

# **Adapting the Future**

Nils Nerhus Rørstad

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# Abstract

Climate adaptation shapes up to be the defining paradigm of the 21th century. This thesis seeks to understand the role climate adaptation plays today, and how it will shape the future. It is a common assumption that climate adaptation is “green”, a claim I will investigate through a mixed-methods approach.

First, it analyzes data from the OECD’s Creditor Reporting System to see how North-South finance flows have changed over the last ten years. It finds that while the amount of aid tagged as climate adaptation is rising, it is not across the board. This leads to a structural shift in aid, where a larger part of aid is out in construction, transport and energy.

Second, it analyzes the National Adaptation Plans submitted to the UNFCCC, through the Causal Layered Analysis framework. It finds that, despite the planned interventions amount to a total rewiring of the economy on all levels, they fail to envision a different future. The interventions, rather, seem to believe there is no alternative to the destructive system that have caused climate change in the first place.

Lastly, the thesis suggests more research into new ways of understanding climate adaptation, and highlights promising work by authors in the fields of futurology, design and development. Based on these different conceptualizations, I construct three different scenarios for the future of climate adaptation.

## Acknowledgements

# **Part I**

## **Introduction**

# 1 Introduction

In January of 2025, as I am starting the process of writing this thesis, the people Los Angeles is feeling the extreme effects of a changing climate. As of today, 24 persons have died from the fires, and billions upon billions of assets have gone up in smoke. Irreplaceable art and music, stored in the homes of the elites that lived in Hollywood, are likely lost for ever.

As this thesis progresses, I will find more examples of climate disasters to write in this section. The floods in Spain are one good example to include. More likely than not, I should include the scenarios here, to give a taste of what is to come.

## 1.1 Climate security

Climate change is dangerous, unfair and already happening. Environmental security is a key pillar in the Human Security approach. Climate change is set to harm it.

Something about the shifting geopolitics meaning that the green transition is also somehow becoming securitized, and that the global polity is more concerned with the security-frame of international relations. Global south adaptation becoming a central part of the climate discourse, and as I will expand on in later in this thesis, it is unclear what it actually entails.

Climate security is a multi-level issue. Droughts, floods and other extremes caused by climate change could impact the livelihoods of many, and possibly threaten peace and security in society at large.

Security is also concerned with anticipating and avoiding risk. This means looking into the future.

Climate adaptation is special because of its orientation to the future. It is a process of adaptation to risks of change. It is a reconstruction of the world to adapt to dangers that we do not know the full extent of. Most theory today assumes that climate adaptation can, and will come, as a win-win for people, climate and economy.

In Scandinavia, climate security (klimasikring) and climate adaptation (klimatilpasning) is used interchangeably. I will use climate adaptation throughout the rest of the thesis, because this is the language of the UNFCCC.

## 1.2 International climate change governance

While mitigating climate change perhaps is most important, adapting (and shielding) people, industries and nations from the risks of climate change is growing in prominence. At the 28th Conference of the Parties (COP28) to the United Nations Framework Convention for Climate Change (UNFCCC) in Dubai, an agreement was signed that the parties should make \$1300 billion available, every year, for climate adaptation.

Governments and civil society organizations around the world welcomed this, as the poorest in the world are the most vulnerable to climate change. Climate adaptation is therefore possibly becoming the new interface for financial aid between the Global North and the Global South. Most of the discourse around climate adaptation assumes many win-win scenarios.

The UNFCCC has three pillars: Mitigation, adaptation and loss and damage (Hall and Persson 2018).

The mitigation pillar has been a part of the UNFCCC since the Kyoto protocols in [way back then], and is perhaps the most important part of the Convention. Since the Paris agreement (COP21) in 2015, all parties to the Convention has to submit Nationally Determined Contributions (NDCs) every five years.

Measures within the mitigation pillar span the whole economy, and is a process internal to every country, with the exeption of different carbon trading regimes, such as UN REDD+ or the European carbon trading system (ECTS).

Climate adapation is measures aimed at limiting the damage caused by unmitigated climate change. It is, in a sense, the spillovereffect from unsuccessful mitigation.

Climate adaptation is at its simplest all infrastructure and change that is aimed at reducing the impacts of climate change (Ensor and Berger 2009). Some expand this understanding to include exploiting the opportunities climate change can bring with it (Vanhala and Hestbaek 2016). This definition makes it possible to frame most infrastructure development as climate adaptation measures (Toussaint 2021). Climate adaptation is largely financed by the state where the infrastructure is built, although a larger degree of ODA is spent on climate adaptation related infrastructure (Dewan 2022).

Loss and damage is the newest pillar, and its distinction from climate adaptation is muddled. When it was first brought it up, it was intended as a formalized and legalized form of climate compensation. It was supposed to pay for losses and damages that occurred beyond the limits of adaptation (Janzen et al. 2021). This is not the version adopted by the UNFCCC. Loss and damage is to be financed through the same channels as adaptation, and will be mainstreamed into development assistance (Scoville-Simonds, Jamali, and Hufty 2020).

The logic of the UNFCCC then becomes: All countries must cut their emissions. The impacts of unmitigated climate change must be adapted and what is beyond adaptation must be paid for as damages.



While the distinctions I present here are *true*, they are not popularly adapted, and as I will highlight in Section 3.4, many approaches to climate change seek to impact (or subvert) all pillars simultaneously.

Climate change finance is a billion-dollar industry, and scholars claim climate adaptation is increasingly being funded with funds from other policy areas (Scoville-Simonds, Jamali, and Hufty 2020). The money is funneled into a growing amount of international funds dedicated to climate adaptation, and existing projects are being recast as adaptation projects (Dewan 2022; Paprocki 2018).

This shift, and the shift to project work is well described in the literature, and something I will expand on below. Thus, the goal of this project is to better understand this shift on the global level, and attempt to chart out where climate adaptation is today, and how it will shape the future.

### 1.3 Climate adaptation as a new paradigm

The Anthropology of Development, as the critical analysis of development actors and their projects has a long history. Thinkers like Ferguson (1994) and his analysis of the *Anti-politics machine* in Lesotho and (escobar1995?) and the discourse of underdevelopment in Latin America have highlighted and spurred research into why development seems to always miss targets and fail in predictable ways.

Scholars have recently begun the work of deconstructing the climate adaptation discourse. Paprocki (2018) describes it as an *Adaptation regime* based on her field work in Bangladesh. She argues that some countries are constructed as climate vulnerable and therefore in need of climate adaptation and that this imaginary is closely related to other historical processes of colonialism. All societal issues are reduced to be climate related, and unavoidable. This dystopian imaginary builds the groundwork for extensive experimentation, since the dystopian outlook eliminates the possible downsides. This, she argues, leads to dispossession as land is taken for shrimp aquaculture and migration to the cities is promoted. The poor and vulnerable that were supposed to be helped, simply are not (Paprocki 2018).

Dewan (2022) further develops this, highlighting the building of dams and polders as flood protection. She argues the polders built as a climate adaptation measure, are the same as the old for flood protection, and are successful at acquiring funding. Climate adaptation was *the spice* that made their applications for funding work. The only issue was that the polders did not work. By blocking the seasonal flooding and draining, the rivers became silted and needed dredging, furthering the risk of floods (Dewan 2022).

This will all sort under the *mitigation* pillar of the UNFCCC, the first of three. All actions taken to avoid global warming and the following climate change, falls into this category. That also includes taxes on emissions and renewable power, as well as many other more or less effective measures.

The second pillar, adopted in [say, 2015] is climate *adaptation*. It involves all measures taken to avoid the causes of global warming. Building sea walls to keep storm surges out of urban areas, shielding agriculture from excessive rain

The third of the UNFCCC, adopted in [say, 2022] is *loss and damage*, concerning all damages from global warming that are beyond adaptation. This pillar is highly disputed, as it was originally proposed as a way of bringing a judicial understanding of climate justice into play, where countries could sue other countries for the losses and damages their emissions had caused. While this is not the understanding adopted by the UNFCCC, where it is just seen as another form of climate adaptation.

## 2 Scope

his thesis seeks to understand climate adaptation funding flows, on a global scale. Since this funding, and its discourse, is anchored in the UNFCCC <sup>1</sup>, it is a natural focal point for the study. The declarations made at the end of every Climate Summit are the outcome of intense negotiations at the summit, and their contents become a part national political debates all around the world.

The UNFCCC is also the stage where climate-related are launched, and a meeting place for activists, lobbyists, decision-makers and experts. The National Adaptation plans are a part of this, where a World Bank supported project has

What is climate adaptation?

- How has climate adaptation evolved at the UNFCCC?
- What is the impact of climate adaptation on are North-South finance flows?
- What are the most common climate adaptation interventions? What do they replace?

I intend to answer these question by analyzing flows in the OECD DAC CRS dataset <sup>2</sup>. The first question would be answered by modelling the relationship between the climate adaptation marker and the funding flows. The second question will be answered in the same dataset, looking at the relationship between the OECD sectors and the marker. The last one will look at the relationship between development funders <sup>3</sup> and the climate adaptation marker.

How will climate adaptation shape the future?

- What futures do climate adaptation projects have? What are their implications?
- How are climate adaptation interventions justified? Who decides?
- How could climate adaptation be reimaged? What are the alternatives?

I intend to answer these questions by analyzing the English language National Adaptation Plans (NAPs) submitted at the UNFCCC. The analysis will be layered and aim to deconstruct the visions of the future expressed in the texts. I identify the key methphors underpinning the adaptation discourse.

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<sup>1</sup>There is an argument to be made that the Norwegian economy is suppressed by the phenomenon known as “Dutch Disease”, where one very large export sector hampers growth in all the others

<sup>2</sup>While it excludes fossil fuels from the future, it does not conceptually choose between technologies

<sup>3</sup>See all these many sources that claim that climate adaptation could also be

Lastly, based on these metaphors, I construct three scenarios for the future of climate adaptation. One where the trends continues as I found the first research question, one where *protection* is prioritized and one where *capacity* is prioritized.

# **Part II**

## **Research design**

## 3 Theory

In this theory section, I will present the theoretical framework that informs the analysis later in the thesis. As a novel framework, it brings in movements in the fields of anthropology, agronomy, economy, development, design, security and futurology, to better understand the complex and transdisciplinary concept of climate adaptation.

First, I will explore how the concept of security has evolved since the World War 2, and how this leads to a form of securitization. Second, I will explain the different justifications for North-South interventions, arguing that there are four main types. Third, I will explain the main views of climate adaptation, and mapping them onto the intervention framework I have built earlier. Lastly, I will explore development and security's relation to the future, and explore new developments in the critical literature.

### 3.1 New security

Security is seen as combination of a security problem with a security solution (Wæver 1995). Interestingly, it is the absence of security solutions that creates insecurity, not the presence of the threat. This idea makes perfect security impossible to achieve (Baldwin 1997, 15). It is a concept with deep historical roots, it has traditionally been associated with military power and state building, but has also included other values and other actors. The values security guards, what *is* secured, is subject for debate, and has changed throughout history and between contexts (Baldwin 1997, 13).

Since security is unachievable, and has a cost, it is no more than just another policy objective for those involved in politics to weigh against other issues, it has marginal value. The value of say, national security, always has to be valued against its costs, and other values, such as human rights (Baldwin 1997, 16). There are two main strains of security thinking; the realpolitik-paradigm, and the human security paradigm.

The concept of security was extended in four directions, vertically, up to the international and down to the individual, and horizontally, from military threats to economic, social and other threats (Rothschild 1995, 55). The concept of human security came as the last in a long line of expansions to the notion of security (Paris 2001, 88). The realpolitik-paradigm was deemed to not fit the new post-cold war situation and the new wars that emerged. There was a need for a new framework to ensure the security of all people in the world (UNDP 1994, 49). International politics was no longer a fight between the superpowers, and there was

considerable fear the “new wars”, by some seen as a different kind of organized violence taking hold (Kaldor 2012, 1).

To feel insecure is more connected to everyday worries and suffering, than it is international headline-grabbing crises (UNDP 1994, 34). Threats against human security somewhere, is a threat to people everywhere (UNDP 1994, 46). These failed states threaten the security of people everywhere, because the new threats would come from individuals and groups, not from nation states (UNDP 1994, 46).

## **3.2 Securitization of the biosphere**

A central point to the understanding of security is the process of securitization. Here, a topic, event or other peace of politics is made into a security issue. Securitization is not simply to speak louder, but to change the language in which an issue is discussed in a specific way (Wæver 1995). This language often invokes life or death for the state or society, and often makes references to war (Wæver 1995). Classic examples of this are “the war on terror”, “the war on drugs”, the “war on crime” and the “war on poverty” all not so proud examples from the US.

Since security is the combination of a security problem with a security solution, and the threats to security has expanded, it is possible to securitize virtually every aspect of society. Securitization has a massive potential to mobilize people to rally behind causes (Wæver 1995). This can be seen in the ability to mobilize troops to fight in actual wars, for states to provide resources to a cause or to shift the debate around an issue.

Securitization, with its references to war, often invokes the state as the provider of security (Wæver 1995). As with the example of “war on drugs”, it was not a war for the pharmaceuticals to fight, nor was it because it was a health crisis. It was to enable the coercive powers of the state to now focus on a new issue, and to use laws, regulations, taxes, fines and incarceration to get it. Some scholars argue that one should only investigate the impacts of securitization, instead of whether or not an issue has been securitized (Owen 2008, 447). Other argues that securitization itself is defensive. It will reinforce the state of the world like it is today (Wæver 1995).

Climate security is a securitization of the biosphere and, as I will explore later in this thesis, leads to a focus on the actions and relations between states, rather than other aspects of society.

## **3.3 North-south interventions**

There are four main ways of understanding the justifications for interventions by countries in the global north, in countries in the global south (Escobar 2018):

- Institutional development
- Participatory development
- Security development
- Alternative development

This way of understanding is perhaps the most common, as it involved the World Bank, IMF and the other large multilateral institutions. It assumes that the issues countries face are somehow of their own making and a result of a history of oppression. Through better governance and improved infrastructure, costs of doing business will sink, and spur economic development. Funds will be dispersed at the national level, most often as loans, with conditions attached. These conditions could include the use of private sector instruments<sup>1</sup>, and mobilization of funds at the project level.

The participatory view is skeptical of the government, both as in its ability to represent its citizens, as well as implementing its policies. By engaging poor populations directly, funds would not be wasted in bureaucracy and corruption. Since funds can target the most vulnerable populations, they make life better. Funds will be dispersed in many of small-scale projects, mediated by an international network of NGOs. The communities that best understand donor preferences, get a larger part of aid flows.

The security view sees the era of rapid growth in international trade as over. The United States, Russia, China and the EU moving investment to allies and strategically important parts of the world, through mechanisms such as EU's Global Gateway and China's Belt and Road, aiming to sure up their value chains. Funds are either dispersed at the national level, as loans or grants, or through infrastructure deals, where the infrastructure is delivered already assembled. Consultation with other actors that the State is limited.

Perhaps the most radical on this list, influenced by post-development thinking, the alternative development view rejects development interventions on the whole. Rather, development is seen as an always-ongoing process, where local communities find better solutions when left alone, without distortions from the outside. Funds are not needed for this approach, but cases where a donors' Ministry for Energy is funding the polluters, and the same donors Ministry for Environment is funding activists to fight the polluters, should be avoided<sup>2</sup>.

The literature on climate adaptation is large and growing rapidly. In this section I will outline the main ways climate adaptation is envisioned by the actors that

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<sup>1</sup>P3 f.ex.

<sup>2</sup>This was a finding from my field work in Uganda in the spring of 2023 as part of my Bachelor thesis in Development Studies at the University of Oslo. The French embassy in Kampala was administering funds both for Total Energy to build the East African Pipeline, and Fridays for Future Uganda to fight it.



### 3.4 Nexus

This approach, favored by UN organizations such as the Food and Agriculture Organization (FAO), highlights the linkages between the ecosystem and resilience, advocating for more

Through measures such as knowledge transfers, co-management of resources and tree planting. This view promises win-win scenarios, as the interventions are thought to have positive effects on the farmer (and farmers family's) income, which then leads to a virtuous cycle.

This approach is squarely based in the participatory view, and has, as its goal, to

### 3.5 Mainstreaming

This view, favored by international NGOs<sup>3</sup> is that climate change should be a part of all development assistance.

This approach is attempting to mainstream climate adaptation into all aspects of development.

### 3.6 Future visions

There are many different conceptualizations of the future.

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<sup>3</sup>And Danish ones like CONCITO...

## 4 Methods

In this section, I explain the methods I will use to find data and to analyze it.

First, I advocate for the mixed-methods design as a way of getting a better picture of climate adaptation, and explain the focus on the study on reports and reported uses of funds.

Second, I will explain the OECD CRS dataset, and how I modelled it.

Third, I will explain the climate adaptation plans, how I analyzed them and why I focussed on the Small Island Developing States (SIDS).

Last, I will explain how I built the scenarios, based on the Causal Layered analysis.

### 4.1 Mixed-methods design

By looking at the reported data on climate adaptation from both a quantitative and qualitative perspective, this thesis gets a closer understanding of how climate adaptation is conceptualized and used in North-South relations. This also avoids the risk of getting a one-sided understanding of the issue.

Most importantly, despite the added complexity to the analysis and dissimulation, is that the quantitative part makes it possible to get a starting point and establish how climate adaptation has changed over the last 25 years and what it is today. This makes the insights from the qualitative part much more fruitful, as the visions of the future are deeply influenced by actions and ideas today. This increases the relevance of the study, and is best practice.

The mixed methods also makes it possible to combine the views of the donors (the ODA) with the views of the recipients (the NAPs), and compare how they are similar or differ.

### 4.2 Reports (and plans) as the focus of the study

By comparing the stated preferences of the donor-countries (as part of the UNFCCC) and comparing them to actual spending and plans, I can get close to a form of “revealed preference”, where the actual preferences are shown as spending and plans, rather than the political statements given at the Climate Summits, f.ex.

I have chosen to focus on actors reporting, rather than observing outcomes or processes for this thesis. As the focus is on understanding how actors see climate adaptation and attempting to understand how that might impact the future.

There are already a broad literature on the effects of climate adaptation and other “grand schemes” <sup>1</sup>

### 4.3 Modelling OECD data

The OECD Creditor Reporting System is a collection of self-reported activities by the members of the OECD. This is, to the member states and the officials that report, a very serious exercise, but it is also not coordinated beyond the guidance the OECD gives. Automatic (artificial intelligence) coding of the data will give different results.

This is to this study fine, as I am after what is coded as climate adaptation to analyze what the actors think, and not the other way around. I will not compare across donors, so that inconsistency is handled. As I have dealt with this dataset earlier during my internship with CONCITO, I was confident in how it functioned.

I will retrieve the numbers by calling the OECDs API. This ensures I have updated and reproducible numbers for analysis. I will then clean the data by using the `dyplr`-package in R, a well known and open statistical program. I have decided to include the code I manipulate the data with in the analysis, so that it is easy to see what I have done and haven't.

### 4.4 Analyzing the National Adaptation plans

Are the SIDS-countries representable? No. They are small island countries, so their donor's focus will be on other things than a land-locked country fix.

The plans are created by the climate adaptation project in one of the members of the World Bank group, in cooperation with different Government actors.

The plans are obviously the outcome of a brokering process between the local context and how the.

### 4.5 Building scenarios

Based on the Causal Layered analysis, I will identify the key myths in the climate adaptation plans, or at least identify what they all have in common.

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<sup>1</sup>See (Ferguson 1994; Paprocki 2018; Dewan 2022) for other examples

# **Part III**

## **Analysis**

## 5 Findings

In this findings-section, I will present the results from the preliminary data collection I have done. It is by no means scientifically sound, nor it is reproducible, but it is something. I will use this data as a way of testing the structure of the thesis, and highlight my own lack of understanding.

The structure is as follows:

- First, I present my findings from the OECD CRS dataset
- Second, I present my findings from the National Adaptation Plans
- Third, I present a “representative” project, and its funding, justification and planning

### 5.1 OECD findings

The “real” data collection for this part will be done in R, following best practice from Yakir (2019), helped by more advanced literature when I get that far (Kuhn 2022; Kabacoff 2024).

The data in this analysis is based on calculations I did while I was an intern at CONCITO in Copenhagen. I forgot to send myself the file, so I am doing the findings from memory. They are based on a lot of `=sumif()` calculations done in the 2022 OECD CRS dataset, and highlighted five “key” donors (at least in our contract): Germany, France, Japan, the EU and the UK. It is also based on transcripts of interviews that I still have.

I found that, within the field of transportation, there was considerable variation between the different donors, both in what they decided to fund, and how they coded their funding. Even though France and Germany are neighbors and the OECD officers meet regularly, their interpretation of sustainability is very different.

Some thing very visible nonetheless. *All* train projects were coded as climate mitigation, as well as *all* road projects were coded as climate adaptation.

## 5.2 NAP findings

The “real” data collection is a review of texts. Here, I am still unsure how to go about it. I can do this as an analysis in `R` as well (Silge and Robinson 2017), or I can choose to do this process manually, and just read them structurally while I take notes. With the text processing, I can have data on *all* published NAPs.

## 5.3 Case findings

Then, to satisfy Michael’s wishes, and to make sure the reader understands what is going on, I can find an “representative” example from the data I’ve extracted. From what I am thinking now, that is a sea wall around some big city in West-Africa, but it could turn out to be something else.

## 6 Discussion

This section will be structured in three parts, one that discusses the research questions, and one that discusses the concepts that keep cropping up. Naturally, this section draws on the findings from all data collection.

### 6.1 What is a climate adaptation?

A climate adaptation project is a road building project. It is located in a large, donor-darling country in Western Africa.

This is for two possible reasons:

- Roads are ubiquitous
- Highways are a popular imaginary

Roads are, in most Global South settings, the same as transportation. Having access to the road network, as many millions of Africans are without, is important. Both to be visible to the State and international community (Ferguson 1994), and to have access to markets for goods and labor. With the increase in

At the same time, highways are very strongly connected to the idea of the American dream, and a specific kind of freedom. This understanding of freedom is powerful to the ruling class in the countries, and as the highways are being built around the western world every day. They are easily understood by funding agencies, as most of them are based in, or have staff familiar with, the USA. Economic growth is highlighted in the NAPs as central to adaptation, as more money in the bank (or pocket) reduces vulnerability to all risks.

The donor decides what to fund, and as long as the international community is picking up the tab for climate change related ills, governments spend the money elsewhere or not at all.

## **6.2 How will climate adaptation shape the future?**

## **6.3 Vulnerability and adaptation**

How does vulnerability relate to economic development? How does economic development relate to adaptation? Is this just normal development under a new name, mainstreaming? (Scoville-Simonds, Jamali, and Hufty 2020).

Remembering the categories from Section 3.3, the focus on economic growth places those projects within the “Institutional development”-frame. This is different from the nexus approaches most found in the literature Section 3.4.

## **6.4 Security**

The security problems highlighted (or created) by climate change.

## **6.5 Alternatives**

A human - and not infrastructure - centered climate adaptation? That will look way more like



## 7 Conclusion

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