



Utrecht University



**GLOBALGOALS**  
Research for Sustainability

# Master Thesis

---

## The Institutionalisation of Climate Justice in the Global Governance Architecture

A dynamic network analysis of climate justice norms in  
intergovernmental and transnational institutions

---

*Course: Master's thesis Sustainable Development (GEO4-2321)*  
*Date: 18<sup>th</sup> of August 2020*

*Author: Karianne K. Taranger – 6563600*  
*Supervisor: Dr. Agni Kalfagianni*  
*Second reader: Dr. Kim Rak*

*Contact: [k.k.taranger@students.uu.nl](mailto:k.k.taranger@students.uu.nl) or [karianne.krohn@gmail.com](mailto:karianne.krohn@gmail.com)*

## **Acknowledgement**

I would like to thank supervisor Agni Kalfagianni for great guidance and valuable response.

Her feedback has led to useful insights that will prove useful for future academic work. I would also like to thank Maya Bogers for guidance in relation to the network analysis. My appreciations also go to those reviewing and commenting on this thesis, for constructive and good feedback, as well as encouragement. This especially concerns Lorenzo, Jana, Eloisa and Jasmin. Lastly, I wish to thank my loved ones for support and consultancy.

## Abstract

The architecture of global climate governance consists of norms that are intended to shape state actions on mitigation and adaption of climate change. A key norm is justice. Climate justice norms determine the fairness and equity of the outcomes of multilateral agreements, as well as their effectiveness, legitimacy and acceptability. Yet, climate justice can be defined on the basis of different philosophical traditions, that invite different courses of action in practice. For example, defining climate justice from a liberal egalitarian perspective would invite transferring resources to the poorest segments of the human population in order to address climate change concerns. In contrast, defining climate justice from a libertarian perspective would invite entrepreneurial activities in order to address climate change through the market. This thesis analyses how justice norms have been institutionalised in intergovernmental and transnational institutions for climate change over time. Specifically, the thesis aims to identify which norms have gained centrality, how this has changed over time and which are the implications for climate governance. To do so the thesis employs an analytical framework which delineates different conceptualisations of justice, including cosmopolitanism, critical perspectives, liberal egalitarianism, libertarianism and the capabilities approach. Methodologically, the thesis conducts a dynamic discourse network analysis of climate justice norms in the global climate architecture. Specifically, the thesis identifies interlinkages between different climate justice norms and intergovernmental and transnational institutions between 1991-2015. Based such interlinkages the thesis constructs dynamic networks which shows the connection between intergovernmental and transnational institutions and specific climate justice norms. The thesis also examines the relations among the institutions, as a function of their reference to the same norm. On the basis of network analysis values, such centrality, the thesis then measures the degree of institutionalisation of particular justice norms over others, revealing which norms have gained traction and which have become marginalised. The overall findings provide crucial insights for the evolution of climate justice norms in intergovernmental and transnational institutions concerning climate change and carry important implications for the overall performance of the global climate architecture.

**Key concepts:** Climate change, climate justice, international norms, global climate change governance architecture, intergovernmental and transnational institutions, network analysis

# Table of contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	PROBLEM DEFINITION .....	1
1.2	CURRENT SCIENTIFIC DEBATE .....	2
1.3	KNOWLEDGE GAP .....	3
1.4	RESEARCH OBJECTIVE AND QUESTION .....	4
1.5	THEORETICAL AND SOCIAL CONTRIBUTION .....	4
1.6	RESEARCH FRAMEWORK .....	5
<b>2</b>	<b>CONCEPTUAL AND THEORETICAL FRAMEWORK .....</b>	<b>6</b>
2.1	CLIMATE JUSTICE AS INTERNATIONAL NORMS .....	6
2.2	FRAMEWORK FOR CONCEPTUALISING CLIMATE JUSTICE NORMS .....	8
2.2.1	<i>The philosophical traditions .....</i>	<i>8</i>
2.2.2	<i>The three aspects of the philosophical traditions .....</i>	<i>11</i>
2.3	ANALYTICAL FRAMEWORK .....	15
2.4	THE INSTITUTIONALISATION OF CLIMATE JUSTICE NORMS IN GLOBAL CLIMATE GOVERNANCE ARCHITECTURE 17	
<b>3</b>	<b>METHODOLOGY .....</b>	<b>20</b>
3.1	RESEARCH STRATEGY .....	20
3.1.1	<i>Literature review .....</i>	<i>21</i>
3.1.2	<i>Selection of intergovernmental and transnational institutions .....</i>	<i>21</i>
3.1.3	<i>Discourse network analysis .....</i>	<i>23</i>
3.2	RESEARCH MATERIALS .....	28
3.3	LIMITATION OF METHODOLOGY .....	28
<b>4</b>	<b>IDENTIFIED CLIMATE JUSTICE NORMS .....</b>	<b>29</b>
4.1	CLEAN ENERGY MINISTERIAL .....	31
4.2	CARBON NEUTRAL CITIES ALLIANCE .....	32
4.3	COVENANT OF MAYORS (EUROPE) .....	33
4.4	KYOTO PROTOCOL .....	34
4.5	PARTNERSHIP FOR MARKET READINESS .....	35
4.6	R20 .....	35
4.7	UNION OF BALTIC CITIES .....	36
4.8	INTERNATIONAL RENEWABLE ENERGY AGENCY .....	37
4.9	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE .....	38
4.10	UN GLOBAL COMPACT CARING FOR CLIMATE .....	38
4.11	FOREST CARBON PARTNERSHIP FACILITY .....	39
4.12	THE CONSUMER GOODS FORUM .....	40
4.13	INTERNATIONAL EMISSIONS TRADING ASSOCIATION .....	40
4.14	VERIFIED CARBON STANDARD .....	41
4.15	CLIMATE, COMMUNITY AND BIODIVERSITY ALLIANCE (CCB STANDARD) .....	42
4.16	GOLD STANDARD .....	43
4.17	PLAN VIVO .....	43
4.18	SOCIAL CARBON .....	44
4.19	GREENHOUSE GAS PROTOCOL .....	45
4.20	SCIENCE BASED TARGETS .....	45
4.21	CLIMATE DISCLOSURE STANDARDS BOARD .....	46
4.22	BIOCARBON FUND .....	46
4.23	CLIMATE AND CLEAN AIR COALITION .....	47

4.24	GLOBAL STATES AND REGIONS ANNUAL DISCLOSURE .....	48
4.25	DIVEST-INVEST.....	48
4.26	GLOBAL ALLIANCE FOR CLIMATE SMART AGRICULTURE .....	49
4.27	GLOBAL BIOENERGY PARTNERSHIP .....	50
4.28	PORTFOLIO DECARBONISATION COALITION.....	51
4.29	THE RENEWABLE ENERGY POLICY NETWORK FOR THE 21ST CENTURY .....	51
4.30	SUSTAINABLE ENERGY FOR ALL .....	52
<b>5</b>	<b>DEGREE OF INSTITUTIONALISATION OF CLIMATE JUSTICE NORMS .....</b>	<b>53</b>
5.1	AFFILIATION NETWORKS .....	53
5.2	AFFILIATION NETWORKS OVER TIME.....	57
5.3	CONGRUENCE NETWORKS.....	62
5.4	DEGREE OF INSTITUTIONALISATION OF THE PHILOSOPHICAL TRADITIONS .....	64
<b>6</b>	<b>DISCUSSION .....</b>	<b>65</b>
6.1	MAIN FINDINGS IN RELATION TO EXISTING SCIENTIFIC RESEARCH.....	66
6.2	CRITICAL REFLECTION AND LIMITATIONS .....	67
<b>7</b>	<b>CONCLUSION.....</b>	<b>68</b>
	<b>REFERENCES.....</b>	<b>69</b>
	<b>APPENDIX I – SHORT DESCRIPTION OF ANALYSED INTERGOVERNMENTAL AND TRANSNATIONAL INSTITUTIONS .....</b>	<b>83</b>

# Introduction

## 1.1 Problem definition

Global governance architectures can be defined as "the overarching system of public and private institutions that are valid or active in a given issue area of world politics" (Biermann et al., 2009, p. 15). The architecture of global climate change governance consists of a collection norms and intergovernmental and transnational institutions, which can be understood as "collections of rights, rules, and decision-making procedures that give rise to social practices, assign roles to the participants in these practices, and guide interactions among the participants" (Young, 2013, p. 89; Biermann et al., 2009, 2010; Widerberg et al., 2016). Norms are standards of behaviour that exist within the global climate governance architecture as they are adopted by intergovernmental and transnational institutions, which again frames climate change issues and justice, and set standards for action globally. Within the global climate architecture, norms shape state actions on mitigation and adaption of climate change (Biermann et al., 2009, 2010; Sandholtz, 2008; Widerberg et al., 2016; Zelli, 2011). Key norms are linked to justice. Climate justice norms determine the fairness and equity as well as the effectiveness, legitimacy and acceptability of the outcomes of intergovernmental and transnational institutions, but also the global climate architecture as whole (Ikeme, 2003; Tritschoks, 2018). Yet, climate justice can be defined based on different philosophical traditions, that invite different courses of action in practice (Biermann & Kalfagianni, 2020). For example, defining climate justice from a cosmopolitan perspective would invite redistribution of resources to the poorest segments of the human population in order to address climate change concerns (Biermann & Kalfagianni, 2020). In contrast, defining climate justice from a libertarian perspective would invite entrepreneurial activities in order to address climate change through the market (Biermann & Kalfagianni, 2020; Nozick, 1974). As a consequence, this has led to the existence of several different climate justice norms, both in research and practice.

Due to the increasing density of the climate governance architecture, there is a need to improve the understanding of the climate justice norms which are adopted by either all or a large number of institutions within the architecture (Biermann et al., 2010; Widerberg et al., 2016). This is important as such understanding is a crucial step to "assess what kind of changes institutions are actually promoting and their potential impacts on particular policies and outcomes" (Bernstein, 2002a, p. 13). The importance of studying norms is that they structure intergovernmental and transnational institutions, as norms prescribe behaviour, promote values and frame domestic policy discourses, and therefore, have important effects on the barriers and

opportunities to solve the climate change crisis (Bernstein, 2000, 2002b; Finnemore & Sikkink, 1998). Moreover, the lack of clarity and explicitness in global policy formulation on climate justice and a diversity in usage of climate justice norms among intergovernmental and transnational institutions can increase the risk of conflicting policy objectives, which could potentially negatively affect the effectiveness of the global climate architecture (Ikeme, 2003; Kooiman & Jentoft, 2009; Tritschoks, 2018). Furthermore, lack of clarity could also make global climate policies and programs less transparent, which could limit the opportunity for the society to intervene and react on how these decisions will affect climate justice issues (McDermott et al., 2013). Thus, analysing the institutionalisation of norms, which is the adoption of specific norms among intergovernmental and transnational institutions, can help us “reveal the underlying pattern of values and goals that guide and define international behavior” (Bernstein, 2000, p. 468). Analysing which are the climate justice norms that are promoted and marginalised by intergovernmental and transnational institutions can create an understanding of how the global climate architecture deals with issues of climate justice, and which normative goals actors promote (Bernstein, 2002b). It is, therefore, important to understand the degree to which climate justice norms are institutionalised in the climate governance architecture, by intergovernmental and transnational institutions, as it can reveal the extent to which specific norms are capable of affecting the political and moral outcome of the architecture (Bernstein, 2000).

## **1.2 Current scientific debate**

The concept of global climate governance architecture is commonly used in scientific literature to describe the overarching governance structures in the international policy domain of climate change that “comprises organizations, regimes, and other forms of principles, norms, regulations, and decision-making procedures” (Biermann et al., 2009, p. 15), hence the meta-level of governance (Biermann et al., 2009; Widerberg et al., 2016; Zelli, 2011). The term thereby covers a broader spectrum than what the often-used concept of regime complexes does. The focus on global governance architectures allows us to analyse the relationship between different regimes or other forms of institutions (Biermann et al., 2010). Moreover, the concept enables us to study the “synergy and conflict between the overarching norms and principles that govern these interactions, and to analyze overarching norms and principles that run through distinct regime” (Biermann et al., 2009, p. 16). Global governance architectures have often been studied and evaluated by their structural qualities, which has been assessed by measuring the

degree of fragmentation of a governance architecture<sup>1</sup> (Biermann et al., 2009; Pattberg et al., 2014). Fragmentation can be analysed based on the global architectures' constellation of institutions, norms, actors and discourses (Pattberg et al., 2014). Despite this, in depth studies of constellations of climate justice norms has still not been done in literature on global governance architectures.

Regarding climate justice, there is a growing body of scientific literature approaching the concept at local and international levels. According to Biermann & Kalfagianni (2020) a “justice turn” have taken place the recent years when it comes to global environmental change research. The concept have emerged as a distinct branch out of the concept of environmental justice and it has been subject to changes in regards of usage and conceptual coverage (Okereke, 2010; Schlosberg, 2013; Schlosberg & Collins, 2014). Scientific literature has been assigning climate justice different definitions and focusing on different aspects of the concept (Biermann & Kalfagianni, 2020; Tritschoks, 2018). Thus, the scientific literature on climate justice is affected by inconsistent use the concept, which makes an overarching understanding of the field difficult and an overview of internationally adopted climate justice norms absent (Ikeme, 2003; Okereke, 2010).

### **1.3 Knowledge gap**

Currently, a comprehensive and overarching analysis of climate justice norms in the architecture of global climate governance and the degree to which they are institutionalised over time is lacking. There is a lack of knowledge on how intergovernmental and transnational institutions in the global climate architecture adopts climate justice norms, and how this shapes the actions of the global climate architecture on climate change mitigation and adaptation, which have a direct impact on how climate justice is exercised in practice (Okereke & Coventry, 2016). Fulfilling this knowledge gap can reveal which norms that have gained traction, and which have become marginalised in the global climate architecture, which is important in order to understand what types of climate justice changes the global climate governance architecture is promoting and undermining, and how climate justice norms are expected impact on policies and outcomes (Bernstein, 2002a).

<sup>1</sup> Whether fragmentation in global governance architectures is positive or negative is a contested debate.



## **1.4 Research objective and question**

The objective of this research is to identify how climate justice norms are institutionalised in the global climate governance architecture over time and to evaluate the consequent implications by conducting a dynamic network analysis of intergovernmental and transnational institutions conceptualisations of climate justice norms.

The main research question is formulated followingly:

*How have climate justice norms been institutionalised in the global climate governance architecture through intergovernmental and transnational institutions over time, and what are the implications for the climate architecture's overall performance?*

In order to answer the main research questions, 5 sub-questions are developed:

SQ 1: How can climate justice norms be conceptualised?

SQ 2: How can institutionalisation of norms be conceptualised?

SQ 3: Which conceptualisations of climate justice norms are present in intergovernmental and transnational institutions related to climate change?

SQ 4: To which degree are various climate justice norms institutionalised in the global climate architecture over time?

SQ 5: What implications does the institutionalisation of climate justice norms have for the overall performance of the global climate architecture?

## **1.5 Theoretical and social contribution**

Regarding theoretical contributions, as existing research have not yet done, this study provides a comprehensive analysis of existing climate justice norms in the global climate architecture, the degree to which they are institutionalised in the architecture and how this have changed over time. This study improves the understanding of which are the climate justice norms that are more dominant among intergovernmental and transnational institutions, and which that are

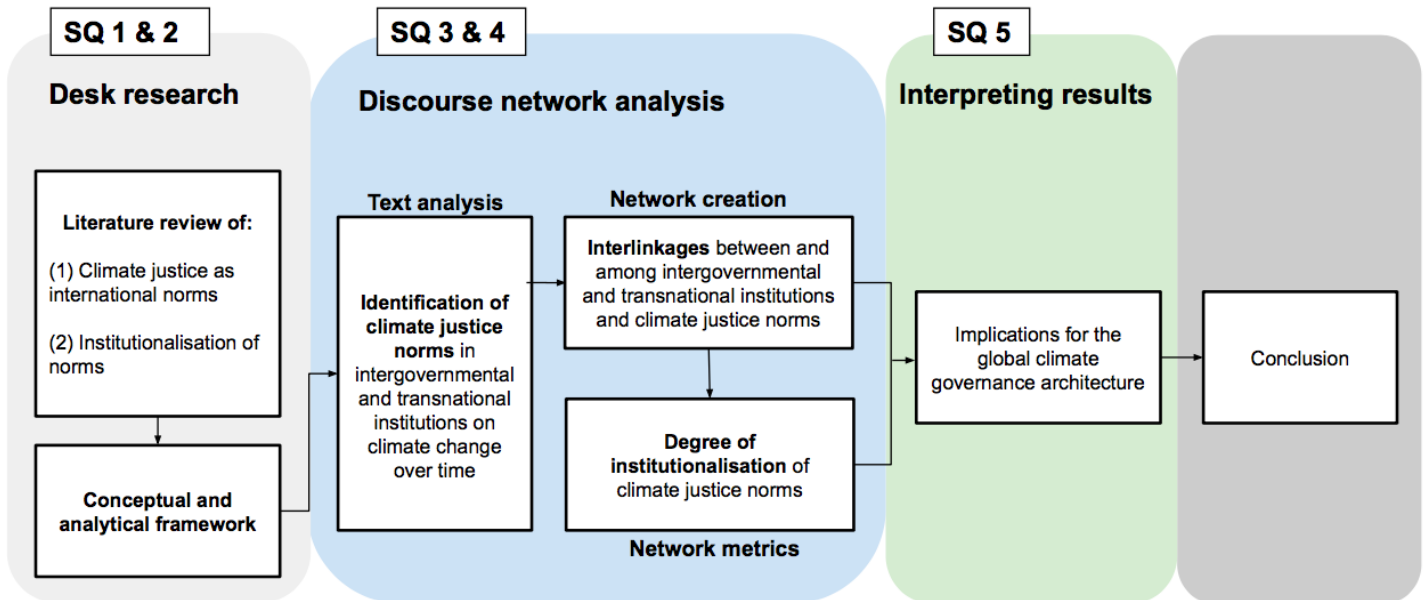
marginalised. This provides a fundamental basis for the further study of how climate justice is affecting the activities and outcomes of the global climate architecture. As existing empirical studies of climate justice norms are rather topic specific and excluding in the use of philosophical theories, this study will cover this lack by providing a more overarching and inclusive (in terms of philosophical theories) analysis of existing climate justice norms in global climate governance. More generally, this study will contribute to enrich the limited literature addressing global governance architecture in relation to justice and norms.

As for the social contribution of this thesis, an increasing understanding of what types of climate justice norms intergovernmental and transnational institutions are promoting can improve the clarity of policy formulations and goals, thereby reducing the risk of conflicting policy objectives in the global governance architecture, and perhaps lead to more effective climate change mitigation and adaptation efforts. Furthermore, the findings of this study can also increase the transparency of international climate change governance, which can improve opportunities for the civil society to intervene and react on how these decisions will affect climate justice issues and themselves (McDermott et al., 2013).

## **1.6 Research framework**

The different steps that has been taken in order to reach the research objective are illustrated in Figure 1. First, a literature review resulted in conceptualisations of climate justice norms and institutionalisation of norms. A conceptual and analytical framework was derived from this literature review. Second, an empirical dynamic discourse network analysis of climate justice norms in intergovernmental and transnational institutions, concerning climate change, was conducted. Here, a text analysis of central documents and webpages of such institutions was done by the use of the analytical framework and resulted in the identification how intergovernmental and transnational institutions referred to specific types of climate justice norm. By identifying references from intergovernmental and transnational institutions to climate justice norms, it was possible to identify interlinkages between such institutions and norms. Based on such interlinkages, the degree of institutionalisation of relevant climate justice norms in the global climate architecture was determined through the creation of networks and calculation of network metrics. Third, the established networks and the degree of institutionalisation of climate justice norms was used to assess the implications this result has for the overall performance of the global climate architecture. Finally, concluding remarks was

made. It should be noted that no normative position to preferences of specific climate justice norms has been taken.



**Figure 1.** Research framework

This thesis will first address the conceptual and theoretical framework, followed by methods. The result will be presented in two chapters, in which a discussion of result and limitation will follow. Concluding remarks will be made.

## 2 Conceptual and theoretical framework

### 2.1 Climate justice as international norms

Norms are defined as “a standard of appropriate behaviour for actors within a given identity” (p. 891), and are claims of legitimate behaviour (Finnemore & Sikkink, 1998). They are embedded in all types of governance networks as governance itself is about steering societies towards specific goals and values (Bernstein, 2002b). International norms<sup>2</sup> shape the political behaviour of states and international actors as they “define, regulate, and legitimate state (and

<sup>2</sup> A distinction is often made between domestic and international norms (Finnemore & Sikkink, 1998).

However, international norms most often start as domestic norms and they are therefore very much interlinked (Finnemore & Sikkink, 1998).

other key actors') identities, interests and behavior" (Bernstein, 2002b, p. 2) (p. 2). Norms, therefore, structures intergovernmental and transnational institutions and their outcomes (Biermann et al., 2010). Norms becomes a part of the global climate governance architecture when intergovernmental and transnational institutions adopt them. This makes norms a crucial part of the underlying structure of such architecture (Biermann et al., 2010; Kooiman & Jentoft, 2009). Moreover, the prevailing norms in the global climate governance architecture change over time, as they get challenged by emerging opposing norms that get established in the architecture through intergovernmental and transnational institutions (Gach, 2019; Sandholtz, 2008).

Climate justice can be contemplated as a set of international norms, and it is growing both in usage and attention in the global sphere, especially in climate change negotiations (Biermann et al., 2010; Gach, 2019; Okereke, 2008). The concept of climate justice emerged out of the broader notion of environmental justice as a distinct area of concern and it is seen as a horizontal expansion of the environmental justice term (Gach, 2019; Schlosberg & Collins, 2014; Nelson & Grubestic, 2018). In general, debates on climate justice have mostly considered two different dichotomies: one between distributive (allocation of burdens and benefits) and procedural (fair and inclusive decision-making process) justice; another covering intra-generational justice (equality among present generations) and inter-generational justice (rights of future generations) (Forsyth, 2014). Several scholars argues that climate justice has mainly been linked to distributive fairness, historical responsibility and restorative justice, the per-capita equity approach, emission allowances and development, human, and environmental rights-based arguments (Gach, 2019; Schlosberg, 2013; Schlosberg & Collins, 2014) Overall, this relates to what is conceptualised as the "triple inequality of responsibility, vulnerability, and mitigation" (Gach, 2019, p.1). This is central to the climate debate and it concerns both the issues of responsibility for the climate change crisis, the victims of its damaging effects, and the duty to address and mitigate climate change.

Climate justice norms are socially constructed and are a concern of ethics (Gach, 2019). The social construction of climate justice norms differs, as they can be defined in many different ways, depending on which philosophical foundation that the term is conceptualised upon or the type of actor and context that the concept is used by and in (Ikeme, 2003; Gach, 2019; Okereke, 2008; Schlosberg & Collins, 2014). Consequently, a high diversity of different climate justice norms exists in the global climate governance arena (Okereke & Coventry, 2016; Okereke, 2010; Brazys et al., 2017).

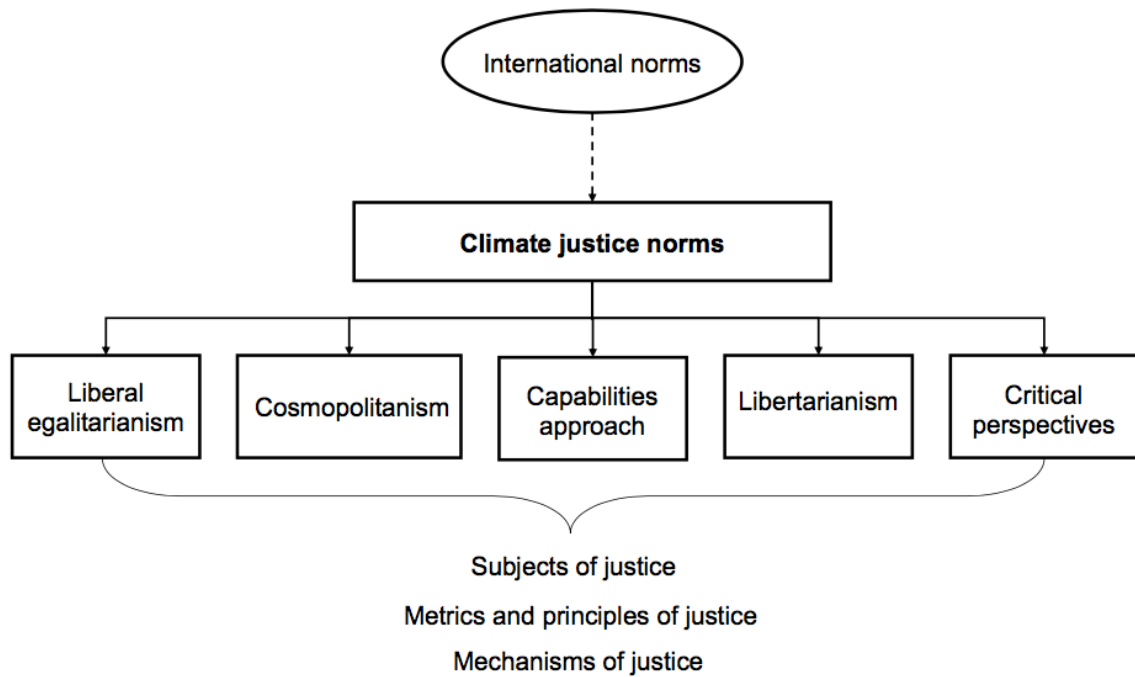
## **2.2 Framework for conceptualising climate justice norms**

Biermann & Kalfagianni (2020) have created a comprehensive framework that can be used to systematically “distinguish different conceptualizations of justice in political discourses, programmes, and outcomes” (p. 2) in the field of global climate governance and research. Biermann & Kalfagianni (2020) use the following definition of justice: “the maintenance or administration of what is just especially by the impartial adjustment of conflicting claims or the assignment of merited rewards or punishments” (p. 4). This definition is also adopted in this study. As it is recognised that environmental justice and climate justice can be conceptualised in many different ways, the framework of Biermann & Kalfagianni (2020) include several types of philosophical traditions that are relevant to climate change. It is important to mention that there is not always a clear theoretical line that distinguish the different philosophical traditions and that the traditions have a tendency to conceptually overlap.

The framework by Biermann & Kalfagianni (2020) is not taking any normative position to preferences of specific justice conceptualisations.

### **2.2.1 The philosophical traditions**

The conceptual framework includes five philosophical traditions that are relevant to fundamental “ethical contestations” in the area of global environmental change. The term “planetary justice”<sup>3</sup> is used to explain this specific area of justice. The five philosophical perspectives include liberal egalitarianism, cosmopolitanism, libertarianism, the capabilities approach and the critical approach. These traditions can be understood as different climate justice norms and constitute the framework that can be used to empirically distinguish different conceptualisations of justice. The philosophical traditions are addressed in relation to three main aspects of the planetary justice debate, which include the subjects of justice, metrics and principles of justice, and mechanisms to promote justice. Figure 2 provides a conceptual overview of the different climate justice traditions.



**Figure 2.** Theoretical framework of climate justice norms based on five philosophical traditions.

Before describing the philosophical traditions in relation to climate change and the three main aspects of the planetary justice debate, some general stances on each philosophical perspective are mentioned.

First, as a deontological (rights-based) philosophical perspective, the core of liberal egalitarianism is equal rights, individual liberty and equal opportunities to members of a society (Biermann & Kalfagianni, 2020; McDermott et al., 2013). Values such as “equality, personal freedom and personal responsibility” (p. 4-5) are highlighted by this perspective (Biermann & Kalfagianni, 2020). The applied version of liberal egalitarianism is based on Rawls (1971) theory of justice, which explains that the basic structures of society “are to govern the assignment of rights and duties and to regulate the distribution of social and economic advantages” (p. 61).

The second philosophical orientation is cosmopolitanism, which adopts the thought that all of Earth’s human beings are a part of a big community and thereby make universal moral claims (Biermann & Kalfagianni, 2020). The philosophical tradition can be divided into two perspectives, namely relational and non-relational. Relational cosmopolitanism expands the ideas of liberal egalitarianism to a global level, in which distribution of benefits and burdens becomes global and should be fair (Biermann & Kalfagianni, 2020). For cosmopolitans, The

result of social interactions, in terms of distribution of benefits and burdens can affect all human beings worldwide, unconditional to national borders, is justification of why global perspective of justice is important (Biermann & Kalfagianni, 2020). Thus, due to its neglect of national borders, it does not apply the Rawlsian version of liberal egalitarianism. Further, Biermann & Kalfagianni (2020) explain that the non-relational perspective of cosmopolitanism “emphasize that humans are entitled to justice in virtue of being humans rather than because they are related with each other through global institutions” (p. 5). This is similar to the third philosophical tradition, namely the capabilities approach, which falls under a consequential philosophical perspective.

The capabilities approach evaluate justice based upon individuals capabilities and opportunities to act in a way in which they can realise the desired outcome (Holland, 2008; Schlosberg, 2012). As a key author within the approach, Martha Nussbaum (2000) defines human capabilities as “what people are actually able to do and to be in a way informed by an intuitive idea of a life that is worthy of the dignity of the human being” (p. 5). As humans have different capabilities, the approach, therefore, “pays attention to the interpersonal differences among people and emphasizes the multiple dimensions of human life” (Biermann & Kalfagianni, 2020, p. 5). Just as with cosmopolitanism, the capabilities approach can be universally applied (Nussbaum, 2000).

The fourth philosophical tradition is libertarianism, which holds a strong deontological position towards justice. As a branch of liberalism, libertarianism emphasizes the individual right to liberty, property and a free market (Biermann & Kalfagianni, 2020; Nozick, 1974). According to the “founder” of libertarianism, Robert Nozick (1974), the state should have minimal interference in people's lives, as state interference threatens individual liberty and rights. Libertarianism disregards positive freedom (e.g. the ability of self-development) and gives attention to mainly negative freedom (e.g. rights to property and security), in which the role of the state is to just to protect such negative freedom (Nozick, 1974). The current distribution of wealth is understood as just (if done rightfully), which is why forced redistribution of wealth is not considered as legitimate (Biermann & Kalfagianni, 2020).

The fifth philosophical orientation, critical perspectives, are based upon ideas from feminism and Marxism (Biermann & Kalfagianni, 2020; Fraser, 2008). According to Biermann & Kalfagianni (2020), the critical perspective is concerned with matters of “misrecognition due to social status and identity, misrepresentation of political voice, and maldistribution of economic benefits and burdens” (p. 6). Schlosberg (2012) explains that “we can quite easily see the lack of recognition of harmed individuals and cultural ways of life that will come with

climate change” (p. 451). Two examples of misrecognized groups vulnerable to climate change are small island states and indigenous communities (Schlosberg, 2012).

## **2.2.2 The three aspects of the philosophical traditions**

### *2.2.2.1 Subjects of justice*

The philosophical perspectives differ in whom they consider as the subject of justice. This is especially the case in how the traditions frame “normative relations among people” (Biermann & Kalfagianni, 2020, p. 6). Specifically, the philosophical perspectives vary in their inclusion of either individuals, communities or states as subjects of justice, and whether national borders constrain such inclusion. Regarding liberal egalitarianism, the moral scope is limited to individuals as members of a nation, especially those vulnerable to the effects of climate change (Biermann & Kalfagianni, 2020). Contrary, for cosmopolitanism, national borders do not matter when defining subject of justice. Instead, cosmopolitanism applies the thought of global interdependence and pays attention to how individuals, communities or states are affected by global structures and interactions (Biermann & Kalfagianni, 2020). Therefore, those vulnerable to the effects of climate change, such as small island states (sea-level rise) and developing countries (lack of ability to cover the costs of climate change) are emphasised as subjects of justice (Caney, 2006). On the other hand, the capabilities approach places mostly individuals in the centre as subjects of justice. Similarly, the capabilities approach focuses on individuals and communities. Subjects of justice can be distinguished based on their capability to well-being, which can be applied to all human beings, despite national borders (Biermann & Kalfagianni, 2020; Robeyns, 2005). Those well-being that have which have been harmed or threaten by climate change, such as future generations (a future healthy environment is threatened), indigenous and forest communities (close dependence of the environment and resources) and individuals from small-island states, are identified as subjects of justice (Schlosberg, 2012). As for libertarianism, subjects of justice are determined based on individuals and their “self-ownership” (Biermann & Kalfagianni, 2020). In this view, subjects of justice can be seen as individuals having their rights violated to protect themselves, their properties and their rights to environmental conditions, from damaging effect from climate change (Shahar, 2009). National borders are found irrelevant in the case of libertarianism, for example concerning the support for global free trade. Regarding the critical perspective, national borders are also irrelevant. Subjects of justice can within this perspective be understood individuals, communities and classes, which are victims of “subjugation based on either gender or class that



runs across nations in terms of transnational class and gender conflicts” (Biermann & Kalfagianni, 2020, p. 7). Examples of such victims are: poor and marginalised communities who lack infrastructure to handle devastating climate change effects or are unable to participate in green transformation; climate refugees; poor and vulnerable women which have higher risks and burdens in relation to climate change (especially women in developing countries) (Terry, 2009).

#### *2.2.2.2 Metrics and principles*

The conceptualisation of justice among each philosophical tradition can be defined upon different metrics and principles. These metrics and principles describe what is considered as “just”. According to liberal egalitarianism, benefits, such as in terms of liberty, equality, opportunities and wealth, and also climate change related burdens should get equally distributed to members of a society (Biermann & Kalfagianni, 2020). However, an exception of this claim is if an unequal distribution is advantageous for the least well-off people of the society (Rawls, 1971). This is called the difference principle (Biermann & Kalfagianni, 2020). Moreover, also the principle that polluters should pay for their carbon emissions<sup>4</sup>, for example through national carbon taxes is relevant (Pedersen, 2010).

Cosmopolitanism expands liberal egalitarianism to the global arena, a claim a for global difference principle is made (Biermann & Kalfagianni, 2020). This implies that people around the world have the same opportunities to reach a certain standard of living. These standards of justice can be discovered through a thought experiment based on John Rawls social contract theory, in which an impartial moral and political judgement of preferred global distribution of wealth and burdens is performed. According to cosmopolitans, people would choose an unequal distribution that would support the well-being of people that are globally worst-off. An often-applied principle in relation to climate change is the common but differentiated responsibility principle. This principle demands that the responsibility and contribution of countries to combat climate change should be based on the country’s capacity to deal with climate change (global difference principle), as well as inequalities in countries historical emissions (historical responsibility principles) (Caney, 2010; Friman & Hjerpe, 2015; Ikeme, 2003; Pedersen, 2010). Furthermore, the climate change impact on the universal human rights is relevant to this perspective (Schapper & Lederer, 2014). Another common principle within cosmopolitan

<sup>4</sup> This so called “polluter pay principle” can be identified within several of the philosophical traditions. This is because the principle is heavily context dependent and have different meanings in different settings.

<sup>5</sup> Closely linked to the polluter pay principle.

thoughts is polluter pays (e.g. global carbon tax) (Pedersen, 2010). Besides, as the philosophical perspective expands liberal egalitarianism, it also supports a per capita equity approach, which implies to assign an “equal share of the capacity of the atmospheric sink” (p. 447) to each individual in the world (Schlosberg, 2012). Also, the “need-based minimum floor principle” (p. 8) exist within cosmopolitanism thoughts (Biermann & Kalfagianni, 2020; Brock, 2005). This principle is based on the notion that justice is when all human beings “are enabled to meet their basic needs; people's basic liberties are protected; there are fair terms of cooperation in global institutions; and (global) social and political arrangements are in place that supports these goals” (Biermann & Kalfagianni, 2020, p. 8), despite the effects of climate change. Basic needs are mentioned by Brock (2005a) as “a certain amount of: (1) physical and mental health, (2) sufficient security to be able to act, (3) a sufficient level of understanding of what one is choosing between, (4) a certain amount of autonomy” (p. 63) and (5) “decent social relations with at least some others” (p. 63).

The capabilities approach disagrees with the procedural approach to justice and instead focuses on facilitating people in a way which makes them capable of developing their well-being and human flourishing despite the damaging effects of climate change. Just outcomes would be determined based on “the fulfilment of a list of basic requirements for individuals as defined by them or by general standards” (Biermann & Kalfagianni, 2020, p. 10). Such basic capabilities could be life, health, education, political participation, affiliation, emotions, economic access and security, environmental conditions etc. (Biermann & Kalfagianni, 2020). Environmental factors, such as climate, are important in enabling individuals to obtain capabilities (Robeyns, 2005). The capabilities approach recognises the instrumental value the environment has for future human generation's capabilities and considers unjust to degrade the environment for future use (Schlosberg, 2012). Furthermore, the recognition of people and places as well as public participation in matters of climate change are understood as principles enhancing justice (Schlosberg, 2012; Biermann & Kalfagianni, 2020).

As libertarians most central individual right is an equal right to liberty, unequal outcomes are accepted on the condition of just initial procedure (Nozick, 1974). The following points have to be fulfilled if something is to be considered just: “civil liberties are protected, markets function as main exchange mechanism, and the role of government is minimized” (Biermann & Kalfagianni, 2020, p. 9). In addition, climate change actions should, therefore, satisfy these requirements. As consequence, redistribution of wealth is not considered as just, if it is not based on voluntary aid transfers from private actors.

Besides, for critical perspectives, the principle of participatory parity in “economic, cultural and political dimensions of life” (p. 9) is central in defining justice (Biermann & Kalfagianni, 2020). The approach blames economic structures (maldistribution of resources to tackle climate change), discrimination of cultural values (marginalisation of groups through climate action), political misrepresentation (exclusion and mis-framing of issues in climate change decision-making) for creating barriers for some people to fully participate in the society (Biermann & Kalfagianni, 2020).

#### *2.2.2.3 Justice mechanisms*

The philosophical traditions have different mechanisms to enhance justice. For instance, liberal egalitarianism considers a national welfare state as a mechanism to make a society more just. The government would then have the role of supporting their citizens with economic and social well-being, in areas that for example is compromised by climate change. This is achieved through substantial taxation, for example, through national tax on carbon emissions or through strong national regulation on emission allowance of companies and heavy polluters.

Cosmopolitanism finds global redistribution as a way to promote global justice, since it would “support the needs of the poorest within and among countries” (Biermann & Kalfagianni, 2020, p. 11) and also of those who are most vulnerable to the effects of climate change. The philosophical tradition supports redistribution through a global tax system, such as global carbon dioxide taxation and global financial transaction taxes, in which climate change polluters pay for their emissions (Pedersen, 2010). To manage such tax mechanisms, cosmopolitans support the idea of an international taxation organisation (Biermann & Kalfagianni, 2020). In addition, transparency and accountability of global financial activities, such as for activities that heavily contribute to climate change, are also highlighted by the philosophical tradition (Biermann & Kalfagianni, 2020).

Similarly to liberal egalitarianism, the capabilities approach also assign governments a central responsibility, here in relation to enhancing the capabilities of climate change vulnerable individuals and communities to improve their lives, through proper institutional structures (Nussbaum, 2011). For example, poor individuals, forest as well as indigenous communities and small island states inhabitants are considered as vulnerable to climate change (Schlosberg, 2012). On an international scale, networks of international treaties on climate change are perceived as a mechanism to facilitate goals of capabilities (Biermann & Kalfagianni, 2020). Moreover, followers of the capabilities approach also argue for the responsibility of richer countries to help poorer countries in mitigating and adapting to climate change, as climate

change negatively affects individuals “capability of a safe and hospitable environment” (Schlosberg, 2012, p. 454; Biermann & Kalfagianni, 2020; Nussbaum, 2011). Further, the “expansion of the human rights framework for climate justice” is closely related to the capabilities approach (Schlosberg, 2012, p. 449). Basic human rights, right to development and specific environmental rights are linked to this expansion (Schlosberg, 2012). In addition, democracy is considered an important mechanism to advance justice, as it allows political and public participation in which demands of climate justice can be pursued (Biermann & Kalfagianni, 2020).

Libertarianism opposes the idea of governments as a mechanism to promote justice, Libertarians disagree with a “global redistributive funding mechanism” (p. 12), and instead finds free markets with limited governmental inference as the main mechanism to promote climate justice (Biermann & Kalfagianni, 2020). A market-based mechanism that internalises climate risks in the market, which is the social costs that economic activities have on climate change, is seen as a way to mitigate the effects of climate change and promote climate justice. Examples are greenhouse gas emission trading schemes and carbon pricing (Page, 2012).

Lastly, the strategy of the critical approach to enhance climate just societies is by “dismantling institutionalized obstacles that prevent some people from participating as peers in social life” (p. 12), both nationally and globally, in relation to climate change (Biermann & Kalfagianni, 2017). The perspective rejects strong institutions and states to decide upon matters of justice and rather argues for inclusive dialogues between formal institutions and civil society on matters of climate change. Such dialogue should follow values such as recognition and representation of individuals and would require us to “rethink the public sphere” (p. 9) of political decision making (Fraser, 2008).

### **2.3 Analytical framework**

Based on the conceptual framework by Biermann & Kalfagianni (2020) and additional literature on climate justice norms discussed in more detail in chapter 2.2, an analytical framework has been developed (see Table 1). By focusing on core justice statements, the analytical framework includes indicators for each of the philosophical approaches. This framework has been used to identify the conceptualisations of climate justice among intergovernmental and transnational institutions.

**Table 1.** Analytical framework for identifying conceptualisations of climate justice. Adapted from Biermann & Kalfagianni (2020, p. 20) and Dirth et al., (2020, p. 3) as well as and other sources from chapter 2.2.

Philosophical traditions	Subjects of justice	Metrics and principles	Mechanisms of justice	Proxies
<i>Liberal egalitarianism</i>	National borders relevant. Focus on individuals as members of a nation, especially those vulnerable to climate change in the nation.	The least advantaged members of society benefit most from national policies and institutions.  Difference principle.  National polluter pay principle (e.g. national carbon tax).	National welfare state (national redistributive governance, such as distribution of climate change burdens)	Equal rights, personal freedom, liberty, liberal, equal distribution, redistribution, equal opportunities, the difference principle, welfare state, national citizens, national taxation
<i>Cosmopolitanism</i>	National borders irrelevant.  Global interdependence among all individuals, communities and states (a form of a global community).  Concerns those most vulnerable to climate change globally, such as developing countries and small island states.	All individuals worldwide can satisfy basic human needs necessary for human survival:  <u>Need-based minimum floor principle:</u> 1. basic needs 2. basic liberties 3. fair global cooperation (e.g. recognising of the special circumstances of developing and small island states countries) 4. supportive social and political arrangements) (Brock, 2009).  Global difference principle; Common but differentiated responsibility principle.  Global polluter pay principle.  Per capita equity principle.	Global redistributive governance to support those poorest and vulnerable to the effects of climate change, through a global tax mechanisms (e.g. global carbon tax).  Increasing transparency and accountability of climate change contributing global financial transactions.	Equal distribution, redistribution, global difference principle, per capita equity, global community, human rights, fair international cooperation, global tax mechanisms, polluter pay principle (historical responsibility principle), common but differentiated responsibility principle  Human needs, need-based minimum floor principle, living standard, basic liberties.
<i>Capabilities approach</i>	National borders irrelevant.  Concerns individuals and communities distinguished based on their capabilities to enhance well-being.  Focus on those that have their well-being harmed or threaten by climate change, such as future generations, indigenous and forest communities, individuals from small-island states.	All individuals can live a life ‘worth living’, despite the effects of climate change, based on a number of basic requirements that fit their capabilities.  Environmental factors have an instrumental value to the capabilities of humans.  Recognition of people and places and enabling public participation.	Decentralized support systems to advance the dignity and the ability of climate change vulnerable individuals and communities to fully develop their capabilities.  Richer countries supporting poorer countries in mitigation and adapting to climate change.  Supporting human rights in relation to climate justice.  Democratic processes in which climate justice can be pursued.	Capabilities, human development, human needs, human dignity, well-being, human flourishing, environmental rights, communities, democracy, political and public participation, recognition, deliberation, future generations (capabilities)
<i>Libertarianism</i>	National borders irrelevant.  Individuals having violated their rights to protect themselves, their properties and their rights to environmental conditions, from damaging effect from climate change	Securing freedom of choice for all (with limited governmental interference), in relation to climate change action.  Free market exchange.  Equal right to liberty.  Polluter pay principle.	Global free markets; market-based mechanisms, such as carbon emission trading schemes and carbon pricing.	Liberty, equal right, (free) market, market exchange, market-based mechanism, property right, self-ownership, greenhouse gas/carbon emission trading, polluter pay principle, limited state interference, global free trade, non-redistribution

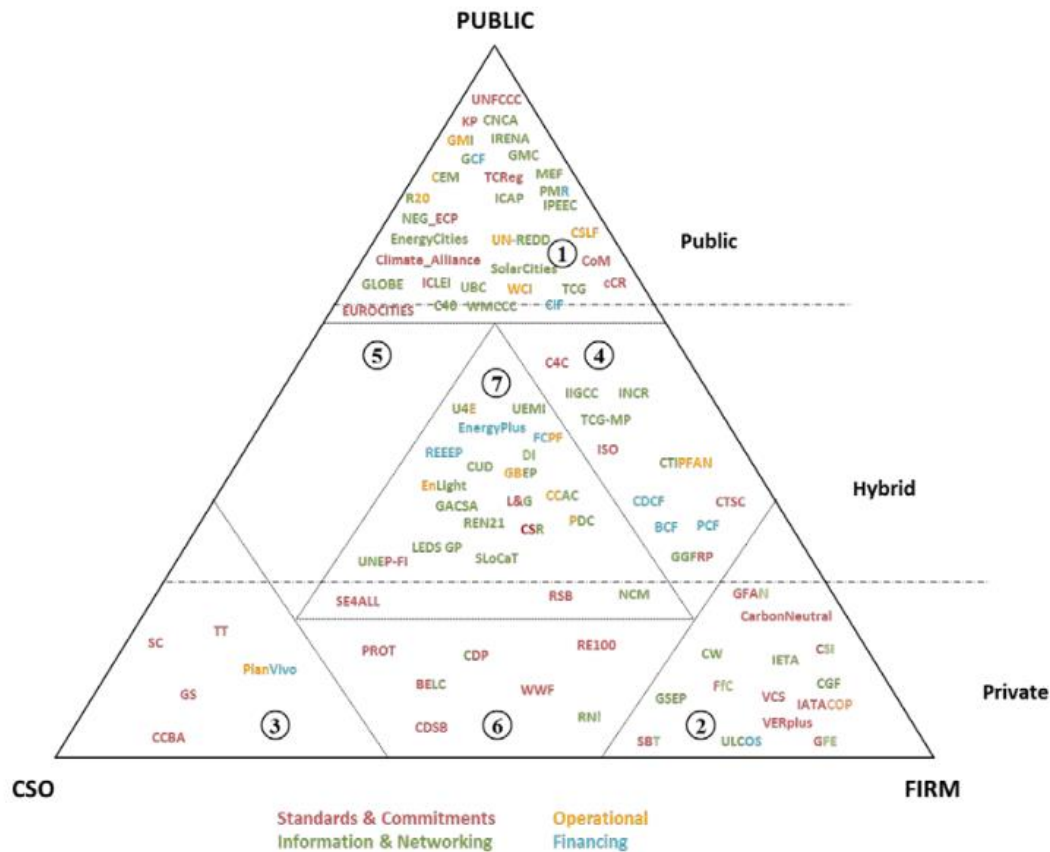
<i>Critical perspectives</i>	National borders irrelevant.  Individuals, communities and classes victims of subjugation related to gender, social status and identity, in relation to climate change.	Breaking down oppressive structures so that all individuals are recognized and able to participate as equals in public life:  Participatory parity in economic, cultural and political dimensions of life related to climate change actions.	National and global destruction of oppressive institutionalised structures of subjugation in relation to climate change (maldistribution, marginalisation, political exclusion).  Inclusive dialogues between formal institutions and civil society on climate change issues.	Representation, recognition, inclusiveness, participation, participatory parity, deliberation, democracy, redistribution, ethnic minorities, culture, gender, social class, social status, social identity, civil society dialogue, transnational class and gender conflicts
------------------------------	---	--	---	--

## 2.4 The institutionalisation of climate justice norms in global climate governance architecture

Intergovernmental and transnational institutions can be understood as complexes of norms and rules (Finnemore & Sikkink, 1998; Keohane, 1988). Thus, norms exist within such institutions, as institutions adopt specific types of norms (Finnemore & Sikkink, 1998; Sandholtz, 2008). As mentioned, intergovernmental and transnational institutions are a part of the global climate architecture. Hence, Widerberg et al. (2016)<sup>6</sup> have proposed a global climate governance triangle showing which institutions operate within the governance domain of climate change. This governance triangle was originally created by Abbott (2012), and it focuses on transnational initiatives in the regime complex on climate change. Starting from the Abbott's triangle, Widerberg et al. (2016) developed an updated version that incorporates both transnational and intergovernmental initiatives, within the climate governance architecture. The intergovernmental part stems from the work on international institutions in the climate regime complex carried out by Keohane & Victor (2011). The governance triangle is presented in Figure 3.

The governance triangle of Widerberg et al. (2016) consists of totally 89 institutions. Based on the type of governance involvement, they are grouped into three “tires” or groups, which include public, hybrid and private institutions. Hybrid institutions are government units that share governance with businesses and/or civil society organisations in a public-private partnership, while private institutions are mainly firms and civil society organisations (Widerberg et al. 2016).

<sup>6</sup> For more detailed information about the climate change governance triangle please refer to Widerberg, O., Pattberg, P., & Kristensen, K. (2016). *Mapping the Institutional Architecture of Global Climate Change Governance (Technical Report No. 2)*. IVM Institute for Environmental Studies.



**Figure 3.** Global climate change governance triangle. Adapted from Widerberg et al. (2016, p. 15).

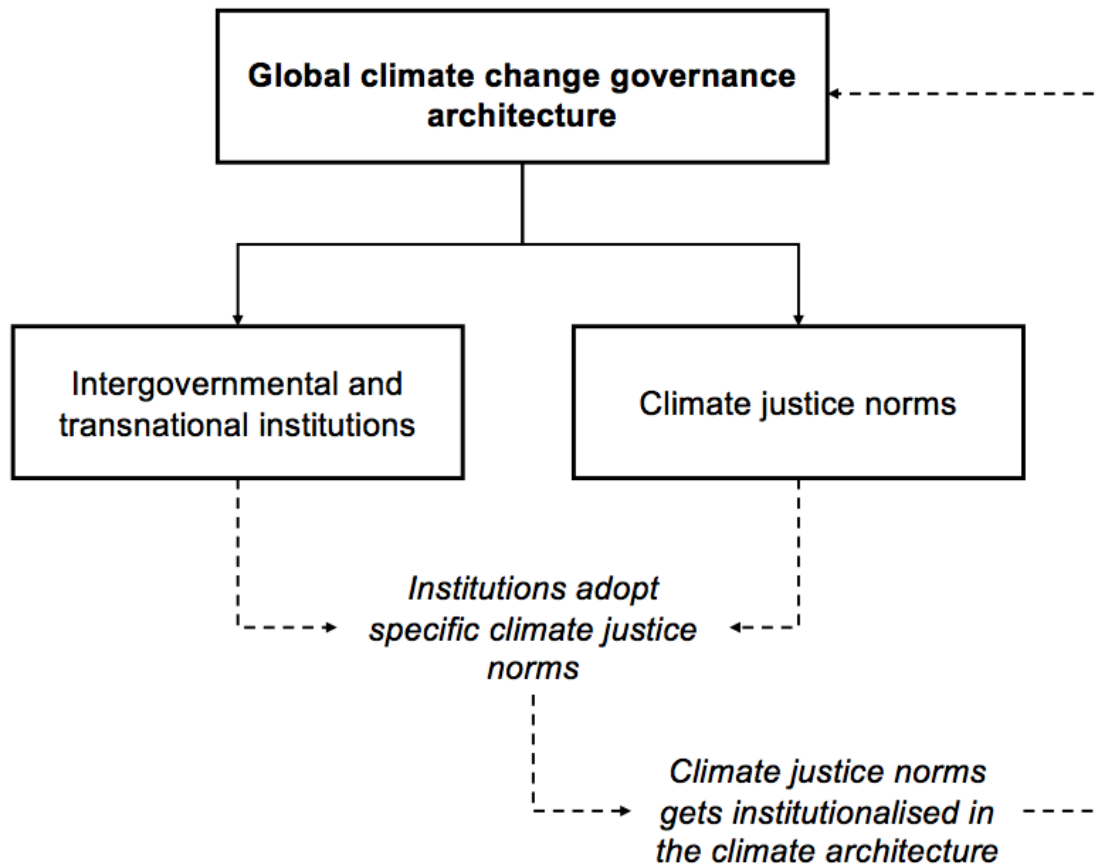
According to Bernstein (2000), norms become important when they are institutionalised by intergovernmental and transnational institutions. The concept of institutionalisation has different meanings across different disciplines and according to the contexts it is used. However, it has been often used to describe the emergence of institutions, and the interactions between them. (March & Olsen, 1998; Tolbert & Zucker, 1999; van Tatenhove & Leroy, 2000). In environmental politics, it is often used to describe the “permanent process of construction and reconstruction of both content and organisation of environmental politics” (van Tatenhove & Leroy, 2000, p. 29). For the purpose of this study, institutionalisation in relation to norms is understood as a process, in which norms become “collective or a part of social structure” (Bernstein 2000, p. 467). The global climate governance architecture can be understood as a social structure, since it constitutes a system of intergovernmental and transnational institutions (Hafner-Burton et al., 2009; Kim, 2019). Therefore, climate justice norms are institutionalised when they are adopted by intergovernmental and transnational institutions within the climate architecture. Climate justice norms are adopted by institutions when they are perceived as

legitimate by the institutions and they operate with such norms in their policy goals, interests, and activities, and eventually outcomes (Bernstein, 2000; Sandholtz, 2008).

Climate justice norms can be institutionalised to different degrees, and highly institutionalised norm have broad acceptance from international actors (Finnemore & Sikkink, 1998). The question that follows is how can the degree to which a climate justice norm is institutionalised in global climate architecture be understood? According to Bernstein (2000), the degree a norm is institutionalised can be understood from “the norm's frequency or “density” in social structure, that is, the range of the instrument, statements and so on that invoke the norm” (p. 467). Based on this, a norm’s frequency or density is the number of times institutions refers to the norm in official communication. This shows the normative weight institutions assign to a climate justice norm. Also Gach (2019) uses the approach of focusing on the language or mechanisms in institutions that support a specific climate justice norm. A climate justice norm can, therefore, be understood to be highly institutionalised when it has a central position or is highly prevalent in the social structure of the climate architecture, since many institutions would refer to it (Florini, 1996). A climate justice norm acquires a central position or high prevalence in the global climate architecture when a high number of references from institutions to the norm is made, relatively to other existing climate justice norms, meaning that a high number of total institutions within the global climate architecture not only have adopted the norm, but also emphasising it in official communication. As clarification, the main relationships between climate justice norms, intergovernmental and transnational institutions and the global climate architecture are illustrated in Figure 4.

Another important debate related to the institutionalisation of climate justice norms is how institutionalisation takes place. Accordingly, the power and legitimacy an institutions have in promoting and defining a norm, plays an important role in understanding how climate justice norms get institutionalised (Bernstein, 2000; Finnemore & Sikkink, 1998; Florini, 1996; Stiles & Sandholtz, 2008). The present study does not focus on *how* norms get institutionalised in the climate architecture, but rather on *what* is institutionalised and to which *extent*, the how-debate falls outside the scope of this study. However, it is acknowledged that the institutions that adopt norms are not considered as equal in terms of power and legitimacy, but this is not assessed due to thesis feasibility reasons.





**Figure 4.** Conceptual framework of the relation between climate justice norms, intergovernmental and transnational institutions and the global climate governance architecture<sup>7</sup>.

### 3 Methodology

#### 3.1 Research strategy

This study assesses empirically the adoption of climate justice norms among selected intergovernmental and transnational institutions (units of observation) as well as the degree of insitutionlisation of such norms in the overall governance architecture. The research strategy combines both qualitative and quantitative research methods (Verschuren & Doorewaard, 2010). A qualitative literature review is conducted as well as a discourse network analysis. The latter includes both a qualitative text analysis and a quantitative statistical approach to create and analyse networks. (Verschuren & Doorewaard, 2010) This chapter describes the selection process for intergovernmental and transnational institutions, the process of the literature review,

the different steps in the discourse network analysis and the research materials that have been used.

### **3.1.1 Literature review**

The first step consisted of conducting a literature reviews on the topic of climate justice, international norms and institutionalisation of norms. The findings of this review have resulted in the conceptual and analytical framework.

### **3.1.2 Selection of intergovernmental and transnational institutions**

To cover the diversity of the climate governance architecture, the selection of intergovernmental and transnational institutions was based upon the global climate governance triangle proposed by Widerberg et al. (2016) (see chapter 2.4). The intergovernmental and transnational institutions were selected based upon the following functions: (i) intergovernmental and transnational institutions with (ii) not only the manifested intention to steer policy and the behaviour of their members or a broader community but which also (iii) explicitly address the common climate governance goal, which can be accomplished by (iv) significant governance functions (Widerberg et al., 2016). Specifically, intergovernmental and transnational institutions that address matters of climate justice were selected out of the 89 institutions listed in the governance triangle available on the online database Connect-It (<http://connect-it-climate.eu/>).

To reduce the complexity of the analysis, without compromising accuracy, the number of institutions was limited to 30. The representativeness of the different types of institutions (public, hybrid and private) was taken into account, according to their weight in the overall 89 institutions. Accordingly, the public, hybrid and private groups included respectively 11, 10 and 9 institutions, which were randomly picked from each group. The random selection was coupled to a screening, to ensure the connection to climate justice. This was done by carrying a specific terms search in documents and webpages of the institutions. The search terms related to climate justice were: (climate) justice; just; fair/fairness; (climate) equality; equity, while the proxies presented in Table 1 were used as search terms for the philosophical traditions. Until the complete fulfilment of the 30 slots, the randomly selected institutions were substituted with other randomly picked institutions when the following points were not respected:

1. Did not address matters of climate justice.
2. Unable to obtain sufficient information or data.

3. If the operational time was exceeded, institution inactive.

The selection process resulted in the selection of the institutions listed in table 2.

**Table 2.** List of selected and analysed intergovernmental and transnational institutions, and data material.

<b>Institutions</b>	<b>Abbreviation</b>	<b>Year</b>	<b>Type</b>	<b>Data material</b>	<b>References</b>
Clean Energy Ministerial	CEM	2009	Public	Webpage, organisation brochure	(Clean Energy Ministerial, n.d., 2019)
Carbon Neutral Cities Alliance	CNCA	2014	Public	Webpage, annual report, report	(CNCA, n.d., 2019)
Covenant of Mayors	CoM	2008	Public	Webpage, annual report, statute	(CoM, n.d.; Covenant of Mayors, n.d., 2018)
Kyoto Protocol	KP	1997	Public	Webpage, treaty	(UNFCCC, n.d.b; United Nations, 1998)
Partnership for Market Readiness	PMR	2010	Public	Webpage, governance framework	(PMR, 2017, 2019)
R20	R20	2010	Public	Webpage, annual report	(R20, 2018, 2019)
Union of Baltic Cities	UBC	1991	Public	Webpage, statute, strategy paper	(UBC, n.d.a, n.d.b; Union of the Baltic Cities, 2019)
International Renewable Energy Agency	IRENA	2009	Public	Webpage, statute	(IRENA, n.d., 2009)
United Nations Framework Convention on Climate Change	UNFCCC	1992	Public	Webpage, statute	(UNFCCC, n.d.a; United Nations, 1992)
UN Global Compact Caring for Climate	C4C	2007	Public	Webpage, Progress report	(Caring for Climate, 2016; United Nations Global Compact, n.d.)
Forest Carbon Partnership Facility	FCPF	2008	Public	Webpage, charter	(FCPF, 2015, 2018)
The Consumer Goods Forum	CGF	2009	Private	Webpage, statute, organisation brochure	(CGF, 2016, 2019, 2020)
International Emissions Trading Association	IETA	1999	Private	Webpage, report	(IETA, n.d., 2019)
Verified Carbon Standard	VCS	2007	Private	Webpage, program guide	(VCS, n.d.; Verra, n.d.)
Climate, Community and Biodiversity Alliance (CCB Standard)	CCBA	2003	Private	Webpage, report	(CCBS, n.d., 2017)
The Gold Standard	GS	2004	Private	Webpage, annual report	(Gold Standard, n.d., 2018)

Plan Vivo	PlanVivo	2008	Private	Webpage, standard	(Plan Vivo, n.d.b, n.d.a)
SocialCarbon	SC	2008	Private	Webpage, standard, policy document	(Social Carbon, n.d.b, n.d.a, 2013)
Greenhouse Gas Protocol	GHGP	1998	Private	Webpage, standard, policy document	(GHGP, n.d.b, n.d.a, n.d.c)
Science Based Targets	SBT	2014	Private	Webpage, progress report	(SBT, n.d., 2019)
Climate Disclosure Standards Board	CDSB	2007	Private	Webpage, framework document	(CDSB, n.d., 2019)
BioCarbon Fund	BCF	2004	Hybrid	Webpage, annual report	(BCF, n.d., 2019)
Climate and Clean Air Coalition	CCAC	2012	Hybrid	Webpage, vision statement, report	(CCAC, n.d., 2014, 2019)
Global States and Regions Annual Disclosure	GSRAD	2015	Hybrid	Webpage, annual report	(Climate Group, n.d.; GSRAD, 2019)
Divest-Invest	DI	2014	Hybrid	Webpage, strategy paper	(Divest-Invest, n.d., 2017)
Global Alliance for ClimateSmart Agriculture	GACSA	2014	Hybrid	Webpage, framework document	(FAO, n.d.; GACSA, 2014)
Global Bioenergy Partnership	GBEP	2007	Hybrid	Webpage, strategy paper, statute	(GBEP, 2012, 2016)
Portfolio Decarbonisation Coalition	PDC	2014	Hybrid	Webpage, brochure, annual report	(PDC, n.d., 2015, 2017)
The Renewable Energy Policy Network for the 21st Century	REN21	2005	Hybrid	Webpage, annual report	(REN21, n.d., 2019)
Sustainable Energy for All	SEforALL	2011	Hybrid	Webpage, annual report, statute	(SE4ALL, n.d., 2018, 2019)

### 3.1.3 Discourse network analysis

A discourse network analysis was used in order to discover the degree to which norms are institutionalised within the global climate governance, which can be understood by analysing the underlying structure of global governance architectures. This can be done by creating networks of intergovernmental and transnational institutions and climate justice norms within the architecture, based on their institutional interlinkages, which in this case is institutions references to climate justice norms (Kim, 2019; Widerberg, 2016). Such networks are what call a social network, which functions as a group of socially relevant nodes (network members) which are connected by one or more relations. Based on this definition, dynamic networks

consisting of intergovernmental and transnational institutions as one type of node, and climate justice norms as another were created. By calculating centrality values of climate justice norm nodes in the network, the degree to which the norm is institutionalised in the global climate architecture was determined.

This type of global governance network analysis has been recently emerging . It has been mostly used to study interaction among actors, as well the relation between actors and their use of thematic concepts or discourses (Chen, 2018; Fisher et al., 2013; Leifeld, 2017; Sanderink, 2020).

The software NVivo was used to analyse data material and the software Gephi 0.9.2 to create networks and calculate network metrics<sup>8</sup>. The next sub-chapters describe the different steps of the discourse network analysis.

### *3.1.3.1 Identifying climate justice norms*

Based on the conceptual framework, climate justice norms are institutionalised if adopted by intergovernmental and transnational institutions within the climate architecture. In order to understand which climate justice norms are institutionalised, the first part of the analysis identified, through a text analysis, the specific climate justice norms that intergovernmental and transnational institutions adopt.

Networks were made by analysing the discourses of climate justice that institutions adopt<sup>9</sup>. A discourse can be defined as “an ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices” (Hajer & Versteeg, 2005, p. 175). The method of analysing discourses is therefore relevant for the case of norms, as it makes us able to analyse meanings, understandings and concepts of climate justice norms in text (Hajer & Versteeg, 2005). Norms can be identified among institutions as norms express a certain “quality of “oughtness” and shared moral assessment, norms prompt justifications for action and leave an extensive trail of communication among actors that we can study” (Finnemore & Sikkink, 1998, p. 892). Climate justice norms are mostly explicitly stated by intergovernmental and

<sup>8</sup> Although the scholar Philip Leifeld has developed a software specifically for this purpose, called Discourse Network Analysis (DNA), it is not used in this thesis due its deficiencies. Instead, the softwares NVivo and Gephi 0.9.2 are used as they provide more flexibility and simplicity in usage.

<sup>9</sup> Discourses and norms are related, but different in the way that “norms can be specified with greater analytic rigor” (Bernstein, 2000, p. 468). Following this definition, the discourse network analysis is therefore not used to identify discourses on climate justice, but to identify specific climate justice norms references in intergovernmental and transnational institutions, in central official documents.

transnational institutions, and when they are operated by institutions in their policy goals, interests, and activities as well as referred to in treaties, resolutions, declarations, rules, standards and strategies, and they can hence be identified thereby (Bernstein, 2000).

In the software NVivo, central documents and webpage information (presented in chapter 3.2) of intergovernmental and transnational institutions were uploaded, and textual analysis was conducted by using the analytical framework developed in chapter 2.3. In the text analysis, “statements” from relevant documents and webpages were coded as references to the specific climate justice norms presented in the analytical framework. "Statements" were understood as a sentence that reveal information on the institutions' discourse or conceptualisation of climate justice, thereby indicating a specific climate justice norm.

Once a statement was assumed to represent the perspective of one of the philosophical categories, a “node” was created in NVivo. To be able to identify the philosophical traditions, the analysis aimed at identifying specific subjects, mechanism, metrics and principles of justice. This resulted in 24 specific norms or sub-nodes. This was also done to ensure a detailed picture of existing climate justice norms and to have enough nodes for creating informative networks. The five main philosophical perspectives functioned instead as overarching norms.

After coding references (statements) to climate justice norms in the selected data material, a dataset of interlinkages between intergovernmental and transnational institutions and specific climate justice norms was extracted from NVivo as a matrix. The interlinkages of the network structure were hence analysed by the produced dataset. Moreover, it was inferred to which degree identified climate justice norms are institutionalised in the overall network structure.

### *3.1.3.2 Analysing the degree of institutionalisation of climate justice norms*

Taking basis in the conceptual framework, a climate justice norm is highly institutionalised when a high number of total institutions within the global climate architecture have adopted the norm. This means that a high number of references from institutions to the norm is made, relatively to other existing climate justice norms. In order to understand the degree to which climate justice norms are institutionalised in the global climate architecture over time, networks were created in order to visualise and quantitatively measure the centrality of certain climate justice norms (number of references to the norm).

The networks were created based on interlinkages between climate justice norms and intergovernmental and transnational institutions developed in the previous step. By importing the dataset from NVivo, networks were created by using a software called Gephi 0.9.2.

### *Affiliation network*

Affiliations network is useful to study and visualise institutions references to climate justice norms over time, as well as to create the congruence network, and to calculate network metrics. A affiliation network (bipartite network) is a network that shows the binary relationship between the “members” of two types of node groups, which in this case is the institutions and the climate justice norms, hence the name “two-mode network” (Scott & Carrington, 2011). Affiliation networks shows how the intergovernmental and transnational institutions (nodes) are connected to specific climate justice norms (nodes), by referring to the norm (link or edge) (Leifeld, 2017; Scott & Carrington, 2011). The link between the institutions and climate justice norms have weighted values, which represent the number of times an institution have referred to the same norm (the strenght of the link). When an insitution refers to many different norms, the weighted degree of the link expresses how much an institution prefers a specific the norm. This provides a more accurate picture of references to norms. Moreover, the links are also undirected, which means that there is no direction of the link as relationship is reciprocital.

Three different affiliation networks were created for overall timeframe which ranges from the date of the creation of the earliest institution (1991) to the most recent institution (2015) in the selection. This overall timeframe was divided into three equal smaller timeframes, so to assess the time evolution of the climate justice norms’ conceptualisations in the global climate architecture. The timeframes were: 1991-1998, 1991-2006 and 1991-2015.

In network analysis, attributes can be assigned to each node (Scott & Carrington, 2011). Attributes such as the type of institution, public, hybrid and private, and year of establishment, were assigned to the institution nodes. Similarly, philosophical tradition affiliation and first year of appearance were attributed to the climate justice norm nodes.

### *Congruence network*

Congruence networks, often referred as one-mode, were created in order to investigate the affiliation networks and central climate justice norms in further details. Specifically, such networks were useful to figure out how central climate justice norms are connected to other norms, and how institutions are connected to each other based, both based on co-referencing. Congruence networks can be derived from the affiliation network by extracting binary relations between same the types of nodes based on their co-reference to the other types of nodes in the network (Scott & Carrington, 2011). The links were undirected and weighted (representing the strength of the connection between nodes) and attributes were assigned to the nodes.

One congruence network of institutions is created. The first, a congruence networks of the institutions, was used to infer the relations between each analysed intergovernmental and transnational institutions as a function of their reference to the same climate justice norms (Leifeld, 2017). The institution congruence network allows us to identify cohesive subgroups, which can be understood as what Hajer (1993) defines as discourse coalitions, actors in a group with common social construct (Leifeld, 2017).

A congruence network of climate justice norms was not attempted as it would not provide sufficient additional information to the affiliation network.

### *Centrality metrics*

In network theory, centrality is one of the most used approaches in understanding how influential a node is in a network, based on its advantageous structural position (Scott & Carrington, 2011). Moreover, Scott & Carrington (2011) categorise three main different ways of calculating centrality, namely degree, closeness and betweenness. As the degree centrality measures the number of edges (links) a node has with members of the other node group, and the edges representing a reference to a norm, is therefore matched the study's conceptualisation of degree of institutionalisation, thus being the most relevant approach.

The use of centrality metrics permits to measure the degree of institutionalisation of particular justice norms over others and to reveal which norms have gained traction, and which have become marginalised. According to the conceptual framework, the central position a climate justice norm has in the global architecture, measured by number of references to the norm from the institutions, determines the degree of institutionalisation in the architecture. In order to measure the centrality of climate justice norms, the degree centrality metric, both weighted and unweighted was calculated for each norm of the affiliation network in Gephi 0.9.2. Weighted degree centrality was chosen because it takes into account the weights of the edges (links) in the network (Scott & Carrington, 2011). For the climate justice norms nodes, the weighted degree equals to its total number of references from the institutions, while for the institutions, the value is equal to the number of references made by the institutions. It is the main measurement for the degree of institutionalisation of climate justice norms. As consequence, the most institutionalised norm is the one with the highest weighted degree centrality. On the other hand, the unweighted degree centrality indicates the number links (edges) a climate justice norm node has with the institution nodes, and shows the number of institutions that have referred to the climate justice norm (Scott & Carrington, 2011; Borgatti,



2005). Differently, in congruence network the weighted degree of an institution indicated the sum of similar norm references per institution.

### **3.2 Research materials**

Scientific literature was used to define the research problem and to develop the conceptual and analytical framework (Verschuren & Doorewaard, 2010). Additionally, related to the discourse network analysis, evidence of norms were drawn from “legal texts, in policy documents, reports, communications, strategy papers, and other possible (non-legal) relevant texts” (p. 20) of intergovernmental and transnational institutions (Pattberg et al., 2014). Therefore, for each of the selected institution, webpages and published official documents were analysed. The webpages of institutions are relevant as the mission, approach and strategy of the institutions is often clearly stated. Moreover, due to time limitation, one or two official documents was chosen from each institution, depending on the quality of information. The selection of the official documents varied in document type, due to differences in availability. The first choice was to select an institutions’ legal agreement or statute. If this was not available, recent annual reports, strategy papers or similar documents were selected. These documents were chosen as they usually contain core information related to institution’s goals and activities. Also, the official documents needed to be accessible for the public online. An overview of the selected data material per institution can be found in Table 2.

### **3.3 Limitation of methodology**

Despite the related potentiality, the methodology presented limitations. First, the climate governance triangle of Widerberg et al. (2016), which the institutions were chosen from, only contains institutions up to 2016. Institutions established afterward were hence not included. However, due to the time constraints, the update of the triangle by the inclusion of more recent institutions would have compromised the feasibility of the thesis. Second, regarding the analytical framework, in case of overlapping conceptualisations between philosophical traditions identical statements extrapolated from institutions were coded on several climate justice norms. An example is the topic health, which can be seen as a basic need for cosmopolitanism, and as a capability for the capabilities approach. Third, in some cases, the variations in size and the type of documents analysed per institutions might have affected the weighted edge value in the affiliation network. However, excluding weighted edges would have been even more misleading: for example, an institution references to one type of climate justice

norm thirty times would then have been considered as equal to a norm only referred to one time by another institution.

## 4 Identified climate justice norms

In total, 30 intergovernmental and transnational institutions have been selected and analysed, which includes 11 public, 9 private and 10 hybrid institutions (see table 2). Throughout the analysis, all of the five philosophical traditions were referred to by one or more institution. For each philosophical tradition, sub-categories of climate justice norms have been identified, based on different aspects of justice (subjects, metrics and principles, and mechanisms). In total 24 sub-categories have been referred to by one or more institutions. A list of identified main and sub-categories of climate justice norms can be seen in Table 3.

**Table 3.** List of all the established main and sub-categories of climate justice norms (main categories ordered after number of references).

Climate justice norm	Aspects of climate justice
<u>Capabilities approach</u>	
Advance capabilities of individuals and communities	Metrics and principles, mechanisms <sup>10</sup>
Central role of governments (capabilities)	Mechanisms
Decentralised support system	Mechanisms
Responsibility of corporations and civil society	Mechanisms
Richer countries assisting poorer countries	Mechanisms
<u>Cosmopolitanism</u>	
Common but differentiated responsibility principle	Metrics and principles
Equal rights and opportunities (globally)	Metrics and principles
Global community and interdependencies	Subjects of justice
Global redistribution (considering vulnerable)	Mechanisms
Need-based minimum floor principle	Metrics and principles
<u>Critical perspectives</u>	
Destruction of disparities	Mechanisms
Inclusive dialogues between formal institutions and civil society	Mechanisms
Participatory parity	Metrics and principles
Recognition of victims of subjugation	Subjects of justice
<u>Liberal egalitarianism</u>	

<sup>10</sup> The established category “advance capabilities of individuals and communities” represent two aspects of climate justice as metrics and principles and mechanisms often overlapped and was hard to distinguish in the text analysis

Central role of governments (liberal egalitarianism)	Mechanisms
Difference principle (national)	Metrics and principles
Equal rights and opportunities (national)	Metrics and principles
Fair redistribution (national)	Mechanisms
National borders relevant (cooperation across borders)	Subjects of justice
<b>Libertarianism</b>	
Market-based mechanisms	Mechanisms
Ownership	Metrics and principles
Polluter pay principle	Metrics and principles
Self-ownership	Subjects of justice

---

In sum, 1259 number of references from the institutions have been coded on the different climate justice norms. The distribution of the references for every institution and norm can be seen in Table 4. This table can be used to understand the how many references an institution made in total, which climate justice norm it referred to the most, and which norms it neglected. Also, the table serves as input for the creation of networks in the software Gephi 0.9.2.

The following chapter will address each intergovernmental and transnational institutions and the climate justice norms they make a reference to, explained around the topic of subjects, metrics and principles and mechanisms, followed by a short conclusion. A short description of each institution can be found in the appendix.

**Table 4.** Analysed intergovernmental and transnational institutions, and number of references coded at specific climate justice norms. Yellow colour = capabilities approach; green colour = cosmopolitanism, pink colour = Critical perspectives; orange colour = liberal egalitarianism; blue colour = libertarianism.

Institution/Climate justice norm	Advance capabilities of individuals and communities																	Central role of governments (capabilities)										Decentralised support system										Responsibility of corporations and civil society										CDRP principle and difference principle										Global community and opportunities (globally)										Need-based redistribution (considering vulnerable)										Transparency and accountability global										Inclusive dialogues between formal institutions and civil society										Recognition of victims of subjugation										Difference principle (liberal or local)										Fair redistribution (national or local)										National borders relevant (cooperation across borders)										Market-based mechanisms										Ownership										Polluter pay principle										Self-ownership																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
BioCarbon Fund	28	0	0	4	4	3	0	9	0	10	0	8	11	10	7	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## 4.1 Clean Energy Ministerial

The way the CEM mention subjects of justice based on two conflicting philosophical traditions. CEM mainly refers liberal egalitarianism, as it recognises the importance of national borders as collaboration is only to occur between specific nations and ministries (Clean Energy Ministerial, 2019). However, it also makes references to the cosmopolitan thought of individuals as a part of a global community having global interdependence, as it acknowledges that greenhouse gasses are a global issue, that needs to be solved through “global action” (Clean Energy Ministerial, 2019, p. 2), in “all regions of the world” (Clean Energy Ministerial, n.d.).

The dominant metrics and principles of justice in the CEM is represented by the capabilities approach, as their activities are conducted in order to meet “growing global energy needs” and “improving energy security” (Clean Energy Ministerial, 2019, p. 3, ) as means to improve human capabilities. Furthermore, the principle of participatory parity of the critical perspective is also mentioned by the CEM, as one of the goals of the organization is to “increase gender diversity in the energy sector” (p. 34) and to “close the gender gap in the energy sector” (Clean Energy Ministerial, 2019, p. 34). Besides, the least dominant principle mentioned is the cosmopolitan need-based minimum floor principle, by emphasising fair global cooperation.

Regarding mechanisms to achieve justice, the idea of the capabilities approach of advancing capabilities in terms of meeting global energy needs, health, economic security and political control over one’s environment is the most dominant in the CEM. Moreover, decentralised support systems (capabilities approach) is also referred to, by claiming that “global action and increased cooperation between national and local governments is essential, as is identifying collaboration opportunities with global organisations”(Clean Energy Ministerial, 2019, p. 24). The least prominent mechanism for justice is a call for dialogue between civil society and formal institutions, representing the critical perspective.

Overall, the CEM is using a rather mixed language in conceptualising climate justice. A total of 34 references coded on different climate justice norm categories, from the statements of the CEM. The capabilities approach holds the majority of coded statements (14), followed by the critical perspective (9), cosmopolitanism (6) and liberal egalitarianism (5). The most dominant sub-norm is the “advance capabilities of individuals and communities” (capabilities approach), with 11 references.

## **4.2 Carbon Neutral Cities Alliance**

Regarding subjects of justice, a liberal egalitarianism language is dominant in the CNCA. When only a selective number of cities of 12 are members<sup>11</sup>, the institution recognizes the relevance of national borders and only includes individuals within those borders. Moreover, territorial relevance also becomes clear as the scope of emission reduction for each city is either directly or indirectly linked to the specific city’s boundaries. Although less emphasised, a critical perspective is also present in the CNCA, as marginalised individuals and communities of “color and low-income” are mentioned as subjects of justice.

<sup>11</sup> Although other cities might have the possibility to join if they aim for achieving carbon neutrality in 2050, the initiative is still globally excluding as their activities is mostly focused around only their members.

The most dominant metrics and principles of justice used by the CNCA is from the capabilities approach. For people and communities living in the member cities currently or in the future, the CNCA aims protect the capabilities: public health, job creation and opportunities, political participation, environmental protection (climate resilience), economic security and prosperity, energy security, empowerment and community well-being (CNCA, n.d., 2019). Followed, the CNCA also refers to the critical perspective several times, respectively participatory parity. Moreover, although less emphasised, the cosmopolitan principles of global equal opportunities and the need-based minimum floor principle and the liberal egalitarian difference principle and principle of equal rights and opportunities is identified in CNCA's statements.

Regarding mechanisms of justice, the CNCA makes most references to the capabilities approach, in terms of advancing people's capabilities through a thin and decentralised support system, in which the responsibility of governments to improve people's lives is central (CNCA report). The institution also makes several references the critical perspective, related to reduce and remove sources of disparities based on class and identity (CNCA, 2019, p.188) and inclusive dialogues between the members of the CNCA and civil society. Moreover, some references are also made to the liberal egalitarian mechanisms: governments having a central role, fair redistribution within cities and carbon taxes. In addition, also the libertarian market-based mechanism regarding carbon-pricing and carbon trade is referred to a few times. Lastly, the cosmopolitan global per capita emissions approach is mentioned once.

Concluding, the CNCA is adopting highly diverse conceptualisations of climate justice. In total, 127 references have been coded, on all the philosophical traditions, which makes the CNCA the institution with the highest number of references. 53 of these are coded on the most dominant norm, the capabilities approach, 40 at the critical perspective, 20 at liberal egalitarianism, and 5 at both cosmopolitanism and libertarianism. The most dominant sub-norm is the "advance capabilities of individuals and communities" (capabilities approach), with 46 references.

### **4.3 Covenant of Mayors (Europe)**

When defining subject of justice, liberal egalitarianism is the most dominant norm, as national borders seem to matter to the CoM since subjects of justice is limited to citizens living within the European Union and within the borders of the members cities. In addition, also the

cosmopolitan idea of global interdependencies among individuals and the critical perspective focus on victims of subjugation are expressed once.

The principle of justice that CoM emphasise the most is participatory parity (critical perspectives). It is reflected in CoM's action to reduce the energy expenses in households in deprived neighbourhoods and in the institution's "engagement of all relevant stakeholders" (CoM, n.d, p. 2). This principle is followed by the cosmopolitan need-based minimum floor principle, identified through CoM activities in protecting citizens from extreme heat, floods and droughts. Marginally represented in the CoM, is the liberal egalitarian version of the difference principle.

As a mechanism of justice, the CoM mostly refers to the capabilities approach, as it facilitates the capabilities of "present and future generations" (STATUTE, p. 1), by "enhancing the quality of life" (CoM, n.d, p. 1), "boosting the local economy and creating jobs, reinforcing stakeholder engagement and cooperation" (CoM, n.d, p. 1), and meeting energy needs. Also, the CoM adopt the idea of a decentralised support system as their approach is based on regional and local governments as actors of action. A few references are made to the critical perspective, which is reducing disparities between individuals through inclusive dialogues between CoM and the civil society. Lastly, the CoM also refers to central role of governments (limited to national borders) in taking climate action, which represent liberal egalitarianism.

Summarizing, the most dominant philosophical traditions for each aspect varies. The CoM makes 15 references to the most dominant tradition, the capabilities approach, 10 to liberal egalitarianism, 8 to the critical perspective and 3 to the marginally represented cosmopolitanism. In total 36 references are made, in which 11 is assigned to the most prominent sub-norm "advance capabilities of individuals and communities" (capabilities approach).

#### **4.4 Kyoto Protocol**

The KP mainly defines subjects of justice on the basis of cosmopolitanism, since interdependence between all individuals is expressed in terms of global emissions. Moreover, acknowledging historical emission of developed countries and their responsibility towards developing countries supports the idea of interdependence between states. However, it once mentions the conflicting idea that national borders are relevant in terms of cooperation across borders.

The KP is also using a strong cosmopolitan language when describing principles of justice, as the protocol claims to "binds developed countries, and places a heavier burden on

them under the principle of “common but differentiated responsibility and respective capabilities” (United Nations, 1998)

The mechanism of justice that the KP refers to the most is the responsibility of developed countries in assisting and supporting developing countries, either through financial initiatives or transfer of knowledge and technology, in reaching their capabilities (the capabilities approach). Followed by this the KP seem to support the idea of market-based mechanisms based on the trade of emissions permits, which represent a libertarian view.

Overall, 30 references are codes based on KP’s statements. The capabilities approach and cosmopolitanism share the place as the most dominant climate justice norm, both having 12 references. 5 references are assigned to liberalitarianism, while liberal egalitarianism is the most marginal norm with 1 reference. The most dominant sub-norm is the common but differentiated responsibility principle (12 references).

#### **4.5 Partnership for Market Readiness**

To the PMR, national borders are relevant, and it thereby defines subjects of justice on the basis of citizens of nations (liberal egalitarianism). This is based on that PMR-related activities are to be “developed on a country-specific basis and will build on the country’s existing initiatives to meet nationally defined priorities” (PMR, 2017, p. 1) while the institution only functions as platform to share lessons between countries.

No statements of the PMR clearly revealed specific metrics and principles of justice. However, regarding mechanisms of justice, libertarianism is the most dominant norm, as PMR focuses on carbon pricing, namely the market-mechanism emission trading. Another mechanism of justice, less prominent, is the liberal egalitarianism, and the concept of national redistribution of wealth through carbon taxes, enforced by governments. This concept conflicts with the libertarian perspective.

In sum, 25 references are coded and distributed among liberal egalitarianism (16) and libertarianism (9). This represent a low diversity of climate justice norms. The most dominant sub-norm is the liberal egalitarian “national borders relevant (cooperation across borders)” (10 references).

#### **4.6 R20**

When the R20 is defining subjects of justice, liberal egalitarianism is the most dominant norm. National borders are found relevant and justice seem to apply to citizens within the borders of



sub-national governments around the world (R20, 2018, 2019). In addition, the R20 is also defining subjects based on victims of subjugation, representing the critical perspectives. Marginally represented, the cosmopolitan view of subjects of justice is used once, in which R20 view individuals as a part of a global community.

Regarding metrics and principles, the R20 find the most dominant norm the capabilities approach. The R20 recognize the importance of enhancing capabilities of individuals and communities in a way in which improve public health, employment opportunities, affordable energy, empowerment of women, engagement of local citizens and wellbeing. Furthermore, several references are also made to the principle participatory parity (critical perspective). Followed, is the cosmopolitan view, in which statements reflecting the common but differentiated responsibility principle, the difference principle, principle of global equal rights and opportunities and the need-based minimum floor principle has been identified.

Belonging to the capabilities approach, the mechanism of justice that the R20 emphasise the most is the need of sub-governments to enhance capabilities of individuals and communities by fighting climate change and seem to stand for a decentralised support system to advance capabilities (R20, 2018). The idea of the fundamental role of governments is shared with the liberal egalitarianism. Moreover, funds from richer countries are used to support (funds and technology transfer) developing countries in Africa, is also referred to and an example of a capabilities approach mechanism (R20, 2018). In addition, the R20 also refers to the critical perspective, by focusing on destruction of disparities through inclusive dialogues between R20 and civil society is mentioned (R20, 2018).

A total of 57 references are coded based on R20's conceptualisation of climate justice. The most dominant norm identified in R20 is the capabilities approach (19 references), closely followed by the critical perspective (18 references). Also, cosmopolitanism is moderately represented (10 references), while liberal egalitarian (5 references) is more marginally represented in the R20. The most prominent sub-norm is "advance capabilities of individuals and communities" (capabilities approach), having 13 references.

#### **4.7 Union of Baltic Cities**

Subjects of justice is conceptualised in a liberal egalitarian way. Subjects are limited to those citizens within the cities that are member of the UBC, which is restricted to cities within the Baltic Sea Region.

In terms of metrics and principles, the capabilities approach is the most dominating norm. A list of capabilities is referred to and includes employment, “protecting natural environment” empower citizens, facilitation of culture, art, creativity and innovation. Further, democratic and participatory values are emphasised (UBC, n.d.b; Union of the Baltic Cities, 2019). More marginally represented is the principle of participatory parity (critical perspective).

Regarding mechanisms of justice, the most dominant approach to increase prosperity and quality of life of its citizens, by advancing their capabilities (capabilities approach). This is done through a decentralised support system mainly led by local authorities. The central role the UBC assign governments also belong to the view of liberal egalitarianism. Moreover, the critical perspective is also represented as UBC aims to remove disparities related to gender and to promote a dialogue channel between UBC and civil society.

Overall, UBC makes 30 references to norms, distributed between the most dominant norm capabilities approach (15 references), liberal egalitarianism (8) and critical perspectives (7). The most prominent sub-norm is “advance capabilities of individuals and communities” (capabilities approach), with 11 references.

#### **4.8 International Renewable Energy Agency**

As its members are sovereign states, IRENA seem to define subjects of justice based on nationality (liberal egalitarianism).

Several times, the IRENA mentions different metrics linked to the capabilities approach: energy need, public participation, economic security and employment, health, environmental protection, peace (IRENA, n.d., 2009). This is also considered in relation to “inter-generational responsibility” (IRENA, 2009, p. 4). Less referred to is the cosmopolitan common but differentiated responsibility principle.

As a mechanism of justice, IRENA mainly emphasises the important role of governments around the world to provide “clean, sustainable energy for the world’s growing population” (IRENA, n.d.) which matches the capabilities approach. Moreover, a mechanism of justice belonging to the critical perspectives is also mentioned several times. As IRENA claims to initiate discussion between formal institutions and civil society. In addition, consideration to richer countries need to support poorer ones are also mad, although marginally represented (IRENA, 2009).

In sum, IRENA makes 22 references to mainly the capabilities approach (11 references), as the most dominant norm, as well as liberal egalitarianism (7), the critical perspective (3) and

cosmopolitanism (1), the most marginal norm. “Advance capabilities of individuals and communities” (capabilities approach) is the most prominent sub-norm is with 9 references.

#### **4.9 United Nations Framework Convention on Climate Change**

Subjects of justice seem to be defined upon interdependencies between all nations, especially in the case of global emissions, as historical emission of developed countries and their responsibility towards developing countries are mentioned. Especially considered as subjects are developing countries and other climate change vulnerable countries, for example “low-lying and other small island countries” (United Nations, 1992, p. 2).

In terms of metrics and principles, the UNFCCC place the strongest emphasise on the cosmopolitan principle of common but differentiated responsibility. The principle is mentioned several times and justified with that developed Parties of UNFCCC should meet needs developing country Parties and that “the largest share of historical and current global emissions of greenhouse gases has originated in developed countries” (United Nations, 1992, p. 1). In addition, the UNFCCC several times refers to certain capabilities for individuals and communities (capabilities approach). Moreover, the cosmopolitan need-based minimum floor principle, in terms of fair global cooperation and health as a basic need is also referred to.

The most dominant mechanisms of justice are richer countries supporting poorer ones, through transfer of funds, technology and knowledge (capabilities approach). However, also the mechanism of advancing capabilities of individuals and communities is also mentioned by the UNFCCC several times.

Overall, the UNFCCC makes 59 references to justice. Of these, the cosmopolitanism is the most dominant norm (33 references), followed by the capabilities approach (26). The diversity of climate justice norms is low in the UNFCCC. The sub-norm with the most references is the “common but differentiated responsibility principle and difference principle” (24 references).

#### **4.10 UN Global Compact Caring for Climate**

No clear references to subjects of justice by the C4C has been identified. However, regarding metrics and principles of justice, the libertarian polluter pays principle is the most dominant one, followed by the cosmopolitan need-based minimum floor principle, in terms of fair global cooperation. In addition, also equal global rights through the support of the international human rights is mentioned once.

Regarding mechanisms of justice, the C4C is mostly emphasising the libertarian market-based mechanism: “pricing the cost of carbon emissions as a necessary and effective measure to tackle climate change” (Caring for Climate, 2016, p. 17). In addition, the responsibility of corporation to facilitate capabilities in areas they operate is mentioned (capabilities approach). Moreover, also mechanism from the critical perspective is identified, as claim of removing discrimination of employment, forces labour, and child labour is made. Within the same perspective, the C4C also seem to support inclusive dialogues between themselves and civil society in their work.

Totally, 16 references are made, in which 9 is made to the dominant norm libertarianism, 4 to cosmopolitanism, 3 to the critical perspective and 1 to the marginalised capabilities approach. The “market-based mechanisms” is the most dominant sub-norm.

#### **4.11 Forest Carbon Partnership Facility**

Global interdependencies (cosmopolitanism) is acknowledged through global forests as they “play a vital role in almost every facet of life on our planet” (FCPF, 2018). Therefore, individuals worldwide seem to be understood as a part of a global community, in which developing countries are especially in focus as subjects of justice. However, one reference is also made to liberal egalitarianism, as national borders are found relevant, which conflicts with the previous idea.

In terms of metrics and principles of justice, the most emphasized norm is the capabilities approach, as the FCPF is identifying several capabilities that can enhance the wellbeing and livelihoods of individuals and communities. These include public participation, poverty reduction, preservation of cultures and traditions, economic growth, income opportunity and environmental protection. Also, the cosmopolitan need-based minimum floor principle (basic needs), the common but differentiated responsibility principle and the critical perspective principle of participatory parity (for indigenous people, forest dwellers and women) is referred to several times.

As for mechanisms of justice, advancing capabilities of individuals and communities living in forests by ensuring sustainable forest management, is the most dominant mechanism. Furthermore, related to critical perspectives, dialogues between the institution and civil society (NGOs, indigenous people and forest dwellers) is mentioned several times, while destruction of oppressive institutionalised structures is mentioned once.

Overall, 28 references are made. The most dominant norms are the critical perspectives and cosmopolitanism with 10 references each, followed by the capabilities approach (7) and the marginalised liberal egalitarian norm (1). “Advance capabilities of individuals and communities” (capabilities approach) is the most prominent sub-norm is with 7 references.

#### **4.12 The Consumer Goods Forum**

The CGF strongly acknowledge global interdependencies between all individuals and the need of acting collectively: “we only do things that need to be driven globally” (CGF, 2019, p. 2). As the institution’s scope is global, it aims to “creating positive change in communities around the world” (CGF, 2019, p. 12). However, the CGF also define subjects of justice in an libertarian language, in terms of individuals self-ownership, when covering the topic of forced or unrewarded work. Additionally, a few references are also made to victims of subjugation as subjects of justice.

Regarding metrics and principles, the CGF refer to the idea of enabling individuals to improve their “well being”, through certain capabilities the most. These include health and wellness, environmental protection, public participation and “decent working conditions. In addition, the need-based minimum floor principle is often referred to, in terms of fair global cooperation and basic needs. Less represented, is the cosmopolitan version of equal rights.

Regarding mechanism of justice, the responsibility of corporations to facilitate capabilities, in a decentralised way, is the most dominating norm (the capabilities approach) (brochure). Besides, several references are also made to the libertarian market-based mechanisms, concerning carbon pricing and food safety certification programmes. In addition, the CGF also seem to promote inclusive dialogues between civil society by “working closely” with civil society (critical perspective).

Concluding, 70 references are made by the CGF. The most dominant climate justice norm is cosmopolitanism (32 references), followed by the capabilities approach (22), libertarianism (10) and the marginalised critical perspective (6). The most prominent sub-norm is “advance capabilities of individuals and communities” (capabilities approach), with 21 references.

#### **4.13 International Emissions Trading Association**

The IETA is not clear in how it defined subjects of justice. However, when it comes to metrics and principles, the dominating principle is the common but differentiated responsibility

principle (cosmopolitanism). Several times, the IETA makes reference to the need of supporting developing countries, as least advantaged societies, in reducing emissions, and mention developing countries and Asian Development Bank as providers of support. This is followed by the cosmopolitan need-based minimum floor principle (fair global cooperation), and the capabilities approach, as the IETA is mentioning energy needs as a way of individuals to advance their own lives.

The most prominent mechanism of justice used by the IETA is a libertarian market-based mechanism in terms of carbon markets and pricing. The institution's mission is to "establish effective market-based trading systems for greenhouse gas (GHG) emissions" (IETA, n.d.). As more marginalised mechanisms, developed countries supporting developing countries (capabilities approach), advancing capabilities of individuals and communities (capabilities approach) and national redistributive governance, in terms of carbon taxes (liberal egalitarianism), are all referred to.

To conclude, the IETA makes 40 references, distributed between the dominating libertarianism (28), cosmopolitanism (7), capabilities approach (4) and the marginalised liberal egalitarianism. The sub-node with most references (28) is "market-based mechanism".

#### **4.14 Verified Carbon Standard**

In the case of the VCS, no conceptualisation of subjects of justice was revealed in the selected data material. However, for metrics and principles of justice, two references are made to the libertarian polluter pay principle as individuals and corporations can "pay" for or "offset their own emissions" (Verra, n.d.) through greenhouse gas credits that can be traded. In addition, one reference is also made to the capabilities approach, in terms of human capabilities.

The VCS main mechanism to achieve climate justice, is to use a market-based mechanism through a carbon market. The institution underlines this with stating that "entities can neutralize, or offset, their emissions by retiring carbon credits generated by projects that are reducing GHG emissions elsewhere" (Verra, n.d.). Furthermore, the VCS also makes one reference to the capabilities approach, regarding facilitating the capability of being able to, and having the right to participate in political decisions, as well as to the critical perspective, concerning inclusive dialogues between formal institutions and civil society.

Overall, the VCS makes 12 references to climate justice norms, mainly to libertarianism (10 references), but also the more marginally represented norms: capabilities approach and the

critical perspective, both receiving one reference. The libertarian “marked-based mechanism” is the most dominant sub-norm.

#### **4.15 Climate, Community and Biodiversity Alliance (CCB Standard)**

A cosmopolitan way of defining subjects of justice is strongly present in the way the CCBA is acknowledging global interdependencies through the global impact of land use change and emphasise on the world’s most vulnerable people (to climate change) as subjects, including local communities and indigenous people. However, also the critical perspective is presented as the CCBA recognize victims of subjugation.

As for metrics and principles of justice, the CCBA’s strongest focus is on the capabilities approach, as it aims to promote several human capabilities, such as “improve livelihoods, create employment, protect traditional cultures and endangered species, help secure tenure to lands and resources” (CCBS, n.d.), protection against discrimination and sexual harassment, and “full and effective participation” (CCBS, 2017, p. 18) of all stakeholders. Besides, the CCBA also heavily adopts the principle of participatory parity (critical perspectives), the need-based minimum floor principle, related to basic needs (cosmopolitanism). More marginally represented is the global difference principle (cosmopolitanism) and the libertarian polluter pays principle.

As the most dominant mechanism of justice, the CCBA is advancing certain capabilities of individuals and communities by “improve the well-being and reduce the poverty of local communities, and conserve biodiversity” (CCBS, n.d.). This is followed by the mechanisms of inclusive dialogues between CCBA and local communities and NGOs, and the removal of disparities for marginalised communities (critical perspective). Moreover, the capabilities approach idea of richer governments supporting those in need of support and the libertarian marked-based mechanism is also referred to a few times. More marginally presented is the focus on the role of governments to, within their borders, improve the lives of individuals and communities, emphasised both by the capabilities approach and liberal egalitarianism.

In total, 64 references are made, in which the capabilities approach is the most dominating one (23 references), followed by the critical perspective (22 references), libertarianism (13 references) and cosmopolitanism (12 references). The “advance capabilities of individuals and communities” (capabilities approach) is the most dominant sub-norm (26 references).

#### **4.16 Gold standard**

The GS's conceptualisation of subjects of justice seem to have a cosmopolitan language, as they related projects can be seen as solidary efforts to benefit “vulnerable communities everywhere” (Gold Standard, 2018, p. 13), despite national borders.

In terms of metrics and principles of justice, the capabilities approach is one the most prominent norm. This is reflected in the GS engagement in projects that are “creating value for people around the world” (Gold Standard, n.d.) by facilitating capabilities such as energy needs, good health and creating job opportunities. The other prominent norm is the libertarian polluter pays principle, and evidently promoted as one of the intentions with the GS is to allow “individuals or corporates to ‘offset’ their greenhouse gas emissions” ” (Gold Standard, 2018, p. 32). In addition, more marginally represented is the cosmopolitan difference principle and need-based minimum floor principle and the critical perspective participatory parity in relation to gender equity.

The most dominant mechanism of justice is the libertarian marked-based mechanisms. The GS is certifying and issuing carbon credits to be traded in global voluntary and compliance carbon markets. Differently, more marginally represented is the capabilities approach, as the GS aims to advance capabilities of individuals and communities, and the critical perspective in terms of facilitating dialogues between the GS and civil society.

Concluding, the GS makes 32 references to climate justice, in which the most dominant perspective is libertarianism (21 references), followed by the capabilities approach (5), cosmopolitanism (3) and the critical perspective (3). The “marked-based mechanism” sub-node is the most dominant one (16 references). The most dominant sub-norm is the “advance capabilities of individuals and communities” (capabilities approach), with 26 references.

#### **4.17 Plan Vivo**

In terms of subjects of justice, Plan Vivo claim that their projects can be implemented at any location, however, they are aimed victims of subjugation, mainly resource-poor rural communities and developing countries, which fits with the critical perspectives view of subjects.

Regarding metrics and principles of justice, Plan Vivo refers the most to the capabilities approach, specifically on facilitating individuals and communities' capabilities. This include: “truly benefit people's livelihoods” (webpage, our approach), environmental protection, “full participation of local communities” (webpage, our approach), poverty alleviation, and “decent work and economic growth” (Plan Vivo, n.d.a). Also, the need-based minimum floor principle



(cosmopolitanism) and the principle of participatory parity (critical perspective is referred to several times. More marginally represented in Plan Vivo is the cosmopolitan difference principle, the libertarian polluter pays principle and right of ownership (ownership over projects are assigned to communities).

The capabilities approach is the norm most referred to in terms of mechanism of justice. This is reflected in that Plan Vivo aims to improve the livelihood of individuals and communities, which encompasses “people’s capabilities, assets, income and activities required to secure the necessities of life and improve wellbeing” (Plan Vivo, n.d.b, p. 27). Besides, destruction of disparities (critical perspectives) by providing equal opportunities to women and members of marginalised groups to participate in Plan Vivo projects is emphasised, as well as inclusive dialogues with civil society. Moreover, the libertarian market based mechanisms are promoted, mainly order to achieve funding for Plan Vivo projects.

In total, 87 references are made by the Plan Vivo, mainly to the critical perspective (27), capabilities approach (26) and cosmopolitanism (22), but also to libertarianism (12).

#### **4.18 Social Carbon**

When it comes to subjects of justice, the SC seem to be using a cosmopolitan language, by acknowledging global interdependence between individuals and communities through global issues, such as climate change.

Regarding metrics and principles of justice, the capabilities approach is the most prominent norm. The SC aims to strengthen welfare and several capabilities of individuals and communities, including active participation, working condition and employment, environmental protection, health, and “social relationships, affiliations, and associations” (Social Carbon, 2013, p. 3). Moreover, the cosmopolitan perspective, the need-based minimum floor principle, the libertarian polluter pays principle, and the participatory parity principle (critical perspectives) is also referred to.

The most dominant norm regarding mechanisms of justice is the libertarian market-based mechanism, as the SC standard is supposed to be applied to carbon offset projects and combined with carbon accounting standards, to create carbon credit to be traded in the voluntary carbon market. Also, the capabilities approach mechanism of advance capabilities of individuals and communities through social development activities is referred several times. More marginally represented is the critical perspective related mechanism of inclusive dialogues between the SC and civil society.

In sum, 45 references are coded, in which 20 references are made to libertarianism (most dominant norm), 11 references to the capabilities approach, 9 reference to cosmopolitanism and 5 to the critical perspective. The libertarian “market-based mechanism” is sub-norm with the highest number of references.

#### **4.19 Greenhouse Gas Protocol**

Regarding subjects of justice, the GHGP seems to find national borders meaningless, and an understanding of a global community is referred to twice.

The GHGP defines principles of justice mainly on the basis of the critical perspective, specifically, the polluter pay principle. This is reflected in that the GHGP states that carbon emission credits can be bought by corporations to offset emissions to “meeting mandatory emission targets, obtaining recognition for GHG reductions under voluntary programs” or “meet internal company targets for public recognition or other internal strategies”. Moreover, also the cosmopolitan need-based minimum floor principle is represented, in terms of fair global cooperation.

GHGP’s main mechanisms of justice is through a libertarian market-based mechanism. The institution provides an international standard on how to measure, manage and report emissions, in which “offset credits” can be created and emissions can be traded. Also, more marginally represented, the GHGP is promoting redistribution nationally (liberal egalitarianism), through the use of carbon and energy taxes.

To conclude, the GHGP is making 27 references to climate justice norms, in which libertarianism is clearly the most dominant one with 20 references, while cosmopolitanism and the liberal egalitarianism received 3. The most dominant sub-norm is the libertarian “market-based mechanisms” (11 references).

#### **4.20 Science Based Targets**

The SBT seems to define subjects of justice mainly upon global interdependencies, where everyone is connected through global issues such as global warming, and collaboration on global climate action and global carbon budget.

As for metrics and principle, the SBT make several references to the cosmopolitan need-based minimum floor principle in terms of basic needs. Besides, the SBT also make one reference to the specific human capabilities which represent the capabilities approach.

The most dominant climate justice norm regarding mechanism of justice is the libertarian market-based mechanism of carbon pricing. References are also made to the

capabilities approach, specifically related to advancing certain human capabilities and placing responsibility of corporations in facilitating capabilities.

In total, SBT makes 23 references to climate justice, in which the majority is made to cosmopolitanism (19 references) while 2 references are made both to the more marginal norms: the capabilities approach and libertarianism. The most dominant sub-norm is the cosmopolitan “need-based minimum floor principle” (10 references).

#### **4.21 Climate Disclosure Standards Board**

Concerning subjects of justice, the CDSB seem to be recognising global interdependencies, as it aims at creating a global corporate reporting model to incorporate use of natural capital. Furthermore, no metrics or principles of justice are identified. However, in terms of mechanism of justice, the CDSB focuses on increasing the transparency and accountability of corporations worldwide. By providing a framework for corporations to incorporate “climate change and natural capital-related information in mainstream financial reports” (CDSB, n.d.), the CDSB hopes to work towards “transparent and resilient markets against climate change disruption” (CDSB, n.d.).

Overall, the CDSB is one of the institutions with the lowest number (8) of references, only coded at one type of climate justice norm, namely cosmopolitanism. The most dominant sub-norm is “transparency and accountability global finance” (6 references).

#### **4.22 BioCarbon Fund**

In terms of subjects of justice, the BCF is strongly emphasising global interdependencies through global issues such as climate change and deforestation, “global wellbeing”, and have the understanding of a “global community”. Developing countries are seen as subjects negatively affected by such interdependencies, which is line with cosmopolitanism. In addition, also the critical perspective is representative in the BCF. Subjects are defined based on international subjugation based on gender, identity and status. Women, indigenous communities, forest-dwelling communities, poor household, disabled, and youth are emphasised as subjects of justice.

Concerning metrics and principles of justice, the capabilities approach is the most dominant norm. The BCF focusses on “improving livelihoods and local environments” (BCF, 2019, p. 49) of individuals and communities, through environmental protection, reducing poverty, public participation, community wellbeing, income opportunities, and enabling

individuals to hold property. On the other hand, the BCF makes several references to the cosmopolitan need-based minimum floor principle and the critical perspective participatory parity, and a few to the cosmopolitan difference principle.

The capabilities approach is also the most prominent norm concerning mechanisms of justice. Several references are made to advancing human capabilities, since the BCF engage the private sector in “contributing to livelihood improvement for forest-dependent communities” (BCF, 2019, p. 3). The BCF also focusses on the responsibility of corporations in facilitating capabilities in places they operate and the idea of richer countries supporting poorer ones. Moreover, a libertarian market-based mechanism is also often referred to. Lastly, the BCF also refers to removing gender disparities and facilitate inclusive dialogues between the BCF and civil society.

Summarizing, the BCF is the institutions making the second most references to climate justice norms. A high diversity of norms is represented, in which both the capabilities approach and the critical perspective represent the most dominating norms (36 references each). This is followed by cosmopolitanism (22 references) and libertarianism (13 references). The most dominant sub-norm is “advance capabilities of individuals and communities”, with 28 references.

#### **4.23 Climate and Clean Air Coalition**

Regarding subjects of justice, the CCAC acknowledges global interdependence and subject of justice seem to be considered as “large populations throughout the world” and “sensitive regions of the world” (CCAC, 2014, p. 7), which makes the conceptualisation closest linked to cosmopolitanism.

In relation to metrics and principles of justice, CCAC place strong emphasis on the cosmopolitan need-based minimum floor principle, in terms of fair global cooperation and basic human needs (health, food and water security). In addition, the global difference principle is referred to once (cosmopolitanism). Furthermore, some references are also made to the capabilities approach.

As mechanism of justice, the CCAC is strongly emphasising the capabilities approach. Through its activities, the CCAC aims at advancing individuals capabilities worldwide, in addition promoting support for developing countries is also mentioned. Moreover, marginally present is the critical perspective regarding inclusive dialogues between CCAC and civil society (FRAMEWORK).

In total, 82 references are made to climate justice norm. These are mostly distributed between the cosmopolitanism, as the most dominant norm (47 references), and the capabilities approach (34 references). This reflects a low diversity in climate change norm representation. The most dominant sub-norm is the cosmopolitan “need-based minimum floor principle” (37 references).

#### **4.24 Global States and Regions Annual Disclosure**

The GSRAD defines subjects of justice as individuals worldwide are connected through global interdependence (cosmopolitanism), in terms of global climate impact, progress and action. The GSRAD especially focuses on those vulnerable to change change worldwide (e.g. forest-based communities, indigenous people, and smallholders).

Regarding metrics and principles of justice the capabilities approach is the most dominant norm, as GSRAD identified health and public participation is as capabilities that can improve the lives of individuals and communities. Moreover, the cosmopolitanism the common differentiated responsibility principle mentioned once by GSRAD.

In regard to mechanisms of justice, the capabilities are also the leading norm. The GSRAD is advancing individuals capabilities by inviting civil society to participate in decision making and providing education on health risks of heatwaves. This is done through something that can be understood as a decentralised support system, as state and regional governments are the ones conducting climate action. Besides, the critical perspective mechanism of inclusive dialogues between formal institutions and civil society is also represented.

Overall, 12 references to climate justice norms are made by the GSRAD, in which the dominating norm is the capabilities approach (6 references), followed by cosmopolitanism (4 references) and critical perspectives (2 references). With both 3 references, the most prominent sub-norms are “advance capabilities of individuals and communities” (capabilities approach) and “global community and interdependencies” (cosmopolitanism).

#### **4.25 Divest-Invest**

The DI is defining subjects of justice as a part of a global community, collectively engaged in disinvesting in fossil fuels, thereby disregarding national affiliation. Globally, those “communities most impacted by climate change, and with the fewest resources to cope” (Divest-Invest, 2017, p. 24) are emphasised as subjects.

The capabilities approach is the most dominant norm in terms of metrics and principles of justice. The DI aims to improve “human potential to prosper and thrive” (Divest-Invest, 2017, p. 8) by advancing capabilities such as energy need, job creation, community ownership and improved air quality, both for present generations, but also to “ensure future generations inherit a clean environment and sustainable global economic system” (Divest-Invest, 2017, p. 31). On the other hand, also the cosmopolitan need-based minimum floor principle is represented by the DI, as it emphasises the satisfaction of basic human needs.

The capabilities approach is also the most emphasised in terms of mechanisms of justice, the DI aims at facilitating several human capabilities linked to the transition to greener energy (see above). Also, in line with the capabilities approach, is the focus on investors (organisations) to take responsibility of their resources and to disinvest in companies posing a threat to sustainable development. Moreover, cosmopolitanism is also marginally represented by the DI, as it mentions global carbon tax.

In total, 20 references to climate justice norms are made by the DI. The majority of these is held by the capabilities approach (11), while the cosmopolitan view holds the rest (9). The diversity of climate justice norms is very low. Lastly, the sub-norm most often referred to is “advance capabilities of individuals and communities” (9), linked to the capabilities approach.

#### **4.26 Global Alliance for Climate Smart Agriculture**

The GACSA is mostly referring the critical perspective when defining subjects of justice. GACSA place special attention victims of subjugations, including “smallholder farmers, including livestock keepers, fishers and foresters, especially women and indigenous peoples” (GACSA, 2014, p. 1) that are most vulnerable to climate change. However, the GACSA also once mentions cosmopolitanism, as it seems to acknowledge global interdependencies by addressing the interlinkages between global population, natural resources and climate change.

Concerning metrics and principles of justice, the most dominant norm is the need-based minimum floor principle (cosmopolitanism) is the most dominant sub-norm. This is represented by GACSA’s work for improved livelihood and basic needs to be met globally, in terms of food security, health and resilience against extreme weather. Followed by this is the capabilities approach, which also have received a high number of references, and is reflected in GACSA’s focus on facilitating the capabilities health, public participation, empowerment, reduced poverty, economic security for smallholder farmers worldwide. Moreover, also the critical perspectives, specifically participatory parity, is referred to several times.

Through their work, the mechanisms of justice most prominent is inclusive dialogues between GACSA and civil society (smallholder farmers, women, youth and indigenous people) (framework), representing the critical perspective. Representing the same perspective, GACSA aims at removing disparities among people, especially regarding global maldistribution of food. Moreover, also statements representing capabilities approach is identified several times, in which the focus on the improvements of the ability of smallholder farmers to develop certain capabilities.

Summing up, 45 references from the GACSA are coded on different climate justice norms. The critical perspective is the overall most dominant norm (25 references), followed by cosmopolitanism (11) and the critical perspective (9). The most dominant sub-norms are both the “need-based minimum floor principle” (10) and “inclusive dialogues between formal institutions and civil society” (10).

#### **4.27 Global Bioenergy Partnership**

The GBEP uses a cosmopolitan language when defining subjects of justice. Through international collaboration (exchange of experience and technologies) between “not only North-South, but also South-South, South-North, and North-North” (GBEP, 2016 p. 4), an understanding of a global community seems to be present. Those worst-off in this global community, developing countries and “countries with economies in transition” (GBEP, 2012, p. 1), receive special attention as subjects of justice.

Regarding metrics and principles of justice, the GBEP place most emphasis on cosmopolitanism. The need-based minimum floor principle is referred to several times. Fair global cooperation and basic need such as food security is mentioned by GBEP. Moreover, the cosmopolitan difference principle also referred to, as the purpose of GBEP’s activities is especially conducted through focusing on developing countries. The reference to the most vulnerable globally is made several times. In addition, also the capabilities approach is represented in the GBEP as it focuses on the capability energy need for improving the lives individuals globally.

In terms of mechanisms of justice, a cosmopolitan representation is absent. Instead, GBEP makes two references to the capabilities approach. Through its activities on bioenergy, GBEP aims at facilitating energy need for individuals. In addition, one statement also reflects the critical perspective, as inclusive dialogues between GBEP and civil society seem to be promoted.

Overall, a total of 18 references has been coded to climate justice norms. The most dominant norm is the cosmopolitanism (15), followed by the more marginally represented capabilities approach (2) and critical perspectives (1).

#### **4.28 Portfolio Decarbonisation Coalition**

The PDC is defining subjects of justice based on cosmopolitanism, more specifically on global interdependencies, as it aims to “protecting the global commons, including the world’s atmosphere” (PDC, 2017, p. 4) by encouraging the “world’s corporations” to work toward the global sustainable development goals.

Regarding metrics and principles of justice, the cosmopolitanism is also dominant, since the need-based minimum floor principle is identified, in terms of fair global cooperation between investors and corporations through the PDC.

In terms of mechanisms of justice, the PDC once mentions the responsibility of corporations worldwide to contribute to reach the sustainable development goals (capabilities approach) (annual report), as well as a market-based mechanism in form of trading “green bonds” (libertarianism).

Concluding, only 8 references to climate justice norms have been coded on the PDC, which makes it one of the institutions with the lowest reference number. Cosmopolitanism is most dominant norm (6), followed by both the critical perspectives (1) and libertarianism (1). The sub-norms “Global community and interdependencies” and “Need-based minimum floor principle” share the place as the most dominant sub-norms.

#### **4.29 The Renewable Energy Policy Network for the 21st Century**

Statements of the REN21 seem to represent a definition of subjects of justice close to the cosmopolitan perspective. REN21 focuses on global interdependencies, as it is forming a worldwide community working to promote renewable energy and emphasise the “engagement of people around the world” (REN21, 2019, p. 22).

REN21 approach to metrics and principles is a bit more diverse. It makes the most references to the cosmopolitan need-based minimum floor principle, as REN21 supports fair global cooperation and sufficient health as a basics need. However, it also refers to the capabilities approach, as REN21 recognise certain capabilities that can improve the lives of individuals globally (e.g. life, health, energy needs etc). Lastly, the principle of participatory



parity (critical perspective) is referred to once, in relation to increase gender inclusiveness in the energy transition.

The mechanisms of justice most often referred to is to facilitate specific capabilities of individuals worldwide, through a decentralised support system (capabilities approach). Furthermore, the REN21 also makes two references to the critical perspective, since it claims to reduce gender disparities as well as facilitating inclusive dialogues between formal institutions and civil society.

In total, 24 references are coded for the REN21, in which 15 were made to cosmopolitanism, 6 to the capabilities approach, and 3 to the critical perspective. The climate justice sub-norm referred to the most is the cosmopolitan “need-based minimum floor principle”.

#### **4.30 Sustainable Energy for All**

When SEforALL defines subjects of justice, cosmopolitanism is the most dominant climate justice norm. The institution aims at achieving energy access for all and to “ensure no one is left behind” (SE4ALL, n.d.), thereby supporting the idea of a global community. In addition, several references are also made to the critical perspective, as victims of subjection is also mentioned as subjects of justice, such as women and girls, displaced populations, and those poorest in the society.

The SEforALL strongly emphasise the capabilities approach when mentioning metrics and principles of justice. To improve lives of people globally, the SEforALL focuses on the improvements of certain capabilities, such as public participation, energy needs, protection against discrimination and health. Following this, is the principle participatory parity (critical perspective) for women, “the poorest people in society” (SE4ALL, 2018, p. 14), and marginalised communities is referred to many times. Moreover, regarding cosmopolitanism, the global difference principle, need-based minimum floor principle (basic needs and fair global cooperation) and the principle of global equal rights and opportunities is applied by SEforALL.

The most dominant norm related to mechanisms of justice is the advancement of human capabilities and support human development, linked to the capabilities approach. Within the same approach, SEforALL refer to the idea of richer countries supporting poorer ones a few times. Moreover, several times, the SEforALL refer to the critical perspective, by focusing on removing disparities in energy access, especially for women, displaced

populations and refugees, and societies' poorest and facilitating inclusive dialogues between formal institutions and civil society.

Concluding, for SEforALL, a total of 71 references are coded relatively equally on three different climate justice norms. The critical perspective perspective holds the majority of coded statements (27), followed by cosmopolitanism (24) and the capabilities approach (20). The most dominant sub-norm is the “advance capabilities of individuals and communities” (capabilities approach), with 18 references.

## **5 Degree of institutionalisation of climate justice norms**

With the aim to analyse the degree of insitutionalisation, climate justice sub-norms were institutionalised in the global climate architecture, three different affiliation networks and one congruence network of institutions were created, and related centrality metrics were computed.

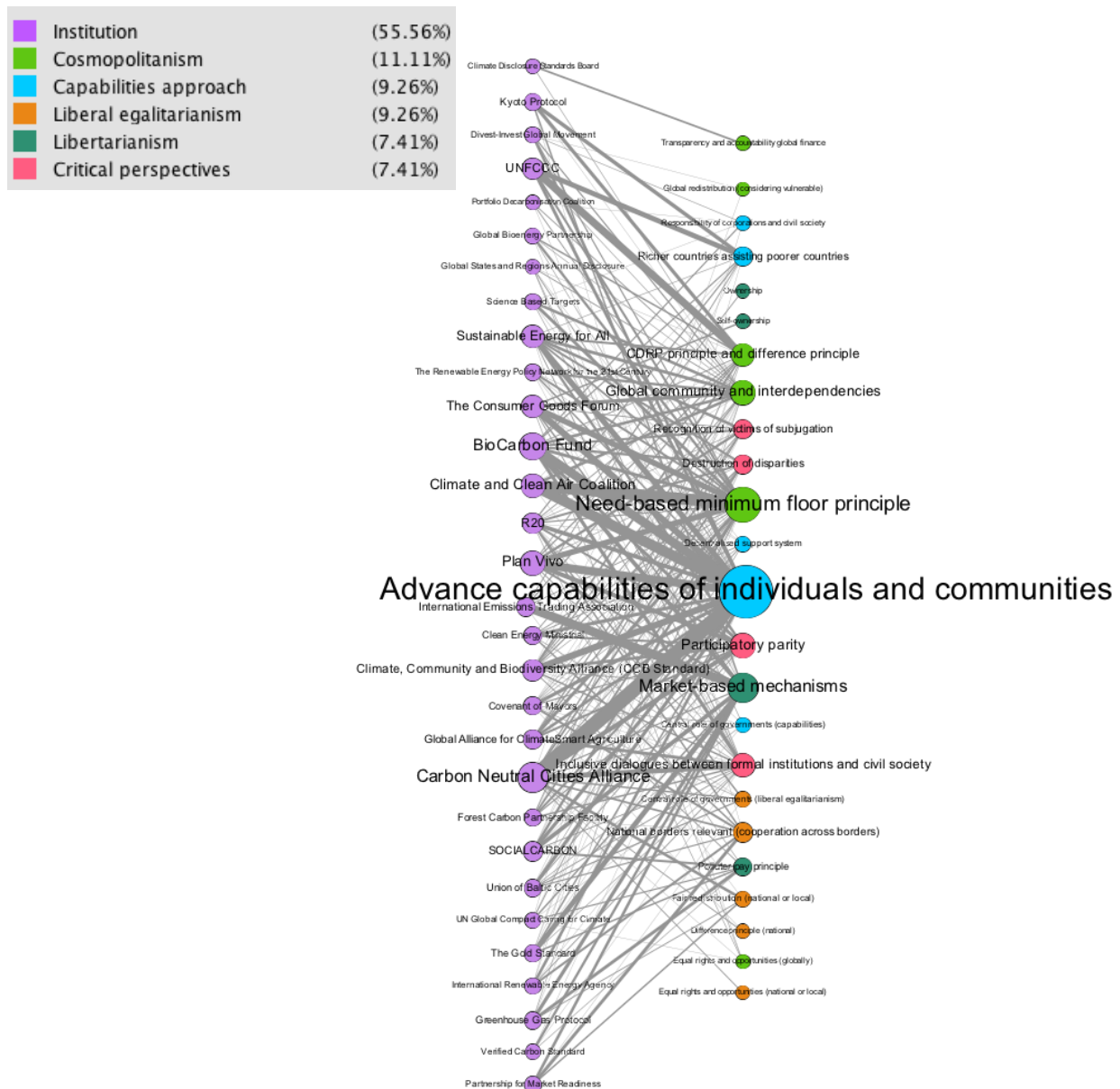
### **5.1 Affiliation networks**

An affiliation network (bipartite network), consisting of intergovernmental and transnational institutions and climate justice norms, was created. It is shown with two different layouts in Figure 5 and 6, respectively. Figure 5 is useful to clearly distinguish the edges/links between the two groups of nodes, i.e. institutions and norms. Figure 6 highlights the central nodes in the network.

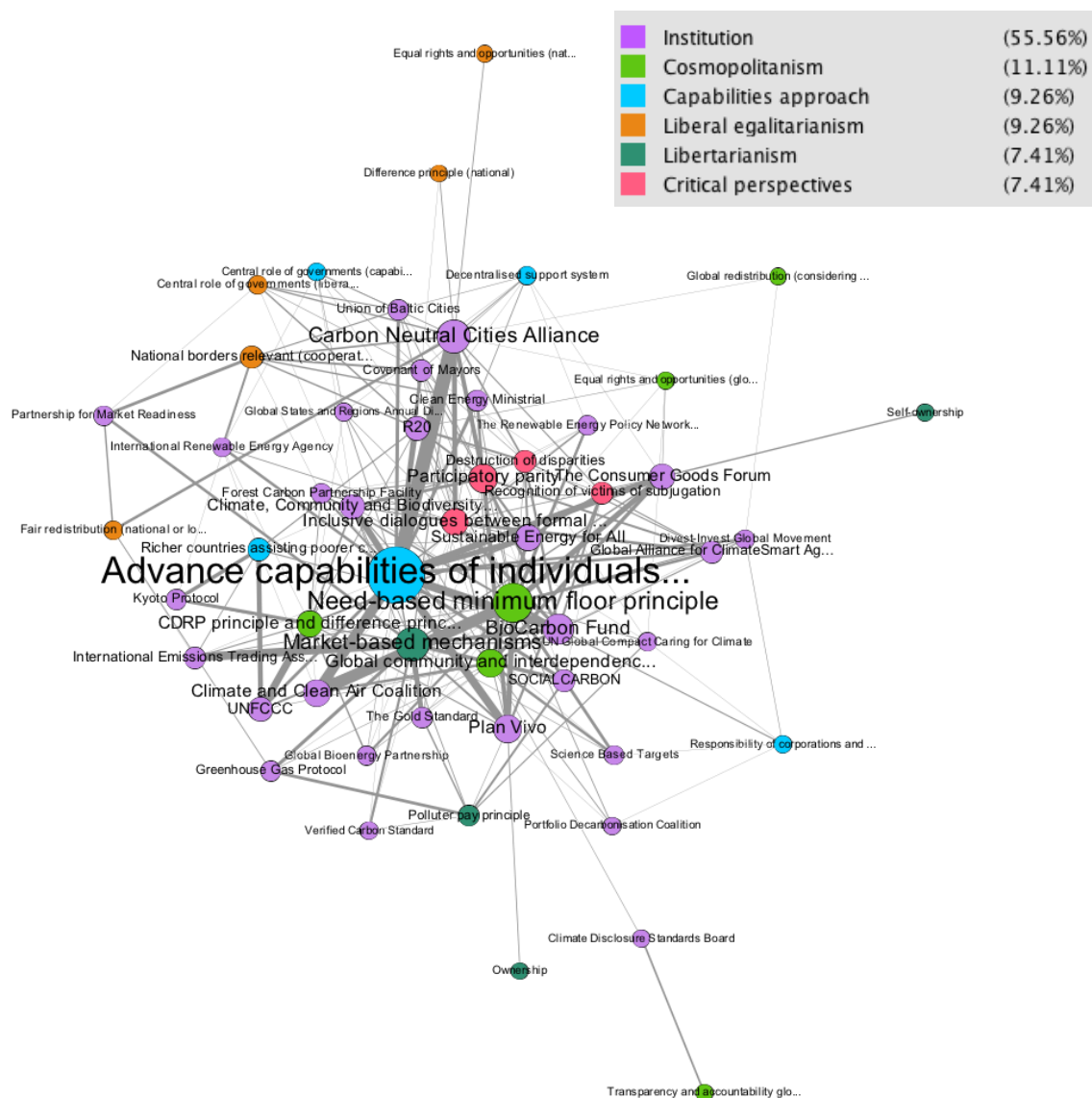
For both layouts, the edge between institutions and climate justice norms represents an institution's reference to a specific norm. The thickness of the edges expresses the “edge weight”: the thicker the edge, the higher the number of times the institution has referred to a specific climate justice norm.

Moreover, the size of the nodes represents the weighted centrality degree of the node. When norm nodes are considered, this implies that the larger the node, the more central it is in the network, implying that the references, made by the institutions, are mostly linked to that norm. The network centrality of a norm is strictly associated to its institutionalisation in the overall climate governance architecture. Instead, regarding the institutions, the larger an institution's node size, the higher the number of references associated to norms.

Overall, regardless of the type of layout, the affiliation network clearly shows which climate justice norms are referred to and by which institution. Specifically, the network shows which climate justice norms are dominant and which are marginalised.



**Figure 5.** Affiliation network (two-mode) of all intergovernmental and transnational institutions (positioned at the left side) and all climate justice norms (positioned at the right side) for all years: 1991-2015. Node sizes reflect the weighted degree centrality (larger nodes = higher weighted degree centrality). Node colour represents the group of affiliation, while the percentage values presented in the legend indicate the proportional number of nodes.



**Figure 6.** Affiliation network (two-mode) of all intergovernmental and transnational institutions and all climate justice norms for all years: 1991-2015. Node sizes reflect the weighted degree centrality (larger nodes = higher weighted degree centrality). Node colour represents the group of affiliation, while the percentage values presented in the legend indicates the proportional number of nodes.

In total, the networks in Figure 5 and 6 consist of 54 nodes (30 institutions and 24 climate justice norms) and 223 edges. Observing both figures, the most central climate justice norm can be identified. It is evident that the capabilities approach norm “advance capabilities of individuals and communities” is the most central node in the network. As presented in Table 5, this node has the highest weighted degree (312), and the highest degree value (24), which implies that the 80% of the network institutions have referred to that norm. The references to

the mentioned norm are distributed between the types of institutions quite homogeneously: public institutions stand for 38%, private for 28%, and hybrid for 34%. Since the weighted degree is an index for the degree of how institutionalised a norm is in the climate governance architecture, it can be inferred that the climate justice norm “advance capabilities of individuals and communities” happens to be the most institutionalised norm in the considered timeframe. The cosmopolitan “need-based minimum floor principle” is the second most institutionalised climate justice norm. It has a weighted degree of 174, which is significantly lower than the most central node, and a degree of 23, which implies that 77% of all institutions have referred to the norm. In this case, hybrid institutions represent the majority of the weighted references to this norm (50%). On the other hand, the libertarian “market-based mechanism” norm is the third most central norm, with a weighted degree of 130 and a degree of 15 (50% of all institutions). In this case, private institutions are evidently dominant in adopting the norm (87%). The “participatory parity” norm, belonging to critical perspectives, has a weighted degree of 91 and a degree of 14 (47% of all institutions, of which 53% represent public institutions) Therefore, it is the fourth most institutionalised norm. The fifth most central climate justice norm is the cosmopolitan “global community and interdependencies”. It has a weighted degree of 89, and a degree of 22 (73% of all institutions). In this case, hybrid institutions hold the majority (62%) of references to the norm. It is worth to mention that, although the two previous central norms are characterized by a higher weighted degree, this norm has been referred to by a higher number of institutions.

**Table 5.** Five of the most central climate justice norms, affiliated to the respective philosophical tradition, and related values of weighted degree and degree for all years: 1991-2015. For each norm, the weighted percentage of type of institution is presented

Most central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Degree (centrality)	Weighted percentage of type of institution		
				Public	Private	Hybrid
Advance capabilities of individuals and communities	Capabilities approach	312	24	38 %	28 %	34 %
Need-based minimum floor principle	Cosmopolitanism	174	23	14 %	36 %	50 %
Market-based mechanisms	Libertarianism	130	15	10 %	87 %	3 %
Participatory parity	Critical perspectives	91	14	53 %	24 %	24 %
Global community and interdependencies	Cosmopolitanism	89	22	8 %	30 %	62 %

The least central and marginalised climate justice norms can be instead identified at the outer periphery of the affiliation network. They are characterised by a small node size as well as thin edge weights (see Figure 6 as example). As appreciable in Table 6, the least central norm is the cosmopolitan “global redistribution (considering vulnerable)”, which has the lowest weighted degree of 2, and a degree of 2, which implies that only two institutions (one public and one hybrid) have referred to the norm one time each. This is the most marginalised climate justice norm. The liberal egalitarian principle of “equal rights and opportunities (national or local)” has a weighted degree of 3, and a degree of 1, which means that only one institution (hybrid) referred to it three times. The libertarian idea of “ownership” has the identical values of the aforementioned norm, with the only difference that it is a private institution that has adopted the norm. Moreover, the fourth least central norm is the liberal egalitarian “difference principle (national)”, with a weighted degree of 4, and a degree of 2 (both institutions are public). Lastly, the fifth least central norm is the libertarian principle of “self-ownership”, which has a weighted degree of five and a degree of 1, as it was only mentioned by a private institution.

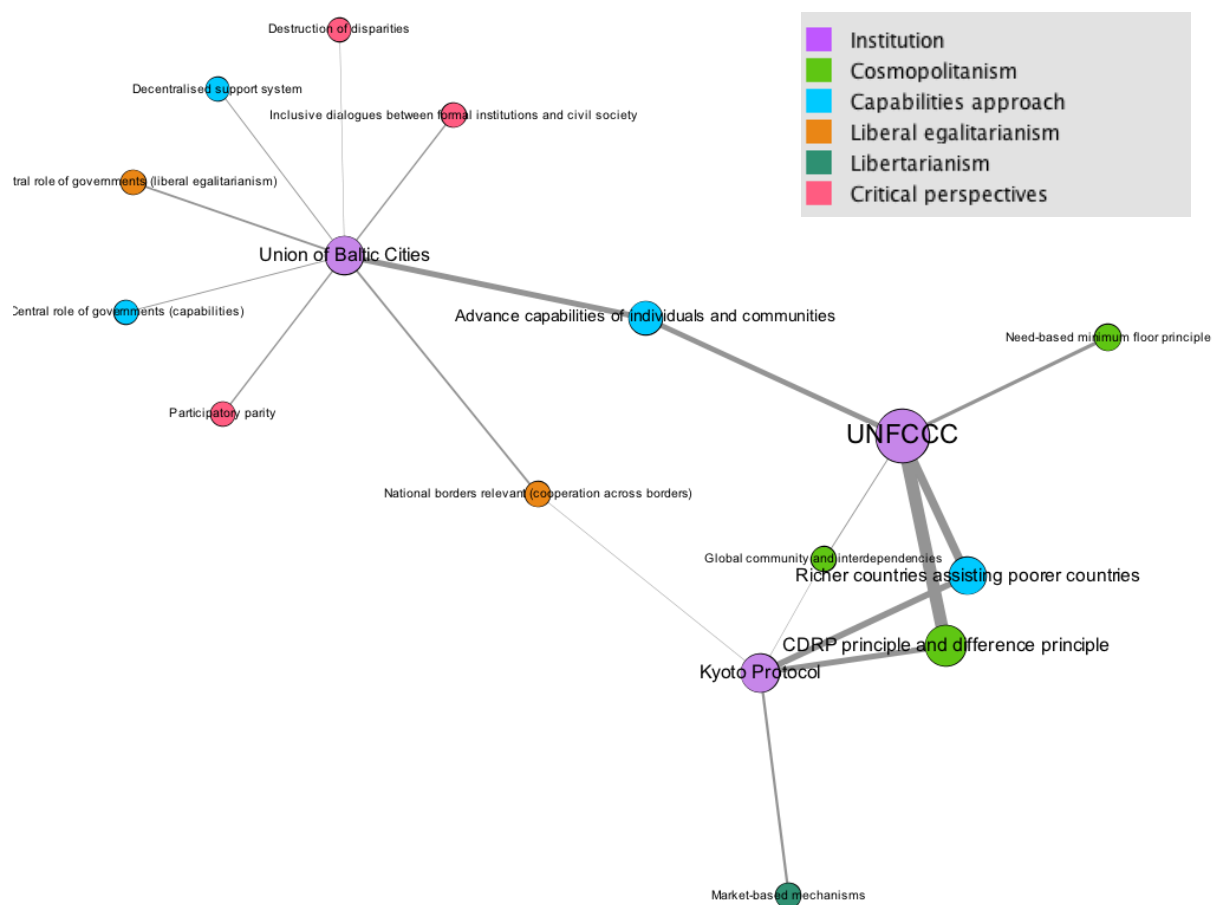
**Table 6.** Five of the least central climate justice norms and related values.

Least central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Degree (centrality)	Weighted percentage of type of institution		
				Public	Private	Hybrid
Global redistribution (considering vulnerable)	Cosmopolitanism	2	2	50 %	0 %	50 %
Equal rights and opportunities (national or local)	Liberal egalitarianism	3	1	0 %	0 %	100 %
Ownership	Libertarianism	3	1	0 %	100 %	0 %
Difference principle (national)	Liberal egalitarianism	4	2	100 %	0 %	0 %
Self-ownership	Libertarianism	5	1	0 %	100 %	0 %

## 5.2 Affiliation networks over time

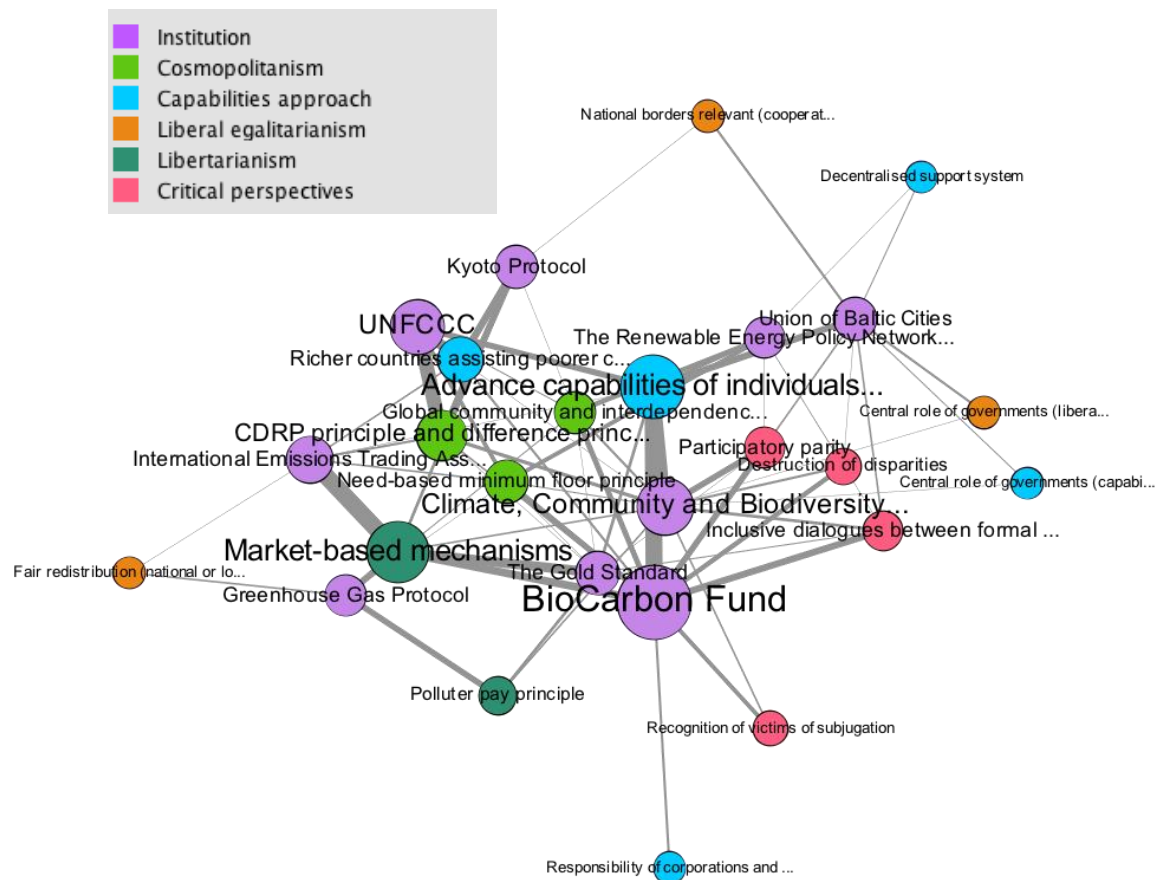
Affiliation networks were created over three different time periods. While the networks presented in the previous sub-chapter were considering the entire timeframe (1991-2015), affiliation networks for the time periods 1991-1998 and 1991-2006 were also made. As shown in Figure 7 and 8, the affiliation network has grown in numbers of institutions and climate justice norms over time. An overview over the most central climate justice norms over time is presented in Table 7. Many of the most central norms have maintained a stable position among

the top five throughout the different time periods, while some have been replaced. In the period 1991-1998, the most central norms (based on weighted degree), were, in descending order, the “CDRP principle and difference principle”, “richer countries assisting poorer countries”, “advance capabilities of individuals and communities”, “need-based minimum floor principle” and “market-based mechanism”. These norms were hence the most institutionalised ones, in the global climate architecture. In the period 1991-2006, the norm “advance capabilities of individuals and communities” became the most central norm, therefore the most institutionalised. Based on the weighted degree, the other central norms were “market-based mechanism”, “CDRP principle and difference principle”, “richer countries assisting poorer countries” and the “need-based minimum floor principle”. Compared to the previous year period (1991-1998), the norms “advance capabilities of individuals and communities” and “market-based mechanism” gained a higher weighted degree, therefore centrality, while the other central norms became less central. As previously explained, the norm “advance capabilities of individuals and communities” has maintained its position of most central and institutionalised norm until the last considered timeframe (1991-2015). This norm has been increasing drastically, in weighted degree in relation to the other climate justice norms in the network. Moreover, compared to the previous time period (1991-2006), the norm “need-based minimum floor principle” has increased in centrality and has become the second most central norm. Also, two norms not among the five most central norms in the previous years have become more predominant: the “participatory parity” and “global community and interdependencies”.



**Figure 7.** Affiliation network (two-mode) of all intergovernmental and transnational institutions and climate justice norms for years: 1991-1998. Node sizes reflect the weighted degree centrality (larger nodes = higher weighted degree centrality). Node colour represents the group of affiliation.





**Figure 8.** Affiliation network (two-mode) of all intergovernmental and transnational institutions and climate justice norms for years: 1991-2006. Node sizes reflect the weighted degree centrality (larger nodes = higher weighted degree centrality). Node colour represent group of affiliation.

**Table 7.** Five of the most central climate justice norms over time and related centrality values.

Year 1991-1998			Year 1991-2006			Year 1991-2015		
Most central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Most central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Most central climate justice norms	Philosophical tradition	Weighted degree (centrality)
CDRP principle and difference principle	Cosmopolitanism	35	Advance capabilities of individuals and communities	Capabilities approach	81	Advance capabilities of individuals and communities	Capabilities approach	312
Richer countries assisting poorer countries	Capabilities approach	28	Market-based mechanisms	Libertarianism	76	Need-based minimum floor principle	Cosmopolitanism	174
Advance capabilities of individuals and communities	Capabilities approach	21	CDRP principle and difference principle	Cosmopolitanism	49	Market-based mechanisms	Libertarianism	130
Need-based minimum floor principle	Cosmopolitanism	7	Richer countries assisting poorer countries	Capabilities approach	36	Participatory parity	Critical perspectives	91
Market-based mechanisms	Libertarianism	5	Need-based minimum floor principle	Cosmopolitanism	31	Global community and interdependencies	Cosmopolitanism	89

In opposition of the most central norms, the least central climate justice norms over time have been more heavily replaced by new norms period after period (see Table 8). In the years 1991-1998, the least central and most marginalised norm was the critical perspectives idea of “destruction of disparities”. Also, the norms “central role of governments (capabilities)”, “decentralised support system”, “global community and interdependencies” and “inclusive dialogues between formal institutions and civil society” were among the least central and marginalised climate justice norms for this time period. In the time period after, 1991-2006, the least central and most marginalised norm was “central role of governments (capabilities)”. For the same period, other least central norms were: “decentralised support system”, “responsibility of corporations and civil society”, “fair redistribution (national or local)”, “central role of governments (liberal egalitarianism)”. Compared to the two previous year periods, in the year period 1991-2015 all the least central norms have been replaced with new ones (see previous chapter), and the cosmopolitan “global redistribution (considering vulnerable)” has become the most marginalised.

**Table 8.** Five of the least central climate justice norms over time and related centrality values.

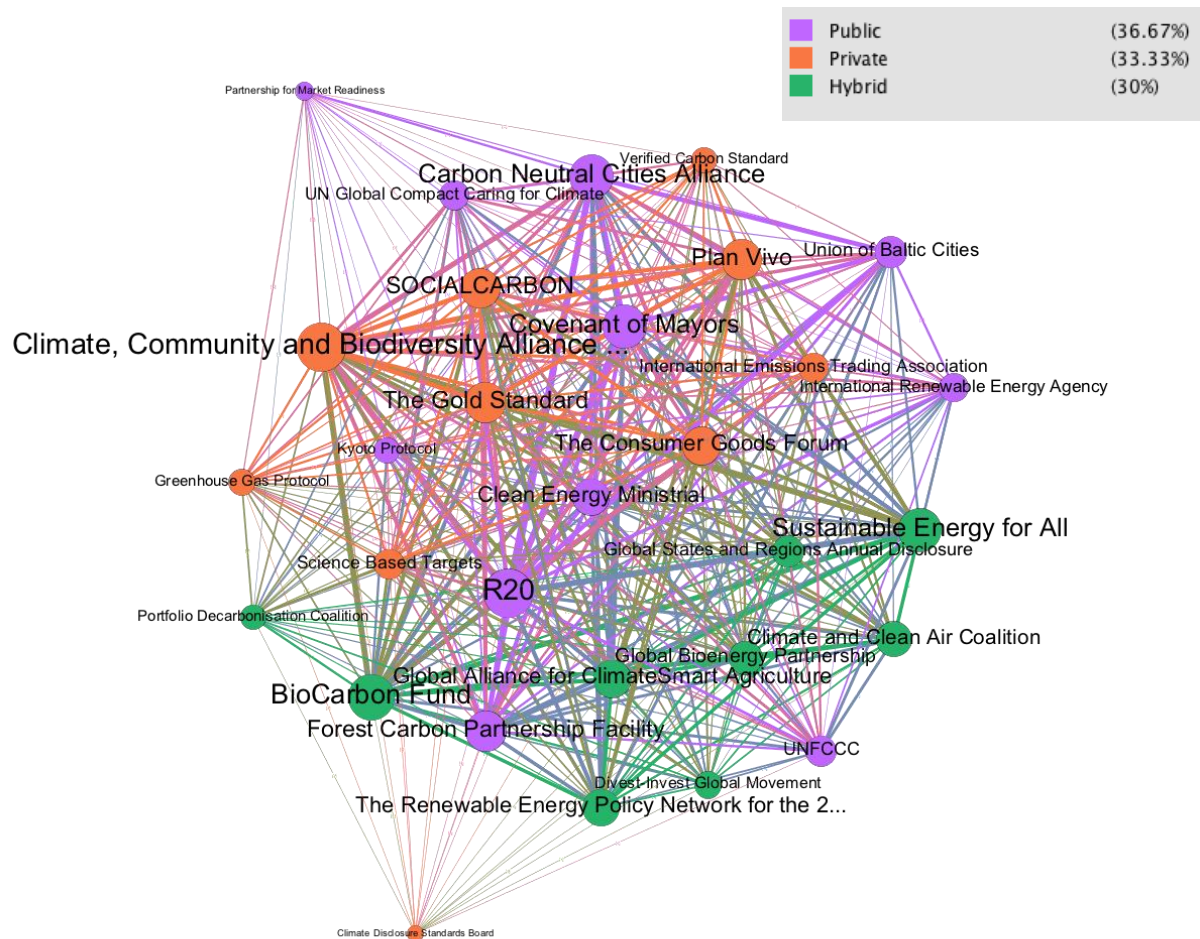
Year 1991-1998			Year 1991-2006			Year 1991-2015		
Least central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Least central climate justice norms	Philosophical tradition	Weighted degree (centrality)	Least central climate justice norms	Philosophical tradition	Weighted degree (centrality)
Destruction of disparities	Critical perspectives	1	Central role of governments (capabilities)	Capabilities approach	3	Global redistribution (considering vulnerable)	Cosmopolitanism	2
Central role of governments (capabilities)	Capabilities approach	2	Decentralised support system	Capabilities approach	3	Equal rights and opportunities (national or local)	Liberal egalitarianism	3
Decentralised support system	Capabilities approach	2	Responsibility of corporations and civil society	Capabilities approach	4	Ownership	Libertarianism	3
Global community and interdependencies	Cosmopolitanism	3	Fair redistribution (national or local)	Liberal egalitarianism	4	Difference principle (national)	Liberal egalitarianism	4
Inclusive dialogues between formal institutions and civil society	Critical perspectives	3	Central role of governments (liberal egalitarianism)	Liberal egalitarianism	5	Self-ownership	Libertarianism	5

### 5.3 Congruence networks

A congruence network of intergovernmental and transnational institutions for all years 1991-2015 was also made. It is shown in Figure 9. This network is useful to visualise the relations between institutions, based on the references to the same climate justice norms. Such connection indicates similarities in the adoption of climate justice norm among the institutions. As visible in the figure, the institutions of the same type (e.g. private, public and hybrid) tend to be closely connected, which means that they share similarities in which climate justice norms they adopt. The node size reflects the weighted degree centrality (the sum of similar norm references per institution), which in this case indicates the diversity in which sub-norms the institutions adopt. In Table 9, the five most central institutions in the network are listed, together with the centrality values. The most central institution is the Climate, Community and Biodiversity Alliance, which has the highest number of similarities in institutionalised norms with other institutions, with a weighted degree on 171. In addition, the institution has a similar norm with 29 of the 30 institutions in the network.

The five most central institutions fairly represent all type of institution. It can therefore be assumed that the trend of having a highly diverse set of climate justice norms is a trend that applies to both public, private and hybrid intergovernmental as well as transnational institutions. This assumption is also accurate when the least central institutions are considered. However, this diversity can be seen as an obstacle to identify certain patterns that can be used

to indicate what one may expect, in terms of climate justice norm, when, for example, a private institution enters the global climate architecture.



**Figure 9.** Congruence (one-mode) network of intergovernmental and transnational institutions, for all years: 1991-2015. Node sizes reflect the weighted degree centrality (larger nodes = higher weighted degree centrality). Node colour represent group of affiliation.

**Table 9.** Five of the most central intergovernmental and transnational institutions in a institution congruence network.

Most central institution	Institution type	Weighted degree (centrality)	Degree (centrality)
Climate, Community and Biodiversity Alliance	Private	171	29
R20	Public	170	29
BioCarbon Fund	Hybrid	158	29
Carbon Neutral Cities Alliance	Public	147	28
Covenant of Mayors	Public	146	29

#### 5.4 Degree of institutionalisation of the philosophical traditions

By summing up the weighted degree centrality of respective sub-norms, an overview over the most institutionalised philosophical tradition can be made. Based on the value of the weighted degree centrality in Table 10, the capabilities approach has got the highest number of references from institutions, equal to 382. Therefore, it is the most dominant and institutionalised philosophical tradition in the global climate architecture. The second position is occupied by cosmopolitanism, with 302 references. The critical perspectives is associated to 160 references, while libertarianism 142. Lastly, liberal egalitarianism is characterised by the lowest amount of references(78).It is therefore the most marginalised philosophical tradition. Over time, the capabilities approach has remained the most dominant tradition.

**Table 10.** The weighted degree centrality of the philosophical traditions for all years: 1991-2015.

Philosophical tradition	Weighted degree centrality
Capabilities approach	382
Cosmopolitanism	302
Critical perspectives	160
Libertarianism	142
Liberal egalitarianism	78

## 6 Discussion

Based on the result, some remarks can be made on the implications of the institutionalisation of climate justice norms on the overall performance of the global climate architecture. Based on the selection of institutions studied for the years 1991-2015, the global climate architecture seems to promote the climate justice norm of “advancing capabilities of individuals and communities”, as it is the climate justice norm with the highest degree of institutionalisation in the climate architecture. Overall, this means that the global climate architecture strongly fosters metrics, principles and mechanisms of justice based on the philosophical tradition capabilities approach, because references to the norms indicate the policy preferences of actors (Leifeld, 2013). This implies that in the climate architecture, climate justice is strongly being defined based on what capabilities people have to do and be what they wish for (Nussbaum, 2000). Some specific capabilities that are often emphasised are health, energy needs, economic security and public participation, both in terms of current and future generations. Furthermore, the diversity of issue areas that the norm encompass might also increase its dominance, as it can be applied in many cases.

The governance outcomes and policies of the global climate architecture can, therefore, be expected to strongly promote normative values of the capabilities approach. Moreover, in practice the specific capabilities mentioned above clearly reflects several of the United Nations Sustainable Development Goals (SDG’s), such as Goals 3 on health, goal 7 on energy and goal 8 on decent work. Since the SDG’s is the world’s leading agenda also on climate action, this could explain the dominance of the capabilities approach in the governance architecture. In addition, the fact that the capabilities approach norm of advancing individuals and communities’ capabilities is the most institutionalised norm in the architecture, could increase the effectiveness in reaching the SDGs as the architecture would promote similar normative goals and activities to the SDGs.

The climate justice norm that is the least institutionalised in climate architecture, or other words, the most marginalised norm, is the cosmopolitan global redistributive mechanism of justice (e.g. a global tax mechanism). Interestingly, the cosmopolitan understanding of metrics, principles and subjects of justice is highly institutionalised in the climate architecture, while for the cosmopolitan approach of mechanisms of justice the case is the complete opposite. To explain this, it could be assumed that the norm does not have an “ideological fit” to other dominant norms in the climate architecture (Bernstein, 2000; Okereke, 2008). Another assumption could be the practical difficulty around implementing a global tax mechanism, as it

would demand the involvement and acceptance of all nations (Roberts, 2009). Moreover, policies and programs founded on liberal egalitarian metrics, principles, mechanisms or conceptualisation of subjects could be expected to struggle to get a foothold in the climate architecture, as well as to be acknowledged as legitimate by actors.

Since the UNFCCC is the most encompassing climate initiatives, it deserves special attention. The fact that the most dominant norm of the UNFCCC (cosmopolitanism) is different than the one most central in the network (capabilities approach) could act as a barrier in reaching the goals of the UNFCCC, as the global climate architecture could promote conflicting policy objectives and normative goals.

Lastly, based on the high degree of institutionalisation of one specific norm (“advance capabilities of individuals and communities”), there seem to be a certain agreement or integration among the institutions on the use of climate justice norm. Based on its relative growth in degree of institutionalisation, it can be expected that the norm continues to stay the most dominant climate justice norms in the architecture. Although the majority of institutions (80%) mentions and put weights on the norm “advancing capabilities of individuals and communities”, the network is still characterised from a high diversity of climate justice norms, since institutions promote additional norms to the most central one. A high variation of climate justice norms opens up for more diversity in policy approaches to climate change in the climate architecture, which can increase the inclusiveness of actors and problem areas (more conceptualisations of subjects of justice gets included), in comparison to low diversity of climate justice norms (Biermann et al., 2009). However, it also leads to conflicting policy objectives, which might negatively affect the effectiveness of the global climate architecture (Ikeme, 2003; Kooiman & Jentoft, 2009; Tritschoks, 2018).

## **6.1 Main findings in relation to existing scientific research**

The findings of this research consolidate, from a different perspective, the claims of previous scientific research on the high diversity of climate justice norms, existing in international climate politics, and caused by the many philosophical traditions which the norms can be conceptualised upon (Ikeme, 2003). Furthermore, although diversity in norms exist, previous research have claimed that global climate governance “cannot operate without a reasoned and coherent set of meta-governance norms and principles” (p. 824), as the world’s diverse societies and actors at different operational levels and areas constitute a complexity that needs to be guided by some common ground in order to be able to govern together (Kooiman & Jentoft, 2009). The results in this study confirm this claim, since some climate justice norms have been

found to be more institutionalised than others as well as more frequently used by institutions in the global climate architecture. The identified climate justice norms with the highest degree of institutionalisation, could, therefore, be understood as a leading set of global climate governance norms.

There is not enough information in the networks and network metrics to explain why some of the identified climate justice norms are more or less institutionalised with certainty, which is a central subject for future research. However, by looking into existing research on international relations on power and interest, it is possible to make some assumptions. First, norms held by powerful actors with rich communication resources might have an increasing chance of becoming central, as the actors have more opportunities to promote the norm to others (Finnemore & Sikkink, 1998; Florini, 1996). For example, with almost universal country membership, the UNFCCC strongly promoting the cosmopolitan common but differentiated responsibility principle as well as the idea of a global community, could be one explanation of why the norms has gained popularity in the global climate architecture. Moreover, also the legitimacy of norms, how well the norms fits with existing ones, and the intrinsic characteristic of the norms (e.g. how clear it is and what issue it addresses) are explanatory factors of why some norms are found to be more prominent or marginalised than others (Finnemore & Sikkink, 1998; Florini, 1996).

Moreover, the findings provide a novel insight to the existing research. First, they give a comprehensive and overarching analysis of climate justice norms in the architecture of global climate governance, the degree to which they are institutionalised over time, as well as which norms that are prominent and which that are marginalised. In addition, this work may be useful to better understand how a network analysis can be applied in relation to climate justice and similar topics.

## **6.2 Critical reflection and limitations**

The outcome of this study has been challenged by several limitations. For instance, the relationship between climate justice norms and institutions is very complex and is in this study it has been simplified, due to practical and feasibility reasons. However, the simplification of the complex relationship between climate justice norms and institutions permitted to better understand this complex relation, which is normally hard to grasp. It is therefore encouraged to further study both the interactions and the power relations of the institutions covered in this research, in terms of how they adopt climate justice norms, how they influence others to adopt



certain norms or impose norms on others. In addition, also the way that highly institutionalised climate justice norms influence the behaviour of institutions in the climate architecture has not been addressed.

Other scholars which deals with the term climate justice have conceptualised it differently than what has been done in this study. While the conceptual framework of this thesis (mainly based on Biermann & Kalfagianni (2020) only addresses justice for current and future generations of humans, other scholars argues for the inclusion of justice for non-human beings, such as animals and non-living beings (e.g. plants and ecosystems) (Dryzek & Pickering, 2020). Due to time constraint, the applied conceptual framework has not been extended to include this aspect, which may nevertheless, for future research, provide a different perspective and, therefore, a more exhaustive picture

The interpretation of climate justice conceptualisation in institutions is naturally affected by the subjectivity of the researcher, as underlying ethical and moral foundation forms understandings of climate justice. However, through consultancy and feedback from supervisor and peers, this bias has been hopefully minimized.

## **7 Conclusion**

This thesis found a high diversity of climate justice norms in the global climate architecture, which changes and grow in number over time. The degree to which climate justice norms is institutionalised in the governance architecture was analysed, finding the capabilities approach as the most institutionalised philosophical tradition. As for specific norms, the mechanism of advancing capabilities of individuals and communities (capabilities approach) was found highly institutionalised in comparison to other norms. This finding reflected a certain integration in climate justice norm adoption among institutions. The cosmopolitan mechanism of redistributing burdens and benefits globally (mainly through a tax mechanism) was found to be the least institutionalised norm. The effect this has on the global climate architecture was addressed, as well as several possible explanations for why specific climate justice norms is either dominant or marginalised in the architecture. The result of this study will hopefully facilitate debates, both within research and in practice, on how climate justice should be addressed at the international governance sphere.

## References

- BCF. (n.d.). *Who We Are*. <https://www.biocarbonfund-isfl.org/who-we-are>
- BCF. (2019). *The BioCarbon Fund Initiative for Sustainable Forest Landscapes: Annual Report 2019*. [https://www.biocarbonfund-isfl.org/sites/isfl/files/2020-03/ISFL%20Annual%20Report%202019\\_7.pdf](https://www.biocarbonfund-isfl.org/sites/isfl/files/2020-03/ISFL%20Annual%20Report%202019_7.pdf)
- Bernstein, S. (2000). Ideas, Social Structure and the Compromise of Liberal Environmentalism. *European Journal of International Relations*, 6(4), 464–512. <https://doi.org/10.1177/1354066100006004002>
- Bernstein, S. (2002a). International institutions and the framing of domestic policies: The Kyoto Protocol and Canada's response to climate change. *Policy Sciences*, 35, 203–236.
- Bernstein, S. (2002b). Liberal Environmentalism and Global Environmental Governance. *Global Environmental Politics*, 2(3), 1–16. <https://doi.org/10.1162/152638002320310509>
- Biermann, F., Betsill, M. M., Gupta, J., Kanie, N., Lebel, L., Liverman, D., Schroeder, H., Siebenhüner, B., & Zondervan, R. (2010). Earth system governance: A research framework. *International Environmental Agreements: Politics, Law and Economics*, 10(4), 277–298. <https://doi.org/10.1007/s10784-010-9137-3>
- Biermann, F., & Kalfagianni, A. (2020). Planetary justice: A research framework. *Earth System Governance*, 10.1016/j.esg.2020.100049
- Biermann, F., Pattberg, P., van Asselt, H., & Zelli, F. (2009). The Fragmentation of Global Governance Architectures: A Framework for Analysis. *Global Environmental Politics*, 9(4), 14–40. <https://doi.org/10.1162/glep.2009.9.4.14>
- Borgatti, S. P. (2005). Centrality and network flow. *Social Networks*, 27(1), 55–71. <https://doi.org/10.1016/j.socnet.2004.11.008>

- Brazys, S., Kaarbo, J., & Panke, D. (2017). Foreign policy change and international norms: A conceptual framework. *International Politics*, 54(6), 659–668.  
<https://doi.org/10.1057/s41311-017-0063-7>
- Brock, G. (2005). Needs and Global Justice. *Royal Institute of Philosophy Supplement*, 57, 51–72. <https://doi.org/10.1017/S1358246100009140>
- Caney, S. (2006). Cosmopolitan Justice, Rights and Global Climate Change. *Canadian Journal of Law and Jurisprudence*, 19(2), 255–278.
- Caney, S. (2010). Climate change and the duties of the advantaged. *Critical Review of International Social and Political Philosophy*, 13(1), 203–228.  
<https://doi.org/10.1080/13698230903326331>
- Caring for Climate. (2016). *CARING FOR CLIMATE PROGRESS REPORT 2016*.  
[https://d306pr3pise04h.cloudfront.net/docs/issues\\_doc%2FEnvironment%2Fclimate%2FC4C-progress-report-2016.pdf](https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2FEnvironment%2Fclimate%2FC4C-progress-report-2016.pdf)
- CCAC. (n.d.). *Who We Are*. Retrieved 17 August 2020, from  
<https://ccacoalition.org/en/content/who-we-are>
- CCAC. (2014). *Time to Act: To reduce short-lived climate pollutants*.  
<https://www.ccacoalition.org/sites/default/files/resources/Time%20To%20Act%20to%20reduce%20Short-Lived%20Climate%20Pollutants.pdf>
- CCAC. (2019). *FRAMEWORK & 2030 VISION STATEMENT FOR THE CLIMATE AND CLEAN AIR COALITION TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS* (HLA/SEP2019 No. 03A).
- CCBS. (n.d.). *About the CCBA*. <https://www.climate-standards.org/about-ccba/>
- CCBS. (2017). *Third Edition: Climate, Community & Biodiversity Standards*.  
<https://www.climate-standards.org/ccb-standards/>
- CDSB. (n.d.). *About the Climate Disclosure Standards Board*. <https://www.cdsb.net/our-story>

- CDSB. (2019). *CDSB Framework for reporting environmental & climate change information: Advancing and aligning disclosure of environmental information in mainstream reports*.  
[https://www.cdsb.net/sites/default/files/cdsb\\_framework\\_2019\\_v2.2.pdf](https://www.cdsb.net/sites/default/files/cdsb_framework_2019_v2.2.pdf)
- CGF. (2016). *THE CONSUMER GOODS FORUM STATUTES*.  
<https://www.theconsumergoodsforum.com/who-we-are/overview/>
- CGF. (2019). *THE CONSUMER GOODS FORUM: CORPORATE BROCHURE [Brochure]*.  
<https://www.theconsumergoodsforum.com/wp-content/uploads/2017/12/CGF-corporate-brochure.pdf>
- CGF. (2020). *Overview: Securing the future by working together and driving positive change*.  
<https://www.theconsumergoodsforum.com/who-we-are/overview/>
- Chen, S.-H. (2018). *Big data in computational social science and humanities*.
- Clean Energy Ministerial. (n.d.). *ABOUT THE CLEAN ENERGY MINISTERIAL*. Retrieved the 17th of August from <Http://Www.Cleanenergyministerial.Org/about-Clean-Energy-Ministerial>.
- Clean Energy Ministerial. (2019). *A guide to The Clean Energy Ministerial [Brochure]*.  
<http://www.cleanenergyministerial.org/about-clean-energy-ministerial>
- Climate Group. (n.d.). *Annual Disclosure*. Retrieved 17 August 2020, from  
<https://www.theclimategroup.org/Annual-Disclosure>
- CNCA. (n.d.). *About*. <https://carbonneutralcities.org/about/>
- CNCA. (2019). *Carbon Neutral Cities Alliance 2019 Annual Report*. CNCA.  
<https://carbonneutralcities.org/about/>
- CoM. (n.d.). *THE COVENANT OF MAYORS FOR CLIMATE AND ENERGY*.  
[https://www.covenantofmayors.eu/IMG/pdf/covenantofmayors\\_text\\_en.pdf](https://www.covenantofmayors.eu/IMG/pdf/covenantofmayors_text_en.pdf)

Covenant of Mayors. (n.d.). *Covenant initiative*.

<https://www.covenantofmayors.eu/about/covenant-initiative/origins-and-development.html>

Covenant of Mayors. (2018). *2018 Annual Report*. <https://www.covenantofmayors.eu/en/>

Dirth, E., Biermann, F., & Kalfagianni, A. (2020). What do researchers mean when talking about justice? An empirical review of justice narratives in global change research.

*Earth System Governance*, 100042. <https://doi.org/10.1016/j.esg.2020.100042>

Divest-Invest. (n.d.). *Together, we are accelerating the clean energy transition*.

<https://www.divestinvest.org/about/>

Divest-Invest. (2017). *Divest-Invest Philanthropy Doing Good. Performing Better. Beat your Benchmarks. Beat Climate Change*. <https://www.divestinvest.org/wp-content/uploads/2017/09/2017-DIP-Briefing-Case-Studies.pdf>

Dryzek, J. S., & Pickering, J. (2020). *The Politics of the Anthropocene*. Oxford University Press.

FAO. (n.d.). *About: What is GACSA?* Retrieved 17 August 2020, from

<http://www.fao.org/gacsa/about/en/>

FCPF. (2015). *International Bank for Reconstruction and Development Charter Establishing The Forest Carbon Partnership Facility*.

<https://www.forestcarbonpartnership.org/resources>

FCPF. (2018). *About the FCPF*. <https://www.forestcarbonpartnership.org/about>

Finnemore, M., & Sikkink, K. (1998). International Norm Dynamics and Political Change.

*International Organization*, 52(4), 887–917. Scopus.

<https://doi.org/10.1162/002081898550789>

- Fisher, D. R., Leifeld, P., & Iwaki, Y. (2013). Mapping the ideological networks of American climate politics. *Climatic Change*, 116(3–4), 523–545.  
<https://doi.org/10.1007/s10584-012-0512-7>
- Florini, A. (1996). The Evolution of International Norms. *International Studies Quarterly*, 40(3), 363–389. JSTOR. <https://doi.org/10.2307/2600716>
- Forsyth, T. (2014). Climate justice is not just ice. *Geoforum*, 54, 230–232.  
<https://doi.org/10.1016/j.geoforum.2012.12.008>
- Fraser, N. (2008). *Scales of Justice: Reimagining political space in a globalised world*. Polity Press.
- Friman, M., & Hjerpe, M. (2015). Agreement, significance, and understandings of historical responsibility in climate change negotiations. *Climate Policy*, 15(3), 302–320.  
<https://doi.org/10.1080/14693062.2014.916598>
- Gach, E. (2019). Normative Shifts in the Global Conception of Climate Change: The Growth of Climate Justice. *Social Sciences*, 8(1), 24. <https://doi.org/10.3390/socsci8010024>
- GACSA. (2014). *GLOBAL ALLIANCE FOR CLIMATE-SMART AGRICULTURE (GACSA) FRAMEWORK DOCUMENT*. <http://www.fao.org.proxy.library.uu.nl/3/a-au667e.pdf>
- GBEP. (2012). *TERMS OF REFERENCE FOR THE GLOBAL BIOENERGY PARTNERSHIP (GBEP)*.  
[http://www.globalbioenergy.org/fileadmin/user\\_upload/gbep/docs/TOR\\_text\\_only\\_updated\\_November\\_2012.pdf](http://www.globalbioenergy.org/fileadmin/user_upload/gbep/docs/TOR_text_only_updated_November_2012.pdf)
- GBEP. (2016). *The Global Bioenergy Partnership*.  
[http://www.globalbioenergy.org/fileadmin/user\\_upload/gbep/docs/ENGLISH\\_Background\\_note\\_GBEP\\_Setember\\_2016\\_FINAL.pdf](http://www.globalbioenergy.org/fileadmin/user_upload/gbep/docs/ENGLISH_Background_note_GBEP_Setember_2016_FINAL.pdf)
- GHGP. (n.d.a). *A Corporate Accounting and Reporting Standard*.  
<https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

- GHGP. (n.d.b). *About Us*. <https://ghgprotocol.org/about-us>
- GHGP. (n.d.c). *The GHG Protocol for Project Accounting*.  
[https://ghgprotocol.org/sites/default/files/standards/ghg\\_project\\_accounting.pdf](https://ghgprotocol.org/sites/default/files/standards/ghg_project_accounting.pdf)
- Gold Standard. (n.d.). *VISION + Mission*. <https://www.goldstandard.org/about-us/vision-and-mission>
- Gold Standard. (2018). *Gold Standard: PATHWAYS TO SCALE: Annual Report 2018*.  
<https://www.goldstandard.org/take-action/resources>
- GSRAD. (2019). *GLOBAL STATES AND REGIONS ANNUAL DISCLOSURE*.  
[https://www.theclimategroup.org/sites/default/files/global\\_states\\_and\\_regions\\_annual\\_disclosure\\_report\\_nov\\_19.pdf](https://www.theclimategroup.org/sites/default/files/global_states_and_regions_annual_disclosure_report_nov_19.pdf)
- Hafner-Burton, E. M., Kahler, M., & Montgomery, A. H. (2009). Network Analysis for International Relations. *International Organization*, 63(3), 559–592. JSTOR.
- Hajer, M. A. (1993). Discourse Coalitions and the Institutionalization of Practice: The case of Acid Rain in Britain. In F. Fischer & J. Forester (Eds.), *The argumentative turn in policy analysis and planning*. UCL.  
<https://ebookcentral.proquest.com/lib/ulaval/detail.action?milDocID=40672>
- Hajer, M., & Versteeg, W. (2005). A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *Journal of Environmental Policy & Planning*, 7(3), 175–184. <https://doi.org/10.1080/15239080500339646>
- Holland, B. (2008). Justice and the Environment in Nussbaum’s “Capabilities Approach”: Why Sustainable Ecological Capacity Is a Meta-Capability. *Political Research Quarterly*, 61(2), 319–332. <https://doi.org/10.1177/1065912907306471>
- IETA. (n.d.). *OUR MISSION*. <https://www.ieta.org/Our-Mission>

IETA. (2019). *2019 GREENHOUSE GAS MARKET REPORT IETA*.

[https://www.ieta.org/resources/Resources/GHG\\_Report/2019/IETA%20-%20GHG%20Report%202019\\_WEB.pdf](https://www.ieta.org/resources/Resources/GHG_Report/2019/IETA%20-%20GHG%20Report%202019_WEB.pdf)

Ikeme, J. (2003). Equity, environmental justice and sustainability: Incomplete approaches in climate change politics. *Global Environmental Change*, 13(3), 195–206.

[https://doi.org/10.1016/S0959-3780\(03\)00047-5](https://doi.org/10.1016/S0959-3780(03)00047-5)

IRENA. (n.d.). *About IRENA*. <https://www.irena.org/aboutirena>

IRENA. (2009). *Statute of the International Renewable Energy Agency (IRENA)*.

[https://www.irena.org/-/media/Files/IRENA/Agency/About-IRENA/Statute/IRENA\\_FC\\_Statute\\_signed\\_in\\_Bonn\\_26\\_01\\_2009\\_incl\\_declaration\\_on\\_further\\_authentic\\_versions.pdf?la=en&hash=635C494208DD405EA8CD2BDB04414FECD40F55F1](https://www.irena.org/-/media/Files/IRENA/Agency/About-IRENA/Statute/IRENA_FC_Statute_signed_in_Bonn_26_01_2009_incl_declaration_on_further_authentic_versions.pdf?la=en&hash=635C494208DD405EA8CD2BDB04414FECD40F55F1)

Keohane, R. O. (1988). International Institutions: Two Approaches. *International Studies Quarterly*, 32(4), 379–396. JSTOR. <https://doi.org/10.2307/2600589>

Kim, R. E. (2019). Is Global Governance Fragmented, Polycentric, or Complex? The State of the Art of the Network Approach. *International Studies Review*, viz052.

<https://doi.org/10.1093/isr/viz052>

Kooiman, J., & Jentoft, S. (2009). Meta-Governance: Values, Norms and Principles, and the Making of Hard Choices. *Public Administration*, 87(4), 818–836.

<https://doi.org/10.1111/j.1467-9299.2009.01780.x>

Leifeld, P. (2013). Reconceptualizing Major Policy Change in the Advocacy Coalition

Framework: A Discourse Network Analysis of German Pension Politics:

Reconceptualizing Major Policy Change in the ACF. *Policy Studies Journal*, 41(1), 169–198. <https://doi.org/10.1111/psj.12007>



- Leifeld, P. (2017). Discourse Network Analysis: Policy Debates as Dynamic Networks. In J. N. Victor, M. N. Lubell, & A. H. Montgomery (Eds.), *The Oxford Handbook of Political Networks*. (p. 30). Oxford University Press.
- MacGregor, S. (2004). Reading the earth charter: Cosmopolitan environmental citizenship or light green politics as usual? *Ethics, Place & Environment*, 7(1–2), 85–96.  
<https://doi.org/10.1080/1366879042000264796>
- March, J. G., & Olsen, J. P. (1998). The Institutional Dynamics of International Political Orders. *International Organization*, 52(4), 943–969.  
<https://doi.org/10.1162/002081898550699>
- McDermott, M., Mahanty, S., & Schreckenberg, K. (2013). Examining equity: A multidimensional framework for assessing equity in payments for ecosystem services. *Environmental Science & Policy*, 33, 416–427.  
<https://doi.org/10.1016/j.envsci.2012.10.006>
- Nelson, J., & Grubestic, T. (2018). Environmental Justice: A Panoptic Overview Using Scientometrics. *Sustainability*, 10(4), 1022. <https://doi.org/10.3390/su10041022>
- Nozick, R. (1974). *Anarchy, state, and utopia*. Basic Books.
- Nussbaum, M. C. (2000). *Women and Human Development: The Capabilities Approach* (1st ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511841286>
- Nussbaum, M. C. (2011). *Creating Capabilities: The Human Development Approach*. Harvard University Press.
- Okereke, C. (2008). Equity Norms in Global Environmental Governance. *Global Environmental Politics*, 8(3), 25–50. <https://doi.org/10.1162/glep.2008.8.3.25>
- Okereke, C. (2010). Climate justice and the international regime: Climate justice and the international regime. *Wiley Interdisciplinary Reviews: Climate Change*, 1(3), 462–474. <https://doi.org/10.1002/wcc.52>

- Okereke, C., & Coventry, P. (2016). Climate justice and the international regime: Before, during, and after Paris: Climate justice and the international regime. *Wiley Interdisciplinary Reviews: Climate Change*, 7(6), 834–851.  
<https://doi.org/10.1002/wcc.419>
- Page, E. A. (2012). The hidden costs of carbon commodification: Emissions trading, political legitimacy and procedural justice. *Democratization*, 19(5), 932–950.  
<https://doi.org/10.1080/13510347.2012.709689>
- Pattberg, P., Widerberg, O., Isailovic, M., & Dias Guerra, F. (2014). Mapping and Measuring Fragmentation in Global Governance Architectures: A Framework for Analysis. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2484513>
- PDC. (n.d.). *About*. <https://unepfi.org/pdc/about/>
- PDC. (2015). *The Portfolio Decarbonization Coalition: Mobilizing financial markets to drive economic decarbonization [Brochure]*. [https://unepfi.org/pdc/wp-content/uploads/pdc\\_brochure.pdf](https://unepfi.org/pdc/wp-content/uploads/pdc_brochure.pdf)
- PDC. (2017). *PORTFOLIO INVESTMENT IN A CARBON CONSTRAINED WORLD: THE THIRD ANNUAL PROGRESS REPORT OF THE PORTFOLIO DECARBONIZATION COALITION*.
- Pedersen, O. W. (2010). Environmental Principles and Environmental Justice. *ENVIRONMENTAL LAW REVIEW*, 24.
- Plan Vivo. (n.d.a). *Our Mission*. <https://www.planvivo.org/about-plan-vivo/mission/>
- Plan Vivo. (n.d.b). *The Plan Vivo Standard*. <https://www.planvivo.org>
- PMR. (2017). *PARTNERSHIP FOR MARKET READINESS (PMR): PMR Governance Framework*. <https://www.thepmr.org/content/supporting-action-climate-change-mitigation>

- PMR. (2019). *About: Supporting Action for Climate Change Mitigation*.  
<https://www.thepmr.org/content/supporting-action-climate-change-mitigation>
- R20. (2018). *ANNUAL ACTIVITY REPORT FROM ACTION TO TRANSACTION: Building the investment vehicle*. <https://regions20.org/>
- R20. (2019). *R20 regions of Climate Action: About us*. <https://regions20.org/about-us-2/>
- Rawls, J. (1971). *A theory of justice*. Harvard University Press.
- REN21. (n.d.). *Who We Are*. <https://www.ren21.net/about-us/who-we-are/#>
- REN21. (2019). *2018-2019: Renewables now!* [http://yang34t.com/wp-content/uploads/2019/05/2018-2019-Annual-Report\\_FINAL\\_low-res.pdf](http://yang34t.com/wp-content/uploads/2019/05/2018-2019-Annual-Report_FINAL_low-res.pdf)
- Robeyns, I. (2005). The Capability Approach: A theoretical survey. *Journal of Human Development*, 6(1), 93–117. <https://doi.org/10.1080/146498805200034266>
- Sanderink, L. (2020). Shattered frames in global energy governance: Exploring fragmented interpretations among renewable energy institutions. *Energy Research & Social Science*, 61, 101355. <https://doi.org/10.1016/j.erss.2019.101355>
- Sandholtz, W. (2008). Explaining International Norm Change. In *International Norms and Cycles of Change*. Oxford University Press.  
<https://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780195380088.001.0001/acprof-9780195380088-chapter-1>
- SBT. (n.d.). *About the Science Based Target Initiative*. <https://sciencebasedtargets.org/about-the-science-based-targets-initiative/#>
- SBT. (2019). *Raising the Bar: Exploring the Science Based Targets initiative's progress in driving ambitious climate action*. <https://sciencebasedtargets.org/wp-content/uploads/2019/12/SBTi-Progress-Report-2019-FINAL-v1.2.pdf>

- Schapper, A., & Lederer, M. (2014). Introduction: Human rights and climate change: mapping institutional inter-linkages. *Cambridge Review of International Affairs*, 27(4), 666–679. <https://doi.org/10.1080/09557571.2014.961806>
- Schlosberg, D. (2012). Climate Justice and Capabilities: A Framework for Adaptation Policy. *Ethics & International Affairs*, 26(4), 445–461. <https://doi.org/10.1017/S0892679412000615>
- Schlosberg, D. (2013). Theorising environmental justice: The expanding sphere of a discourse. *Environmental Politics*, 22(1), 37–55. <https://doi.org/10.1080/09644016.2013.755387>
- Schlosberg, D., & Collins, L. B. (2014). From environmental to climate justice: Climate change and the discourse of environmental justice: Climate change and the discourse of environmental justice. *Wiley Interdisciplinary Reviews: Climate Change*, 5(3), 359–374. <https://doi.org/10.1002/wcc.275>
- Scott, J., & Carrington, P. J. (2011). *The SAGE handbook of social network analysis*. SAGE publications.
- SE4ALL. (n.d.). *About Us*. <https://www.seforall.org/about-us>
- SE4ALL. (2018). *2018 Annual Report*. <https://www.seforall.org/system/files/2019-05/SEforALL-2018-Annual-Report.pdf>
- SE4ALL. (2019). *SUSTAINABLE ENERGY FOR ALL Statutes*. <https://www.seforall.org/system/files/2019-07/SEforALLStatutes.pdf>
- Shahar, D. C. (2009). Justice and Climate Change Toward a Libertarian Analysis. *Independent Review*, 14(2), 219–237.
- Social Carbon. (n.d.a). *About*. <https://www.socialcarbon.org/>
- Social Carbon. (n.d.b). *ICROA Code of Best Practice and CCB and SOCIALCARBON Standards*. <http://www.socialcarbon.org/wp->

- content/themes/socialcarbon/docs/ICROA-Policy-Paper-on-Use-of-CCB-and-SOCIAL-CARBON-Standards-Final.pdf
- Social Carbon. (2013). *Social Carbon Standard Version 5.0*. [http://www.socialcarbon.org/wp-content/uploads/2012/11/SOCIALCARBON\\_STANDARD\\_v-5-.00.pdf](http://www.socialcarbon.org/wp-content/uploads/2012/11/SOCIALCARBON_STANDARD_v-5-.00.pdf)
- Stiles, K., & Sandholtz, W. (2008). Cycles of International Norm Change. In *International Norms and Cycles of Change*. Oxford University Press.
- <https://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780195380088.001.0001/acprof-9780195380088-chapter-12>
- Terry, G. (2009). No climate justice without gender justice: An overview of the issues. *Gender and Development*, 17(1), 5–18. Scopus.
- <https://doi.org/10.1080/13552070802696839>
- Timmons Roberts, J. (2009). The International Dimension of Climate Justice and the Need for International Adaptation Funding. *Environmental Justice*, 2(4), 185–190.
- <https://doi.org/10.1089/env.2009.0029>
- Tolbert, P. S., & Zucker, L. G. (1999). The Institutionalization of Institutional Theory. In *Studying Organization: Theory & Method* (pp. 169–184). SAGE Publications Ltd.
- <https://doi.org/10.4135/9781446218556.n6>
- Tritschoks, A. (2018). Rethinking Justice in International Environmental Negotiations: Toward a More Comprehensive Framework. *International Negotiation*, 23(3), 446–477. <https://doi.org/10.1163/15718069-23031159>
- UBC. (n.d.a). *UBC – The leading network of cities in the Baltic Sea Region UBC Strategic Framework 2016–2021*. <https://www.ubc.net/document-categories>
- UBC. (n.d.b). *UBC Union of the Baltic Cities: WELCOME to the UBC website*. <https://www.ubc.net/>

UNFCCC. (n.d.a). *United Nations Climate Change: About the Secretariat*.

<https://unfccc.int/about-us/about-the-secretariat>

UNFCCC. (n.d.b). *What is the Kyoto Protocol?* [https://unfccc.int/kyoto\\_protocol](https://unfccc.int/kyoto_protocol)

Union of the Baltic Cities. (2019). *STATUTE OF THE UNION OF THE BALTIC CITIES*.

<https://www.ubc.net/document-categories>

United Nations. (1992). *UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE* (FCCC/INFORMAL No. 84).

<https://unfccc.int/resource/docs/convkp/conveng.pdf>

United Nations. (1998). *KYOTO PROTOCOL TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE*. <https://unfccc.int/documents/2409>

United Nations Global Compact. (n.d.). *The Case for Climate Action is Clear*.

<https://www.unglobalcompact.org/what-is-gc/our-work/environment/climate>

van Tatenhove, J., & Leroy, P. (2000). The Institutionalisation of Environmental Politics. In J. van Tatenhove, B. Arts, & P. Leroy (Eds.), *Political Modernisation and the Environment: The Renewal of Environmental Policy Arrangements* (pp. 17–33).

Springer Netherlands. [https://doi.org/10.1007/978-94-015-9524-7\\_2](https://doi.org/10.1007/978-94-015-9524-7_2)

VCS. (n.d.). *Verified Carbon Standard: Program Guide*. Retrieved 17 August 2020, from

[https://verra.org/wp-content/uploads/2019/09/VCS\\_Program\\_Guide\\_v4.0.pdf](https://verra.org/wp-content/uploads/2019/09/VCS_Program_Guide_v4.0.pdf)

Verra. (n.d.). *About Verra: Who We Are*. <https://verra.org/about-verra/who-we-are/>

Verschuren, P., & Doorewaard, H. (2010). *Designing a research project* (2nd ed.). Eleven International Publishing House.

Widerberg, O., Pattberg, P., & Kristensen, K. (2016). *Mapping the Institutional Architecture of Global Climate Change Governance* (Technical Report No. 2; p. 43). IVM Institute for Environmental Studies.

- Young, O. R. (2013). Sugaring off: Enduring insights from long-term research on environmental governance. *International Environmental Agreements: Politics, Law and Economics*, 13(1), 87–105. <https://doi.org/10.1007/s10784-012-9204-z>
- Zelli, F. (2011). The fragmentation of the global climate governance architecture: Fragmentation of the global climate governance architecture. *Wiley Interdisciplinary Reviews: Climate Change*, 2(2), 255–270. <https://doi.org/10.1002/wcc.104>

## Appendix I – Short description of analysed intergovernmental and transnational institutions

Institutions	Description
Clean Energy Ministerial	The Clean Energy Ministerial (CEM) is a global forum to promote clean energy. Its members consist of major economies and front-running clean energy countries. The members collaborate with the private sector (industry and non-profit organisations) in order to facilitate a global clean energy transition, through policy development, technology, sharing best practices and engaging stakeholders.
Carbon Neutral Cities Alliance	CNCA is a global network of cities which are dedicated to becoming carbon neutral within 2050. The members focus area is to remove carbon emissions from energy supply, buildings, transport and waste systems. The institution is engaged in developing planning and implementation standards, supporting innovations and initiatives, and in sharing information on carbon neutrality.
Covenant of Mayors	The European Covenant of Mayors (CoM) is a voluntary movement of local and regional governments that aims to accelerate the efforts on sustainable energy and in mitigating and adapting to climate change.
Kyoto Protocol	The Kyoto protocol is an international agreement based on the United Nations Framework of Convention (UNFCCC), in which its members commits to set targets to reduce greenhouse gas emissions.
Partnership for Market Readiness	Focused on the up scaling of climate change mitigation efforts, the Partnership for Market Readiness provides a forum for countries, international organisations and experts to increase and develop mitigation efforts mainly through market-based mechanisms. The institution is focused on increasing climate change mitigation by building country-capacity, assisting countries, exchanging knowledge, affecting policy discussions on topics related to carbon pricing.
R20	As a non-profit organisation, R20 concentrates on sub-national governments globally and their role in the transition to a “green economy”. The organisation both support and finance infrastructure projects which are carbon-low and climate resilient. The areas of concern include renewable energy, LED lightning and waste.
Union of Baltic Cities	The union of Baltic cities (UBC) is a network that aims to strengthen collaborative efforts between cities in the Baltic Sea Region. It promotes common interests of the member cities and works towards sustainable development in the regions, and do so through knowledge



	exchange, supporting and assisting member on matters of development and knowledge production, strengthen cooperation and linkages between members or external actors, etc.
International Renewable Energy Agency	International Renewable Energy Agency (IRENA) is an intergovernmental organisation that functions as a platform for global cooperation on stimulating growth in renewable energy. The organisation assists countries in transitioning to a more sustainable energy scenario. The institution's aim covers "sustainable development, energy access, energy security and low-carbon economic growth and prosperity"
United Nations Framework Convention on Climate Change	The UNFCCC is a unit at the United Nations that deals with global action to mitigate and adapt to climate change. It is one of the most encompassing climate initiatives in the world as its membership is close to including all the countries in the world.
UN Global Compact Caring for Climate	An initiative to encourage the role of businesses in taking climate action. The initiative assists businesses in coming up with solutions to climate change.
Forest Carbon Partnership Facility	A multi stakeholder initiative on emission reduction from deforestation and forest degradation, as well as forest carbon stock conservation and sustainable forest management.
The Consumer Goods Forum	The Consumer Goods Forum (CGF) is an organisation that facilitated collaboration between consumer goods manufacturers and retailers to obtain consumer trust and to bring about positive change within the following fields: food and non-food safety, environmental & social sustainability, health and wellness, etc.
International Emissions Trading Association	The International Emissions Trading Association (IETA) is a non-profit organization with companies and businesses as members, aiming to develop and promote market-based solutions (carbon markets and pricing) to climate challenges.
Verified Carbon Standard	The Verified Carbon Standard is a program for greenhouse gas removal through voluntary carbon markets. It enables tradable greenhouse gas credits to be traded in the open market. Formerly the Voluntary Carbon Standard.
Climate, Community and Biodiversity Alliance (CCB Standard)	The CCBA is a partnership of international NGOs that works for identifying land management projects that results in net positive effects on climate change, local communities and biodiversity. A standard for such projects is developed through the inclusion of several different types of stakeholders.
The Gold Standard	The Gold Standard (GS) was established by World Wildlife fund and other international NGOs as a "best practice standard for climate and sustainable development interventions" (webpage). The institution's focus areas are environmental markets, corporate sustainability, and climate and development finance
Plan Vivo	Plan Vivo is a certification framework for paying communities for ecosystem services projects. The initiative focuses on achieving benefits in relation to community livelihood, climate and ecosystems.

SocialCarbon	Social Carbon (SC) is a standard, established by the NGO the Ecologica Institute, that aims at improving co-benefits to sustainable development of projects involving carbon offset.
Greenhouse Gas Protocol	Provides a global standard to measure, manage and report emissions from greenhouse gas emissions.
Science Based Targets	Supports corporations in adopting scientific research in regard to decisions on emission reduction in order to reach global climate goals.
Climate Disclosure Standards Board	CDSB
BioCarbon Fund	The BioCarbon Fund (BCF) is a public-private initiative that provides funding for emission reduction from the land-use management, sustainable agriculture, deforestation and forest degradation in developing countries.
Climate and Clean Air Coalition	Climate and Clean Air Coalition to Reduce Short Lived Climate Pollutants consist of businesses and environmental organisations which focuses on integrating information on climate change into corporate reporting.
Global States and Regions Annual Disclosure	A reporting mechanism for states and regions worldwide, to yearly evaluate efforts that have been taken on climate action.
Divest-Invest	Divest-Invest Global Movement is an initiative encouraging to disinvest in heavy polluting corporations, and instead invest in more sustainable corporations.
Global Alliance for ClimateSmart Agriculture	A voluntary initiative dealing with issues concerned with food security and agriculture, through the cooperation of its members.
Global Bioenergy Partnership	Multi-stakeholder initiative focused on promoting bioenergy.
Portfolio Decarbonisation Coalition	An initiative that encourages investors to decarbonize their investments.
The Renewable Energy Policy Network for the 21st Century	A multi-stakeholder initiative leading in producing and sharing knowledge on renewable energy.
Sustainable Energy for All	Is an initiative that promotes energy access and renewable energy globally.