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## Regional Policy Brief

# Energy for Crisis Recovery

## Solar Solutions for Crisis-Affected Communities in the Arab Region



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Regional Policy Brief

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### **I. Introduction: The energy challenge in crisis contexts**

Sustainable energy is a critical element for achieving goals of immediate recovery and longer-term resilience in fragile and crisis contexts. Nowhere is this more apparent than in the Arab region, where countries have experienced an expansion of conflict, drought and an unprecedented level of displacement. The ability of communities to cope with and rapidly recover from crisis hinges in many ways on their ability to regain sustainable access to energy. Energy fuels communities access to water, to social services like health and education, to transport and communication needs, and is critical for regenerating livelihoods and local economies. But too often countries affected by crisis are unable to bring back online the type of energy systems needed for an effective recovery. In such contexts, decentralized energy solutions are now receiving greater attention, as a way of meeting the needs of affected communities and setting the foundations for resilience.

As countries seek new bridges between humanitarian and development interventions, and new resilience-based approaches to crisis recovery, the role of sustainable energy solutions has come into greater focus. Sustainable Development Goal 7 (SDG 7) on energy calls on countries to “ensure access to affordable, reliable, sustainable and modern energy for all.” Among those most in need are the record numbers of individuals globally and in the Arab region affected by conflicts, droughts and disasters. Many countries suffering the impacts of crisis are also energy poor, relying heavily on energy imports for economic and social needs. In these contexts, expanding sustainable energy solutions is seen not as an end in itself, but as an enabler on the road from fragility to resilience. This is particularly important in the protracted situations of conflict and displacement faced in the Arab region.

Globally, the number of people forcibly displaced by conflicts and disasters has reached record levels. The world now has a record 65.3 million forcibly displaced persons, including over 21 million refugees crossing borders, and over 40 million internal displacements within countries. In 2016 alone, there were 31.1 million new internal displacements associated with conflict and disasters globally, of which 24.2 million were internally displaced by disasters and 6.9 million by conflicts.<sup>1</sup> In the past eight years, the world has recorded more than 203 million Internally Displaced Persons (IDPs) around the world, an unprecedented increase.

To make matters worse, the vast majority of refugees and IDPs are hosted in developing countries which already face strained levels of energy security. Constraints often exist to extending energy access to displaced communities, either owing to ongoing conflicts and destruction of power grid infrastructure, or from lack of fiscal space and limited ability to expand already-stretched energy supplies. In such communities, expanding use of decentralized energy solutions is important not only for short-term needs, but from a longer-term development perspective as it helps reduce pressures on host communities and fiscal pressures on the State.

Across the Arab region, a lack of access to energy is hindering the ability of crisis-affected communities to earn a living, access food and water, or access health and education services, and is an important obstacle to recovering from crisis. As further elaborated below, in many countries in the region, expanding access to solar solutions has emerged as one potential enabler of resilience building for affected communities. The ability to scale-up sustainable energy solutions in crisis contexts is in many ways a litmus test for the aspired goal of bridging the humanitarian-development divide and crafting ‘resilient recovery’ solutions – priorities that have come into strong focus in recent years in global and regional fora.

The SDGs and the 2030 Agenda for Sustainable Development call for more integrated and resilience-based approaches to development. Energy is a key factor in helping individuals, households, communities, society and the State bounce back effectively from crisis and shocks, ensuring that crises do not lead to a downturn in human development indicators, while also helping communities transition to long-term resilient pathways.

## **II. UNDPs Sustainable Energy Strategy**

The United Nations Development Programme (UNDP) addresses the afore-mentioned issues under the framework of its new Strategic Plan (2018-2021) which places strong emphasis on helping partners close the energy gap and expand energy access for the poor. This is aligned with UNDPs Sustainable Energy Strategy (2017 -2021), meant to guide UNDPs cooperation around the world. As noted therein, UNDP is the UNs largest provider of country assistance for action on climate change with close to US\$3 billion of grants today in over 140 countries including countries in Arab region, of which US\$ 655 million of country grants are for climate change mitigation and sustainable energy, in turn leveraging US\$ 3.4 billion in parallel co-financing from private and public partners.

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<sup>1</sup> See 2016 Global Report on Internal Displacement (GRID), Internal Displacement Monitoring Center (IDMC) and the Norwegian Refugee Council, Oslo.

Through this support, UNDP helps countries achieve three key objectives, in line with the three pillars of SDG 7 – (i) reducing energy intensity of growth by enhancing energy efficiency in key sectors such as urban infrastructure, buildings and transport, (ii) de-risking the policy environment for expanded investments into renewable energy solutions and (iii) expanding energy access for poor and vulnerable communities. The latter objective has particular benefit for addressing the plight of communities in fragile and crisis contexts, with displaced communities being among the poorest and most vulnerable in society today.

While levels of extreme poverty are coming down around the world, poverty rates have become entrenched or are expanding in many of the world's fragile and crisis contexts. The Arab region has seen a resurgence of poverty in recent times owing to rising levels of conflict and displacement. The challenge of achieving SDG 7 in such contexts is a new and critical part of the 2030 Agenda for Sustainable Development. UNDP believes sustainable energy can have a significant multiplier effect in fostering stability and resilience, enabling recovery, ensuring access to health and education services, and regenerating employment and livelihoods - as an accelerator across many of the SDGs.

UNDPs support focuses primarily on building long term solutions and transformational change. A main focus is on strengthening policy and institutional capacities to overcome barriers to greater investments into sustainable energy, and to foster transformative development solutions. While many successes have been registered around the world, in fragile and crisis contexts the risks and cost calculus of sustainable energy use is very different. A tailored approach is now needed for crisis contexts, given high levels of complexity, reduced clarity of institutions and policies, constraints in domestic finance, and lack of data on energy needs needed for effective response. One-size-fits-all approaches do not work in such settings, given the highly contextualized needs of IDPs and conflict-affected communities, while decentralized solutions are often well-suited, given the large lag times for crisis-affected communities to recover power grid connection.

In this regard, UNDP has commenced a series of new initiatives in the Arab region in recent times, specifically adapted to the needs of crisis-affected communities. Decentralized solar technologies are increasingly identified as a solution for communities hosting refugees and IDPs, especially in cases of protracted displacement. UNDP has helped deploy solar solutions for broader development and recovery goals, seeing electricity not as an end in itself, but as an enabler of poverty reduction and community resilience. Solar solutions help communities address needs for irrigation and food security, refrigeration needs in clinics for medicines and other vital supplies, lighting for household and education needs, and stable energy for small businesses to generate income and livelihoods. Through this support, UNDP helps achieve meet emergency development needs of crisis-affected communities, and supports broader goals of stabilization, recovery and resilience in the region.

### **III. Closing the Energy Gap: Solutions for resilient recovery**

In recent years the region has experienced one of the most dramatic crises in its history, and UNDP is now engaged in a major effort to expand recovery and resilience programming at the country level. Within this broader effort, UNDP has initiated a series of sustainable energy initiatives to address the important role of energy in stabilization and recovery. Support to local partners is led by the network of UNDP Country Offices present across the region, with technical expertise and policy support from UNDPs Regional Hub for Arab States. What follows are some examples of this new track of energy cooperation emerging in the region.

#### *Solution 1) Energy Access and the Syria Crisis*

The crisis in Syria has caused tremendous devastation within Syria itself, and it has also had significant impacts in neighboring countries in the Arab region. While efforts have been underway to establish more effective global cooperation, today over 90% of all Syrian refugees are hosted within neighboring countries such as Egypt, Iraq, Jordan, Lebanon and Turkey. In places like Jordan and Lebanon, most refugees reside not in camps, but in host communities. Meanwhile, both countries lack significant domestic energy reserves, with additional refugee populations having created new pressures on already stretched energy supplies and extra fiscal burdens from rising import needs.

The protracted nature of the Syria crisis and its impact on neighboring countries has galvanized a growing realization that responses are needed not only for immediate humanitarian needs, but also for medium- and long-term development challenges. Sustainable energy is now emerging as one example of a solution that can help forge a nexus between humanitarian and development tracks of cooperation. Sustainable energy solutions can help meet immediate energy needs in host communities, while also reducing broader risks to stability and development in countries like Jordan and Lebanon increasingly affected by the conflict in Syria. Sustainable energy solutions are increasingly seen as part of broader resilience-based approaches to the crisis, helping ensure that countries can cope with increased demand in host communities, and that local development trends and social cohesion can be maintained.

*Jordan* for example hosts over 1.3 million Syrian refugees, while at the same time being one of the region's most energy insecure countries. The growth in energy demand from the refugee influx has resulted in recent years in an expansion of fossil fuel imports meant to ensure energy security and stability for the entire Kingdom. With Syrian refugees residing in cities and towns across Jordan, additional energy demands have resulted in increased pressure on public budgets and risks to fiscal stability and national resilience.

Recognizing the important role of energy in achieving resilience, the Government in recent years has put in place a Jordan Response Plan to the Syrian Crisis (JRP), the national pillar of the UNs Regional Refugee and Resilience Plan (3RP). It covers various elements of the challenge, including for example access to health and education services in refugee host communities, and it also includes an important pillar on sustainable energy solutions. The energy pillar in the JRP was designed through a lead role of UNDP and UNOPS, helping the Government assess the social and economic vulnerabilities from by lack of energy access and

setting forth a series of interventions to build resilience. This emerged as the first national response plan under the 3RP with a dedicated sustainable energy focus, and served as a model for other countries in the region. Through this support national partners were enabled to mainstream sustainable energy solutions into crisis response and recovery at the upstream policy level, with plans for resilience building able to meet host community energy needs for livelihood, health and education goals; offset rising energy demands with new energy efficiency and renewable energy measures; and reduce the fiscal burden of rising import needs.

In neighboring *Lebanon* over 1.5 million Syrians have taken refuge, now constituting more than a quarter of the overall population in Lebanon, the highest share of any country. This brings various risks to Lebanon's development pathway, with energy insecurity an increasingly important issue. Like in Jordan, pre-existing challenges of energy insecurity have been exacerbated by the rapid onset of new energy demand. UNDP has likewise played an important upstream role in Lebanon, helping integrate sustainable energy into the new Lebanon Response Plan to the Syria Crisis (2017-2020). With support of the Netherlands, UNDPs Country Energy Efficiency and Renewable Energy Demonstration Project for the Recovery of Lebanon (CEDRO) helped the Government assess the incremental demand placed on the national energy supply from the crisis, the energy needs of Syrian refugee families, and recommend ways to expand sustainable energy solutions for host communities.

This upstream support has also been coupled with a series of downstream actions under CEDRO, supported by the Netherlands, Germany and Saudi Arabia, to build community resilience through renewable energy for household lighting, heating and street lighting needs in host communities. This includes some of the most vulnerable areas of Lebanon facing increased pressures from host community needs alongside significant levels of energy insecurity. To date, decentralized solar systems have been installed in over 750 households benefiting thousands of individuals in areas most in need. Solar powered street lighting systems have been installed across 30 towns in rural areas, while energy efficient stoves that run on environmentally-sound briquettes made from carpentry and agriculture waste have been distributed to over 600 households.



*Eco-friendly briquettes in Lebanese refugee host-communities.  
Photo: UNDP CEDRO Programme*

### *Solution 2) Energising Social Services in Palestine*

The Occupied Palestinian Territory faces serious challenges of energy access as result of state of the occupation. The Gaza strip in particular faces a dire situation following series of military campaigns over the past decade and a comprehensive blockade of Gaza that started in 2007. Communities in the region suffer high levels of social exclusion, poverty, one of the world's highest unemployment rates, and insufficient infrastructure. The lack of access to energy hinders these and other developmental needs and has emerged as a crisis in its own

right. This started in 2006 when fighting in Gaza damaged major infrastructure including the areas power facilities, leaving the community with a chronic energy shortage. With little success in recovery over the past decade, the lack of energy access in Gaza has become a protracted crisis. By 2016, the electricity deficit in Gaza reached 61%, with between 8-12 hours each day of power cuts affecting the entire 1.7 million population in the Gaza Strip.

Palestine receives an abundance of solar radiation, with an average of 320 days of sunshine per year in the Gaza strip. With the right set of policies to integrate solar solutions into crisis recovery efforts, energy security can be enhanced for critical areas of need and broader goals of community resilience. To this end, UNDP's Renewable Energy Generation programme supports local partners in Gaza to expand access to solar energy in schools, health centres and water facilities, improving the reach of key social services to women, children and vulnerable populations impacted by crisis.

Through the support of the OPEC Fund for International Development (OFID), solar solutions have been deployed in four schools including Basheer Al Rayes in Gaza city, and Akka in Khanyounis and Raba'a Al Adawiyah in Rafah, and Al Falouja in Jabalia. Teachers previously having to teach in the dark are now able to access lighting during power cuts. In Bashir El Rayyes High School for example around 1800 female students are already experiencing a transformative process towards greater educational attainment thanks to new energy access. Through this process, communities are empowered, and greater awareness is built on the important role of sustainable energy in achieving resilient recovery in Palestine.



*Empowering resilience in Gaza. Photo: UNDP PAPP*

Through this cooperation, UNDP and OFID also help scale-up development benefits for broader livelihood results. Solar ovens are deployed to households to support women's empowerment through commercial income generating activities. Two maternity health care clinics Hassan Al Harazeen in Gaza city and UAE Red Crescent clinic in Rafah have also benefited from solar electrification, while solar water pumps have been deployed to vulnerable communities helping mitigate chronic shortages. This includes a solar water pump to increase

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