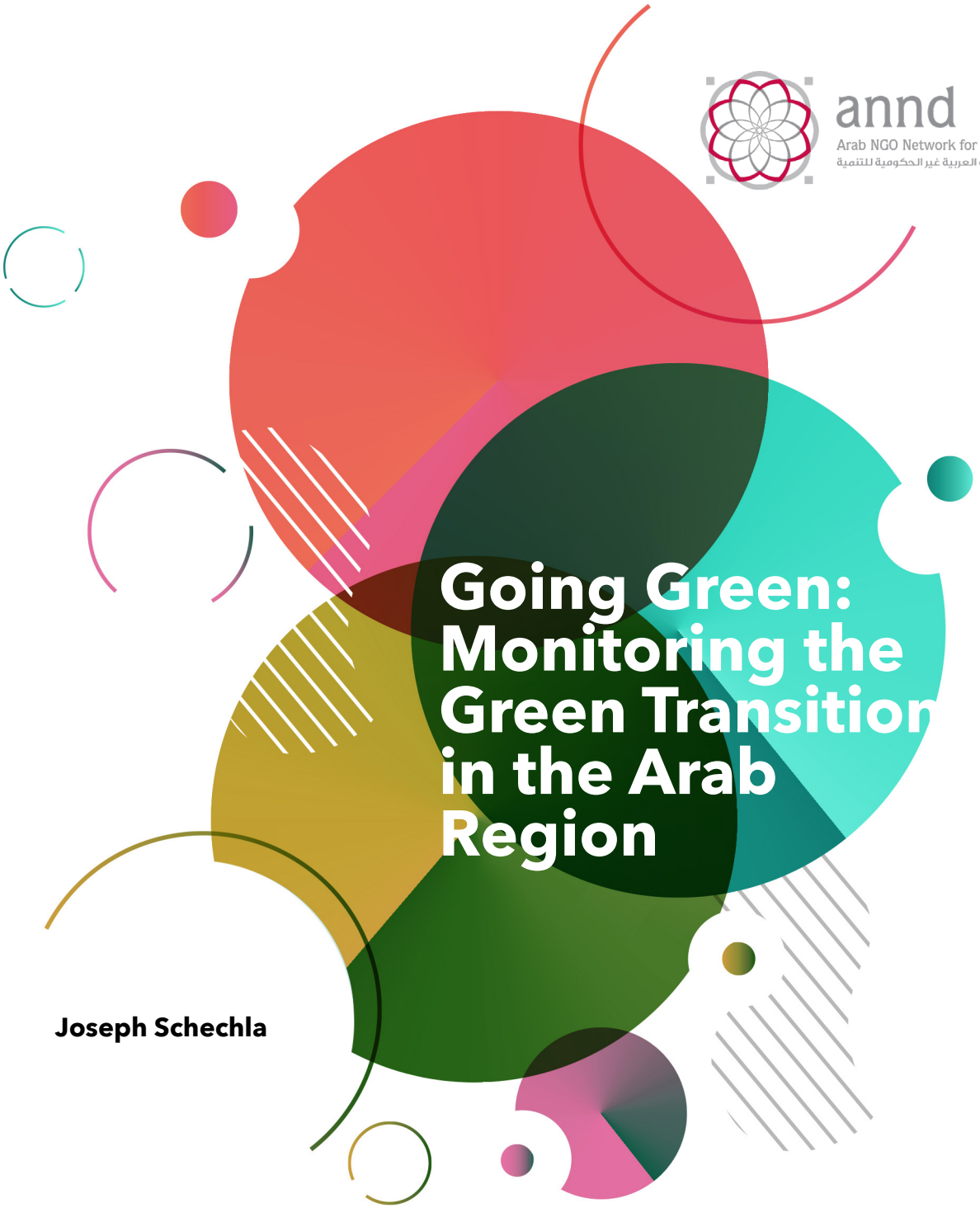

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شبكة المنظمات العربية غير الحكومية للتنمية

Going Green: Monitoring the Green Transition in the Arab Region

Joseph Schechla

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Joseph Schechla is the coordinator of the Habitat International Coalition's Housing and Land Rights Network (HIC-HLRN), which supports member organizations in their development, advocacy, and various struggles to realize the human right to adequate housing and equitable use and democratic control over the land in the Middle East/North Africa and other regions across the globe.

Abbreviations and Acronyms

4C Maroc	Morocco Climate Change Competence Center
ADB	Asian Development Bank
AFD	French Development Agency
AfDB	African Development Bank
AFED	Arab Forum for Environment and Development
AFOLU	Agriculture, Forestry and Other Land Uses
AIF	alternative investment fund
AIP	Agricultural Insurance Program (Morocco)
AMCC	Alliance mondiale contre le changement climatique
AMEE	Moroccan Energy Efficiency Agency (Morocco)
ANCAR	Appui au Renforcement des capacités de gestion multisectorielle, coordonnée et décentralisée de l'environnement pour atteindre les objectifs des trois Conventions de Rio en Union des Comores (project)
APG	Associated petroleum gas
APRUE	National Agency for the Promotion and Rationalization of Energy Use (Algeria)
AQI	Air Quality Index

BAU	business as usual
BIA	bilateral investment agreement
CCAC	Climate and Clean Air Coalition (Morocco)
CCF	Climate Change Fund
CCL	Code of Local Authorities (Tunisia)
CCS	carbon capture and storage
CDER	Centre de Recherche dans le domaine des Energies Renouvelables
CEDARE	Center for Environment and Development for the Arab Region and Europe
CEF	Construction Equity Fund
CER	certified emission reductions
CFS	Committee on World Food Security
CI1	Climate Investor 1
CIF	Climate Investment Fund
CNCB	National Commission for Biological Diversity) (Morocco)
CNCC	National Commission for Climate Change (Morocco)
CNDD	National Council for Sustainable Development (Comoros)
Co.	company

CO2	carbon dioxide
CONF.	conference (UN)
CoP	Conference of Parties
COVID-19	novel corona virus 2019
CSP	concentrated solar power
CSP	concentrated solar power
DF	development fund
DoECC	Directorate of Environment and Climate Change (Somalia)
DRR	disaster risk reduction
EBRD	European Bank for Reconstruction and Development
EDF	Energy Development Fund
EEAA	Egyptian Environmental Affairs Agency
EME	emerging-market economies
EPI	Environmental Performance Index
ESCWA	United Nations Economic and Social Commission for Western Asia
ETO	exterritorial (human rights) obligations
EU	European Union
EU	European Union
FAO	Food and Agriculture Organisation of the UN
FCCC	Framework Convention on Climate Change (see also UNFCCC)
FDI	foreign direct investment

FFC	Forces of Freedom and Change alliance (Sudan)
GBIG	Green Building Information Gateway
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GET	Green Economy Transition
Gg CO2-eq.	total greenhouse gas emissions
GHG	greenhouse gas
GHGE	greenhouse gas emissions
GmbH	Gesellschaft mit beschränkter Haftung (limited liability company)
GNI	gross national income
GoE	Government of Egypt
HIPC	heavily indebted poor country
HIV/AIDS	human immunodeficiency virus / acquired immunodeficiency syndrome
HLPF	High-level Political Forum
HSBC	Hong Kong and Shanghai Banking Corporation
HYDROMET	hydrological and meteorological (hazards)
IBSA	India, Brazil, South Africa (international tripartite group for promoting international cooperation among these countries)
ICBA	Center for Biosaline Agriculture

ICCD	International Convention to Combat Desertification
ICTU	information to facilitate clarity, transparency and understanding
IDP	internally displaced person
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	international financial institution
INC	Initial National Communication to the UNFCCC
INDC	Intended Nationally Determined Contribution (see also NDC)
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
IRESEN	Institute for Research in Solar Energies and New Energies (Morocco)
IsDB	Islamic Development Bank
ISO	International Organization for Standardization
JICA	Japan International Development Agencies
JNF	Jewish National Fund
JREEF	Jordan Renewable Energy and Energy Efficiency Fund
KEPA	Kuwait Environment Protection Agency
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KPC	Kuwait Petroleum Corporation
LAS	League of Arab States
LDC	least developed country
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LEZ	low-emission zone
LGIF	Lebanon Green Investment Facility
LNG	liquid natural gas
LPG	liquefied petroleum gas
Ltd.	limited (liability)
LT-LEDS	National Long-term Low-carbon Strategy for 2050 (Morocco)
LT-LEDS	National Long-Term Low-Carbon Strategy for 2050 (Morocco)
MASEN	Moroccan Agency for Sustainable Energy (Morocco)
MC	member country
MDTF	Multi-Donor Trust Fund
MEDRESET	a consortium of research and academic institutions focusing on different disciplines from the Mediterranean region to develop alternative visions for a new Mediterranean partnership and corresponding EU policies
MENA	Middle East/North Africa

MENARA	The Middle East and North Africa Regional Architecture, regional project mapping geopolitical shifts, regional order and domestic transformations is a project supporting studies on the geopolitical order in the making, identifies the driving forces behind it, sheds light on bottom-up dynamics and assesses the implications of these processes on the EU and its policies towards the region
MEWA	Ministry of Environment, Water and Agriculture (Saudi Arabia)
MIPME	Ministry of Industry and Small and Medium-Sized Enterprises (Tunisia)
MOCCAE	Ministry of Climate Change and Environment (UAE)
MOEW	Ministry of Electricity and Water (Kuwait)
MPED	Ministry of Planning and Economic Development (Egypt)
MRV	measurement, reporting and verification
MtCO2eq	million tonnes (megatonnes) of carbon dioxide equivalent
MW	megawatt
NAP	National Adaptation Plan
NAP	National Adaptation Plan
NC4Egypt	Egypt's Fourth National Communication to the UNFCCC
NCCC	National Climate-change Committee (Somalia)
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
NDA	National Designated Authority (Somalia)
NDC	Nationally Determined Contribution
NDC	Nationally Determined Contribution (to the Paris Agreement goals)
NDP	National Development Plan
NEEAP	National Energy Efficiency Action Plan (Egypt)
NEEAP	National Energy Efficiency Action Plan (Egypt)
NEEREA	National Energy Efficiency and Renewable Energy Action (Lebanon)
NEPAD	New Partnership for Africa's Development
NESAP	National Environmental Strategy and Action Plan (Iraq)
NG	natural gas
NIGSD	National Institute for Governance and Sustainable Development (Egypt)
NPA	National Policy Agenda 2017–2022 (Palestine)
NSWMP	National Solid Waste Management Program (Egypt)
NTF	Nigeria Trust Fund
NUA	New Urban Agenda
ODA	official development assistance

ORSEC	Specific Intervention Plan and Emergency Organization Plans (Algeria)
PADIDFA	Programme d'appui au développement inclusif et durable des filières agricoles
PAGGW	Pan-African Agency for the Great Green Wall
PaMs	Mitigation Measures and Policies (Egypt)
PCN	National Climate Plan (Morocco)
PCR	Regional Climate Plans (Morocco)
PCR	regional climate plans (Morocco)
PDALM	Mauritanian Coastal Development Master Plan
PDB	public development banks
PEFCLI	Subnational Climate Finance Expertise Program (Morocco)
PM	particulate matter
PNA	National Adaptation Plan (Morocco)
PNAEDD	National Action Plan for the Environment and Sustainable Development 2020–2024 (Algeria)
PNAE-DD	National Action Plan for Environment and Sustainable Development 2035 (Algeria)
PNC	National Climate Plan (Algeria)
PNDA and PNDE	National Agriculture and Livestock Development Plans (Mauritania)
PNIA / SA	National Agricultural Investment and Food Security Program (Mauritania)
PPP	public-private partnership
PQD	Five-year Development Plan (Tunisia)
PREFER	Productivité et résilience des exploitations agricoles familiales (project)
PSM	Moroccan Solar Plan (PSM)
QDS	Quarter Century Strategy (Sudan)
R&D	research and development
RCREEE	Regional Centre for Renewable Energy and Energy Efficiency
REDD+	reducing emissions from deforestation and forest degradation, plus the sustainable management of forests, and the conservation and enhancement of forest carbon stocks
REDD+	Reducing emissions from deforestation and forest degradation
RES	resolution (UN)
Rio+20	UN Conference on Environment and Development
RMC	regional member country
SABIC	Saudi Arabian Basic Industries Corporation
SCCF	Special Climate Change Fund
SCP-NAP	Sustainable Consumption and Production National Action Plan (Algeria)

SDG	sustainable development goal
SDG	Sustainable Development Goals
SEforALL	Sustainable Energy for All (UAE)
SIE	Energy Investment Company (Morocco)
SME	small and medium enterprise
SNAP	National Action Plan for Short-lived Climate Pollutants (Morocco)
SNAP	National Action Plan for Short-lived Climate Pollutants (Morocco)
SNDD	Stratégie Nationale de Développement Durable 2030
SNDP	National Petroleum Distribution Company (Tunisia)
SNE	National Strategy for the Environment
SNEDD	National Strategy for the Environment and Sustainable Development (Algeria)
STEG	Tunisian Electricity and Gas Company
STF	single donor trust fund
SWLRI	Strategy for Water and Land Resources of Iraq
TMC	Transitional Military Council (Sudan)
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
UNDESA	UN Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNGA	UN General Assembly
UNISDR	United Nations International Strategy for Disaster Reduction (
UNRWA	United Nations Refugee Works Agency for Palestine Refugees in the Near East
US	United States (of America)
VNR	Voluntary National Review
WACA	West African Costal Area
WSSD	World Summit on Sustainable Development

Introduction: Green-transition discourse in MENA

The economic slowdown associated with the COVID-19 pandemic and other simultaneous crises has done little to slow the climate crisis. Preliminary data show global greenhouse gas emissions (GHGE) increased in 2020 while the global average temperature in 2020 was about 1.2°C above pre-industrial level, dangerously close to the 1.5°C limit called for in the Paris Agreement. The world also fell short of its 2020 targets to halt biodiversity loss, while 10 million hectares of forest have been lost annually between 2015-2020.[1] Consistent with the 2030 Agenda for Sustainable Development Goal 13 (climate action) and the Paris Agreement on climate change, CO_2 emissions must reach net zero by 2050, in order to limit warming to .5°C above pre-industrial levels. Greenhouse gases (GHG) increased in 2020 around the world, despite changes to typical patterns during lockdown periods of the pandemic.

This inquiry comes at the convergence of "the three planetary crises: the climate crisis, the biodiversity crisis, and the pollution crisis." However, these challenges also coincide with the crisis of global finance and the greatest disparity in wealth distribution for a century, the crisis of population growth (unaddressed in global policy processes since 1994), the crisis of armed conflict and occupations, and the related crisis of human displacement. The Arab region lies at the geographical center of all these crises. While "crisis" (*azma*, in Arabic) is a typical theme and term common to the contemporary discourse in MENA.[2] The combination of these *azmat* poses a dilemma for states and governments to prioritize efforts and resources without the luxury of selectivity.

To wit, the region is also characterized by the highest rate of youth unemployment, the highest level of capital flight[3] and the uniquely predicted combination of water stress and drought risks, coinciding with reduced crop yields due to climate change.[4] With low human development index (HDI) rankings for many Arab countries and rampant poverty, the region is also facing internal conflicts over scarce natural resources such as conflicts between rain-fed farmers and pastoralists.[5]

The region hosts—and produces—the majority of displaced persons and refugees. Conflicts in some countries lead to poor and declining performance on most SDGs, particularly on food security (SDG 2), health (SDG 3) and peace and justice (SDG 16). Three countries from the region (Republic of the Sudan, Syrian Arab Republic and Republic of Yemen) are among the bottom 50 countries on the SDGs dashboard in 2020.[6] The consequences of conflict on the environment are evident also in the occupied Gaza Strip of Palestine, which the UN predicted would be uninhabitable already by 2020.[7]

Against this backdrop, much of the official discourse emphasizes the means and expertise of the private sector in achieving green transition by mounting profitable and operational green initiatives. Meanwhile, the role of government is explained as facilitating, incentivizing and regulating the process dominated by private interests. Moreover, government is seen as internalizing environmental externalities, encouraging social inclusiveness and generally enabling the shift of investments in human and natural resources, including clean and renewable energy.[8]

Much of the discourse cites the ability to mobilize external financing and investment for green projects, as well as reduced carbon emissions, as measures of green-transition success.[9] And green financing has surged in the global market. From a modest US$ 46 billion in green bond issuances in 2015, the industry exploded with just under US$ 250 billion financed in 2019.[10] Among the region's states, Egypt appears the leader in mobilizing funding through its "green bonds" (*sukuk khadra'*), sold on the London Stock Exchange since 2019.

Resilience economy

Borrowing from other human sciences (natural and social sciences), "resilience economy" or "economic resilience" is understood as the capacity of an economic system to recover rapidly from a particular shock and regain the previous level of growth, or better. The concept and problématique of growth-based measurement are being interrogated during the global COVID-19 pandemic by virtue of the fact and urgency of public investment in remedial efforts, social-protection programs and distribution schemes that do not necessarily adhere to the classic logic of growth for a healthy economy.[11]

Alternatives to unlimited growth in a planet of finite resources has been challenged also at the global level, at least since the World Summit on Sustainable Development (WSSD) in 2002.[12] In light of prospects for climate-related and public-health disaster yet to come, more attention has focused on preventive side of public policies and investments as measures to avoid even greater costs, losses and damage in the longer run. Nonetheless, such interrogation of the growth-economy orthodoxy has not yet risen to the level of replacing growth and expansion as a unit of measuring economic health of a country or region. Emerging at the nexus of these competing approaches is the compromising concept of "green growth," which means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which human wellbeing relies.

The impact on human wellbeing of a disaster or other shock to an economic system does not only depend on the physical characteristics of the event or its direct impacts (losses, costs and damage) to lives, livelihoods, habitat, wealth and other assets. Such impacts also depend on the ability of the economy to cope, recover, reconstruct and, therefore, minimize aggregate negative impacts. This ability can be referred to as the macroeconomic resilience to environmental disasters and other shocks in the context of climate change, with an understanding of the interconnectedness of economic, social and environmental dimensions of wellness.[13]

Macroeconomic resilience is generally considered to have two components: (1) instantaneous resilience, which is the ability to limit the magnitude of immediate production losses for a given amount of asset losses, and (2) dynamic resilience, or the ability to reconstruct and recover. The degree of such impacts also depends on micro-economic resilience, which depends on the distribution of losses; i.e., the vulnerability of households or entire sectors, such as pre-disaster income, solvency and ability to absorb shocks over time with savings, borrowing, insurance, formal and informal social-protection systems, or other coping mechanisms for sharing risks across a population.[14]

The (economic) welfare disaster risk in a country can be controlled by reducing the exposure or vulnerability of people and assets (reducing asset losses), increasing macroeconomic resilience (reducing aggregate consumption losses for a given level of asset losses), or increasing microeconomic resilience (reducing welfare losses for a given level of aggregate consumption losses). Estimating macroeconomic and microeconomic resilience is often based on the relevant parameters in the economy and a list of indicators that can be used to build a resilience indicator.

However, resilience in the face of some hazards may seem rather beside the remedial point. It may be impertinent for a project to encourage a population to prioritize resilience over remedy. Such is the question arising from Egypt's 2021 VNR, recounting how, "In September 2020, the World Bank approved a USD 200 million project to support Egypt's initiatives to … increase resilience to air pollution in Greater Cairo."[15] The human evolutionary process to achieve such resilience could take millennia, if at all, and untold lives from respiratory failure in the interim.

Economic resilience can be enhanced by implementing policies that seek to mitigate both the risks and consequences of severe crises. In the case of risks, this implies being able to monitor local and inherent (structural) vulnerabilities. Recovery and/or coping with the consequences means identifying policy settings and mechanisms that can be put in place after the fact, so as to help absorbing the impact of a severe economic downturn (economic contraction). The benefits of such policies need to be balanced against the trade-off of lower growth. Hence, macroeconomic and structural policy making should seek the most-cost-effective actions to achieve the desired outcome.

Further, the term "resilience," in itself, has many different definitions that apply to specific contexts. Definitions of "resilience" include "the ability of a system, community or society exposed to hazards to resist, absorb accommodate to, and recover from the effects

of a hazard in a timely and efficient manner,"[16] or "the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change,"[17] or alternatively "the capacity of a system to absorb disturbance and reorganize while undergoing change."[18]

Borrowing the concept as understood in social and natural sciences, an entity—be it an individual, community, organization or natural system—is resilient when it prepares for disruption, recovers from shocks and learns from disruptive experiences. An entity that has built up resilience, according to the theory in psychology,[19] is one that is better able to *prevent* the shocks it can predict and *respond* to those it cannot. As devised by Judith Rodin, a resilience framework has five components: (1) being aware of one's situation and vulnerabilities; (2) being diverse, in order to mount a range of responses; (3) being integrated, in order to ensure collaborative solutions; (4) being self-regulating, in order to prevent disruptions from cascading through the system; and (5) being adaptive, in order to improvise in the face of challenges.[20] These features align also with the related concept of *anti-fragility*.[21]

Formerly, most research in the field of food security, for example, had focused on developing and refining methods of analysis chosen to predict more accurately the likelihood of experiencing future loss of adequate food; i.e., vulnerability to food security.[22] Beyond predictability and vulnerability, resilience to food insecurity has been described as "the ability of the household to keep within a certain level of wellbeing (e.g., food security), withstanding shocks and stresses, depending on the options available to the household to make a living and its ability to handle risks."[23] According to the UN Committee on World Food Security (CFS), "the resilience of communities is particularly important in protracted crises, during and after violent conflicts, and whenever state institutions and the systems through which livelihoods normally operate (e.g., markets and economies) are weak and ineffective."[24] This iteration omits the preventive dimension and emphasizes adaptation without reference to remedy. The CFS *Framework for Action for Food Security in Protracted Crises* enumerates the positive outcomes of resilience, but does not define the quality itself.[25] In the context of human settlements, resilience refers to the capability of a person, household or community to recuperate after a shock or crisis involving the loss of, or damage to home or landed property, and/or displacement from a habitual residence.[26]

Despite variances among definitions for "resilience" most share two common elements: (1) capacity to bounce back (i.e., recover quickly) after a shock and (2) capacity to adapt to a changing environment. However, these elements alone call for the victims and affected parties to (1) endure and (2) adapt. With the added descriptive elements of prediction and response, corresponding actions include resistance to the threat of disruption or harm accompanying the shock. Recovery may require remedy and/or reparation, which are elsewhere defined.[27]

However, prevention, if possible, is always the best remedy, and implementing states' human rights obligations provides for both. Building resilience requires providing support and multiple actors, including networks between

and among individuals, communities and governments, in order to transform "resilience" called for in contemporary policy instruments into both preventive and remedial action, as well as assistance in recovery.

Whatever the current definition, "resilience" does not offer a normative framework like "sustainable development" does. Sustainable development aligns with the "progressive realization" of human rights and the state's obligation to ensure "continuous improvement of living conditions" enshrined in the International Covenant on Economic, Social and Cultural Rights (Articles 2.1 and 11, respectively). By contrast, resilience provides for only return to the *status quo ante*, regardless of the level of wellbeing prior to the shock. Nor does any operative definition of resilience allow for prevention, address the root cause of the shock, or suggest liability for the parties responsible for the shock. Rather, resilience puts a disproportionate onus on the victim or affected party to "bounce back," and official concept descriptions remain silent about both the need and right to resist the causes and threats of the disruption or hazard, including defense against responsible parties, if any. Thus, resilience, as an objective condition, offers no recourse against the impunity of perpetrators causing the human-made events, developments and crises necessitating the prescribed recovery.

From green economy to green transition

"Green economy" is a vision for growth and development that can generate economic development and improvements in people's lives in ways while also enhancing environmental and social wellbeing. Among the components of a green-economy strategy are to promote the development and adoption of sustainable technologies and policy mixes that require a re-assessment of the roles of the private industry and the state, respectively.

Over the last decade since the UN Conference on Environment and Development (Rio+20), the green economy vision is a response to the need for traditional economic models to be reformed, in order to address climate change, biodiversity losses, water scarcity and the depletion of other finite resources, while also addressing key social and economic challenges. The global financial crisis in 2008–2009 spurred this debate,[28] and these concerns have been translated into the vision of a "green economy."[29] Then in 2015, the UN adopted the 2030 Agenda for Sustainable Development and its 17 SDGs.[30] The goals recognize that ending world poverty must align with strategies that build economic growth, but also address a range of various social needs including education, health, social protection, housing and job creation, while tackling environmental pollution and climate change. The SDGs, thus, also recognize and affirm the nexus between the ecological system and the economic system (SDG13). They also reinforce the need for a *transition* to a green economy, including a fundamental transformation toward more responsible and sustainable modes of production and consumption (SDG12), including the development of circular economies. In 2015, all multilateral development institutions have agreed on a same set of objectives, called the SDGs.

One year later, the UN also renewed the Habitat Agenda with a narrower scope; i.e., in the form of a "New Urban Agenda" (NUA).[31] Following the 2030 Agenda, the specialized NUA enshrined such progressive commitments as operationalizing the social function of land,[32] state support for social production of habitat,[33] urban resilience and environmental sustainability.[34] Although the previous iteration of the policy addressed the urgency of climate change and promoted a habitat approach that envisaged villages and cities as points on a human settlement continuum within a common ecosystem,[35] the NUA promoted the vision of the world's inevitable "urban future" and did not interrogate the assumption of run-away population growth.[36]

The population of the Arab countries, estimated at approximately 407 million (2016), with 100 million considered to be in poverty, is expected to reach approximately 635 million by 2050. Middle East North Africa (MENA) is the only region in the world where poverty increased between 2011 and 2016; and poverty is projected to increase further by 2030.[37]

These two related global policies, 2030 Agenda and NUA, run in parallel—albeit with differing timelines—and both call for states to reform their modes of development to meet the environmental imperative. This paper reviews the implementation of these policies through the Voluntary National Reviews,

reporting efforts toward the SDGs, the Intended Nationally Determined Contributions to implementing the Paris Agreement on climate change, and National Reports on implementation of the NUA.

The Green Economy Transition (GET) is a term synonymous with a new approach to international cooperation and assistance introduced by the European Bank for Reconstruction and Development (EBRD) to help economies where the EBRD works to build green, low carbon and resilient economies.[38] This approach and the term itself reflect the cumulative thinking and lessons learned over the decade since the broader "green economy" was introduce into global development policy at Rio+20. It is a comprehensive approach to development in complex crises, and represents the timely forward thinking of the COVID-19 pandemic era, and is adopted as the subject and title of this study.

With specific reference to 'green building,' a 'green' building is one that, in its design, construction and/or operation, reduces or eliminates negative environmental impacts, and can create positive impacts on climate and natural environment. Green buildings are intended to preserve precious natural resources and improve our quality of life through:
Efficient use of energy, water and other resources;

- Use of renewable energy, such as solar energy;
- Pollution and waste reduction measures, and the enabling of re-use and recycling;
- Good indoor environmental air quality;
- Use of materials that are non-toxic, ethical and sustainable;
- Consideration of the environment in design, construction and operation;
- Consideration of the quality of life of occupants in design, construction and operation;
- A design that enables adaptation to a changing environment.

Some Arab states have reported on as an adaptation and mitigation measure, notably Saudi Arabia. This innovation at a local scale remains part of a largely private-sector-driven global movement, with some academic participation. The World Green Building Council, headquartered in Toronto and London, has developed the methodology for certifying projects as achieving Leadership in Energy and Environmental Design (LEED). Three Arab states have established Green Building Councils (Egypt, Jordan and UAE), with emerging or prospective Councils in five others (Bahrain, Kuwait, Palestine and Qatar). They list a total of 1,192 certified green building projects across the region, mostly in UAE.[39]

Major actors and reporting mechanisms

The major actors and managers of green transition programs and project include multilateral development-financing institutions, or international financing institutions (IFIs), Trust Funds, multi-donor Trust Funds, Special Funds and Alternative Funds. The principal IFIs operating in the MENA region are the World Bank, the European Bank for Reconstruction and Development (EBRD) and the African Development Bank (AfDB).

Trust Funds are established with contributions entrusted to the IFI for a specific purpose or theme contributing to the implementation of the institution's strategy and typically finance technical assistance activities (studies, training etc.) through grants on the basis of technical cooperation agreements. Trust Funds may involve arrangements with a single donor, also known as a "Single Donor Trust Fund (SDTF)." Arrangements can also be with several donors, or support a specific theme such as green transformation and/or mitigation of, or adaptation to climate change. Such institutions are also known as a "Multi-Donor Trust Fund" (MDTF).

Special Funds are entrusted to, or established by a bank or multilateral development-financing institution for specific purposes and approved exclusively by the institution's governing board. Special Funds may finance technical assistance and other activities, and can provide a greater selection of support through grants or loans. Examples include Bilateral Trust Funds with general scope of activities and benefiting wide range of sectors (e.g., Nigeria Technical Cooperation Fund, Korea-Africa Economic Cooperation), Multi-donor thematic Trust Funds (e.g., Sustainable Energy for Africa, Youth Entrepreneurship and Innovation Multi-donor Trust Fund); and other special funds (e.g., NEPAD-IPPF, African Water Facility). The duration of Special Funds, as well as their governance structure, replenishment process, reporting requirements, and management criteria are set out in the proposal submitted to the principal bank or IFI's governing board.

Trust Funds or replenishments of existing agreements often impose nationality restrictions on procurement. They have their own governance structures and detailed legal agreements that specify the services provided and their functioning. Trust Funds operate the only financing instruments that can be deployed as a grant and each has a sunset clause. In practice, the duration of Trust Funds vary between five and ten years, but could be prolonged. The resources of such a fund deplete with activity implementation, and additional funds depend on the willingness of donors to replenish its resources. This process is less complex for single donor or bilateral Trust Funds, and multiple-donor resource replenishment is typically more complex.

Alternative Investment Funds (AIFs) involve alternative investments as financial assets that do not fall into one of the conventional investment categories. Conventional categories include stocks, bonds, and cash. Alternative investments include private equity or venture capital, hedge funds, managed

futures, art and antiques, commodities, and derivatives contracts. Real estate is also often classified as an alternative investment. AIFs may collaborate as co-funders with institutions supporting climate-change-related projects and green transformation processes.

Other mechanisms of financing green transition include bilateral investment agreements (BIAs) and government backed "green bonds" (*sukuk khadhra'*). These can be significant sources of development aid to the green transition of the Arab states. However, these instruments are many and diffuse, complicating the tracking process within the scope of this study. Nonetheless, they are important to the overall green-transition effort and cited here where they form a critical mass of support aligned with policy-based green transition in the states considered.

Complicating the overview of green transition funding efforts is the overlap of programs, projects and institutions. For example, projects may be implemented and/or managed by UN and other international agencies. However, while these agencies are often perceived as donors, their back funders may be one or more of the financing institutions reviewed here. This study seeks to distinguish between international implementing functions of UN and other development organizations, on the one hand, and the financial institutions enabling projects, on the other.

Another hazard is the listing of joint financing schemes by more than one funder, suggesting double counting. One example is a Sustainable Urban Infrastructure and Wind Power Development Project, approved in May 2020, in support of the private sector in Libya, Morocco, Tunisia, Yemen, jointly funded by Climate Investment Funds and the International Finance Corporation (IFC) of the World Bank Group. To the extent possible, this study endeavors to avoid such potential duplication in the monitoring process.

Beyond the scope of this study is the valuation of funding for green-transition projects. This pursuit is elusive since the projects on record are at various stages operation—ranging from approval of concept to completion—with myriad conditions and processes of cash flow. It is not intended to arrive at a reliable total of funding for these efforts. Moreover, the review of the policy frameworks of the individual countries in the region reflect many states' self-funding programs and projects in a context where public budget figures are not readily available. The combination of information on the major financing partners and the states' sovereign policies and initiatives, as reported, indicate a great mix of monies and other assets in play. Nonetheless, on matters of volume of financing and costs of green transition across the region, it is hoped that the following compilation give a faithful impression of the issues involved and the values at stake in the Arab green transition.

Investments and projects supporting green transition

The following is an inventory of investment funds and green-transition projects operating at various stages across the Arab states. The principal actors are presented in alphabetical order, taking into account the financing of project activities dating from 2015, the same year as the states' NDCs under the Paris Agreement (see table **Green-transition funding activities since 2015** below):

Adaptation Fund

Since 2010, the Adaptation Fund has operated with financing largely provided by government and private donors, and also from a two per cent share of proceeds from certified emission reductions (CERs) issued under the Protocol's Clean Development Mechanism projects. The Adaptation Fund finances climate-adaptation projects in nine sectors:

- Agriculture
- Coastal Zone Management
- Disaster Risk Reduction
- Disaster risk reduction and early warning systems
- Ecosystem based Adaptation
- Food Security
- Forests
- Multisector Projects
- Rural Development
- Urban Development
- Water Management

The Adaptation Fund has committed US$ 850 million to projects and programs to date,[40] including 123 concrete projects, spanning nearly 100 countries, including 19 small island developing states (SIDS) and 33 least-developed countries (LDCs), serving about 28 million total beneficiaries. The Fund also created Direct Access, a mechanism for countries to access funding and develop projects directly through accredited national implementing entities.

African Development Bank (AfDB)

The African Development Bank (AfDB) was founded under an agreement signed by African member states in 1963, at Khartoum, Sudan. The AfDB comprises three entities: the African Development Bank (AfDB), the African Development Fund (AfDF) and the Nigeria Trust Fund (NTF). The AfDB Group's overarching objective is to catalyze sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction. The Group pursues this objective by (1) mobilizing and allocating resources for investment in RMCs; and (2) providing policy advice and technical assistance to support development efforts from its official headquarters at Abidjan, Côte d'Ivoire.

The AfDB Group finances projects, programs and studies in the areas of agriculture, health, education, public utilities, transport and telecommunications, industry and the private sector. Since 1968, it also has sought to finance non-project operations, including structural-adjustment loans, policy-based reforms and various forms of technical assistance and policy advice. The AfDB Group has also widened the scope of its activities to cover new initiatives such as the New Partnership for

Africa's Development (NEPAD) and response to HIV/AIDS. The Bank Group is also involved in important initiatives on debt reduction, to the tune of US$ 5.6 billion under the Highly-indebted Poor Countries (HIPC) Initiative, which aims at reducing the debt stock of 33 eligible countries to sustainable levels. In 2006, the AfDB Group also made a commitment to cancel nearly US$ 9 billion owed by the countries concerned, in order to help them achieve the Millennium Development Goals.

Most AfDB resources and projects are intended for its RMCs, including Arab states in North Africa. Countries are classified under three categories on the basis of two criteria: (i) country-creditworthiness and (ii) gross national income (GNI) per capita. The first category comprises 'not creditworthy' countries with a GNI per capita below an established threshold updated annually (in fiscal year 2013–2014: US$ 1,205). Countries in the first category are only eligible for concessional resources from the AfDB window. The second category contains countries with a per capita GNI below the operational GNI cut-off, but creditworthy. These are called 'blend countries' and are eligible for AfDF and AfDB resources. The third category is made up of countries above the operational GNI cut-off and, thus, creditworthy. Those countries are eligible to AfDB resources only. The Group's credit policy was reviewed in May 2014, enabling, under certain conditions, an AfDF eligible country to borrow non-concessional resources from the AfDB window.

AfDB funds are derived from subscriptions by member countries, especially non-regional member countries, borrowings on international markets and loan repayments. The Bank's resources also come from AfDF and Nigeria Trust Fund (NTF) capital increases. The only African-funded trust fund providing concessional financing to RMCs, the AfDF's role is to provide the institution's RMCs with resources to boost their productivity and economic growth. The NTF was established by the Nigerian government in 1976 to help the AfDB's most-underprivileged RMCs and provide 2–4 per cent interest rate loans repayable over 25 years.

Djibouti and Somalia are both recipients of AfDB funds for cyclone recovery,[41] while Djibouti also benefits from support for a geothermal energy project.[42] AfDB has financed one completed Inclusive and Sustainable Development Support Programme for Agricultural Sectors in Morocco.[43] In Somalia, AfDB has supported rural livelihoods through a region project for adaptation to climate change in the Horn of Africa. Phase II of that project included Sudan also with assistance to drought victims. AfDB has also supported three solar energy projects in Egypt. Altogether, AfDB has supported 34 activities of varying scope related to green transition across the region, let alone in North Africa.

Climate Change Fund (CCF)

Based in Incheon, South Korea, CCF was established as part of the 2010 United Nations Climate Change Conference (COP 16) to finance clean energy solutions and enable developing countries to adapt to climate change. The fund focuses on three areas: adaptation, clean energy, sustainable transport, low-carbon urban development and reducing GHGE from deforestation and degradation through improved land use management (REDD+). The fund has received a total of US$ 98 million Asian Development Bank (ADB) financing. As of 31 March 2021, US$ 75.4 million of the total fund resources (net of savings) has been allocated to 126

projects—46 on clean energy development, 73 on adaptation, 11 on REDD+ and land use, and one on climate finance readiness. However, CCF does not operate in Western Asia, neither Iran nor the Arab states.

Climate Investment Funds (CIF)

The US$ 8.5 billion Climate Investment Funds (CIF), established in 2008, represents one of the most-ambitious efforts to unlock this investment. CIF accelerates climate action by empowering transformations through current clean-technology, energy-access, climate-resilience, and sustainable-forests programs in developing and middle-income countries. The CIF's large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. CIF tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance. CIF manages a collection of targeted programs that enable climate-smart development planning and action through 325 projects in 72 developing and middle-income countries worldwide.

CIF is financing an Investment Plan for Concentrated Solar Power in the Middle East and North Africa Region through its Clean Technology Fund, benefitting Algeria, Egypt, Jordan, Morocco and Tunisia. In Morocco also, the same fund is support a World Bank-backed Clean and Efficient Energy Project and a One Wind Energy Plan.

European Bank of Reconstruction and Development (EBRD):

As noted above, the Green Economy Transition (GET) is the brand of international cooperation and assistance introduced by the EBRD to help economies where the EBRD works to build green, low carbon and resilient economies.[44] Through the GET approach, the EBRD is increasing "green financing" to more than 50 per cent of its annual business volume by 2025. It also aims to reach net annual GHGE reductions of at least 25 million tonnes over the five-year period 2021–25.

The GET approach takes into account the context brought about by COVID-19, concentrating on areas of opportunity to support a green recovery. It also builds on the EBRD's long track record of financing green investments. To date, the EBRD has signed €36 billion in green investments and financed over 2,000 green projects, which are expected to reduce 104 million tonnes of carbon emissions yearly. In 2019 alone, EBRD financed over 2.2 GW of new renewable power capacity and aims to exceed that in 2020.

GET 2021–2025 adopts a systemic approach in supporting the transition to low-carbon and resilient economies by:

- Assessing projects in relation to the principles of international climate agreements, principally the Paris Agreement;
- enhancing policy engagement for the development of long-term low carbon strategies and greening of financial systems; and
- scaling investments across a set of priority environmental, climate mitigation and resilience theme, including: greening the financial sector, energy systems, industrial decarbonization, cities and environmental

infrastructure, sustainable food systems, green buildings[45] and sustainable connectivity.

The GET approach uses a range of the EBRD's financial instruments, including loans, equity investments (in which EBRD takes only a minority stake), guarantees through its Trade Facilitation Programme and assistance through financial intermediaries such as small and medium enterprises (SMEs).[46] EBRD also work closely with other donors such as Climate Investment Funds, the European Union,[47] the Global Environment Facility, the Green Climate Fund and other bilateral donors to mobilize climate finance for our clients. In addition, we have developed a range of dedicated programs to promote green investments, promoting energy and resource efficiency, circular economy, renewable energy, climate resilience and just transition.[48]

Among EBRD's regions is the Southern and Eastern Mediterranean, covering Egypt, Jordan, Lebanon, Morocco, Tunisia, and Palestine (West Bank and Gaza). EBRD is funding 16 projects in Egypt. Seven of these are related to natural resources and energy. Only the Alexandria Refinery Green Project is in the public (state) sector. In Jordan, EBRD is financing eight project, four of which relate to green-economy efforts, and all are state projects.

In Lebanon, EBRD supports private-sector competitiveness, promoting sustainable energy supply and enhancing the quality and efficiency of public-service delivery. Of the ten projects in Lebanon to date (€760 million of cumulative EBRD investment), 100 per cent of the portfolio is in the private sector. To ensure the timely delivery of projects formulated in response to the coronavirus pandemic, the EBRD's President has approved a deviation from the usual timelines for disclosure of certain project summary documents (PSDs) approved as part of that response.

The EBRD's portfolio in Morocco is diverse, spanning sustainable energy (20 per cent for industry, commerce and agribusiness), direct and indirect financing of private enterprises (21 per cent), promoting infrastructure reform (59 per cent) and facilitating non-sovereign financing. EBRD has supported 74 projects in Morocco to date, representing €2,937 million of cumulative EBRD investment, 44 per cent private sector. Of the ten green-transition-related projects, four are in the private sector.

EBRD is supporting six projects in Tunisia, two of which are related to green transition. Both projects, supporting agribusiness and hydraulic infrastructure in the southern oases, are in public/state sector.

Since 2015, EBRD has supported 44 green-transition-related activities across the region. The greatest share of these have been in Morocco (18), with seven each in Egypt and Lebanon, and six each in Tunisia and Jordan.

European Commission

The European Commission operates Climate Investor One (CI1), a blended finance facility funded by a number of high-profile donors and investors, including the EU. The facility targets the development, construction and operations of renewable energy projects in emerging markets, with a focus on long-term sustainability and accelerating the green energy transition. It is managed by Climate Fund Managers (CFM), established in 2015 to launch and manage a series of financing facilities, each targeting key thematic areas of climate change mitigation and adaptation. CFM is jointly owned by the Dutch Entrepreneurial Bank, FMO, and Sanlam InfraWorks, part of the Sanlam Group of South Africa.

Related facilities include the Development Fund (DF), partly funded by the EU, is designed to enable suitable projects to reach financial close from an early stage. The DF is funded entirely of donor capital, enabling it to operate with a higher risk tolerance to 'develop' early-stage projects. The DF has a broad mandate so that projects can be 'bankable' (meaning mature enough to bring profit). In addition to capital, DF-funded projects also benefit environmental and social, engineering, and financial structuring support.

The Construction Equity Fund (CEF), to which the EU also contributes, benefits from the pipeline of projects prepared by the DF. The CEF offers investment opportunities for commercial investors and can mobilize capital at scale. The CEF is used to fund the construction stage of a project with all-equity financing.

The Refinancing Fund, yet to be established, will provide debt to projects once they have reached commercial operations. This facility will target debt investors seeking a stake in long-term de-risked infrastructure assets.

Of the 58 projects funded by these facilities, only one activity is supported in the region. The East Africa regional 'Regreening Africa' project includes Somalia in restoration of 20,000 hectares of land to benefit 40,000 households in Somaliland (Dweyne and Awdac districts) and Puntland (Sanaag, Karkar and Bari districts) through World Vision Somalia, CARE Somalia and the World Agroforestry Centre.[49] In addition, the EU funds regional research projects such as MEDRESET[50] and MENARA.[51] part if their focus is on climate change adaptation and mitigation. In Djibouti, the EC funds agroecology[52] and provision of clean water for households and farming.[53]

The Eu also supports private European actors to provide services to local governments to develop and implement their own green transition projects. One such actor is Hulla & Co. Human Dynamics GmbH & Co. KG, a German firm that operates the € 6.9 million "Clima-Med – Acting for climate in South Mediterranean" project (2018–2022). It covers Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, Tunisia, and seeks to improved climate-change governance and mainstreaming climate action, engaging in PPPs and helping municipalities develop solid financing proposals and matching them with financiers.

While this is only one example of the myriad players in the field, it does raise several questions for inquiry, namely the:

1. Increasing privatization of green-transition initiatives with their pursuit of short-term gains, within the longer-term and globalist objectives;
2. Roles and values of private actors in public policy fields and their relation to states' human rights obligations, and economic- and social-justice principles; and
3. Decentralization of green transition activities that is often overlooked by a focus on the bilateral and multilateral dynamics.

Global Environment Facility (GEF)

The Global Environment Facility (GEF) Trust Fund was established on the eve of the 1992 Rio Earth Summit, to aid in resolving the planet's most-pressing environmental problems. As an operating entity of the UN Framework Convention on Climate Change (UNFCCC) Financial Mechanism,[54] GEF funding supports projects with resources contributed by 40 donor countries.[55] These financial contributions are replenished every four years. GEF funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental agreements.

The World Bank serves as the GEF Trustee, administering the GEF Trust Fund. The Trustee helps mobilize GEF resources; disburses funds to GEF Agencies; prepares financial reports on investments and use of resources; and monitors application of budgetary and project funds. The Trustee creates periodic reports that contain an array of fund-specific financial information.

GEF support is provided to government agencies, civil society organizations, private sector companies, research institutions, among the broad diversity of potential partners, to implement projects and programs in recipient countries. The GEF administers several other trust funds and provides secretariat services, on an interim basis, for the Adaptation Fund (see above).

The GEF has operated 14 relevant projects in the Arab region. These include specific project. Mostly implemented through UN agencies, for individual countries, including Algeria, Comoros, Djibouti, Egypt, Iraq, Jordan, Lebanon, Libya, Mauritania, Oman, Sudan, Tunisia and Yemen. In addition, the Fund has financed regional projects such as Fisheries and Ecosystem-based Management for the Blue Economy of the Mediterranean benefitting Albania, Algeria, Lebanon, Libya, Morocco, Montenegro, Tunisia and Turkey, and a Build Back a Blue and Stronger Mediterranean international waters project, operated by Conservation International in Algeria, Lebanon, Morocco, Montenegro and Tunisia.

Green Climate Fund (GCF)

The Green Climate Fund (GCF) is considered a critical element of the Paris Agreement on climate change. It is the world's largest climate fund, approving climate finance projects in 2020 with US$ 2.2 billion approved out of the US$ 3.4 billion approved in total.[56] GCF is mandated to support developing countries raise and realize their Nationally Determined Contributions (NDC) ambitions toward low-emissions and climate-resilient pathways. GCF invests across four fields (transitions): (1) built environment; (2) energy and industry; (3) human security, livelihoods and wellbeing; and (4) land-use, forests and ecosystems. It employs a four-pronged approach that involves:
Transformational planning and programming by promoting integrated strategies, planning and policymaking to maximise the co-benefits among mitigation, adaptation and sustainable development;

1. Catalysing climate innovation by investing in new technologies, business models, and practices to establish a proof of concept;
2. "De-risking" investment to mobilize finance at scale by using scarce public resources to improve the risk-reward profile of low emission climate resilient investment

and crowd-in private finance, notably for adaptation, nature-based solutions, least developed countries (LDCs) and small island developing states (SIDS);
3. Mainstreaming climate risks and opportunities into investment decision making to align finance with sustainable development: by promoting methodologies, standards and practices that foster new norms and values.

Climate change offers businesses an unprecedented chance to capitalise on new growth and investment opportunities that can protect the planet as well. GCF employs part of its funds to help mobilise financial flows from the private sector to compelling and profitable climate-smart investment opportunities. Its Global Subnational Climate Fund (SnCF Global) has supported four multiple-country projects, each including Tunisia. One global project involving Tunisia, Egypt and Morocco, and one project for Water Banking and Adaptation of Agriculture to Climate Change in Northern Gaza (Palestine).

Islamic Development Bank (IsDB)

Founded in 1975, the Islamic Development Bank provides funding in case of shortfall. It has a mandate to foster economic growth, sustainability and eradication of poverty in its member countries (MCs). It extends financing to MCs for various developmental projects and programs that involve the procurement of goods, works, consultants and other related services. IsDB is the only major funding organization based in the Arab region, with its headquarters at Jiddah, Saudi Arabia. In addition to this deserving mention, the IsDB seeks to build collaborative partnerships between and among communities and nations, and work toward the SDGs.[57]

Although IsDB does not operate specific programs in support of green transition, it has served as catalyst for some. For instance, IsDB is attributed as enabling the establishment of the International Center for Biosaline Agriculture (ICBA), which leads agricultural adaptation to climate change, including rising seas. (See **United Arab Emirates (UAE)** below.).

Japan International Cooperation Agency (JICA)

A bilateral development agency recently accredited to the Green Transition Fund, JICA has begun with Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in critical Watersheds in Timor-Leste and "Building Climate Resilient and Safer Islands in the Maldives" JICA also cooperates with EBRD on renewable energy projects in the Caucasus, Central Asia, Europe and North Africa (since April 2021).

In addition, JICA funds development operations across the region, in Algeria, Egypt, Iraq, Jordan, Morocco, Palestine, Syria, Tunisia and Yemen. In Jordan, JICA is known for its technical cooperation in Jordan's water sector since the late 1990s.[58] In Palestine, JICA has supported development of the water sector and sustainable agriculture in the West Bank.[59] In Syria, JICA has supported projects in water resources management and effective use and environmental health.[60] Support for Tunisia has included Projects in Environmental Management of Coastal Fisheries Resources and Integrated Reforestation.[61] Effort in Yemen have supported community-based water management and rural water supply.[62]

MENA Transition Fund

The MENA Transition Fund was established in 2012 at the request of the Deauville Partnership with Arab Countries in Transition. The fund is designed to support the transformation currently underway in several countries in the region by providing funds for technical cooperation to strengthen governance and public institutions, and foster sustainable and inclusive economic growth by advancing country-led reforms with the ultimate goal of improving the lives of citizens in transition countries. All SME loans.

The MENA-OECD Competitiveness Programme has focused primarily on economic development and governance, it has supported initiatives over the decade at Strengthening the Employability of Youth during Tunisia's Transition to a Green Economy; supporting the Tunisian Energy Reform Plan; Green Growth, Industrial Waste Management and SME Entrepreneurship in Egypt; and developing Reliable Water Quality for Jordan.[63]

Special Climate Change Fund (SCCF)

The Special Climate Change Fund (SCCF) was established under the United Nations Framework Convention on Climate Change (UNFCC) in 2001 to finance projects relating to adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the UNFCCC.

The GEF, as an operating entity of the Convention's Financial Mechanism, has been entrusted to operate the SCCF. In 2004, the GEF Council approved a programming document which provides the operational basis for funding activities under the SCCF.[64] (See **Global Environment Facility (GEF)** above.)

World Bank Group

The World Bank Group is a combination of inter-related financial facilities with differing mandates and clients. These include the International Bank for Reconstruction and Development (IBRD); the International Development Association (IDA), serving the world's poorest countries; the International Finance Corporation (IFC), supporting private-sector development initiatives; the Multilateral Investment Guarantee Agency, which promotes cross-border investment in developing countries by providing guarantees (political risk insurance and credit enhancement) to investors and lenders); and the International Centre for Settlement of Investment Disputes, devoted to international investment dispute settlement.

The Bank's support to public-sector management finances the management of the environment and natural resources. Related Bank activities breakdown by proportion of funding according to the following configuration:

Public Sector Management %	
Environment and Natural Resource Management	
Renewable Natural Resources Asset Management	20%
Biodiversity	20%
Environmental Health and Pollution Management	21%
Water Pollution	7%
Soil Pollution	7%
Air quality management	7%
Environmental policies and institutions	20%
Total	100%

In addition to financing, the World Bank Group provides expert input for policy formulation and analysis at the regional and global levels, besides country-specific research. These range from a study on efforts at cooperation in combatting air pollution in the Gulf,[65] providing power sector emergency action plan for Lebanon,[66] the costs of sea rise in the Maghreb,[67] and the link between water issues related to conflict and forced displacement.[68]

The World Bank also cooperates with, and funds projects through other facilities such as the GEF. So, some of its projects may be duplicated in the comprehensive inventory of green-transition projects. However, the current listing of the World Bank's "climate change" funding in the MENA region include 16 projects in Djibouti, ten in Egypt, eight in Yemen, six in Morocco, three in Tunisia and two each in Iraq, Jordan, Lebanon and Palestine.

The following table of green-transition funding activities since 2015, provides an inventory of projects at various stages and funded by the major green-transition donor funds and agencies. The details and links to these are provided also in **Annex I: Inventory of Funded Green-transition Projects** >>

Annex I: Inventory of Funded Green-transition Project

Green-transition funding activities since 2015	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauritania	Morocco	Oman	Palestine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Western	Yemen	**Totals:**
Adaptation Fund							1		2									1						**4**
African Development Bank	1	1		3	8						1	8					4	4		4				**34**
Alternative Investment Fund					2																			**2**
Climate Investment Funds					2							2											1	**5**
EBRD					7		6		7			18								6				**44**
European Commission				2													1							**3**
Global Environment Facility	4		1	1	3	2	1		4	3	3	2	1					4		4			1	**34**
Green Climate Fund	4	5	19	13	20	4	33		10		28	48	3	7			3	22	2	29			1	
World Bank				16	10	2	2		2			6		2						3			8	**51**
Totals:	**9**	**6**	**20**	**35**	**52**	**8**	**43**	**0**	**25**	**3**	**32**	**84**	**4**	**9**	**0**	**0**	**8**	**31**	**2**	**46**	**0**	**0**	**11**	

Situation analysis

With the exception of those embroiled in conflict, most Arab states have been diligent about reporting to the international forums involved in climate action and related global policies. Although the green-transition measures and performance are very uneven across the region, it must be said that most states are involved in some degree of green transition. This study was intended to map the actions of the Arab states and the major funders of green transition. It has been a quantitative, rather than a qualitative assessment.

Nonetheless, some qualitative observations are important to note. Of all the very positive-seeming VNRs, Bahrain, Iraq and Kuwait are outliers in the sense that they project increases in GHGE, oil and gas production and few green-transition initiatives. That may read more like an honest admission than a policy showcase. However, that VNR suggests that the drafters had not yet imbibed the habitual style and terminology of 2030 Agenda reporting. Notably also, some VNRs (e.g., Iraq and Syria, among others) externalizing all responsibility for environmental decline and climate change, while others ignore the subject of climate change in official reports (e.g., Sudan and Libya's VNRs).

All VNRs reflect a lack of distinction between what is a voluntary and temporary policy commitments and what is a legally binding and permanent state obligation. The states generally prefer to refer to all norms as commitments, which, by definition, are not monitored with critical scrutiny and consequences. Whereas, terms of a treaty such as the Paris Agreement are *obligations* and have legal effect and have simultaneous individual, collective, domestic and extraterritorial dimensions. It must be observed, however, that this shortcoming is not unique to the Arab region, but shared in like measure across the states reporting to the annual HLPF.

A phenomenon that emanates from a review of all states' reporting to HLPF is no less true in the Arab states' VNRs. The VNRs show diligence on the part of the state and its institutions and agents domestically by their green-transition performance. That may be at divergence from the states' foreign policies and external behavior, including their negative effects on other peoples' ecosystems. Notably, the Major Groups and Other Stakeholders cited this contradiction at some Arab monarchies' VNR presentations. However, only a broader investigation might explore the extraterritorial human rights obligation (ETO) approach to states' green transition performance.[69] At this writing, the UN Human Rights Council has voted to recognize a clean and healthy environment to be a "human right,"[70] with the many implications that brings to the inquiry. And this comes only weeks before the CoP26 at Glasgow.

The foregoing review is otherwise neutral in the sense that it relies on the published official texts of the serial VNRs and related documents, taking the information at face value. The mapping of green-transition policy and legislative frameworks is possible only partially and superficially from those documents. Therefore, it became necessary at certain junctures to consult other relevant reports to fill gaps in the picture emerging from the VNRs. On those occasions, this study turned to the NUA-implementation presented to date by Algeria, Egypt and Tunisia, as well as the NDC documents, including updates, for

all the 18 presenting Arab countries, as well as other authoritative sources.

None of the VNRs, NUA-implementation reports or NDCs appears to be truly "national" in the sense of reflecting multi-stakeholder inputs and collaboration. Rather, each is a "governmental" report, compiled either with or without UN agency assistance. This being the case, a further inquiry would be needed to determine the degree to which the policies and the reports citing them pass the test of meaningful participation and sovereign ownership. That question and the suitability of the policies cited would require a level of effort beyond the scope of this review.

In addition to the climate emergency, the context of the pandemic-afflicted world has seen some notable shifts affecting all emerging-market economies (EMEs), both directly and indirectly. The most-obvious implication is the $14 trillion of additional debt that will have to be paid off in advanced and emerging economies alike. However, for the latter, the additional fiscal burden has shifted to external debt markets as a new round of borrowing has emerged to help finance both external debt and balance-of-payments anomalies amid needed green transition. It is anticipated that further debt issuance in rich countries will eventually raise interest rates and call for a repatriation of finance capital that can further reduce access to, or raise costs of financing for EMEs.[71]

Coincident with the climate and public-health crises, ODA has increased significantly to countries in conflict such as Syria, Libya and Yemen since 2012, but as much as 90 per cent of that international assistance has been in the form of humanitarian aid. Among the LDCs, Somalia and Yemen received higher levels of ODA in the past five years, mostly as humanitarian aid, while ODA to Sudan has declined significantly during the past decade. ODA to the middle-income countries of the region, including Egypt, Jordan, Morocco and Tunisia has increased over the last five years, but has remained volatile, fluctuating from one year to the next. The inconsistency in the flow of ODA remains a major concern, in addition to the concern that developed countries maintain their commitment of a minimum 0.7 per cent of their national income as assistance to developing countries.[72] Numerous VNRs remind other states of that commitment when facing the burgeoning costs of their green transition.

As a special feature of the Arab region, this study shows the opportunity costs of conflict in those countries to the global green-transition effort, as well as the direct harm to the environment—both directly and indirectly—caused by ongoing war. It is clear also that the region's major conflicts and protracted occupations, namely of Palestine and Western Sahara, are enabled, armed and financed by some of the same Western countries managing and resourcing the green-transition funds.[73]

For a thorough mapping of the green-transition funders and projects, a longer-term and more diligent effort is still needed. The major actors in this field are covered here, but such PDBs number some 450 institutions worldwide. Beyond those are innumerable commercial and private banks, as well as bi-lateral aid arrangements, bi-lateral investment agreements, foreign direct investment (FDI) and technical cooperation grants and loans that are not coordinated through the majors. Some of these receive passing reference in specific country profiles.

The sheer scale and complexity of green-transition efforts, even in a specific region, is difficult to track with any level of comprehensiveness. This is complicated by questions of the:

1. Increasing privatization of green-transition initiatives with their pursuit of short-term gains, within the longer-term and globalist objectives;
2. Roles and values of private actors in public policy fields and their relation to states' human rights obligations, and economic- and social-justice principles; and
3. Decentralization of green transition activities that is often overlooked by a focus on the bilateral and multilateral dynamics.[74]

The role of the private-sector in green-transition efforts is a subject of needed scrutiny beyond the sources consulted here. The issues involved and values at stake in their operations arise from the inherent non-public interest of the privately interested implementors, benefiting from public development banks (PDBs). Moreover, the opaque and nondemocratic nature of the private-equity financing of green transition, in general, and agro-business, in particular, has raised alarms about the "green washing" of entire sectors.[75]

The transition to renewable-energy (RE) in most countries has been mostly undertaken through a model which associates the private sector as the main partner, given its expertise and operational capacity. Such an approach was supported by the development of a regulatory framework with the objective of fostering investment confidence, mobilizing stakeholders and sharing resources.[76] In this setting, this transition remains a rather top-down process with support from the highest governance institutions, given that the different options of energy transition are not frequently discussed by all stakeholders.

Simultaneous with respectable green-transition efforts in certain countries is the same old BAU of continued investment in oil and gas, or other extractive industries within Arab state jurisdictions. Notable is Royal Dutch Shell's off-shore oil and gas exploration deal concluded with the Egyptian government in 2020. For Shell's part, that investment defies litigation outcomes directing the corporation to desist from further fossil-fuel investments.[77] In Jordan, the Ministry of Energy and Mineral Resources is seeking to turn the Dana Biosphere Reserve into a copper pit mine,[78] and a KfW-funded project operated by UNRWA to provide clean water to refugees simultaneously spells the destruction of a natural forested area at al-Muqablain.[79]

A debate over the trend of introducing coniferous trees in ecosystems that cannot support them has emerged recently in the region and globally out of the contradictions in the practices of the Jewish National Fund (JNF) throughout Palestine. Not only do JNF forestation projects conceal the evidence of depopulated villages and terrace agriculture of the evicted indigenous Palestinian people, planting any coniferous trees triggers the Israeli claim over that land as a "forest reserve," which pretext is used to ban Palestinians from using their land. Moreover, the evergreens absorb more of the sun's heat, altering the natural microclimate and ecosystem, and are unsustainable without costly and unsustainable irrigation of seedlings.[80] Drought like the one that hit the region in 2010 showed that as much as 80 per cent of such coniferous plantations could be lost in a single weather event. Beyond the environmental consequences, the link between JNF "reforestation" and the serous crime of population transfer by denying land to Palestinians and implanting settler colonies in their place has come to the global consciousness.[81] And the ambitious premise

of creating "green walls" in incompatible climates is coming under critical interrogation by environmentalists more generally.[82]

Much criticism of grand solar-panel oases in the desert is now emerging as well.[83] Not only do those installations raise local temperatures while generating only a fraction of the energy captured, they are often the subject of land disputes at the expense of traditional tenure holders. In the case of Morocco's development of solar power in occupied territory, the practice and its outcomes are also grave violations of international law, including peremptory norms.[84]

Recommendations

This review is a snapshot from what is a constantly moving multidimensional picture. The dynamic nature of the field risks to overtake the information in this study, suggesting that a sustained effort would be needed to keep on top of the developments and shifts in the field.

Furthermore, the descriptive nature of the study is useful to quantify efforts at green transition. However, it does not seek to quantify the value of the efforts or sums of projects in monetary terms. That shortcoming was anticipated, but may be an objective of further study and monitoring.

Given the potential for further inquiry, the recommendations address the possibilities of further civil society engagement and monitoring. Those prospects are followed with recommendations for specific actors, including states and their benefactors in the green transition processes.

Despite the limitations of this short-term inquiry, this study may provide a basis for states and citizens to build on. That further effort could take the form of a civil society "observatory," with division of labor and information sharing functions across the region. Such a process could go far to develop participants' advocacy and policy-analysis skills. Such monitoring would be well positioned to incorporate the following recommendations to all parties.

Considering the large sums of money involved in green-transition financing and project implementation, the tendency and temptation for rent seeking and corruption are ever present, *all concerned parties* should be diligent and scrupulously avoid, expose and combat corruption at all phases of green-transition efforts.

Here below are more-specific recommendations for relevant actors, including states, financial partners, implementers and civil society:

Recommendations to states

Green-transition projects, especially large-scale ones, may generate misunderstandings, resistance and even conflicts. Therefore, planning RE projects by involving all stakeholders would make it possible to obtain greater social acceptance and a clear picture about the transition's outcomes. Organized civil society has a central role to play in this process by raising public awareness of energy issues and creating citizen engagement during the implementation phase. Multilevel coordination and consultation mechanisms may be set up to actively involve stakeholders in relevant decision-making processes. To reinforce participation of local communities, particularly to enforce existing obligations, commitments and regulations provide communities with a mandate to act as a local-development driver.[85]

As a means of statecraft, we recommend the following:

- To achieve greater social acceptance for green-transition policies and efforts, stakeholders should be systematically informed, starting from the project planning stage to be enlightened about site and technology choices, regulatory framework, and the concrete socioeconomic and environmental returns of the project.
- To disambiguate the language and avoid conceptual confusion in the reporting instruments, governments should know and reflect the distinction between states'

voluntary and temporary commitments of "soft law" and policy instruments, on one hand, and the permanent and binding obligations under treaties (and peremptory norms) on the other, with their simultaneous individual, collective, domestic and extraterritorial dimensions.

- Develop methods to restore the missing "P" in PPPs; i.e., to engage the *public* in the policy discourse and green-transition project benefits.
- Since the highest human rights policy-making body of the UN has recognized a clean and healthy environment to be a "human right." That cast environment and climate action in the new light of corresponding state obligations vis-à-vis that human right, and the alignment of SDG progress and human rights norms and obligations is still needed.
- The "national" reporting instruments need to demonstrate the consultations with, and inputs of organized stakeholders. Especially in the Arab region, the participation of civil society is lacking and needs to be remedied.
- At the same time, the roles of the private sector in contributing to the reports and climate-change actions are welcome. However, certain criteria, including transparency, should apply in the monitoring in such a way as to recognize that private interests are distinct from the public and plural interests of other actors, whether public institutions and civil society.
- It would help fill gaps in the green transition reporting to include data on the level of indebtedness incurred in the course of green-transition financing.
- As private actors implementing green-transition projects often lead to privatization of public goods and services, states and all spheres of their successive governments should sufficiently regulate such enterprises to ensure they do not result in undue increases in user fees, or a decline in the quality of public utilities and services.
- Some governments continue to conduct BAU, including the prosecution of ongoing war, occupation and militarism, as well as investment in fossil fuel extraction and over-hunting and over-extraction. States have a duty to respect international law, including peremptory norms, but that calls for Major Groups and Other Stakeholders to point out this contradictory.

Recommendations for financing institutions

- As third parties to the relevant state and its people, PDBs, private financers and equity funds, whether multilateral or domiciled in a treaty-bound state, should apply human rights and other international law criteria in their selection of funded projects and partners.
- Since the financing of private actors in the implementation of green-transition projects is often a pathway to privatization of public goods and services, these projects should not lead to undue increases in user fees, or a decline in the quality of public utilities and services.
- All green financing institutions must scrupulously avoid funding industrial agriculture, agribusiness, fossil fuel extraction and exploration, as these pursuits are inherently antithetical to green transition and combatting climate change.

Recommendations for implementing agencies

- Both management and other personnel of all implementing agencies, whether private-sector companiers and corporate service providers domiciled in a treaty-bound state, or UN-Charter-based specialized organizations, should understand and apply their normative and regulatory frameworks, in addition to technical operations in the field of green transition. This includes upholding human rights and standards of meaningful consultation and participation of affected communities and populations, including ensuring free, prior and informed consent in advance of project implementation.

Recommendations for civil society

- The potential of enhanced monitoring would require a collective effort with division of labor, as well as links and exchanges with monitors in other regions.
- In broadening, deepening and prolonging the green-transition research as an observatory, civil society could set out to:
- Evaluate not only the content and quality of official reports, but also the relevance, coherence, effectiveness and impact of the policy, legislative and institutional frameworks guiding green-transition efforts.
- A political economy approach would be needed for civil society to analyze the outcomes of green-transition projects, as well as the "policy culture" in their states as it relates to decisions and choices at the decision-making processes.
- An multi-actor observatory would benefit from applying an ETO approach to green-transition monitoring and policy analysis.
- CSOs should also monitor PDBs and equity funds especially in sensitive sectors and harmful environmental practices (agribusiness, chemicals).
- CSOs should also monitor and critically assess financing for green transition as compared to other sectors (arms vis-à-vis climate action), in order to grade the priorities that the state pursues.
- Such critical inquiry should interrogate the concept and usage of "resilience," particularly in relation to "sustainable development," with its established normative framework, and "accountability" and "liability" for climate change, as well "remedy and reparation" for victims.

Ultimately, a community of citizens committed and mobilized for the green transition must emerge, with the possibility to develop a common vision and influence energy policies at various scales. Therefore, new forms of sociability could emerge, especially engaging the voices of concerned women, youth, indigenous peoples, farmers and pastoralists of the front lines of climate change, and a robust debate-and-consultation culture could emerge among involved actors.

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