

# Climate change, climate justice and the Western Sahara Conflict

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*This Briefing Note draws on the first Sahrawi indicative Nationally Determined Contribution, published by the Office of the Prime Minister of the Sahrawi Arab Democratic Republic (SADR) in November 2021.<sup>1</sup> The Sahrawi NDC drew on the expertise of a diverse range of Sahrawi and international specialists. This Note has been updated to support the position of the SADR at the African Climate Summit, scheduled for 4<sup>th</sup>-6<sup>th</sup> September 2023 in Nairobi, Kenya. For further details on the issues covered below, and for supporting data and references, please refer to the NDC, which can be downloaded [here](#).<sup>2</sup> A commentary on the original NDC is available [here](#).<sup>3</sup>*

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<sup>2</sup> [https://www.spsrasd.info/news/sites/default/files/documents/sadr\\_ndc\\_draft\\_final\\_09nov21.pdf](https://www.spsrasd.info/news/sites/default/files/documents/sadr_ndc_draft_final_09nov21.pdf)

<sup>3</sup> <https://nickbrooks.wordpress.com/2021/11/15/challenging-climate-colonialism-in-north-africa-a-new-indicative-ndc-for-western-sahara/>

## **Executive summary**

Western Sahara is a non-self-governing territory that is effectively partitioned between Morocco and the Frente Polisario national liberation movement. The Occupied Territories controlled by Morocco and the Liberated Territories controlled by the Polisario are separated by the 'Berm', a series of earthworks, minefields and fortifications constructed by Morocco. The Polisario, which proclaimed the Sahrawi Arab Democratic Republic (SADR) in 1976 and is recognised as the representative of the people of Western Sahara, controls the areas east and south of the Berm. A ceasefire brokered by the UN in 1991 broke down in November 2020, when armed conflict resumed.

The Sahrawi population is distributed across refugee camps in Algeria (over 173,000 people), the Liberated Territories (some 60,000 people prior to the resumption of hostilities in November 2020), and the Occupied Territories (a large but unknown number of people).

In the Sahrawi refugee camps and the Liberated Territories of Western Sahara, conflict and displacement increase the exposure of the population to hazards made worse by climate change, principally extreme heat and water scarcity, which are more severe in these areas. Forced sedentarisation and the concentration of the Sahrawi population in refugee camps increases their exposure to flooding.

The conflict increases the vulnerability of the Sahrawi population through (i) the status of the majority of Sahrawis as refugees living with limited resources, food insecurity, and fragile infrastructure in the camps, (ii) restrictions on geographic range and access to natural resources in the Liberated Territories as a result of the Berm and conflict risks, and (iii) inequality, marginalisation, restrictions on livelihoods, and environmental pressures in the Occupied Territories.

Exclusion of the SADR and the Sahrawi people from global climate governance and finance mechanisms prevents them from accessing the resources they need to confront the climate crisis through adaptation, while the UN-dominated global climate governance and finance system rewards Morocco, which uses (largely private) climate finance to entrench its occupation through the development of renewable energy in Occupied Western Sahara.

The SADR and the Sahrawi people are subject to multiple climate injustices related to (i) their negligible contribution to global greenhouse gas versus their exposure to severe climate change risks and impacts, (ii) the amplification of their vulnerability and exposure as a result of the conflict, (iii) their exclusion from global climate governance and finance mechanisms, (iv) the UNFCCC's endorsement of Morocco's NDC, which is predicated on the development of renewables in occupied Western Sahara, and effective blocking of the SADR's NDC, (v) (mostly private) investment in renewables development in the Occupied Territories to the benefit of Morocco, versus a lack of investment flows to the SADR and the Sahrawi people. Global climate governance and finance mechanisms thus serve to legitimise and strengthen Morocco's occupation of Western Sahara while excluding the Sahrawis displaced by the occupation and constraining their adaptation. By endorsing Morocco's NDC, the UNFCCC is directly complicit in the occupation.

## 1 Background

*Western Sahara is a non-self-governing territory that is effectively partitioned by the 'Berm', constructed by Morocco, which occupies the areas west and north of the Berm, while the Frente Polisario national liberation movement, which proclaimed the Sahrawi Arab Democratic Republic (SADR) in 1976 and is recognised as the representative of the people of Western Sahara, controls the areas east and south of the Berm.*

Western Sahara is defined by the UN Special Committee on Decolonisation as a non-self-governing territory, in which the decolonisation process is incomplete.<sup>4</sup> Western Sahara has been partially occupied by Morocco since the withdrawal of Spain, the previous colonial power, in 1975. The Frente Polisario national liberation movement has opposed Morocco's occupation, declaring the Sahrawi Arab Democratic Republic in February 1976. In 1991, the United Nations brokered a ceasefire between Morocco and the Polisario and established the United Nations Mission for the Referendum in Western Sahara (MINURSO). The ceasefire agreement recognised Morocco and the Polisario as the parties to the conflict, and the Polisario as the sole representative of the Sahrawi people. The ceasefire, and multiple UN resolutions, mandate a referendum on self-determination for Western Sahara, but this has never taken place. In November 2020, the ceasefire broke down when Moroccan troops entered the 5 km demilitarised buffer zone immediate east/south of the Berm, and armed conflict resumed.

Currently, Western Sahara is effectively partitioned by the Berm (a series of earthworks, minefields, and other fortifications) into a Moroccan occupied zone (the Occupied Territories west and north of the Berm) and a zone controlled by the Polisario (the Liberated Territories east and south of the Berm). The conflict has resulted in the displacement of over 173,000 Sahrawis to refugee camps in neighbouring Algeria.<sup>5</sup> Until the resumption of hostilities in November 2020, some 60,000 Sahrawis lived in the Liberated Territories.<sup>6</sup> A large number of Sahrawis also live under Moroccan occupation west of the Berm.

While the injustices of the occupation have been widely discussed, the interactions of the conflict with the impacts of climate change, and the implications of the conflict for climate justice, have received barely any attention.

Climate justice addresses the unequal contributions of different populations to climate change, the highly differentiated vulnerability to the impacts of climate change across different groups, and the fact that it is often the poorest, and those who have contributed least to climate change, who experience the worst impacts. The SADR and the Sahrawi people have made a negligible contribution to global greenhouse gas emissions but are on the frontline of climate change impacts. In addition, the conflict and its geopolitical consequences directly and indirectly increase the exposure and vulnerability of the Sahrawi people to the impacts of climate change, as discussed in detail below. The Western Sahara conflict is thus not only an issue of occupation, colonialism, and disregard for international law and UN

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<sup>4</sup> <https://www.un.org/dppa/decolonization/en/nsgt>. The decolonisation process requires full self-determination as mandated under UN Security Council Resolutions 621 (1988), 690 (1991), 809 (1993) and 1033 (1995).

<sup>5</sup> Sahrawi Refugees in Tindouf, Algeria: Total In-Camp Population, Official Report, UNHCR, March 2018. Available via [https://www.europarl.europa.eu/doceo/document/E-8-2018-002896\\_EN.html](https://www.europarl.europa.eu/doceo/document/E-8-2018-002896_EN.html) and <https://www.acaps.org/country/algeria/crisis/sahrawi-refugees>.

<sup>6</sup> Urgent Appeal: Effects of COVID-19 on the humanitarian situation of the Sahrawi refugees. Sahrawi Red Crescent, 28th April 2020.

conventions and resolutions - it is also one of climate justice.

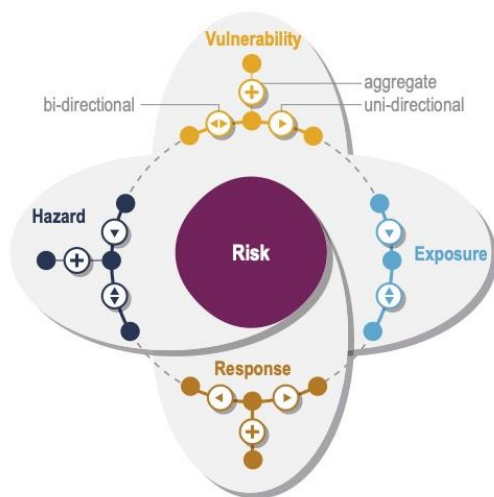
## 2 The IPCC and climate change risks

*The IPCC frames risk as resulting from the interaction of hazard, exposure, vulnerability and response. The Western Sahara conflict exacerbates all these elements of risk for the Sahrawi people.*

The Intergovernmental Panel on Climate Change (IPCC) defines risks from climate change as arising from the interaction of hazard, exposure, vulnerability, and response (Figure 1) (Begum et al. 2022: 147).

*Hazards* are actual or potential “natural or human-induced physical event[s] or trend[s] that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources” IPCC 2022: 2911). Hazards may include climate trends and extremes that are made worse by climate change.

*Exposure* refers to “The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected” by a climate hazard (IPCC 2022: 2908).



**Figure 1.** Framing of risk in the latest Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (Begum et al. 2022: 147).

*Vulnerability* is “The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt” (IPCC 2022: 2927). Vulnerability to a particular hazard is influenced by a variety of factors, including the characteristics and attributes of the exposed system or population (e.g., livelihoods, assets and resources, ability to respond and move, access to information and services, poverty, socio-economic status, etc.), as well as more systemic structural factors related to political economy, power relations, inequality, geopolitical factors and history (e.g., legacies of colonialism and conflict).

*Response* in the IPCC framing refers to responses to climate change, including *mitigation* measures to reduce greenhouse gas emissions, and *adaptation* measures to adjust to actual or anticipated changes in climate in order to reduce the harm associated with climate change impacts (IPCC 2022). Responses intended to reduce risk may actually increase risk, for example as a result of unexpected consequences or trade-offs, including measures that reduce risk in one location or for a particularly population or

group, but increase risk in other locations or for other groups.

The remainder of this briefing will outline how the Western Sahara conflict increases the exposure and vulnerability of the SADR and the Sahrawi population to hazards associated with climate change, and how responses to climate change by other actors, including the United Nations, further exacerbate exposure, vulnerability and risk for the Sahrawis.

### **3 Hazards and exposure**

*In the Sahrawi refugee camps and the Liberated Territories of Western Sahara, conflict and displacement increase the exposure of the population to hazards made worse by climate change, principally extreme heat and water scarcity, which are more severe in these areas. Forced sedentarisation and the concentration of the Sahrawi population in refugee camps increases their exposure to flooding.*

Like other developing countries, the SADR is exposed to hazards that are amplified by climate change caused by the historical emissions of other countries, principally industrialised countries in the Global North, but also more recently China and other emerging economies. The principal hazards of concern in the SADR and the camps are extreme heat, drought and enhanced aridity, and flash flooding associated with occasional heavy rainfall. All of these hazards are made worse by climate change.

#### **3.1 Heat extremes**

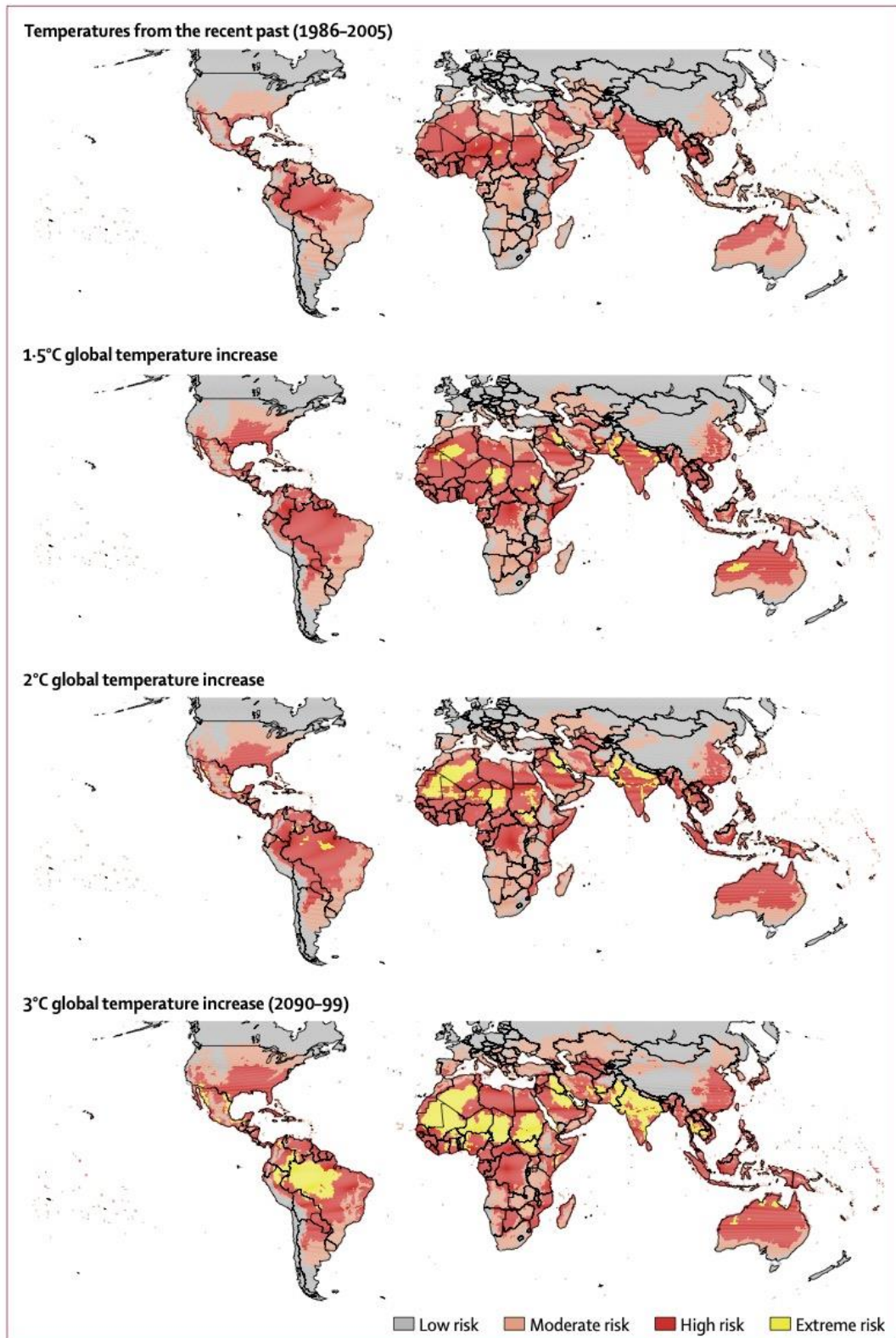
The Sahrawi-controlled areas of Western Sahara (Liberated Territories) and the Sahrawi refugee camps experience higher temperatures and temperature extremes than the areas nearer to the Atlantic coast. Increases in average and extreme temperatures are projected to be greater in these inland areas than in the areas of Western Sahara occupied by Morocco.<sup>7</sup> The camps and the Liberated Territories are at the edge of a zone of extreme risk from projected increases in wet-bulb temperature, a combined measure of heat and humidity (Figure 2).

In the coming decades, wet-bulb temperatures in this zone of extreme risk are projected to approach and possibly exceed 35°C, the limit of human survivability (Figure 2).<sup>ii</sup> People living in the Liberated Territories and the camps would be exposed to these potentially fatal conditions, while people living in the Occupied Territories would not. The conflict is thus exposing the Sahrawis living in the camps and the Liberated Territories to potentially fatal combinations of heat and humidity resulting from climate change, through the mechanisms of displacement and forced sedentarisation.

Extreme temperatures can destroy crops, increase livestock mortality, and reduce livestock productivity and fertility, increasing food insecurity and the risk of malnutrition. Heat extremes are associated with direct health impacts and exacerbate respiratory conditions. They also increase the risk of power outages, compromising the function of health facilities and the storage of medical supplies.

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<sup>7</sup> <https://interactive-atlas.ipcc.ch/>



**Figure 2.** Temperature-humidity risks based on projected maximum wet-bulb temperatures under different increases in global mean surface temperature (global warming). High risk is associated with wet-bulb temperatures of 31–33°C, extreme risk with wet-bulb temperatures above 34°C (extreme). Figure reproduced from Andrews et al. 2018.<sup>ii</sup> A wet-bulb temperature of 35°C is widely considered to represent the limit of human survivability, above which the human body is unable to regulate its temperature through evaporative cooling.

### 3.2 Drought, aridity and water scarcity

Rainfall is projected to decrease over the western Sahel region, covering Mauritania, western Mali, and southern Western Sahara, while droughts are expected to become more prevalent and severe. The impacts of any reduction in rainfall will be amplified by higher average, minimum and maximum temperatures, and more severe heat extremes, which increase evaporation and therefore reduce surface runoff, soil moisture, and groundwater recharge rates and levels. Droughts will be particularly severe when they coincide with episodes of extreme heat, due to higher evaporation rates. At the same time, higher temperatures and heat extremes increase water demand for domestic consumption, livestock, and agriculture. The higher temperatures of the Saharan interior, and the greater projected warming in the Liberated Territories and the area hosting the camps mean that these impacts – and their secondary impacts on food production and food and water security - will be more pronounced for the displaced Sahrawi population and those living in the area under SADR control.



**Figure 3.** Drainage channels blocked by the Moroccan Berm, located some 20 km south-southwest of Oum Dreyga, at 23.9440 N; 13.3456 W. One of many such examples along the Berm.

The impacts of reduced rainfall and higher temperatures are amplified in parts of the Liberated Territories by the blocking of drainage systems by the Berm (Figure 3). Many locations are visible on satellite imagery where the Berm cuts across drainage channels (*oueds*), starving downstream sections of these channels moisture and resulting in a decline in vegetation cover and habitat. **Error! Bookmark not defined.** These downstream impacts tend to occur in the Liberated Territories, due to the nature of the topography associated with the Berm. These locations thus experience the double impact of physical diversion of surface runoff coupled with increased evapotranspiration resulting from higher temperatures. In this way, the physical manifestations of the conflict combine with climate change to amplify aridity, posing risks to ecology and biodiversity, as well as to the livelihoods and food security of the small number of herders that exploit the Liberated Territories. As well as amplifying hazards associated with water scarcity, the Berm and its associated minefields represent a direct threat to the lives of herders, livestock and wild fauna.

### 3.3 Floods

The Sahrawi refugee camps are subject to regular severe and devastating floods. Reliable data on rainfall intensity are not available for Western Sahara or the area around the camps. However, climate change is increasing the amount of moisture in the atmosphere and resulting in more severe rainfall extremes, both globally and in the Sahel region immediately south of Western Sahara.<sup>iii</sup> These trends increase flood risk, and it is reasonable to assume they apply to Western Sahara and the camps. Periodic

flooding in the camps destroys homes, schools, food stocks, health facilities and other infrastructure, resulting in loss of life, injury, poor physical and mental health, food insecurity, and disruption to children's education.<sup>1</sup> Flooding is associated with an increase in water-borne diseases and the contamination of soils, water supplies and homes with pollutants.

Prior to the conflict, the Sahrawi population was dispersed throughout the territory of Western Sahara, with a proportion of the population practicing lifestyles based on mobile herding. The conflict has resulted in most of the Sahrawi population being concentrated in the camps, in what are effectively densely populated urban environments located in flood prone areas. Overall exposure of the population to flooding has thus increased.

## **4 Impacts of the conflict on vulnerability**

*The conflict increases the vulnerability of the Sahrawi population through (i) the status of the majority of Sahrawis as refugees living with limited resources, food insecurity, and fragile infrastructure in the camps, (ii) restrictions on geographic range and access to natural resources in the Liberated Territories as a result of the Berm and conflict risks, and (iii) inequality, marginalisation, restrictions on livelihoods, and environmental pressures in the Occupied Territories.*

### **4.1 Vulnerability in the camps**

The basic and fragile nature of infrastructure in the refugee camps, and limited access to services including health, means that people are particularly vulnerable to the impacts of climate hazards. Vulnerability to the hazards described above (extreme heat, water scarcity, flooding) is increased by the limited financial and technical resources available to the population by virtue of their status as refugees, and their dependence on international aid. Limited access to power and cooling exacerbate vulnerability to heat extremes. Housing consists largely of tents and mud-brick dwellings that are easily destroyed by floods. Some families are adapting to flood risk by constructing more robust concrete dwellings, but this option is unaffordable for many. Transport infrastructure is fragile, with most roads unpaved and liable to damage during floods.

The limited capacity of refugees to move and migrate, whether permanently or temporarily, limits their ability to avoid hazards. Prior to November 2020, some residents of the camps practiced temporary migration to the Liberated Territories, while others took up the option of permanent settlement around Tifariti and Mheres in the late 2000s and 2010s. However, these options are no longer available due to the direct risks associated with the resumption of armed conflict, and most of the Sahrawis who settled in the Liberated Territories have returned to the camps or migrated to northern Mauritania.

Displacement and forced sedentarisation mean the Sahrawi refugees can no longer practice their traditional livelihoods, based predominantly on mobile pastoralism involving camel and sheep herding, but also including other activities such as coastal fishing. Their status as refugees means that the displaced Sahrawis have moved from productive, resilient livelihoods that are well-adapted to their local environment, to being almost entirely dependent on international food aid. Some food production is practised, based on small gardens and hydroponics, but the harsh desert environment and limited water supplies make food production extremely challenging, and crops are highly vulnerable to heat extremes. Malnutrition and related conditions are common in the camps, making the refugees particularly vulnerable to any climate-related disruption to food production or distribution, for example



the destruction of food supplies by floods. The camps are highly vulnerable to any decline in already-scarce water resources, for example due to declines in groundwater levels associated with reduced rainfall and/or high temperatures. In contrast, food is produced for export in the Occupied Territories, using unsustainable fossil groundwater.

#### **4.2 Vulnerability in the Liberated Territories**

A small number of Sahrawis practice pastoralism in the Liberated Territories. However, their mobility is severely restricted by the Berm, which prevents them accessing more productive areas to the west. Within the Liberated Territories, mobility is constrained by land mines and other munitions, which regularly kill and injure both herders and livestock. The physical manifestations of the conflict therefore constrain pastoralists' access to the resources on which they have traditionally depended, while increasing risks associated with mobility. This in turn constrains their ability to cope with increased climatic and environmental variability, and with increasingly severe droughts, to which pastoralists generally respond by adapting their mobility patterns or expanding their geographic range.

Sahrawis living in the Liberated Territories were already experiencing hardship due to drought conditions that developed in 2017. The resumption of physical hostilities in November 2020 has made pastoralism even more dangerous, with the targeting of individuals, vehicles, and locations by Moroccan forces through conventional bombardment and drone strikes. The combination of drought and the resumption of fighting has resulted in many people fleeing the Liberated Territories for the camps or northern Mauritania, illustrating how conflict and hazards linked with climate change can drive displacement and migration to areas that themselves have limited resources.

The diversion of surface runoff by the Berm, discussed above, increases ecological vulnerability to drought and water scarcity in the Liberated Territories by reducing the baseline moisture availability in these areas. Consequently, the ecology and biodiversity of the areas affected are even more susceptible to projected reductions in rainfall and increased water scarcity.

#### **4.3 Vulnerability in the Occupied Territories**

Morocco has invested considerable resources in the development of the Occupied Territories, and in the resettlement of Moroccan nationals there. The expansion of settlement, industry, agriculture, and tourism in the Occupied territories has increased water demand and pressure on the environment and natural resources. Ongoing or planned development along the coast has implications for increasing risks associated with sea-level rise, increased erosion, periodic and permanent inundation. These include risks to important coastal ecosystems including systems recognised under the international Ramsar convention.

Restrictions on mobility in the Occupied Territories prevent Sahrawis in the Territories from practising traditional livelihoods, while the preferential treatment of Moroccan settlers results in the exclusion and marginalisation of Sahrawis, and systemic inequality, factors widely viewed as structural drivers of vulnerability to climate and other hazards.

### **5 International responses and their consequences**

*Exclusion of the SADR and the Sahrawi people from global climate governance and finance mechanisms*

*prevents them from accessing the resources they need to confront the climate crisis through adaptation, while the UN-dominated global climate governance and finance system rewards Morocco, which uses (largely private) climate finance to entrench its occupation through the development of renewable energy in Occupied Western Sahara.*

The SADR and the Sahrawi population are in urgent need of support to address their exposure and vulnerability to climate change. This includes financial and technical support to develop, implement, and scale-up mitigation and adaptation measures that have already been identified and, in some cases, piloted.<sup>1</sup> However, the both the conflict itself, and the system of global climate governance, represent major obstacles to such support.

## **5.1 Exclusion of the SADR from global climate governance & finance mechanisms**

The SADR is a founding member of the African Union and enjoys diplomatic recognition by dozens of countries. However, as a result of the conflict and the failure of the UN-mandated decolonisation process, predicated on a referendum on self-determination that has never taken place, the SADR is not yet a fully-fledged UN member state. As a non-UN member state, the SADR cannot be a party to the United Nations Framework Convention on Climate Change (UNFCCC), or a signatory to the Paris Agreement on climate change. Countries that are signatories to the Paris Agreement undertake to submit regular Nationally Determined Contributions (NDCs) to the UNFCCC Secretariat.<sup>8</sup> NDCs are national documents setting out what countries intend to do to address climate change through mitigation (reducing greenhouse gas emissions) and adaptation (reducing the risks and impacts of climate change). The SADR has developed its own NDC.<sup>Error! Bookmark not defined.</sup> However, it cannot formally submit this to the UNFCCC Secretariat because of its status as a non-UN member state. The SADR has also developed a national adaptation plan. Both these documents demonstrate the country's commitment to climate action as mandated under the UN climate governance system, even as the SADR is excluded from this system.

Critically, the SADR is also excluded from global climate finance mechanisms associated with global climate funds such as the Green Climate Fund, the Climate Investment Funds, the Adaptation Fund, and the Global Environment Facility. Access to grants or loans from these funds requires the existence of an Accredited Entity in the recipient country. Accredited Entities include National Designated Authorities (NDAs), which are "government institutions that serve as the interface between each country and the Fund."<sup>9</sup> They may also include non-governmental and multilateral organisations that meet standards set by the funds, and that have offices in the recipient country. The process of establishing an Accredited Entity is notoriously difficult, particularly for poor developing countries. Where climate finance is channelled through multilateral development banks, these banks require loan agreements with the recipient country before climate finance can be agreed.

The conflict in Western Sahara means that the SADR has not been able to establish an Accredited Entity and cannot establish an internationally recognised NDA. Multilateral Development Banks do not operate in the SADR, meaning no loan agreements can be arranged with these bodies. This limits potential Accredited Entities to the limited set of international NGOs operating in the refugee camps,

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<sup>8</sup> <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs>

<sup>9</sup> <https://www.greenclimate.fund/about/partners/nda>

which are focused on humanitarian needs. The conflict, and Western Sahara's status as a non-self-governing territory rather than a UN member state, would pose further obstacles to accreditation, even if a body could be identified to act as an Accredited Entity.

The above factors mean that it is very difficult, if not impossible, for the SADR to access climate finance and associated technical support for adaptation and mitigation actions, severely constraining its ability to respond to the climate crisis and address the extreme risks and vulnerabilities faced by its people, which are exacerbated by the conflict with Morocco. Exclusion from global climate governance and finance mechanisms therefore 'lock in' vulnerability for the SADR and the Sahrawi people and prevent them adapting, further amplifying risks associated with worsening climate hazards.

## **5.2 Global climate governance and finance support the occupation**

In contrast to the situation experienced by the SADR, Morocco enjoys good access to global climate finance, and has established two NDAs, one public and one private. Morocco uses them to bolster its position through climate diplomacy, and Morocco's NDC includes a target of sourcing 52% of its energy from renewable sources<sup>10</sup>, which is dependent on the development of renewable energy infrastructure in occupied Western Sahara (WSRW 2021). The achievement of Morocco's climate targets, endorsed by the UNFCCC through its acceptance of Morocco's NDCs, is thus directly dependent on its occupation of Western Sahara.

Renewable energy infrastructure in the Occupied Territories directly supports Morocco's occupation and its ruling elite. Wind and solar plants power Moroccan economic and industrial activity in the Occupied Territories, including the CIMAR cement factory and the Bou Craa phosphate mine. Morocco's stated intention is to use renewables in the Occupied Territories to provide power to users that include PhosBoucraa factory, the Office National de l'Electricité et de l'Eau Potable (ONEE), the Moroccan Airports Authority (ONDA), and blockchain computing facilities. Desalination powered by renewables will support agriculture in the region around Dajla. The 200 MW Aftissat wind farm is operational and will soon be connected to the ONEE substation in the area of El Aaiún via the city of Bojador, contributing to the connection of occupied Dajla to the Moroccan national grid. Off-takers of the wind farm will be LafargeHolcim Maroc, OCP, Sonasid, Ciment du Maroc and Air Liquide Maroc. For a more detailed discussion of these developments, see the NDC<sup>Error! Bookmark not defined.</sup> and the report *Greenwashing the Occupation*, by Western Sahara Resource Watch.<sup>iv</sup>

The development of renewables in the Occupied Territories is supported by foreign private interests, including direct investment, contracts for supplying infrastructure such as wind turbines, and voluntary carbon offsetting schemes. All operational wind farms except the privately owned CIMAR farm belong to the portfolio of the Moroccan King's energy company NAREVA, as do the planned farms under the Integrated Wind Energy Programme. The Noor PV II solar farm will be built adjacent to industrial greenhouses owned by the King, members of the Moroccan ruling elite, and French conglomerates. The development of renewable energy in the Occupied Territory thus supports the personal financial interests of the Moroccan ruling elite, facilitates unsustainable and potentially maladaptive water-intensive agriculture, and provides financial returns and potentially energy resources to foreign interests at the expense of the Sahrawi people, and without their consent, contrary to international

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<sup>10</sup> <https://unfccc.int/NDCREG>

law. Morocco's engagement of foreign interests in Occupied Western Sahara, and its integration of renewable energy generation in the Occupied Territories into its national energy grid and regional energy systems result in wider complicity in and dependency on the occupation, consolidating Morocco's position.

### **5.3 Conflict inhibits effective climate change mitigation responses**

Morocco maintains its occupation of Western Sahara through a large military presence, which is concentrated along the 2700 km Berm that partitions Western Sahara. Forts or blockhouses capable of housing hundreds of troops are located at approximately 10km intervals along the Berm, and previous estimates of total troop numbers (prior to the recent resumption of violent conflict) are as high as 200,000.<sup>v</sup> An unknown number of Sahrawi troops are stationed in the Liberated territories, concentrated around military basis located throughout the areas east of the Berm.

The maintenance of large numbers of military personnel and associated military infrastructure on both sides of the Berm is associated with direct greenhouse gas emissions, including from military vehicles. These emissions are not included in national greenhouse gas emissions inventories. The conflict therefore directly drives emissions from military activities that are not accounted for in NDCs or other reporting mechanisms. The resumption of hostilities in November 2020 will have resulted in a considerable increase in these emissions.

The conflict also prevents accurate estimates of non-military emissions. Independent emissions estimates do exist for Western Sahara, but these cover only the Occupied Territories, excluding the Liberated Territories and the camps. Lack of finance, technical support and technical capacity linked to the conflict have prevented the SADR from establishing systems for the monitoring, reporting and verification its own emissions, further excluding the SADR from international efforts to address climate change.

## **6 Implications for climate justice**

*The SADR and the Sahrawi people are subject to multiple climate injustices related to (i) their negligible contribution to global greenhouse gas versus their exposure to severe climate change risks and impacts, (ii) the amplification of their vulnerability and exposure as a result of the conflict, (iii) their exclusion from global climate governance and finance mechanisms, (iv) the UNFCCC's endorsement of Morocco's NDC, which is predicated on the development of renewables in occupied Western Sahara, and effective blocking of the SADR's NDC, (v) (mostly private) investment in renewables development in the Occupied Territories to the benefit of Morocco, versus a lack of investment flows to the SADR and the Sahrawi people. Global climate governance and finance mechanisms thus serve to legitimise and strengthen Morocco's occupation of Western Sahara while excluding the Sahrawis displaced by the occupation and constraining their adaptation. By endorsing Morocco's NDC, the UNFCCC is directly complicit in the occupation.*

The SADR and the people of Western Sahara are subject to climate injustice as a consequence of their negligible contribution to global greenhouse gas emissions (Box 1), coupled with the high level of exposure of the territory of the SADR to the impacts of climate change. The conflict with Morocco compounds this injustice by further increasing the exposure and vulnerability of the Sahrawi population

through displacement, forced sedentarisation in refugee camps with limited resources and fragile infrastructure, systematic discrimination, and political marginalisation.

**Box 1. Emissions in Western Sahara**

Official estimates that consider only the Occupied Territories indicate per capita CO<sub>2</sub> emissions for Western Sahara that are just over 10% of the global average, placing the territory 169<sup>th</sup> out of 208 countries. Half of these emissions are associated with transport, almost a quarter with power, and the remainder with industry, housing and other sources. Most of these emissions can be associated with the development and expansion of infrastructure by Morocco to support its occupation and the illegal settlement of Moroccan nationals in the Occupied Territories. No emissions data are available for the Liberated Territories or the Sahrawi refugee camps, but these are likely to be very low given the level of development in these areas.

**6.1 The international system and climate injustice**

The UN-dominated system of global climate governance and finance compounds the climate injustice experienced by the Sahrawi people still further, by excluding them from global climate governance and finance mechanism. This denies the Sahrawis a voice in international climate negotiations and access to climate finance and technical assistance that is urgently needed to address their exposure and vulnerability to climate change, and support adaptation to potentially existential climate change risks in the camps and within the territory of the SADR.

The exclusion of the SADR and the Sahrawi people from global climate governance and finance is a direct result of the conflict and the associated failure of the UN-mandated decolonisation process, which has prevented the SADR from being granted the status of a UN member state. In a sense, the SADR and the Sahrawi people are thus being punished by the UN for the UN's own failures.

By accepting Morocco's NDCs, whose emissions targets are dependent on the development of renewable energy infrastructure in occupied Western Sahara, the UNFCCC Secretariat is effectively endorsing Morocco's occupation of the territory. This alone represents an injustice, which is compounded by the inability of the SADR to submit its own NDC to the Secretariat, due to its status as a non-UN member state. This is despite Morocco and the Frente Polisario enjoying parity as equal parties to the conflict under the ceasefire agreement and multiple UN resolutions (SADR, 2021), and the Polisario being recognised as the sole representative of the people of Western Sahara under the UN-mandated decolonisation process by the UN itself and by other parties such as the General Court of the European Union.<sup>11</sup> Through its acceptance of Morocco's NDC and effective blocking of the submission of the SADR's NDC, the UNFCCC is favouring one party to the conflict and marginalising the other. The UNFCCC Secretariat is thus complicit in the illegal military occupation of a non-self-governing territory.

NDCs serve as the foundation for climate change mitigation and adaptation actions, by listing and prioritising actions that can be supported by international and bilateral climate finance. Blocking of the SADR's NDC by the rules governing the submission of NDCs to the UNFCCC Secretariat therefore acts as a further barrier to the financing and implementation of adaptation actions that are urgently needed to address the climate change hazards and impacts faced by the SADR and the Sahrawi people.

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<sup>11</sup> <https://curia.europa.eu/jcms/upload/docs/application/pdf/2021-09/cp210166en.pdf>

In contrast, the UNFCCC's endorsement of Morocco's NDC, which is predicated to a significant extent on the development of renewables in occupied Western Sahara, paves the way for public, private, and potentially multilateral investment in renewables infrastructure in the Occupied Territories. This infrastructure is used to support the expansion of settlement, tourism, agriculture and industry in the Occupied Territories, to the benefit of the occupying Moroccan state and associated private interests, at the expense of the Sahrawi population and without their consent. This development of the Occupied territories further entrenches Morocco's occupation and has potential impacts on environmental and social vulnerability through the unsustainable use of water resources, development in environmentally sensitive and high-risk coastal areas, and intensified exploitation of marine resources.<sup>i</sup>

## **6.2 Knowledge, culture & identity**

Traditionally, most Sahrawis practised mobile pastoralism based on camel and goat herding. Mobile pastoralism is based on the flexibility that is needed to exploit shifting patterns of rainfall and pasture in marginal, unpredictable and highly variable environments. African pastoralism emerged in the Sahara during the last period of global climatic reorganisation as a direct adaptation to climate change, allowing herders to cope with shifting resource patterns.<sup>vi</sup> Pastoral livelihoods such as those practiced by the Sahrawis therefore confer a significant amount of 'adaptive capacity' on those who practice them, and have a key role to play in adaptation to climate change.<sup>vii</sup> Pastoralism is also associated with a deep knowledge of local environments, which enables pastoralists to track changes in those environments, helping us to monitor, understand and respond the impacts of climate change.

While a small number of Sahrawis still practice pastoralism in the Liberated Territories, most Sahrawis live in the camps, where mobile pastoralism is not possible, or in the Occupied Territories, where it is restricted. Forced displacement and sedentarisation has resulted in a loss of traditional skills and knowledge, particularly among younger Sahrawis.<sup>viii</sup> This represents a loss of cultural heritage, pastoralist identity, and adaptive capacity that might otherwise be deployed to help the Sahrawi people and state respond to climate change. This adaptive capacity would be critical in the event of the UN-mandated self-determination process being completed, and the Sahrawi refugees returning to a unitary, independent Western Sahara. The loss of adaptive capacity inherent in pastoralist systems, and the erosion of environmental knowledge that will be vital to the adaptive management of natural resources, serve to make the Sahrawis more vulnerable to climate change in a future independent Western Sahara.

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<sup>i</sup> SADR. 'Sahrawi Arab Democratic Republic: First Indicative Nationally Determined Contribution'. Bir Lahlou: Sahrawi Arab Democratic Republic, Office of the Prime Minister, November 2021.

<sup>ii</sup> Andrews, Oliver, Corinne Le Quéré, Tord Kjellstrom, Bruno Lemke, and Andy Haines. 'Implications for Workability and Survivability in Populations Exposed to Extreme Heat under Climate Change: A Modelling Study'. *The Lancet Planetary Health* 2, no. 12 (December 2018): e540–47. [https://doi.org/10.1016/S2542-5196\(18\)30240-7](https://doi.org/10.1016/S2542-5196(18)30240-7).

<sup>iii</sup> Holmes, S., N. Brooks, G. Daoust, R. Osborne, H. Griffith, A. Waterson, C. Fox, E. Buonomo, and R. Jones. 'Climate Risk Report for the Sahel Region'. Exeter, UK: UK Met Office, 2022. <https://www.metoffice.gov.uk/services/government/international-development/sahel-climate-risk-report>.

<sup>iv</sup> WSRW. *Greenwashing Occupation: How Morocco's Renewable Energy Projects in Occupied Western Sahara Prolong the Conflict over the Last Colony in Africa*. Brussels: Western Sahara Resource Watch, 2021. <https://wsrw.org/en/news/report-morocco-uses-green-energy-to-embellish-its-occupation>.

<sup>v</sup> Garfi, S. 'An Archaeology of Colonialism, Conflict, and Exclusion: Conflict Landscapes of Western Sahara. Volume One.' University of East Anglia, 2014. <https://ueaeprints.uea.ac.uk/id/eprint/53409/>.

<sup>vi</sup> Lernia, Savino di. 'Building Monuments, Creating Identity: Cattle Cult as a Social Response to Rapid Environmental Changes in the Holocene Sahara'. *Quaternary International* 151, no. 1 (July 2006): 50–62. <https://doi.org/10.1016/j.quaint.2006.01.014>.

<sup>vii</sup> Krätli, Saverio, Christian Huelsebusch, Sally Brooks, and Brigitte Kaufmann. 'Pastoralism: A Critical Asset for Food Security under Global Climate Change'. *Animal Frontiers* 3, no. 1 (1 January 2013): 42–50. <https://doi.org/10.2527/af.2013-0007>.

<sup>viii</sup> Volpato, Gabriele, and Rajindra K. Puri. 'Dormancy and Revitalization: The Fate of Ethnobotanical Knowledge of Camel Forage among Sahrawi Nomads and Refugees of Western Sahara'. *Ethnobotany Research and Applications* 12 (28 June 2014): 183. <https://doi.org/10.17348/era.12.0.183-210>.