

UNRWA and the Climate Emergency

UNRWA IN FOCUS

BRIEFING PAPER 12

Climate Change in the Middle East

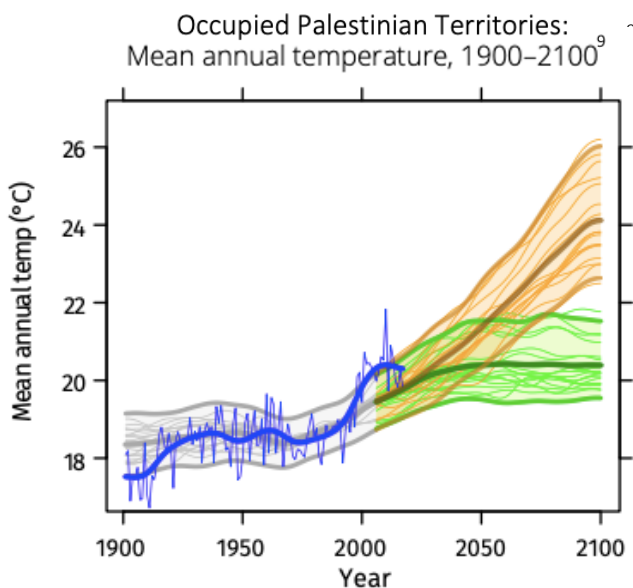
Climate change will contribute to an increase in already high temperatures across the Middle East. The heat may surpass human adaptability in many areas, causing them to become uninhabitable and increasing the necessity of regional climate migration.¹ Projections of average temperature increases by 2050 in the occupied Palestinian territories (oPt) range from 1.3°C if emissions see an immediate and drastic decrease, to 4.4°C if conditions remain as they are.²

The rising temperatures and arid conditions are increasing the likelihood of natural disasters and climatic shocks in the region. Recent wildfires in northern Lebanon exemplify this trend and are likely to become more frequent and more uncontrollable.³

Precipitation rates are projected to decline, particularly in the Levant. It has been estimated that Jordan will see a 30% decrease in annual rainfall by the end of the century.⁴ With groundwater reserves diminishing and temperatures rising, water scarcity will threaten agriculture. Already arid agricultural conditions will require more irrigation to sustain crops and feed a growing population. It has been projected that between 80-90 million people across the Levant will experience some form of water stress by 2025.⁵

The economic impacts of climate change will be felt by Gulf states who currently supply 30% of global oil but can expect to see a significant decrease in the demand for petroleum.⁶ Severe socio-economic effects will be felt by individuals across the region. Livelihoods of farmers in rural areas will be threatened as crops fail to cope with climatic changes. In cities, urban migration is likely to accelerate as an adaptive mechanism, exacerbating water shortages and threats to livelihoods as temperatures soar and water availability decreases as costs of water surge.⁷ It has been estimated that Lebanon may see a 14% decrease in GDP by 2050 as a direct result of climate change.⁸

This graph shows the range of projected temperature increases in the oPt, demonstrating the variation in estimations depending on the global and regional responses to the climate emergency. Human lives and human rights are under threat and greater action is essential to prevent the worst this graph indicates.



¹ K. Fanning and Y. Mehlberg, 'The Coming Climate Migration Crisis in the Middle East and North Africa', *Newsline Institute for Strategy and Policy*, 7 Dec 2021 <<https://newlinesinstitute.org/climate-migration/the-coming-climate-migration-crisis-in-the-middle-east-and-north-africa>>

² ICRC Climate Centre, Regional-level Climate Fact Sheet: Middle East, 2021, p. 2 <https://www.climatecentre.org/wp-content/uploads/RCCC-ICRC-Country-profiles-Region_Middle_East.pdf>

³ 'Wildfires Rage Across Greece, Turkey, Italy, Spain and Russia', *The Washington Post*, 10 Aug 2021 <<https://www.washingtonpost.com/photography/interactive/2021/wildfires-europe-greece-turkey-italy-spain-lebanon/>>

⁴ R. Alaaldin, 'Climate Change May Devastate the Middle East, Here's How Government's Should Tackle It', *Brookings*, 14 Mar 2022

<<https://www.brookings.edu/blog/planetpolicy/2022/03/14/climate-change-may-devastate-the-middle-east-heres-how-governments-should-tackle-it/>>

⁵ Ibid.

⁶ K. Fanning and Y. Mehlberg, 'The Coming Climate Migration Crisis in the Middle East and North Africa', *Newsline Institute for Strategy and Policy*, 7 Dec 2021

⁷ 'Beyond Scarcity: Water Security in the Middle East and North Africa', MENA Development Report Series, *World Bank Group*, pp. 7-20

<<https://openknowledge.worldbank.org/handle/10986/27659>>

⁸ R. Alaaldin, 'Climate Change May Devastate the Middle East, Here's How Government's Should Tackle It', *Brookings*, 14 Mar 2022

⁹ 'Occupied Palestinian Territory: Health and Climate Change Profile 2022', *World Health Organisation*, p. 4 <<https://www.who.int/publications/i/item/WHO-HEP-ECH-CCH-22.01.04>> Graph shows predicted average annual temperatures in the oPt with green indicating the most moderate speculations if carbon emissions are drastically cut with immediate effect. Brown indicates the worst-case scenario if no or very few changes are made to ameliorate climate

UNRWA's Responses to the Climate Emergency

UNRWA has begun to develop an Environmental Management and Policy Framework (EMPF) but it remains in draft stages.¹⁰ The Framework prioritises the sustainable development of UNRWA's facilities and policies. In accordance with the 'Green Approach' adopted in the 2016 Medium-Term Strategy, the EMPF seeks to upgrade the infrastructure of health centres to improve the comfort of refugees in the centres, reduce running costs and use sustainable sources of energy.¹¹ This project will also be extended to the infrastructural re-development of UNRWA's schools. The Medium-Term Strategy positions 'environmental health' of refugees as priority alongside the provision of shelter and food as basic human needs.¹²

The impact of climate change on UNRWA in the short term will involve higher running costs as water and energy prices increase. The EMPF has perhaps stalled since 2016 due to finances being diverted amid the 2018-2021 funding crisis. Finding stable funding to fulfil UNRWA's environmental responses is being sought, as are finding solutions to maintaining energy and water supplies to Palestinian refugees with creative and sustainable adaptive mechanisms. Advancing measures to move towards a 'green economy' will mainstream environmental concerns into UNRWA's camp improvement, infrastructure upgrades, post-conflict reconstruction and sanitation policies.

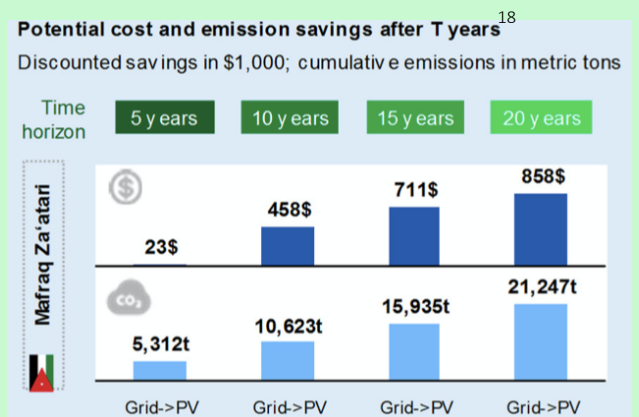


Recent practical measures taken by UNRWA include:

- Raising awareness of environmental issues in schools. Recently, Layan al Bairouti, Palestinian refugee student won a prize with UNICEF's Environmental Project for her video on reducing plastic usage.¹³
- Encouraging a 'circular economy' approach and emphasising the 5Rs: refuse, reduce, reuse, repurpose, recycle. UNRWA recently drew attention to the enthusiastic grassroots engagement in this initiative, publishing press releases on communities making recycled Ramadan decorations.¹⁴
- Solar panels on offices, replacing halogen lighting with LED, planting roof gardens, office waste management strategies.¹⁵

Photovoltaics in Refugee Camps

The Jordanian government has been working in partnership with IKEA to improve sustainable energy supplies in Syrian refugee camps.¹⁶ Solar photovoltaic (PV) systems with battery storage have been successfully installed in the Za'atari settlement and may offer a transferable model for Palestinian refugee settlements. PV systems could provide energy for water pumps and purification, domestic lighting, cooling systems and communication. It is thought that there is an opportunity here for UNRWA to adopt these systems and create similar partnerships with private corporations which could be seen to create routes to cheaper, greener and more sustainable energy sources.¹⁷



¹⁰ Environmental Policy Management Framework, a pending UNRWA policy, see <<https://www.ungrm.org/Public/Notice/126732>>. See also, 'Green Economy, Circular Economy: Can UNRWA be a Catalyst for Change?' presentation given by Arab Renaissance for Democracy and Development (ARDD) at Workshop held by Palestinian Economic Policy Research Institute (MAS), 'Rethinking the Financing of UNRWA 2020-2030', August 2021 <<https://mas.ps/en/unrwa/#>>

¹¹ UNRWA, Medium Term Strategy 2016-2022, p.37 <<https://www.unrwa.org/resources/strategy-policy/medium-term-strategy-2016-2021>>

¹² Ibid., p. 49.

¹³ UNRWA Press Release, 'UNRWA Student Wins the UNICEF Environmental Project: Layan's Environmental Awareness Video', 24 Mar 2022 <<https://www.unrwa.org/newsroom/features/unrwa-student-wins-unicef-environmental-project-layan-s-environmental-awareness>>

¹⁴ UNRWA Press Release, Ramadan Decorations from Ramadan Camp, Syria: Upcycled Lanterns and Climate Action' 13 Apr 2022

<<https://www.unrwa.org/newsroom/features/ramadan-decorations-ramadan-camp-syria-upcycled-lanterns-and-climate-action>>

¹⁵ 'Green Economy, Circular Economy: Can UNRWA be a Catalyst for Change?' presentation given by Arab Renaissance for Democracy and Development (ARDD) at Workshop held by Palestinian Economic Policy Research Institute (MAS), 'Rethinking the Financing of UNRWA 2020-2030', August 2021 <<https://mas.ps/en/unrwa/#>> ¹⁶ J. Ossenbrink, P. Pizzorni, T. van der Plas, 'Solar PV Systems for Refugee Camps', *ETH Zurich*, Jan 2018, <<https://ethz.ch/content/dam/ethz/special-interest/mtec/mtec-department-dam/news/files/solar-pv-in-refugee-camps>>

¹⁷ UNHCR and IRENA, 'Renewables for Refugee Settlements', December 2019, pp.1-5 <<https://www.irena.org/publications/2019/Dec/Renewable-solutions-for-refugee-settlements>>

¹⁸ J. Ossenbrink, P. Pizzorni, T. van der Plas, 'Solar PV Systems for Refugee Camps', *ETH Zurich*, Jan 2018, p. 4.

Climate and Conflict in Gaza

Gaza faces unique climate challenges as a coastal region. It is estimated that the sea level will rise by 0.7-1.8 metres by 2100, which could mean an inland penetration of seawater of up to 3-4km.¹⁹ In line with the general climate trends of the region, Gaza will see increasing temperatures, with a 3-fold increase in the number of days reaching over 34°C.²⁰ Precipitation rates will decrease but rainfall will become more intense which, as was seen in January 2022, will cause widespread flooding.²¹

Oxfam has recently published research on the impact of climate change and the ongoing blockade on Gaza's agricultural sector.²² The research findings indicate women are bearing the brunt of climate change and inequality in this sector, adding a gender-sensitive rights-based element to the urgency of climate policies. Oxfam demonstrated that olive and grape smallholders in Gaza have a low resilience capacity to respond to the climatic changes and environmental shocks.

Gaza's population is growing significantly, its infrastructure remains inadequate, the population has high poverty and unemployment rates and frequently sees outbreaks of political violence. The Palestinian Authority (PA) lack control in Gaza and so the population lacks political leadership in climate policies. UNRWA is well-placed to provide this leadership.

The causal link between climate change and violent conflict is heavily debated.²³ It is however clear that the pressures on Gaza's population are severe, and the climate emergency will exacerbate existing socio-economic distress, prompting political discontent. Political instability and violence in Gaza will negatively affect private sector partners' already hesitant willingness to engage.²⁴ Climate change will not distinguish between refugee and non-refugee populations. An integrated response in Gaza from UNRWA, the PA, Israel, private sector partners and other UN agencies, can therefore be seen to be a critical way forward to meet both climate emergency and development strategies.

Useful Links

O. Grafham and G. Lahn 'The Costs of Fuelling Humanitarian Aid' *Moving Energy Initiative*, Chatham House, 2018.

<https://www.chathamhouse.org/2018/12/costs-fuelling-humanitarian-aid>

Beyond Scarcity: Water Security in the Middle East and North Africa', MENA Development Report Series: World Bank Group

<https://openknowledge.worldbank.org/handle/10986/27659>

Further Reading

K. Bergoui et al., 'The Contribution of Human-Induced Climate Change to the Drought of 2014 in the Southern Levant Region', *BAMS*. 96 (2015), 66-70.

S. Efron, 'Rising Temperatures, Rising Risks: Climate Change and Israel's National Security' *Institute for National Security Studies*, 2021

The 'UNRWA In Focus' Project

The UNRWA In Focus project is a student-centred activity at the University of Exeter, led by Professor Mick Dumper. The project is designed to provide a platform for the publication of the student's research on one of the UN's largest institutions. Project briefing papers are concise overviews providing useful information on the activities of UNRWA to explore the notion of UNRWA as a significant political actor in the Middle East and its trajectory over the next 10-15 years.

¹⁹ S. Efron, K. Noach and N. Shusterman, 'The Gaza Strip and the Climate Crisis', *The Institute for National Security Studies*, 7 June 2022 <<https://www.inss.org.il/publication/gaza-climate/>>

²⁰ Ibid.

²¹ A. Darwish, 'Floods and Cold Hit the Most Vulnerable in Gaza', ICRC, 2 Feb 2022 <<https://www.icrc.org/en/document/floods-and-cold-hit-most-vulnerable-gaza>>

²² N.M. Casas, A. Abumezeid and C.L. Sterrett, 'Climate Change, Agriculture and Gender in Gaza', Oxfam, July 2020 <<https://oxfamlibrary.openrepository.com/bitstream/handle/10546/621024/rr-climate-agriculture-gender-gaza-140720>>

²³ J. Obeid, 'Levant: Where Politics Defeat Alternative Energy Disruptions' in *Low Carbon Energy in the Middle East and North Africa*. R. Mills and L. C. Sim (eds) (London: Palgrave Macmillan, 2021), pp. 211-236.

²⁴ Ibid., pp. 217-219.