

Low Lands, High Stakes: How the Dutch Navigate Climate Security

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Abstract

The impacts of a changing climate are unmistakably evident, globally but also domestically. The security implications of climate change shape the strategic environment of the Netherlands. Climate change impacts increase resource competition and manipulation, disrupt critical infrastructures, and affect military operations and capabilities. The energy transition that is catalysed by climate mitigation policies in turn has its own geopolitical implications as it affects the energy security positions of countries. These strategic security effects mean that the Dutch government cannot overlook the importance of climate security. Followed by an analysis of how climate security is featured in Dutch strategies and policies, this chapter proposes specific entry points for synthesising climate security through a 3D approach, by integrating it into development, diplomacy and defence activities. It moreover points to the need to consider the security and conflict risk dimension more prominently in its international climate action too.

Keywords: climate security, 3D approach, the Netherlands, development, defence, diplomacy

6.1 Introduction

Climate change is a defining challenge and its security implications have been acknowledged for a while. Even for a well-developed and stable country like the Netherlands, climate change has significant security implications, both at home and abroad. A rising sea level leaves a great part of the Netherlands prone to flooding and storm surges, threatening coastal communities, critical infrastructure and the availability of freshwater (Haasnoot et al., 2020). Changing climatic and precipitation patterns affect agricultural productivity and water availability with notable implications for water and food security. Increasingly frequent heatwaves affect public health and can create conditions favourable for the spread of certain diseases (van Loenhout et al., 2016). The Caribbean part of the Kingdom of the Netherlands faces probably even bigger challenges, such as intensified hurricane seasons. All these impacts are cross-sectoral in nature and have far-reaching consequences for the

Dutch military. More frequent and severe extreme weather events increase demand for the military to provide humanitarian assistance and disaster relief (HADR) and raise the possibility of being increasingly deployed for stabilisation missions.

In Dutch policies climate security is recognised as a pressing issue, with climate change perceived as a threat to national and international security. The concept of climate security has been included in Dutch development, foreign, security and climate strategies. Although recognition is a first step, actual implementation is still falling short. Military personnel, diplomats and development actors realise the importance of implementing climate security in foreign, defence, and development policies but still face challenges with operationalisation (Hollander & van Schaik, 2023). It is for instance not yet clear how the relationship between climate and security affects the theory of change of development cooperation in fragile countries with high climate vulnerability and conflict risk. The same is the case for possible implications for early warning and action, including environmental expertise in operations, risk assessments for missions or the potential of exploring climate-security dialogues as part of peacebuilding and stabilisation efforts. Just like other countries, the EU and the UN, the Netherlands is struggling with how climate security affects its international activities.

This chapter aims to identify entry points for a synthesis of climate security through a 3D approach, so with a focus on development, diplomacy and defence. As climate security risks are context-dependent, have a compound character and transmit across time and space, different policy communities have to come together to develop an integrated approach (Mobjörk & Smith, 2017). The chapter also points to the need for international climate action to incorporate security and conflict risk insights. It will not discuss efforts by the EU and NATO, whereas it should be taken into consideration that these institutions are increasingly active on this issue. The chapter begins with outlining the strategic security implications of climate change for the Netherlands, followed by an analysis of how climate security is featured in Dutch strategies and policies. It concludes with entry points for how to better synergise climate security through a 3D approach and consider the security and conflict dimension more explicitly in international climate action that – at least in part – is implemented through the Dutch development spearheads food and water.

6.2 Strategic Security Effects of Climate Change

The security implications of climate change are multifaceted and can have spill-over effects, making climate security issues – even beyond Dutch borders – a threat to its national security. Outlined below are the strategic security implications of climate change for the Kingdom of the Netherlands.

6.2.1 *Increasing resource competition and manipulation*

Climate change leads to a melting Arctic, which in turn opens up new shipping lanes and access to new resources, including oil, gas, scarce metals and fish stocks. In addition to land rights contestation and borders between NATO allies and Russia, this has made the region a new frontier of geopolitical competition. Major powers such as Russia, the United States and China have increased their presence, either militarily or economically. Russia has a great strategic advantage as its Navy has year-round access to both oceans from the North. There are rising concerns that Russia's growing military presence will be used to deny access to the sea line that could drastically shorten transport between the EU and Asia, the Northern Sea Route (Klimenko, 2019). The fact that Finland has now joined NATO, and Sweden may soon follow, augments the Alliance's ability to deter and defend against Russian influence, but also means security risks for the Netherlands have become larger. The melting of the ice does not only pose a geopolitical dilemma, but also potentially leads to an additional increase in sea level rise, a halting of the Gulf Stream and storm surges (Rantanen et al., 2022; Perovich & Richter-Menge, 2009).

While climate change in the Arctic leads to increased access to natural resources, in other parts of the world it results in the opposite. In arid and semi-arid regions such as the Sahel, Horn of Africa and the MENA region, climate change impacts pose intricate challenges. While in these regions the vast majority of the population depends on rural activities such as agriculture, pastoralism and fishing, increasingly unpredictable and extreme weather patterns, periods of droughts, desertification, floods, heatwaves, and land degradation are causing yield losses, damage to crops, and livestock mortality (Sartori & Fattibene, 2019; Heinrigs, 2010). Farmers, herders and fishers are disproportionately affected as pressures on already scarce resources increase. This aggravates food insecurity, malnutrition, increases the risk of resource competition and changes pastoral mobility patterns raising the possibility of conflict between farmers and herders over access to water and pastures (e.g. grazing vs crop cultivation), paving the way for people migrating in search of better living conditions (OCHA, 2023). With large numbers of migrants to Europe coming from or transiting through the Sahel, these regions are of strategic interest to the EU and the Netherlands. In the Netherlands, increasing temperatures and periods of prolonged droughts hit the agricultural sector hard, reducing crop yields, grassland and farmer's income, while reduced surface water impacts drinking water facilities (Utrecht University, n.d.).

Resource scarcity is also creating windows of opportunity for non-state armed groups (NSAG). In fragile and conflict-affected contexts where people's vulnerability and exposure to climate change impacts are greatest, little adaptive capacity forces people to sell their resources or flee their homes. Resulting grievances play

into the hands of NSAGs such as AQIM, ISGS, Boko Haram and ISIS. These contexts render a conducive environment for NSAGs to establish a foothold by controlling territory and key access roads, allowing them to recruit young men for their cause – as they lack alternative means for employment and need to support their families. NSAGs such as ISIS have weaponised water – through capture, control, sabotage and looting of water installations – as a means to recruit farmers (Middendorp & Bergema, 2019). Heightened risk of conflict and insecurity caused by climate change impacts possibly necessitates more stabilisation missions and interventions.

6.2.2 Disrupted critical infrastructures

Climate change impacts and natural hazards, specifically droughts, wildfires, and floodings pose great challenges to the densely populated country the Netherlands is. The government-wide Security Strategy has stated that “it is not a question of *if* but *when* an uncontrollable wildfire will occur” (Ministerie van Justitie en Veiligheid, 2023). Natural hazards can disrupt critical infrastructures like drinking water, electricity and telecom facilities which in turn affect service provision such as energy, transport, water, food, communications, health, emergency response services and payment/financial services. Since essential services are increasingly becoming interdependent, the risk of systemic failures increases as a breakdown of one critical infrastructure can generate cascading effects.

According to the Joint Research Centre, annual damage to Europe’s critical infrastructure could be ten-fold by the end of the century under business-as-usual scenarios due to climate change alone, from the current €3.4 billion to €34 billion (Joint Research Centre, 2017). For the Netherlands specifically, expected annual damage based on multi-hazard multi-sector analysis was €76 million in 2000, which is expected to rise to €105 million in 2020 and €156 million in 2050 (Forzieri et al., 2018). The flooding in 2021 in Germany, Belgium and the Netherlands caused not only 220 casualties but also destroyed critical infrastructure. Germany and Belgium were primarily affected, with critical infrastructure such as hospitals, fire departments, railways, bridges and utility networks heavily damaged. While less affected, physical damage was estimated to be approximately €300–600 million for the Netherlands (Koks et al., 2021). The Caribbean part of the Kingdom has also experienced how climate change can disrupt critical infrastructures. Hurricane Irma hit Sint Maarten in September 2017, extensively damaging buildings, infrastructure and communication networks (van Schaik et al., 2018). The destruction of the airport and the maritime port blocked transportation routes and food and material supply in Sint Maarten and neighbouring islands that rely on them, such as Saba and St. Eustatius. As providing relief goods proved to be highly challenging, water and medicines were largely exhausted after only a week and had to be brought

in by military assistance from the Netherlands. Due to damaged telecom masts and failure of power plants, walkie-talkies, radios, the internet, mobile phones, landlines and satellite phones were not working or barely working, significantly limiting communication (Fetzek et al., 2019).

These two examples from the Netherlands and its Caribbean part illustrate the far-reaching consequences of extreme weather events. The intensity and frequency of natural hazards will increase if climate change is not curbed, meaning that there might be a greater role for the Dutch military to provide HADR.

6.2.3 Military deployment, infrastructure and capabilities, and operations

As climate change dynamics aggravate, it is expected that armed forces will be affected in multiple ways. First, an increase in deployment can be expected. The increasing severity and frequency of extreme weather events will increase the deployment of forces for HADR in the short term (van Schaik et al., 2020). Because the Dutch military has a broad range of capabilities (e.g. air and sea transport, reconnaissance and intelligence, communications, engineering, and medical) they might be called upon when assistance is urgently needed¹ (Stoetman et al., 2023). For instance, the Dutch military has already been deployed to provide HADR in response to the 2017 Hurricane Irma and the 2021 floodings in the Netherlands. HADR will have a lead-in time that places a higher demand on early warning and crisis detection.

In addition, as climate change raises the possibility of conflict and instability, an increase in demand for crisis management or stabilisation operations may result (Stoetman et al., 2023). Furthermore, climate change impacts that lead to livelihood insecurity and inhumane situations pave the way for people to migrate in search of better living conditions. This could lead to an increasing role for the Royal Marechaussee at the Schengen area border or on the Caribbean islands to engage in border protection (Stoetman et al., 2023). Lastly, climate impacts in strategically significant areas like the Arctic can also unlock new military operations to protect Dutch strategic interests.

Second, climate change impacts affect military infrastructure and capabilities. Particularly high temperatures, rising sea levels and extreme weather events could damage military assets or render them unfit in certain operation conditions. This leads to higher costs for infrastructure inspection, maintenance, repair and overhaul (da Costa et al., 2023). Helicopters, for example, face difficulty taking off in high temperatures and military infrastructure in harbours and low-lying land areas are vulnerable to sea level rise and flooding. A one-metre rise in sea level has already affected military infrastructure such as the Marines Barracks Savaneta at Aruba. This could lead to new requirements to guarantee its future use. In the long term, infrastructure might need to be relocated to higher altitude areas (Stoetman et al.,

2023). Climate hazards can also put the military at risk by impacting civilian entities that operate critical energy infrastructure (CEI) on which the military depends (e.g. electricity for powering systems or fuel for transportation). If such CEI is affected by climate hazards, the services it provides may be disrupted, cascading to military installations and compromising operational effectiveness and readiness. There is therefore a strong link between operational effectiveness and energy resilience (da Costa et al., 2023).

Third, the impacts of climate change affect the characteristics of military operations – be it warfighting operations or humanitarian and stabilisation missions. Armed forces will increasingly have to operate in a rapidly changing and harsh environment where circumstances are extremely challenging. Areas with extreme temperatures and heatwaves, such as in the Sahel, Horn of Africa or MENA region can disrupt logistic activities, and drought and desertification directly impact water availability for land forces (NATO, 2023a). In addition to extreme temperatures, climate change impacts can place a significant burden on the supply chains and logistical capacity of armed forces directly engaged in combat (Stoetman et al., 2023). Another example is that climate change increases salinity levels and changes surface temperatures of seawater, severely affecting submarine and anti-submarine operations (NATO, 2023a).

6.2.4 A geopolitical energy transition

As demand for military deployment will increase in the foreseeable future, it also implies that military emissions will increase. The Russian invasion of Ukraine unveiled the EU's and Dutch critical vulnerabilities, proving to be a wake-up call regarding the risks associated with its energy dependency on Russia (Lokenberg et al., 2023). The defence sector is a large contributor to greenhouse gas (GHG) emissions as its energy use at military bases and fuels used for operations and military equipment are fossil fuel based and have a big carbon footprint (CEO, 2021). Decarbonising the military would result in a win-win-win: curbing climate change by reducing GHG emissions, increasing autonomy in the field by reduced dependency on vulnerable diesel supply lines and diminishing operational vulnerabilities caused by the strategic leverage of petrostates (e.g. weaponisation) like Russia (van Schaik et al., 2022). Hence, phasing out fossil fuels would have advantages beyond GHG emissions reduction (Stoetman et al., 2023).

Transitioning to climate neutrality and green technologies needed for the military increases demand for critical raw materials (CRM) and rare earth elements (REE) and redraws the geopolitical energy map. A country's ability to either generate or export renewable energy (sources) and its dependency on fossil fuel energy influences its international posture (Hollander & van Schaik, 2023).

Paradoxically, while the energy transition has many advantages, the increased demand in CRMs can also cause new climate security risks. First, REEs and CRMs needed to realise a net-zero energy system is currently mined in only a small number of countries, including the DRC, Nigeria, Brazil, Chile and China. Processing and refinery are predominantly dominated by China, as it controls 85% of the processing capacity for REE, 35% for nickel and 50–70% for lithium and cobalt. As most of the CRMs key to the EU and Dutch energy transition are both produced, processed and supplied by non-EU member states, the energy transition creates the risk of new undesired dependencies on undemocratic regimes or even systemic rivals (Lokenberg et al., 2023).

Second, increased demand for REE and CRMs could incite domestic tensions and conflicts in conflict-affected and fragile countries. In the majority of countries where REE and CRMs are found, governments and the mining sector perform poorly in terms of due diligence and ensuring sensitivity to conflict and the needs of local communities. Although supplying 70% of the world's cobalt, institutions in the DRC are still afflicted by patronage systems and little political or economic interests exist to implement the Mining Code. Mismanagement and unequal distribution of mining revenues have led to grievance and conflict (Ateyo, 2022).

Third, and in a similar vein, hydroelectric, wind and solar infrastructure projects can also violate human rights, exacerbate tensions, and fuel conflict. In South and Central America, renewable energy infrastructure projects have violated land, territory and indigenous rights, and attacks against human rights defenders have also been highly prevalent (Hudlet & Hodgkins, 2021). In the Western Sahara, Morocco's plans to construct solar and wind parks have violated the international humanitarian laws protecting civilian populations under occupation and are harming peace efforts in the region (Ateyo, 2022). As demand for CRMs increases, the probability of conflict can also be expected to rise. This also prompts the question from developing countries about what agenda is served by the energy transition (Hollander & van Schaik, 2023). Whereas it is sometimes suggested it would benefit primarily Western countries and China which own most renewable energy technologies, many developing countries will be hit hard by climate change and can reduce energy costs by shifting to locally produced renewable electricity.

6.3. Climate Security in Dutch Climate, Foreign, Security and Defence Strategies

The strategic security implications of climate change mean that the Dutch government cannot overlook the importance of climate security. Until now, Dutch foreign, defence and climate policies have made reference to climate security, albeit in a limited manner and without clear links to implementation. While in 2015, the

Netherlands raised awareness by launching the Planetary Security Initiative, it was hardly on the radar in its own policies. Even in the climate-adaptation field of water, where an additional Water, Peace and Security Programme is funded, the link with conflict and security in actual policies remains insufficient. This is highlighted by the limited allocation of both capacity and financial resources to address climate security risks (Hollander & van Schaik, 2023; Bunse et al., 2022). Several policies and strategies reiterate the recognition that the effects of climate change pose a threat to (national) security. See Table 6.1 for an overview of relevant strategies for climate security.

The 2022 policy on trade and development (**BHOS note**) of the Ministry of Foreign Affairs (MFA) recognises the security implications of climate change and aims to tackle these challenges by directing attention to mitigation, adaptation and disaster relief. Increasing access to renewable energy is a priority as well as combining Dutch expertise in water and food with digital information systems for climate-smart agriculture and sustainable land and water use. However, despite the risk of renewable energy projects in developing countries leading to new climate security risks, this BHOS note does not consider conflict sensitivity in its intention to double the number of people with access to renewable energy to 100 million. The Netherlands also intends to contribute to conflict prevention by supporting early warning early action systems to gain better insights into water-related conflicts and solutions. It pledges to continue its work on emergency response and disaster relief with a specific focus on mental health and psychosocial support (MHPSS; Ministerie van Buitenlandse Zaken, 2022a). While recognising the need for a combined approach of political efforts, trade and development cooperation, conflict prevention and peacebuilding, it does not specify what such an integrated approach should look like. By and large, this BHOS note comes down to pledges of financial support and ways of implementation relate merely to greening trade instruments.

The **International Climate Strategy** (ICS), published in 2022, features climate security (next to climate and health and climate and humanitarian aid) as part of a whole-of-government approach to climate policy. Hence, implementation is the responsibility of several Dutch ministries. The ICS emphasises the critical role of climate adaptation, natural resources management and renewable energy in supporting conflict prevention and peacebuilding initiatives. However, no attention is given to preventing climate interventions from having unintended effects on conflict because they provide support to one group over another (maladaptation). It is also awkward that in the English version the Dutch term “klimaatveiligheid” has been translated into “climate safety” instead of “climate security”. A conflict sensitivity assessment of these interventions could be the first step in this regard.

The ICS does integrate a climate lens in Dutch security policies and development and stability programming and addresses climate risks and resilience in strategic

context analyses, conflict analyses and programming. Actions are directed towards accelerating the energy transition in developing countries, fostering inclusive green job creation and sharing Dutch expertise in water security, land use and climate-smart agriculture. Greening funding and trade instruments are proposed as ways for implementation. Furthermore, and similar to the BHOS Policy Note, the ICS is also committed to supporting early warning early action systems (Ministerie van Buitenlandse Zaken, 2022).

With a foremost focus on adopting a climate lens into Dutch development, foreign, and security policies it tends to overlook the integration of a conflict lens into Dutch climate policies. While it does recognise the importance of conflict sensitivity, it does not concretely propose instruments to implement this (Hollander & van Schaik, 2023). This applies also to the **Resources Strategy** published in 2022 which aims to enhance the security of supply of critical raw materials (CRM) in the mid-to-long term. The Dutch government puts efforts into making a strong case within the EU for concluding and strengthening partnerships on CRM, including African and Latin American countries. For many climate activities such as the Just Energy Transition Partnerships (JETP), no analysis is made of their conflict sensitivity – and instruments to do so are missing. As the Dutch government contribute to JETPs in for example South Africa, it is advised to consider conflict sensitivity. However, the Resources Strategy does recognise the intricate challenges of child labour and conflict minerals, and seeks due diligence and responsible sustainable mining practices by supporting public-private financing (Ministerie van Algemene Zaken, 2023). But in proposing actionable steps, this strategy stresses supporting new research and analysis of social and environmental risks in critical supply chains – but does not include conflict risks.

The **Africa Strategy 2023–2032**, published for the first time in February 2023, recognises the impact of climate change as a driver of instability in the Sahel, Horn of Africa and North Africa. The Netherlands works through the EU and in cooperation with EU member states, while also maintaining intensive bilateral relations of its own with many African countries and partners. Given its solid knowledge base on water and food-related conflict, the Netherlands could step up its efforts when it comes to its own bilateral programming, such as supporting the preparation of better climate vulnerability and risk assessments. In addition, these climate interventions can lead to perceptions of inequality between communities that qualify and those that do not if conflict sensitivity is not considered (Darwish, 2023). As most of the Dutch bilateral programmes relate to the water and food sector and are implemented in the Sahel and East Africa – both greatly afflicted by conflict – considering conflict sensitivity is key to avoiding climate interventions that lead to maladaptation.

While implementing the ICS is in close collaboration with the Ministry of Defence (MoD), there are no explicit actions or instruments directed specifically towards the Dutch military. However, climate security has gained traction at the MoD. Climate change has been taken into account in applicable regional cases and strategic foresight activities have increased (van Schaik et al., 2020). Moreover, the MoD is further professionalising its tasks in disaster relief and is incorporating the consequences of climate change into its strategic regional analyses (Ministerie van Defensie, 2022). Despite the prevailing perception that a trade-off exists between going green and maintaining operational effectiveness, efforts on decarbonising the military have heightened by focusing on energy efficiency in military operations through emission reduction (Ministerie van Defensie, 2022).

In 2023, the MoD published the **2030–2050 Roadmap Energy Transition**, including a target to reduce fossil fuel dependency by 2030 by at least 20% compared to 2010, and in 2040 by 70% (Ministerie van Defensie, 2023). To develop policies to meet these targets, knowing how much energy the MoD consumes and which equipment or weapon system consumes most is essential. In its 2022 annual report, numbers on energy consumption were absent. After invoking the Open Government Act, the MoD shared a 2017–2022 overview, which claims that fuel consumption has declined significantly from 193.432m³ in 2017 to 87.051m³ in 2022². According to this overview, the MoD would have already met the 2030 target (20% reduction). The only reasonable explanation for this spectacular reduction would be if the MoD had started using much more third-party fuel than its own DBBB (Defensie Brand en Bedrijfsstoffen Bedrijf; Hendriks, 2023a; Hendriks, 2023b).

In its **Defence White Paper**, the MoD has stated its intention to establish a dashboard to better provide insights into its energy consumption. However, how this dashboard will be realised remains vague. In addition, the White Paper stressed the importance of international cooperation on climate security within NATO and the European Defence Agency (EDA), aiming for enhanced interoperability and standardisation within NATO and the EU. The **2022 EU Strategic Compass** and the **NATO Strategic Concept** render entry points for intensification of cooperation. In light of implementing the **Climate Change and Defence Roadmap**, the EU Strategic Compass also requires member states by the end of 2023 to develop national strategies to green the military and prepare them for climate change. This also pertains to improving the ability of the armed forces to support and coordinate with civilian authorities in emergency situations (EEAS, 2022). While this deadline is the end of 2023, not all countries, including the Netherlands have met it.

Other security strategies such as the government-wide Security Strategy and the National Security Strategy highlight that climate and natural disasters have a great impact on security interests and threaten national security. The **2019 National Security Strategy** identifies floods, storms, rising temperatures, long periods of

drought and sea level rise as factors affecting the security of the Netherlands and makes the case for enhancing civil-military cooperation in the context of an integrated approach to national security. The **Security Strategy 2023–2029** states that “the Kingdom incorporates the impact of climate change and climate transitions in the security policy and takes climate risks and resilience into account in the strategic context analyses, conflict analyses and programmes”. It also highlights the need to enhance the Kingdom’s adaptive capacity against climate and natural disasters, among other things through climate-resilient spatial planning that will take into account extreme weather, flood risks, the spread of infectious diseases and wildfires. In addition, the strategy acknowledges the importance of strengthening crisis control and increasing the preparedness of society with regard to climate-related threats. This requires joint national planning with attention to specific issues such as the care, shelter and evacuation of vulnerable groups (Ministerie van Justitie en Veiligheid, 2023).

Because the ICS features climate security as part of a whole-of-government approach to climate policy, the Dutch government paves the way for mainstreaming climate security risks into development and security programming. However, the ICS shows deficits when it comes to implementation. The instruments that are proposed include primarily a climate lens in Dutch foreign, security and development strategies while largely leaving conflict sensitivity in Dutch climate policies unnoticed, both within the Netherlands and abroad. The ICS does recognise the importance of the latter, but when it comes to implementation the ICS refers to gender and youth mainstreaming, and the Dutch Diamond Approach (Hollander & van Schaik, 2023). The first are strategies to realise gender equality and youth participation, which involves incorporating a gender and youth perspective throughout the entire process of policy development, implementation, monitoring and evaluation, regulatory measures and funding programmes. The latter means fostering effective cooperation between the private sector, knowledge institutes, NGOs and the government. Yet, these two approaches do not clearly demonstrate their contribution to conflict sensitivity. Despite the prevalent use of these typical Dutch approaches, specific instruments for effective implementation remain largely absent. To put climate security into practice in an integrated manner, the Dutch strategies would benefit from a common, inter-ministerial agenda for implementation.

Table 6.1. Overview of how climate security is featured in Dutch policies and strategies.

Policies/ strategies	Climate security	Proposed actions and instruments for implementation
BHOS note	• Tackling root causes of climate change • Focus on mitigation and adaptation • Increasing efforts to help make countries more resilient and enhance biodiversity • Supporting developing countries with green economic growth • Strategic autonomy for CRM (production in EU)	• Greening trade instruments and research- ing by which instruments greening is most effective – with a special focus on SMEs • Analysing strategic CRM dependencies through a geo-strategic monitor • Mobilising private financing (Dutch Fund for Climate and Development; Climate Investor One, International Loan Exchange) • More budget for tackling issues in the food supply chain caused by climate change • Mobilising in 2025, 1.5 billion EUR for climate finance (public & private) • Doubling the number of people with access to renewable energy to 100 million in 2030
International Climate Strategy	• Climate lens in conflict programming and regional context analyses • Convincing multilateral and international partners of the importance of applying conflict-sensitive approaches to climate interventions	• Greening funding and trade instruments • Accelerate green transition in developing countries • Pursuing inclusive green job creation • Sharing Dutch knowledge on water security land-use and climate smart agriculture • Financially support organisations and systems that use big data for early warning early action systems
Africa Strategy	• Climate lens in conflict programming and regional context analyses • Conflict sensitivity into climate adaptation interventions • Include climate risk and resilience in strategic context analyses, conflict analyses and programming • Increasing climate resiliency of people in Africa • Promoting a just energy transition	• Localising humanitarian efforts (including regional, national, local actors in international humanitarian assistance) • Strengthening environmental impact reports in Africa for better investment decisions • Improved access for African countries to digital climate-smart technologies, investment in climate resilient infrastruc- ture, supporting green job creation • Enhancing water infrastructure in 9 African countries • Greening Dutch funding instruments

Policies/ strategies	Climate security	Proposed actions and instruments for implementation
Resources Strategy	• Seeking due diligence and responsible mining practices • Promote that developing countries benefit from new EU regulations and international agreements • Emphasising CRM, environment and gender equality • Pursuing a just transition • Promoting the inclusion of climate and environmental risks in the OECD guidelines	• Supporting new research and analyses of the social and environmental risks in all critical supply chains • Supporting public-private financing for due diligence • Conducting impact analyses of EU regulations • Reviewing the Conflict Minerals Regulation
National Security Strategy	• Climate adaptation and mitigation • Climate proof groundwater and surface water systems • Climate proof spatial planning and use of land	• The Fresh Water Delta Programme will work out plans to boost water availability. • The Spatial Adaptation Delta Programme will further elaborate the theme of 'drought' for use in stress tests and risk dialogues • The Ministry of Agriculture, Nature and Food Quality will take care of the policy objectives relating to the Climate Adaptation for Agriculture and Climate Adaptation for Nature action programmes. • Municipalities and water boards will conduct stress tests and implement operational measures.
Government- wide Security Strategy	• Intensifying climate mitigation and adaptation • Strengthen crisis control capabilities and preparedness of society • Ensure better protection for critical infrastructure • Contribute to greater water security and safety in fragile states	• Climate-resilient spatial planning by considering climate risks • Strengthen the approach to wildfire prevention and suppression • Define long-term approach to climate change impacts for the Caribbean (renewable energy, climate-proofing spatial planning and increase redundancy) • Taking climate risks and resilience into account in strategic context analyses, conflict analyses and programming

Policies/ strategies	Climate security	Proposed actions and instruments for implementation
Defence White Paper	• Contributing to the social challenge of combating climate change • Energy efficient deployment • Decarbonising defence • Professionalising HADR • Increase sustainability of real estate • Exploring opportunities for operational sustainability	• Using simulation for training and exercise • Carrying out pilot scheme to assess the suitability of zero-emissions vehicles for operations • Examine how to produce less waste and research circularity • Consider sustainability as guiding principle in procurement of materiel and real estate projects • Replacing non-operational vehicles with zero-emission alternatives (by 2030, 2800 zero emission vehicles) • Increasing the proportion of biomass or synthetic fuels used in combination with fossil fuels to an average of 30% • Establish a dashboard for its energy consumption • Include climate change impacts in military strategic analyses

6.4 Recommendations for Implementation: Climate Security in 3D

This subchapter identifies entry points which could be part of integrating climate security insights into a 3D approach. A 3D approach, commonly referred to as a whole-of-government approach, refers to a comprehensive strategy that involves coordination and cooperation across the development, diplomacy and defence sector. The aim is to create a holistic approach that leverages the strengths of each dimension to effectively address multifaceted complex issues, such as climate security. On top of this, there is also the other side of the coin: adopting a security or conflict lens in climate policies, both in the Netherlands and abroad.

Implementing climate security through a 3D approach necessitates a substantial level of inter-departmental coordination to enhance coordinated decision-making. It is essential to avoid the potential drawback wherein this strategy might lead to new compartmentalisation or silos in policymaking by prompting stakeholders to differentiate the 3Ds and compete for resources. Nevertheless, it is this whole-of-government approach that is best suited to tackling the intricacies inherent in the contemporary climate security environment (Brock et al., 2021). This is because climate change is context dependent, compound in character and transmits across

time and space and its effects affect diverse policy areas, different levels of society (local, national, regional, global) and manifest differently depending on social, economic, political, and institutional factors. The multifaceted nature of climate security requires policy responses from different policy circles at the same time (Mobjörk & Smith, 2017). An integrated, coordinated, cross-departmental approach can leverage departmental expertise, reduce policy redundancies, mainstream climate change into all decision-making, and create cross-departmental synergies for more effective climate governance (McKenzie & Kuehl, 2021).

The following entry points for integrating climate security in development, diplomacy and defence activities could be considered:

- Better cooperation and coordination between policy areas/ministries should not be an end in itself, but a means for improved action, requiring consensus on a common language and framing of climate security (e.g. in development circles climate is linked to conflict risk, whereas defence circles use the word security when talking about similar issues). Establish a **climate security division (or working group) with a clear mandate** to coordinate an inter-ministerial agenda for implementation to overcome departmentalisation and think beyond known patterns.
- To effectively **mainstream climate security** into various policy domains, including development and defence, the Dutch government could designate **climate security advisors (within its new division)** who are responsible for ensuring that climate security plays a role in all policy areas and supporting colleagues to achieve this. Examples could be taken from its own Taskforce Women's Right and Gender Equality, which ensures gender equality in all policy areas. In addition, the Netherlands could conduct a thorough **climate security audit** for its development, climate, foreign and security programmes.
- As the Dutch military has an increasingly important role to play when it comes to providing HADR within and beyond Dutch territory, greater involvement of the **armed forces in early warning early action systems** and a focus on preventive action through increased **actionable foresight capacities** could help to prevent humanitarian disasters after extreme weather events. At the same time, civil-military-cooperation (CMC) could be enhanced as both will work more closely together – because at the moment distrust still exists in climate and development circles towards the military.
- Degraded environmental conditions and natural resource scarcity can fuel conflict. Hence, protecting the environment can contribute to peacebuilding. Appointing climate security envoys in peacebuilding and stabilisation missions can enhance the potential for **climate-sensitive peacebuilding**. The Netherlands could draw lessons from the UN which already deploys climate

security advisors in the mission in Somalia. Moreover, the EU aims to replicate the UN in this respect but lacks financial resources and experts. The Netherlands could support these efforts financially or by providing experts.

- Since climate interventions can be used to support peace and security objectives, it is advised to consider **conflict sensitivity** in Dutch climate and resource interventions. Especially as most bilateral programmes are in the water and food sector and implemented in conflict-affected regions like the Sahel and East Africa.
- Strategies to secure REEs and CRMs needed to **decarbonise the military** could be pursued in a **conflict-sensitive** way. Considering the importance of not creating new undesired strategic dependencies is paramount in the transition to green technologies. Closely monitoring its strategic dependencies and exploring diversification strategies provides greater insight into current and future dependencies. In its efforts to diversify supply chains and restore critical production chains, the Netherlands could incorporate a climate security lens into its policies to secure critical raw materials, which entails analyses of environmental costs, local stakeholder mapping and potential sources of grievances. Lastly, as the Netherlands has green energy partnerships bilaterally and through the EU with developing countries, a better understanding of the conflict and political sensitivity of these partnerships could lead to more mutually appreciated efforts.
- The Netherlands could more actively **promote** the reduction of military emissions at both EU and NATO levels – for example by including decarbonisation in public procurement and by investing in new R&D programmes on decarbonising defence technologies and weapon systems.
- Effective **climate diplomacy** is particularly important when it comes to climate security, given the Netherlands' bilateral partnerships with countries in regions like the Sahel and the Horn of Africa that are prone to climate-related conflicts. Enhancing and expanding the Dutch embassy network as well as appointing climate security advisors in embassies in these countries would be two means to pursue climate diplomacy. Another avenue could be to support climate-security dialogues as part of peacebuilding and stabilisation efforts.

Notes

- ¹ Higher demand for gathering and processing information; firefighting, in particular in areas which are remote or difficult to access; emergency access by air or boat (when entering by land is impossible); delivering water and food supplies; search and rescue; evacuation of civilians; engineering to restore infrastructure, roads and bridges; providing temporary urgent energy supply or communications. In terms of capabilities and equipment: transport capabilities, in particular in the air and at sea (manned aircraft and helicopters, unmanned aerial vehicles); water pumping; divers; small boats; engineering capabilities, in particular to repair, restore or rebuild infrastructure (bridging equipment, bulldozers, cranes, trucks, etc); search and rescue capabilities (helicopters in particular); medical capabilities (up to field-hospital level).
- ² For an overview of 2017–2022 fuel consumption, see: <https://irp.cdn-website.com/9afbfdfio/files/uploaded/brandstofverbruik.jpg>.

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