged that a project of this kind carries with it significant challenges, and there is awareness of the ongoing debate surrounding it. One major impediment is its political feasibility, as states are unlikely to allow the domestic relationship between them and the individuals within their territories to be under the scrutiny of a binding international institution.[440] There are more valid concerns that include the desirability of such an institution; the costs of realizing and maintaining this project; how decisions would be enforced; who should its provisions apply to; the extent and nature of this institution's judicial powers; how to handle the potential workload of a human rights court that operates at an international scale; and what would be the relationship and usefulness, even, of such an international body in relation to domestic judicial systems and existing regional institutions.[441]

This paper does not pretend to have any particular contribution to make to the debate, but it can make use of it in regard to the characteristics of the mechanism considered here. First, it will be pointed out that the mechanism for accountability put forward in this thesis is addressed to businesses, and other non-state actors if relevant, and as such is smaller in scale

[438] Philip Alston, 'Against a World Court for Human Rights.' (2014) 28 Ethics and International Affairs 198–199 <https://doi.org/10.1017/S0892679414000215>.
Ignacio de la Rasilla, 'The World Court of Human Rights: Rise, Fall and Revival?' (2019) 19 Human Rights Law Review.
Manfred Nowak, 'A World Court of Human Rights' in Gerd Oberleitner (ed), *International Human Rights Institutions, Tribunals, and Courts* (Springer 2018) 272–273 <https://doi.org/10.1007/978-981-10-5206-4_10> accessed 21 May 2020.
[439] Julia Kozma, Manfred Nowak and Martin Scheinin, 'A World Court of Human Rights - Consolidated Draft Statute and Commentary'
<https://www.eui.eu/Documents/DepartmentsCentres/Law/Professors/Scheinin/ConsolidatedWorldCourtStatute.pdf> accessed 21 May 2020.
Nowak (n 438) 272–273.
[440] Alston (n 438) 200–201.
[441] ibid 201–209.
Ruggie (n 346) 62.

and less politically contentious than an international court with jurisdiction on both state and non-state actors. Secondly, such a mechanism does not necessarily need to be created from scratch, it has also been proposed in this paper that reinforcing and consolidating existing institutions and giving them the jurisdiction to adjudicate on matters involving businesses. Thirdly, this institution can draw inspiration from the International Criminal Court (ICC), and operate as a last resort mechanism to complement national courts and cover a wider area than regional human rights institutions can. Finally, while it is desirable that the mechanism be able to deliver binding decisions that states would enforce, the minimum could also be that it provides advisory opinions on which plaintiffs/victims can rely to support their arguments in their national or regional courts.

5. Conclusion

This thesis has discussed the impacts of agribusinesses on climate change and the right to food. It has also shown that the causes of the agribusiness industry's impacts on the right to food are not limited to just its own activities, but also include its contribution to the climate crisis. This thesis has also endeavoured to examine what role the international human rights framework of the right to food plays in regulating and guiding the interactions between the agribusinesses, who are non-state actors, and the right to food, considering climate change as an additional factor.

The eventual findings were that the international framework of the right to food establishes a primary obligation on agribusinesses to respect the right to food (and every other human rights). Provisions do exist in regard to the environment, but it is only in recent years that international human rights bodies have started to grapple with the impacts of climate change on human rights, and the response of states and non-states actors alike has so far been extremely lacking.[442] The framework also lacks the power to directly, and legally, bind agribusinesses with human rights obligations. It does not either have an effective enforcement mechanism and must rely on states and their implementation of national and regional regulatory, accountability, and remedy mechanisms. While these do exist, their effectiveness vary in degree depending on the priority of interests of states, the effectiveness of their legal

[442] Philip Alston (n 14).

systems, and their own power and willingness to hold agribusinesses accountable. And, as it has been stated from the beginning of this thesis, businesses have grown in such size and power that some do surpass that of states, which allows them to priorities their own personal interests and pursue activities even when they violate human rights and/or contribute to the climate crisis.

In those circumstances, the inevitable conclusion is that the international framework of the right to food, as it currently stands, does not provide sufficient and effective protection to the right to food against non-state actors, much less amidst the climate crisis. However, this does not mean a major fault of the system, it is much more like a gap or an insufficiency that the human rights community has yet to figure out how to remedy. Indeed, as remarked by Ruggie, international human rights law has constantly been evolving, since its beginnings, in order to provide ever better human rights protection, and also to guide and govern relevant actors in their interactions with human rights, whether they be states or non-state actors.[443]

Before the 1948 Universal Declaration on Human Rights, there was no internationally agreed standards of individual rights amongst states, but today we have several treaties and mechanisms, at international and regional level, dedicated to the protection of human rights, and they have been acknowledged and implemented in the vast majority of national legal systems. Furthermore, until a few decades ago, only states were recognized as actors in international law with duties and rights, and yet today individuals and private entities now have rights of their own, and non-state actors do have certain obligations towards human rights. As a result, changes and improvements do happen, they are almost inevitable by human rights law's nature. However, in the face of the challenges of climate change, the international response to the impacts that agribusinesses, and all relevant businesses, have on the right to food and every other rights, must be swifter and more robust.

[443] Ruggie (n 346) 14–15.

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