Climate justice handbook

A practical guide to implement climate justice in practices and policies

Colofon

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Summary

Climate justice means making sure that the ways we deal with climate change are fair – or at least as fair as possible. Some people and places have been and continue to be impacted more than others, even though they have done less to cause the problem. This handbook helps people who are working on climate issues in the Netherlands and beyond to translate the principle of fairness into concrete action.

Developed as part of the **KIN ACT research program: Accelerating Just Climate Transitions in Urban Regions**, the handbook focuses on cities — where the challenges and opportunities for just transitions are most visible. It is designed for practitioners such as city planners, teachers, civil servants, health workers, and business leaders, who often want to make the right choices but lack practical guidance on how to embed climate justice in their daily work.

The handbook provides **tools, tips, and real-world examples** to support better and fairer decision-making. It was shaped by listening to diverse voices — from Dutch cities, provinces, the national government, the Dutch Caribbean, businesses, and communities of different ages and backgrounds. Their experiences, alongside insights from academic research and policy documents, have been woven into this handbook to make climate justice actionable.

The **first part** of the handbook helps you with concrete steps to integrate climate justice into your work. It includes tools to help you define and work with climate justice and to design a workshop to talk about the topic with different types of people. It also provides a scenario-based strategy developed by Health Action International to help you prepare for different scenario's related to climate change.

The **second part** provides information on the concept of climate justice, including a definition of climate justice, an

overview of what has been written about climate justice in literature and climate policies and a number of practical examples of how people in the Netherlands, the Dutch Caribbean and other countries have dealt with climate justice dilemmas.

This handbook is not about having all the answers immediately, as every situation is different. It is about starting conversations, learning together, working toward a fairer future, and jointly finding out what the answers are for specific situations. Climate justice is for everyone—and this guide helps to show the way.

How to Use This Handbook

How can this handbook help you in applying climate justice to your work? This depends on your needs and the context you're working in:

Are you looking to put climate justice into action and dive straight into implementation?

Go to part 1, where you will find:

- A step by step **How to do Climate Justice** guide for climate professionals who want to integrate climate justice into their policy or practice from the start;
- A **Climate Justice Workshop** format designed to create a shared definition of climate justice tailored to the stakeholder group of your policy or practice;
- An adaptable framework for **Scenario-based Training and Strategizing**, for use by climate professionals in preparing for a range of scenarios in case of climate related events. This framework has been developed by Health Action International

Are you interested to find out what climate justice means in theory and practice, and how this possibly applies to your work?

Go to part 2, where you will find:

- A **working definition of climate justice**, based on theory and policies and improved by several conversations with people who have experience with climate justice in their daily practice;
- **A theoretical framework climate justice**, including the core dimensions of climate justice: distributive, procedural, recognitional, restorative, epistemic and structural justice;

- Examples of **climate justice in policies and case studies** as real-life examples of how climate justice may work out in practice;
- **Conclusions & Future Suggestions** on how to move on with putting climate justice into action.

Want to know more about who created this handbook, how we did it and what has inspired us?

In the last section of the handbook, you will find:

- The **acknowledgements**, in which we express our heartfelt gratitude to the many thoughtful conversations and valuable contributions that made this work possible;
- **Appendix I - methodology**, which offers a behind-the-scenes look at how we collaborated and co-created this resource.
- **Appendix II – climate justice in the media**, which features a curated selection of podcasts, music, books, and other media that inspired us along the way.

Note: this handbook is both a resource and a starting point. We hope this handbook sparks reflection, fosters engagement, and strengthens the collective effort to make climate action fair, inclusive, and lasting. It is a **living document**, which means it can be filled with new insights and inspiration as it is being applied. Finally, we are aware that in its current form and language, it isn't accessible to everyone who is affected by climate change. Therefore, we will dedicate the next two years of this KIN ACT research to working on ways to include **different perspectives** in the conversations on climate justice.

Part 1 Making Climate Justice Real: Tools and Steps for Action

1.1 Introduction

Climate change is moving faster than ever before and has become the biggest public health challenge of the 21st century.[1] Climate change puts people's health, economy and global security at risk. People dealing with poverty, poor nutrition, chronic illness, disabilities, housing in polluted areas, hazardous work environments and limited education are more vulnerable for health issues due to climate change.[2] People in vulnerable positions usually suffer most from climate change and environmental harm, yet they contribute the least to the problem, highlighting a serious unfairness or injustice.[3]

The unfair way climate change affects people is a global problem. The climate crisis is mostly caused by burning fossil fuels—a process that has brought immense wealth and benefits to some, while others suffer the most harm. Wealthy countries have gained a lot from activities that make the climate crisis worse, while the countries that are most affected often benefit the least. Rich people enjoy lifestyles that bring them many advantages, but this worsens the climate crisis for everyone.[4] Climate justice is not only about the consequences of climate change; it is also about recognizing the deep inequalities behind it. In the second part of this handbook, you'll read more about the theory and policies which have influenced the how-to-climate justice guide.

The urgency of putting climate justice into action

As climate change accelerates, the importance of fair and inclusive climate action becomes clearer every day. Across the world, professionals from many sectors are working to make sure that their response to climate change is not only effective, but also fair. This is where climate justice comes in. Justice is about sharing resources, rights and responsibilities fairly, and including everyone who is affected. It gives guidance in recognizing and reducing inequalities, protects vulnerable groups, and ensures that decision-makers make fair choices. Justice in this sense includes climate justice, which focuses on fairness in both responsibility and the effects of climate change.[5]

Despite growing attention, climate justice remains difficult to apply in practice. Definitions are often too theoretical, and professionals may lack the time or tools to translate them into real-world decisions. Misunderstandings between institutions, activists, and communities can also stand in the way of working together. This practical part of the handbook offers both clear ideas and practical tools to help apply climate justice in daily work. As a part of this research, in collaboration with numerous stakeholders from different backgrounds, we have created a working definition of climate justice which you can use as a start.

So, let's start doing justice to climate justice - let's get to it!

1.2 How to Do Climate Justice: Practical Tools

We Offer How To Tools:

1. **Are you working towards a just climate transition and do you have time to integrate justice into your policy or project from the start?**
   A step-by-step how-to-do-climate-justice guide can be downloaded here as a printable PDF (A3 format). It consists of three phases: preparation, application and conclusion. The pages below offer an elaborate explanation of each of the steps, which can be used as a guideline when filling out the canvas. After filling in the canvas, you will have a clear idea of how to integrate climate justice into your project. Not all of the steps might be applicable for your work – we encourage you to only fill out those parts of the canvas which are of relevance to you.

2. **Do you want to formulate a climate justice definition which fits the context you are working on?** When doing this, it is important to include as many different perspectives as possible - everyone that might be affected by your policy or practice. We offer a workshop format which you can use to organize climate justice workshops with a diverse group of stakeholders.

3. **Do you want to prepare for scenarios in which quick action is needed in response to climate related events?** Health Action International has developed an adaptable framework for scenario-based training and strategizing, for use by climate professionals in preparing for a range of scenarios. It can be downloaded here.

   The scenario-based approach offers a safe-to-fail environment to help explore what works and what doesn't in a particular situation before being put to use in the real-world. The example given was prepared by Health Action International based on planning key messages and approaches to a scheduled event. It can be easily adapted

for those taking part in any specific meetings or events, e.g., COP. However, with small tweaks to the scenarios and exercises, this approach can also be used as part of training on climate-related crisis response. For example, by testing crisis management plans, and identifying weaknesses and potential shortcomings in existing protocols and procedures.

Step-by-Step: How to do Climate Justice Guide

Phase 1: Preparation

1. Defining purpose
2. Understanding context and scope
3. Applying **two or more** dimensions of justice.

Phase 2: Application

4. Consensus on climate justice operational definition
5. Design for meaningful participation
6. Anticipate and prepare for (unintended) dilemmas and consequences

Phase 3: Conclusion & reflection

7. Sustain the work and care for people
8. Learn from others and reflect on your process
9. Document the learning and share with others.

Phase 1: Preparation

1. Defining Purpose

Key Questions & Suggestions:

- What is the issue you want to apply a climate justice lens to (e.g., a policy, project, or plan)?

  > *→ Suggestion: Identify the concrete decision, policy, or development you're engaging with.*

- Why does this issue matter to you, your organization, or your community? Are you directly impacted or representing affected communities?

  > *→ Suggestion: Articulate the lived experiences, values, or mandates that drive your engagement.*

- What is the intended impact of your involvement (e.g., mitigating harm, accelerating timelines, ensuring equitable outcomes)?

  > *→ Suggestion: Be specific, do you want a policy changed, voices heard, timelines altered?*

- How does your goal contribute to a more just transition?

  > *→ Suggestion: Consider whether your actions address both immediate needs and structural root causes, such as energy access, wealth inequality, or land rights.*

2. Understand Context and Scope

Key Questions & Suggestions:

- Who are the stakeholders? What are their interests, powers, and constraints?

  > *→ Suggestion: Map stakeholders' roles and relationships to the issue.*

- What is the scope of your project or policy? (e.g., geographical scale, policy area, human/non-human, etc.)

  > *→ Suggestion: Draw a visual representation of your project, what it includes and what it excludes. You may also draw related projects/policies which might overlap with yours.*

- What is the policy landscape that influences this issue (local, national, global)?

  > *→ Suggestion: Note relevant laws, guidelines, and institutional rules.*

- Who is affected by your project or policy? Who is included and who may be excluded?

  > *→ Suggestion: Identify all the types of groups which might be affected. Tip: use the climate intersectionality wheel (see case study 2) to make sure you are not forgetting anyone.*

- Which non-human species might be affected by your policy or project?

  > *→ Suggestion: Bring experts or representatives of these species into your project to make sure they are included.*

- What is your circle of control vs. your circle of influence?

  > *→ Suggestion: Clarify what you can directly change and what you can affect indirectly.*

- What are the relevant historical and structural injustices?

  > *→ Suggestion: Consider legacies of colonization, environmental harm, or discrimination.*

- Are there existing recommendations, cases, or toolkits to learn from?

  > *→ Suggestion: Search for comparative case studies or relevant action plans.*

3. Apply Two or More Dimensions of Justice

In justice literature, different dimensions of justice have been identified in order to make clear which aspect of justice is relevant for each context. These dimensions help you to identify what is at stake here: is it for example about an unfair distribution of resources, an untransparent process or a structural injustice which stretches outside of the climate related issue? In developing your climate just policy or project, you may use these dimensions to make sure you are not just focusing on one dimension of justice while forgetting the other. Therefore, we encourage you to apply **two or more** dimensions.

Dimension	Key Questions	Suggestions / Tools / Resources
a. Recognition	Who is affected and whose needs or worldviews are overlooked? Are non-human, people living in geographically other places and future generations included?	Suggestion: Map communities and ecosystems affected; apply intersectional lenses. Tools: Climate vulnerability mapping.
b. Procedural	Who participates in decision-making? What barriers exist? How are voices valued?	Suggestion: Assess procedural fairness; hold community consultations. Tools: Inclusive facilitation, trust-building exercises.
c. Distributive	How are risks, responsibilities, and benefits shared? Based on what principles (equity, need, etc.)?	Suggestion: Define who pays, who gains, and who bears the cost. Tools: Equity assessments, participatory budgeting.
d. Restorative	Are root causes like racism, colonialism, or land rights addressed? Are reparative actions considered?	Suggestion: Include reparative measures and long-term transformation strategies. Tools: Rights-based frameworks.
e. Epistemic	Whose knowledge counts? Is local and experiential knowledge integrated equitably?	Suggestion: Involve experts by experience and multiple forms of knowing.
f. Structural	Are policies shifting power or addressing structural causes of injustice?	Suggestion: Advocate for reforms that challenge unjust systems. Tools: Structural analysis tools, governance reform checklists.

Phase 2: Application

4. Consensus on climate justice operational definition

In Chapter 2.1 of the second part of this handbook, we provide a working definition of climate justice which you may adopt and tailor to your context and audience. That means first listening and speaking with people to find out what matters in their life, so that you can tailor your communication to them. Consider using terms that are accessible and resonant in your community. For this step you can use the climate justice workshop format.

Reflect on whether your jointly created definition's tone is neutral, hopeful, or more activist in nature — and **be transparent** about that choice. This conveys several assumptions and aspirations and helps in the engagement of stakeholders as well as to anticipate or understand reactions to this (positive or negative).

Dialogues and communication in multiple languages as needed (e.g., Dutch, Papiamentu, Frisian, dialect languages, English, Spanish). Depending on your audience, you may use B1 language (written), which is understandable for an estimated 80% of the Dutch population.

Reflect on which types of knowledge you will include in your conversations. Some forms of knowledge might be different from the ones you have been trained in, such as oral histories or local knowledge on nature restoration. Consider using visual or oral methods to communicate with groups who might use different ways to transfer their knowledge.

Be mindful of the differences between different types of knowledge and climate mis- and disinformation. The latter can be harmful in the process, and tools exist to recognize and address these when they occur. For more information, see Dr. Mario Veen's article Klimaatdesinformatie: een bedreiging voor de volksgezondheid.

5. Design for dialogue and inclusion

Since climate justice is so context sensitive, dialogue should always be a core practice: What does justice mean in this place, to the people concerned?

Build trust through transparency, consistency, acknowledgement and humility.

Determine the values for a just process and outcome in collaboration with your stakeholder group. Be aware of possible conflicting stakes and tensions that might arise. In doing this, you may use the values as defined by Dr. Toni Griffin in the Just City Index.

Appendix I of this handbook provides an example of how to organize dialogues on climate justice.

6. Prepare for dilemmas and unintended consequences

Justice work is rarely perfect. Not all outcomes will be fair to all, and tensions will arise. Be honest about trade-offs and remain open to change. For instance, much data on how climate change affects marginalized people, groups, and regions is missing because it is not connected, similar to gaps in health data on women. Therefore, solutions should be seen as provisional and part of a learning process. No one has the full answer to climate injustice, so the best approach is to experiment and learn together with communities.

Ask: What harms might unintentionally emerge? Who might be excluded despite best intentions? And what could be strategies to deliberately consider those needs?

Phase 3: Conclusion and reflection

7. Sustain the work and care for people

- What **structures and relationships** are needed to sustain the work long-term?

  > *→ Suggestion: Establish cross-organisational partnerships and shared platforms.*

- How do you **support the emotional and mental well-being** of those involved?

  > *→ Suggestion: Include well-being checks, ensure risk groups are represented, reuse data to avoid burdening communities with repeated studies, build peer support systems, and celebrate small wins.*

8. Learn from others and reflect on your process

- Use principles like progressive realization (step-by-step progress) with no retrogression (no step back) from human rights. This also allows for a degree of pragmatism: if the ideal situation is not (yet) available, what are achievable steps on the way towards the aspirational aim?
- Are there any existing laws or norms which might limit the execution of your climate just policy or project? Leverage these laws, normative guidance, or frameworks to strengthen legitimacy and accountability of a climate just approach within the circle of influence you have identified in phase 1.
- Develop a monitoring process (for instance by weekly and monthly check-ins and progress reports) to reflect your initial goals and desired outcomes. Keep track of your lessons learned, so others working with climate justice can learn from your work and use it as an inspiration.

9. Document the learning, share with others

- Write down successes, challenges, and dilemmas in a clear format (e.g. checklists or short briefs) so it might be accessible and reusable by others.
- Share your learnings in plain, inclusive language and choose formats that reach diverse audiences (reports, infographics or workshops).

Climate Justice Workshop

Goal

To create a shared definition with the stakeholders involved in your climate related policy or project

Desired outcomes

- A clear and applicable definition of **climate justice** which you can put into practice
- **Consensus** amongst the participants on what climate justice means
- **Stakeholder engagement from an early stage** of the policy or project

Workshop duration

- **2 hours** (online)
- **3 hours** (live)

1. Pre-workshop engagement

Participants will fill out a brief form describing what climate justice means to them. Some questions you might ask:

- How do you define climate justice?
- How do you experience climate justice in your daily work/ practice?
- What problems and opportunities do you identify in relation to climate justice?

2. Introductions

- Make sure everyone can hear, see and understand you – check for language or other barriers
- Introductory exercise: what was your first experience with climate change?

- Make room for emotions to arise: fear, sadness, frustration

3. Defining climate justice

- Provide a short overview of theory and policies on climate justice
- Present starting definition of climate justice
- Start breakout sessions in smaller groups:
  - Round 1: What is missing in the current definition?
  - Round 2: Which perspectives might be missing? Take this perspective and look at the definition again.
  - Round 3: Bring in a case study of climate justice you've personally experienced
- Plenary reflection

4. Reflection & next steps

- Formulate a new working definition of climate justice with the group
- Explain the next steps and what you will do with the results
- Record the main points of the workshop and share them with the group
- Evaluate if more workshops are needed to include more perspectives

Part 2 Climate Justice in Context: Theory, Policies and Case Studies

2.1 Defining Climate Justice

The concept of climate justice combines normative principles of fairness with critique on social and ecological systems. It demands an analysis of how climate change, its causes, and its effects are distributed across historically and structurally unequal lines of power, wealth, and contextual vulnerabilities.[6,7] Climate justice builds upon and transcends traditional theories of justice - liberal, socialist, feminist, postcolonial, and ecological. It integrates perspectives from multiple disciplines to address both present-day and historical injustices.

This chapter will first present our working definition on climate justice. It will then delve deeper into the various liberal and critical approaches to the concept of justice. Liberal approaches often focus on fairness, rights, and the equal distribution of costs and benefits. Critical approaches go further, questioning deeper power structures, historical injustices, and systemic inequalities that drive the climate crisis. The chapter concludes by introducing the six principles of justice outlined by the Dutch Scientific Council for Climate Policy and the European Environment Agency, which inform our working definition.

2.1.1 A working definition of climate justice

Across a series of workshops with participants from local, provincial, national, Caribbean, global, and private sector levels, we worked to define what climate justice means and how to apply it in practice. We began with a draft definition based on a wide review of research and policy documents. For details on the process, see Appendix I. The result is:

> "Climate justice ensures fairness in avoiding, addressing, and repairing the causes and consequences of climate change, such as biodiversity loss and ecological breakdown. This must occur through an inclusive process that considers the interests, needs, risks, capabilities, power relations, opportunities, and limitations of all —both human and non-human— across time: past, present, and future."

This definition shows that climate justice is about more than just adapting to a changing climate and cutting carbon emissions. It means we need to look at deeper issues - like inequality, the lasting effects of colonialism, damage to nature and ecosystems, and the systems that cause environmental harm. Climate action should not only work well in technical terms but also be fair to people and communities throughout the process.

Why specific terms were used: a closer look at terms used in the definition

In forming a working definition, we have strived to be conscious in choosing the best terms to describe a broad concept such as climate justice. These terms came from climate justice literature and policy documents and were reshaped by conversations during the climate justice workshops. We are grateful to the contributions of some critical voices to remind us of the power of language.

- **“Fairness”**: Refers not only to equal treatment but to equity, recognizing different starting points and ensuring just outcomes based on need, capacity, and responsibility. Fairness is also a more accessible word than “justice”, and a term all generations can relate to.
- **“Avoiding”**: this refers to the technical term “mitigation”, how to prevent (further) damage to occur due to climate change.
- **“Addressing”**: this refers to the technical term “adaptation” - how we adapt our existing systems and structures to the effects of climate change.
- **“Repairing”**: this term refers to the need to also fix damage that already occurred. This term relates to reparational justice, and the need to recognize and address colonial legacies and historical inequalities.
- **“Climate change, biodiversity loss and ecological breakdown”**: Climate change, biodiversity loss, and ecological breakdown are different but connected processes. They are connected because climate change makes biodiversity loss—defined by the UNDRR as “the reduction of any aspect of biological diversity”[8]—worse. For example, climate change warms oceans, causing coral reefs to die, which destroys habitats and food for many sea creatures, leading to biodiversity loss. At the same time, the loss of biodiversity weakens nature’s ability to absorb carbon and protect against climate impacts. Together, they lead to ecological breakdown, where natural systems no longer work in a healthy way. All three should be part of climate justice. This addition also extends our climate justice definition to reflect larger ecological justice considerations.
- **“Must”**: signals the non-negotionableness of procedural and recognitional justice as part of climate justice.
- **“Inclusive process”**: Emphasizes participation across all levels of society, with special attention to those most affected and historically excluded.

- **“Interest, needs, risks, capabilities, power relations, opportunities, and limitations”**: this emphasizes different dimensions in which people are more or less likely to participate, to be heard or included in decision making. *Capabilities* is a specific term that ties this definition to the work of Amartya Sen’s “Capability Theory”. *Limitations* instead of *vulnerabilities* was used to emphasize the structural inequality rather than (contextual or individual) vulnerability of individuals. This recognizes that climate risk is socially constructed, through geography, poverty, race, gender, and political marginalization.
- **“Both human and non-human”**: broadens the ethical community to include non-human nature such as animals, plants or ecosystems, recognizing their intrinsic value, not just their utility to humans.
- **“Past, present, and future”**: Stresses the importance of historical responsibility (e.g., colonialism, fossil capitalism), urgency of present action, and foresight toward long-term sustainability.

2.1.2 Liberal and critical foundations for climate justice

The liberal tradition of justice, represented by thinkers such as **John Rawls**, **Amartya Sen**, and **Michael Sandel**, provides a foundational vocabulary for addressing inequality and fairness in the context of climate change.

- The American philosopher **John Rawls**[9] advanced the notion of "justice as fairness," proposing that just principles are those that would be chosen behind a "veil of ignorance", that is, without knowledge of one's own position in society. Though influential in policy debates, this abstraction has been critiqued for eliding historical and structural inequalities.
- The Indian economist and philosopher **Amartya Sen**[10] offered a corrective by proposing a capabilities-based framework, emphasizing that justice should be measured not by primary goods but by individuals' real freedoms to achieve valued functioning. He highlighted the trade-offs between different forms of equality and the need to focus on what people are substantively able to do and be.
- Political philosopher **Michael Sandel**,[11] meanwhile, critiqued liberal neutrality and argued that justice inevitably involves normative judgments about the good life and the social meanings of resources and rights.

The liberal tradition of justice, in recent decades, has also been critiqued for its lack of attention to race, gender, colonial history, and diverse cultural traditions. Extending the works of **Karl Marx**,[12] who locates injustices in material inequalities and class struggles, **Nancy Fraser**[13] proposes to see justice not simply from an economic perspective, but to account for other structures of inequalities, including gender, ecology, cultural hierarchies, and political exclusion. The influential work of **Kimberly Crenshaw**[14] emphasizes the need to consider intersectionality, that is, how various forms of discrimination and inequalities—be it gender, race, social classes—intersect, overlap, and combine forces to further hinder people's capabilities or access to resources. More recently, a growth of

works on decolonial ecology, including those by **Malcolm Ferdinand**[15] and **Shivant Jaghroe**,[16] calls for the need to see the climate crisis not simply as an environmental problem, but as a continuation of historical and structural injustices rooted in colonialism, slavery and racial capitalism.

The works by indigenous authors, such as **Robin Wall Kimmerer**,[17] encourage us to see the climate crisis and sustainability just through Eurocentric environmental science, but to take seriously alternative ways of seeing and experiencing human-non-human interconnectedness and to see the climate crisis as a cultural, moral, and spiritual problem. These critical works provide us with a way of seeing justice not as a question of improving individuals' capabilities, but of transforming overlapping structures of discrimination and inequalities, of repairing historical wrongs, and of taking seriously other ways of living and relating.

Building on these critical works and the work from the Dutch Scientific Council for Climate Policy and the European Environmental Agency, we use a practical list of six principles of justice: distributive, procedural, recognitional, restorative, epistemic, and structural. This list helps to look at the complex ethical, social, and political sides of climate injustice.

While the principles give a clear starting point, they do not cover for each situation. As will be clear in the case studies in Chapter three, different principles of justice often apply at the same time in different contexts. We invite readers to think carefully about how these ideas connect, and to add or suggest other views of justice when needed, especially in relation to local histories, identities, and power dynamics.

2.1.3 Operational approaches to justice

1. **Distributive justice (benefit vs burden)**

   Distributive justice refers to the equitable allocation of the benefits and burdens of climate change and related policies. In climate justice policy, this means addressing the historical inequity whereby countries and communities that contributed least to greenhouse gas emissions are the most affected by climate-related disasters. The WRR report, “Rechtvaardigheid in klimaatbeleid. Over de verdeling van klimaatkosten”,[18] provides guidelines for a fair distribution of benefits and burdens in the context of climate change.

2. **Procedural justice (a fair and inclusive process)**

   Procedural justice centers on fairness in decision-making. It calls for inclusive, transparent, and participatory governance where all stakeholders, particularly marginalized communities (defined by the Merriam Webster dictionary as those “relegated to an unimportant or powerless position within a society or group”), have a real voice in shaping climate policy. Procedural justice challenges the top-down structures that often dominate environmental governance and seek to democratize climate-related decision-making processes.

3. Recognitional justice (acknowledge diversity of people)

Recognitional justice insists that climate policies must acknowledge and respect the diverse identities, values, and knowledge systems of affected communities. This includes recognizing indigenous sovereignty, cultural ties to land, and the historical marginalization of certain groups. It also asks to recognize the voice of non-human actors or future generations. This accounts for the fairness between present and future generations, which is defined by some as intergenerational justice.*

4. Epistemic justice (acknowledge different forms of knowledge)

Epistemic justice links to recognitional justice and focuses specifically on fairness in knowledge-related practices. It ensures that all individuals and communities have equitable access to producing, using and sharing knowledge, while their own perspectives and experiences are genuinely respected and valued. It challenges the dominant scientific frameworks and seeks to amplify historically marginalized perspectives, including indigenous knowledge systems, local ecological understandings, and lived experiences. In climate justice, epistemic justice means recognizing that no single knowledge system holds all the answers, and that inclusive, pluralistic approaches are essential for creating effective, just, and culturally grounded climate solutions.

* Intergenerational justice is about fairness between today's generations and those that will come after us. For instance, this means that we must recognize that burning fossil fuels and damaging ecosystems already poses risks today but will create even greater risks for future generations. Intergenerational justice therefore requires us to act responsibly now, by reducing emissions, protecting biodiversity, and making sustainable choices. It reminds us that justice is not only about sharing fairly among people alive today, but also about ensuring that those who come after us inherit a safe, healthy, and livable planet.

5. **Restorative/Reparative Justice (repair what has been broken)**

Restorative justice involves addressing the legacies of harm caused by colonialism, environmental destruction, and fossil-fuelled development. It includes both symbolic and material efforts to repair past wrongs: financial compensation, land restitution, ecosystem restoration, and policy change. Reparative justice goes further to advocate for systemic shifts that dismantle the structures causing these harms in the first place.

6. **Structural justice (account for structural inequalities)**

Structural Justice examines the deep-rooted social, economic, and political systems that create and sustain climate inequality. These structures limit some groups' freedoms and capabilities while granting others greater power and opportunities. Often resulting from both deliberate actions and unintended consequences, they shape and constrain people's choices rather than eliminating freedom outright. Structural injustices are often invisible because they are embedded in dominant institutions and norms, which marginalize certain perspectives. Addressing structural justice means transforming these systems of power and privilege to tackle the root causes of climate change and social inequality, enabling a fair and sustainable future.

Finally, climate justice must account for time, place and context, recognizing that the challenges and responsibilities of climate change span generations and geographies. Current generations already experience deeply unequal climate impacts based on geography, economic status, marginalisation and political context.

2.2 Climate Justice in Climate Policies and Practice

As climate justice is shaped by context, this chapter shows its interpretation and implementation in climate policies. Policies address climate justice by focusing both on mitigation (preventing further climate change) and adaptation (changing our structures to cope with climate change impacts). We have selected several case studies showing climate justice in practice. These can be good or bad practices, showcasing which justice dilemmas arose in the cause of climate change. The case studies aim to connect theory to practice and provide lessons for similar and future cases. As this handbook is created as part of the *Accelerating Just Climate Transitions in Urban Regions* project, we will focus mainly on climate policies in urban areas at local and national levels (including both European and the Dutch Caribbean). But as global policies also shape local and national levels, we will briefly reflect on of these policies.

Climate justice at the local level

At the local level in Dutch municipalities, climate justice focuses on how climate policies affect communities differently, depending on their situation and background.[19] Many municipalities have committed to meet the (mitigation) ambitions formulated in the Dutch Climate Agreement of 2019: to reduce CO_2 to 49% by 2030. In terms of climate adaptation, many cities developed strategies to prepare for the consequences of extreme weather conditions such as drought, heat stress and flooding. Examples of these include rain proof measurements, adding green space to avoid heat stress (with the co-benefit of contributing to more biodiversity), or applying insulation measurements to the housing stock. The Climate Agreement also states that 1.5 million houses must become more sustainable through insulation and sustainable energy measurements by 2030. Across the Netherlands, municipalities are actively promoting this sustainable energy transition by subsidizing solar panels and heat pumps, constructing heat grids and stimulating homeowners to isolate their homes.[20]

Three case studies illustrate the importance of a climate justice lens in local policy making during climate-related disasters (floodings in Limburg), in integral policy development (Climate Justice Rotterdam), and through a climate change mitigation grassroot initiative (distribution of electric scooters in Nijmegen). Possible unfair differences from climate consequences can occur due to an increased risk of negative effects (i.e. some people live in areas prone to flooding), a higher risk of not being able to restore damage done (i.e. due to household income), or risk of not being considered in policies due to less power and likelihood to be included. We see - despite the overall wealth in our country - that clear differences exist between more and less affluent neighborhoods, and these differences translate into substantial differences following climate disasters as seen in the case of the Limburg floodings. Many cities struggle to include socio-economic position in developing and executing sustainability strategies, as these groups are more likely to lack the (implicitly expected) communication strategies, social capital

or have insufficient access to knowledge.[21] To address these issues, many cities developed local awareness campaigns and funding possibilities with the aim to make the climate transition more inclusive.

Flooding in Zuid-Limburg, 2021 Source: Netherlands Ministry of Defence, CC BY-SA 4.0

Case study 1: Restorative justice after the floodings in Limburg (2021)

Short description of the case:
The 2021 floods in Limburg, the Netherlands, highlighted systemic inequities in disaster preparedness and recovery, infrastructure and social systems. The consequences of which still affect the lives of people today. The floods caused widespread damage, prolonged displacement of people, and significant health impacts - exacerbated by the COVID-19 pandemic. Groups in vulnerable situations were hit hardest, such as residents of elderly care homes and people with lower incomes. They experienced delayed damage checks, unclear rules about compensation, weakened healthcare services, and protracted housing issues like mold and damp walls. It was also unclear who was responsible for addressing these problems. The experiences in Limburg revealed structural bureaucratic challenges in providing support, with many types of actors (e.g. governmental, private sector, semi-public sector) involved - even two years after the floodings.

Climate justice principles emerging from this case:

- **Structural and procedural justice**: The flooding revealed structural injustices such as differences in access to resources and information, vulnerability of certain groups in cases of an unforeseen crisis, and the urgency to

address systemic inequalities before a disaster. It also illustrates the importance to consider fairness in compensation procedures to make sure attempts to compensate for the disaster are not worsening existing inequalities, for example by creating damage forms only in Dutch or requiring high digital literacy skills that may be a barrier for elderly people.

- **Distributive justice**: In restoring the damage after the floodings, challenges and dilemmas in ensuring a fair distribution of the consequences of the disaster immediately arose in the decisions about the reallocation and compensation of displaced households. Who to help first? How to help based on individual needs vs efficiency considerations to help all in a similar way? How to monitor and address differences that arose between more affluent people (who are often house owners) and less affluent people (more often in social housing)?

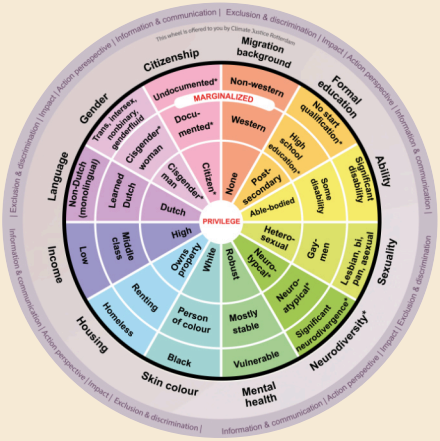
Lessons we can draw from this case and how to put them in practice:

- The risk described in this case is not unique to Limburg: extreme weather events leading to flooding or sudden heavy rains (e.g. those in Enschede in 2023) are predicted to occur more often. While vulnerability to impacts can be mapped, no certainty exists on which areas will be affected, mandating all potentially vulnerable regions and local authorities to prepare themselves. In preparation of extreme weather events, climate justice issues must prioritize low-income groups and those most negatively affected by climate change. Tools such as the *Climate Justice Wheel* by Klimaatrechtvaardig Rotterdam (see case 2) can be applied to map risk groups in relation to climate change. This can help to develop strategies which help to create more resilient local communities.
- The experiences in Limburg revealed structural bureaucratic challenges in providing support, with many types of actors (e.g. governmental, private sector, semi-public sector) involved - even two years after the floodings. These challenges reflect structural inequalities which

operate beyond, but interact with, the scope of climate policies. It teaches us that climate injustice is always related to other injustices, and that these need to be addressed in a holistic manner.

Recommended reading:

- Van Gaal N & Wijkhuijs V. (2023). Hoogwater in Limburg: een inventarisatie van de gezondheidsimpact. In V. Wijkhuijs & M. van Duin (Eds.), *Lessen uit crises en mini-crises: Klimaatverandering en extreem weer* (pp.135-152). Boom bestuurskunde.
- UNICEF. (2025). Opgroeien in een veranderend klimaat: onderzoek naar de impact van klimaatverandering op kinderen in Nederland. https://www.unicef.nl/nieuws/2025-06-19-klimaatverandering-werkt-door-in-gezondheid-van-kinderen-in-nederland
- Smit, P. H. (2025, June 21). Een jaar na de verwoestende hoosbui in Enschede weten de getroffenen nog steeds niet of ze ooit naar huis kunnen. *de Volkskrant*. https://www.volkskrant.nl/binnenland/een-jaar-na-de-verwoestende-hoosbui-in-enschede-weten-de-getroffenen-nog-steeds-niet-of-ze-ooit-naar-huis-kunnen~b7c63ac0/



The Climate Justice Wheel

Source: Klimaatrechtvaardig Rotterdam, with permission

Case study 2: The climate justice wheel: an intersectional approach to addressing climate justice in Rotterdam

Short description of the case:
Klimaatrechtvaardig Rotterdam ("Climate Justice Rotterdam") uses the climate justice wheel to help projects systematically consider and address social inequalities among Rotterdam's residents. The wheel is developed based on "The Wheel of Power/Privilege" of Sylvia Duckworth and adapted to climate contexts to highlight marginalization and privilege on four aspects: social exclusion and discrimination, information and communication, impacts on wellbeing, and action perspective. It guides stakeholders to identify missing perspectives ("blind spots") and implement climate-just practices. It also includes reflective questions for project leaders in identifying collaborators and understanding affected groups. The visualization of the climate wheel can facilitate team discussions to ensure more fair and inclusive outcomes through greater awareness and accountability in achieving climate justice throughout a project's process. The climate justice wheel is, just as the society upon which it was based, dynamic. With new societal developments, the wheel can be revised accordingly. Terms and forms of marginalization continue to be developed and checked by experiential experts.

Climate justice principles addressed:

- **Recognition justice**: the climate justice wheel supports policy makers and other practitioners to discover possible blind spots in developing strategies for a just climate transition. It provides an intersectional approach to climate justice, showing how different factors determine someone's level of influence and multiple of these factors can occur at the same time and interact with each other. It also makes climate workers aware of their own privilege and agency to use this power to support others in building resilience in the context of climate change.
- **Procedural justice**: This systematic approach addresses procedural justice by identifying who is at risk of being disadvantaged or not included in decision making, and by making sure different perspectives are included. *Klimaatrechtvaardig Rotterdam* also acknowledges in its approach that meaningful participation requires an adaptation of processes to ensure everyone can contribute, and it has experiences with various participatory methods to achieve this aim.
- **Epistemic justice**: The climate justice wheel strives to ensure that everyone has equal access to knowledge on climate adaptation by ensuring clear communication and access to information.

Lessons we can draw from this case and how to put them in practice:

- Tools such as the climate justice wheel can be used to proactively shape climate-adaptive policies before crises occur in an inclusive manner. These approaches can also be used in mitigating processes (ensuring an inclusive process and/or deliberate reflection on possible unintended consequences from various perspectives), or in disaster response. The reflective questions included in Rotterdam's climate wheel can be further tailored to these contexts.
- To ensure equitable access to information about climate adaptation and extreme weather, communication should be made accessible to people with varying levels of literacy

and different needs (e.g., visual impairments). The climate wheel supports the identification of these groups.

- In addition to equitable access to information, it can also support ensuring that everyone has equal opportunities or a fair starting point to adapt to changing conditions, considering individual abilities (physical, mental, financial) and structural factors such as housing and job flexibility. It allows a crucial question to be actively reflected on while developing climate adaptation policy: are the people targeted by this strategy physically, mentally or financially able to take actions, and if not – who not and what can be mitigative strategies?
- Unintended and possibly harmful consequences need to be anticipated and monitored – as they may arise despite the good intentions to ensure an inclusive process. Examples of risks are the reinforcing of existing inequalities or stereotypes through the emphasis on marginalization or paternalizing the people who you are working with.
- An important lesson is that combining physical climate data with social data can lead to different and fairer investment choices. By translating social indicators, such as socio-economic vulnerabilities and the presence of disadvantaged groups, into maps and superimposing these on climate data, it becomes clearer where climate risks and social vulnerabilities can converge. This makes it possible to invest unequally with a view towards equal opportunities.
- Another important lesson is that the justice wheel has contributed to policy development. Consequently, climate justice has become an explicit theme within the official Water-and Climate Adaptation Programme in Rotterdam. The justice wheel will play an important role in the implementation of this policy.

Recommended reading:

- Klimaatrechtvaardig Rotterdam. *Het Rechtvaardigheidswiel*. https://klimaatadaptatienederland.nl/hulpmiddelen/overzicht/rechtvaardigheidswiel/

- Sylvia Duckworth. *The Wheel of Power, Privilege, and Marginalization*. https://www.researchgate.net/publication/364109273_Migrants_at_the_university_doorstep_How_we_unfairly_deny_access_and_what_we_could_should_do_now/figures?lo=1
- Van Eijsden, M. & Barfoot, E (Hosts). (2023, February 24). Klimaatrechtvaardigheid (i.s.m. ICAR) (no. 9). In *Hoe creëer ik een beweging*. Rotterdams WeerWoord. https://rotterdamsweerwoord.nl/podcast/
- Rotterdams Weerwoord. *Klimaatrechtvaardigheid*. https://rotterdamsweerwoord.nl/klimaatrechtvaardigheid/
- Chicks and the city & Open Rotterdam (2025, June 11). *Niet iedereen kan investeren in groener leven, vrouwen vaker geraakt door klimaatongelijkheid | Chickstalk*. Open Rotterdam. https://openrotterdam.nl/niet-iedereen-kan-investeren-in-groener-leven-vrouwen-vaker-geraakt-door-klimaatongelijkheid-chickstalk/
- Sulis, P., van Heerden, S., Aydin, N., Goncalves, J., Verma, T., van Ham, R. & Davids, L. (2024). *Policy brief European Commission: Inclusive cities fit for crises and long-term challenges*. European Commission. https://publications.jrc.ec.europa.eu/repository/handle/JRC137806

Scooter riding

Source: Shmulik Elias on Unsplash

Case study 3: Fair distribution of electrical scooters in Nijmegen

Short description of the case:
As part of air pollution policy commitments launched an e-scooter subsidy program in 2011. Residents were encouraged with a financial incentive to exchange their old petrol-powered scooters for electric models. The scheme complemented the city's low-emission zones and aimed to reduce localized emissions while ensuring equitable access to clean transport. After successful implementation in 2011, the subsidy program was renewed four times. In the 2024 call, changes were made to the accessibility of the subsidy, as policy makers noted that most applicants were more affluent residents. Since then, the subsidy focuses specifically on supporting lower income groups, who receive €200 for scrapping their scooter and another €600 for buying a new one. The accessibility of the subsidy was also improved, by simplifying the bureaucratic routes for residents and by actively promoting the program amongst lower income groups through local community centers, social workers and multilingual letters.

Climate justice principles addressed:

- **Distributive justice**: Many financial incentives to promote more sustainable behavior focus on more affluent groups (e.g. solar panels, heat pumps, subsidies for electrical

cars). These often redistribute public funding to the more affluent in society, with less benefits to low-income households. Yet, in the Netherlands, lower income households more often rely on older vehicles with higher gasoline costs and emissions, whilst lacking the financial capacity to choose more sustainable mobility options. By developing policies which also address the needs and interests of lower income households, this policy aimed to ensure a fairer allocation of climate adaptation measurements. This can also strengthen public support for policies.

- **Procedural justice**: Procedural justice considerations were integrated through the inclusive outreach methods via neighborhood centers, newsletters, social workers and multilingual communications and simplified application forms and assistance desks at municipalities.

Lessons we can draw from this case and how to put them in practice:

- This case study from Nijmegen shows that when starting a subsidy program with the aim to promote more sustainable behavior, it is essential to consider and monitor accessibility. In the consideration, special attention should be paid to lower income groups or groups who more often lack access to governmental information. Nijmegen has developed a very accessible website and form to access the subsidy. Monitoring on the extent to which accessibility intensions translate into practice, allows adaptations in case needed.
- Engagement of groups less likely to benefit from available policies or subsidies, require active strategies. Key stakeholders such as community centers and social workers, who are in contact with a diverse group of residents, can be effective ways to do this.
- When developing strategies to promote more sustainable mobility options, the risk of 'mobility poverty' needs to be anticipated and monitored. This occurs when jobs, amenities or social relationships become inaccessible for

certain resident groups, and this most often happens for car-dependent lower income households. This report by TNO provides an elaborate analysis of the risks and possible solutions.

Recommended reading:

- Van den Berg, T. (2025, April 16). *Nijmegen verlengt subsidie voor schone brommers: Tot 1000 euro voor inruil vervuilende scooter*. RN7. https://www.rn7.nl/nieuws/artikel/nijmegen-verlengt-subsidie-voor-schone-brommers-tot-1000-euro-voor-inruil-vervuilende-scooter
- Shaheen, S & Cohen, A. (2019). *Micromobility Policy Toolkit: Docked and Dockless Bike and Scooter Sharing*. Institute of Transportation Studies, Berkeley. https://doi.org/10.7922/G2TH8JW7
- Aman, J. J. C., Zakhem, M., & Smith-Colin, J. (2021). Towards Equity in Micromobility: Spatial Analysis of Access to Bikes and Scooters amongst Disadvantaged Populations. *Sustainability*, 13(21), 11856. https://doi.org/10.3390/su132111856
- Mulder, P., Longa F.D., & Sterkenburg, R. (2024). *De energietransitie en het risico op vervoersarmoede*. TNO. https://publications.tno.nl/publication/34642065/6y3SMx/mulder-2024-vervoersarmoede.pdf

Climate justice at the national level

In European Netherlands, various major policies shape climate (justice) considerations. The 2019 Dutch Climate Agreement ("Klimaatakkoord") outlines a clear framework to achieve climate goals. Climate justice is considered in the agreement with the statement that the climate transition needs to be accessible and affordable to everyone by providing financial support and sustainability measurements targeted at low-income households and other groups in vulnerable positions. It also states that the most polluting companies need to pay for most of the climate costs and CO_2 reduction. Finally, it argues for the active participation of residents and the private sector in decision-making processes. The report by the Dutch scientific council for government policy (WRR) that was published in 2023 "*Justice in Climate Policy. Distributing Climate Costs Fairly*"[22] provided an conceptual analysis of climate justice and its role in policy. It stressed that climate change disproportionately affects vulnerable groups, and centers climate justice around the principle of fairness in distributing the burdens and costs of the mitigation of and adaptation to climate change. The report provides ten distributive principles for climate costs and responsibilities, and provides guidelines on how to implement climate justice in policies. This report inspired the government to put special emphasis on climate justice in the new "Climate Plan (*Klimaatplan*) for 2025-2030", which was approved in February 2025. In the Climate Plan, four principles for climate justice were identified:

1. Realization of the climate goals for future generations – zero CO_2 emission by 2050;
2. Shared, but differentiated responsibility – the government asks companies, residents and societal organizations to take responsibility in acting on climate change. Subsidies to support measurements will be provided;
3. Capacity based contribution and support – the broadest shoulders should bear the greatest burden. Financial

support will be provided so everyone can join the climate transition;

4. The polluter pays – this principle will be regulated at a European scale to ensure fair distribution of responsibilities amongst EU nations.

The case study on justice in relation to water management in the Netherlands shows how the last three of these principles are put into practice, and the case study on food forests shows the difficulties in achieving systemic change in a bureaucratic context.

House under water, Uitdam, 1916 Source: The National Archive

Case study 4: Applying a justice lens to water and technology in the Netherlands

Short description of the case:
While 70% of the earth's surface is covered by water, only 3% of this amount is fresh water, of which only 1% is regarded as accessible. Researcher Lisa Mandemaker used justice as a lens to study the future of water in relation to technology (Mandemaker, 2025). The Netherlands faces three urgent themes in the context of climate change: water pollution, water usage and flooding. For example, the amount of PFAS (a family of so called 'forever chemicals'), manure, microplastics, and other toxic materials in Dutch surface water, is way above the European standard. At the same time, the average Dutch person uses around 129 litres of water per day, of which the majority is imported from outside the Netherlands. And then there is the risk of flooding for a big part of the country, which has already led to the displacement of numerous households. Solutions for these risks are often looked for in technological solutions, however, fundamental questions such as who has access to water, who has ownership over it and who bears the consequences of the choices we make, often remain overlooked. Mandemaker has developed four future scenarios that take justice as a starting point for exploring our future relationships with water and technology. These scenarios offer different perspectives on the distribution, maintenance, and

protection of water, helping policymakers and professionals make more conscious choices in relation to water justice

Climate justice principles addressed:
The report addresses several justice principles: distributive, procedural, recognition, intergenerational and reparative. It states that, when applying distributive justice as a framework, it is important to be transparent about what it is that needs to be distributed: rights, means or responsibilities.

The report proposes a broader analysis by focusing on five aspects of climate justice (Parsons et al., 2024):

- Scale (time and space);
- Principle (e.g. distributive, procedural);
- Area (e.g. mitigation, adaptation);
- For whom (humans, future generations);
- Intersections (with other forms of justice such as gender, social).

Lessons we can draw from this case and how to put them in practice:
The report shows the complexity in applying a subjective concept such as justice to a broad area of policymaking like the managing of water in the Netherlands. However, by translating the conceptual framework of the relationship between water, technology, and justice to concrete scenarios, it helps to think about future possibilities and threats. Each of these scenarios centres different justice principles, showing us what happens when we shift our focus to the different aspects of justice.

While we highly recommend you read the report, here's a short summary of the four scenarios:

- Extraction - Water is managed as a scarce commodity, with technology optimizing who gets how much and when;

- Overflow - As crises unfold, existing systems collapse and old certainties wash away. Water takes on the role of an active force, no longer contained within human control;
- Porous - A gradual shift occurs toward viewing water as a shared good, guided by ecological limits and collective responsibility.
- Liquid - In this future, water has rights, a voice, and a language. Ecosystems and technologies collaborate in decision-making for habitats and future generations.

Recommended reading:

- Mandemaker, L. (2025). *LEK – Tussen doorlaten en dichten: technologie in waterrechtvaardige toekomsten*. Stichting Toekomstbeeld der Techniek. https://stt.nl/nl/toekomstverkenningen/de-toekomst-van-water/stt-104-lek-tussen-doorlaten-en-dichten
- Parsons, M., Asena, Q., Johnson, D., & Nalau, J. (2024). A bibliometric and topic analysis of climate justice: Mapping trends, voices, and the way forward. *Climate Risk Management, 44*, 100593. https://doi.org/10.1016/j.crm.2024.100593
- Leijdekkers, A. (2024). *Once There Stood a House* [Art Installation]. https://www.anneleijdekkers.nl/

Food Forest in Utrecht

Source: Dat Nguyen

Case study 5: Navigating systemic barriers in developing food forests

Short description of the case:
Stichting Voedselbosbouw Nederland (VBNL) ("Food Forest Foundation Netherlands") promotes large-scale establishment of food forests. A food forest is defined as "a productive ecosystem designed by humans in the form of a natural forest" (Green Deal voedselbossen, 2020). Food forests contain a high diversity of trees, shrubs, herbs and other plants, of which parts (fruits, seeds, leaves, etc.) function as food. Simultaneously, they function as areas for accessible educational and recreational activities. Since 2020, VBNL has been collaborating with independent farmers to pilot food forests on marginal lands, aiming to enhance biodiversity, improve soil health, reduce carbon emissions and create new income streams for rural communities. The national government's aim is to have 1.000 hectares of food forestry by 2030. Farmers and other initiators still face challenges in accessing plant food forests, as the administrative routes are still developing and zoning regulations often allow for limited agricultural destinations for natural environments which are not indicated as farmland. At the same time, food forests have a longer return on investment, as they only start to produce a significant amount of food after 7-10 years. In their aim to remove systemic barriers and to provide financial support, the VBNL is active in setting up public-private partnerships.

Climate justice principles addressed:

- **Procedural justice**: Many farmers in the agricultural sector who are striving towards more sustainable land use are facing challenges in navigating bureaucratic systems. Permits for organic farming are expensive and require many regulations, making it difficult for farmers to switch from traditional farming to more sustainable techniques. The same goes for food forests, which are therefore developing at a slow pace.
- **Restorative Justice**: Food forests restore soil fertility and biodiversity and contribute to the restoration of traditional food collection techniques. Requiring communal harvesting techniques, they help form communities and restore the relationship between humans and their natural environment. However, financial mechanisms for ecosystem service compensation remain underdeveloped.

Lessons we can draw from this case and how to put them in practice:

- In the current financial system, food forests are regarded as unfeasible and time consuming. The long maturation of forests requires new investment mechanisms which allow for longer funding cycles. This asks for financial validation of the development of ecosystems. Specific agroforestry codes within national and European subsidy frameworks can support in creating quicker access to funding opportunities for food forests.
- To limit systemic barriers, standardized permitting pathways should be developed for food forests at the municipal level. For instance, the number of administrative requirements can be limited and made more accessible for small farmers. In cities, the development of food forests is now highly dependent on the political climate. National legislation can help local initiators in building stakeholder support.

Recommended reading:

- Wendel, B., Rooduijn, B. & Disselhorst, E. (2023): *Voedselbossen: bodem, biodiversiteit, biomassa, business en beweging*. Nationaal Monitoringsprogramma Voedselbossen. https://www.monitoringvoedselbossen.nl/2023/08/31/nationaal-monitoringsprogramma-voedselbossen-nmvb-publiceert-rapportage-over-drie-jaar-onderzoek-naar-voedselbossen/
- Green Deal Voedselbossen. (2020). *Voedselbossen voor provincie, gemeente en waterschap* [Fact sheet]. https://netwerkvoedselbosbouw.nl/wp-content/uploads/2020/10/Factsheet-Voedselbossen_2020.pdf
- Çelik, F. (2017). The Importance of Edible Landscape in the Cities. *Turkish Journal of Agriculture - Food Science and Technology, 5*(2), 118. https://doi.org/10.24925/turjaf.v5i2.118-124.957

Climate Justice at the National Level: The Dutch Caribbean

The Dutch Caribbean consists of Aruba, Curaçao, Sint Maarten, and the BES islands (Bonaire, Sint Eustatius, and Saba). These islands face significant, and existential climate challenges as they are highly vulnerable to climate change impacts such as rising sea levels, extreme weather events (e.g., hurricanes), coastal erosion, and increased temperatures.[23] These issues are compounded by socio-economic challenges, including limited financial resources, high rates of poverty, heavy reliance on fossil fuels, and inequality in access to basic services like energy and water. Local and regional policies focus on climate mitigation projects on coastal protection, water management and disaster preparedness. Other policies focus on the energy transition, with ambitious renewable energy targets focused on providing all islanders with sustainable and affordable energy. However, in the national debate on climate justice policies, the Dutch Caribbean are often overlooked. This illustrates the existing inequalities in the relationship between the European Netherlands and the Dutch Caribbean. The case of hurricane Irma in 2017 shows the systemic inequalities that led to the slow response to the crisis.

At the regional level, the Dutch Caribbean islands participate in regional climate governance through organizations such as CARICOM (Caribbean Community).[24] CARICOM plays a crucial role in advocating for climate justice within the Caribbean, particularly for small island developing states (SIDS), which are disproportionately impacted by climate change despite contributing minimally to global greenhouse gas emissions. The Dutch Caribbean islands are also involved in the Caribbean Catastrophe Risk Insurance Facility (CCRIF),[25] which provides insurance coverage to help countries recover from climate-related disasters such as hurricanes and floods. This insurance scheme is an important tool for ensuring financial resilience and promoting climate justice by providing quick access to funds for disaster recovery.

Hurricane Irma on Sint-Maarten

Source: Netherlands Ministry of Defence, CC BY-SA 4.0

Case study 6: Hurricane Irma in Sint Maarten and the BES islands (2017)

Short description of the case:
The response to Hurricane Irma in 2017 exposed deep climate injustices within the Kingdom of the Netherlands, particularly affecting Sint Maarten and the BES islands (St. Eustatius, and Saba). Systemic inequities in crisis preparedness, governance, high levels of poverty, and resource distribution left island communities highly vulnerable. This was further exacerbated by bureaucratic inefficiencies, poor coordination between local and Dutch authorities, and historical underinvestment in disaster resilience. The lack of access to aid, issues of prioritization, and legal exclusions from Dutch climate policies further marginalized these territories. The case also highlights ongoing colonial-era disparities, with island residents struggling for recognition and equitable protection in the face of intensifying climate threats, as the effects of the climate crisis hit the Caribbean islands the hardest.

Climate justice principles addressed:

- **Distributive justice**: the BES islands and Sint Maarten received significantly fewer resources for climate adaptation, disaster preparedness, and recovery compared to the European Netherlands in similar situations, and aid distribution after Hurricane Irma was mostly to larger

NGOs instead of local organizations, limiting access for the most vulnerable communities. It also took half a year before some of the islands received funding.

- **Procedural injustice**: the islands have limited political influence in Dutch climate and disaster policies, as seen in the territorial exclusion from UN climate agreements, bureaucratic inefficiencies and a lack of coordination between local and national authorities. This delayed a quick response to the hurricane and its consequences.
- **Recognitional injustice**: The island residents have experienced to be treated as “second-class citizens” by the Netherlands, which was reflected in the unfair distribution of climate adaptation resources. They also feel unrecognized in the psychological and social burden of annual hurricane threats and the lack of systemic action to act upon extreme weather events.

Lessons we can draw from this case and how to put them in practice:

- After hurricane Irma, the Dutch government decided to arrange a funding construction via the World Bank, where strict conditions applied. Other financial routes, such as those via the European Union, would have led to quicker compensation for the affected households. This is not the only case in which parts of the Netherlands more vulnerable to climate change had to wait longer for much needed support. Therefore, bureaucratic routes should be simplified and better collaborations between local and regional institutions should be facilitated.
- The case of hurricane Irma showed the structural inequalities which are still present between the European Netherlands and the Caribbean parts of the Kingdom of the Netherlands. The same goes for the former colonies which are not a part of the Kingdom, such as Surinam and Indonesia. In conversations and publications about climate justice, these historical relationships often remain unexposed. In developing climate policies, it is important

to include this colonial perspective and take responsibility for the structural inequalities.

Recommended reading:

- Eerste Kamer Der Staten-Generaal (n.d.). *Gevolgen van de orkaan Irma (34.773)*. https://www.eerstekamer.nl/kamerstukdossier/gevolgen_van_de_orkaan_irma
- Wijkhuijs, V., van Duin, M., Jong, W., Domrose, J. (2018). Noodhulp na orkaan Irma: de eilanden binnen het koninkrijk. In V. Wijkhuijs & M. van Duin (Eds.), *Lessen uit crises en mini-crises: Klimaatverandering en extreem weer* (pp.233-260). Boom bestuurskunde.
- Haringsma, P. (2023, March 1). Van klimaatrechtvaardigheid kunnen we binnen ons Koninkrijk nog niet spreken, zegt deze jurist. *De Correspondent*. https://decorrespondent.nl/14247/van-klimaatrechtvaardigheid-kunnen-we-binnen-ons-koninkrijk-nog-niet-spreken-zegt-deze-jurist/3ec593a3-f268-05f2-1831-9057d53622f1
- Derbali, Naïm. (2021, October 20). Klimaatdenkers: Daphina Misiedjan “Het gaat om mensenlevens”. *De Groene Amsterdammer*. https://www.groene.nl/artikel/het-gaat-om-mensenlevens

Climate justice at the global level

From a global perspective, climate justice is deeply connected to historical and colonial relations, economic disparities, and differentiated responsibilities. Industrialized nations have been the primary contributors to greenhouse gas emissions, yet developing countries bear the brunt of climate-related disasters. The principle of common but differentiated responsibilities (CBDR), as outlined in international agreements such as the Paris Agreement[26] and the verdict of the International Court of Justice (2025), acknowledges this imbalance. However, challenges remain in implementing fair financial and technological support to nations that need it most. Climate finance mechanisms, loss and damage compensation, and equitable carbon reduction targets are crucial in addressing these historical injustices. In the context of the Netherlands, colonial relations with Indonesia, South Africa and Suriname should inform Dutch policies by taking responsibility for any climate damage which has indirect or direct connections to any activities executed in the colonial past, present or future.

In countries across the world, indigenous groups are taking action to fight for their voices to be heard in climate adaptation and mitigation. Their knowledge is essential to acting upon climate change, as they possess knowledge of local nature preservation strategies and agricultural traditions that do not harm but rather restore ecosystems. Another important voice which is gaining more prominence in the climate justice debate as that of the future generations, such as represented by famous climate activist Greta Thunberg. The United Nations Committee on the Rights of the Child (2023)[27] emphasized the urgent need to address the adverse effects of environmental degradation on the enjoyment of children's rights and clarifies the obligations of countries to address environmental harm and climate change. Other minority groups which deserve to be heard more in the climate justice debate are elderly people, people with mental or physical challenges, migrant groups and industrial workers.

These examples of climate justice in policies and practice show that climate justice is a guide for real-world decision-making. It shows that we need to pay attention to the people, the context, the place, and the process.

2.3 Conclusions and Future Suggestions

The accelerating climate crisis demands urgent, just, and inclusive action—not only to address its unequal impacts, but also to confront the injustices that contribute to it. Climate change affects everyone, yet its consequences hit vulnerable communities, marginalized groups, and future generations the hardest. Climate justice must therefore be understood and applied through multiple, intersecting principles: distributive, procedural, recognitional, restorative, epistemic, and structural justice. Each principle addresses a different aspect of fairness, from sharing costs and benefits to including diverse voices, respecting knowledge, and addressing historical and systemic injustices.

This handbook is tailored to the context of the Netherlands, where climate justice plays out at local, national, regional, and global levels. Locally and regionally, municipalities work on climate adaptation and mitigation policies, raising key questions about how to include diverse voices, especially from marginalized and indigenous communities, and how to fairly balance the risks, needs, and consequences faced by different groups. At the national level, guidance from the Scientific Council for Climate Policy (WRR) highlights the importance of integrating climate justice into climate policies. Policies such as the Dutch Climate Agreement[28] and the National Climate Adaptation Strategy (NAS) reflect principles like shared but differentiated responsibilities, capacity-based contributions, and the polluter pays.

The kingdom of the Netherlands includes both continental Europe and the Caribbean, which consists of three special municipalities (Saba, St. Eustatius, and Bonaire) and three countries (Aruba, Curaçao, and St. Maarten). Climate justice requires explicitly addressing the unique vulnerabilities of the Caribbean islands, considering the legacy of colonialism, socio-economic inequalities, and the need for regional cooperation through bodies like the Caribbean Community (CARICOM) and

climate risk insurance schemes. Outside of the kingdom, former colonial relationships require the Dutch government to take responsibility in addressing the consequences of climate change in countries such as Suriname and Indonesia.

Implementing climate justice requires more than recognition—it needs concrete, context-specific actions. Practitioners should start by defining the purpose of their work, understanding the historical and structural causes of inequality, and knowing the limits of their influence. Engaging stakeholders through mapping exercises, inclusive dialogue, and clear communication helps ensure that all voices are heard and that different knowledge systems—scientific, local, and experiential—are equally valued.

Applying justice principles means sharing climate costs, benefits, and responsibilities fairly, based on equity and the capacity of different actors. It also means tackling the root causes of injustice—such as racism, colonial legacies, and our economic system—rather than only treating symptoms. This requires long-term restorative and reparative actions, including financial compensation, policy reforms, and broader systemic change. Practitioners must remain flexible and accountable, ready to deal with dilemmas and unexpected outcomes by reflecting on goals and results.

Sustaining climate justice work means supporting those at its center—community leaders, policymakers, and practitioners. It is important to recognize the emotional and political challenges they face and to build networks of care and collaboration. This handbook encourages learning from existing experiences worldwide, using step-by-step progress to move justice forward.

In short, climate justice is not only a principle, but also an ongoing process. This handbook offers a flexible foundation and practical tools to translate justice from an abstract idea into real, inclusive climate action. By doing so, it supports a fairer, more resilient, and sustainable future—one that respects

and protects the rights of people, animals, ecosystems, and future generations, from local communities to the global stage.

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The Climate Justice Team

This handbook was developed as part of the Accelerating Just Climate Transitions in Urban Regions (ACT) research project of the Dutch Climate Research Initiative (KIN). Members of the team behind this handbook met in 2023, when KIN organized a three-day 'Crutzen workshop' with the goal to facilitate the formation of a research proposal by researchers and societal partners. In this co-creative workshop, team members Dat Nguyen (NIOD Institute for War, Holocaust and Genocide Studies, the Netherlands Royal Academy of Arts and Sciences), Joyce Browne (UMC Utrecht & Utrecht University) and Marthe Singelenberg (Amsterdam University of Applied Sciences) met and connected on stressing the importance of a concrete definition and operationalization of climate justice – especially if this was grounded in different disciplinary perspectives and real work case studies. This led to the formulation of a joint research question and proposal for a work package (a subpart of the full research) focused on drafting a handbook on climate

justice. At the start of the research, researchers Charisma Hehakaya (UMC Utrecht) and Juliette Mattijsen (UMC Utrecht) joined the team. Corinne Lamain (then at the Centre for Unusual Collaborations), Daphina Misiedjan (Erasmus University) and Roel Vermeulen (UMC Utrecht & Utrecht University) were invited as advisory board members. Last but not least, we were joined by the talented students Bente Mossink, Vicki Brandsen and Abdalla Al-Moussawi, who made valuable contributions to the handbook by supporting in the organization of the workshops and collecting the case studies. The team combines a diversity of disciplinary backgrounds: anthropology, medicine, philosophy, epidemiology, implementation sciences, global health, innovation sciences, gender studies, human rights and planetary health.

2.4 Acknowledgements

Formulating a working definition of climate justice that is both practical and broadly recognizable has not been an easy task. Yet, this journey became feasible—and often enjoyable—thanks to the many people we met along the way. We are deeply grateful to everyone who contributed to this handbook by sharing their knowledge, insights, and experiences.

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Appendices

Appendix I. Methodology and Justification

To develop a comprehensive and inclusive working definition of climate justice for this handbook, we started with scoping reviews on the current academic literature on climate justice and policy documents containing climate adaptation and mitigation strategies. 82 local, national and international policy documents were analyzed; theory summarized from justice and environmental thinkers. These led to a draft definition on climate justice. Next, we conducted five structured stakeholder workshops across different levels — local, national, global, the Caribbean Netherlands, and private sector actors. The workshops were held in person in the public library in Utrecht and online between November 2024 and April 2025. The workshops were designed to integrate diverse perspectives, identify challenges, and ensure that the resulting working definition would be both theoretically sound and practically applicable. We worked iteratively, meaning the inputs from one workshop led to updates of the working definition that we would present during the next workshop. We also collected case study examples and input on professionals' perspectives, considerations and needs that a handbook should ideally address.

Workshops were conducted with representatives from various sectors and disciplines, ensuring a broad spectrum of voices was included:

- **Local level**: Municipality representatives, academics, civil society representatives from non-governmental organizations (NGOs), citizens, and students.
- **National level**: Ministerial contacts, academics, NGOs, citizens, and students.

- **Global level**: Academics, NGOs, citizens, and students.
- **Caribbean Netherlands**: Representatives from local governance, civil society, and environmental groups.
- **Private sector**: Businesses and industry representatives engaging in climate-related policies, people working for interest groups or collectives of business.

Refining the climate justice definition

The outcomes of these discussions were systematically analysed to:

- Adjust and refine the working definition of climate justice.
- Develop guidance on how this definition can be used in different contexts and by various stakeholders.
- Propose steps to tailor the climate justice definition based on local, national, and global perspectives.
- Identify a spectrum of language use, from neutral to activist, to address different communication needs.
- Establish best practices for communicating about climate justice.
- Collect practical case studies to illustrate the application of climate justice principles in real-world scenarios.

In addition to the formal workshops, we also held presentations about the project during which we presented the operational definition available at that stage and solicited feedback and input. This allowed for a further validation of our finding for different audiences, for example during the ACT consortium meeting where researchers, representatives of different municipalities, citizens, and civil society representatives were present.

Through this iterative process, we aimed to create a flexible, inclusive, and actionable definition of climate justice that can serve as a foundation for policy, advocacy, and practice.

Insights the stakeholder workshops provided for this working definition

The following table summarizes how the definition was iteratively created: we started with a definition based on literature, and each workshop updated it based on the received inputs.

Workshop	Feedback that shaped the Climate Justice definition	Climate Justice in Practice, feedback not on the definition specifically but we incorporated in the development of the next sections of the handbook
Local	• Requires multiple perspectives • Balances present and future needs • Inclusion depends on trust and context • Some exclusion may be inevitable • More “active” language is needed (“ensures”)	• Social justice (e.g., housing) is foundational • Power dynamics: who leads, who benefits, who pays • Use local case studies (e.g. energy, healthcare) • Linked to structural issues like poverty and racism
National	• Say “people in vulnerable situations,” not “vulnerable groups” • Use clear, hopeful language • Must be contextual and flexible - Emphasize inequalities and powerful actors	• Real-life injustices: housing damage, gentrification, subsidy access • Inclusion is complex; resistance can drive change
Global	• Missing perspectives (e.g. Caribbean, private sector, religious groups) • Power dynamics matter (age, status, expertise	• Communities often excluded from solutions • Most affected often contribute the least to the problem • Call for inclusive language and bottom-up approaches
Caribbean	• Language barriers matter — promote multilingual inclusion (Papiamentu, Spanish, English) • Should look forward, not only address past harms	• Raise awareness to build unity • Address social struggles (living costs, infrastructure, inequality) alongside biodiversity loss
Private	• Rethink vulnerability: The term “vulnerabilities” suggests passivity — “limitations” better reflects how injustice restricts people’s agency. • Inclusion is not enough: Collaboration also means building trust, resolving tensions, and overcoming systemic and cultural barriers.	• Keep it practical by providing tools, checklists, and steps that apply across policy and private sectors. • Acknowledge power and systemic barriers: Climate justice demands structural change, not just individual behavior shifts. • Foster cross-sector collaboration: Encourage shared responsibilities and common goals between public and private actors.

Appendix II. Climate Justice in Media: Inspiration

Popular media plays an important role in how people learn about climate justice. Documentaries, films, books, social media, podcasts, and art all offer different ways to engage with the topic. This chapter looks at how these forms of media reflect, shape, and support the ongoing conversation on climate justice. We share them as sources of inspiration, but also as tools to connect with others in professional work, transformation projects, and even team building.

Documentaries, films, and podcasts

One of the most powerful ways to educate on climate justice is through visual storytelling and in-depth discussions. Films like *An Inconvenient Truth* (2006), *Before the Flood* (2016), and *I Am Greta* (2020) have brought climate issues to the mainstream, along with several nature focused documentaries like *Planet Earth* (2006) and *David Attenborough: A life on our planet* (2020). In *My biggest little farm* (2018), a couple shows how they trade living in the city for farmland and a dream to harvest in harmony with nature. *The Condor & The Eagle* (2020) is a newer documentary, with a focus on climate justice. It highlights Indigenous resistance to environmental destruction. *I Am the River, The River is Me* shows a beautiful portrait of a Maori family elder who has fought a lifelong battle for the legal status of the Whanganui River, the first river in the world to have actual rights. The film *Dark Waters* (2019) is based on a true story, and it exposes corporate pollution and its impact on human and environmental health, illustrating how environmental harm relates to legal and justice systems. Movies like *Don't Look Up* (2021) use satire to critique governmental inaction on climate change, while films like *First Reformed* (2017) explore the ethical dilemmas surrounding environmental destruction. The documentary Merchants of Doubt (2015) to make people aware of climate obstruction and climate disinformation. Climate-focused podcasts like *How to Save a Planet* and *Outrage and Optimism* provide ongoing discussions on climate justice, activism, and policy. Last but not least, check out the podcast “De duurzame wijk” by KIN ACT researcher Rob van der Rijt, in which he interviews the initiators of local activities which contribute to sustainability in the Netherlands at the neighborhood level.

Social media platforms

Social media platforms have become an important channel for sharing information, raising awareness, and fostering engagement around climate justice, particularly among younger audiences. Platforms like YouTube, Instagram, TikTok, X, LinkedIn and BlueSky enable activists and communities to share climate justice messages in a fast, accessible, and globally shareable format. The YouTube Channel @whatifwechange show hopeful stories about the future of our planet. Activists like Vanessa Nakate (@vanessanakate1) and Xiye Bastida (@xiyebeara), but also communities like World's Youth for Climate Justice (@wyfcj) or Climate Justice Coalition (@climatejustice_coalition) use these platforms to spread messages concerning climate change and community action. Furthermore, hashtags play a critical role in unifying global conversations. Campaigns like #FridaysForFuture, #ClimateJusticeNow, #YouthForClimate, and #PeopleNotProfit have allowed movements to gain international attention, empowering youth to participate in digital strikes, share local experiences, and demand policy change from global leaders.

Art and books

Art and books provide creative ways to engage with climate justice by offering personal and emotional perspectives in the discussion. Street art, exhibitions, and digital art projects have been used to convey the urgency of the climate crisis. Movements like Extinction Rebellion use large-scale performances and installations to make political statements. When considering non-fiction literature, titles like *This Changes Everything* (2014) by Naomi Klein and *The Intersectional Environmentalist* (2022) by Leah Thomas connect climate justice to systemic inequality. *All We Can Save* (2020) brings together voices of women climate leaders, while *A Bigger Picture* (2021) by Vanessa Nakate highlights African perspectives. Fiction like *The Ministry for the Future* (2020) and, while being written decades ago, *Parable of the Sower* (1993) imagines futures shaped by climate breakdown and social change. The Dutch Planetary Health Hub collected recommended fiction, non-fiction and children's books that address climate topics: https://www.planetaryhealthhub.nl/aanbevolen-boeken

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