

# IDENTIFICATION OF WATER AND CLIMATE-RELATED INVESTMENT OPPORTUNITIES IN JORDAN, LEBANON AND TUNISIA



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# IDENTIFICATION OF WATER AND CLIMATE-RELATED INVESTMENT OPPORTUNITIES IN JORDAN, LEBANON AND TUNISIA

This report has been produced for the UFM and supervised by Almotaz Abadi, Managing Director-Water



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# EXECUTIVE SUMMARY

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The purpose of this report is to review potential investment opportunities in water and climate adaptation and mitigation.

Our review included national and regional large-scale investments that attract international investors such. Examples include the Red Sea Dead Sea project, waste-to-energy in Lebanon, and water management in Tunisia. In addition, we reviewed potential national niches that may attract investors.

For Jordan, we identified potential investments in industrial clusters that can use unconventional water sources and renewable energy to provide a competitive climate for its inhabitants. Brackish water farming was also highlighted as a potential investment opportunity in Jordan, so was eco-tourism through localized innovative investments (e.g., Karak Castle renovation). Lastly for Jordan, wastewater treatment and the use of treated wastewater for farming by private investors or through PPP with municipalities is highlighted as a potential investment opportunity.

The current challenging economic, financial, and political climate is not expected to attract serious investors, however, several initiative including that led by the French President Macron are due to bring in tens of millions of Euros in grants and investments if Lebanon can enact the needed reforms and restore investor confidence in the country. Highlighted potential investments include hydro-generation and waste to energy.

Tunisia, which has undergone serious reform in the past decade, is projected to attract serious investments in the coming years. Highlighted investment opportunities include private water desalination, floating solar PV power plants, and waste-to-energy investments.

The report also lists potential investors for each of the three countries categorized as anchor investors, individual investors, development banks, international development agencies, and institutional investors.

# BACKGROUND

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The UfM Climate Change Expert Group (CCEG) adopted a work program in March 2017 that stresses the importance of climate finance to UfM member countries. This five-year program revolved around the need to strengthen availability of financing mechanisms in Euro-Mediterranean countries, in addition to the creation of investment opportunities that would help with climate adaptation and mitigation. The program resulted in the creation of the UfM Regional Climate Finance Committee (UfM RCFC) to initiate dialogue with international financial institutions active on climate finance.

To help the RCFC have a better understanding of available financing mechanisms related to climate action in the Euro-Mediterranean region, three studies were commissioned; two of these studies focused on Southern and Eastern Mediterranean countries including public climate finance and international private financing tools, and the third focused on financing mechanisms in Jordan and Morocco.

The results of these studies were discussed with UfM Member States during the UfM RCFC on 9 April 2019 and during the UfM CCEG on 10 April 2019. Following these meetings, UfM Member States agreed to pursue the assessment of climate finance in the UfM region, with the view of providing sound basis for a renewed climate mandate of the UfM by 2020, which is now pushed to 2021 due to the COVID-19 pandemic.

A cursory look at the UfM member countries shows a population that has more than doubled since 1960 and stands at around 500 million people today with different growth rates since 1960 that vary from +250% in the Middle East and North Africa (MENA) to +33% in South Europe. In the decade between 2008 and 2018, growth rates varied between 20% in North Africa and 2% in Western Europe. Population trends also included a shift from rural to urban areas with over 70% of the population currently living in urban areas. This was accompanied by a 44% decrease in agricultural employment (The World Bank).

In terms of climate change, the Mediterranean area is a climate hotspot, where temperatures have already increased by 1.5 C°, compared to a 1.1 C° global average increase. This will lead to intensified warming effect across the Mediterranean compared to the rest of the world.

Some models including the [MedECC 2020](#) model project a temperature increase of up to 2.2 C° in 2040 and 3.8 C° in 2100, accompanied by a 10% decrease in precipitation in Europe and 30% decrease in MENA, and a 10-20% higher intensity of extreme weather events including droughts, waves, and flooding. The report also projects that freshwater reserves will decrease by 2% to 15% across the Mediterranean countries with risk of damage to these reserves being the highest in the world. This will further expand the water gap between the average Mediterranean population and the rest of the world, especially since this population has less than 1,000 m<sup>3</sup>/year of fresh water per capita.

The agricultural sector is also likely to witness severe water shortages as it currently consumes 50-90% of freshwater resources in the Mediterranean countries, leading to food security challenges and potential political and socio-economic unrest.

These projections highlight huge risks to water resource availability and stress the importance of immediate investments in water and climate projects that can help UfM member country inhabitants adapt and mitigate climate change effects.

This study follows the same theme of attempting to understand available financing mechanisms, and attempts at identifying investment opportunities in water and climate action in Jordan, Lebanon, and Tunisia, with focus on mid to large-scale investments that are both bankable and repeatable across the UfM Euro-Mediterranean member countries.

Tunisia, Jordan, and Lebanon rank 63rd, 89th, and 95th, respectively, in the SDG global rank according to [the UN Sustainable Development Report](#). These ranks show clear opportunity for improvement, and highlight the presence of investment opportunities in water and climate action areas, despite some legal and regulatory challenges that were highlighted in the first report released under this engagement.

# POTENTIAL WATER AND CLIMATE INVESTMENTS

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This investigation revealed three levels of potential water and climate-related investments, which are:

- International large-scale investments.
- National investments.

## International and Large-scale Investments

The World Bank and international development banks including the European Bank for Reconstruction and Development, the African development Bank, and the European Investment Bank, have pledged hundreds of millions of Euros towards water and climate-related investments. Some of these investments include:

- The [Red Sea Dead Sea Project](#) which aims at pumping water from the Red Sea, which aims to start with an initial phase to desalinate (80-100) MCM/year in Jordan, which will be partly swapped with Israel at Aqaba (about 50mcm/year), and to supply the southern Jordanian cities with the remaining quantities in order to receive water from Israel for the swapped quantities in the Northern Jordan Valley to alleviate the water shortages in the Northern and other Governorates in Jordan. This initial phase will be the base of the overall project which aims at increasing the desalinated water quantities to meet the water deficit all over Jordan. The brine water in this initial phase will be discharged to the Dead Sea. Although this project has been under development for several years, several economic and political challenges have prevented this first phase from seeing the light.
- A paper [published by the IEEE](#) in the 2014 International Conference on Renewable Energies for Developing Countries addresses the solid waste management challenge in Lebanon and suggests investments in three 4th generation Waste-to-Energy (WTE) facilities around the country. These facilities would process 2.6 million tons of Lebanon's municipal solid wastes (MSW) annually and generate 197.3 MW of electricity plus 470672 Btu/h of heat to be used for adjoining industrial processes or for distribution as district heating. This process would additionally minimize waste volume to < 5% by transporting 7,100 tons per day of municipal solid waste directly from households and businesses to the WTE facilities instead of landfilling most of these wastes. The installation of state-of-the-art emission control technologies at the facilities would reduce gaseous emissions well below standards established by the Lebanese Ministry of Environment. These projects are expected to cost over 500 million Euros and would eliminate the solid waste problems in Lebanon, however, similar to the Red-Dead project in Jordan, these projects are facing serious slowdowns related to legislative, economic, and political challenges.

- Tunisia has received an \$84 million (69 million Euros) loan from the Kreditanstalt für Wiederaufbau (KfW) to finance several water management projects. This loan will be used to establish improved water networks including the integrated water resources management project in Mornag and the modernization of the irrigated public areas of Sidi Thabet (Gire). The challenge with loans given to governments, however, is that it will take a long time for projects to see the light due to complicated government procurement processes and long durations for award and contracting.

The above three examples show the importance of large-scale investments to design and execute country or regional-level projects. The examples do highlight, however, the importance of bringing in private sector players at large and mega-scale levels to improve the efficiency and reduce the time it takes to get such projects completed. The reason private sector investors are needed is that it is to their benefit to expedite the process of project development, construction, and commissioning, unlike governments, which have no such incentives.

One example of such efforts is the establishment by the World Bank and the Government of the Netherlands of a [“Water Bank”](#) fund that will act as a for-profit, private sector-led, investment fund aiming to alleviate the risks of water-related shortages by developing and investing in large-scale projects around the globe. This initiative was developed by private investors and has evolved to become the first such “water bank” in the world. Some of the projects this bank will focus on include buying freshwater rights close to river exits into seas and oceans and using refurbished oil tankers to take fresh water from these river exits to water-poor countries. Other projects include large-scale desalination using solar energy.

## National Investments

Following the mandate of national and local governments, which focuses on service provision to residents and continuous improvements to their lifestyles, the following types of investments in water and climate mitigation and adaptation are typical:

- Water-based investments, which aim to efficiently use water resources for revenue generation and/or provision of improved services, these may include:
  - o For coastal cities, water can be desalinated using renewable energy. Desalinated water can be used for agriculture, tourism (offered at preferential rates to hotels and resorts), entertainment (e.g., water parks), municipal services, or as cheaper input to industry. Using solar water pumping for water desalination should yield a competitive freshwater cost that can help generate feasible projects and help attract local and international investors.

o Mountainous areas with running water sources (e.g., rivers and streams) can use water for improved farming away from river and stream basins, by pumping water to those locations. The cost of pumping can be reduced using renewable energy. This availability of fresh water can support industry and year-round farming (traditional, fish, livestock, etc.), especially since land tends to be cheaper the further it is from river basins. A municipality can create industrial and agricultural clusters with ongoing running water at reduced rates (factoring the free continuous water flow and the cheap operations and maintenance of solar farms), which would attract investors in these sectors.

o Treated wastewater can be used for industry and agriculture. Again, using renewable energy for treating wastewater can yield relatively cheap treated water that can attract investors due to improved feasibility. Renewable energy sources can include sludge-fueled and solar photovoltaic energy.

- Energy-based investments, which focus on revenue generation through renewable sources. These projects include:

o Solar PV and wind farms within municipal zones. Municipalities can participate by land lease or using land towards equity in project special purpose companies, which would help generate long-term revenues. Municipalities can be good partners to investors not only by availing land resources, but also by lobbying to offer tax incentives, services, permits, and other project requirements.

o Waste-to-energy projects, which generate electricity and heat from incineration or by other means. These projects can yield considerable returns and tend to be long-term (25 years or longer). Municipalities can also make good partners to private sector investors by facilitating concessions, power purchase agreements, access to required land, and other service provisions.

o Hydro-generation, which can leverage running water to generate electricity. Municipalities with access to year-round running water sources can attract investors to such projects by availing the required licenses and land, noting that such projects do not need to be in the mega scale and can be feasible even at relatively small scale.

o Municipal heating using available energy sources. This falls under the umbrella of innovative projects, and it entails municipal investments into one or more combined heat and power (CHP) generation plants that can use solar, hydro, waste, geothermal, or fossil fuel, followed by zoning and possibly building industrial clusters adjacent to these plants, thus offering reduced electricity rates and heat sources to industries that require such heat. The availability of CHP plants is considered a big plus to heat-intensive industry, and this can generate long-term revenues to municipal (and possibly private) investors.

- Food-based investments, which tend to leverage existing water, energy, markets, distribution channels, municipal support, and other resources to build sustainable profitable businesses. Examples include:

- o Farming based on smart crop selection matching local soil and water properties. For example, aloe vera can be grown using brackish water, and can yield high returns if farmed on relatively cheap land and using relatively cheap water.

- o Relatively cheap food processing using renewable energy and potential cheap municipal water sources. This would also benefit from municipal locations close to ports or land transportation networks and would leverage local skilled labor forces.

- o Processing of natural resources including salt and other minerals, which could include sea or land salt production.

The above list is not exhaustive and only offers an indication of the wide variety of potential investments that can be pursued, especially after proper assessment of available resources and potential competitive advantages.

# INVESTMENT OPPORTUNITIES IN JORDAN

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Given the expected amendments to both the local government and PPP laws, Jordan will be well-positioned to take advantage of several local investment opportunities which can bring the country and municipality considerable financial returns.

In order to be able to invest, though, the expected amendments must pass, which is expected to happen before mid-2021. These amendments will include municipalities as entities that can enter PPP projects, and will allow municipalities to directly invest, borrow, use assets towards project equity, and use blended and direct financing instruments to the benefit of municipal residents.

In addition to the previously listed potential investments, below are some suggested investments based on discussions with governmental leaders in Jordan.

## **Industrial Clusters**

Building industrial estates as PPP projects seems to be one of the priorities highlighted by several municipality investment committees. These projects entail municipal participation by offering prime municipal land and securing all required approvals for these industrial estates.

The required investment will be offered to institutional and private investors along with a feasibility study that shows potential returns.

Feasibility for these projects will be achieved by conjunctive water use of all available sources (e.g., freshwater, brackish/saline water, treated wastewater, and harvested rainwater) to reduce the cost of water, a key input to industry. In addition, renewable energy will be used to reduce the cost of electricity, another major cost item. Jordan also has an advantage of relatively cheap natural gas imported from Egypt and Israel, which can be used to produce cheap power and heat through combined heat and power plants.

## **Brackish Water Farming**

Jordan has considerable brackish water resources that are not being used due to the high cost of desalination. Since fresh water is a precious resource in Jordan, the idea of selecting high-value crops that can grow using brackish water is an interesting investment concept being evaluated by several municipalities around the country. Several donor-led projects are also promoting this concept including the recently signed Smart Desert project, which will promote non-conventional water use for farming in the northern highlands of Jordan.

The project (and potential investors) will make use of expertise gained through decades of research at the National Agriculture Research Center facilities around the country, resulting in the selection of high-value crops that can be farmed using brackish water with up to 5,000 PPMs. This concept entails land selection, crop selection, accessibility of brackish water at the right salinity levels, potential transformation for improved value, and a detailed technical, feasibility, and market study.

Crop examples include aloe vera, fodder (different types), and medicinal herbs. All these crops can benefit from some industrial transformation and can easily find export markets for the final products. Municipalities can be encouraged to attract such investments resulting in local job creation and improved food security for the country.

## Eco-tourism

Jordan has tens of national and historic treasures including Petra, the Dead Sea, several Roman cities, several ancient castles, among others. These sites attract hundreds of thousands of tourists and visitors each year and investing in improvements based on eco-friendly use of resources will surely increase the value of tourism at these sites.

We will site one example here to show the potential value of such examples. The largest Crusader castle in the Levant, with an area of 24,000 square meters, the Karak Castle is a “dark maze of stone-vaulted halls and endless passageways”, according to the Jordan Tourism Board’s (JTB) website. The Crusader castle’s best-preserved passageways are underground. In the Castle Plaza, 19th century Ottoman administrative buildings have been redesigned to house a tourist center, with restaurants, a crafts center and other facilities grouped around the central plaza, the website said. While the castle essentially dates back to the 12th century, Karak has been a fortress since Biblical times.

The castle is only partially accessible as several floors have been filled with dirt over the centuries and are deemed inaccessible. One idea floated during our meeting with the municipal team is to study the availability of cleaning up those lower floors and attracting investors to use part of the castle as a premium hotel facility, which would be a first in the region and would boost the number of tourists coming to Karak, thus further supporting the local economy.



Added elements to this project include solar photovoltaic power generation and rainwater harvesting using an ancient pool which would need to be rehabilitated.

We believe the Karak Castle project to be representative of tens of eco-tourism potential investments in Jordan.

## **Treated Wastewater**

Jordan has tens of population areas that lack proper sewage drainage and use cesspools that are drained by tankers, with waste being driven tens of kilometers to large wastewater treatment plants (WWTP). This situation presents and investment opportunity manifested in the establishment of medium size WWTPs (2,000 – 4,000 cubic meters per day) and using the treated wastewater for farming. Jordan has only one such investment that is less than one-year-old, but that shows good return on investment potential. These investments should be encouraged by the government as municipal PPP projects after the updated PPP law passes parliament and is ratified.

# INVESTMENT OPPORTUNITIES IN LEBANON

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Lebanon has faced compounded crises since late 2019, with the most adverse being an economic and financial crises that has led to the local currency losing over 80% of its value, followed by COVID-19, and lastly the explosion at the Port of Beirut, which has led to the resignation of the government and to a severe political gridlock.

These crises have led to stoppage of capital inflows and have led to the government first-ever sovereign default on the payment of a US\$1.2 billion Eurobond back in March 2020. marking Lebanon's first-ever sovereign default. Later closures due to COVID-19, port explosion, government resignation, and political gridlock, have all led to a very unfavorable investment climate in Lebanon.

An October 2020 [World Bank update](#) states that:

“Over the medium-term, Lebanon will have to prioritize building better institutions, good governance, and a better business environment, alongside physical reconstruction. However, given Lebanon's state of insolvency (sovereign, banking system) and its lack of sufficient foreign exchange reserves, international aid and private investment will be essential for a comprehensive recovery and reconstruction. The extent and speed to which aid and investments are mobilized will depend on whether the authorities and the Lebanese Parliament can act swiftly on enacting much needed fiscal, financial, social, and governance reforms. Without reforms, there can be no sustainable recovery and reconstruction, and the social and economic situation will continue to worsen.”

Given the above, and until such reforms are enacted, we can only suggest potential investments that may be realized if and when reforms are completed and investors feel safe bringing their capital to Lebanon.

## Hydro-generation

Lebanon has several rivers and streams that run year-round. These natural resources provide potential opportunities for small and medium-scale clean electricity generation. To date, no comprehensive studies have been completed to highlight the generation potential of these hydro potential resources.

## **Waste-to-Energy**

The cited IEEF report shows great potential for solving two of Lebanon's major problems (lack of sufficient electricity supply and poor solid waste management) by direct incineration of solid waste using environment-friendly fourth generation incineration plants. Although these projects were considered to be large in scale, they can also be potential PPP investments if broken down to serve individual landfills.

We hope reforms will take place soon including an updated Lebanese PPP law that can lead to Lebanese central and municipal governments generating bankable investment opportunities. Until then, our assessment is that Lebanon does not have many investment opportunities and should focus on internal improvements that can lead to improved investor trust and lower risk levels.

# INVESTMENT OPPORTUNITIES IN TUNISIA

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Tunisia is facing urgent challenges, the most serious concerns being severe shortages in the available water resources, ground water over-exploitation, and poor institutional management. Although Tunisia has a national water strategy, this strategy is outdated and should be updated to include the mobilization of non-conventional resources such as the desalination of seawater and the increased use of treated wastewater. It is also recommended to develop a new governance scheme for water operators which can help assist in decreasing financial burdens on the water sector. Major water shortage challenges can be faced if a network for transferring water from northern Tunisia to southern Tunisia is not upgraded.

These challenges present investment opportunities in a country that has undergone several challenging transformations in the past ten years. These opportunities include the following suggestions.

## **Water Desalination**

The National Company for the Exploitation and Distribution of Water (Sonede), which supplies the country's three million households with drinking water, recently completed the first desalination plant on the island of Djerba, with a daily capacity of 50,000 cubic meters. This plant will be followed in 2021 with a second plant in Zarat with a similar capacity.

These examples will surely encourage private investors to look into the feasibility of water desalination investments. The main challenges that may slow down or hinder such investments may be the bureaucratic processes leading to licensing or even PPP partnerships with private investors. Based on discussions with Tunisian officials, it appears decades of such "red tape" cannot be eliminated in a short period, but the country is serious about attracting private investments, and is expected to complete additional regulatory improvements to allow such investments to flow into the country.

## Floating Solar PV Farms

Several areas in Tunisia including Monastir have several saltpans (called Sebkhass) that have been used for decades to produce salt. These saltpans are also a national treasure in that they attract migrating birds including flamingos. More than 22,000 flamingos [nested at the Sahline saltpans](#) in 2019 alone.



This attraction to migrating birds makes the concept of a floating solar plant a sensitive matter that will need to be studied from all aspects including environmental and touristic economic risks. If the investment idea passes these tests, we believe Monastir can benefit from clean generation and the saltpans will increase in value both for being “greener” and due to the income generation potential this project brings with it.

Based on the baseline assessment, this project is expected to bring a relatively lucrative internal rate of return on equity. If the municipality chooses to invest in the project either by cash investments or by leasing the saltpans to the project against an equity stake, we believe this would be a lucrative investment. In addition, funds for initial studies can be secured from donors and/or development banks which would benefit from extending debt if the project is deemed possible and feasible.



## **Energy Generation from Solid Waste**

Around 30 municipalities along the center of the country dump their solid waste at the Al-Qazzah landfill. This landfill is becoming a hazardous location with liquid organic waste seeping into the Mediterranean, which poses a serious risk to tourism and marine life. The suggested project entails using the solid waste from the landfill as incineration fuel for electricity and heat generation. The project will use the latest fourth generation environmentally safe technology and should bring in considerable returns to the investors.

We believe this project should take precedence as a regional and national priority due to the high risk the landfill poses to the area both from a health perspective and as potential risk to tourism in the region.

# LIST OF POTENTIAL INVESTORS

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Each of the three countries have access to multiple potential investors. Identifying these investors and pitching project ideas to them requires localized research and preparing the right investment pitches. The following types of investors have been identified for each of the three countries.

## Anchor Investors

These are typically institutional or government-owned investment funds that have a political incentive to invest in local projects. They may also include development banks. Any type of investor may become an anchor investor, but some are designed to be anchors. We list some of these investors below:

**Jordan**: Jordan has several potential anchor investors including:

- The Cities and Villages Development Bank (CVDB), which is a publicly held development bank with a declared vision of “having the leading role in local development,” and a declared mission stating that the bank “offers required financing and advanced banking services to municipalities intending to establish development and investment projects and encourage public private partnerships.” The law regulating the bank is currently being amended and is expected to be ratified by mid-2020. The updated law will allow the bank to enter profit-making investments as an equity shareholder, in addition to being a lender. The bank is active in offering syndicated facilities and loans and, according to the bank CEO who we met for the purpose of this assignment, plans to offer blended financing products to municipalities. As an example, the bank signed a 45 million Euro facility with the European Investment Bank to be used for energy efficiency projects. The bank is expected to become an anchor investor in several municipal projects in Jordan.
- The Innovative Startups & SMEs Fund (ISSF), which was “established in response to the first recommendation of the Jordanian Economic Policy Council and is a private sector managed fund making investments in innovative startups and early stage SMEs. The World Bank has invested USD 50 million in the Fund which was complimented by the Central Bank of Jordan with an additional USD 48 million bringing the total working capital of the ISSF to USD 98 million. The ISSF will promote entrepreneurship and contribute to job creation in Jordan by increasing private, early stage equity finance for innovative small and medium enterprises (SMEs). In addition to early stage financing, the ISSF will encourage entrepreneurship across Jordan with outreach programs to entrepreneurs from lagging regions, underserved sectors and underserved groups such as youth and women entrepreneurs.” The ISSF is expected to also be an anchor investor in newly established municipal projects, especially those involving entrepreneurs.

- The SME Investment fund, which was funded by many Jordanian commercial banks with a US\$180 million capitalization. This fund focuses on small and medium investments, which can also be municipal investments.

**Lebanon:** In Lebanon, anchor investors tend to also be serial investors, and invest more along political lines, especially in areas outside the main cities. These investors tend to be political figureheads and usually invest in their political strongholds and in specific industries.

Due to the current challenges in Lebanon, we expect serious investments to be limited until reforms are completed as stated earlier in this report.

**Tunisia:** With the new 2014 constitution, municipal law, and PPP law, Tunis is well-positioned to attract investors. Several countries including the United States and France offer their companies intending to invest in Tunis export credit financing that can be used towards project investments. We believe these funds will act as anchor investors until the time when Government-owned facilities start actively investing in municipal projects.

Tunisia is undergoing several changes, including a paradigm shift in municipal management, which used to be conventional, and has been strongly empowered under the new constitution. Financing will follow success stories, and we believe Monastir to be a prime candidate for creating such stories and incentivizing the creation of government funds.

## **Individual Investors**

These are typically high net-worth individuals and family offices intending to invest in their hometowns and cities. Municipalities can attract families that have shown interest in investing their funds in their cities. Investment decisions made by these investors range from emotional to highly professional. Municipalities can leverage the experience of this type of investors and their strong emotional attachment to their cities to ensure that projects are well-studied and sustainable.

These investors also tend to take higher risks than conventional investors, which is why a prudent investment strategy should depend on individual, along with other types of investors to de-risk projects.

## **Development Banks**

These include several large institutions including the European Bank for Reconstruction and Development (EBRD), the Agence Française de Développement (AFD), the Islamic Development Bank (IDB), the African Development Bank (ADB), and others. These banks believe in municipal investments and their strategies call for offering debt, equity, and grants to municipal projects that meet their criteria.

The banks also offer blended financing facilities to help de-risk municipal projects. These facilities include loan guarantees and first-loss investments, among others.

For the suggested projects above, we believe development banks would be most interested in the medium and large scale projects, especially those requiring investments in the range of US\$50 million and above.

## **International Development Agencies and Donors**

Export credit financing falls under this category, which includes the US Trade Development Agency. Other agencies include the USAID, DFID, the European Union, JICA, and others. These agencies usually provide grants, but sometimes provide financial instruments such as first-loss or loan guarantees that can support municipal investments. They can also provide free technical support that can help reduce operational costs and improve the bankability of projects.

These agencies are active in all three countries, and we believe municipal leaders can attract funds in the form of grants, technical support, or investments if they are proactive and engaging with their local staff.

## **Institutional Investors**

This is a sophisticated group of investors and includes large funds of funds, large investment banks, corporations, insurance companies, venture capital funds, and pension funds.

Commercial banks having investment arms also fall in this category. Institutional investors tend to be repeat investors and they also tend to follow successful investments, which is why the first investment project at each municipality should be well-studied and successful.

We list below some of these potential investors.

### **Jordan:**

- [The Social Security Investment Fund](#), with a US\$14.5 billion fund size, is the largest fund in Jordan. The SSIF is unique in that 98% of its investments are in Jordan and it tends to invest in long-term projects and can accept lower returns than other investors.
- [Jordan Enterprise Development Corporation \(JEDCO\) - Governorate Development Fund](#), with a Euro 150 million fund size, this fund focuses on manufacturing, tourism, telecom, information technology, media, and healthcare.
- [Foursan Capital Partners](#), which invests in oil and gas, telecom, energy, financial services, and aviation. The fund size is US\$200 million.
- [Riyada Enterprise Development](#), which invests in information and communication technology, consumer media, telecom, healthcare, education, finance, cleantech, entertainment, and specialty manufacturing, and has a fund size of US\$500 million.

There are several other funds active in Jordan including the Hajj fund, the Saudi Jordanian Investment Fund, and others. There seems to be sufficient access to finance in Jordan, which will be beneficial to municipalities when the new PPP and Local Government laws are ratified.

### **Lebanon:**

Like Jordan, Lebanon has many approved investment funds (foreign and domestic), but unlike Jordan, these funds tend to mostly invest in stock and mercantile instruments. When the laws are amended to enable municipal project investments, we believe Lebanon will not have any issues accessing these funds. Some of the approved domestic funds include:

- Beirut Preferred Fund
- BLOM Growth Fund
- Global Properties Securities Fund
- Libank Global Balanced Fund
- Magallanes Value Investors UCITS
- Optimize FI Fund

## Tunisia:

Several private equity and donor-supported funds focus on small and medium enterprise including entrepreneurial ventures. Some of these funds include:

- Entrepreneur First Fund
- [Tunisian American Enterprise Fund](#), which is a US\$100 million fund focusing on growth investments in small and medium companies across Tunisia. The fund mandate also focuses on investments that create jobs, including investments in remote cities and villages.
- [United Gulf Financial Services North Africa](#) is a 100 million Tunisian Dinars (US\$35.7 million) private equity and investment fund.
- [Tunisia Innovative Startups and SMEs project](#) is a US\$75 million World Bank facility launched in 2019 to support innovative start-ups. The project can invest in any opportunity that promises to be profitable and to create jobs, which fits some of the project ideas suggested for Monastir.

In addition to the above, most development agencies are active in Tunisia and offer direct and blended financing facilities that can be accessed by Monastir and other municipalities.

# CONCLUSION

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This report included an analysis of potential water and climate-related investments in Jordan, Lebanon, and Tunisia. The potential investment types and benefits are all possible in other UfM member countries and are bankable if the country can offer the required investor guarantees and the legal environment can support such investments.

Our conclusion is that governments should act on two fronts in parallel:

- 1.** Ensure the legislative, regulatory, and investment environment is supportive of large-scale investments and encourage investors to come in using Public Private Partnership mechanisms. Investments under such PPP schemes can include country-wide initiatives such as large desalination plants, water transport pipelines, waste-to-energy projects, large solar and wind farms, among others.
- 2.** Work with international financing parties and local commercial banks to encourage debt provision to small and medium investors, and support local government entities (e.g., municipalities) to identify and invest in bankable PPP projects.

Working on both fronts would ensure sufficient action and show the investment community the seriousness in attracting impact investments and the alignment of such investments to national plans.



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