

Palestine *Country Profile*

On Circular Economy



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1. Introduction

Climate change has a severe impact on Palestine's economy and the livelihood of its people. Syndromes like decreased precipitations, significant warming, more frequent and more intense extreme weather events, and rise in sea level could lead to greater water scarcity, decreased agricultural productivity and saline water intrusion are already being observed by Palestinians. But due to the instability of the region, Palestinians are more concerned about their economy and security.

Despite the political, economic and social conditions, some initiatives have been promoting sustainable development concepts in Palestine. But these initiatives are still very punctual and small scale, as Palestinians prioritize livelihoods on the short-term.

Water in Palestine

Palestinians face political constraints and economic barriers to access water resources, which have enormously impacted various aspects of life including health and economy¹. Access to safely-managed water varies dramatically between the West Bank and Gaza, and between urban, rural, and refugee communities. Average daily water consumption of Palestinians connected to a water network is less than the World Health Organization's minimum recommended daily allowance and about one-third of the water daily consumption rate in Israel. Some of the vulnerable communities in Palestine have a daily water consumption rate less than 50 l/c/day, constituting a severe water shortage².

Due to limited access to natural water resources in the West Bank, Palestinians have become dependent upon purchasing water from the Israeli national water company Mekorot for domestic use. This has resulted in high uncertainty in water supply and increased financial burdens. Purchases water from Mekorot have increased in recent years to address the needs of the growing population; nevertheless, the amount purchased does not meet demand, resulting in constant water shortages³.

As for wastewater management, in the last twenty years, house onsite wastewater management systems have been increasing in the West Bank's rural areas. 76.5% of these Grey Water Treatment Plants (GWTPs) serve one household, 14.2% serve two households and 9.2% serve three to four households⁴.

Great efforts were undertaken by Palestinian governmental and non-governmental institutions to advance the wastewater infrastructure. Nevertheless, low population densities in rural and suburban areas and limited funding are major obstacles for the development of wastewater services. However, sociocultural acceptance and public awareness around these systems are limiting their potential: health concerns, fear of odor emission or insect infestation and the lack of monitoring and maintenance are slowing GWTP's development in Palestine. Reusing treated grey water in irrigation and reducing cesspit discharge frequency are seen as the main incentives for implementing GWTPs⁵.

¹ State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

² State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

³ State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

⁴ Reasons of Acceptance and Barriers of House Onsite Greywater Treatment and Reuse in Palestinian Rural Areas. Rehab A. Thaher, Nidal Mahmoud, Issam A. Al-Khatib, Yung-Tse Hung. Birzeit University and Cleveland State University
<https://www.mdpi.com/2073-4441/12/6/1679/htm>

⁵ Reasons of Acceptance and Barriers of House Onsite Greywater Treatment and Reuse in Palestinian Rural Areas. Rehab A. Thaher, Nidal Mahmoud, Issam A. Al-Khatib, Yung-Tse Hung. Birzeit University and Cleveland State University
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Energy in Palestine

Access to electricity in Palestine is very high, however, energy supply is volatile specially in Gaza. In 2019, Gaza received less than half of its power demand. In the West Bank, power shortages are regularly experienced, especially during peak winter and summer months. Projections estimate an annual increase in electricity demand of 3.5 percent in the coming years. Securing access to reliable, affordable and sustainable energy in the West Bank and Gaza is central to improving the lives of Palestinians and to creating the conditions under which development and growth can be realized⁶.

Palestine heavily relies on imports of Israeli electricity to meet demand. Therefore, electricity tariff in Palestine is based on the Israeli Electricity Company tariff, is one of the highest in the region. As a consequence, Palestinian households spend 9 percent of their expenditures on electricity. This is twice the share paid by households in Lebanon and Egypt, and three times the share paid by households in Jordan⁷.

Solar energy is the only significant renewable resource in Palestine, which is located in a sundrenched region. The West Bank and Gaza rank among the world's top locations for construction of solar systems. Nevertheless, challenges associated with securing Israeli permits for solar farms construction, the lack of a power purchase agreement, and the lack of transmission infrastructure hinder progress in this sector⁸.

2. Policy and regulatory framework

There isn't a proper regulatory framework focusing exclusively on circular economy in Palestine. Nevertheless, green businesses can benefit from broader Palestinian policies that include measures related to the circular economy. The major policies being:

- Law No. 2 of 1995 concerning the establishment of the Palestinian Energy Authority: states that the Energy Authority is responsible for organizing production, storage distribution and management of energy in Palestine in addition to researching and developing all types of renewable energy (solar, wind, water and others) and granting the licenses to generate and transfer energy.
- Law No. 1 for the year 1998 concerning the encouragement of investment in Palestine: includes a package of incentives to encourage investment in Palestine in the form of (total or partial) tax exemptions depending on the nature of the project.
- Environmental Law No. 7 of 1999, whereby:
 - Article 8 encourages the reduction of solid waste production
 - Article 13 prohibits the recovery of hazardous waste and restricts its passage through the Palestinian Territory
 - Article 15 sets the standards for permitted agricultural chemicals
 - Article 22 sets the standards for the use of industrial machines
 - Article 33 determines the environmental regulations for the construction of buildings on the seashore
 - Article 45 identifies projects subject requiring an environmental impact assessment
 - Article 46 prioritizes the use of materials that are less harmful to the environment.
 - Article 47 identifies the activities and projects that must obtain prior environmental approval

⁶ State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

⁷ State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

⁸ State of Palestine: Atlas for sustainable development. 2020. The United Nations and the State of Palestine.

- National Environmental Assessment Policy 2000: regulates the granting of environmental approval for the projects and facilities.
- Agriculture Law No. 2 of 2003: determines the specifications of the seeds, pesticides and animals that can be imported to Palestine.
- Industry resolution No. 10 of 2011: sets the mandatory compliance standards for industries including environmental constraints.
- Palestinian Electricity Regulatory Council: Regulations no. 1/2012 regarding the implementation of the Palestinian initiative for the solar energy in term of fixing the solar panel systems.
- Law No. 14 of 2015: encourages exploitation and development of renewable energy sources. It also exempts from import tax all renewable energy and energy saving systems, devices, spare parts and equipment. Clean electricity producers are also granted the privileges accorded by the Palestinian Investment Promotion Law.
- Ministry of finance decision 29/12/2016: exempt taxes for the renewable energy supplies (batteries, solar panels, others)
- Palestinian Energy Authority: regulations No1/2017 regarding the organization of on grid renewable energy projects on the roof of schools and higher education institutions.
- Cabinet Decision No. 7/138 of 2017: stipulates that national transportation companies should ensure the purchase of electrical energy produced by licensed renewable energy plants.
- Cabinet Decision No. 6 of 2017 exempting renewable energy power plants from income tax for a period of 4 years, then giving them tax reductions for the following years.
- Cabinet Decision No. 8 of 2017 encouraging investments in industrial and free zones through tax reduction for a period of three years.
- Cabinet Decision No. 6 of 2018 supporting ICT entrepreneurs and projects. While this law does not focus on green entrepreneurship, they can benefit from the amenities it provides to ICT entrepreneurs if their project has a strong ICT component. Benefits include tax exemption for a period of up to 4 years.
- Solid waste management bylaw 3/2019:
 - Regulate and encourage the waste reduction, reuse, recycle, and composting.
 - Delegate the Private sector the role in investment of solid waste management.
- Drafted framework policy on enabling environment for green export in Palestine 2020

In addition to these policies, an important milestone in Palestine's environmental policies was reached in 2015, with the development of Palestine's SCP National Strategy and Action Plan 2016 – 2022. This strategy and action plan identify 3 priority sectors for circular economy: Tourism, Construction and Agriculture⁹.

Following the same track, Palestine's Environmental Quality Authority launched later on its "2017-2022 Environmental Strategy Across Sectors"¹⁰ focusing on 5 strategic objectives:

1. Lowering and controlling environmental pollution levels
2. Managing in a sustainable way the environment and biological diversity
3. Launching actions to mitigate and adapt to climate change and reduce desertification
4. Improving the policies and legal framework and strengthening their application
5. Improving environmental awareness and behavior

⁹ CSP National Plan. 2016. Switchmed. <https://switchmed.eu/country-hub/palestine>

¹⁰ Environmental Strategy Across Sectors 2017- 2022. Palestine's Environmental Quality Authority. http://info.wafa.ps/userfiles/server/pdf/en_2017-2022.pdf

Measures were identified for 23 sectors, but very few actions were implemented so far to concretize these 5 strategic objectives.

On a final note, the inter-dependency of Palestinian and Israeli policies in different sectors (water excavation, imports...) creates complications and gray areas in the policies and their application, and unforbidden collaboration with Israel limits green businesses' maneuvers, opportunities and growth potential.

3. Market Conditions

Due to complex economic, social and political situation in the country, Palestinians lack awareness around the circular economy and the market share for green products is almost inexistent with two exceptions: organic food and solar panels / heaters.

Palestine imports around 90% of its energy from Israel¹¹ at a relatively high cost. Therefore, Palestinians went to alternative solutions like solar panels and heaters to reduce their electricity bills and consumption. Therefore, the omnipresence of solar panels and heaters on Palestinian rooftops is driven by economic needs rather than eco-consciousness.

Demand for organic food also exists, but its market share is small and is mainly driven by health rather than eco-consciousness.

As for the investment climate, universities took the lead on building entrepreneurship skills and networks. Major universities have their internal incubators for early stage start-ups (e.g. Birzeit University, Palestine Polytechnic University, University of Jerusalem...). But their support is usually limited to training, coaching, mentoring and seed funding / micro grants.

Investment funds are rare: Few exist and are mainly supported by international organizations and/or expats willing to invest in Palestinian start-ups (e.g. Sharakat Investment Fund).

From a political perspective, Sustainable Development is one of the 3 priority themes in Palestine's National Policy Agenda 2020-2022. Achieving Economic Independency is a national priority under the Sustainable Development theme, which includes a set of national policies are defined as providing Decent Job Opportunities, creating a Favorable Investment Environment, building Palestine's Future Economy and promoting Palestine industry and the actions/interventions to achieve these three national priorities were identified.

These actions include:

- Supporting entrepreneurs and SMEs
- Encouraging and supporting initiatives in the ICT sector
- Developing new policies and procedures to help graduates from both genders to launch their entrepreneurship ideas
- Creating a productive economy through supporting agriculture, industries, and tourism
- Attracting foreign and local investments especially for construction, transportation, tourism, agriculture and ICT sectors
- Encouraging export of goods and services to Arab countries
- Empowering and improving the role of the financial sector in supporting economic development
- Improving NGOs and cooperatives governance

¹¹ West Bank and Gaza Energy Sector Review - Sustainable Development Department, United Nations. May, 2007. <https://unispal.un.org/pdfs/WBReportNo39695-GZ.pdf>

- Enforcing of relevant laws that ensure a safe work environment from a health and safety perspective

4. Socio-cultural context

Palestinians lack awareness around circular economy and often limit circular economy to clean energy production, organic fruits and vegetable production and solid waste management. They are aware of environmental issues, but don't have or didn't implement proper and sustainable solutions.

Historically, green practices exist in the Palestinian society especially in the agricultural sector: some green practices in this agriculture are naturally implemented as they are already embedded in the culture.

Youth have interest in entrepreneurship, and major universities are spreading awareness around it. But as mentioned earlier, proper support and incentives are limited for these entrepreneurs. The high unemployment rate is also pushing youth towards "necessity entrepreneurship": some are focusing on the green sector because it could represent a niche market opportunity for their products or services.

5. SWOT

For the purpose of creating a synthesis for Palestine, a SWOT analysis has been conducted to explicate Strengths, Weaknesses, Opportunities, and Threats.

Strengths are defined as factors currently enabling green and circular businesses to develop. Weaknesses are defined as factors currently preventing the development of green and circular economy businesses. Opportunities are defined as future developments that could enable green and circular economy businesses to flourish. Threats are defined as potential future developments that could threaten green and circular economy business development.

Strengths	Weaknesses
<ul style="list-style-type: none"> - Historically, green practices exist in the Palestinian society especially in the agricultural sector - Youth have interest in entrepreneurship and major universities have already created their small entrepreneurship support services targeting youth. - Sustainable Development is one of the 4 priority themes in Palestine's National Policy Agenda 2020-2022. Achieving Economic Independency, providing Decent Job Opportunities and creating a Favorable Investment Environment are identified as national priorities under the Sustainable Development theme. 	<ul style="list-style-type: none"> - Administrative and governmental procedures are slow in Palestine. Circular economy initiatives struggle to register their business, export products and / or to get production permits for example. - Many lands can't be used for agriculture or construction due to the political context. - Lack of a clear legal framework and incentives to support or promote green and circular economy business can slow down and demotivate green business owners. - Lack of coordination between stakeholders and players in the circular economy sector at the national level resulting in a loss of opportunities and reduced impact.

<ul style="list-style-type: none"> - Many laws and bylaws are promoting the private sector to take part in in the investment in different sectors like agriculture, industrial, and solid waste. 	<ul style="list-style-type: none"> - There are no major incubators (governmental or private) for the green initiatives and green entrepreneurs.
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Opportunities	Threats
<ul style="list-style-type: none"> - Energy is imported and expensive while Palestine benefits from more than 9 months of sun which creates a good context for clean energy production. - Technology start-ups have the potential to by-pass all export complications. - While high unemployment rates, urbanization and job opportunities in the abroad are pushing Palestinians to leave their villages, women tend to stay in their lands more than men. So if circular economy in agriculture is chosen as a sector to be supported, focusing on women may create faster short-term impact. - Unemployment in Palestine is quite high, especially among women. Focusing on job creation adapted and targeted for women in the circular economy sector may be a good opportunity for SwitchMed and other programmes. - Scarcity of water is a real challenge for Palestine while creating untapped opportunities for modern techniques (hydroponics, aquaponics, vertical farming, ...) and water optimization products and services. 	<ul style="list-style-type: none"> - While some incentives for the import or production of green products exist, most importers or producers do not benefit from them. Awareness about these policies and the application of these policies need to be enforced. - Illegal collaboration with Israel limits green businesses' manoeuvres, opportunities and growth potential. - The inter-dependency of Palestinian and Israeli policies in different sectors (water excavation, imports...) creates complications and grey areas in the policies and their application - Energy is imported and expensive which drastically impact production and industries in general. - Political, security and economic instability in the region makes Palestinians focus on their short-term livelihoods priorities rather than other long-term projects and vision. - Lack of monitoring, evaluation and reporting scheme for circular economy programs and other green initiatives could reduce these programmes impact. - Lack of awareness around circular economy may limit projects to clean energy production, organic fruits / vegetables production and solid waste management initiatives. - The Israeli control over land, natural resources, and borders reversely affect the Palestinians ability to invest and to develop their business.

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