

# **A NEW CLIMATE FOR PEACE: HOW EUROPE CAN PROMOTE ENVIRONMENTAL COOPERATION BETWEEN THE GULF ARAB STATES AND IRAN**

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## **SUMMARY**

- The process of de-escalation between Iran and Gulf Arab states is fragile and could collapse if efforts to revive the Iran nuclear deal fail.
- A platform for dialogue on climate and environmental security may be one of the few politically feasible ways to strengthen and sustain diplomatic channels between Iran and Gulf monarchies.
- The Middle East is very exposed to climate change and faces challenges including water scarcity, air pollution and sandstorms, rising temperatures, and extreme weather events.
- Europeans should proactively support a regional platform to address climate issues as a means of advancing their interests in de-escalation, asserting their influence in an increasingly multipolar region, and fulfilling climate and environmental security commitments.
- European initiatives should highlight the merits of regional cooperation, focusing on diplomacy, joint scientific research, capacity building, and strategic investment.

# Introduction

The Middle East is one of the regions of the world most exposed to climate change and desertification. The urgent challenges it faces include air pollution and sandstorms, temperatures in some areas that exceed a threshold for human adaptability, and extreme weather events, such as Cyclone Shaheen in October 2021 and the floods in summer 2022. Water scarcity, long a grave concern, is worsening. Yet Middle Eastern countries are moving too slowly to address these common threats to their environmental and climate security – and have rarely cooperated with one another in these areas. As such concerns gradually become more relevant to Middle Eastern policymakers, Europeans should encourage them to work together and should create and support a platform on which they could do so. This would advance Europeans' climate agenda and signal their commitment to tackling climate change as a global problem. It could also reinforce the trend towards de-escalation between Gulf Arab states and Iran.

Until recently, Russia supplied 40 per cent of the European Union's natural gas imports and 27 per cent of its oil imports. But their response to Russia's all-out invasion of Ukraine left Europeans scrambling for alternative providers, including Gulf Cooperation Council (GCC) states. The urgency of the situation prompted Europeans to refocus on hydrocarbons, denting their climate credentials. While they have also accelerated their domestic renewable energy initiatives, this has not been enough to demonstrate that environmental concerns are still at the top of their agenda. Therefore, they need to make substantive diplomatic efforts and investments in the energy transition. These would be particularly significant if they were directed towards GCC states, which are some of the world's leading producers of hydrocarbons.

Such an undertaking would also aid the EU's work to implement the European Green Deal abroad. Moreover, Europeans could use this to strengthen their geopolitical position in the Middle East. Europeans remain weak players in the region in terms of their political and security clout. However, they have a competitive advantage – including over China – in efforts to address non-military security challenges, which are linked to domestic and regional stability.

The opportunity to support de-escalation between Iran and Gulf Arab states comes from a trend that began in late 2019, when shifts in international political and economic dynamics pushed these rivals to explore diplomatic solutions to their disputes. This strategic pause led to a series of bilateral and multilateral dialogue processes. The United Arab Emirates gradually engaged with Iran, including through the provision of covid-19 aid, maritime

security consultations, and economic exchanges. Saudi Arabia held several rounds of Iraqi-facilitated bilateral talks with Iran, readmitted Iranian diplomats to the Organisation of Islamic Cooperation in Jeddah, and explored the restoration of diplomatic relations with Iran. Qatar, Kuwait, and Oman pursued their dialogue with Iran more openly, focusing on energy diplomacy and even regional security, as well as the revival of the Iran nuclear deal, also known as the Joint Comprehensive Plan of Action (JCPOA). Both the UAE and Kuwait sent their ambassadors back to Iran in August 2022. A year earlier, Iraq and France co-hosted the Baghdad Conference for Cooperation and Partnership, which involved representatives from Jordan, Egypt, Qatar, the UAE, Turkey, Saudi Arabia, and Iran.

These are all positive steps. However, the de-escalation process remains extremely fragile.

For Gulf monarchies, sustainable and long-term de-escalation with Iran would require Tehran to heed their geopolitical red lines, such as by scaling back Iranian military cooperation with hostile groups such as the Houthis in Yemen. For Iran, Gulf countries' reliance on US security guarantees – which have led to extensive US military deployments on their territory – is a fundamental obstacle to confidence-building. There has been almost no progress in these areas, but that makes it even more crucial for the sides to institutionalise their limited engagement with one another, especially in light of the complicated recent developments around the JCPOA.

If the JCPOA comes into effect once again, Iran and its neighbours will need to follow this up with diplomatic engagement to sustain the deal. Conversely, the collapse of talks on the deal could close some channels of regional diplomacy. The United States has already started pressing Gulf monarchies to reduce some of their economic engagement with Tehran, by imposing sanctions on Emirati firms for trading Iranian oil. In view of the difficulties in its nuclear negotiations with Iran, the Biden administration has – according to Saudi and Emirati officials – linked Iran's regional reintegration to the JCPOA, in a bid to pressure Tehran to return to the deal.[1] Yet, in doing so, the US is depriving Gulf states of the incentives they can offer to Iran in return for de-escalation. In this context – and given Middle Eastern governments' reluctance to address one another's major geopolitical and security concerns – there is an urgent need for a new platform on which to maintain dialogue. A platform that centres on climate and environmental security may be the only politically feasible option. And external support might help insulate the process from political shifts in the region.

Traditionally, environmental security has not driven policy in the Middle East, where regimes' highest priority is political security. But the link between the two areas is becoming clearer. This is especially so in Iraq and Iran – where there are growing public protests about water scarcity and the impact of pollution on public health, and where climate-induced

migration is becoming a challenge.

Gulf monarchies, which are better equipped to cope with environmental degradation, still recognise the political value of international climate politics, and have overseen initiatives and investments in this area. For instance, Saudi Arabia launched the Middle East Green Initiative, and the UAE will host the 2023 United Nations' Conference of the Parties (COP28). Gulf monarchies also want to maintain channels of communication with their neighbours in a tense and unstable geopolitical environment, and to strengthen regional initiatives in response to their decreasing trust in actors further afield.

Other Middle Eastern countries have also come to view this issue as suited to regional cooperation, with Iran hosting ministerial representatives from 11 states at a July 2022 conference on “Environmental Cooperation for a Better Future”. Iraq has sought to engage with all its neighbours on environmental issues. Iran and Iraq see the benefits of cooperating with wealthier and more technologically advanced Gulf monarchies – especially given the limitations they face in attracting foreign investment while under US sanctions, and in dealing with post-conflict reconstruction and paralysis in government, respectively.

This paper explores the climate and environmental challenges facing Iran, Iraq, and GCC states, analysing the domestic and multilateral initiatives the countries have launched to tackle them. It recommends policies that could help these countries sustainably and effectively upgrade their environmental security cooperation with one another. Finally, it explains why Europe would be an appropriate convening power for this process and how Europeans could contribute to it diplomatically and operationally, including through technical support.

## Environmental insecurity in Iran and the Arabian Peninsula

Climate change and desertification are already a reality across the Arabian Peninsula and Iran. With varying degrees of severity, environmental threats affect the economies, politics, and even security of Middle Eastern countries. Indeed, environmental insecurity can strike at the heart of the social contract between the government and the population, directly threatening people's livelihoods, health, and access to food and energy, among other areas. Growing water insecurity leads to economic and political instability, even if Middle Eastern governments have long been reluctant to recognise this fact. For instance, in 2018, a severe drought internally displaced more than 20,000 people in Iraq. Over successive summers, people in Iran – especially those in the southwestern province of Khuzestan – have taken to

the streets to express their anger with the government's poor management of water resources. In 2021, after suffering a months-long drought, Iranians began protests that, despite the government's violent crackdown, persisted for much of the summer and expanded towards Isfahan.

Such events should push Middle Eastern regimes to prioritise environmental security. Yet this has only happened recently and in some countries – such as Iraq and Iran, which lack the financial and technological resources to adequately reduce the impact of environmental challenges on people's lives. Having suffered long conflicts and decades of international sanctions respectively, the two countries have done far less than their GCC neighbours to address such challenges. Baghdad and Tehran are also limited by the need to manage larger populations and deal with high levels of corruption and poor governance.

By contrast, GCC leaders are confident they can rely on advanced (if costly) technological solutions to climate and environmental challenges. They are increasingly trying to do so even as they continue to rely on hydrocarbons revenues. For example, since the onset of the covid-19 pandemic, citizens of GCC states have demonstrated a much stronger awareness of the issue of air pollution, eventually pushing the topic onto policymakers' agendas. Moreover, GCC leaders recognise that climate policy is linked to the energy transition away from fossil fuels – an existential economic and geopolitical challenge for them.

So far, there has been almost no regional cooperation to tackle these shared environmental challenges. This is despite the fact that, due to the interdependence of habitats in the region, individual governments often cannot act effectively alone.

## Water

Water scarcity is the most pressing environmental concern in the Middle East. The number of people living in Iran and the Arabian Peninsula jumped from 34.4 million in 1960 to 182.9 million in 2020. In this context, high per-capita water consumption – with Gulf monarchies having one of the world's highest – combined with poor water management and wasteful practices in agriculture and industry to intensify water stress in the region. In the last two decades, the Middle East has been experiencing the longest meteorological drought on record, with average rainfall decreasing by more than 20 per cent. The worst-affected country is Iran, where the period between October 2020 and June 2021 was the driest in 53 years. All countries in the region are among the top 20 most water-scarce nations on earth.

The outlook is also particularly grim for Iraq. Declining rainfall and rising temperatures, together with poor water management and inadequate infrastructure maintenance, have

markedly depleted the Mesopotamian Basin. Agricultural and industrial pollution, waste dumping, and the spread of the hornwort plant across infrastructure have increasingly made much of Iraq's water unsuitable for human consumption, especially in the Basra governorate. A lack of freshwater has undermined security in border areas. Iraqi politicians frequently blame Iranian and Turkish water policies for their scarcity emergency, complaining that Iran builds dams that divert the flow of cross-border rivers such as the Tigris, the Little Zab, and the Diyala. In 1975, Iran and Iraq signed the Algiers Agreement – which delimited the border along the Shatt al-Arab and was supposed to ensure an equitable division of water resources – but never fully implemented it. Turkish dams such as the Ilisu Project and the planned Southeastern Anatolia Project have been similarly problematic for Iraq, creating tensions between Ankara and Baghdad. Such tensions will only increase unless governments reach bilateral agreements on water basins and rivers to which several countries have access.

Intra-GCC diplomacy on water issues might also be useful, given that Saudi Arabia controls most aquifers on the Arabian Peninsula. While this situation has not led to conflict between GCC states, they do not sufficiently cooperate to manage shared water resources.

Iran also faces a daunting challenge in meeting the demand for water of a population much larger than that of any GCC state. More than one-third of Iranians live in water-stressed areas. And most of the country's terrain is arid, due to the partial or total depletion of water sources such as Lake Urmia and the Zayanderoud river. During six months in 2022, the flow of water into dams in the Tehran area decreased by 30 per cent compared to the same period the previous year. This growing water insecurity has a severe impact on hydropower generation, leading to power disruptions in summer.

In Iraq and Iran, a lack of infrastructure, technology, and technical know-how has led to inadequate wastewater treatment. By contrast, all Gulf monarchies have been working with treated wastewater on a large scale for decades. Through the GCC Unified Water Strategy, they have set regional targets to reclaim and treat 90 per cent of sewage effluent by 2035 and to expand their wastewater collection networks by 60 per cent by 2030. While governments have generally fallen short in the implementation of the strategy, there are some exceptions. The UAE, for example, is working towards implementing its Water Security Strategy 2036, which includes measures to enhance conservation and storage in preparation for emergencies. As part of the strategy, the country will focus on: water harvesting, including that to pump rainwater back into the ground; smart meters, tariffs, and education on scarcity, to reduce consumption rates and engage with water-intensive industries (such as cement production); the implementation of strict water recycling rules amid a real estate boom; and monitoring and maintenance of infrastructure, to prevent leakages.

Finally, agriculture is a key domain to watch, since it accounts for an average of more than 70 per cent of total water use in littoral states and almost all groundwater extraction in Iraq and Iran. All Middle Eastern states are either focused on self-sufficiency in food production or increasingly interested in achieving this to the extent possible – be it in reaction to international sanctions regimes or as part of efforts to reduce their massive import dependencies. This is in relative terms, as GCC monarchies still import between 80 per cent and 90 per cent of their food, while Iraq imports almost 50 per cent of its food. Unless they properly manage the resulting increase in agricultural production, they could exacerbate their longstanding problems with inefficient irrigation systems and outdated, wasteful water use. Regional cooperation would be particularly valuable here. GCC countries have the capital and know-how to deploy the most efficient water-saving agricultural technologies – from vertical and hydroponic cultures in Oman and Saudi Arabia to agriculture-focused artificial intelligence in the UAE – while Iran and Iraq have more arable land than any other countries in the Gulf.

Undoubtedly, the water scarcity challenges GCC countries face are different to those in Iraq and Iran. But, arguably, they are no less concerning. GCC countries rely overwhelmingly on desalination for drinking water, with the UAE, Kuwait, and Qatar depending on this technology for more than 80 per cent of their total supply and Saudi Arabia alone responsible for around 20 per cent of global production. This dependence leaves GCC countries vulnerable to shortages, as most of them only store a few days' worth of drinking water at any given time.

With demand high and rising due to population growth and large-scale investment in water-intensive renewable energy production, GCC countries are heavily investing in their desalination capabilities. The main challenge in this comes from the fact that most desalination technologies are not environmentally safe and rely on energy-intensive plants – which, usually powered by fossil fuels, have a large carbon footprint. In most cases, a by-product of desalination is brine, which increases the salinity of the coastal waters into which it is discharged. This brine build-up disrupts the marine environment, leading to the proliferation of toxic algae that, in turn, threatens to disrupt the desalination processes. In fact, if water in the Gulf reaches what experts call “peak salt”, desalination may become unfeasible.

As brine disposal has an impact on every coastal nation, it is important for governments to work together to address the problems created by desalination. Regional scientific cooperation could be key to developing more sustainable desalination technologies. The Oman-based Middle East Desalination Research Centre (MEDRC) – which was established in

1996 to conduct research and training, and promote cooperation on transboundary water projects – could have been the right platform for such cooperation, but it has underperformed. There are many reasons for this, including the fact that it is co-chaired by the US and includes Israel, preventing cooperation with Middle Eastern states that have no diplomatic relations with Israel or hostile relations with the US.

Finally, the challenge posed by water salinity becomes even more daunting when one considers that sea levels are projected to rise by 0.5m by 2100. As a consequence, seawater will damage agriculture, transportation, and tourism in the Gulf's highly populated, low-lying coastal areas. Rising sea levels could submerge between 27 per cent and 56 per cent of Bahrain, posing an existential threat to the country. In such a scenario, seawater would infiltrate underground aquifers across GCC states, making the water they hold unsuitable for human consumption.

Therefore, desalination and marine pollution are closely linked. Yet oil leakages and waste dumping – neither of which are properly monitored by governments – are the biggest causes of marine pollution by far. This has led to some extreme cases: for instance, the Kuwaiti Court of Cassation ruled in July 2022 that the Umm al-Hayman area was unfit for habitation, despite the government's claims to the contrary, due to pollution from the energy industry, which caused many residents to develop serious health issues. Elsewhere, Qatar and Kuwait have long wanted to speak to Iran about the impact of its nuclear power plant in Bushehr, which is close to their territorial waters, on marine pollution.

Beyond its environmental implications, marine pollution poses a clear economic threat to the region. It damages not just fishery and tourism but also countries' strategic projects in international logistics and renewable energy production. According to a 2019 study by the Abu Dhabi Environment Agency, as much as 85 per cent of the stock of what were the three most commonly eaten species of fish in GCC states have already disappeared, due to a combination of overfishing and pollution.

All Gulf littoral states are signatories to the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, which recognises the economic importance of the sea and their inability to tackle this challenge alone. The convention established in 1979 the Regional Organization for the Protection of the Marine Environment ( ROPME), with the aim of reducing oil leakages and land-based sources of pollution. However, the ROPME was almost immediately caught up in regional political tensions. As a result, experts who participated in the 2022 Stockholm Forum on Peace and Development described the organisation as “archaic”, “dominated by Iranian sympathisers”, and “an empty shell”. [2]

## Heat

According to Germany's Max Planck Institute, the Middle East and North Africa are generally warming at twice the global average and, by 2050, will be 4°C hotter than pre-industrial levels. The Gulf is more vulnerable to extreme heat than any other area in the region, as temperatures, combined with high levels of humidity, may exceed a threshold for human adaptability for longer periods in several locations. The World Bank reports that the region “could face four months of exceedingly hot days every year” and that extreme climatic conditions will become the norm.

Extreme weather events, which correlate with rising temperatures, are becoming more frequent and severe in the Middle East. This year has seen increasingly frequent, intense, and widespread sandstorms across the region. Northern Iraq has been particularly exposed, experiencing almost one sandstorm per week between March and June. These events sent thousands of people to hospital with breathing issues. Hundreds of people in Kuwait, Iran, and Saudi Arabia have been hospitalised as a result of frequent, violent dust storms and sandstorms. According to a report by the World Bank, countries in the Middle East and North Africa collectively lose around \$13 billion per year to the effects of sandstorms. This is due to the costs of: the clean-up; treatment of health problems; a decline in productivity; damage to buildings, power lines, and other vital infrastructure; destruction of crops; and interruption of air, rail, and maritime transport. Fuelled by strong winds, sandstorms easily spread across borders in the mostly level terrain of the region. In this sense, they are a prime example of a shared problem that requires common solutions.

Cyclones and floods, which are often triggered by heatwaves, have also become more common. Cyclone Shaheen, powered by warmed sea water, caused both heavy damage and 14 casualties in Oman. This episode reminded many Omanis of the 2007 Cyclone Gonu, the most devastating tropical cyclone to strike the Arabian Peninsula on record. This extreme weather event killed 70 Omanis and cost Muscat more than \$1 billion in repairs to buildings and infrastructure.

In 2022 intense heatwaves led to floods in several Middle Eastern countries, hitting the UAE, Qatar, and Iran especially hard. In the UAE and Qatar, these events caused extensive damage, displacing some people and killing others. In Iran, dozens died during the thunderstorms and landslides that followed, which swept across large areas.

Middle Eastern states already cooperate with one another to provide emergency aid, especially in natural disasters: in mid-2019, Saudi Arabia and the UAE sent 95 tonnes of

humanitarian aid to flood-stricken Iran, despite the fact that political tensions between the countries were particularly high at the time. However, there is almost no cooperation on disaster prevention and preparedness even within the GCC itself. The GCC Disaster Preparedness Executive Committee has only held one major meeting, in 2004, and has failed to implement a common strategy.

## Air quality

Air pollution has become a sensitive issue across the Middle East due to its impact on people's health. In all Middle Eastern capitals, particulate in the air markedly exceeds the safe levels designated by the World Health Organisation (WHO). In Iraq, the average level of particulate was eight times the maximum safe level in 2022. In some regions of Kuwait, air quality has declined to its lowest level in decades and is widely considered unsafe. The WHO has included Tehran on its list of most polluted cities in the world since 2018, with the city experiencing thousands of deaths linked to poor air quality every year.

Yet most Middle Eastern states have only made small efforts to curb pollution in recent years. A notable exception to this is the UAE, which recently launched the UAE National Air Quality Strategy (2021-2031) to reduce the impact of pollutants on health, coordinate institutional programmes, and introduce air-cleaning technology. In 2017 the Iranian authorities adopted legislation to phase out excessively polluting vehicles – which are responsible for around 80 per cent of air pollution in Tehran – but rarely enforce this.

Of course, air pollution is another challenge that demands a collective response. Ultimately, initiatives to improve air quality require countries to cut greenhouse-gas emissions, and to decarbonise the energy and transportation industries. This is an immense effort that requires large-scale cooperative investments. In the meantime, nature-based offsetting measures could also be helpful. In line with its ambitions, Saudi Arabia could make a leading contribution in this area through the Middle East Green Initiative – a platform on which the country has made a series of commitments to climate-specific actions in the region, including a pledge to plant 50 billion trees. Indeed, tree planting could help reduce particulate levels in highly polluted cities such as Tehran, Ahwaz, and Sanandaj, and could help reforest endangered rural areas, notably Khuzestan. Iran is still not part of the Middle East Green Initiative, but there is a chance that this could change.

# European support for cooperation between Iran and Gulf Arab states

An effort to establish closer intra-regional ties through dialogue and constructive cooperation would be largely in line with the EU's traditional approach to the Gulf. Europeans have long argued against bloc politics in the region and in favour of a more comprehensive and inclusive attitude. While they have been at the forefront of efforts to keep the JCPOA alive, they have also developed close relations with Gulf monarchies and have been relatively active in Iraq. Europeans generally believe that animosity between Middle Eastern states leads to instability – making it counterproductive for everyone involved. The rivalry between Iran, Iraq, and GCC countries has often threatened critical logistics and energy infrastructure, freedom of navigation, and maritime security.

Europeans have significant economic interests in the region, especially in GCC countries: in 2020, the EU was the GCC's biggest source of imports, with their total trade in goods amounting to €97.1 billion. In 2018 (before the covid-19 pandemic), total EU foreign direct investment in GCC states reached €76.9 billion. In addition, a substantial share of trade between Europe and Asia moves through Gulf waters and ports. Ever since European countries began to diversify away from dependence on Russian energy, the strategic value of their trade links with Gulf monarchies has increased substantially.

Meanwhile, the personnel of NATO and EU missions in Iraq are threatened by regional conflicts. Experience has made Europeans painfully aware of how, in Iraq, regional geopolitical tensions can create fertile ground for terrorist groups that target them. European policymakers generally believe that stability in both Iraq and Iran is crucial to reducing irregular migration to Europe from Middle Eastern countries. At the same time, the EU and its member states are seeking to strengthen their geopolitical position in the Middle East in an increasingly competitive multipolar order. And, while China or Russia may be more interesting interlocutors for Middle Eastern governments on questions of geopolitics and hard security, neither makes a significant contribution to these governments' attempts to confront environmental security challenges.

All this explains why Europeans are eager to support de-escalation in the region – as stated in the EU’s joint communication on a “[Strategic Partnership with the Gulf](#)”. One can see this in individual member states’ involvement in the European Maritime Awareness in The Strait of Hormuz mission, and in the French initiative to co-host the Baghdad Conference for Cooperation and Partnership in 2021.

This heightened European interest in de-escalation aligns with Middle Eastern governments’ growing interest in diplomacy, as well as their increasing focus on climate and environmental security issues. Europe is now working to improve its credentials as a [climate superpower](#) in the face of one of the [gravest](#) energy shocks in its history. Last year, EU foreign policy chief Josep Borrell [wrote](#) that “water security is a real issue in the Gulf, and we can help”. Beyond water security, the joint communication emphasises: the marine environment, pollution, biodiversity, food security, desertification and deforestation, and disaster relief. This framework is intentionally broad, allowing for a variety of specific actions. But, to make a substantive contribution in these domains, the EU and its member states will need to look beyond the environmental challenges looming over the Gulf to the opportunities for common solutions. A much more active form of diplomacy and policy engagement – including that to encourage substantial investment from the private sector – would be key to demonstrating that Europe had remained true to its climate commitments, including the external dimension of the European Green Deal.

However, Europe should be careful to ensure that Middle Eastern states take the lead on the platform it provides. This is because Iran’s ruling elites, particularly members of the Islamic Revolutionary Guards Corps, see environmental concerns as security issues, believing that external actors – especially Israel and the US – use their country’s vulnerabilities in this area to weaken the regime. Iran’s security forces have arrested several Iranian environmentalists on charges of cooperation with hostile outside forces. By the same token, the UN has had difficulty establishing environmental projects in Iran, especially when the US is noticeably involved.

## Diplomacy

The past year has seen Iran, Saudi Arabia, the UAE, and Iraq increase their diplomatic engagement with environmental security issues at the regional level. Europeans should work with these four countries on environmental issues more directly, by supporting their initiatives in the area. Europeans should use diplomacy to link these disparate initiatives, prioritising consistency and the establishment of a coherent, sustainable, and practical dialogue. The long-term goal should be to help create a Gulf environmental strategy that

includes all littoral countries.

In his opening address at the conference on “Environmental Cooperation for a Better Future”, Iranian President Ebrahim Raisi said that the response to environmental threats such as dust storms and sandstorms “requires” international determination, welcoming collaboration in the area. The participants in the conference included Oman, Iraq, Syria, the UAE, Armenia, Qatar, Azerbaijan, and Turkey. Saudi Arabia was notably absent, limiting the scope of the event. But Iranian officials expressed their desire to involve Saudi Arabia in the talks on sandstorms and dust storms Iran is conducting with Iraq, Syria, and Kuwait. The Iraqi, Syrian, and Kuwaiti governments have even signed a memorandum of understanding with Tehran on the topic. And Iran attempted to create a regional cooperation framework to combat sandstorms in a 2018 letter to the UN secretary-general.

The West Asia Regional Master Plan to Combat Sand and Dust Storms includes Bahrain, Iran, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Syria, Turkey, and the UAE. It is coordinated by the UN Environment Programme and the World Meteorological Organization’s regional office for West Asia, which is based in Iran. As experts at the 2022 Stockholm Forum described it, the office aims to “establish a regional monitoring, forecasting, and early warning network for dust storms” and to “invest in strengthening mitigation measures against root causes of dust storms” but, so far, it has struggled to achieve these goals. [3]

Saudi Arabia has also recently become active in environmental diplomacy – partly because it senses that global climate politics is gaining momentum. Riyadh has the will and capabilities to emerge as a leading player in the region on environmental issues. This is the logic behind the Middle East Green Initiative, which includes many commitments to combat climate change at the regional level. Saudi Arabia hosted in October 2021 its first international summit on the topic, which was attended by representatives from the UAE, Kuwait, Qatar, Iraq, Morocco, Tunisia, Jordan, Bahrain, Algeria, Libya, Yemen, Egypt, Oman, and Palestine. Some Iranian officials could join the second Middle East Green Initiative summit, given that it will take place within a UN framework on the sidelines of COP27, which Egypt will host in November 2022.

In general, COP27 and COP28 can be useful umbrellas for high-level regional engagement on environmental security, as both will take place in the Middle East. Beyond COP28, the UAE has become an important centre of climate diplomacy. The country has put the relationship between climate and security on the agenda of its 2022-2023 term on the UN Security Council. Abu Dhabi has appointed a minister of climate change and environment, Mariam Almheiri, who works closely with other players in the region. At the conference on “Environmental Cooperation for a Better Future”, she signed a bilateral agreement on environmental

cooperation with Iran. The UAE has much to offer in response to environmental challenges, thanks to its advanced technological capabilities.

Iraq, the fourth key actor in Middle Eastern climate diplomacy, has demonstrated great urgency in its constructive engagement with its neighbours. Working within a UN structure, Iraq's Ministry of Water Resources organised iterations of the annual Baghdad International Water Conference in March 2021 and March 2022, inviting all neighbouring countries to the events as it sought to strike new deals on water management with them.

The Algiers Agreement may be a viable framework within which Iraq can restart water diplomacy by, for example, creating a technical commission to supervise cross-border rivers and establish water quotas, as mandated in Articles 3 and 4. In parallel, Baghdad needs to reach an agreement with neighbouring countries on seasonal and emergency mechanisms to guarantee minimum water flows to Iraq. Given the complexity and sensitivity of the challenge, this would likely need to involve mediation and support from states such as Saudi Arabia, Qatar, and the UAE. These countries should participate in the third Baghdad International Water Conference – as should European states. The internationalisation of these issues might be the only way for Iraq to negotiate on water with Iran and Turkey effectively, as the latter two countries are generally reluctant to do so.

## Technical cooperation

Through technical cooperation, Gulf monarchies could make a significant contribution to Iran's and Iraq's efforts to tackle environmental challenges. But the two countries lack the capacity to reciprocate. Because of this asymmetry, European incentives in capacity building, technology transfers, and investment could be key to encouraging Gulf monarchies to share their technological know-how and even invest in the operationalisation of environmental initiatives elsewhere in the region.

Gulf states have long invested in measures to generate rain, with the UAE leading the pack in this. The country is an experienced developer of cloud-seeding programmes, which have increased its rainfall levels by at least 5 per cent annually. Cloud seeding is a weather-modification technique that involves sowing clouds with small particles of condensation-inducing substances to produce rain. The UAE runs these programmes with something close to military efficiency, keeping nine pilots on stand-by to capitalise on suitable meteorological conditions. Khalifa University in Abu Dhabi has developed a newly patented substance for the process that uses nanotechnology better adapted to the hot, dry conditions in the region and that has no appreciable environmental impact.

The UAE is also home to the Research Program for Rain Enhancement Science, which promotes the development of technology internationally and could support a joint regional exchange programme for researchers. In 2021 the country began testing cloud-busting drones within the framework of this programme. Equipped with customised sensors, these drones fly at low altitudes to deliver an electric charge to air molecules, which should increase the likelihood of precipitation. While many other Middle Eastern governments are more or less familiar with cloud-seeding operations, only the UAE has worked with cloud-busting technology so far. The Research Program for Rain Enhancement Science would be an ideal venue for much-needed regional cooperation on scientific research into rain enhancement, including that which addresses some of the concerns about it in other capitals of the region. In 2018, for example Gholam Reza Jalali, a senior official in the Islamic Revolutionary Guards Corps, falsely claimed that “both Israel and another country [such as the UAE] are working to make Iranian clouds not rain”.

As discussed, greater regional scientific cooperation is also particularly needed in efforts to monitor marine pollution and sandstorms. A revitalised ROPME could serve as a hub for capacity building and could make a key contribution to the collection of up-to-date data on oil spills, given that leakages often go unreported – which leaves little room to monitor and address this problem. Similarly, regional scientific and technical cooperation could significantly contribute to initiatives to share ideas about how to mitigate the effects of sandstorms, which could lay the groundwork for a region-wide forecasting, early-warning, and monitoring systems.

Desalination is another field of opportunity. Gulf monarchies could share their know-how in this area with Iran and Iraq as they work to expand their desalination capabilities. They could also discuss terms for sharing desalinated water with the two countries in times of emergency and perhaps more consistently. After protests swept southern Iraq in 2018, Kuwait provided desalination units to four Iraqi governorates. It is important that the two countries discuss a more permanent arrangement in which Kuwait could reliably channel desalinated water to southern Iraqi governorates in the hottest months of the year. In 2022 Saudi Arabia launched the first floating desalinator, a piece of infrastructure that can be transported across borders during crises.

In the long term, regional scientific cooperation will be key to developing more sustainable desalination technologies. The MEDRC may currently be problematic, but Qatar could act as a link between it and a new platform that included all Middle Eastern states – perhaps one co-sponsored by a European institution. In 2022, UNESCO announced the establishment of a chair in desalination and water treatment at Qatar University.

The promotion of more sustainable desalination processes is important not only for water security but also for the many European governments that are interested in importing green hydrogen (which is produced using desalinated water) from GCC states. Europeans should direct their investments in desalination plants in the region towards those that run on renewable energy rather than fossil fuels. In this sense, the desalination plant in the Saudi city of NEOM, which is designed to dispose of brine sustainably, could be particularly valuable. The plan is to embrace the concept of a circular economy by using advanced membrane technology to produce separate brine streams and brine-derived products for industrial use. This process will be managed by French company Veolia. In fact, most desalination technology in GCC states is imported – much of it from European countries, especially Italy and Spain.

The private sector is also central to wastewater treatment. It could make a particularly important contribution to Iraq's efforts to expand and improve its sewage system, which the government has long left to decay. By developing efficient infrastructure for the management and treatment of wastewater, the country would reduce pollution in freshwater. The concept of a circular economy here could be particularly influential, encouraging countries to use treated wastewater rather than freshwater for agricultural irrigation. The UN Assistance Mission for Iraq has long attempted to work in this area, but it needs significantly more support, including from the EU.

## Recommendations

Middle Eastern governments increasingly value environmental security cooperation but are still drawn to the politics of competition. Europeans can play a role in highlighting the merits of cooperation – including its potential benefits in environmental security and economic stability – and the value of creating apolitical platforms to support wider dialogue. In doing so, they should concentrate on environmental diplomacy, joint scientific research, capacity building, and strategic investment. Some of these activities are an EU competence, while others would require the involvement of individual member states, partners such as the United Kingdom, private companies, and non-governmental scientific and technical

institutions.

In many cases, the UN could provide political cover that would make initiatives in these areas more effective, given its agencies' commitment to environmental issues. The UN Environment Programme's regional office for West Asia, which recently relocated to Bahrain, could play an outsized role here.

Europeans should make Iraq a focal point for regional cooperation on this agenda. All the country's neighbours have an interest in maintaining its stability and security, which are increasingly under threat from environmental challenges.

## Facilitate environmental diplomacy

Europeans should work to reinforce regionally owned diplomatic processes that have developed in the past year, especially by linking disparate initiatives and prioritising consistency and the establishment of a coherent, sustainable, and practical dialogue. The four key Middle Eastern actors in climate diplomacy – Iran, Saudi Arabia, Iraq, and the UAE – have shaped their environmental diplomacy around UN events or initiatives, such as COPs. Europeans should support these undertakings, and the France-hosted second iteration of the Baghdad Conference for Cooperation and Partnership would provide the ideal context for this. France, however, should really work to involve more European actors as part of a core group. This might include the EU, and Sweden too, which is particularly sensitive to environmental issues, is perceived as an honest broker in the region, and will hold the presidency of the Council of the EU in the first half of 2023. Greater inclusivity would help share the diplomatic burden as well as strengthen the credibility of the initiative and European access towards regional actors. The main topics for such a diplomatic event should be: water sharing (especially with Iraq); coordination on natural disaster relief; the expansion of Saudi Arabia's afforestation plans under the Middle East Green Initiative to Iraq and Iran; and political backing for enhanced scientific and technical cooperation between non-governmental bodies.

## Promote joint scientific research

Joint scientific research would be especially beneficial in areas such as air and water pollution, rain enhancement, desalination, and sandstorms. Research into problems and solutions in these areas may be politically more effective in the region if it is conducted by Middle Eastern states rather than countries further afield.

Europeans could try to inject new life into platforms such as the ROPME and the MEDRC or

even establish spin-offs in which they participate. For example, the EU should consider replicating its INCONET-GCC2 project. Funded by the European Commission's Directorate General for Research and Innovation until its closure in 2017, the project was designed to establish a cooperation network for science, technology, and innovation between the EU and GCC states. It focused on practical collaboration between research institutions, joint research activities, and researcher mobility. A new iteration of the project should include scientific institutions in Iran and Iraq, as well as EU partners such as the UK. This would provide an appropriate setting in which to reimagine the MEDRC, rejuvenate the ROPME and the West Asia Regional Master Plan to Combat Sand and Dust Storms, and add a regional dimension to individual countries' initiatives, such as the UAE's Research Program for Rain Enhancement Science.

## Pursue opportunities for strategic investment and capacity building

Europeans have a clear interest in supporting the green transition in GCC states, Iraq, and Iran. In many ways, this will require the active involvement of the European private sector and even seed funding from the EU. In line with the European Green Deal and the joint communication, the EU should organise a Green Business Forum that brings together private sector representatives from both Europe and the Gulf. European leaders should travel with a delegation of executives from companies that are active in sectors covered by the European Green Deal when visiting Middle Eastern countries. Such initiatives could help make desalination more sustainable, by powering the process with renewable energy and focusing on brine disposal.

In agriculture, Europeans should work to regionalise investments in arid-climate agricultural technology, creating partnerships with regional investment bodies and prioritising cross-border projects and ventures. For instance, while vertical farming enabled by artificial intelligence is energy-intensive, it could ease the pressure on water resources and reduce dependencies on carbon-intensive food imports.

Europeans should also try to promote transnational clean energy projects by offering technical and policy assistance to Middle Eastern states, working within the framework of the Global Gateway. Given the difficulty of financing new desalination plants in Iraq, Europeans could promote cooperation in this area by providing seed funding. Combined with incentives for European companies, such funding would be particularly effective in developing wastewater treatment infrastructure in Iran and Iraq.

Europeans should develop ventures with local funds and financial institutions that are engaged with these issues, such as the Islamic Development Bank. One effective way to

encourage European companies to contribute to environmental security in the region is for institutions to develop capacity building programmes that support these firms' investments. In this, European governments should account for the fact that companies often need institutional support to incorporate capacity building programmes into their commercial activities.

## Conclusion

Middle Eastern states' efforts at de-escalation will continue to be fragile as long as they are unable to have difficult conversations with one another about their geopolitical and security concerns. In this environment, a platform for dialogue on climate and environmental security may be one of the few politically feasible ways to strengthen and sustain channels for regional diplomacy – even if the JCPOA process collapses.

Middle Eastern governments are increasingly interested in such diplomacy, as they recognise that cooperative efforts to confront environmental insecurity make sense politically and technically. Their tentative desire for closer intra-regional ties based on constructive cooperation and dialogue largely aligns with the European approach to the region.

Europeans are aware that it is in their interests to promote de-escalation between Iran and its Arab neighbours. This could strengthen the EU's position in an increasingly multipolar region and help it fulfil its commitments to climate and environmental security. To make a substantive contribution in these domains, the EU and its member states will need to look beyond the environmental challenges in the region to the opportunities for common solutions. Europeans can use their credibility on climate issues to promote a dialogue on political and technical cooperation in environmental security between Iran, Iraq, and GCC countries.

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[1] Author's interview with Saudi and Emirati officials, Brussels, June 2022.

[2] Comments by experts at the 2022 Stockholm Forum on Peace and Development, 24 May 2022.

[3] Comments by experts at the 2022 Stockholm Forum on Peace and Development, 24 May 2022.

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