

Strategic Sectors | **Economy & Territory**

Mobilizing Private Financing for Climate Adaptation in the Mediterranean Region

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The Mediterranean region faces significant climate change impacts, with temperatures predicted to rise by 1-5 degrees Celsius and average precipitation to decrease by 20 percent by the end of the century.¹ This is projected to lead to more extreme weather events, floods and rising sea levels. The Mediterranean Sea could potentially rise by more than one metre.² Changes are already being witnessed through an increase in extreme forest fires, a shrinking of water supplies and a reduction of rainfed agriculture production.

These human induced changes in the Mediterranean climate are impacting key economic sectors in the region, such as agriculture, water, tourism, fisheries, manufacturing, forestry and energy. Economic losses due to climate change are estimated to be between 1.9 and 4.2% of GDP by 2050 if no adaptive measures are taken.³ Some economic sectors could be impacted more dramatically, like agriculture for example, with physical production volumes dropping by almost 80% by the end of the century.⁴ There is, therefore, an urgent need to accelerate efforts to

adapt to climate change, while maintaining the momentum on curbing GHG emissions, which drive climate change.

Bridging the Finance Gap

In many sectors, measures to adapt to climate change have been identified by governments and documented in their Nationally Determined Contributions (NDCs), agreed by countries under the Paris climate agreement. In general, the costs associated with climate adaptation are estimated to be at least 2.5% of GDP.⁵ With an estimated EUR 9 trillion GDP for all Mediterranean countries, this would amount to EUR 225 billion per year for the entire Mediterranean region.

In 2022, global climate finance reached EUR 1.2 trillion, of which EUR 59 billion was labelled for climate adaptation.⁶ Of these, EUR 1.2 billion flowed to developing countries of the Mediterranean, in particular Morocco, Egypt and Tunisia in the form of debt finance.⁷ This shows that the financing gap for climate adaptation in the Mediterranean is several orders of magnitude. Given the significant sovereign debt most Mediterranean countries have, the gap is unlikely to be closed by national government financing only.

¹ ALI, E.; CRAMER, W.; CARNICER, J.; GEORGOPOULOU, E.; HILMI, N.J.M.; LE COZANNET, G. and LIONELLO, P. "Cross-Chapter Paper 4: Mediterranean Region." in *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. pp. 2233-2272, 2023 doi:10.1017/9781009325844.021.

² *ibid.*

³ GALEOTTI, Marzio. "The Economic Impacts of Climate Change in the Mediterranean." In *IEMed. Mediterranean Yearbook 2020*, Barcelona, IEMed, 2020. www.iemed.org/publication/the-economic-impacts-of-climate-change-in-the-mediterranean/.

⁴ www.taccioire.sua.ac.tz/bitstream/handle/123456789/182/economic%20impact%20of%20cc.pdf?sequence=1&isAllowed=y.

⁵ GLOBAL CENTER ON ADAPTATION (GCA) 2024. *State and Trends in Climate Adaptation Finance 2024*. <https://gca.org/reports/state-and-trends-in-climate-adaptation-finance-2024/>.

⁶ *ibid.*

⁷ GLOBAL CENTER ON ADAPTATION (GCA) 2023. *State and Trends in Climate Adaptation Finance 2023*. https://gca.org/wp-content/uploads/2023/12/State-and-Trends-in-Climate-Adaptation-Finance-2023_WEB.pdf.

Can the Private Sector Step in?

To date, the private sector has financed less than 3% of climate adaptation activities around the world.⁸ About 90% of this finance comes from large corporates and is channelled as grants, primarily to the agriculture sector.⁹ Stepping up private finance is hindered by the perception amongst business owners that private financing of climate adaptation is risky, with investments having less predictable cash-flows and uncertain returns. Moreover, small and medium-sized enterprises (SMEs), which constitute a significant portion of the private sector in the Mediterranean, frequently struggle to access affordable financing in general, let alone for climate adaptation efforts. Another major challenge in mobilizing private sector investment for climate adaptation is the incompatibility of the timescales involved. Companies are guided by the need to secure returns in the foreseeable future. In contrast, the benefits from climate adaptation efforts will often only become visible in the next decades. Hence, businesses are most likely to finance only those climate adaptation investments that bring financial returns in a short to medium time period (less than 10 years).

In many instances, businesses also lack a comprehensive understanding of the risks posed by climate change and the potential benefits of investing in adaptation measures. Many businesses in the Mediterranean still tend to underestimate their exposure to climate risks and related impacts on supply chains and the broader market.¹⁰ To overcome this, businesses will have to become more active in defining, and acting upon, climate hazards, and the exposure and vulnerabilities that are most relevant to them.

Public Finance as a Catalyst

To entice businesses to invest in climate adaptation, concerted efforts are needed from governments and financial institutions to create favourable policies, es-

tablish regulatory frameworks, improve access to finance and foster public-private cooperation. While government financing alone won't be able to fund all climate adaptation needs, governments have a key role to play in mobilizing private finance.

The benefits from climate adaptation efforts will often only become visible in the next decades

A key aspect of this is the role of governments in developing broader sector modernization programmes, in particular in the tourism, agriculture, water, energy and fisheries sectors. By focusing on innovation, entrepreneurship and strengthening value chains, these programmes can double for climate adaptation programmes and attract private investments. For example, the Green Morocco Plan has enabled the creation of hundreds of cold storages, packaging, crushing and processing units in all regions of Morocco, building a more climate resilient agri-food sector. Between 2008 and 2019, the Agricultural Development Fund (ADF) provided 349 million dirhams (EUR 32.6 million) of support, which mobilized 2.9 billion dirhams (EUR 270 million) in private investments.¹¹ Similarly in Jordan, the economic modernization vision and the national action plans for green growth (2021-2025) provide the backbone to attract private sector financing, implement sustainable natural resources strategies and address climate change.¹²

To promote private investment, governments can also offer tax reductions or eliminate tariffs on importing climate-resilient technologies and materials. For example, in 2022, Egypt's Ministry of Finance reduced import duties on fertilizer, seeds and agricultural equipment for harvesting and sorting agriculture products from 5% to 2%. This assisted farmers to invest more in the modernization of their farms and contribute to making these more resilient.¹³ Beyond these, the pub-

⁸ *ibid.*

⁹ *ibid.*

¹⁰ GOLDSTEIN, S. M. *Are We Prepared? Increased Drought Vulnerability Due to Climate Change and State Drought Plan Preparedness* (Doctoral dissertation, University of Colorado at Boulder).

¹¹ www.agriculture.gov.ma/fr/programme/valorisation.

¹² <https://invest.jo/en/our-vision.html>.

¹³ <https://research.hktdc.com/en/article/MTEwMTY1NjMzMg>.

lic sector also has other means to mobilize private sector finance for climate adaptation, including through grants, subsidies, concessional loans, co-financing of innovation hubs and accelerators, or regulations that favour climate adaptation investments (e.g., water efficiency standards that require investment in leakage reduction and modernizing urban water supply and irrigation systems).

Finally, the public sector can also provide other types of stimulus for adaptation investments. For example, Morocco has set up business incubators for adaptation, encouraging innovation through an adaptation innovation competition, and developing catastrophe risk insurance programmes.¹⁴

Private Finance Opportunities and Modalities

As public financing alone is insufficient to meet the enormous funding needs on climate adaptation in the developing countries of the Mediterranean region, leveraging private sector investments is vital. Throughout the Mediterranean region, there are vast opportunities for commercial financiers and private enterprises to develop and finance climate adaptation-related solutions, products and services. For example, investments in crop diversification, irrigation efficiency or soil conservation provide business opportunities in the agriculture sector to increase productivity, lower costs and create resilience. Similarly, in the water sector, investments in leakage reduction, wastewater reuse and desalination can be profitable private investments that also contribute to climate adaptation.

To turn private financing of adaptation into an opportunity, it is important to accept that climate adaptation finance is likely to look different from climate mitigation finance. Where private climate mitigation financing often takes the form of project finance, private climate adaptation finance is more likely to form part of the general financing of businesses. Therefore the ability to mobilize private climate adaptation finance depends on the capacity of businesses to

access finance in general. Hence, for farmers or hoteliers to make relevant climate adaptation investments, they might use their retained earnings or existing credit lines with local banks. To do so, however, they need a clear business motive and to see that the investment is relevant to their continued ability to be profitable and serve the market.

By focusing on innovation, entrepreneurship and strengthening value chains, modernization programmes can double for climate adaptation programmes and attract private investments

Within the Mediterranean region, several environmental investment loan schemes have been set up by national banks to focus on SMEs. In Algeria, for example, the Banque Nationale d'Algérie offers green loans to SMEs in the agriculture sector, including, for example, for a transition to drip irrigation systems. The loans provide financing of up to 300,000,000 DA (EUR 2 million) at a 5.25% interest rate¹⁵ and a maximum maturity of 15 years. In Tunisia, the Banque de l'Habitat offers similar green agriculture loans for agricultural SMEs to finance eco-friendly practices up to EUR 100,000 with competitive interest rates and flexible repayment schedules.¹⁶ Increasing the size and uptake of such loan schemes, including in combination with (partial) government loans or guarantees, will be critical to mainstream climate adaptation finance in the Mediterranean.

Another type of mechanism used is the "Climate Resilience Loan." Attijariwafa Bank in Morocco offers such loans aimed at enhancing climate resilience in agriculture and water management. For example, for the installation of solar-powered irrigation systems, loans are available between Moroccan Dirham (MAD) 100,000 to MAD 500,000 (approx-

¹⁴ GLOBAL CENTER ON ADAPTATION (GCA) "State and Trends in Adaptation Report 2022." Rotterdam and Abidjan, 2022. https://hcss.nl/wp-content/uploads/2022/11/GCA_State-and-Trends-in-Adaptation-2022_Fullreport.pdf.

¹⁵ www.bna.dz/fr/credit-filaha/.

¹⁶ www.bh.com.tn/profils/entreprise/couvrir%20vos%20besoins%20dexploitation/exploitation/cr%C3%A9dit%20de%20campagne%20agricole.

imately USD 10,000 to USD 50,000) with a 3% interest rate and a repayment period of up to 7 years.¹⁷ These loans could be matched with subsidies from government programmes supporting renewable energy use in agriculture.¹⁸ In Tunisia, the Banque Centrale Populaire (BCP) provides financing solutions for SMEs in the tourism sector to implement eco-friendly practices, including climate resilience. Financing is provided together with Tamwilcom's Green Invest, which requires a minimum of 20% financing from an SME.¹⁹

In Egypt, the National Bank of Egypt has launched its Green Financing Initiative, offering specific loans to SMEs for various financial products, solar irrigation and efficiency irrigation.²⁰ Loans can be up to EGP 5 million (USD 325,000) and are backed by government guarantees supported by International Finance Corporation (IFC). In Jordan, the Ahli Bank offers several green financing programmes tailored to support environmentally-friendly projects, including water efficiency projects and purchasing eco-friendly commercial assets, including water and irrigation solutions.²¹

Public-Private Partnerships

When it comes to the financing of larger infrastructure developments to adapt to climate change, such as dams, desalination plants or seawalls, private finance is rarely the only source of investment. In some instances, the use of Public-Private Partnerships (PPPs) could be the right instrument to attract private finance to invest in these measures by using a "project finance" approach.

With respect to climate adaptation in the Mediterranean, PPPs are most relevant for two main economic sectors: water and transport. In the water sector, PPPs are used for infrastructure projects focused on bulk water treatment, desalination, water distribution (urban & irrigation), sewerage systems and wastewater treatment plants. In the transport

sector, PPPs are mostly used for roads, light rail and ports. Depending on the type of PPP contract, projects can entail the involvement of the private sector in different ways, including in the construction, rehabilitation or operation of new or existing infrastructure. PPP contracts can vary from relatively short duration – < 1 year – to long-term engagement of up to 30 years.

Several countries throughout the Mediterranean region have used PPPs to attract expertise and private finance. For example, the PPP project in the Chtouka Aït Baha Plain (Morocco) includes the construction and operation of a desalination facility (167,000 m³/day) and irrigation scheme (18,000 ha) for an estimated cost of ca. EUR 315 million.²² The project was commissioned in March 2020 and constructed by Aman El Baraka under a public-private partnership (PPP). The company is responsible for co-financing, designing, building, operating and managing the desalination plant and the irrigation infrastructure for a period of 20 years. The project will increase the resilience of 1,000 farmers in an arid region threatened by changes in rainfall patterns. The project will avoid economic losses due to drought and preserve the Chtouka water table on which the Souss-Massa Natural Park also depends.²³

Increasing the size and uptake of environmental investment loan schemes, including in combination with (partial) government loans or guarantees, will be critical to mainstream climate adaptation finance in the Mediterranean

In Egypt, the government promotes PPPs to finance large-scale projects such as desalination plants. Egypt's water desalination programme entails the

¹⁷ www.attijariwafabank.com/fr/rse/environnement-et-rechauffement-climatique.

¹⁸ <https://unimagec.ma/subventions-pour-lenergie-renouvelable-au-maroc-investir-dans-un-avenir-durable/>.

¹⁹ www.tamwilcom.ma/fr/system/files_force/fiches_produits/green_invest_fr.pdf.

²⁰ www.nbe.com.eg/NBE/E/#/EN/ProductCategory?inParams=%7B%22CategoryID%22%3A%22AIAhlyBusinessIndustrialSector%22%7D.

²¹ <https://ahli.com/smes/my-green-project-program/>.

²² www.4c.ma/_files/ugd/3c9136_7069eaaa6c7b407f819a8faa3701b8f8.pdf?index=true.

²³ www.afrik21.africa/en/morocco-after-3-years-of-work-the-htouka-desalination-plant-is-now-operational/.

launch of several projects covering a total planned capacity of 8.85 million m³/day by 2050 of which 3.35 million m³/day is planned by 2025 as the “First Phase”. The programme, led by the Sovereign Fund of Egypt, has prequalified 17 private consortia, which will be invited to the tendering process. The key objectives are developing, constructing and operating the plants, powering them with renewable energy, transferring technology and localizing the manufacturing of key desalination components.²⁴

Concluding Remarks

The Mediterranean region is facing urgent and substantial challenges due to climate change, impacting key economic sectors if adaptive measures are not accelerated. Addressing climate adaptation requires joint public – private efforts to mobilize expertise and private finance. Yet engaging the private sector in climate adaptation entails challenges related to perceived risks, investment timescales and limited access to finance for SMEs.

To overcome these challenges and mobilize private investments, public sector actions, such as developing sector modernization programmes, offering fiscal incentives, fostering innovation and facilitating public-private partnerships are needed. These measures can improve resilience in key economic sectors

throughout the Mediterranean, including in agriculture, water and infrastructure, and stimulate sustainable economic growth.

The PPP project in the Chtouka Aït Baha Plain will increase the resilience of 1,000 farmers in an arid region threatened by changes in rainfall patterns

Private sector opportunities in climate adaptation are substantial, particularly if the focus is on developing innovative solutions, such as efficient irrigation, water reuse, desalination and eco-friendly technologies. Leveraging financial instruments like green loans, climate resilience loans and PPPs can mobilize private capital towards impactful adaptation projects.

Ultimately, a coordinated effort that combines government policy, targeted financial incentives, private sector engagement and innovation is critical to enhancing climate resilience in the Mediterranean. Only through joined-up actions can the region effectively adapt to its changing climate, safeguard its economies and mobilize the required expertise and financing to adapt to climate change impacts.

²⁴ <https://smartwatermagazine.com/news/sovereign-fund-egypt/egypt-prequalifies-17-consortia-its-water-desalination-program>.