



United Nations
Climate Change



POLICY IMPACTS OF THE CLIMATE CHANGE CONFERENCES IN THE MEDITERRANEAN

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Executive Summary

The Mediterranean region, a recognised **climate and biodiversity hotspot**, faces accelerated and multifaceted impacts from climate change, with implications for its socio-economic stability, ecosystems, and public health. Rising temperatures, extreme climate events, sea-level rise, water scarcity, and biodiversity loss threaten the environmental, social and economic foundations of the region, especially in sectors like agriculture, tourism, and fisheries taking place in densely populated areas with fragile ecosystems.

Both terrestrial and marine temperatures in the region have already increased by 1.5°C above pre-industrial levels. This trend is expected to continue, with projections suggesting a further rise of between 0.5 and 6.5°C by the year 2100. Other alarming projections include an **increase in surface water temperatures** by 1 to 4°C throughout the century and a significant reduction in rainfall. Furthermore, **sea levels** in the Mediterranean have already risen by 6 cm over the past two decades, with an expected increase of 43 to 84 cm by the end of the century.

The **United Nations Framework Convention on Climate Change** (UNFCCC) Conferences of the Parties (COP) have been instrumental in galvanising global attention and action on climate issues. From the early COPs that focused on foundational agreements like the **Kyoto Protocol** to the more recent and ambitious **Paris Agreement** at COP21, these conferences have played a crucial role in shaping the global climate regime.

For the Mediterranean, the COP process has provided a framework within which regional and national efforts can align with broader global objectives, particularly in reducing greenhouse gas emissions and enhancing climate resilience. The Paris Agreement, with its goal to limit global warming to well below 2°C, and ideally to 1.5°C, is especially significant for the Mediterranean, where even small increases in temperature can have outsized impacts. The commitment to both **mitigation and adaptation**, alongside the establishment of mechanisms for **climate finance, technology transfer, and capacity-building**, has offered Mediterranean countries the tools to confront their unique challenges.

The **post-COP21** era has seen Mediterranean countries implement **adaptation** measures in critical areas, such as water management and coastal resilience, while also working to enhance renewable energy sources like solar and wind. However, regional progress is uneven, hampered by financial limitations, political instability, and capacity gaps. Scaling up climate finance, strengthening regional cooperation, and bridging technological and institutional divides are essential for the region to meet Paris Agreement commitments effectively.

The future of the Mediterranean depends on the region's ability **to build resilience** and adapt to these multifaceted climate challenges. This will require enhanced regional cooperation, as no country can effectively

tackle these issues in isolation. Regional frameworks such as the **Union for the Mediterranean (UfM)** and the **Barcelona Convention** must be strengthened to foster collaboration on climate action, with a particular focus on shared resources like water and energy. Equally important is the need to scale up **climate finance**. Mediterranean countries, particularly those with fewer resources, need more robust support from international funding mechanisms like the **Green Climate Fund** and the **Adaptation Fund**. These resources must be directed towards projects that address the most pressing issues, such as water management, renewable energy infrastructure, and coastal protection.

Reinforcing **institutional capacity** is therefore a critical step. Many Mediterranean countries face significant **governance and technical challenges** that impede the effective implementation of climate policies. Investing in **education, capacity-building and governance reforms** can help bridge this gap, enabling countries to better execute national climate plans and make use of international support. Furthermore, **technology transfer** must be accelerated. For Mediterranean nations to effectively mitigate emissions and adapt to climate impacts, they need access to cutting-edge technologies that can enhance energy efficiency, improve water use, and protect ecosystems.

In conclusion, **urgent and coordinated action is needed** to safeguard the Mediterranean from escalating climate risks. Strengthening regional frameworks, enhancing access to international funding, and accelerating technology transfer will be vital in supporting Mediterranean countries. By fostering resilience through sustained commitment to climate adaptation and mitigation, the Mediterranean region can protect its future and offer valuable insights for other vulnerable areas worldwide.

Introduction

The Mediterranean region is widely recognised as one of the areas most vulnerable to the impacts of climate change. According to the **Mediterranean Experts on Climate and Environmental Change** (MedECC),¹ both terrestrial and marine temperatures in the region have already increased by 1.5°C above pre-industrial levels. This trend is expected to continue, with projections suggesting a further rise of between 0.5 and 6.5°C by the year 2100, depending on the effectiveness of global climate mitigation efforts. Other alarming projections include an **increase in surface water temperatures** by 1 to 4°C throughout the century and a significant **reduction in rainfall**. For every degree of warming, rainfall could decline by 4%, leading to an overall reduction of 4-22% by the end of the century. Furthermore, **sea levels** in the Mediterranean have already risen by 6 cm over the past two decades, with an expected increase of 43 to 84 cm by 2100.²

The region's **unique geography**, which includes a large expanse of coastal areas, islands, and semi-arid zones, combined with its rich but fragile ecosystems, makes it particularly susceptible to climate change. In addition, the Mediterranean basin is a climatic and ecological transition zone, meaning that it is disproportionately affected by the accelerated pace of global warming. As a result, **the region is warming at a faster rate than the global average**. This has led to increasingly frequent and intense heat waves, prolonged droughts, and severe **water scarcity**. **Rising sea levels** threaten coastal communities, while shifts in biodiversity are causing a significant **loss of species**, many of which are endemic to the region.

The effects of climate change in the Mediterranean are not only environmental but also socio-economic. Key sectors such as agriculture, fisheries and tourism, which are vital to the region's economy and livelihoods, are already feeling the strain. **Agriculture** is particularly vulnerable, with rising temperatures and reduced rainfall impacting crop yields, threatening food security, and exacerbating desertification in certain areas. The **fisheries** sector is also at risk due to the warming of marine waters, which is altering fish migration patterns and habitats. **Tourism**, a cornerstone of many Mediterranean economies, is being disrupted by extreme weather events, sea-level rise and the degradation of natural environments that tourists flock to experience. Furthermore, climate change is intensifying existing **social and political instability** in several Mediterranean countries, particularly those already facing economic difficulties, resource shortages and migration pressures.

In light of these pressing challenges, this paper seeks to examine the history and implications of the **United Nations Framework Convention on Climate Change** (UNFCCC) **Conferences of the Parties** (COP) on the Mediterranean region. Special attention is given to the decisions adopted since the landmark **COP21**, held in Paris in 2015, which set the framework for global climate action through the Paris Agreement. By analysing

¹ MedECC_MAR1_complete.pdf

² Climate change - Plan-bleu : Environnement et développement en Méditerranée

the strategies, action plans, and implementation efforts that have been undertaken in the Mediterranean in response to COP agreements, this paper aims to provide a comprehensive understanding of both the progress that has been made and the challenges that persist.

The discussion begins with an **overview of the impacts of climate change** in the Mediterranean, detailing the region's environmental, economic and social vulnerabilities. Following this, the paper explores the **evolution of the UNFCCC COPs**, highlighting key milestones and decisions that have shaped international climate policy, with a particular focus on their relevance to the Mediterranean context. The **post-COP21 era** is of particular interest, as the Paris Agreement marked a turning point in **global climate governance**, setting ambitious targets to limit global warming to well below 2°C, and ideally to 1.5°C above pre-industrial levels. Since then, Mediterranean countries have developed and implemented a range of climate adaptation and mitigation strategies, though their effectiveness has varied widely across the region.

In the final section, the paper turns to the future, offering a **forward-looking perspective** on the opportunities and challenges that lie ahead for the Mediterranean in addressing climate change. This includes an assessment of the region's **capacity to meet the commitments** set out in the Paris Agreement, the role of **regional cooperation** in tackling shared climate challenges, and the potential for **innovative solutions** to drive sustainable development in the face of a rapidly changing climate. It is clear that urgent and coordinated action is required if the Mediterranean is to avoid the worst impacts of climate change and secure a sustainable future for its people and ecosystems.

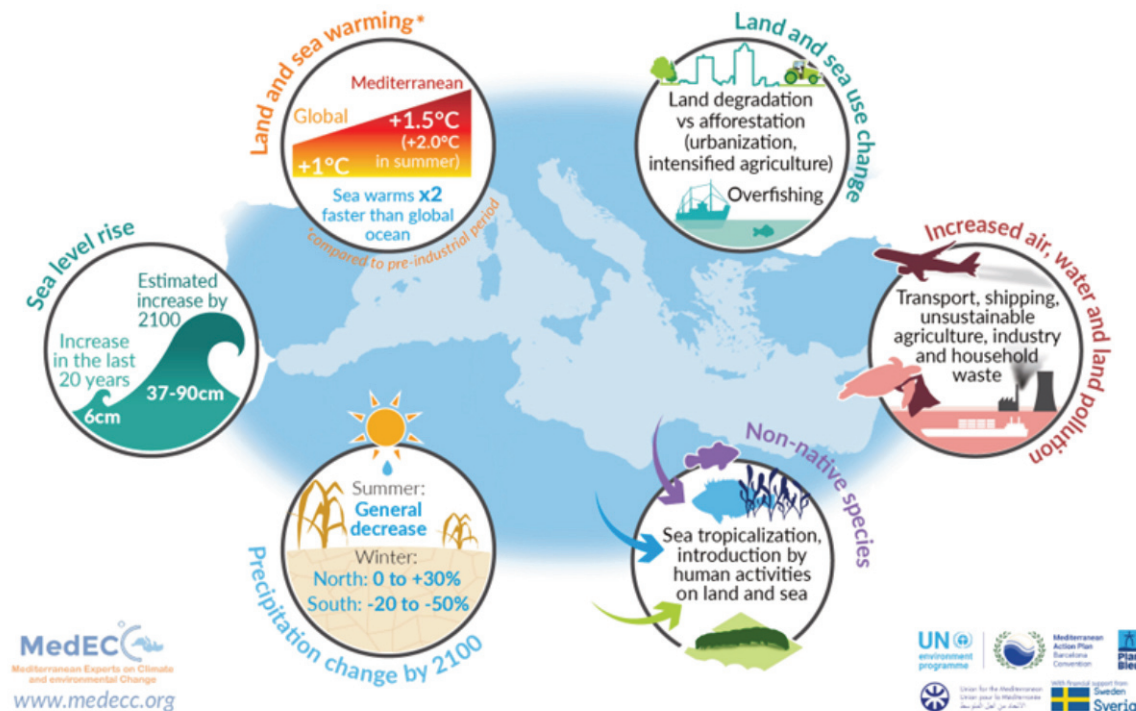
Climate Change in the Mediterranean

The Mediterranean is facing severe and multifaceted impacts from climate change, which are expected to intensify in the coming decades. As one of the most vulnerable regions globally, it is experiencing a faster rate of warming than the global average. This accelerated pace of climate change is driving a series of interrelated challenges, each of which poses significant risks to both the environment and society.

Climate and environmental changes in the Mediterranean (MedECC)³

1st Mediterranean Assessment Report (MAR1) published by MedECC

The Mediterranean Basin: main drivers of environmental change



RIISING TEMPERATURES AND EXTREME HEAT

Temperatures in the Mediterranean are currently 1.5°C above pre-industrial levels and under a high-emissions scenario, could rise by an additional 3.8 to 6.5°C by 2100. This rapid warming is already resulting in more

³ Infographic from MedECC_SR nexus_Draft SPM_ENG.docx, p. 16.

frequent and intense heat waves. These extreme heat events are having a profound impact on human health, agriculture, ecosystems and energy demand. The elderly and individuals with pre-existing health conditions are especially vulnerable to **heat-related illnesses**, and rising temperatures have been linked to increased mortality rates. Health systems in many Mediterranean countries are under pressure to address these heat-related health crises.⁴

In the **agricultural sector**, rising temperatures are leading to reduced yields for crops such as olives, grapes and cereals, all of which are particularly sensitive to heat stress. The decline in agricultural productivity threatens food security in a region that relies heavily on farming both for sustenance and export revenues. Higher temperatures also increase the demand for irrigation, further exacerbating the region's water scarcity challenges.

WATER SCARCITY, DROUGHT AND FLOODS

Water resources in the Mediterranean are becoming increasingly scarce due to changing precipitation patterns, higher evaporation rates, and unsustainable water extraction practices. Climate change is intensifying these pressures, leading to more frequent and severe droughts. Reduced rainfall, especially during summer months, could decrease by 10 to 30% in some areas, worsening the already critical water shortages.⁵ This has far-reaching consequences not only for agriculture, but also for drinking water supplies and industrial activities. Many Mediterranean countries, particularly in the south and east, already suffer from chronic water shortages, and the situation is projected to worsen in the future.

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In the Southern and Eastern Mediterranean, 180 million people currently live with water scarcity, with 80 million facing extreme water shortages. In some cases, groundwater serves as the primary source of freshwater, but in many regions, these are non-renewable fossil aquifers, meaning that water extraction is unsustainable over the long term. The transboundary nature of many Mediterranean rivers and aquifers further complicates water management efforts, raising the potential for conflicts over shared water resources, particularly in regions like the Nile and the Jordan River basins.⁶

SEA-LEVEL RISE

Another critical challenge facing the Mediterranean is sea-level rise, which is contributing to coastal erosion, saltwater intrusion and flooding. As many Mediterranean countries have densely populated coastal zones, these changes pose a significant threat to infrastructure, tourism and coastal ecosystems. Tourism, a cornerstone of many Mediterranean economies, is particularly vulnerable as beaches, resorts and other tourist attractions face the risk of damage from rising sea levels and storm surges. The natural habitats of coastal ecosystems, including wetlands that serve as crucial biodiversity hubs, are also at risk of being destroyed.⁷

⁴ MedECC_MAR1_complete.pdf, p. 14.

⁵ MedECC_MAR1_complete.pdf, p. 14.

⁶ Ibid, p. 23.

⁷ Ibid, p. 39.

BIODIVERSITY LOSS

Biodiversity in the Mediterranean, which is one of the world's most biologically rich regions, is under threat from the combined impacts of rising temperatures, habitat destruction and ocean acidification. Many species that are unable to adapt to changing conditions are at risk of extinction, particularly marine species affected by warming seas and increasing acidification. Ocean acidification, driven by higher CO₂ concentrations, has a direct impact on marine life such as corals and shellfish, which are essential for maintaining the region's marine biodiversity. Overfishing, the spread of non-native species, and algal blooms further exacerbate the decline of marine ecosystems.⁸ This loss of biodiversity is not just an environmental concern but also has economic implications, particularly for the fisheries sector, which is already experiencing reduced fish stocks due to changing ocean conditions.

ECONOMIC IMPACTS

The economic impacts of climate change in the Mediterranean are being felt across multiple sectors. Agriculture, fisheries and tourism — key pillars of the region's economies — are highly sensitive to climate variability. By way of example, over 20% of exploited fish and marine invertebrates are set to disappear locally by around 2050 due to ocean warming and acidification.⁹ Prolonged droughts and heatwaves are reducing agricultural productivity, while warmer sea temperatures are impacting fish stocks, threatening the livelihoods of those dependent on these industries. Tourism, which is vital to the Mediterranean's economy, is also under threat from both rising temperatures and extreme weather events, which could deter visitors and damage infrastructure.¹⁰ This economic stress is particularly severe in rural areas, where communities are already vulnerable due to lower incomes and limited access to resources.

SOCIAL AND POLITICAL INSTABILITY

The impacts of climate change are not only environmental and economic but also social and political. As resources such as water and food become scarcer, the potential for social unrest and political instability increases. The Southern Mediterranean, in particular, is already grappling with significant socio-economic challenges, and climate change threatens to exacerbate these difficulties. Resource scarcity, coupled with the displacement of populations affected by environmental degradation, could lead to migration pressures and heightened conflict in the region.¹¹ Without effective adaptation measures, these dynamics risk destabilising already fragile societies, creating a cycle of crises driven by climate change.

CASCADING EFFECTS

The interconnected nature of these climate impacts creates a complex and challenging situation for the Mediterranean. Rising temperatures, water scarcity and biodiversity loss all feed into one another, creating cascading effects that amplify the risks for human health, livelihoods and the environment. For instance, water

⁸ Ibid, p. 15.

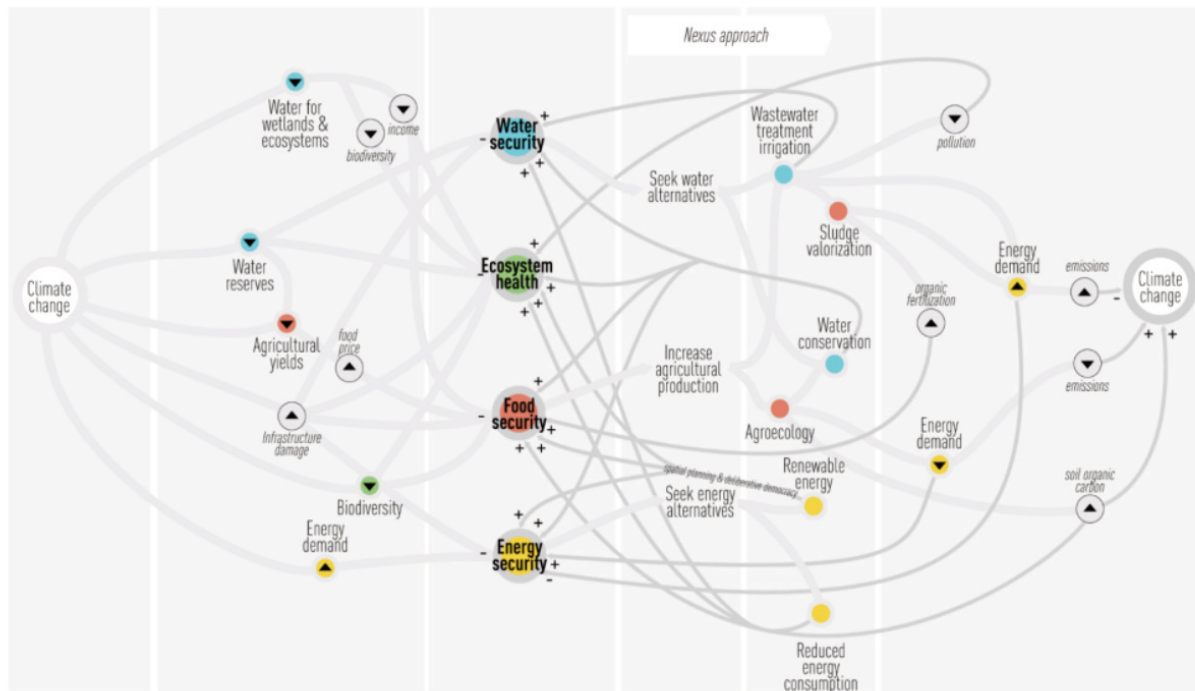
⁹ The-Economic-Impacts-of-Climate-Change-in-the-Mediterranean.pdf, p. 5.

¹⁰ The-Economic-Impacts-of-Climate-Change-in-the-Mediterranean.pdf, p. 7-8.

¹¹ Climate Change and Security in the Mediterranean: Exploring the Nexus, Unpacking International Policy Responses, p. 74.

scarcity worsens agricultural yields, which in turn affects food security and exacerbates poverty. At the same time, sea-level rise threatens coastal areas that are vital for tourism and agriculture, compounding the economic vulnerabilities of these regions.

Impacts, interactions and cascading effects on the Water-Ecosystem-Food-Energy (WEFE) approach¹²



BUILDING RESILIENCE THROUGH CLIMATE ACTION

Given the severity and interconnectedness of these challenges, urgent and coordinated climate action is crucial for the Mediterranean. Building **resilience** in the face of these impacts will require comprehensive **mitigation and adaptation strategies** that address the root causes of climate vulnerability while also preparing the region for future changes. This includes investing in sustainable water management practices, protecting biodiversity through conservation efforts, and developing infrastructure that can withstand the impacts of rising sea levels and extreme weather events. Regional cooperation will be key to ensuring that these efforts are successful, particularly in managing shared resources like water and in coordinating responses to cross-border challenges such as migration and environmental degradation.

The Mediterranean's future depends on the ability of its countries to work together to implement effective climate action, balancing both mitigation efforts to reduce emissions and adaptation measures to protect communities and ecosystems. The window for meaningful action is rapidly closing, making it essential for the region to act decisively to safeguard its environment, economies and societies from the worst impacts of climate change.

¹² Infographic from Microsoft Word - MedECC_SR nexus_Draft SPM_ENG.docx, p. 16.

The UNFCCC Climate Change Conferences

The UNFCCC Conferences of the Parties (COPs) have been instrumental in shaping global climate governance, serving as the primary platform for international negotiations on climate change mitigation, adaptation and financing. The history of these conferences reflects an evolving understanding of the challenges posed by climate change and the need for coordinated global action. For the Mediterranean region, the outcomes of COPs, from early negotiations to the landmark Paris Agreement, have had significant implications, given the region's unique vulnerability to rising temperatures, water scarcity and biodiversity loss.

EARLY COPs AND THE KYOTO PROTOCOL

The early COP conferences, beginning with COP1 in Berlin in 1995, focused primarily on establishing a global framework to combat climate change. These early efforts culminated in the adoption of the **Kyoto Protocol** at COP3 in 1997. The Kyoto Protocol was the first international treaty to set legally binding targets for reducing greenhouse gas emissions for developed countries. Although the Kyoto Protocol was a critical milestone in global climate policy, its impact on the Mediterranean was more indirect, as it did not establish region-specific initiatives. However, the protocol laid the groundwork for future climate actions that would later be relevant to Mediterranean countries. By targeting emission reductions in industrialised nations, the Kyoto Protocol marked a shift towards more concrete commitments, setting a precedent for the ambitious goals that would follow in later COPs.

As the **science of climate change** advanced, so did the scope of the COP negotiations. In the early 2000s, COPs began addressing the need for adaptation measures alongside mitigation. While the focus initially remained on reducing emissions, it became clear that vulnerable regions, including the Mediterranean, would require support to adapt to the unavoidable impacts of climate change. This growing awareness laid the foundation for discussions on climate finance, technology transfer and capacity-building — key issues for countries in the Mediterranean basin, many of which face economic and technical barriers to implementing climate solutions.

THE PARIS AGREEMENT (COP21)

The Paris Agreement, adopted at COP21 in 2015, represented a transformative moment in international climate governance. For the first time, the agreement brought both developed and developing countries into a shared framework for climate action, marking a shift towards a more inclusive and equitable approach to addressing global warming. The Paris Agreement's overarching goal is to **limit global temperature rise to well below 2°C**, with efforts to limit the increase to 1.5°C. This goal is particularly relevant to the Mediterranean region, where even a 2°C rise in global temperatures would have devastating consequences, including more frequent heatwaves, droughts and loss of biodiversity.

The significance of the Paris Agreement for the Mediterranean lies in its emphasis on both **mitigation and adaptation**. The agreement recognises the urgent need to enhance adaptive capacities in vulnerable regions, a crucial point for Mediterranean countries that are already experiencing the tangible effects of climate change. The inclusion of mechanisms for climate finance, technology transfer and capacity-building in the Paris Agreement is also critical for Mediterranean nations. These mechanisms aim to support countries in implementing their **Nationally Determined Contributions (NDCs)** and strengthening their resilience to climate impacts. For Mediterranean countries, many of which face significant socio-economic challenges, access to these resources is essential for addressing the impacts of rising temperatures, water shortages and coastal erosion.

NATIONALLY DETERMINED CONTRIBUTIONS IN MEDITERRANEAN COUNTRIES

The **Nationally Determined Contributions (NDCs)** of Mediterranean countries, which are each country's climate action plans under the **Paris Agreement**, outlining their targets for reducing emissions and adapting to climate impacts, reflect the diverse socio-economic and environmental challenges of the region, with the Mediterranean basin identified as one of the world's most climate-impacted areas. **Southern and Eastern Mediterranean (SEMed)** countries, including **Egypt, Morocco, and Tunisia**, emphasise adaptation in their NDCs, focusing on mitigating critical issues like water scarcity and droughts and reducing fossil fuel reliance by developing renewable energy sources.¹³

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Despite some progress, including the increase in climate ambitions and the adoption of concrete plans, among others, updating NDCs remains complex. Many SEMed countries face **technical and financial challenges** that limit their capacity to set and pursue ambitious targets. The United Nations Environment Program (UNEP) **Gap Reports** indicate that despite increased climate ambitions, current commitments in many Mediterranean countries fall short of the emissions reductions needed to meet the Paris Agreement's +1.5°C goal.

In the SEMed region, countries such as **Egypt, Turkey and Algeria** are heavily **reliant on fossil fuels** and many lack the resources to rapidly shift to renewable energy or implement large-scale emissions-reduction projects. Additionally, **rapid urbanisation and high population density** along coastal zones in these countries exacerbate vulnerabilities to climate impacts, including sea-level rise and extreme weather events, which already threaten infrastructure, agriculture, and water supplies. While some nations, like **Morocco**, have made progress with significant renewable energy investments (notably in solar and wind projects), the pace of transition remains slow across the region. Without stronger, financially backed commitments, the SEMed region risks facing temperature increases and climate impacts that could severely disrupt ecosystems, economies, and communities. This underscores the need for stronger commitments, as the Mediterranean basin is already experiencing intensified warming and climate impacts.

Since **COP26 in Glasgow**, some Mediterranean countries, including **Morocco**, have sought to strengthen their commitments by raising mitigation targets and integrating more robust adaptation strategies, such as

¹³ Regional-analysis-on-NDCs-in-the-SEMed-region.pdf, p. 35.

sustainable water management and climate-resilient agriculture.¹⁴ However, for most SEMed countries, realising these goals requires substantial international support. Greater **access to financing and technical resources** will be essential for the Mediterranean countries to advance their NDCs, mitigate their carbon footprints, and adapt to the severe impacts of climate change, contributing more effectively to global climate goals.

CLIMATE FINANCE IN THE MEDITERRANEAN

The Mediterranean region has benefited from the global **climate finance** mechanisms established through the COPs. The **Green Climate Fund** (GCF), created at COP16 in 2010, and the **Adaptation Fund**, established under the **Kyoto Protocol**, have both played important roles in financing climate adaptation and mitigation projects in Mediterranean countries. These funds are particularly important for the region's southern and eastern nations, which face significant economic and technical challenges in addressing climate change even if they are far from sufficient. Through the GCF and Adaptation Fund, among other funding sources, Mediterranean countries have been able to secure financial support for projects aimed at enhancing water management, protecting coastal infrastructure, and promoting renewable energy. Although the available funding is often inadequate, these financial mechanisms enable the initiation of vital projects through co-financing strategies involving various stakeholders.

In 2018 (last year reported the UfM climate finance report¹⁵), **financial commitments for climate action** directed to **Southern and Eastern Mediterranean** (SEMed) countries totaled **USD 6.95 billion**, accounting for **9.7% of the global climate finance flows**. This marks a decrease from 2017, when SEMed countries received 12% of total climate finance. Comparatively, the overall international public climate finance provided the **OECD Development Assistance Committee** (DAC) members toward the global USD 100 billion pledge amounted to USD 71.95 billion in 2018. This amount continues to grow, as developed countries provided and mobilised USD 115.9 billion in climate financing for developing countries in 2022, exceeding the annual target of USD 100 billion for the first time and reaching a level not expected until 2025.¹⁶ This shows that while SEMed countries are significant recipients, their share of climate finance flows is diminishing relative to global commitments, highlighting a **potential gap** in support for addressing the unique climate challenges in the Mediterranean region.¹⁷

Moreover, the Southern Mediterranean countries - Morocco (USD 774.8 million), Tunisia (USD 49.0 million), Algeria (USD 8.4 million), Libya (USD 8.3 million), and Egypt (USD 448.5 million) - received a total of **USD 1.29 billion** in **funding** from multilateral climate change funds as per end of 2023.¹⁸ These amounts represent approved projects supporting specific climate initiatives in each of these countries, 70% focused on Mitigation and (only) 21% on Adaptation.

¹⁴ Promoting Climate Resilient Irrigation in Morocco (World Bank)

¹⁵ Climate Finance Flows in SEMed Region (UfM, 2018), p. 23.

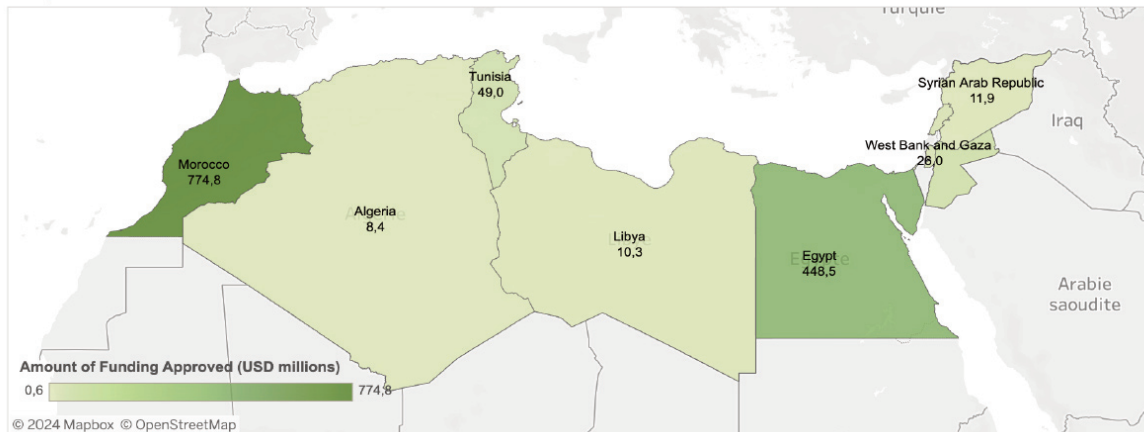
¹⁶ Developed countries materially surpassed their USD 100 billion climate finance commitment in 2022 - OECD

¹⁷ Highlighting MENAs climate finance challenge (SMRG, 2023)

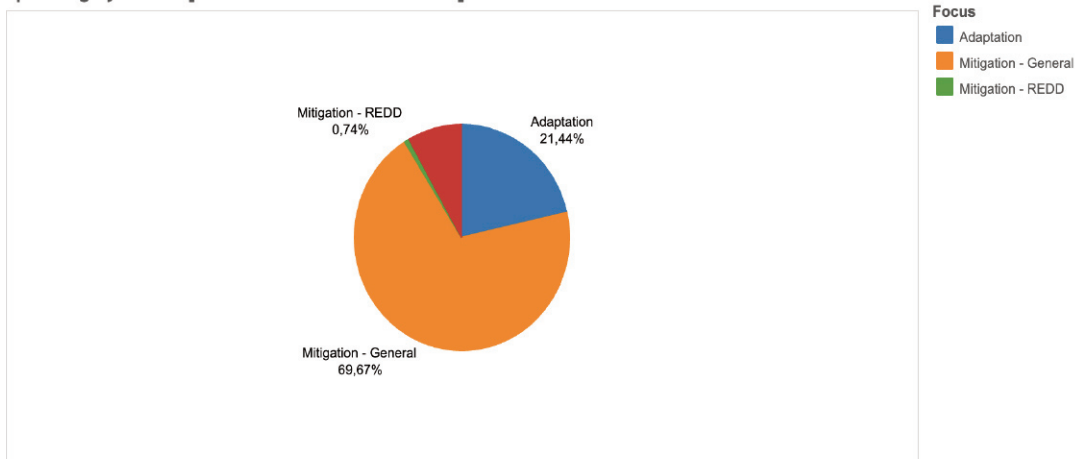
¹⁸ Climate Funds (ODI, 2024)

Cumulative amount of project approvals by multilateral climate change funds in selected countries (as per end of December 2023)

Recipient countries in the Middle East and North Africa



Spending by theme [Middle East and North Africa]



Source: Climate Funds (ODI, 2024)

As an example of a project financed by Climate funds, the **Moroccan Saïss Plain**¹⁹ project aimed at enhancing the climatic resilience of agricultural systems required multiple funding sources, including an European Bank for Reconstruction and Development (EBRD) loan of USD 139 million, a state grant budget of USD 62 million from the Kingdom of Morocco, Green Climate Fund (GCF) of USD 33 million. This ambitious project, costing approximately €309 million, aims to provide drinking water to 2.3 million people and irrigation for 13,600 hectares of farmland. It underscores how the GCF and Adaptation Fund catalyse essential climate initiatives despite their limitations.

¹⁹ FS-WEB-EN.pdf, p. 21.

POLICY IMPACTS IN THE MEDITERRANEAN

In recent years, **COP decisions** have increasingly recognized the importance of addressing the unique vulnerabilities of regions facing significant climate challenges, including those with shared seas and interdependent ecosystems. For example, at **COP24** in Katowice, Poland, various countries engaged in discussions about the need for stronger **regional cooperation on climate adaptation**. These discussions contributed to initiatives aimed at enhancing **cross-border collaboration** on issues like water resource management and climate-resilient agriculture. Regions with interconnected ecosystems, such as the Mediterranean, require a coordinated approach to addressing these challenges, and COPs continue to serve as a critical platform for advancing such regional collaborations.

At **COP24** in **Katowice**, Poland, alongside the formal discussions, a key side-event entitled “*A science-policy interface on risks of climate and environmental change in the Mediterranean region*”²⁰ was organised by the Secretariat of the **Union for the Mediterranean** (UfM) in collaboration with partners, including the **UN Environment Mediterranean Action Plan** (UNEP/MAP) through **Plan Bleu** Regional Activity Centre and **MedECC** (the network of Mediterranean Experts on Climate and Environmental Change). Held on 13 December at the **Moroccan Pavilion**, this event featured contributions from **MedECC** Steering Committee members.²¹ This side-event provided a platform for scientists and stakeholders to address the unique vulnerabilities of the Mediterranean, focusing on building resilience to climate change. During the event, the MedECC booklet outlining climate and environmental challenges in the region was distributed, and the MedECC's role as a scientific platform essential for informing stakeholders on regional climate issues was presented.

Moreover, since **COP24** in Katowice, subsequent **Conferences of the Parties** have produced several key decisions that shape climate governance and establish new support mechanisms for vulnerable regions, including the Mediterranean. **COP24** marked the adoption of the **Paris Rulebook**, providing clear implementation guidelines for the Paris Agreement, particularly regarding transparency and accountability for national contributions. This framework benefits Mediterranean countries by enabling coordinated efforts and aligning their climate policies with international standards. At **COP26** in **Glasgow**, there was increased pressure to phase out coal and expand climate financing for developing countries. This shift impacts fossil fuel producing Mediterranean countries, such as Algeria and Egypt, by encouraging them to diversify their economies and prepare for a global energy transition. Finally, COP27 in Sharm El-Sheikh represented a significant milestone with the establishment of a Loss and Damage Fund, a crucial measure for climate justice that holds particular importance for Southern Mediterranean nations facing severe and often irreversible climate impacts, such as coastal erosion and desertification. This fund provides the region with essential support to address economic and social repercussions of extreme climate events, helping to build resilience among affected populations.

²⁰ Événement parallèle - COP24 : Une interface science-politique sur les risques de changement climatique et environnemental dans la région méditerranéenne - Plan-bleu : Environnement et développement en Méditerranée

²¹ Joel Guiot (Coordinator, Air-Climat, CNRS, France), Maria Snoussi (Mohamed V University, Morocco) and Manfred Lange (The Cyprus Institute)

IMPLICATIONS FOR FOSSIL FUEL-DEPENDANT MEDITERRANEAN COUNTRIES

Recent COP decisions have varying implications for Mediterranean countries, depending on their economic structure, development priorities, and vulnerability to climate impacts. For fossil fuel producing countries like **Algeria** and **Egypt**, the international commitments to decarbonisation are increasing the pressure to diversify income sources and invest in sustainable sectors. Recent COPs have underscored financing mechanisms to support energy transitions, offering these countries an opportunity to fund renewable energy projects and reduce their dependence on fossil fuels. Simultaneously, less developed Mediterranean countries, such as **Lebanon** and **Morocco**, rely heavily on adaptation financing mechanisms like the **Green Climate Fund** and the **Adaptation Fund** to address immediate challenges posed by droughts, rising sea levels and biodiversity loss. However, accessing these funds often remains challenging due to administrative and technical barriers that limit their capacity to submit and manage complex, large-scale projects.

Furthermore, the **Paris Agreement's** emphasis on **technology transfer** has significant implications for the Mediterranean, particularly in sectors such as **renewable energy**. The Mediterranean is rich in solar and wind resources, and several COP decisions have highlighted the importance of facilitating the transfer of clean energy technologies to the region. Through initiatives such as the **Technology Mechanism**, established at **COP16**, Mediterranean countries have gained access to technological support for transitioning to low-carbon economies. This is particularly important for countries in the Southern Mediterranean, where economic constraints often limit the ability to invest in new technologies.

COPS HOSTED IN MEDITERRANEAN COUNTRIES

The impact of COPs has been notably pronounced in Mediterranean host countries, such as **Morocco** during COP22 in 2016 and **Egypt** during COP27 in 2022. These conferences not only highlighted the region's vulnerabilities and the urgent need for action but also served as a platform for launching initiatives specifically tailored to Mediterranean challenges.

At **COP22** in Marrakech, **Morocco** took centre stage, emphasising the importance of climate adaptation strategies tailored to the region's unique context. The conference facilitated dialogues on the creation of the **Marrakech Partnership for Global Climate Action**, which aims to promote collaborative action between governments and non-state actors in climate mitigation and adaptation.

Similarly, **COP27**, held in Sharm El-Sheikh, **Egypt**, further advanced the Mediterranean agenda by focusing on the necessity for comprehensive climate action and adaptation strategies. One significant outcome was the establishment of the **Mediterranean Pavilion**,²² which debuted at COP27 as a dedicated space for Mediterranean countries to showcase their climate initiatives, share best practices, and foster collaborative projects aimed at addressing the region's specific climate challenges. The Pavilion facilitates a platform for dialogue among stakeholders, amplifying the voices of Mediterranean nations in global climate discussions.

²² Mediterranean Pavilion



OTHER REGIONAL FRAMEWORKS

Several COP decisions have had direct implications for the Mediterranean region, shaping the development of climate policies and initiatives aimed at addressing its specific challenges. One of the most important initiatives for the Mediterranean is the **Barcelona Convention** and its associated **Mediterranean Action Plan (MAP)**. While not directly part of the UNFCCC process, the Barcelona Convention has been heavily influenced by the global climate agenda, particularly as the impacts of climate change on the Mediterranean have become more evident. The Mediterranean Action Plan, launched in 1975, was the first regional seas program under the **United Nations Environment Programme (UNEP)**. Its goal is to protect the Mediterranean marine and coastal environment while promoting sustainable development in the region.

In addition, the **Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025** has set clear objectives for climate change mitigation and adaptation, emphasising the need for integrated approaches to address environmental challenges across the region. This strategy complements the goals of the Barcelona Convention by providing a framework for sustainable development that incorporates climate action. Moreover,

a significant step was taken at the COP23, where the Barcelona Convention adopted a decision to establish a **Regional Activity Centre (RAC)** on Climate Change in Turkey. This initiative aims to enhance regional cooperation and facilitate the implementation of climate change adaptation measures specifically tailored to the Mediterranean context. The combination of the MSSD, the RAC and ongoing commitments under the Barcelona Convention demonstrates a concerted effort to align regional policies with global climate goals, fostering resilience and sustainable development throughout the Mediterranean.

In the context of climate change, the **Barcelona Convention** has focused on mitigating the impacts of rising sea levels, coastal erosion and the degradation of marine ecosystems. Over time, the convention has increasingly aligned its objectives with the outcomes of the COPs, particularly regarding climate adaptation and resilience. For instance, the convention's **Integrated Coastal Zone Management (ICZM)** Protocol, adopted in 2008, reflects global efforts to integrate climate adaptation into coastal management strategies.

The UfM also plays a crucial role in addressing climate change and promoting sustainable development across the Mediterranean region. Established in 2008, the UfM brings together 42 countries, fostering dialogue and cooperation among European and Mediterranean partners. Its climate initiatives focus on creating a comprehensive framework for addressing environmental challenges, including climate adaptation, renewable energy and sustainable resource management. One of the UfM's key projects is the Mediterranean Solar Plan,²³ which aims to harness solar energy potential in the region, promoting clean energy solutions while addressing energy security and climate change mitigation.

Additionally, the UfM has initiated various projects to enhance resilience to climate impacts, particularly through its Climate Action Agenda. This agenda aims to develop collaborative strategies that support national and regional policies, focusing on water management, coastal zone protection and disaster risk reduction. By aligning with global climate frameworks, including the Paris Agreement, the UfM seeks to ensure that Mediterranean countries are equipped to tackle climate-related challenges effectively.

In addition to the international frameworks provided by the COPs, various subnational and bilateral initiatives have emerged to address climate change in the Mediterranean region. One prominent example is the **Mediterranean Conference of Local and Regional Authorities on Climate Change**²⁴ (MedCOP). Established in response to the need for local and regional governance in climate action, MedCOP provides a platform for stakeholders to share their experiences, strategies and challenges in implementing climate actions. This initiative promotes localised approaches to climate change, recognising that effective solutions often originate at the community level.

²³ Fiche-projet_ENE_MSP.pdf

²⁴ MedCOP



Another initiative, the **Mediterranean Climate Action Plan**²⁵ (MedCAP), focuses on fostering climate resilience and sustainable development in the Mediterranean. MedCAP aims to enhance collaboration among Mediterranean countries and partners to develop and implement climate action plans that are responsive to the region's specific needs. By addressing issues such as renewable energy, sustainable agriculture and water management, MedCAP complements the broader efforts undertaken at the COPs, ensuring that regional voices are heard and prioritised in the global climate discourse.

REMAINING POLICY CHALLENGES

Despite these advances, progress in addressing the Mediterranean's climate challenges has been uneven. While some countries have made significant strides in reducing emissions and implementing adaptation measures, others have faced setbacks due to political instability, economic constraints or insufficient international support. The region's complex geopolitical landscape, characterised by both cooperation and conflict, has sometimes hindered the ability to implement COP decisions effectively. For instance, while countries such as **Morocco**²⁶ and **Tunisia** have taken proactive steps to integrate climate considerations into their national policies, others have struggled to meet their climate commitments due to internal conflicts or economic hardship.

The evolution of the COP process has thus been marked by both progress and setbacks. While the Paris Agreement and subsequent COP decisions have created a framework for more ambitious climate action, the implementation of these commitments remains a significant challenge, particularly for Mediterranean countries facing socio-economic and political difficulties. The region's experience reflects the broader global struggle to balance the need for rapid emission reductions with the realities of economic development and political stability²⁷.

Looking forward, the role of the COPs in addressing the Mediterranean's climate challenges will be increasingly important. The region's unique vulnerabilities require tailored solutions that address both mitigation and adaptation, with a particular focus on building resilience to the impacts of rising temperatures, water

²⁵ Mediterranean Climate Action Partnership

²⁶ For example, the Noor Ouarzazate Solar Complex in Morocco is one of the largest solar power plants in the world, capable of providing clean electricity to over a million people. Comprising several plants that use different solar technologies, it exemplifies Morocco's commitment to transitioning to a low-carbon economy.

²⁷ Cf. Webinar: "What are MENA countries' priorities for climate action and COP?", CHATHAM HOUSE (24/10/24).

scarcity and biodiversity loss. As the COP process continues to evolve, Mediterranean countries will need to engage proactively in global climate negotiations, advocating for greater international support and cooperation to address their specific needs. The future success of the COPs in the Mediterranean will depend on the ability of the international community to provide the necessary financial, technical and political resources to support the region's transition to a more climate-resilient future.

Although the Mediterranean is a coherent climatic, cultural and geographic region, it is not recognised as a **unified regional entity** in international climate negotiations. This **lack of political recognition** limits opportunities for coordinated efforts and joint funding for cross-border projects, particularly those focused on water resource management and the protection of marine ecosystems. Mediterranean countries are divided into **various negotiation groups**, which complicates the development of a unified regional position. The **Arab Group**, which includes most Southern Mediterranean countries, prioritises issues such as water management and adaptation to arid conditions. The **European Union** plays a leading role in reducing emissions and funding climate projects, significantly influencing regional climate policies. The **Like-Minded Developing Countries** group, including Algeria, Egypt and Jordan, advocates for an equitable distribution of climate responsibilities and enhanced support for development needs. Finally, the **Organization of the Petroleum Exporting Countries (OPEC)** group, with fossil fuel producers like Algeria, is impacted by decisions aimed at reducing global emissions, while pushing for sufficient support in transitioning to sustainable energy.

The upcoming **COP29** in **Baku** presents an important opportunity for Mediterranean countries to advocate for their climate priorities, particularly in areas such as climate finance and resilience to the growing impacts of climate change. Discussions at COP29 are expected to focus on critical issues like funding for loss and damage, adaptation, and capacity building, with significant implications for Southern Mediterranean nations. Additionally, the **Mediterranean Pavilion**, established at **COP27**, has become a key platform for dialogue and visibility on the region's specific climate challenges. It facilitates cooperation among countries in the UfM, promotes the sharing of regional initiatives and innovative solutions, and strengthens efforts for coordinated and harmonised climate action. The Pavilion also serves as a platform to promote international partnerships for financing projects and providing technical support, helping to address the unique climate challenges faced by the Mediterranean region.

Paris Agreement Implications for the Mediterranean

Since the adoption of the Paris Agreement at COP21, significant decisions have been made to address climate change globally, with particular relevance to the Mediterranean region. As a region highly vulnerable to the impacts of climate change — facing rising temperatures, water scarcity and sea-level rise — these decisions have had wide-reaching implications for both mitigation and adaptation strategies. This section examines the key developments and agreements since COP21 and their specific influence on Mediterranean countries, assessing the successes and challenges encountered in translating global climate commitments into regional and national action.

MITIGATION AND ADAPTATION

One of the central tenets of the Paris Agreement is the commitment to limit global warming to well below 2°C, with efforts to keep it to 1.5°C above pre-industrial levels. For the Mediterranean, where warming is occurring at a faster rate than the global average, this target is particularly crucial. A rise beyond 2°C would bring catastrophic consequences, including more frequent and severe heatwaves, further reductions in water availability, and significant threats to biodiversity and food security. In the wake of COP21, Mediterranean countries have increasingly integrated this global goal into their national climate strategies, placing a strong emphasis on both mitigation—reducing emissions — and adaptation — enhancing resilience to the inevitable impacts of climate change.

In terms of **mitigation**, several Mediterranean countries have made commendable strides in reducing greenhouse gas emissions through the development of renewable energy projects. **Solar and wind power** have become pivotal in the region's energy transition, particularly in countries like Morocco, Tunisia, Spain and Greece. Morocco, for instance, has emerged as a leader in solar energy with the establishment of the **Noor Solar Complex**,²⁸ one of the largest concentrated solar power plants in the world. This project not only contributes to significant reductions in carbon emissions but also serves as a model for other Mediterranean nations seeking to transition away from fossil fuels. Spain and Greece have similarly advanced their renewable energy portfolios, with significant investments in wind power and a growing share of their energy mix coming from clean sources. These efforts demonstrate how post-COP21 decisions, emphasising the importance of renewable energy, are being actively implemented in the Mediterranean, reducing dependency on coal, oil and gas.

However, despite these positive developments, the progress on emissions reductions has been uneven across the region. Many Mediterranean countries, particularly in North Africa and the Eastern Mediterranean, continue to face significant challenges in transitioning to a low-carbon economy. These challenges are often related

²⁸ Noor Ouarzazate Solar Complex, Morocco

to **economic constraints**, as the upfront costs of renewable energy infrastructure remain high, and many countries lack the financial resources needed for large-scale projects. Furthermore, existing energy systems in these countries are often outdated, making the shift to modern, efficient energy grids a complex and expensive process. These financial and technical barriers have slowed the pace of mitigation efforts in some areas, even as the need for action grows more urgent. On the other hand, in many **Middle East and North Africa (MENA)** countries, extensive subsidies make fossil fuels more affordable, reinforcing dependence on these resources. This structure, which subsidised fossil fuels by over USD 1 trillion globally in 2022, is a significant obstacle to clean energy investments, which receive minimal support in comparison²⁹. For example, in the Middle East, only about 15% of total energy investments go toward renewables. Reducing these subsidies would alleviate fiscal pressures and help accelerate the clean energy transition, but governments must ensure protective measures for vulnerable populations during this shift.³⁰

On the **adaptation** side, Mediterranean countries have focused extensively on building resilience to the region's specific vulnerabilities, particularly in relation to water scarcity and coastal protection. Water management has emerged as a critical priority, as the region faces declining rainfall and increasing droughts. In response, several countries have implemented advanced irrigation systems to enhance water efficiency in agriculture, which is one of the most climate-sensitive sectors. Countries such as Israel, which has pioneered drip irrigation and other water-saving technologies, offer valuable lessons in managing scarce water resources. Additionally, the expansion of desalination plants in water-stressed countries like Algeria and Spain represents a direct response to the growing risk of water shortages exacerbated by climate change. These adaptation measures, supported by post-COP21 climate finance mechanisms, demonstrate how global decisions are being translated into concrete actions to protect critical sectors from the worst impacts of climate change.

Coastal adaptation has also become a significant area of focus for Mediterranean countries, as rising sea levels and coastal erosion threaten densely populated coastal zones. Many countries, particularly those with tourism-dependent economies, have initiated large-scale projects aimed at protecting coastal infrastructure from storm surges, flooding and erosion. Nature-based solutions, such as restoring wetlands and building natural barriers, are increasingly being used as part of coastal defence strategies. These approaches not only provide protection against climate impacts but also help preserve the biodiversity of coastal ecosystems, which are under threat from both warming seas and human activities. Countries such as Italy and Tunisia have been particularly active in implementing coastal adaptation measures, with international support through funding mechanisms like the Green Climate Fund.

FINANCE AND TECHNOLOGY

However, the availability of climate finance remains a critical issue for many Mediterranean countries, especially in the southern and eastern parts of the region. The **Green Climate Fund (GCF)** and other financial

²⁹ Fossil Fuel Subsidies Surged to Record \$7 Trillion

³⁰ Fossil Fuel Subsidies – Topics - IEA

mechanisms established under the Paris Agreement have provided valuable resources for climate adaptation and mitigation projects, but there are still significant gaps in funding. Large-scale infrastructure projects, particularly those needed to protect against sea-level rise and ensure water security, often require more financial investment than is currently available. For lower-income Mediterranean countries, accessing this funding can be challenging due to bureaucratic hurdles, insufficient project planning, or a lack of institutional capacity to manage and implement large-scale climate investments. These financial shortfalls are further exacerbated by the high costs of adaptation, particularly in sectors like agriculture and coastal management, where the impacts of climate change are already being felt acutely.

In addition to financial barriers, **technology transfer** remains an essential component of post-COP21 decisions. Mediterranean countries, particularly those in North Africa and the Middle East, often lack access to the advanced technologies needed to effectively combat climate change. Technology transfer agreements, facilitated by COP decisions, have aimed to bridge this gap by enabling the transfer of renewable energy technologies, water management systems, and climate-resilient agricultural practices from developed to developing countries. However, the rate of technology transfer has been slower than anticipated, with many countries in the region lacking the infrastructure, expertise or regulatory frameworks necessary to adopt and implement these technologies on a large scale. This has led to a significant **adaptation gap**, where countries that are unable to access modern technologies remain disproportionately vulnerable to the impacts of climate change.

CHALLENGES IN IMPLEMENTATION

Another significant challenge in implementing post-COP21 decisions in the Mediterranean is the region's **political and institutional landscape**. Political instability in parts of North Africa and the Middle East has hindered the effective translation of global climate commitments into concrete national actions. In countries experiencing conflict or economic turmoil, climate action is often deprioritised in favour of more immediate security or development concerns. This has created disparities in the level of progress achieved across the region, with some countries making substantial advancements in climate policy and others lagging behind. In addition, **institutional capacity** remains a significant barrier in many countries. Governments often lack the technical expertise or administrative structures required to effectively design, execute, and monitor climate-related projects. Strengthening these institutions and building capacity at the national and regional levels will be essential for the successful implementation of climate commitments moving forward.

The fragmented nature of **regional cooperation** has also posed challenges. The Mediterranean is a region of significant political, economic and cultural diversity, and coordinating climate action across borders has proven difficult. While regional organisations such as the UfM have made efforts to promote cooperative initiatives, the region's countries often pursue disparate climate agendas. This lack of cohesion hinders the development of comprehensive, cross-border strategies that are crucial for addressing shared climate risks, such as water scarcity in transboundary river basins or coastal erosion affecting multiple nations. Enhanced regional cooperation, supported by frameworks established under the Paris Agreement, will be necessary to ensure that Mediterranean countries can collectively address the climate challenges they face.

Despite these challenges, there have been notable success stories in the Mediterranean that illustrate the potential for translating COP decisions into effective climate action. **Morocco's** renewable energy sector, for example, has rapidly expanded in the wake of COP21, making the country a leader in the region's energy transition. Similarly, countries such as Greece and Spain have implemented ambitious programmes to enhance climate resilience, focusing on disaster risk reduction, forest fire prevention, and the restoration of ecosystems. These successes underscore the importance of strong political commitment, innovative financing, and regional collaboration in overcoming the obstacles to climate action in the Mediterranean.

In conclusion, while the decisions made since UNFCCC COP21 have provided a vital framework for addressing the Mediterranean's climate challenges, significant gaps remain in translating these commitments into concrete, effective action. Addressing these challenges will require a combination of enhanced financial and technical support, stronger institutional frameworks, and increased political will. Only through sustained and coordinated efforts can the Mediterranean region effectively adapt to the changing climate and build a resilient future for its people and ecosystems.

Future Outlook and Policy Learnings

The Mediterranean region faces a unique set of challenges when it comes to climate change, and these challenges continue to intensify. While progress has been made in addressing some of these issues, such as the development of renewable energy and adaptation projects, the region is still at a critical juncture. The impacts of climate change in the Mediterranean are becoming more severe, and the pace of action to mitigate these impacts must be accelerated if the region is to avoid significant environmental, social and economic disruption.

The Mediterranean has long been identified as a **climate change hotspot**, warming at a rate faster than the global average. In the decades ahead, the region is projected to experience more frequent and intense heatwaves, extended periods of drought and severe water shortages. These environmental changes not only threaten the ecosystems that support Mediterranean life but also place immense stress on agricultural production, water resources and public health systems. The rising temperatures are likely to reduce agricultural productivity across the region, particularly in Southern Mediterranean countries that rely on climate-sensitive crops such as olives, grapes and citrus. The prospect of prolonged droughts also puts pressure on freshwater supplies, potentially causing conflicts over water access, especially in areas where resources are already scarce.

In addition to these environmental impacts, the **social and economic consequences** of climate change in the Mediterranean are profound. As the region faces more frequent extreme weather events, including floods and heatwaves, the cost of rebuilding infrastructure and recovering from disasters will strain public resources. This will disproportionately affect **vulnerable communities**, particularly in countries with weaker governance structures and limited financial capacity. Without coordinated efforts to improve resilience and adaptation, the social fabric of many Mediterranean countries could be severely tested, leading to increased migration and political instability.

This escalating risk underscores the urgency of addressing climate change in the Mediterranean. While countries in the region have made strides in advancing climate policies and integrating sustainability goals into their national agendas, there are still considerable gaps that need to be filled. The economic cost of inaction could far outweigh the investments required to mitigate climate change and build resilience. The region must prioritise climate action not just as an environmental necessity but also as an essential pillar of economic stability and social wellbeing.

STRENGTHENING REGIONAL COOPERATION

One of the key challenges facing Mediterranean countries is the need for stronger regional cooperation. The Mediterranean is an inherently interconnected region, with shared ecosystems, economies and resources that

transcend national borders. Coastal erosion, for example, does not stop at a country's borders, and neither does water scarcity or desertification. Therefore, individual nations acting in isolation cannot adequately address the challenges that affect the region as a whole. Cooperation is critical in areas such as transboundary water management, where several river basins and aquifers are shared by multiple countries. Initiatives that focus on the sustainable management of these shared resources will be crucial in the years ahead. Furthermore, regional cooperation can help improve data collection, climate research and early warning systems, which are essential for making informed decisions and preparing for future climate risks.

Strengthening regional institutions is another essential step. Organisations such as the UfM and the **Barcelona Convention** have already laid important groundwork for regional climate governance, but their capacities need to be expanded. These bodies should play a more active role in fostering joint climate action, coordinating adaptation strategies, and ensuring that all Mediterranean countries are working toward common climate goals. One of the major obstacles to this kind of coordinated action is the wide disparity in economic development and institutional capacity between northern and Southern Mediterranean countries. Wealthier nations, particularly in Southern Europe, have more advanced technologies, stronger institutions, and greater access to international climate finance, allowing them to implement more robust climate policies. In contrast, many countries in North Africa and the Middle East struggle with limited resources, political instability and weak governance, which severely hampers their ability to respond to climate challenges.

SCALING UP CLIMATE FINANCE

To overcome these obstacles, there must be a concerted effort to scale up climate finance for the Mediterranean region. Although international funds such as the **Green Climate Fund** and the **Adaptation Fund** have provided valuable support, they have not been sufficient to meet the scale of the region's needs. Access to climate finance is particularly critical for Southern Mediterranean countries, which often lack the financial means to invest in large-scale climate projects. These countries are facing an urgent need for infrastructure upgrades to cope with rising temperatures, drought and sea-level rise. More international assistance is needed to finance climate-resilient projects, particularly in vulnerable sectors such as agriculture, water management and coastal protection. Additionally, private sector investment must be mobilised to complement public funding, with innovative financing mechanisms such as green bonds and blended finance playing a key role in unlocking new sources of capital.

To address these challenges fully, it is also essential to consider the issue of **Loss and Damage** (L&D), especially as the Mediterranean region faces increasingly severe climate impacts that threaten both economies and communities. Loss and Damage, as recognised under the UN Framework Convention on Climate Change, refers to the irreversible impacts of climate change that go beyond the scope of adaptation efforts. In Southern Mediterranean countries, where economic and infrastructural vulnerabilities are high, climate-induced L&D is already evident in the form of reduced agricultural yields, biodiversity loss and displacement due to extreme weather events.

However, funding dedicated to L&D remains limited and often falls short of addressing the scale of these impacts. Establishing a more robust L&D financing framework would help countries in the region recover from climate-related losses and support long-term resilience. Additionally, the implementation of financial tools like **insurance mechanisms** and **risk-sharing funds** could mitigate economic shocks for communities most affected by climate change. Mobilising support for L&D alongside adaptation and mitigation finance would provide a more comprehensive response to the climate crisis in the Mediterranean, particularly for the most vulnerable populations and sectors.

ADDRESSING INSTITUTIONAL AND CAPACITY GAPS

One of the most effective ways to ensure long-term sustainability is through technology transfer and capacity-building. Many Mediterranean countries are struggling to implement advanced climate mitigation and adaptation technologies due to a lack of technical expertise and institutional capacity. **Building local capacities** to manage and deploy these technologies is essential. Investing in education and training for climate professionals, policy-makers and engineers will help ensure that countries are better equipped to implement climate solutions. Moreover, **improving governance structures and institutional frameworks** will enable countries to create and enforce climate policies more effectively. This includes integrating climate action into broader development strategies to ensure that climate considerations are not sidelined in favour of short-term economic gains.

Another key aspect of future climate action in the Mediterranean involves improving resilience to the impacts that are already being felt. **Adaptation strategies** must be tailored to the unique challenges of each region, whether it is managing water scarcity in North Africa or protecting coastal infrastructure in Southern Europe. Building climate resilience requires not only physical infrastructure investments, such as flood defences and drought-resistant crops, but also enhancing natural systems that can provide ecosystem-based solutions. For example, restoring wetlands and forests can help absorb excess floodwaters and provide natural buffers against storm surges. These nature-based solutions are often more cost-effective and sustainable than traditional engineered approaches.

At the national and local levels, Mediterranean governments must prioritise **resilience planning** by strengthening **early warning systems** and **disaster preparedness**. The ability to predict and respond to extreme weather events will be critical in mitigating the human and economic toll of climate disasters. Additionally, local communities need to be empowered to participate in resilience-building efforts. Inclusive approaches that involve all stakeholders, particularly those most vulnerable to climate impacts, will help ensure that adaptation measures are effective and equitable.

In conclusion, the future of the Mediterranean depends on urgent and sustained climate action. The challenges are immense, but the consequences of inaction are far greater. Mediterranean countries must come together to address their shared vulnerabilities, leveraging regional cooperation, financial support and technological innovation to build a more sustainable and climate-resilient future. By scaling up efforts at the local, national and international levels, the region can avoid the worst impacts of climate change and create a pathway toward a more secure and prosperous future for all its inhabitants.

Conclusion

The Mediterranean region is facing a pivotal moment in its history, with climate change presenting an existential threat that demands immediate and coordinated action. This region, known for its unique biodiversity, rich cultural heritage and economic activities reliant on agriculture, fisheries and tourism, is now confronting unprecedented environmental challenges. Rising temperatures, prolonged heatwaves, severe water scarcity and the degradation of both marine and terrestrial ecosystems are rapidly transforming the Mediterranean landscape. These changes are not occurring in isolation but are deeply interconnected, with cascading effects that exacerbate social, economic and political instability. As such, addressing climate change in this region is not merely a matter of environmental stewardship, but one of safeguarding livelihoods, protecting vulnerable communities and preserving regional stability.

Despite the progress made through the COP process, the Mediterranean continues to face significant hurdles in implementing climate action. While global frameworks provide the overarching guidelines, the success of these initiatives depends largely on the ability of countries to translate them into concrete actions at the local, national and regional levels. In the Mediterranean, this has been a complex task. Many countries in the region, particularly those in the Southern and Eastern Mediterranean, face limited financial resources, political instability and institutional capacity gaps that hinder effective climate action. Access to climate finance remains a critical challenge, with many Mediterranean nations struggling to secure the funding necessary for large-scale adaptation and mitigation projects. Additionally, while renewable energy projects have gained momentum in some parts of the region, the deployment of advanced climate technologies has been slower than anticipated, partly due to the lack of infrastructure and expertise required for such initiatives.

Looking ahead, it is clear that the Mediterranean cannot afford to delay climate action. The consequences of inaction are dire: more frequent and severe climate events, further degradation of natural resources, deepening economic instability, and potentially large-scale displacement of populations. The region's vulnerability to climate change makes it imperative that all stakeholders — governments, businesses, civil society and international organisations — commit to sustained and ambitious climate efforts. Local and national governments must prioritise climate adaptation in their development agendas, ensuring that climate resilience is built into all aspects of policy planning, from agriculture to urban development.

At the international level, the Mediterranean can benefit from continued engagement in the COP process, where global commitments can be leveraged to support regional goals. The global community, in turn, has much to learn from the Mediterranean's experiences, as this region represents a microcosm of the broader climate challenges facing many parts of the world. The Mediterranean's ability to adapt to climate change, while maintaining social and political stability, will offer valuable lessons for other regions that are similarly vulnerable.

In conclusion, the Mediterranean's battle against climate change is a critical test for the region's future sustainability. The UN COP conferences have set the stage for global cooperation, and their influence on Mediterranean climate policy is undeniable. However, the real work lies ahead, in the implementation of these policies and the mobilisation of the necessary resources. Continued commitment from all stakeholders, alongside strengthened regional collaboration and enhanced access to climate finance, will be essential to protect this vulnerable region. The Mediterranean must act swiftly and decisively, not only to safeguard its own future but to serve as a model for the world on how to navigate the challenges of climate change and build a more resilient and sustainable future.