

Third Middle East and North Africa Academic Roundtable

CLIMATE CHANGE AND DISPLACEMENT IN MENA

Outcome Report / June 2021



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Executive Summary

The Third Academic Roundtable on Climate Change and Displacement in the Middle East and North Africa (MENA) was co-convened virtually on Wednesday 2 and Thursday 3 June 2021 by the UNHCR MENA Regional Bureau and Columbia Global Centers | Amman. Over the two days, close to 200 participants joined the discussion from 20 countries. This roundtable presented an opportunity to reflect on climate-related challenges in the region. It was particularly significant considering the rising level of climatic effects on the ground, with climate change being a threat multiplier, impacting displaced persons and the communities hosting them.

Figure 1
Jordan's Za'atari refugee camp made the switch to clean energy on Monday 13 November, with the inauguration of the largest solar power plant ever built in a refugee setting.



Photo: UNHCR / Yousef Al Hariri

The roundtable outcomes will feed into related global analysis in December 2021 at the High-level Officials Meeting (HLOM) in Geneva, which will serve as the mid-way point between the first and second Global Refugee Forum. The HLOM is an opportunity to bring together government officials, humanitarian and development organizations, financial institutions, and other stakeholders to evaluate efforts towards easing the pressure on countries hosting large refugee populations; understand the extent to which refugees and host communities have been able to achieve self-reliance; review efforts needed to advance third-country solutions and assess efforts made and still needed towards the implementation of the Global Compact on Refugees (GCR) objectives and Global Refugee Forum (GRF) pledges submitted in 2019.

The roundtable commenced with opening remarks by Ayman Gharaibeh, UNHCR MENA Director, followed by a keynote address by Sir Alex Halliday, Founding Dean of the new Columbia Climate School and Director of Columbia University's Earth Institute, New York. Participants contributed to an analysis of climate risks in relation to displacement trends in the MENA region. They highlighted the main challenges for countries in the region that are increasingly experiencing the adverse impacts of climate change. These challenges include sea-level rise, drought and storms, food insecurity, competition over scarce resources, water scarcity, clean energy access, and climate-driven displacement. The session provided an opening to identify and share prevention, anticipatory, and risk reduction activities that contribute to protection and solutions for affected displaced and host communities highlighting key efforts undertaken on that front. The session concluded by calling attention to the importance of identifying governments' priorities in the MENA region and how UNHCR and partners can support national authorities, refugees and local communities to find solutions. These solutions are informed by the needs on the ground, as well as the need to bridge research gaps, and identify concrete research questions on the nexus between climate change and displacement.

Participants investigated the issue of enhancing environmental sustainability in refugee responses, noting the many positive impacts of clean energy and sustainability related projects on the environment, individual and community health, education, governance, and economic and commercial aspects. While it became apparent that these projects enhance financial and job opportunities, refugees, local communities and municipalities must be involved early on in the process to feel a sense of ownership. The session enabled sharing of best practices from various countries featuring specific efforts such as the construction of green buildings in Kuwait, UNHCR's solar power plant and hydroponics projects in Azraq and Zaatari camps in Jordan, and the sustainable energy solution for Domiz 1 refugee settlement in Iraq. The session concluded with the need to raise awareness on the efficient use of energy in refugee locations and replicate positive efforts in local contexts if deemed feasible.

Ongoing discussions covered themes relating to supporting climate resilience among displaced and host communities. These discussions highlighted environmental health risks on communities and the deterioration of urban infrastructures. Experts emphasized the need to upgrade the current conditions of cities while designing in parallel an environmentally sustainable infrastructure that adapts the design of shelters to the local climate, culture, and the availability of raw materials in the local market. Examples such as "Khazaf" (palm-leaf mats) and refugee housing units in Yemen (developed by the social enterprise Better Shelter and the IKEA Foundation) were showcased to demonstrate how these innovations can mitigate the effects of displacement and climate change. The session concluded with the importance of fostering partnerships and building the capacity of resident communities so that they are able to endure and adapt to the changing environment.

The two-day discussions concluded with the session on enhancing the impact of climate and displacement research on policy and legal frameworks. Participants reiterated the need to build research partnerships that collectively identify research gaps, collect data and share knowledge to avoid fragmented responses. They called on bridging the gaps between academia, policymakers, and humanitarian practitioners. The discussion flagged two needed research areas, to understand drivers of migration with the goal of developing more resilient solutions in potential source areas, and to understand the impacts of refugee camps on

the environment, and how camps are vulnerable to climate risks. The session concluded with the need to look into ways to enhance the impact of climate and displacement research on policy and legal frameworks, and explore prospects on how to catalyse new thinking on including displaced persons within the existing local, national, and international frameworks that address climate change.

Overall, the two-day roundtable was well received and evaluated by the participants.¹



¹ Of the total responses received, 80% relayed satisfaction with the substance and content of the event, indicating contextual analysis of the climate risks in relation to displacement trends in the MENA region as the most beneficial session (80%), followed by the session on supporting climate resilience among displaced and host communities (60%), while 100% noted that the sessions were geographically diverse and gender balanced. A total of 80% noted better understanding of the nexus between climate change and displacement in the region and that they would be more engaged thereafter on the topic, as well as that it reflected the importance of partnership, localization and inclusion of displaced persons.

Background Information

Disasters and climate change are a growing concern, and it is clear that climate change and the environment have a huge impact on population movements and on the lives of millions of forcibly uprooted people around the world. In 2020, conflict, disasters and weather-related events triggered 40.5 million new internal displacements across the world - the highest annual figure recorded in a decade. Weather related hazards such as storms and floods were responsible for more than 95% of all disaster related displacement ([Global Report on Internal Displacement - GRID 2020](#)). The majority of people of concern to UNHCR are in the most vulnerable areas around the world, and climate change will undeniably force people into displacement and increasing poverty, thereby exacerbating the factors that lead to conflict, rendering both the humanitarian needs and responses in such situations even more complex.

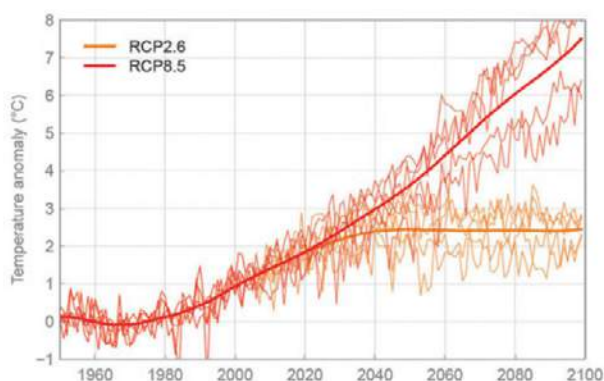


Figure 2
Temperature projections for the Middle East and North African land area compared to the baseline (1951-1980). © 2014 International Bank for Reconstruction and Development / The World Bank

Temperature projections for the MENA land area compared to the baseline (1951-1980) for the multi-model mean (thick line) and individual models (thin lines) under RCP2.6 (2°C world) and RCP8.5 (4°C world) scenarios for the months of JJA. The multi-model mean has been smoothed to give the climatological trend.

The MENA region faces a complex set of interrelated challenges and is one of the global hotspots for climate change. Many of those forcibly displaced rely on the environment for survival, particularly during emergencies. The natural environment is a source of food, shelter, energy, medicine, and means for livelihoods. In the MENA region, it is foreseen that climate change will increase risk of floods, increase disease transmission, change precipitation patterns and reduce crop productivity. Furthermore, it is expected that in less than a decade, temperatures in the region could rise by two degrees, thereby increasing water scarcity, drought, and desertification. The effects of climate change may differ in intensity and gravity, varying from compounding the existing security challenges and potentially exacerbating the causes of displacement.

UNHCR's work on climate change and displacement is in line with the [Global Compact on Refugees \(GCR\)](#) adopted by the UN General Assembly on 17 December 2018, which acknowledges and responds to the reality of increasing displacement due to disasters, environmental degradation and climate change, and provides a basis for measures to tackle the many challenges arising in this area. The Compact notes that "while not in themselves causes of refugee movements, climate, environmental degradation and natural disasters increasingly interact with the drivers of refugee movements". It highlights the need to reduce disaster risks and preparedness measures, taking into account global, regional and national early warning and action mechanisms, and measures to enhance evidence-based forecasting of future movements and emergencies (including in situations of forced internal displacement). This must also include refugees in disaster risk reduction strategies.

The Compact and the pledges made by the various stakeholders at the Global Refugee Forum in December 2019 rests on two key ideas:

- 1. Solidarity in responding to refugee situations, and**
- 2. An equitable sharing of the responsibility for refugees and displaced people.**

These principles underline the importance of taking into full consideration the needs of host communities in those countries that share the greatest responsibility. While these ideas and pledges were put to the test by COVID-19, they will be tested by upcoming climate related issues and challenges, whereby the Compact has proved to have an enduring relevance for all global emergencies, of which we can expect more, and hence UNHCR must be prepared.

The Third Academic Roundtable is part of an initiative of the MENA Policy Unit (MPU) to enhance collaboration and engagement with academia, including, inter alia, think tanks, research centres, universities and professors, who have demonstrated a strong ability and potential to contribute to a better understanding of issues at the local level, as well as to generate evidence-based solutions, inform programming and influence policies related to displacement, refugee needs and host communities. The said roundtables provide constructive fora for analysis and critical thinking, and offer a bridge between academic, policy, humanitarian/development stakeholders. Academia offers fresh insights to advance comprehensive responses to current regional challenges through generating evidence-based data and scientific analysis.

Following up on the outcomes of the first regional roundtable on enhancing dialogue and partnership between academia and humanitarian actors held in Amman, UNHCR and the Columbia Global Centers | Amman entered into a partnership as the first strategic regional collaboration between academia and UNHCR MENA. A Memorandum of Understanding was officially signed on 30 May 2018 to consolidate collaborative efforts between UNHCR and Columbia Global Centres | Amman, and build on a number of joint projects that transforms cutting edge research into policy reform that benefits both refugee and host populations, including an independent, qualitative research study that evaluates the impact of separation on Syrian refugee families in Jordan.

In view of the recently released [Strategic Framework for Climate Action](#), UNHCR engages academic partners in the conversation, ahead of developing a regional plan for operationalizing the framework in MENA, helping shape the future of the efforts in the region.

“We need to invest now in preparedness to mitigate future protection needs and prevent further climate caused displacement.”

*Filippo Grandi,
UN High Commissioner for Refugees*

Figure 3

Ali is one of the Incentive-Based Volunteers in Zaatari camp who encourage the community to recycle.



Opening Remarks: Roundtable on Climate Change and Displacement

Welcome and Introductions

Ms. Shaden Khallaf, Senior Policy Advisor, UNHCR MENA Bureau

Opening Remarks

Mr. Ayman Gharaibeh, UNHCR MENA Director

Keynote Address

Sir Alex Halliday, Founding Dean of the new Columbia Climate School and Director of Columbia University's Earth Institute, New York

Opening Remarks were provided by Mr. Ayman Gharaibeh, UNHCR MENA Director, while the Keynote Address was provided by Sir Alex Halliday, Founding Dean of the new Columbia Climate School and Director of Columbia University's Earth Institute, New York. Opening session was also attended by Professor Safwan Masri, Executive Vice President for Global Centers and Global Development, at Columbia University.



Mr. Gharaibeh highlighted that UNHCR has become increasingly committed to protecting the environment and has set in place programmes and initiatives aimed at improving sustainable environmental management and reducing environmental degradation.

Given that climate change is impacting most of those living in precarious conditions such as the displaced and stateless persons including women, children, older persons, people with disabilities, and indigenous peoples, several projects and initiatives took place in the MENA region from 2018-2020, in Algeria, Iraq, Jordan, Lebanon, Mauritania, Syria and Yemen. There are 15 new projects being planned for 2021-2023 in seven operations namely Algeria, Iraq, Jordan, Mauritania, Morocco, Syria, and Yemen. Mr. Gharaibeh added that with the scope and scale of protracted displacement in the region, partnerships and a 'whole of society' multi-stakeholder approach continue to be a critical pillar of UNHCR's national and regional interventions. Partnerships with the private sector, civil society, academia, cultural and faith-based actors have been increasingly expanding, and are being encouraged. They enable region specific partners and experts to be more engaged early on in the policy thinking and design of refugee responses, thus capitalizing on the importance of localized knowledge to inform international responses.



Sir Halliday noted that climate change is one of the most urgent, challenging, and complex problems (or array of problems) facing humankind. Scientists have been modelling the climate for decades and warning about global warming. The evidence suggests that climate change is going to get worse, be faster to develop, and harder to predict, than most scientists had realized. Sir Halliday further explained that changing environmental conditions and extreme weather events — sea-level rise, heat waves, storms, droughts, and wildfires — will be a defining feature of global migration and affect migration flows around the world. For thousands of years, humans have lived mostly on lands where a limited range of temperatures enabled an abundance of food to grow. One of the biggest challenges of today is the impacts of climate change on crops, water resources, droughts and risks related to health. While the humanitarian crises – caused by unrest, war and conflict, is the central driver of human displacement – this phenomenon is likely to intensify by the cascading effects of climate change and environmental deterioration. Since more and more people live in regions and locations highly vulnerable to disasters and other impacts of climate change, we have an important role to play in future strategies to respond and adapt to such impacts.

Contextual Analysis of Climate Risks in Relation to Displacement Trends in MENA

Moderator

Ms. Raya Abi Rached, TV Presenter,
Journalist and UNHCR Goodwill
Ambassador, Lebanon

Speakers

Mr. Andrew Harper, UNHCR Special
Advisor on Climate Change,
Geneva

H.E. Dr. Mohammed Khashashneh,
Secretary General, Ministry of
Environment, Jordan

Dr. Mohamed Behnassi, Professor
and Director of the Center for
Environment, Human Security &
Governance, Inb Zohr University,
Morocco

Ms. Sandra Draskovik, General
Manager, Green Building Council,
Kuwait

Dr. Mohamed Abdrabo, Head of
the Alexandria Research Center
for Climate Change Adaptation,
Alexandria University, Egypt

UNHCR has been dealing with climate displacement for a substantive period of time. Climate emergencies are likely to be the key contributor and driver forcing movement of populations in the foreseeable future. Some 90% of the world's refugees originate from territories which are classified as extremely climate vulnerable. Climate change and environmental challenges are triggering major shifts in human and ecological systems, as it has an impact on human security as a result of food insecurity, scarcity of water, physical and livelihood security, which triggers movement of people from rural areas to cities and may cause human migration across national borders. The forcible relocation and displacement caused by climate change also makes it difficult for people to return to their homes due to environmental and climate vulnerabilities.

There are many areas in the MENA region that are prone to high risks of climate change and displacement due to water insecurity, drought, and unequal social distribution of resources. Various countries in the region are under threat due to changes in the climate that has an effect on their natural systems. For instance, in Jordan (particularly in the Dead Sea area), climate models predict the region will only become drier in the future, with more frequent droughts and a 20 percent decrease in freshwater availability by 2100. A core recently drilled from the bottom of the Dead Sea shows that, during the planet's two previous warm periods, the Middle East experienced thousands of years of severe aridity, with water levels dropping to half of what's available today. Water scarcity is a real threat as water have dropped from an amount of 3600 sq. m. per person/yearly in 1946 to 50 sq. m. per person/yearly today. Heavy seasonal rainfall in Kuwait and Saudi Arabia is causing fatalities and temporary displacement. Saudi Arabia has frequently experienced record-breaking climate extremes over the last decade, which have had adverse socioeconomic effects on many sectors of the country. As for Mauritania, the rate of livestock and agriculture production has decreased from 75% to 25% due to decades-long droughts since the 1970s. The Yemen Water Crisis, due to high population growth, misguided agricultural development, and a vulnerable climate to climate change is facing an environmental catastrophe. In a major report generated by the world bank in 2018 on climate impact (Groundswell report), it is shown that there will be significant declines in water availability as well as crop production in Iraq, parts of Iran and the East western part of the Mashreq. Additionally, Lebanon's freshwater availability is less than 660 m3 /capita/year, which is close to the absolute water scarcity level of 500.

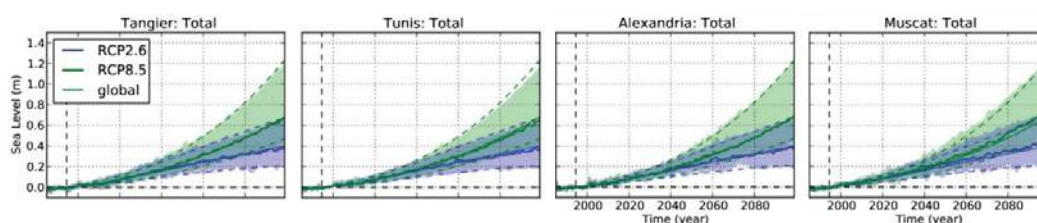


Figure 4
Sea-level projections for Tangier, Tunis, and Alexandria. © 2014 International Bank for Reconstruction and Development / The World Bank

Time series for sea-level rise for the two scenarios RCP2.6 (1.5°C world, blue) and RCP8.5 (4°C world, green). Median estimates are given as full thick lines and the lower and upper bound given as shading. Full thin lines are global median sea-level rise with dashed lines as lower and upper bounds. Vertical and horizontal black lines indicate the reference period and reference (zero).

Impacts of climate change on the MENA region include:

- Increase in air pollution resulting in health problems (asthma, depression, allergy, and respiratory diseases).
- Major and severe weather conditions including heavy rain induced flooding, wind, sandstorms, heat waves, dry seasons and extreme temperature discomfort.
- Climate impacts on agriculture may affect food production and food supplies. This results in economic losses (especially during particular seasons) affecting people's livelihood. Compounding issues relating to water scarcity, damaged infrastructure, and disease outbreaks will ultimately push people to migrate to locations seeking better environmental conditions.

Figure 5
Moderator and
panelists in
session one



UNHCR aims to be proactive and anticipate movement to better prepare for future displacement. There are research gaps that need to be addressed regarding assessing impacts of climate change. There is also a need to strengthen collaboration between humanitarian and development agencies with academia to collectively investigate such impacts in scenario-based assessments. It is paramount that human security issues are attended to by working with communities on the ground with the support of their governments, and not to overlook the important role of youth in this respect, considering their perspectives of how this crisis impacts future generations. Overall, there needs to be better governance to mitigate risks associated with climate change and resource depletion, as well as a need to collaborate closely with governments and local communities to enable the adoption of national adaptation plans through humanitarian agencies and donors. Compounded impacts of climate change and forced displacement add increasing pressure on host communities who are having pre-existing vulnerabilities. Given the overlap between climate change and displacement, climate change resilience must be strengthened while supporting the Sustainable Development Goals (SDGs) including from a gender lens.

Key outcomes and recommendations

1. Bridge research gaps by identifying concrete research questions on the nexus between climate change and displacement to help develop models and offer potential scenarios.
2. Identify key priorities of governments in MENA and how UNHCR can support national authorities, refugees and local communities to find solutions based on the needs on the ground and building upon existing mechanisms that have been utilized to address displacement.
3. Reform domestic legal and policy frameworks and international law to tackle the nexus between climate change and displacement, with a view to facilitate overcoming obstacles that hinder the work of actors on the ground including United Nations agencies.
4. Emphasize on climate change and displacement in countries of origin with a focus on generating solutions, as well as developing mitigation and adaptation strategies that are aimed at mainstreaming human insecurity policies and combatting inequalities of access to food security, protection against natural disasters, and conflict linked to resource scarcity or access.
5. Build partnerships and foster collaboration and bringing in the private sector to find innovative solutions.
6. Deepen understanding on climate issues and raise awareness on impacts and solutions for more concrete action and efforts on part of the communities through national dialogues.
7. Integrate climate change messaging in education and curriculums.

Best practices shared

UNHCR is currently working on a project in Sahel to address challenges such as population growth, a deterioration in the conditions to grow crops, and poor governance. The project aims to envisage where future vulnerabilities will be and how to prepare for them.

A high-level national committee was established in Jordan to address climate change, and implement a strategy to transition towards green energy between 2021-2025 with a view to:

- Build resilience and increase capacity of vulnerable groups including women, youth, and refugees to adapt to the impacts of climate change.
- Ensure collaboration between government institutions, the private sector, civil society and local communities (including women, youth and refugees) on the six main sectors of education, health, water, agriculture, food security and livelihood.



The Green Building Council (GBC) in Kuwait - a not-for-profit, non-governmental institution that constitutes 40 corporates and more than 150 individual members (including local authorities, engineering offices, universities, academia, manufacturing and energy leaders from Kuwait and MENA) – GBC aims to increase public awareness on the benefits of green buildings and develop the relationship between the building industry society and local authorities in the hope of improving environmentally responsible buildings, policies, technologies, and urban environments. This is done through three projects that are in line with the SDGs:

- Promoting sustainable development in green buildings and working closely with the construction sector to increase knowledge on green building technologies and sustainable solutions.
- Tackling the impact of existing buildings on carbon and house gas emissions.
- Addressing the sustainable reconstruction of post conflict areas for permanent and temporary settlements in collaboration with UN HABITAT and the [European Bank for Reconstruction and Development](#).

Enhancing Environmental Sustainability in Refugee Responses

Moderator

Ms. Francesca Coloni, Chief of Technical Support Section, DRS, UNHCR, Geneva

Speakers

Mr. Abdallah Ibrahim, UNHCR Senior Protection Associate, Community Based / Innovation Lab Manager, Jordan

Mr. Khaled Ahmad Al-Hamid, Energy Incentive Based Volunteer, refugee community member, Jordan

Dr. Jack Williams, Acting Dean at Department of Political Science at the American University Duhok, Iraq

Ms. Jessica Obeid, Senior Advisor and Energy Specialist, Azure Strategy and Academy Associate, Chatham House, Energy, Environment and Resources Programme

“ *There is a need for workshops to raise awareness on sustainable energies, provide livelihood opportunities for women and provide education to children on clean energy. I hope to see further support to refugee communities.* **”**

Mr. Khaled Ahmad Al-Hamid, Energy Incentive Based Volunteer, Refugee Community Member, Jordan

Climate change is a threat multiplying factor and a long-term crisis, which needs to be factored into the context of refugees and protracted displacement. Camps and other locations in urban areas where refugees are residing need to be climate resilient, so that they can live in safety, dignity and privacy. Clean energy and sustainability related projects should be included in the design of camps and the infrastructure of refugee urban locations. Decentralizing renewable energy solutions enables sustainability.

Refugees, local communities, and municipalities, need to be involved early on in the process to articulate an accurate sense of the needs on the ground, and foster a sense of community ownership to ensure regular engagements in energy-related projects, particularly those where alternative sources of energy can be used to reduce the environmental print. To ensure that these projects are sustainable, funding and capacity building of local communities is key. However, resistance due to variant interests on the part of the different actors involved needs to be factored in, when planning and implementing projects. Establishing links between energy resources and projects in camps and other refugee urban locations is an added value, particularly if these energy-related projects are connected to their livelihoods. Promotion of energy efficiency is equally important. For instance, the Energy Incentive Based Volunteers noted positive experiences on engagement on part of refugees in Jordan. Their involvement in replacing spare parts, carrying out maintenance works and regular monitoring of the solar power plant, provided those engaged with a sense of achievement and stability.

The international community and humanitarian agencies need to build technical skills required by the concerned countries. To facilitate the processes of design and procurement, it is seen that setting up systems and pre-designing and sharing procurement documents can equally benefit both refugee and host communities.

Key outcomes and recommendations

1. Build upon existing positive examples and experiences and replicate as feasible in local contexts.
2. Raise awareness on adequate and efficient use of energy in refugee locations both among the displaced as well as the local communities.
3. Ensure sustainability of energy sources to avoid postponing addressing the problem.
4. Establish partnerships, as well as engage with and include local communities and municipalities in all processes.
5. Prepare guidelines on standards and specifications for designs to help in response plans.

Best practices shared

Due to water scarcity in Jordan, UNHCR in partnership with UNICEF are distributing water by establishing networks and shifting away from relying on water trucking.

Azraq refugee camp has a solar power plant program, funded by IKEA foundation and the Saudi Fund for Development, which:

- Is the first refugee camp in the world powered by renewable energy
- Provides electricity for shelters and others with an average of 16 hours a day including at night.
- Reduced the carbon footprint by almost 6300 tonnes per year.

Zaatari camp solar power plant is funded by the government of Jordan, KfW Development Bank and is the largest solar power plant in a refugee camp. The plant:

- Connects 100% of the shelters to electricity on an average of 12 hours a day.
- Provides electricity to 49 organizations and operational facilities.
- Reduced the carbon footprint by over 15,600 tonnes per year.

Hydroponics and agriculture projects are piloted in both the Zaatari and Azraq camps to support persons of concern residing there. 20,000 people have been trained on hydroponics this year in both camps as well as in urban settings. The next phase of the project entails providing persons of concern with the means to provide for their livelihoods through planting vegetables.

Innovation Lab hosted in Zataari camp provides innovation techniques and technologies to refugees and empowers them to utilize them. One refugee participated and won Jordan's Energy Hackathon.

Sustainable Energy Solutions for **Domiz 1 Refugee Settlement in Duhok, Iraq** entails the installation of a photovoltaic (PV) system that provides existing electricity supply that comes from the national grid. The project is a partnership between [The American University of Kurdistan](#), refugee community members, UNHCR and [Atmosfair](#) (a German Carbon Offsetting company). Electricity is currently provided for 12-20 hours a day with frequent blackouts, which has a damaging effect on the need for electrical devices to cope with temperatures ranging from as low as -2 degrees and up to 45 degrees, as well as the impact of emissions from diesel generators used to compensate the blackouts. The installation of the PV system should add a significant amount of electricity coverage for up to 50% to camp residents particularly during the summer months. The PV system spans over 15-20 years with the aim to go beyond clean energy by promoting energy efficiency. This demonstrates sustainability and commercial viability, provides a sense of ownership and is also a source of income to refugee communities and the local government.

Initial outcomes of the project include

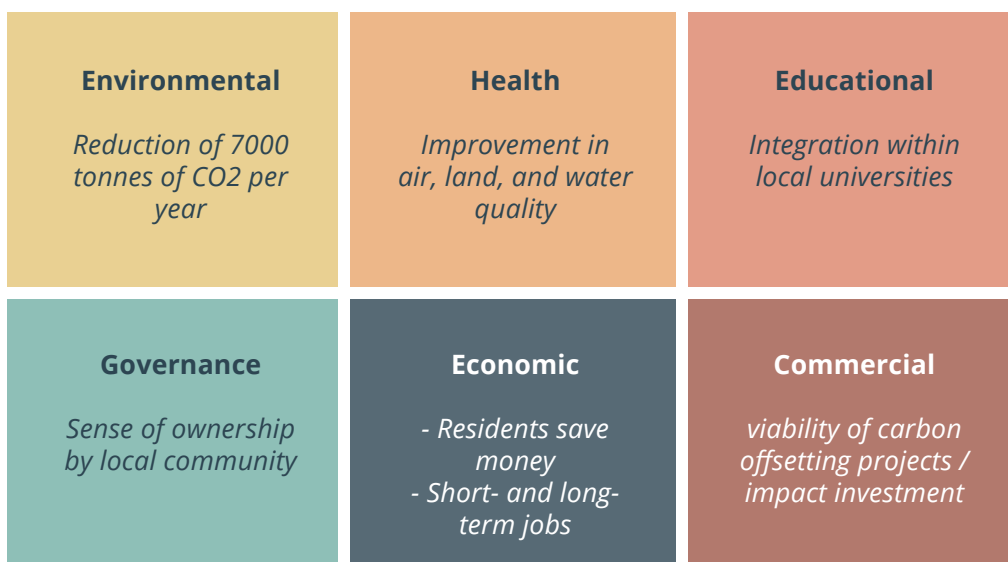


Figure 8
Initial outcomes of Domiz 1 Refugee Settlement in Duhok, Iraq

Supporting Climate Resilience Among Displaced And Host Communities

Moderator

Ms. Nadia Rouchdy – Chief Impact officer for DUCKLIFE/Founder of RealPalestine

Speakers

Mr. Jean-Nicolas Beuze, Representative, UNHCR Yemen

Ms. Stefania DiGiuseppe, Food Security/Systems & Resilience Analyst, UN Food and Agriculture Organization

Mr. Aram Yeretizian, Assistant Professor, American University of Beirut, Lebanon

Mr. Sidi T’Feil, Project Coordinator, SOS Desert, Mauritania

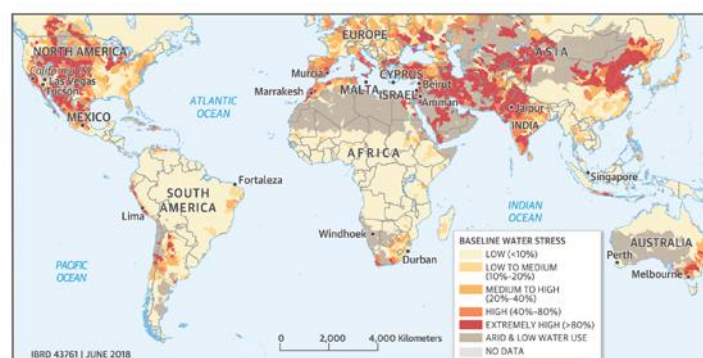
Ms. Maha Al Barjas, Secretary General, Kuwait Red Crescent, Kuwait

Estimates from 2018 show that approximately 108 million people were affected by the impact of climate change. Predictions estimate that in 2050 these figures will be doubled. In the MENA region, Yemeni and Syrian refugees are the most affected forcibly displaced populations, particularly those residing in Jordan, Lebanon, and Turkey. The intersection of conflict, climate change and environmental risk can destroy livelihoods, drive more displacement, widen inequality, and undermine the sustainable development of countries as it affects achievement of 10 out of 16 of the SDGs.

Climate change brings on a scale of risks that ranges from fiscal impact to the ecosystem, diminished agricultural production, a disruption to the food chain, a reduction of wages, and disrupting trade. These vulnerabilities interact with other key trends and sources of risk, including population growth, urbanization, and conflict. Resulting economic change will also drive employment and income and people’s ability to purchase food. Therefore, climate variability is already a critical factor in determining the livelihoods of many poor and vulnerable people in MENA, and this will ultimately exacerbate the food insecurity of countries in the developing world which could trigger tensions within communities and cause migration to resource sufficient areas. Changes in long-term climate change trends: higher temperatures, precipitation changes, and sea level rise will add stress on already scarce water resources. This will act as a threat multiplier leading to a wide array of issues including epidemics.

Urban settlements are changing drastically in countries where the climate was hit hard. Beirut today is marked by a clear shift in the planning of land use and design characteristics, as opposed to the earlier case in the 1960s. The transformation in Beirut’s urban fabric including zoning and building regulations, has affected the current urban thermal climate, the quality of urban space and the degradation of its natural environment. This is happening on an ad hoc basis and is resulting in the loss of agricultural land, the disruption of water systems, and insufficient water waste system networks that contribute to water pollution and health problems. In order to alleviate unhealthy urban conditions, there is a need to improve the state of cities and create in parallel a robust infrastructure that can respond to the issues of displacement due to climate change. There is also a need to plan for adverse environmental change by designing flexible built infrastructure that can adapt to and resist climate change via multi-stakeholder collaboration.

Figure 9
World Resources Institute, Aqueduct Projected Water Stress Country Rankings. Map depicts Country-Level Water Stress in 2040 under the Business-As-Usual Scenario.



New forms of collaboration are thereby necessary. Partnerships that focus on providing an adaptable infrastructure must be centered on building the capacity of communities so that they are able to endure and adapt to the changing environment, including humanitarian and development actors at the local and the global level. A multi-stakeholder partnership needs to consider and involve valuable insights and knowledge of several actors (such as civil society, the private sector, indigenous people, international organizations, and academia). Producing and sharing knowledge, experience, and data is crucial to enhance a society-wide response, as well as to inform and formulate the parameters that could lead to designing for flexibility. It would be necessary to have an inclusive approach that embraces the voices of people on the ground and leverage available resources and indigenous knowledge

to rectify the situation resulting from climate change. Adaptation is a bottom-up approach which requires close participation of multi-stakeholder actors with specific focus on grassroots organizations.

Awareness campaigns are essential to communities affected by climate change, being often unaware of the implications and how it directly affects their lives in terms of finding sustainable households and livelihoods. It would be necessary to develop a coordinated approach between governments and civil society actors to ensure the protection of displaced persons. It is crucial that the voices of women and female refugees are heard, as well as understanding the different roles they play, their needs, and adaptation methods they employ, ensuring inputs from a gender lens.

Key outcomes and recommendations

1. Increase awareness on the intersection of health, hygiene, nutrition, and the sustainable use of natural resources.
2. Expand partnerships and share knowledge and expertise amongst civil society actors, the private sector, indigenous people, refugees and displaced populations, international organizations and a network of academics and institutions of higher education.
3. Formulate the parameters that will lead to designing for flexibility (flexible infrastructure).
4. Tap on indigenous solutions and ensure refugees are heard in an inclusive manner, ensuring involvement of grassroots organisations and efforts in a bottom up approach.
5. Build on existing frameworks to reduce the provision of sustainable aid and preserve the development of natural resources.
6. Highlight the role of academia in the state of transition, to fill gaps present in the context of crisis.
7. Utilise moveable shelters enabling the displaced to move with them upon need.
8. Put in place a repository of climate related and displacement data (possibly to be linked to the Arabic Journal under process)².
9. Build the capacity of UN country offices to be able to improve sufficient and timely data collection and capitalise on the use of new technologies for data dissemination.
10. Enhance geolocated data on populations in refugee camps, as part of the Leave No One Behind agenda of the 2030 SDGs Agenda.
11. Overcome challenges faced in data collection including the need to adhere to a lengthy validation process and standardized questions to ensure compliance with government regulations.
12. Follow an integrated approach that takes into account the wide network of uncertainties about climate change including on changing weather and community conflicts.

² UNHCR MENA is working with the Arab Institute for Human Rights (AIHR) for the implementation of the above-mentioned first Arabic Journal on Displacement being produced collaboratively between both entities. The MENA Academic Journal and Digital Platform for Displacement; an annual peer-reviewed journal to be issued by the AIHR publishing articles, testimonies and reviews of books on the MENA neighbouring regions in Arabic in order to draw on comparative experiences on public policies and the need to understand refugee pathways. The journal will publish interdisciplinary research in a variety of topics: law, political sciences, and all fields of human and social sciences as well as literature and adopts the principle of free access to knowledge in all parts of the world, through a digital and paper publication. The journal creates opportunities for localized and regional knowledge production about displacement, with a view to serve as a reference for policymaking and expert advice from the region in line with UNHCR's strategic engagement with the academic sector.



Figure 10
Group of women create what is called in Yemen “Khazaf” which is the cover of shelters in Hudaydah and Hajjah governorates. UNHCR empowers the host community by engaging them in building shelters for displaced families.

Photo: UNHCR / Jeel Al Bena

Best practices shared

- UNHCR is working on finding solutions that are respectful of the environment by drawing on the experiences and knowledge of nomadic and indigenous people. The experience of building shelters in Yemen using “Khazaf”, renewable palm-leaf mats, whereby indigenous people have a long tradition of using Khazaf as it is readily available and adaptive to climate and related change.
- The IKEA refugee housing units’ model in Yemen is successful because it is composed of recycled materials and its ability to be easily transported. This minimizes the pressure on urban centers and it incentivizes refugees and displaced people to return to their homes with their packable IKEA units thereby allowing for their fast integration withing their community.
- The UN Food and Agriculture Organization’s efforts have developed a framework for monitoring and evaluation that is designed to measure the resilience and capacity of host communities and ascertain the geographical areas impacted. This tool is being applied in over 20 countries and was developed jointly with the WFP and UNICEF. The tool serves as an important indicator of highlighting the possible challenges and investment opportunities to increase resilience capacity.
- Due to the higher level of crises in Beirut, a growing synergy between academia, industries and communities has been formed, not least on the issues of displaced people.
- The Kuwait Red Crescent is working on a Climate Charter to organize work in response to natural hazards.

Enhancing the Impact of Climate and Displacement Research on Policy and Legal Frameworks

Moderator

Dr. Nasser Yassin, Director of Research at the Issam Fares Institute for Public Policy and International Affairs, American University of Beirut

Speakers

Ms. Shereen Shaheen, Director of Programme, WANA Institute, Jordan

Dr. Abdalnabi Sabri, Professor of International Law and International Relations at Mohammed V University, Morocco

Dr. Alex de Sherbinin, Associate Director for Science Applications and Senior Research Scientist, Columbia University, USA

Dr. Jinan Bastaki, Assistant Professor, Department of Public Law, UAE University, UAE

Facilitated reflective conversation with Dr. Ibrahim Awad, Professor of Practice in Global Affairs and Director of the Center for Migration and Refugee Studies, Egypt

As early as 10 years ago, institutions of higher education were more focused internally on conducting research and pedagogy. Today there is a significant amount of work that is being done in many universities to increase the sharing of knowledge across borders and enhance international cooperation and collaborative research. Academic knowledge, evidence and expertise can help inform, design, improve and test policy – and ultimately make government policy better. This is achievable if policy makers and academics interact effectively, and work on bridging the gap by generating evidence-based data from joint research, design and offer education opportunities to key decision makers, and provide independent objective guidance on new policies. Policymakers, educators, NGO workers and businesses need to join the dialogue on climate change and engage with academia to find solutions, and develop joint action moving forward.

To this effect, UNHCR is bringing to the table different academic institutions to deepen their understanding on the overall needs of displaced persons. UNHCR recently signed partnership agreements with the [Potsdam Institute for Climate Impact Research in Germany](#); [Uppsala University in Sweden](#); [The City University of New York](#) and more. UNHCR is keen on partnering with the [Earth Institute at Columbia University](#) to work jointly on climate displacement. These partnerships will be focused on generating, gathering and sharing evidence-based data to alleviate risks on refugee and host communities. The need for data and research on policy and climate impact on refugee populations is identified.

Potential research areas to consider in data modelling include:

- To understand drivers of population movements with the goal of developing more resilient solutions in potential source areas to prevent displacement and refugee flows.
- To understand the impacts of refugee camps and settlements on the environment, and how camps are vulnerable to climate risks.

There is also a need to understand the true weight of environmental and climatic factors in relation to their interplaying relationship factors that have a more social political or economic nature. Reasons for modeling include anticipatory planning for governments but also models that allow for policy experiments to better inform decision makers on the long run.

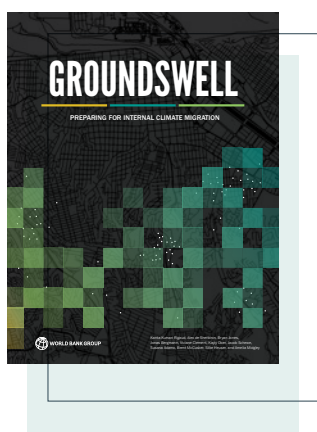


Figure 11
World Bank - Groundswell Report

Key outcomes and recommendations

1. Enhance the impact of climate and displacement research on policy and legal frameworks.
2. Explore prospects on how to catalyse new thinking (and narrative) on including displaced persons within the existing local, national, international frameworks that address climate change.
3. UNHCR to consider adapting indicators to refugee centric situations focusing on refugee sending populations in relation to SDG, in addition to refugee receiving.
4. Capitalize on the importance of localized evidence and how is it used to influence decision-making, informing advocacy efforts and policymaking in general, and to advance more integration and adoption of protection-centred narrative and practice.
5. Step up inter-regional cooperation with a focus on research ethics and respect for human dignity.
6. Encourage green growth thinking and activities adaptable to climate change effects.
7. Embed sustainability and green growth into national curriculums to help mainstream it not only for refugees but for the society at large.
8. Assist governmental bodies via provision of data generated from academic scientific research.
9. Develop an interdisciplinary approach that goes beyond the definition of laws and focuses on the underlying factors driving displacement instead of the obvious factors of displacement and migration.
10. Raise awareness locally and internationally on the reasons and implications causing displacement and enhance the role of academia in changing perceptions.
11. Undertake empirical research and comprehensive investigation of the climate change and migration nexus which requires a cross-disciplinary approach.
12. Suggested research areas and solutions include:
 - Use climate projections to consider the moments in time when conditions may become difficult to bear in refugee camps.
 - Consider developing regional plans similar to those of the Platform for Disaster Displacement for moving refugee camps / populations to more benign climates.
 - “Climate Proofing” in refugee camps
 - Develop principles for reducing refugees’ future climate vulnerability

Best practice

The WANA institute is a policy think tank in Jordan that promotes a transition to evidence-based policy, and specializes in bridging the gap between academia, policy makers, civil society, and development practitioners, and is also a member of the MENA Civil Society network for Displacement led by UNHCR. WANA worked closely with UNHCR to publish a [report](#) that aimed to assess to what extent refugees in Jordan are living in a state of unity and inclusion. The objective of the report was to bring light to the challenges facing refugee families in Jordan in hopes of improving host countries, third countries and donor policies. The study looked at refugees who came into Jordan due to refugee producing conflict in Iraq, Somalia, Sudan, Syria and Yemen which all differ in nature and scope yet exhibit the common traits of having developed into protracted civil wars. WANA interviewed both women and men from the five nationalities. WANA has also been conducting various studies working closely with the local

people and grassroots. In doing so it has produced the booklet on “[Enabling Communities for Climate Change Adaptation](#)” which contains training and capacity building of different civil society actors and youth from different regions in Jordan.

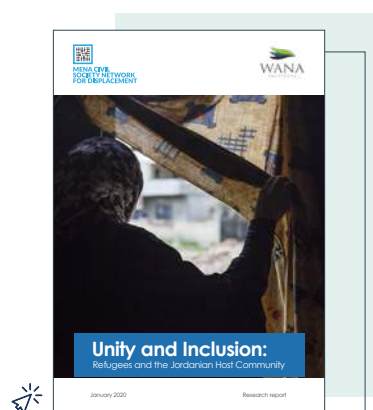
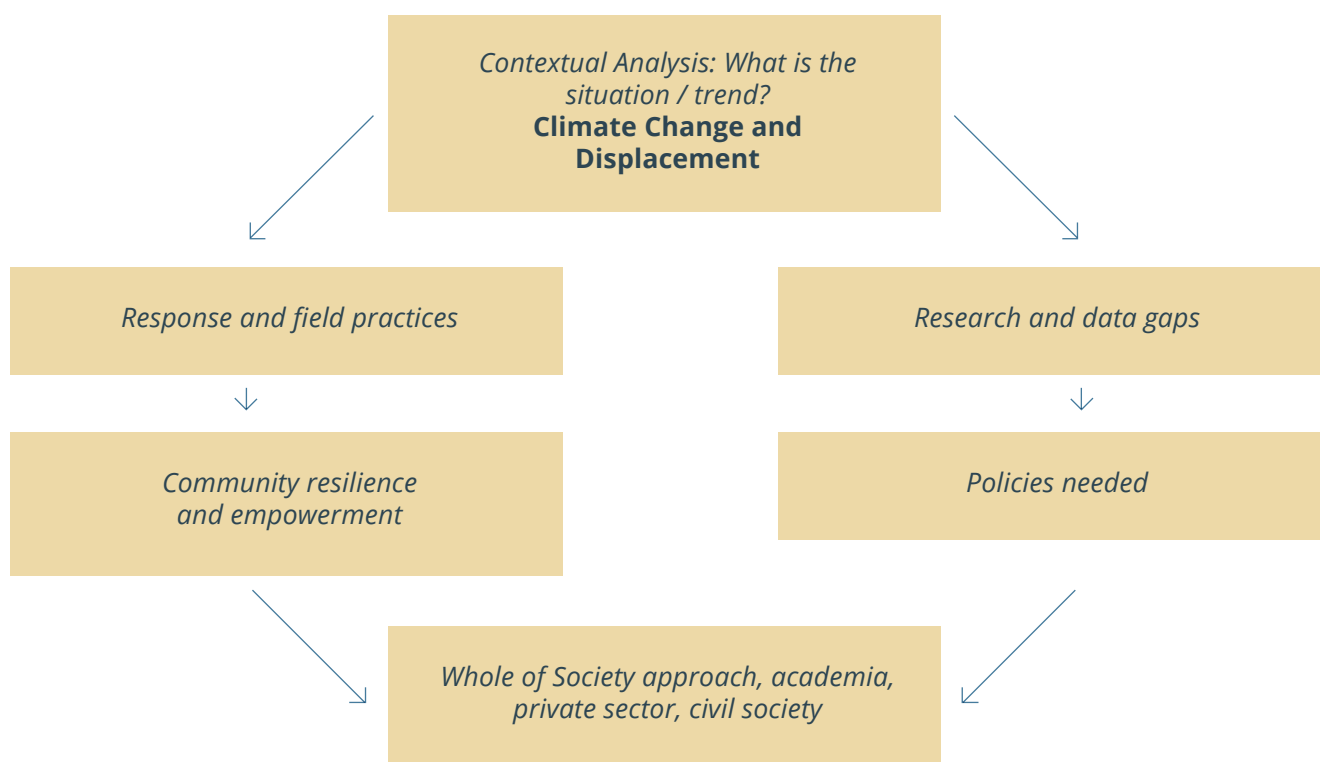


Figure 12
Unity and Inclusion - Refugees and the Jordanian Host Community

Way Forward And Next Steps

In addition to the key outcomes and recommendations of the roundtable shared above, some next steps in engagement, communications, and planning include:



- UNHCR to start an awareness initiative on the impact of climate change on displacement and develop principles for reducing refugees' future climate vulnerability.
- UNHCR to adapt or develop indicators complementary to SDG and Sendai indicators that are refugee-centric and that focus on refugee hosting rather than refugee sending country conditions.
- Advocate for commitment of donors to invest in research and opportunities to alleviate and mitigate the impact of climate change on displacement, including ear-funding for climate specific issues and solutions.
- UNHCR to tap into potential sources of financing to enable replication of successful and good practices within the region.
- UNHCR to continue engagement with a variety of universities and academic institutes to pursue needed research areas and cover identified research gaps.
- Through the first version of the Arab Journal tackling issues on refugees and forced displacement, include a
- call for papers in relation to the nexus of climate change and displacement as a primary area of investigation.
- Liaise with concerned offices in the field to enhance awareness raising and develop relevant activities on the issue of climate change and displacement.
- Encompass the results of the exchanges and outcomes as a basis for continued discussions, including in light of, and in line with, [UNHCR's Strategic Framework for Climate Action](#), and its respective pillars of (a) Law and Policy (b) Operation and (c) UNHCR's Environmental Footprint, and the relevant objectives, in particular objectives 2.1, 2.2 and 2.3.³

³ Objective 1: Guide the interpretation and application of relevant legal and policy frameworks, develop guidance and catalyze international discussions Objective 2.1: Preserve and rehabilitate the natural environment and mitigate environmental degradation in displacement settings Objective 2.2: Enhance the resilience of displaced people and host communities to climate-related and other environmental risks Objective 2.3: Strengthen preparedness, anticipatory action and response to support protection and solutions for people displaced and their hosts in disaster situations Objective 3: Improve UNHCR's environmental sustainability by reducing greenhouse gas emissions and minimizing negative impacts on the environment.

Columbia University is open to collaborate with interested partners, and key areas of progress and potential research collaboration opportunities include:

1) Climate Modeling: predict what will happen and how. Columbia University's expertise in modelling and global leadership in vulnerability assessment, hosting diverse socioeconomic databases and mapping tools. The CIESIN, CCSR / NASA Goddard, the Data Science Institute have developed modelling tools that could be utilized by researchers and planners to accurately predict the relocation of climate-induced migrants, and to enable the development of political and economic strategies to address this challenge.

2) Disaster Preparedness and Resilience: Development of a program to unify the study of "disasters" by including studies on extreme weather events (e.g., hurricanes, droughts, extreme heat), geophysical (e.g., earthquakes, volcanic eruptions, tsunamis), pandemics, and technological accidents (dam failures, water system contamination, nuclear detonation). While hazards are comparable and interconnected, they are rarely analyzed and classified in a way that clearly identifies priorities for decision makers. There is also potential for collaboration around preparedness priorities and community resilience.

3) Sea Level Rise: Columbia University expertise includes: State-of-the-art models of ice sheets, oceans, and the underlying Earth (LDEO, IRI); New generation of satellite observations of polar and coastal processes (LDEO, IRI); vulnerability assessments; A diversity of adaptation perspectives (GSAS – Center for the Study of Social Difference, GSAPP – Center for Resilient Cities and Landscapes). Potential collaboration may also include projections for MENA areas impacted by sea level rise, preparedness and response, etc.

4) Climate Law and Policy: Develop new laws and policies on relevant issues. Columbia expertise includes: The Sabin Center for Climate Change Law – already investigating the impact of these issues on international law; The Columbia Business School; Center for Global Energy Policy (CGEP). Potential areas of collaboration include (1) how carbon pricing can potentially be a solution to fund climate relocation; (2) International laws and/or policies around population movements in the MENA region.