

Climate Governance

An assessment of the government's ability and readiness to transform Egypt into a zero emissions society

CAT Climate Governance Series

EGYPT

March 2022

CAT Climate governance series

Under the Paris Agreement, governments have committed to limiting temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C. Achieving this objective will halving global emissions by 2030 and reaching net zero CO₂ emissions by 2050 and all gases around 2070, with net negative emissions thereafter.

Governments in all countries play a critical role in enabling this transformation, which involves action from all aspects of society and the economy.

The Climate Action Tracker (CAT) tracks the progress of countries towards achieving the climate targets they have set for themselves under the Paris Agreement and what the combined effect of these commitments and policies mean for global temperature levels at the end of this century.

In this series, the CAT expands on its country analysis to evaluate the ability and readiness of national governments to enable the required economy-wide transformation towards a zero emissions society.

Our assessment focuses on national governments and analyses four aspects of governance covering key enabling factors for effective climate action:

- the political commitment of the government to decarbonisation,
- the institutional framework it has put in place to achieve its emission reduction targets,
- the processes it has established to develop, implement and review mitigation policies, and
- its ability and willingness to engage with relevant stakeholders on policy development.

The Climate Governance Series seeks to offer a standardised and replicable approach to assessing a government's ability and readiness to achieve the required transformation, highlighting positive developments and areas for improvement.

Since 2019, we have been expanding the scope of our coverage. All country profiles are available on [our website](http://climateactiontracker.org/publications/climate-governance).

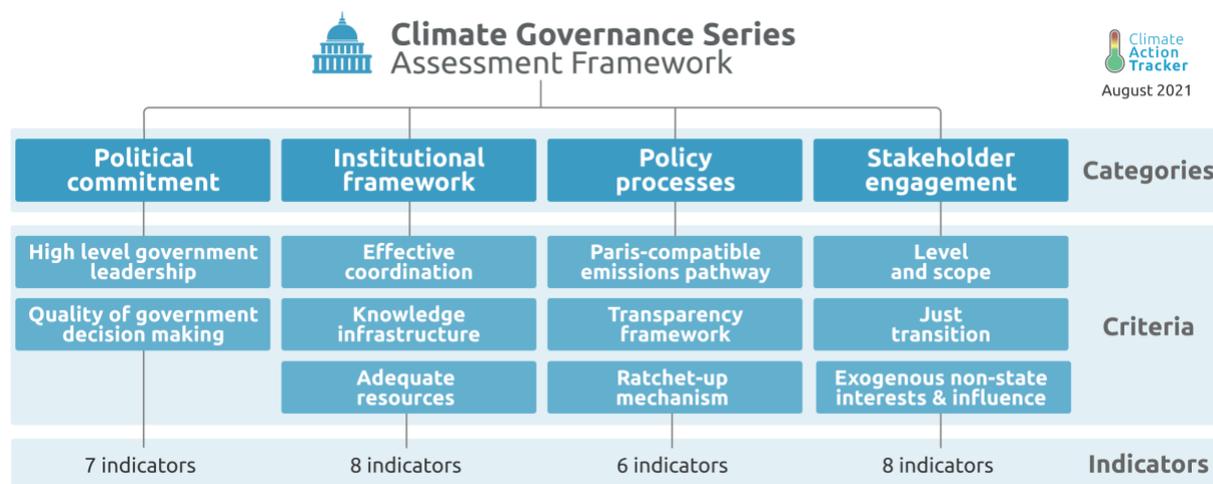


<http://climateactiontracker.org/publications/climate-governance>

Legend

Understanding our indicators

This report series seeks to produce a standardised and replicable approach to assessing a country's readiness to transition to a zero emissions society. To achieve this, we have assessed a number of possible indicators under four broad categories and eleven criteria. **Criteria** are marked in bold text throughout this document.



Notwithstanding the desire for standardisation, our framework is a living document and we occasionally revise the number or make-up of our indicators. For complete details, see our [methodology page](#). This assessment of Egypt is based on our **2021 methodology**.

Understanding our rating system

Our rating system highlights positive developments within countries, identifies areas of improvement, and establishes a basis on which to compare climate governance across countries.

Each individual indicator has been assessed and given a score. The categories and criteria linked to those indicators are then given a rating based on those scores.

Very Poor	<p>≤ 20% of possible score</p> <p>This rating indicates that the government is deficient and improvement is necessary.</p>
Poor	<p>20 – 40% of possible score</p> <p>This rating indicates that the government is showing a limited level of readiness but improvement is still necessary.</p>
Neutral	<p>40 – 60% of possible score</p> <p>This rating indicates that the government is showing some level of readiness, but improvement is still necessary.</p>
Acceptable	<p>60 – 80% of possible score</p> <p>This rating indicates that the government is showing a good level of readiness, although improvement is still possible.</p>
Advanced	<p>≥ 80% of possible score</p> <p>This rating indicates that the government is performing well, although improvement is still possible and beneficial.</p>

Executive summary

President El-Sisi has not been a strong advocate of the need to transition the Egyptian society and economy towards net zero emissions, though this may change as Egypt prepares to host the climate negotiations in November 2022. He has traditionally focused on the importance of climate adaptation and emphasised the need for climate finance from developed countries. More broadly, expanding the country's natural gas production is a top priority for government officials, both for the country's own energy security and as a valuable export commodity, not starting on the path to decarbonisation.

While the climate change lead agency is entrusted with clear legal mandates, it needs greater power to reinforce its position as the lead institution on climate change issues in Egypt.

There is incremental improvement in Egypt's climate policy development, but the process is slow. And, there have been some notable rollbacks, including measures adopted in response to the fuel shortages the country experienced a decade ago, and more recent measures that may dampen the speed of renewable energy uptake.

The trustworthiness and the accountability of Egypt's government is considered to be low both generally and in relation to environmental governance metrics, which may inhibit the transition. Constitutional addendums passed in 2019 mean that the President could stay in power until 2030. The extent to which there is broadscale political support for the transition to a zero emissions society is somewhat moot against such a backdrop.

The National Council for Climate Change (NCCC) is an inter-ministerial committee and the key-decision body responsible for coordinating climate policy development and implementation across ministries and agencies. Assessing its effectiveness is difficult as information on the workings of the Council is limited. Transition-related policy development also appears to be taking place in other settings, with the link to the NCCC unclear. Coordination with subnational governments is poor as there are no climate specific coordination mechanisms.

Mainstreaming the concept of a transition to a zero emissions society within government is in its infancy as Egypt has only recently begun to consider the need for such a transition. Egypt announced its 2050 National Climate Change Strategy (NCCS) in November 2021, though few details are available. Egypt's numerous policies and strategy documents are generally aligned, though these are not transition focused and not updated frequently.

Egypt does not have an authoritative body with an explicit mandate to provide the government with transition-related advice, though some agencies may be capable of playing such a role. The government does consider external advice as part of its policy-development process.

While the country has a high level of climate finance readiness in some areas, the financial and technical resources of the Ministry of Environment need to be improved. Some specific technical capacities within the Ministry are lacking, such as GHG inventory preparation and funding proposals preparation, so it relies on external consultants. However, overall the Ministry is run by well-qualified staff who enable the lead agency, Egyptian Environmental Affairs Agency (EEAA), to build continuous institutional learning.

Egypt's processes to develop, implement and track the policies needed to enable the transition are weak. The country has not adopted a net zero target, nor has it set out a pathway to achieve it. The 2050 National Climate Change Strategy is not publicly available.

The country's existing legal architecture is comprised of piecemeal sectoral legislation which may help climate mitigation, but it lacks comprehensive, climate-focused legislation to support the transition. A legislative review is underway to include climate change in all relevant laws, though no timeline for its completion has been given. Implementation of existing regulations has also been problematic: enforcement of building sector energy use and efficient regulations are a case in point.

Egypt does not have a comprehensive transparency framework. A proposal was developed a few years ago, but it has not yet been adopted by the government. GHG inventories are an exception, with evidence of improvement at the national and sub-national level. Egypt has not established a formal

review mechanism for transition-related policies, nor is there evidence of any domestic ratchet-up mechanism. The country did not submit an updated NDC during the period 2020/2021, although one is in the works.

Stakeholders are consulted as part of the decision-making process; however the scope and the depth of those consultations is difficult to gauge. Consultations take place against a backdrop of low levels of public understanding of climate change - only about 40% of Egyptians consider that they know at least a moderate amount about climate change. Civil society is active in the climate space, but often faces capacity limitations, and recent legislative reforms have curtailed the ability of these groups to function. Government efforts around creating awareness and public education have been ad hoc to date, but a number of initiatives are planned in the lead-up to its hosting COP27.

Egypt lacks a comprehensive strategy to ensure a Just Transition, but has had some success with the phasing out of its energy subsidies and the promotion of green jobs. The full phase-out of consumption subsidies has been pushed back to mid 2025, due, in part, to concerns of rising consumer prices.

The military is heavily involved in Egypt’s economy, especially in major public infrastructure projects, which likely lessens the effect non-state actors can have on the government compared to other countries. This involvement is in activities that both support and potentially hinder the transition.

As the incoming COP27 host, there is the potential for Egypt to improve on a number of governance metrics. The Egyptian Government is talking a lot more about climate change. Whether that turns into action remains to be seen.

Category	Criteria	Recommendations
Political commitment	High-level government leadership	<ul style="list-style-type: none"> Ensure climate change is a priority for political leaders Entrust the Egyptian Environmental Affairs Agency (EEAA) with greater power and functions to reinforce its position as the lead institution on climate change Ensure that all relevant climate-concerned ministries have the mandate to lead on transition action
	Quality of government decision making	
Institutional framework	Effective coordination	<ul style="list-style-type: none"> Improve NCCC coordination to ensure that climate mitigation and the transition are mainstreamed into sectoral policies Establish a climate-specific coordination mechanism for engaging with subnational governments Allocate more financial resources to the Ministry of Environment and entrust the Egyptian Environmental Affairs Agency (EEAA) with sufficient technical human resources to enable both institutions to lead on climate action Strengthen existing programmes to build capacity within the Ministry of Environment and reduce reliance on consultants
	Knowledge infrastructure	
	Adequate resources	

Policy processes	Paris-compatible emissions pathway	<ul style="list-style-type: none"> • Submit an updated NDC, including a quantified emissions reduction target • Pass comprehensive climate-focused legislation and strengthen the implementation and enforcement of existing laws • Publish the 2050 Strategy and develop a long-term net-zero pathway, if not already covered by the Strategy • Ensure that all sectoral policies are aligned with the 2050 Strategy and regularly revise these policies in light of broader market developments • Establish a domestic transparency framework and climate change transparency focal points in all relevant ministries to better ensure GHG inventory data collection and tracking of mitigation actions • Develop a formal review mechanism to ensure effective monitoring and assessment of policy measures being implemented and a formal ratchet-up mechanism to ensure targets are strengthened over time • Make all major climate policy documents widely available (e.g. online)
	Transparency framework	
	Ratchet-up mechanism	
Stakeholder engagement	Level and scope	<ul style="list-style-type: none"> • Use its role as in-coming COP President to raise the level of public awareness and education on climate change and the need to cut GHG emissions • Improve existing stakeholders consultation mechanisms to ensure adequate public participation and buy-in • Develop a comprehensive strategy to ensure a Just Transition and promote green jobs, building on the success Egypt has had with phasing out energy subsidies • Remove restrictions on civil society groups and allow them to freely advocate for greater climate action
	Just transition	
	Exogenous non-state interests and influence	

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1 Introduction

1.1 Domestic context

Egypt is a lower middle-income country and is the third largest economy in the Arab world (Omran, 2021; World Bank, 2021d).

The 2011 revolution, which ended the 30-year reign of President Hosni Mubarak, led to significant political, social and economic upheaval. Political and institutional uncertainty, a perception of rising insecurity and sporadic unrest negatively affected economic growth and the country experienced a sharp decline in tourism revenue and foreign direct investment (IMF, 2014).

After a number of reforms, Egypt's economy had been improving prior to the pandemic (World Bank, 2020). While the pandemic has cut growth, Egypt was one of the few countries able to sustain positive GDP growth in 2020 and 2021 (IMF, 2021). Despite these economic improvements, social conditions remain difficult as about 30% of the population continue to live below the national poverty line (World Bank, 2021d).

Former Defence Minister, Abdel Fattah El-Sisi, became President in 2013, when the democratically elected President, Mohamed Morsi, was ousted in a military coup. El-Sisi won the elections in 2014 and 2018, although the validity of these has been called into question (BBC News, 2018; Human Rights Watch, 2018; Kirkpatrick, 2014).

The constitutional amendments made in April 2020 mean that El-Sisi will stay in power until 2024 (France Diplomatie, 2020). The amendments also allow him to seek an additional six-year term through to 2030 (Freedom House, 2021). The President is not affiliated with a political party. Parliament rarely uses its power to hold the President and executive branch to account, thus enabling the President to take all major policy decisions (Darwisheh, 2019; Morsy, 2021).

Egypt has a very centralised government. The country is divided into 27 governorates, which are in turn divided into smaller administrative units (Ministry of Local Development, 2017). Sub-national administrative units have limited powers, with much of the substantive decision-making taking place at the national level within respective ministries or by the executive (Yara & Essam, 2021). Local councils were disbanded after the 2011 revolution and legislative reform of the local administrative law has been slow (ahramonline, 2021).

Human rights restrictions are a major concern (Human Rights Watch, 2021). Egyptian authorities have been accused of severely curtailing many freedoms of their citizens and many are arbitrarily detained without trial. The ability of civil society to advocate for change has also been curtailed by recent legislative changes.

Egypt and Ethiopia are locked in a long-standing dispute over Ethiopia's construction of a major hydro power scheme, the Grand Ethiopia Renaissance Dam, on the Nile River, which threatens Egypt's water supply (Saied, 2021; Saleh, 2021). The country is also fighting an ongoing insurgency in the Sinai against the Islamic State's local affiliate, and persistent attacks throughout the country by dissident groups (France Diplomatie, 2020).

Egypt has plans to become a regional energy hub; having overcome many of the energy challenges it faced in the last decade. From 2012-2014, Egypt experienced significant fuel shortages and power outages (Egyptian Environmental Affairs Agency, 2018). Crude oil and natural gas production has been steadily declining over the past decade because of aging refineries that lack capacity to produce higher-end petroleum products and depletion of natural gas reserves. In 2015, Egypt became a net importer of natural gas (IEA, 2019).

The discovery and development of substantial natural gas fields off Egypt's coast in 2015 has changed the picture dramatically. By 2019, it had become a net exporter of natural gas again. Expanding its production of natural gas is a top priority for government officials, both for its own energy security and as a valuable export commodity. Egypt is the largest non-OPEC (Organization of the Petroleum Exporting Countries) oil producer, the third-largest dry natural gas producer, and the largest oil and natural gas consumer in Africa (BP, 2020; U.S. Energy Information Administration, 2018).

Egypt has set targets to accelerate renewable energy use and has implemented a number of policies to support this development, but these fall short of the rate of uptake needed to be 1.5°C compatible.

Egypt, along with Jordan and Morocco, top the Arab Future Energy Index (AFEX) Renewable Energy ranking, which assesses a country's market structure, policy framework, institutional capacity and finance and investment to support renewable energy deployment (Mahmoud & Habib, 2019). In 2019, 7% of total electricity capacity was hydropower, with 2% from wind and 1% from solar (IRENA, 2020).

Not surprisingly, close to 70% of Egypt's GHG emissions come from the energy sector, with agriculture, industry and waste each contributing roughly an equal share of the remainder (Gütschow et al., 2021). The majority of Egypt's electricity is from natural gas (IEA, 2019). Oil is a distant second, though together the two provide 90% of the country's power.

Egypt is highly vulnerable to the impacts of climate change. and one of the least prepared to handle these impacts (ND-GAIN, 2022; World Bank, 2021b).

1.2 Climate governance snapshot

Egypt's main mitigation policies are set out in its 2030 low emissions development strategy, which was adopted in early 2019 (Osama et al., 2019). At COP26, Egypt announced it had developed a 2050 National Climate Change Strategy (Egyptian Environmental Affairs Agency, 2021). Neither the 2030 or 2050 strategies are available online, making evaluation difficult.

Renewable energy targets for 2022 and 2035 were adopted in the *Integrated Sustainable Energy Strategy to 2035* (ISES 2035), in late 2016. The 2035 target date has now been brought forward to 2030. *Egypt Vision 2030*, developed in 2014-2015, is the country's overarching sustainable development strategy (Ministry of Planning, Monitoring and Administration Reform, 2016). Climate change does not feature prominently and the Vision does not include an economy-wide emission reduction target; however, it does have a few mitigation-related sectoral targets.

Egypt's Nationally Determined Contribution (NDC) has no quantified emissions target (The Arab Republic of Egypt, 2015). The government did not submit an update by the 2021 COP26 deadline, but is expected to submit an update in 2022, ahead of hosting COP27.

The Egyptian Environmental Affairs Agency (EEAA) is the lead entity on climate change. The Agency is chaired by the Ministry of Environment (MoE) (Egyptian Environmental Affairs Agency, 2019). The Central Department of Climate Change (CDCC) is the technical arm of EEAA and is responsible for GHG inventory preparation and reporting, and for the development and the implementation of climate-related studies, strategies and programmes. It serves as the United Nations Framework Convention on Climate Change (UNFCCC) Focal Point.

The National Council for Climate Change (NCCC) provides strategy oversight and is the main decision-making body for climate policy. It is responsible for coordinating climate policy development across ministries and agencies (Egyptian Prime Minister, 2019). The Council has been reformed a number of times over the years, but has existed in some form since 1997 (Egyptian Environmental Affairs Agency, 2018).

In 2019, The Prime Minister took over from the Ministry of Environment as head of the council, signaling the growing importance of the climate portfolio across the government. The Council oversees the development of Egypt's national strategies, such as the 2030 low emissions development strategy, the 2050 National Climate Change Strategy, key policies, like the carbon market proposals currently under consideration, and all of its national reporting to the UNFCCC (Egyptian Environmental Affairs Agency, 2018; Ministry of Environment, 2022a; Osama et al., 2019). The Ministry of Environment and its Climate Change Department support the day-to-day operations.



Key Institutions

Ministry of Environment (MoE), formerly Ministry of State for Environmental Affairs (MSEA)

The Ministry is focused on defining environmental policies, setting priorities and implementing initiatives within a context of sustainable development. It is in charge of preparing the necessary plans for environmental protection and environmental development projects, following up their implementation, and undertaking pilot projects.

Egyptian Environmental Affairs Agency (EEAA)

The EEAA is the operational arm of MoE. The Agency drafts laws and decrees related to the protection of the environment, include climate change. It conducts studies on the state of the environment, develops national plans and implements projects. It compiles and publishes periodic reports on the main environmental indicators. EEAA hosts the Central Department of Climate Change (CDCC).

National Council for Climate Change (NCCC)

The NCCC provides strategic oversight and is the main decision-making body within the executive. The NCCC has existed in some form since 1997. The Council is now led by the Prime Minister after the latest reforms in 2019.

New and Renewable Energy Authority (NREA)

NREA's aim is to promote renewable energy technologies in Egypt on a commercial scale, together with the implementation of related energy conservation programs. NREA is entrusted to plan and implement renewable energy programmes in coordination with other concerned national and international institutions.

Supreme Energy Council

The Council provides strategic oversight and is the main decision-making body for energy policy. Like the NCCC, it is headed by the Prime Minister and is managed by the Ministry of Petroleum and the Ministry of Electricity and Renewable Energy.



Key Plans & Strategies

Sustainable Development Strategy: Egypt Vision 2030 (2016)

Egypt Vision 2030 is the country's overarching sustainable development strategy. Climate change does not feature prominently and the Vision does not include an economy-wide emission reduction target; however, it does have some mitigation-related sectoral targets.

Integrated Sustainable Energy Strategy – ISES (2016)

ISES sets out Egypt's vision for the scaling-up of renewable energy development in the power sector (a copy of the strategy is not available online). ISES set targets of 20% renewable energy by 2022 and 42% by 2035. At COP26 (November 2021), Egypt announced a strengthening of its targets to 42% by 2030.

Low-Emission Development Strategy – LEDS (2019)

The LEDS is a national framework that aims to redirect Egypt's economy towards investment in clean technology. A copy of the strategy is not available online.

2050 National Climate Change Strategy (2021)

The Strategy was announced at COP26 (November 2021). The Strategy is broad, seeking to achieve green growth, enhance adaptive capacity and resilience, ameliorate climate governance, improve the infrastructure for both domestic and international climate finance, and strengthen research and public education. No emissions targets were mentioned when the Strategy was announced and a copy of the strategy is not yet available online.



Targets

Nationally Determined Contribution (NDC)

Egypt's NDC does not include a quantified emission reduction target, but instead contains a general list of priority actions focused on energy efficiency, increased use of renewable and nuclear energy, and more efficient fossil fuel technology, and energy subsidy reform. Egypt did not update its NDC before COP26 in 2021; however, President El-Sisi mentioned in his address to the Summit that an update was being prepared.

42% Renewable Energy generation by 2030

Egypt has renewable energy targets of 20% of by 2022 and 42% by 2030. In 2019, RE generation was around 10% (IEA, 2019).

Zero Routine Gas Flaring by 2030

In 2018, Egypt joined the World Bank's Initiative to stop gas flaring in oil production by 2030 (World Bank, 2022). It ranked 13th in terms of total volume flared globally in 2020 (World Bank, 2021c).



Key Laws & Regulations

Egypt does not have a climate law

Environmental Law: Law 105/2015

Adopted in 1994, and most recently amended in 2015, the Environmental Law is Egypt's main piece of environmental legislation. The Minister of Environment has said that a dedicated chapter on climate change is in the works.

Law for the Production of Electricity from Renewable Energy Resources: Law 203/2014

The Law sets up several development schemes and incentives to promote energy production from renewable sources, such as competitive bids, feed-in tariff, and independent power production through third party access. Cabinet decree No. 1947 of 2014 further established the basis for the feed-in tariff.

2 National assessment

2.1 Political commitment

Political commitment

High-level government leadership

Quality of government decision making

President El-Sisi has not been a strong advocate of the need to transition the Egyptian society and economy towards net zero emissions, though this may change as Egypt prepares to host the climate negotiations in November 2022. He has traditionally focused on the importance of climate adaptation and emphasised the need for climate finance from developed countries. More broadly, expanding the country's natural gas production is a top priority for government officials, both for the country's own energy security and as a valuable export commodity, not starting on the path to decarbonisation.

While the climate change lead agency is entrusted with clear legal mandates, it needs greater power to reinforce its position as the lead institution on climate change issues in Egypt.

There is incremental improvement in Egypt's climate policy development, but the process is slow. And, there have been some notable rollbacks, including measures adopted in response to the fuel shortages the country experienced a decade ago, and more recent measures that may dampen the speed of renewable energy uptake.

The trustworthiness and the accountability of Egypt's government is considered to be low both generally and in relation to environmental governance metrics, which may inhibit the transition. Constitutional addendums passed in 2019 mean that the President could stay in power until 2030. The extent to which there is broadscale political support for the transition to a zero emissions society is somewhat moot against such a backdrop.

As the incoming COP27 host, there is the potential for Egypt to improve on a number of governance metrics. An updated NDC is expected. The Egyptian Government is talking a lot more about climate change. Whether that turns into action remains to be seen.

High-level government leadership can be a driving force for stimulating economy-wide transformational changes and increasing climate mitigation ambition through top-down strategy setting and sending effective policy signals.

President El-Sisi has not been a strong advocate of the need to transition the Egyptian society and economy towards net zero emissions, though this may change as Egypt prepares to host the climate negotiations in November 2022. Egypt has not yet submitted an update of its NDC nor adopted a net zero target under President El-Sisi's leadership. However, the President did note that Egypt has completed preparations of its 2050 National Climate Change Strategy and that this would assist in the update of its NDC in his speech at COP26 (The Arab Republic of Egypt, 2021).

President Abdel Fattah El-Sisi has traditionally focused on the importance of climate adaptation and emphasised the need for climate finance from developed countries (Egypt State Information Service, 2021; Head of State, 2015; Samir, 2019). In 2019, Egypt and the United Kingdom (UK) co-chaired the Climate Alliance Working Group on Adaptation during the Climate Change Summit of the 74th UNGA Session in New York, one of nine climate coalitions (Samir, 2019). The collaboration between both countries led to the creation of the Adaptation Action Coalition which was officially launched in January 2021 by the UK Prime Minister Boris Johnson (UK Government, 2021).

There is some acknowledgement from key ministries on the need for climate action. However, the depth of support and the extent to which ministries are supportive of transition-related mitigation efforts is not clear and difficult to assess.

The Minister of Petroleum and Mineral Resources has mentioned the need to reduce emissions and ultimately reach net zero emissions, but squarely sees natural gas as a 'transition fuel' (ATTAQA, 2020; Egypt Oil & Gas News Paper, 2021; Ministry of Petroleum and Mineral Resources, 2020, 2021). The Climate Action Tracker (CAT) and others have cautioned against such a view, both globally (Climate Action Tracker, 2017; Climate Analytics, 2021b) and within Egypt (Climate Analytics, 2021a; McDonnell, 2021).

The Prime Minister has asserted that he is personally committed to working on removing all obstacles that will hinder the investments needed to achieve the Sustainable Development Goals and, reduce GHGs emissions in Egypt (Egypt today, 2021a). But the statement is very recent and has not been followed up with action. As the Chair of the National Council on Climate Change (NCCC), it is expected that Prime Minister should give a positive impetus to the government as a whole, and to individual sectoral ministers, for greater transition-related actions.

Some ministries, such as the Ministry of Water Resources and Irrigation (MWRI) and the Ministry of Agriculture and Land Reclamation (MALR), have dedicated climate change units and others divide climate-related tasks amongst existing departments (Egyptian Environmental Affairs Agency, 2018). The scope of the policies and interventions of the latter ministries is oriented towards climate resilience more than on GHG emissions reduction.

It is questionable as to how much power the Egyptian Environmental Affairs Agency (EEAA), the lead entity on climate change, has to drive climate action. The Agency is chaired by the Ministry of Environment (MoE) (Egyptian Environmental Affairs Agency, 2019). It holds the technical secretariat of the NCCC and coordinates all technical input (Egyptian Prime Minister, 2019). The Third National Communication on Climate Change (TNC) called on the government to entrust the EEAA/CDCC with greater power and functions given the limitations in its functions (Egyptian Environmental Affairs Agency, 2016). There is evidence the Agency is constrained in bringing together and influencing all sectoral ministries to pay attention to low-carbon development. Much of the energy-related policy development and implementation is driven by the Ministry for Petroleum and Mineral Resources and the Ministry of Electricity and Renewable Energy. Also, despite opposition from the MoE in 2015, the Government of Egypt (GoE) allowed the expansion of industrial coal usage in response to the energy crisis it was facing at the time (Egyptian Initiative for Personal Rights, 2015).

Decarbonisation has not been a priority on Egypt's political agenda. Expanding its natural gas production is a top priority for government officials, both for its own energy security and as a valuable export commodity (Tanchum, 2020; Wardany, 2021). Since 2014, the country has completed over USD 70bn worth of fossil fuel development deals (Daily News Egypt, 2021a). Egypt also hosts the East Mediterranean Gas Forum, an intergovernmental organisation established in 2020 to support natural gas exploration and development in the region (Enterprise, 2021b; Reuters Staff, 2020b). More broadly, cutting GHG emissions and transitioning to a net zero future is not a focus of the country's central sustainable development planning document, Egypt Vision 2030 (Ministry of Planning, Monitoring and Administrative Reform, 2016).

As the incoming COP27 host, the Egyptian government has made some high-level statements that seem to suggest that the country will pay more attention to this issue in 2022 (Hegazi, 2022; Ministry of Environment, 2021a).

The **quality of government decision making** at the highest levels is a key factor in implementing ambitious climate policies, as national governments provide resources and direction for lower levels of government and can stimulate horizontal dynamics through mainstreaming, lesson-drawing, and cooperation (Jänicke, Schreurs, & Töpfer, 2015). The stability of this decision-making and the trustworthiness of the government are important elements.

The development of climate policy in Egypt is slow. There is incremental improvement in each new strategy, but there have also been some significant rollbacks.

In 2014-2015, the GoE developed *Egypt Vision 2030*, the country's overarching sustainable development strategy (Ministry of Planning, Monitoring and Administration Reform, 2016). While climate change is not featured prominently, though there are some relevant sectoral measures. In 2015, Egypt adopted its first NDC which does not contain a quantified emissions target (The Arab Republic of Egypt, 2015).

Late 2016, the Supreme Energy Council (SEC) adopted the *Integrated Sustainable Energy Strategy to 2035* (ISES 2035) which outlines the country's vision for the energy sector with renewable energy targets of 20 percent and 42 percent respectively for 2022 and 2035. The necessary legislative reforms to support renewable energy development had begun even before the adoption of the ISES 2035, with the passage of its RE law in 2014 (The Arab Republic of Egypt, 2014). In November 2021, Egypt announced that it would strengthen its midterm renewable electricity target, bringing the target date forward from 2035 to 2030 (Enterprise, 2021a). By way of comparison, according to IRENA, 53 percent by 2030 is possible (IRENA, 2018). In 2019, Egypt generated around 10% of its electricity from renewables (IEA, 2019).

In 2016-2017, a number of industry roadmaps were developed, focusing on CO₂ reduction or energy efficiency in the sub-sectors of food manufacturing, chemicals, building materials, textile, and cement (EBRD, 2016; UNIDO, 2017c, 2017b, 2017a, 2018).

The *Egypt Vision 2030*, the ISES 2035 and sectoral plans and policies all fed into the development of Egypt's 2030 Low Emissions Development Strategy (LEDS), which was approved by the NCCC in early 2019 (Osama et al., 2019). At COP26, Egypt announced it had adopted a 2050 National Climate Change Strategy (NCCS) (Egyptian Environmental Affairs Agency, 2021). Neither the LEDS or the 2050 NCCS are available online, making evaluation difficult.

Key rollbacks include measures adopted in response to the fuel shortages the country experienced a decade ago, and more recent measures that may dampen the speed of renewable energy uptake.

In response to the fuel shortage the country suffered in the early 2010s, the government authorised the use of coal by industry (Egyptian Initiative for Personal Rights, 2015; Egyptian Prime Minister, 2015b). CO₂ emissions from coal jumped from 1 MtCO₂ in 2016 to 13 MtCO₂ in 2018 (IEA, 2019). Historically, emissions from coal had never been above 4 MtCO₂ and had been on a slow decline since 2008.

More recently, the government imposed a 5% import tariff on solar panels, which had previously been duty free (Enterprise, 2021d). The government also imposed additional fees for grid access for renewable energy plants (Salah & Abdelaty, 2022). Industry experts say both measures will impede the expansion of the renewable energy sector (Enterprise, 2022b; Salah & Abdelaty, 2022).

The trustworthiness and the accountability of Egypt's government is considered to be low both generally and in relation to environmental governance metrics. Egypt ranks 117th out of 180 countries on Transparency International's 2021 Corruption Perception Index, with a score of 33 points which is below the global average (Transparency International, 2021). Egypt also ranks poorly on the anti-corruption, accountability & transparency aspects of the Mo Ibrahim Index of African Governance, coming in at 32 and 43 out of 54 countries, respectively (MIF, 2020). Egypt ranked tenth out of 54 on the Index's sustainable environment metrics (MIF, 2020). The environmental governance analysis is based on air quality, land and water biodiversity, enforcement of environmental policies, promotion of environmental sustainability, and sustainable management of land and forest indicators, and does not include a separate assessment of climate policies. Governance of Egypt's oil and gas sector is considered poor (Natural Resource Governance Institute, 2017).

The electoral integrity of Egypt's recent presidential (2018) and parliamentary (2020) elections have been questioned by international observers (Human Rights Watch, 2021). Elections are won by very large margins (97% in 2018) and voter turnout is low. Constitutional addendums passed in 2019 have extended the President's term to 2024 and allowed him to run for a third term, which means he could stay in power until 2030 (BBC News, 2019).

There is no meaningful opposition to the current government from political parties (Freedom House, 2021). The extent to which there is broadscale political support for the transition to a zero emissions society is somewhat moot against such a backdrop. The Green Party of Egypt (Hizb Al-khodr) did run candidates in the 2012 parliamentary elections, but did not win any seats (EISA, 2013). It no longer appears to be active.

2.2 Institutional framework



The National Council for Climate Change (NCCC) is an inter-ministerial committee and the key-decision body responsible for coordinating climate policy development and implementation across ministries and agencies. Assessing its effectiveness is difficult as information on the workings of the Council is limited. Transition-related policy development also appears to be taking place in other settings, with the link to the NCCC unclear. Coordination with subnational governments is poor as there are no climate specific coordination mechanism with them.

Mainstreaming the concept of a transition to a zero emissions society within government is in its infancy as Egypt has only recently begun to consider the need for such a transition. Egypt announced its 2050 National Climate Change Strategy (NCCS) in November 2021, though few details are available. Egypt's numerous policies and strategy documents are generally aligned, though these are not transition focused and not updated frequently.

Egypt does not have an authoritative body with an explicit mandate to provide the government with transition-related advice, though some agencies may be capable of playing such a role. The government does consider external advice as part of its policy-development process.

While the country has a high level of climate finance readiness in some areas, the financial and technical resources of the Ministry of Environment need to be improved. Some specific technical capacities within the Ministry are lacking, such as GHG inventory preparation and funding proposals preparation, so it relies on external consultants. However, overall the Ministry is run by well-qualified staff who enable the lead agency, Egyptian Environmental Affairs Agency (EAAA), to build continuous institutional learning.

Effective coordination across ministries and agencies as well as with sub-national governments affects the ability of actors to align overarching climate policy targets efficiently and consistently.

Coordination of transition-related actions between line ministries does exist, but its effectiveness is difficult to assess. The National Council for Climate Change (NCCC) is an inter-ministerial committee and the key-decision body responsible for coordinating climate policy development and implementation across ministries and agencies (Egyptian Prime Minister, 2019; Mukhtar, 2019). The Council oversees the development of Egypt's national strategies, such as the 2030 low emissions development strategy, the 2050 National Climate Change Strategy, key policies, like the carbon market proposals currently under consideration, and all of its national reporting to the UNFCCC (Egyptian Environmental Affairs Agency, 2018; Ministry of Environment, 2022a; Osama et al., 2019). The Council meets regularly (Mikhail, 2021), but little information about these meetings, nor the Council's regular reports to the Prime Minister, is publicly available.

Beyond the general lack of information on the workings of the Council, questions about its effectiveness arise from the fact that transition-related policy development appears to be taking place in other settings and it is not clear that all relevant line ministries are involved in the decision making process.

The NCCC and some relevant ministries appears to have little involvement in some transport and energy policy development and implementation (Attari & Schiffer et al., 2020; IRENA, 2018). For example, EV policy is driven by the Ministries of military production (local manufacturing), public enterprises (local manufacturing, charging stations), the interior ministry (license and registration), electricity (charging rate) and trade (import duties), with the transport and environment ministries seemingly having little role (Lynx, 2020).

Energy policy is decided by the Supreme Energy Council, also headed by the Prime Minister, which is managed by the Ministry of Petroleum and the Ministry of Electricity and Renewable Energy (IRENA, 2018). The relationship between this body and the NCCC is unclear. Lack of coordination amongst relevant ministries has also been noted as a barrier for energy efficiency policy (RCREEE, 2020a).

There are also questions about the composition of the NCCC itself. The Council was first established in 2015 and reformed in 2019. After the 2019 reforms, some key ministries like the Ministry of Transport and the Ministry of Electricity and Renewable Energy appear to be missing as members of the Supreme Committee (the dominant decision-making body within the Council), having been part of the 2015 Council. However, this could also be a limitation of our assessment, which is based on unofficial translations of the relevant decrees (Egyptian Prime Minister, 2015a, 2019). Considering that these are the highest emitting sectors in Egypt, reducing their ministries to the simple participation of the Council appears to be a limit in terms of effectiveness to establish a coordinated cross-sectoral oversight of powers and competences for low-carbon development goals.

Coordination of transition-related actions between national and subnational governments is poor. According to the 2015 Environmental Law, MoE is in charge of developing cooperative links with regional and local authorities on environmental issues (Ministry of Environment, 2015). However, there is no climate specific coordinating mechanism.

At one time, the MoE chaired an Advisory Board for Climate Change in Cities (AB-CCC), a peer-to-peer learning and knowledge-sharing platform amongst representative of national and local government bodies, academia, development agencies, civil society and private sector (AB-CCC, 2016). The funded project for that initiative ended in 2018 and there is no evidence the group has continued to operate. More generally the MoE does have a presence at the subnational level, either through Regional Branch Offices (RBOs) or Environmental Management Units (EMUs), for coordination of environment-related activities more broadly (Ministry of Environment, n.d.-e).

Mainstreaming the concept of a transition to a zero emissions society within government is in its infancy as Egypt has only recently begun to consider the need for such a transition. From the policy side, Egypt announced its 2050 National Climate Change Strategy (NCCS) in November 2021, though few details are available. From a financial standpoint, Egypt has developed Sustainability Standards to be considered as part of its national budget and public investment projects (Ministry of Planning and Economic Development, 2021). While these standards include GHG emission reductions, this consideration does not appear to be linked to any particular target or pathway.

Egypt's numerous policies and strategy documents are generally aligned, though these are not transition focused and not updated frequently. For example, *Egypt Vision 2030* and its 2035 Integrated Sustainable Energy Strategy both fed into its 2030 Low Carbon Development Strategy (Osama et al., 2019), although these strategy documents often have slightly different indicators. IRENA advised the government that the ISES 2035 should be updated every two years to reflect the rapid changes in market conditions, but that strategy has not been revised since its adoption in 2014 (IRENA, 2018).

Another important criterion is the existence and utilisation of a **knowledge infrastructure capable of supporting strategic planning and policy development**, as this aids in the elaboration and application of decarbonisation analyses in climate policy development.

There is no authoritative body with an explicit and clear mandate to provide transition-related advice to the government, though some agencies may be capable of playing such a role. The government does consider external advice as part of its policy-development process.

In 2017-2018, the Egyptian Environmental Affairs Agency (EEAA) had explored the possibility of establishing an Egyptian Centre of Excellence on Climate Change Research to provide the government with advice on climate mitigation and adaptation (Levy & Patel et al., 2017). While the government issued TORs to set up the Centre (Egyptian Environmental Affairs Agency, 2017), it does not appear to have been established.

In early 2020, Egypt launched the Centre of Excellence for Research and Applied Studies of Climate Change and Sustainable Development (N3SD.NRS) dedicated to the study of the environment and the socio-economic impacts of climate change (C3SD.NRS, n.d.; Space in Africa, 2020). The Centre's mandate includes developing reliable environmental models and suggesting pragmatic solutions to adapting and mitigating the levels of impacts of climate change in the country and region.

The Centre grew out of a COMSATS (Commission on Science Technology for Sustainable Development in the South) initiative¹ to set up centres for climate & sustainability in its member countries (COMSATS, 2022). The exact mandate of C3SD.NRS is not clear, nor the extent to which it provides advice to the government, if any. Since its inception, the C3SD.NRS has been involved in a broad range of climate-related activities, which do not have a clear focus on the transition. The relationship between the C3SD.NRS and the EEAA's Centre of Excellence on Climate Change Research is also unclear.

The C3SD.NRS is part of Egypt's National Research Centre (NRC), the largest multidisciplinary research and development centre in Egypt, established by the government in 1956 and devoted to basic and applied research (National Research Centre, n.d.). The NRC seeks to encourage the development of innovative ideas of global importance, including on climate change. It supports mitigation related research, like, for instance, conducting a study commissioned by the Egyptian Ministry of Civil Aviation on the use of locally grown biofuel for use in commercial aviation by 2050 (Badr, 2017).

Notwithstanding the lack of an authoritative advisory body, Egypt does consider analytical work developed through modelling tools and technical advice as part of its policy development. For example, the 2035 national energy strategy (ISES 2035) is based on a suite of modelling scenarios (IRENA, 2018).

Capital and resource constraints are significant barriers to effective climate governance and have been impediments for developing countries in the past (Bhave, Conway, Dessai, & Stainforth, 2016). **Adequate resources and capacity** need to be made available to implementers, and efficiently used by them, in climate policy processes.

Egypt excels in some areas of climate finance preparedness, while others still need work. In late 2020, Egypt successfully issued USD 750m in green bonds, making Egypt a pioneer in green bonds issuance in the Middle East and North Africa (MENA) region and the second largest green bonds issuer in Africa after South Africa (Ministry of Finance, n.d.; World Bank, 2021a). The bond was used to support public transportation and, water and waste management. Planning has begun on a second issuance (Enterprise, 2022d).

Egypt is the MENA regions' largest recipient of climate finance from the Green Climate Fund (GCF) (Green Climate Fund, n.d.; Watson & Schalatek, 2021). It also has experience with creating domestic funding systems, having established its Environmental Protection Fund (EPF) in 1994 (Ministry of Environment, n.d.-c). The EPF provides financial assistance on a competitive basis for projects that benefit the environment, including mitigation-oriented projects, in order to stimulate investment. The EPF's website has not been updated recently, making any assessment of its current operations difficult (Ministry of Environment, n.d.-b); however, the EPF is still supporting new projects, like installing solar panels at the Cairo International Airport (Daily News Egypt, 2021b), which also received support from the UNDP (Nassar, 2021). Egypt's Sovereign Fund, established in 2018 to attract foreign investment, is also looking into launching a renewable energy sub-fund to further support industry development (Enterprise, 2022a; The Arab Republic of Egypt, n.d.-b).

Egypt does not have a system to tag climate-related expenditures as part of its budgeting process (World Bank, 2021a) and so cannot readily track climate finance-related public expenditures. However, Egypt has begun to 'green' its public budget, having recently adopted Sustainability Standards to serve as criteria to ensure that public investment projects included in the national investment plan are consistent with environmental sustainability standards (Ministry of Planning and Economic Development, 2021). Reducing GHG emissions is included in these standards, but does not appear to be linked to achieving any specific emission reduction targets. The level of green national investment was 15% for the FY 2020/2021, which the government seeks to increase to 50-60% by FY 2024/2025 (Egypt today, 2021b; Egyptian Streets, 2021; Ministry of Environment, 2020).

Egypt has been considering establishing a national carbon market since submitting its Intended Nationally Determined Contribution (INDC) in 2015 (The Arab Republic of Egypt, 2015), with renewed interest this year as incoming COP president (DCarbon, 2019; Ministry of Environment, 2022a). While it does have experience with previous international carbon market mechanisms as it has a

¹ COMSAT is an inter-governmental organisation focused on promoting science and technology in developing countries.

comparatively large portfolio of Clean Development Mechanism (CDM) projects for the region (UNFCCC, 2022), it is considered to have a low capacity to develop a national carbon market (Egyptian Environmental Affairs Agency, 2018; South Pole Spain, 2020).

Some capacity-building initiatives are underway to improve Egypt's financial readiness. As part of the development of the fourth National Communication on Climate Change (4NC), the Ministry of Environment has organised climate change intensive courses for Finance and Planning Ministries' officials with the aim of mainstreaming climate considerations in budget and investment planning processes (Egyptian Environmental Affairs Agency, 2020c). Egypt is also receiving support, through the GCF, to improve its climate finance readiness (Green Climate Fund, 2021).

Setting aside the question of climate finance readiness and looking at the question of capacity and resources more broadly, it is clear that there are other constraints. Institutional capacity on climate research, GHG inventory and funding proposals development remains weak within the Ministry of Environment, and the EEAA relies on external consultants to carry out research and data gathering for many sectors (Ministry of Environment, n.d.-a; Rizzo, 2016).

Since El-Sisi took office in 2014, the EEAA has been led by five successive Chief Executive Officers. The profile of all these CEOs shows that the government always appoints a highly qualified person, as all of them hold a Ph.D. and are professors in the most important universities of Egypt (Egyptian Environmental Affairs Agency, 2022). Still, substantial resources would be required to implement capacity building programmes nationally and establish robust information systems to address climate change challenges (Egyptian Environmental Affairs Agency, 2018).

There are also capacity constraints at the sectoral level, such as a limited planning and forecasting ability in the power section (IRENA, 2018). Under the 4NC development process, the MoE has conducted training sessions towards governmental specialists in order to build their capacities to be able to consider neutral carbon transition in their actions and decision-making processes (Egyptian Environmental Affairs Agency, 2020b).

2.3 Process for policy development, implementation and review



Egypt's processes to develop, implement and track the policies needed to enable the transition are weak. The country has not adopted a net zero target, nor set out a pathway to achieve it. Its recently-announced 2050 National Climate Change Strategy is not publicly available.

The country's existing legal architecture is comprised of piecemeal sectoral legislation which may help climate mitigation, but it lacks comprehensive climate-focused legislation to support the transition. A legislative review is underway to include climate change in all relevant laws, but without a timeline for its completion. Implementation of existing regulations has also been problematic: enforcement of building sector energy use and efficient regulations are a case in point.

Egypt does not have a comprehensive transparency framework to support the transition to a zero emissions society. A proposal was developed a few years ago, but the government has not yet adopted it. GHG inventories are an exception, with evidence of improvement at the national and sub-national level. Egypt has not established a formal review mechanism for transition-related policies, nor is there evidence of any domestic ratchet-up mechanism. The country did not submit an updated NDC during the period 2020/2021, although one is in the works.

A defined Paris Agreement-compatible decarbonisation pathway is an important component to aid the long-term planning for, and alignment with, the Paris Agreement's overall objectives.

Egypt does not have a net zero target, but it has announced that it has a 2050 National Climate Change Strategy (NCCS). The Strategy was announced at COP26 in November 2021, although no documentation is available publicly (Egyptian Environmental Affairs Agency, 2021). The Strategy is broad, seeking to achieve green growth, enhance adaptive capacity and resilience, ameliorate climate governance, improve the infrastructure for both domestic and international climate finance, and strengthen research and public education.

No emissions targets are mentioned in the announcement of the Strategy, though at COP26, President El-Sisi said that an updated NDC would be prepared in light of the Strategy (Sayed, 2021). Egypt is also part of the US-led Net Zero World Initiative (National Renewable Energy Laboratory, 2022). In 2020, the Minister of Petroleum said the country was working on actions to cut emissions and achieve carbon neutrality (ATTAQA, 2020).

Egypt has not adopted comprehensive climate-focused legislation. The country's existing legal architecture is comprised of piecemeal sectoral legislation which may help climate mitigation, but is not necessarily drafted with a transition in mind (New and Renewable Energy Authority, 2022). The Renewable Energy Law No. 203/2014 set up incentives to promote energy production from renewable sources, such as a feed-in tariff (The Arab Republic of Egypt, 2014). Recent waste management legislative reforms, with the adoption of a new waste management law (Law 202/2020), may help support waste-to-energy projects, but do not set emission reduction targets for the sector (Enterprise, 2020; Lynx, 2020; Salah & Abdelaty, 2022).

Implementation of existing regulations has also been problematic. For instance, building energy efficiency codes have been adopted and a ministerial decree issued to make the installation of solar water heating systems mandatory in new government buildings, yet neither have been enforced (RCREEE, 2020b).

The Environment Minister has said that a legislative review is underway to include climate change in all relevant laws, as well as adding a dedicated chapter into the country's Environment law (Ministry of Environment, 2009, 2015), but no details or timeline are available regarding this review (Ministry of Environment, 2021b).

Without setting a long-term decarbonisation goal, it is not possible for line ministries to feed such considerations into their near-term policy development plans. As such, near-term policies run the risk of not being Paris Agreement compatible. For example, to decarbonise its power sector in a Paris compatible manner will require Egypt to achieve a high uptake of renewable energy in the order of 77-95% by 2030 (Climate Analytics, 2021a). While Egypt has recently strengthened its 2030 Renewable Energy target to 42%, it is still far from being Paris compatible.

An enhanced transparency framework mechanism is necessary in order to track progress towards achieving emission reduction targets in line with the Paris Agreement, as well as providing checks and balances for the government's climate commitments.

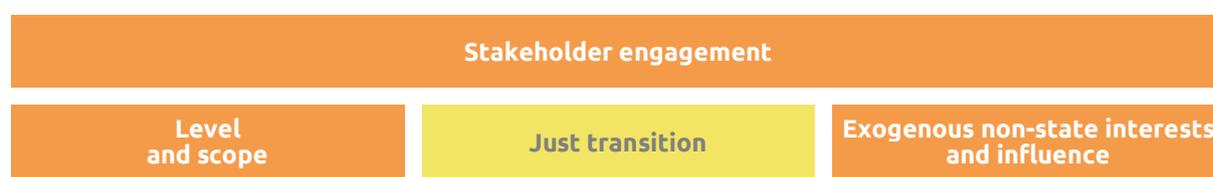
Egypt's transparency framework is fractured and piecemeal (Egyptian Environmental Affairs Agency, 2018). Egypt has conceptualised how it would implement a domestic transparency framework to cover GHG emissions, including the monitoring and review of both mitigation activities and the support received. However, the implementation of such a system is constrained by a lack of financial support (Egyptian Environmental Affairs Agency, 2018). This transparency framework proposal has also not yet been endorsed by the National Council on Climate Change. There is no evidence that Egypt has established a formal review mechanism for climate-related policies.

Establishing GHG inventories is the one area where improvements are evident. Egypt has steadily been making progress in its ability to track GHG emissions with each of its national reports to the UNFCCC (Egyptian Environmental Affairs Agency, 1999, 2010, 2016, 2018).

Some sub-national governments have also prepared GHG inventories (Egypt Governorate of Luxor, 2017; Egypt Governorate of the Red Sea, 2017). As part of its latest climate report to the UNFCCC, the Third National Communication on Climate Change (3CN), a collaboration between the Ministry of Environment and the Central Agency for Public Mobilisation and Statistics (CAPMAS), was established to ensure the sustainability of GHG inventory data collection process (Egyptian Environmental Affairs Agency, 2018). Capacity building initiatives were established to train CAPMAS personnel and the IPCC’s GHG inventory software was used for the first time. The EEAA has some capacity to measure and monitor the impact on emissions of its mitigation actions (Egyptian Environmental Affairs Agency, 2018; Osama et al., 2019). Overall, these efforts are spread out amongst ministry departments and lack central coordination.

The Paris Agreement includes a mechanism through which to ‘ratchet-up’ climate action ambition over time. The first iteration of this mechanism took place in 2020/2021, with the vast majority of countries submitting updates (Climate Action Tracker, 2021). Egypt did not submit an updated NDC during this period, nor is there evidence of any domestic **ratchet-up mechanism** for its climate targets. The President has indicated that an updated NDC is in the works.

2.4 Stakeholder engagement



Stakeholders are consulted as part of the decision-making process, but the scope and the depth of those consultations is difficult to gauge. Consultations take place against a backdrop of low levels of public understanding of climate change - only about 40% of Egyptians consider they know at least a moderate amount about climate change. Civil society is active in the climate space, but often faces capacity limitations, not least of which is from recent legislative reforms, which have curtailed the ability of these groups to function. Government efforts around creating awareness and public education have been ad hoc to date, but a number of initiatives are planned in the lead-up to its hosting COP27.

Egypt lacks a comprehensive strategy to ensure a Just Transition, but has had some success with the phasing out of its energy subsidies and the promotion of green jobs. The full phase-out of consumption subsidies has been pushed back to mid-2025, due, in part, over concerns of rising consumer prices.

The military is heavily involved in Egypt’s economy, especially in major public infrastructure projects, which likely lessens the effect non-state actors can have on the government compared to other countries. This military involvement is in activities that both support and potentially hinder the transition.

The government’s **level and scope of engagement** with stakeholders reflect how well it is aware of external knowledge and the expectations of its constituents, which, in turn, affects the ability for sound government decision-making.

It is questionable whether the government is able to ensure broad buy-in on climate change action. The government has developed some mechanisms to improve public participation in policy decision-making processes. For instance, the development of the annual Economic and Social National Plan (ESNP) is subject to public consultation at every step of the process (Khodary, 2016). The development of the country’s sustainable development strategy, *Egypt Vision 2030*, had a participatory and inclusive approach (The Arab Republic of Egypt, n.d.-a). The 2030 low carbon strategy was developed through a participatory process which included a series of workshops, seminars and meetings involving key stakeholders (Osama et al., 2019). Stakeholder consultation has also been undertaken for some sectoral reports (IRENA, 2018). However, the scope and the depth of these consultations is difficult to assess and must be contrast to the general restrictive environment in which civil society works (more below). It is also not clear whether any consultation processes were held in relation to Egypt’s NDC update nor the recently-announced 2050 National Climate Change Strategy. There have been calls for improvements to be made in the government’s participatory approach (Khodary, 2016).

The level of public understanding of climate change is low and the government's efforts to date have been ad hoc (Hegazy, 2018). Only about 40% of Egyptians consider they know at least a moderate amount about climate change (Leiserowitz & Carman et al., 2021) and close to two thirds say they need more information to form an opinion. The government is planning a number of public awareness initiatives, especially focused on youth, in the lead-up to its hosting COP27 (Ministry of Environment, 2022b). Awareness raising was also included as one of the goals of the 2050 strategy (Egyptian Environmental Affairs Agency, 2021). Recently, the government has also organised training workshops on climate change for journalists and media professionals (Egyptian Environmental Affairs Agency, 2020d).

Egypt does not have specific guidance or requirements to incorporate climate change education into its educational curriculum. The MoE has some education material for children on its website, but it is somewhat outdated and limited (Ministry of Environment, n.d.-d, 2017). More extensive material is available on some of the educational portals supported by the Ministry of Education (Discovery Education, n.d.). The MoE is working on an educational package for climate change for pre/university education systems (Egyptian Environmental Affairs Agency, 2020a). Calls for a more coordinating education strategy are being made now that the country is hosting the next climate conference, COP27 (Ead, 2021).

It is important that the transition towards net zero emissions is planned and implemented as a **Just Transition**, enabling wider benefits for the population as a whole and ensuring that no one is left behind. This applies to both the impact of policies that governments will implement to cut emissions and the transition away from fossil fuel related industries.

Egypt has had some success with the phasing out of its energy subsidies; however, it does not have a comprehensive strategy to ensure a Just Transition and promote green jobs. In the early 2010s, the government implemented a number of energy subsidy reforms to reduce the fiscal burden on the country's budget. The implementation of these reforms was coupled with the introduction of a number of social programmes to lessen the impact of those reforms on poorer households. These social programmes are largely considered to have been a successful example of how to remove such subsidies (ITUC, 2019; Zinecker et al., 2018). The government had originally planned to phase out these consumption subsidies entirely by mid-2022, but has pushed the date back to mid-2025, in part, over concerns of rising consumer prices (Enterprise, 2021c).

Egypt has implemented some training programmes focused on promoting green jobs, most notably in the renewable energy sector, but overall it lacks a coordinating body and associated framework for the transition (Farouk, 2018; ILO, 2018; Invest for Jobs, 2021).

Egypt is rapidly expanding its natural gas production and aims to become a regional energy hub. To be 1.5°C compatible, the portion of natural gas in its electricity grid (the dominant source today) need to shrink to a small percentage by the end of the decade and be phase out entirely in the next (Climate Analytics, 2021a).

The International Energy Agency (IEA) has said if the world is serious about achieving net zero emissions, no new oil and gas development should take place (IEA, 2021). Any such development poses a risk of creating stranded assets and not addressing the needs of workers in this sector. Ensuring a Just Transition for Egypt is not limited to energy, but includes all sectors, like the many informal workers in the country's transportation sector (Attari & Schiffer et al., 2020).

Non-state actor interests and influence have the ability to shape government policies, either to accelerate or impede the speed of the transition to a zero emissions society. Such influence may come from groups directly affected by the transition, either positively or negatively, or from the general public. An important consideration is to what extent these stakeholders can access and utilise country-specific analyses to influence the policy agenda.

Evidence of support for the transition to a net zero emissions society and economy amongst Egyptian population is limited. Polling data suggests that there is at least some concern about climate change and support for addressing it, although the extent varies across studies.

One study found that two thirds of Egyptians consider climate change to be a global emergency, slightly higher than other Arab countries polled but in the middle of the 50 countries surveyed (Flynn & Yamasumi, 2021). In another study, Egyptians were the least worried about climate change out of the 31 countries surveyed, though a thin majority (51%) still said they were at least somewhat worried about it (Leiserowitz & Carman et al., 2021). 31% considered it very or extremely important to them personally and 54% thought it should be a high or very high government priority. 69% supported more renewables, though only 29% supported reducing fossil fuel use.

There are a number of civil society groups in Egypt that undertake public awareness and climate mitigation related activities (EIPR, 2016). However, the impact of civil society is often considered to be weak for a number of reasons such as limited funding or the lack of awareness in the broader population (EIPR, 2016; Tschentscher, 2016). These groups also work in a restricted environment: in 2017, the Egyptian government passed legislation setting limits on the ability of civil society groups to form and work in the country (Human Rights Watch, 2019, 2022).

While sectoral benchmarks for a 1.5°C compatible transition in Egypt's power, transport, industry and buildings sectors are available, there is limited policy research related on how to achieve the transition to a zero emissions society (Climate Analytics, 2021a). There is some sectoral analysis for energy (Bottoms, 2016; Ersoy & Terrapon-Pfaff, 2021; Habib & Ouki, 2021), transport (El-Dorghamy, 2020; Habib & Mahmoud, 2020; Hegazy & Henedy, 2021a, 2021b), and buildings (Omar et al., 2022).

Mitigation-related research is also supported by the Egyptian Academy for Science Research and Technology and has been commissioned by Ministries (Badr, 2017). Yet gaps still remain, and not all material is available in Arabic. In 2018, IRENA noted that more in-depth measurement of wind and solar resource potentials is needed to ensure the bankability of projects, as well as studies on dealing with increasing levels of variable renewable energy in the power sector (IRENA, 2018; but see: Doorga, Hall, & Eyre, 2022).

The military is heavily involved in Egypt's economy, especially in major public infrastructure projects (Reuters Staff, 2018; Sayigh, 2022), which likely lessens the effect non-state actors can have on the government compared to other countries. There is military engagement in activities that both support and potentially hinder the transition. As noted above, the Ministry of Military Production is involved in the country's EV ambitions, but has also built the largest cement factory in the country (Reuters Staff, 2020a). Given the fact that Egyptian cement production was already in oversupply (Enterprise, 2021) and this is an energy and emission intensive harder-to-abate sector, the investment, from a transition standpoint, is questionable.

Non-state actors whose interests are at risk from the transition are likely to have significant influence in the energy-related sectors. As highlighted above, governance of Egypt's oil and gas sector is poor (Natural Resource Governance Institute, 2017). The private sector has a permanent advisory role in the Egyptian hosted East Mediterranean Gas Forum (East Mediterranean Gas Forum, n.d.). Egypt also allowed industry to begin using coal during its fuel shortage crisis, despite broad popular opposition (Egyptian Initiative for Personal Rights, 2015; Egyptian Prime Minister, 2015b).

Egypt does have ambitions for its renewable energy sector and has implemented a number of legislative measures to accelerate the growth of renewable energy (El-Mazghouny, 2021), so non-state actors who profit from the transition may also have some influence. However, a couple of recent measures have adversely impacted the industry, their objections to which have gone unanswered.

In November 2021, the government imposed a 5% import tariff on solar panels, which had previously been duty free (Enterprise, 2021d). The new tariffs were one of a handful imposed. Industry groups have protested the new tariff saying that it will hurt investment in the sector at a time when it is facing increasing inflationary pressure (Enterprise, 2022c).

More recently, the government also imposed additional fees for grid access for renewable energy plants, a move also seen by industry as impeding the expansion of the sector (Salah & Abdelaty, 2022). The EV industry has worked with the government to remove some of the regulatory barriers limiting EV growth, but negotiations were slow and much remains to be done to accelerate growth in the sector (Mohamed, 2022).

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The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

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The Consortium



NewClimate Institute is a non-profit institute established in 2014. NewClimate Institute supports research and implementation of action against climate change around the globe, covering the topics international climate negotiations, tracking climate action, climate and development, climate finance and carbon market mechanisms. NewClimate Institute aims at connecting up-to-date research with the real world decision making processes.

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Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

climateanalytics.org

References

- AB-CCC. (2016). Participatory Development Programme in Urban Areas. Retrieved from <http://www.egypt-urban.net/ab-ccc/>
- ahramonline. (2021). Absent popular eye: Waiting for local councils. Retrieved March 15, 2022, from <https://english.ahram.org.eg/NewsContentPrint/50/0/408191/AlAhran-Weekly/0/Absent-popular-eye-Waiting-for-local-councils.aspx>
- ATTAQA. (2020). Egypt plans to achieve carbon neutrality and eliminate emissions. Retrieved from <https://attaqa.net/2020/10/21/مصر-تخطط-لتحقيق-الحياد-الكربوني-والق>
- Attari & Schiffer et al. (2020). *The Mobility Transition in the MENA region. Friedrich Ebert Stiftung* (Vol. 6). Retrieved from https://egypt.fes.de/fileadmin/user_upload/documents/publication/Mobility_Transition_-_Typescript__Bilingual_-_04.12.2020.pdf
- Badr, H. (2017). Egypt produces jet biofuel from jatropha. *SciDev.Net*, (February), 6. Retrieved from <https://www.scidev.net/global/news/egypt-produces-jet-biofuel-jatropha/>
- BBC News. (2018). Egypt election: Sisi set to win second term as president. Retrieved March 15, 2022, from <https://www.bbc.com/news/world-middle-east-43581039>
- BBC News. (2019). Egypt president could rule until 2030 as constitutional changes backed. *BBC News*, 24(April), 12. Retrieved from <https://www.bbc.com/news/world-middle-east-48035512>
- Bhave, A. G., Conway, D., Dessai, S., & Stainforth, D. A. (2016). Barriers and opportunities for robust decision making approaches to support climate change adaptation in the developing world. *Climate Risk Management*, 14, 1–10. <https://doi.org/10.1016/j.crm.2016.09.004>
- Bottoms, I. (2016). *80GW of Change: Egypt's Future Electricity Pathways*. Retrieved from https://tn.boell.org/sites/default/files/80_gigawatts_of_change_-_en_-_pages.pdf
- BP. (2020). Statistical Review of World Energy globally consistent data on world energy markets. Retrieved from <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf>
- C3SD.NRS. (n.d.). Centre of Excellence for Climate Change and Sustainable Development. Retrieved February 24, 2022, from <https://www.facebook.com/C3SD.NRC/>
- Climate Action Tracker. (2017). *Foot off the gas: increased reliance on natural gas in the power sector risks an emissions lock-in. CAT Decarbonisation Series*. Retrieved from https://climateactiontracker.org/documents/55/CAT_2017-06-16_DecarbNaturalGas_CATAnalysis.pdf
- Climate Action Tracker. (2021). *Glasgow's 2030 credibility gap: net zero's lip service to climate action Wave of net zero emission goals not matched by action on the ground. Climate Analytics and New Climate Institute*. Retrieved from https://climateanalytics.org/media/cat_2021-11-09_briefing_global-update_glasgow2030credibilitygap_1.pdf
- Climate Analytics. (2021a). What is Egypt's pathway to limit global warming to 1.5°C? Retrieved February 24, 2022, from <https://1p5ndc-pathways.climateanalytics.org/countries/egypt/>
- Climate Analytics. (2021b). *Why gas is the new coal?* Retrieved from <https://climateanalytics.org/publications/2021/why-gas-is-the-new-coal/>
- COMSATS. (2022). Centre for Climate and Sustainability. Retrieved from http://comsats.org/?page_id=5593
- Daily News Egypt. (2021a). Egypt signs 98 oil agreements worth \$ 74bn since 2014, 9(June), 5. Retrieved from <https://dailynewsegypt.com/2021/06/09/egypt-signs-98-oil-agreements-worth-74bn-since-2014-petroleum-minister/>
- Daily News Egypt. (2021b). Environmental Protection Fund approves finance for Cairo Airport's solar chargers. *Daily News Egypt*, 2. Retrieved from <https://dailynewsegypt.com/2021/02/09/environmental-protection-fund-approves-finance-for-cairo-airports-solar-chargers/>
- Darwish, H. (2019). EGYPT UNDER SISI: FROM AN AUTHORITARIAN DOMINANT PARTY SYSTEM TO STRONGMAN POLITICS. *JETRO-IDE ME-Review Vol.6*, 6, 20. Retrieved from https://www.ide.go.jp/library/Japanese/Publish/Periodicals/Me_review/pdf/201903_01.pdf
- DCarbon. (2019). Study on Establishing Carbon Market in Arab Republic of Egypt. Retrieved from https://www.eeaa.gov.eg/portals/0/eeaaReports/NC4Egypt/InceptionWorkshop/ppt.carbon_market.pdf
- Discovery Education. (n.d.). Education material. Retrieved from <https://en.discoveryeducation.ekb.eg/search?q=climate+change>
- Doorga, J. R. S., Hall, J. W., & Eyre, N. (2022). Geospatial multi-criteria analysis for identifying optimum wind and solar sites in Africa: Towards effective power sector decarbonization. *Renewable and Sustainable Energy Reviews*, 158(112107).
- Ead. (2021). University contributions on climate change. *Ahramonline*, 20(November). Retrieved from <https://english.ahram.org.eg/NewsContent/50/1204/440766/AlAhran-Weekly/Opinion/University-contributions-on-climate-change-.aspx>
- East Mediterranean Gas Forum. (n.d.). The Gas Industry Advisory Committee. Retrieved February 24, 2022, from <https://emgf.org/giac/overview/>
- EBRD. (2016). *Low-Carbon Roadmap for the Egyptian Cement Industry*. Retrieved from https://www.thegreenwerk.net/download/Low_Carbon_Roadmap_for_the_Egyptian_Cement_Industry.pdf
- Egypt Governorate of Luxor. (2017). *Egypt Governorate of Luxor Sustainable Energy & Climate Adaptation Plan (SECAP)*. Retrieved from [https://www.climamed.eu/wp-content/uploads/files/Egypt-Governorate-of-Luxor-Sustainable-Energy-and-Climate-Action-Plan-\(SECAP\).pdf](https://www.climamed.eu/wp-content/uploads/files/Egypt-Governorate-of-Luxor-Sustainable-Energy-and-Climate-Action-Plan-(SECAP).pdf)
- Egypt Governorate of the Red Sea. (2017). *Sustainable Energy & Climate Adaptation Plan (SECAP)*. Retrieved from [https://www.climamed.eu/wp-content/uploads/files/Egypt-Governorate-of-Hurghada-Sustainable-Energy-and-Climate-Action-Plan-\(SECAP\).pdf](https://www.climamed.eu/wp-content/uploads/files/Egypt-Governorate-of-Hurghada-Sustainable-Energy-and-Climate-Action-Plan-(SECAP).pdf)

- Egypt Oil & Gas News Paper. (2021). El Molla : Egypt Develops Strategy for Hydrogen Industry, 4. Retrieved from <https://egyptoil-gas.com/news/el-molla-egypt-develops-strategy-for-hydrogen-industry/>
- Egypt State Information Service. (2021). Speech by H.E. President Abdel Fattah El-Sisi in Virtual Leaders' Dialogue on the Africa Covid-Climate Emergency. *State Information Service*, 5. Retrieved from <https://www.sis.gov.eg/Story/154884/Speech-by-H.E.-President-Abdel-Fattah-El-Sisi-in-Virtual-Leaders'-Dialogue-on-the-Africa-Covid-Climate-Emergency?lang=en-us>
- Egypt today. (2021a). Egypt's PM Madbouly meets U.S. Special Envoy for Climate John Kerry in Cairo, (June), 10. Retrieved from [https://www.egypttoday.com/Article/1/105095/Egypt's-PM-Madbouly-meets-U-S-Special-Envoy-for-Climate](https://www.egypttoday.com/Article/1/105095/Egypt-s-PM-Madbouly-meets-U-S-Special-Envoy-for-Climate)
- Egypt today. (2021b). Egypt takes part in Ministerial Conference on Climate Development, (April), 6. Retrieved from <https://www.egypttoday.com/Article/1/100395/Egypt-takes-part-in-Ministerial-Conference-on-Climate-Development>
- Egyptian Environmental Affairs Agency. (1999). Egypt Initial National Communication on Climate Change. UNFCCC Reports. Retrieved from <https://unfccc.int/sites/default/files/resource/TNC%20report.pdf>
- Egyptian Environmental Affairs Agency. (2010). *Egypt Second National Communication on Climate Change*. Retrieved from <https://unfccc.int/resource/docs/natc/egync2.pdf>
- Egyptian Environmental Affairs Agency. (2016). Egypt Third National Communication under the United Nations Framework Convention on Climate Change. *Egyptian Environmental Affairs Agency*, 245. Retrieved from https://unfccc.int/files/national_reports/non-annex_i_parties/biennial_update_reports/application/pdf/tnc_report.pdf%0Ahttps://www.environment.gov.za/sites/default/files/reports/draftsouthafricas3rdnationalcommunication_unfccc2017.pdf
- Egyptian Environmental Affairs Agency. (2017). ToR for the feasibility of the Egyptian Centre of Excellence on Climate Change. Retrieved from https://www.eeaa.gov.eg/portals/0/eeaaReports/announcements/TOR_BS.pdf
- Egyptian Environmental Affairs Agency. (2018). *Egypt's first Biennial Update Report to the United Nations Framework Convention on Climate Change*. Retrieved from <http://www.eeaa.gov.eg/portals/0/eeaaReports/N-CC/BUR Egypt EN.pdf>
- Egyptian Environmental Affairs Agency. (2019). EEAA Organization Structure. Retrieved from <https://www.eeaa.gov.eg/en-us/aboutus/aboutagency/structure.aspx>
- Egyptian Environmental Affairs Agency. (2020a). Terms of Reference (TOR) for National consultant to develop an educational package for Climate Change. Retrieved from [https://www.undp.org/content/dam/egypt/docs/Vacancies/Procurement/2020/July%202020/\[...\]020-TOR%20CB3%20consultant%20educational%20package%20Final.pdf](https://www.undp.org/content/dam/egypt/docs/Vacancies/Procurement/2020/July%202020/[...]020-TOR%20CB3%20consultant%20educational%20package%20Final.pdf)
- Egyptian Environmental Affairs Agency. (2020b). Hands - on Training for Governmental Specialists Tentative agenda : Day 2 : Wednesday 25 March 2020 Agenda : Retrieved from <http://www.eeaa.gov.eg/portals/0/eeaaReports/NC4 Egypt/Upcoming/Mitigation Action Database Workshop.pdf>
- Egyptian Environmental Affairs Agency. (2020c). Training Workshop Agenda. Retrieved from <http://www.eeaa.gov.eg/portals/0/eeaaReports/NC4 Egypt/Upcoming/Climate Finance Workshop Agenda.pdf>
- Egyptian Environmental Affairs Agency. (2020d). Training workshop for journalists and media professionals on climate change. Retrieved from www.eeaa.gov.eg/portals/0/eeaaReports/NC4Egypt/Upcoming/nc4egypt_media_ws_final agenda.pdf
- Egyptian Environmental Affairs Agency. (2021). Launch of the Egypt National Climate Change Strategy-2050. Retrieved from <https://www.eeaa.gov.eg/en-us/mediacenter/newscenter.aspx?articleID=6876>
- Egyptian Environmental Affairs Agency. (2022). Egyptian Environmental Affairs Agency Former CEOs. Retrieved from <https://www.eeaa.gov.eg/en-us/aboutus/aboutagency/ceo/formerceos.aspx>
- Egyptian Initiative for Personal Rights. (2015). The New Amendments to the Implementing Regulations of the Law on Environment: Huge Expansion in the Use of Coal, and Serious Health and Environmental Toll . *Press Release, 18(May)*, 6. Retrieved from <https://eipr.org/en/press/2015/05/-new-amendments-implementing-regulations-law-environment-huge-expansion-use-coal>
- Egyptian Prime Minister. (2015a). Egyptian National Committee on Climate Change - Prime Minister Decree No. 1912. Retrieved from http://www.eeaa.gov.eg/Portals/0/eeaaReports/N-Law/Decrees/PM_decree1912_2015_ClimateChange.pdf
- Egyptian Prime Minister. (2015b). Prime Minister's Decree No. 964/2015. Retrieved from <http://extwprlegs1.fao.org/docs/pdf/egy152819.pdf>
- Egyptian Prime Minister. (2019). Egyptian National Committee on Climate Change - Prime Minister Decree No. 1129. Retrieved from https://www.eeaa.gov.eg/Portals/0/eeaaReports/N-Law/Decrees/PM_decree_1129_for_2019_NCCC.pdf
- Egyptian Streets. (2021). Summary of President AL SISI's speech at COP26. *Egyptian Streets*, 3(November), 7. <https://doi.org/10.1017/9781108304368.012>
- EIPR. (2016). *Mapping of Environmental Organizations in Egypt*. Retrieved from https://eipr.org/sites/default/files/reports/pdf/environment_map_egy.pdf
- EISA. (2013). African Democracy Encyclopaedia Project Egypt : Parties without seats in 2011 / 2012 People's Assembly. Retrieved from <https://www.eisa.org/wep/egy2012parties2.htm>

- El-Dorghamy, A. (2020). *Mainstreaming Electric Mobility in Egypt: Seeing the bigger picture of sustainable cities*. Retrieved from https://egypt.fes.de/fileadmin/user_upload/documents/publication/Policy_Brief_2020_2nd_edition.pdf
- El-Mazghouny, D. (2021). Renewable Energy 2021; Laws and Regulations. *ICLG.Com*, 17(September), 9. Retrieved from <https://iclg.com/practice-areas/renewable-energy-laws-and-regulations/egypt>
- Enterprise. (2020). Where did things go wrong with Egypt's waste management? *Enterprise, The State of the Nation*, 8(July), 4. Retrieved from <https://enterprise.press/stories/2020/07/08/where-did-things-go-wrong-with-egypts-waste-management-18499/>
- Enterprise. (2021a). Egypt lays out 2030 renewable energy targets. *Enterprise, The State of the Nation*, 7(November), 2. Retrieved from <https://enterprise.press/stories/2021/11/07/egypt-lays-out-2030-renewable-energy-targets-57430/>
- Enterprise. (2021b). El Sisi ratifies East Mediterranean Gas Forum. *Enterprise, The State of the Nation*, 5(September), 3. Retrieved from <https://enterprise.press/stories/2021/09/05/el-sisi-ratifies-eastmed-gas-forum-52446/>
- Enterprise. (2021c). Your electricity bill is going up. Retrieved February 24, 2022, from <https://enterprise.press/stories/2021/06/22/your-electricity-bill-is-going-up-45665/>
- Enterprise. (2021d). العدد-46-مكرر مؤمن-5-6-1. Retrieved from <https://enterprise.press/wp-content/uploads/2021/11/1-6-5-مكرر مؤمن-5-6-1.pdf>
- Enterprise. (2022a). SFE eyes renewable energy sub-fund. *Enterprise, The State of the Nation*, 13(January), 3. Retrieved from <https://enterprise.press/stories/2022/01/13/sfe-eyes-renewable-energy-sub-fund-62617/>
- Enterprise. (2022b). Solar energy players call for scrapping tariffs on solar panels. *Enterprise, The State of the Nation*, 1(January), 2. Retrieved from <https://enterprise.press/stories/2022/01/05/solar-energy-players-call-for-scrapping-tariffs-on-solar-panels-61971/>
- Enterprise. (2022c). Solar energy players call for scrapping tariffs on solar panels. Retrieved February 24, 2022, from <https://enterprise.press/stories/2022/01/05/solar-energy-players-call-for-scrapping-tariffs-on-solar-panels-61971/>
- Enterprise. (2022d). We're looking to join Euroclear during 2H2022 + Another round of green bonds. *Enterprise, The State of the Nation*, 31(January), 3. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/35174/Main-Report.pdf?sequence=1&isAllowed=y>
- Enterprise. (2021). Slightly less cement oversupply. Retrieved March 23, 2022, from <https://enterprise.press/stories/2021/11/23/slightly-less-cement-oversupply-58809/>
- Ersoy & Terrapon-Pfaff. (2021). *Sustainable transformation of Egypt's energy system*. Retrieved from https://epub.wupperinst.org/frontdoor/deliver/index/docId/7892/file/7892_Egypt.pdf
- Farouk, M. A. (2018). Egypt launches renewable energy curriculum to boost promising sector. Retrieved from <https://www.al-monitor.com/originals/2018/02/egypt-launches-renewable-energy-curriculum.html#ixzz5FFXczpH1>
- Flynn & Yamasumi. (2021). *Peoples' Climate Vote. United Nations Development Programme and University of Oxford* (Vol. 1). Retrieved from [file:///C:/Users/HP/Downloads/Oxford.com_compressed \(1\).pdf](file:///C:/Users/HP/Downloads/Oxford.com_compressed%20(1).pdf)
- France Diplomatie. (2020). Présentation de l'Égypte Présentation du pays. Retrieved from <https://www.diplomatie.gouv.fr/fr/dossiers-pays/egypte/presentation-de-l-egypte/>
- Freedom House. (2021). Freedom in the World 2021 Egypt country Report. Retrieved from <https://freedomhouse.org/country/egypt/freedom-world/2021>
- Green Climate Fund. (n.d.). Egypt Country Profile. Retrieved February 24, 2022, from <https://www.greenclimate.fund/countries/egypt>
- Green Climate Fund. (2021). *Annual Performance Report (APR) AFD - TFSC Programme*. Retrieved from <https://www.greenclimate.fund/sites/default/files/document/fp095-annual-performance-report-cy2020-disclosable.pdf>
- Gütschow et al. (2021). The PRIMAP-hist national historical emissions time series: Egypt - Kyoto Greenhouse Gases (AR4). Retrieved March 15, 2022, from <https://www.pik-potsdam.de/paris-reality-check/primap-hist/#scenario=histcr&id=egy&entity=kyotoghgar4>
- Habib & Mahmoud. (2020). *Electric Mobility Opportunities and Challenges: A case study on Cairo, Egypt*. Retrieved from https://www.rcreee.org/sites/default/files/electric_mobility_in_cairorcreeefinal.pdf
- Habib & Ouki. (2021). *Egypt's low carbon hydrogen development prospects*. Retrieved from <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2021/11/Egypt-Low-Carbon-Hydrogen-Development-Prospects-ET04.pdf>
- Head of State. (2015). Statement of the President of the Republic at COP21. <https://doi.org/10.1145/3132847.3132886>
- Hegazi, S. (2022). COP 27 in Sharm El-Sheik will be crucial to Africa's response to climate change. Retrieved March 15, 2022, from <https://dailynewsegypt.com/2022/02/08/cop-27-in-sharm-el-sheik-will-be-crucial-to-africas-response-to-climate-change/>
- Hegazy & Henedy. (2021a). *Sustainable Urban Mobility Plan in 6th of October-Phase 2*. Retrieved from https://egypt.fes.de/fileadmin/user_upload/documents/publication/SUMP_Phase_2_ENG_AR_pdf.pdf
- Hegazy & Henedy. (2021b). *Sustainable Urban Mobility Plan in 6th of October Phase 1*. Retrieved from https://egypt.fes.de/fileadmin/user_upload/documents/publication/SUMP_Phase1_ENG_AR_.pdf
- Hegazy, O. (2018). Climate Change Public Awareness in Egypt. Retrieved from https://unfccc.int/files/cooperation_and_support/education_and_outreach/application/pdf/egypt_gambia.pdf
- Human Rights Watch. (2018). Egypt: Planned Presidential Vote Neither Free Nor Fair. Retrieved March 15, 2022, from <https://www.hrw.org/news/2018/02/13/egypt-planned-presidential-vote-neither-free-nor-fair>
- Human Rights Watch. (2019). Egypt: New NGO Law Renews Draconian Restrictions. *Human Rights Watch*, 24(July), 9. Retrieved from <https://www.hrw.org/news/2019/07/24/egypt-new-ngo-law-renews-draconian-restrictions>

- Human Rights Watch. (2021). Human rights in Egypt. Retrieved from <https://www.hrw.org/world-report/2021/country-chapters/egypt#73fcc>
- Human Rights Watch. (2022). Egypt events of 2021. Retrieved February 24, 2022, from <https://www.hrw.org/world-report/2022/country-chapters/egypt>
- IEA. (2019). Egypt Country Profile. Retrieved March 15, 2022, from <https://www.iea.org/countries/egypt>
- IEA. (2021). *Net Zero by 2050 A Roadmap for the Global Energy Sector*. Paris, France: International Energy Agency. Retrieved from https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf
- ILO. (2018). *Skills for green jobs in Egypt*. Ilo.Org. Retrieved from http://www.ilo.org/wcmsp5/groups/public/--ed_emp/--ifp_skills/documents/publication/wcms_142483.pdf
- IMF. (2014). Arab Countries in Transition, An Update on Economic Outlook and Key Challenges. *Policy Papers*, 2014(22), 21. <https://doi.org/10.5089/9781498343459.007>
- IMF. (2021). Egypt: Overcoming the COVID Shock and Maintaining Growth. Retrieved March 24, 2022, from <https://www.imf.org/en/News/Articles/2021/07/14/a070621-egypt-overcoming-the-covid-shock-and-maintaining-growth>
- Invest for Jobs. (2021). Investing for Employment launches Call for Proposals in Egypt. Retrieved from <https://invest-for-jobs.com/en/news/investing-for-employment-launches-call-for-proposals-in-egypt>
- IRENA. (2018). *Renewable Energy Outlook: Egypt*. /publications/2018/Oct/Renewable-Energy-Outlook-Egypt. Retrieved from <https://www.irena.org/publications/2018/Oct/Renewable-Energy-Outlook-Egypt>
- IRENA. (2020). *Renewable Energy Statistics 2020*. Retrieved from www.irena.org
- ITUC. (2019). *The Role of Social Protection in a Just Transition*. Retrieved from https://www.ituc-csi.org/IMG/pdf/role_of_social_protection_in_a_just_transition_en.pdf
- Jänicke, M., Schreurs, M., & Töpfer, K. (2015). The Potential of Multi-Level Global Climate Governance. *Institute for Advanced Sustainability Studies (IASS) Policy Brief*, (2), 1–12. <https://doi.org/10.2312/iass.2015.021>
- Khodary, Y. (2016). Public Participation in Public Policy : Case Studies on Egypt's Right to Information Draft Law and National Plan. *International Journal of Political Science and Development*, 4(25), 10. <https://doi.org/10.14662/IJPSD2016.005>
- Kirkpatrick, D. D. (2014). International Observers Find Egypt's Presidential Election Fell Short of Standards. Retrieved March 15, 2022, from <https://www.nytimes.com/2014/05/30/world/middle-east/international-observers-find-fault-with-egypt-vote.html>
- Leiserowitz & Carman et al. (2021). *International Public Opinion on Climate Change*. New Haven, CT: Yale Program on Climate Change Communication and Facebook Data for Good. Retrieved from <https://climatecommunication.yale.edu/wp-content/uploads/2021/06/international-climate-opinion-february-2021d.pdf>
- Levy & Patel et al. (2017). Center for Excellence for Climate Change in Egypt. ClimaSouth. Retrieved from <https://www.climamed.eu/wp-content/uploads/2019/01/Center-of-Excellence-for-Climate-Change-in-Egypt.pdf>
- Lynx. (2020). *EGYPT'S EVOLVING POLICY FRAMEWORK FOR ELECTRIC VEHICLES*. Retrieved from <http://www.lynxegypt.com/assets/pdfs/EVs-Policy-Regulatory.pdf>
- Mahmoud & Habib. (2019). *Arab Future Energy Index: Renewable Energy*. Retrieved from https://rcreee.org/sites/default/files/final_afex_re_2019_final_version-1.pdf
- McDonnell, T. (2021). John Kerry cautions Egypt against fossil fuels. *Quartz Africa*, (June 17), 4. Retrieved from <https://qz.com/africa/2022050/john-kerry-has-a-warning-for-egypt-over-fossil-fuels/>
- MIF. (2020). *Ibrahim Index of African Governance*. Mo Ibrahim Foundation. Retrieved from <https://mo.ibrahim.foundation/sites/default/files/2020-11/2020-index-report.pdf>
- Mikhail, G. (2021). Egypt announces plan to address climate change following heat wave Egypt is devising a strategic national plan to address climate. *AL-MONITOR*, 23(August), 7. Retrieved from <https://www.al-monitor.com/originals/2021/08/egypt-announces-plan-address-climate-change-following-heat-wave>
- Ministry of Environment. (n.d.-a). Egypt - Fourth National Communication to UNFCCC Project (NC4Egypt). Retrieved from <https://www.eeaa.gov.eg/en-us/mediacenter/reports/projectstudies/nc4egypt.aspx>
- Ministry of Environment. (n.d.-b). Egypt Environmental Protection Fund. Retrieved February 24, 2022, from <https://www.eeaa.gov.eg/epf2/>
- Ministry of Environment. (n.d.-c). Environmental Protection Fund (EPF). Retrieved March 16, 2022, from <https://www.eeaa.gov.eg/epf2/>
- Ministry of Environment. (n.d.-d). Green Corner. Retrieved from https://www.eeaa.gov.eg/ar-eg/المركز_الاعلامي/التوعية_البيئية/الركن_الأخضر.aspx
- Ministry of Environment. (n.d.-e). Organization Structure for Regional Branches. Retrieved February 24, 2022, from <https://www.eeaa.gov.eg/en-us/aboutus/branches/structure.aspx>
- Ministry of Environment. (2009). Egypt Environmental Law. *Egypt Environmental Law*, (4), 48. Retrieved from <http://nrgi.staging.derilinx.com/dataset/rgi-environmental-law-2009/resource/79950ddb-137d-419a-aa40-3257683ea5c3>
- Ministry of Environment. (2015). Egypt New Environmental Law. Retrieved from http://www.eeaa.gov.eg/portals/0/eeaaReports/N-Law/Law_ammend_105_2015.pdf
- Ministry of Environment. (2017). *Mother Earth and our Children's Future*. Retrieved from <http://www.eeaa.gov.eg/portals/0/eeaaReports/awariness/OurPlanetandKidsFutureBooklet.pdf>
- Ministry of Environment. (2020). The Minister of Environment and the Minister of Planning and Economic Development emphasize the necessity of the decree taken by the Cabinet of Ministers to approve the issuance of environmental sustainability criteria guideline. Retrieved from <https://www.eeaa.gov.eg/en-us/mediacenter/newscenter.aspx?articleID=6447>

- Ministry of Environment. (2021a). Road to COP27. Retrieved from https://www.eaaa.gov.eg/Portals/0/eeaaReports/MediaReport/COP26 EGYPT Brochure_final_cs6_2.pdf
- Ministry of Environment. (2021b). Senatory Plenary Sessions to review environmental national plans. *Ministry of Environment Media Center*, 20(December), 3. Retrieved from <https://www.eaaa.gov.eg/ar-eg/مركزالاخبار/المركزالاعلامي.aspx?articleID=6944>
- Ministry of Environment. (2022a). Carbon Market Proposals. Retrieved from <https://www.eaaa.gov.eg/ar-eg/مركزالاخبار/المركزالاعلامي.aspx?articleID=6980%0A>
- Ministry of Environment. (2022b). Meeting between Minister of Environment and Minister of Youth and Sports to discuss ways of cooperation in preparing for the COP27 Climate Conference. Retrieved from <https://www.eaaa.gov.eg/ar-eg/مركزالاخبار/المركزالاعلامي.aspx?articleID=6983>
- Ministry of Finance. (n.d.). Egypt Green Bond Documentation. Retrieved February 24, 2022, from <https://mof.gov.eg/en/posts/publicDept/601ace3810ca760007b20d2c/Green-Bond Documentation>
- Ministry of Local Development. (2017). Egypt Governorates and Administrative sub-divisions. Retrieved March 15, 2022, from <https://mld.gov.eg/en/governorates>
- Ministry of Petroleum and Mineral Resources. (2020). New agreements for Egypt with international companies despite the challenges of the Corona Pandemic. Retrieved from https://www.petroleum.gov.eg/ar-eg/media-center/news/news-pages/Pages/mop_21102020_01.aspx
- Ministry of Petroleum and Mineral Resources. (2021). Speech of Eng. Tarek El Molla, Minister of Petroleum and Mineral Resources, at the Sixth Ministerial Meeting of the East Mediterranean Gas Forum (EMGF). Retrieved from https://www.petroleum.gov.eg/en/media-center/news/news-pages/Pages/mop_25112021_01.aspx
- Ministry of Planning and Economic Development. (2021). *Environmental Sustainability Standards*. Retrieved from <https://www.eaaa.gov.eg/Portals/0/Documents/guides/Environmental sustainability final.pdf>
- Ministry of Planning, M. and A. R. (2016). *Egypt Vision 2030 - Sustainable Development Strategy*. Retrieved from https://www.arabdevelopmentportal.com/sites/default/files/publication/sds_egypt_vision_2030.pdf
- Mohamed, D. (2022). Permanent registration of electric vehicle to encourage its sales in Egypt: Pundits. Retrieved February 24, 2022, from <https://dailynewsegyp.com/2020/12/14/permanent-registration-of-electric-vehicle-to-encourage-its-sales-in-egypt-pundits/>
- Morsy, A. (2021). Egypt's Elections and Parliament: Old Habits Never Die. Retrieved March 23, 2022, from <https://timep.org/commentary/analysis/egypts-elections-and-parliament-old-habits-never-die/>
- Mukhtar, H. (2019). The Official Gazette publishes the Prime Minister's decision regarding the powers of the National Council for Climate Change. Retrieved March 16, 2022, from <https://www.youm7.com/story/2019/5/8/الجريدة-الرسمية-4234655/تنشر-قرار-رئيس-الوزراء-بشأن-صلاحيات-المجلس-الوطني>
- Nassar, M. (2021). Cairo Airport going solar with support of UNDP. *CSR Egypt*, 19(August), 5. Retrieved from <https://www.csregypt.com/en/cairo-airport-going-solar-with-support-of-undp/>
- National Renewable Energy Laboratory. (2022). Net Zero World Initiative. Retrieved from <https://www.nrel.gov/international/net-zero-world.html>
- National Research Centre. (n.d.). Egypt National Research Centre. Retrieved February 24, 2022, from <https://www.nrc.sci.eg/>
- Natural Resource Governance Institute. (2017). Egypt oil and gas, Resource Governance Index. *The Natural Resource Governance Institute*, 7. Retrieved from http://www.resourcegovernance.org/sites/default/files/country_pdfs/qatarRGI2013.pdf
- ND-GAIN. (2022). ND-GAIN Country Index. Retrieved March 15, 2022, from <https://gain.nd.edu/our-work/country-index/>
- New and Renewable Energy Authority. (2022). Renewable energy legislation and reporting. Retrieved from <http://www.nrea.gov.eg/Investors/Legislation>
- Omar et al. (2022). Optimal strategy for transition into net-zero energy in educational buildings: A case study in El-Shorouk City, Egypt. *Sustainable Energy Technologies and Assessments*, 49(February), 16. <https://doi.org/10.1016/j.seta.2021.101701>
- Omran, H. (2021). Saudi Arabia Retains Lead As Largest Arab Economy In 2021, Ahead Of UAE And Egypt. Retrieved March 21, 2022, from <https://www.forbesmiddleeast.com/industry/economy/saudi-maintains-on-top-of-five-largest-arab-economies-in-2021-ahead-of-uae-and-egypt>
- Osama et al. (2019). Egypt Low Emissions Development Strategy (LEDS) Objectives of LEDS. Retrieved from <https://www.eaaa.gov.eg/portals/0/eeaaReports/NC4Egypt/InceptionWorkshop/ppt.leds.pdf>
- RCREEE. (2020a). *Energy Efficiency and Renewable Energy Strategies and Policies. Mitigation Enabling Energy Transition in the Mediterranean region*. Retrieved from https://docs.google.com/viewerng/viewer?url=https://www.rcreee.org/sites/default/files/meetmed_report_a1_1_final_191009.pdf
- RCREEE. (2020b). *Energy Efficiency in buildings. Mitigation Enabling Energy Transition in the Mediterranean region* (Vol. 1). Retrieved from https://doc-0g-6o-apps-viewer.googleusercontent.com/viewer/secure/pdf/itcfrati3b8a89haio2dvffar3h7r7b9/25ollcsr6tqqf3nh2qehg9o1nvacelba/1627040625000/lantern/09629795448030179362/ACFrOgCGyhni97VanTHU8PagalEEVv_kgKa5yGbbFD2En5RgZpJLBmM7Bn17uhRpfJj2XWs6W8rm
- Reuters Staff. (2018). From war room to boardroom: Military firms flourish in Sisi's Egypt. Retrieved February 24, 2022, from <https://www.reuters.com/investigates/special-report/egypt-economy-military>
- Reuters Staff. (2020a). Coronavirus widens the cracks in Egypt's cement industry. Retrieved February 24, 2022, from <https://www.reuters.com/article/us-egypt-cement/coronavirus-widens-the-cracks-in-egypts-cement-industry-idUSKBN23F01Y>
- Reuters Staff. (2020b). East Mediterranean states formally establish Egypt-based gas forum. *Reuters*, 22(September), 3. Retrieved from <https://www.reuters.com/article/us-mideast-energy-idUKKCN26D14D>
- Rizzo, A. (2016). *Transparency of Climate Action in the ENPI South region, An assessment of the capacity of South Mediterranean countries to undertake Measurement, Reporting and Verification (MRV) and related challenges*. Retrieved from http://www.climasouth.eu/sites/default/files/policy_paper/CS_policy_paper_N1_pagsing.pdf

- Saied, M. (2021). New Egyptian-Ethiopian escalation over Nile dam. Retrieved March 15, 2022, from <https://www.al-monitor.com/originals/2021/11/new-egyptian-ethiopian-escalation-over-nile-dam>
- Salah & Abdelaty. (2022). New Merger Fee Imposed on Renewable Plants in Egypt. Retrieved from <https://riad-riad.com/new-merger-fee-imposed-on-renewable-plants-in-egypt/>
- Saleh, H. A. & M. (2021). Focus | AFRICA The Political Deadlock on the Grand Ethiopian Renaissance Dam The failure of the latest talks over the Grand Ethiopian Renaissance Dam. *German Institute for Global and Area Studies (GIGA)*, 4(July), 13. Retrieved from www.giga-hamburg.de/en/publications/giga-focus/
- Samir, S. (2019). Egypt, UK tackle resilience, adaptation at UN Climate Change Summit. Retrieved March 21, 2022, from <https://www.egypttoday.com/Article/1/75087/Egypt-UK-tackle-resilience-adaptation-at-UN-climate-change-summit>
- Sayed, N. (2021). Full Speech of Egypt's President El Sisi at Glasgow's COP-26. *Sada Elbalad Egypt*, 2(November), 7. Retrieved from <https://see.news/full-speech-of-egypts-sisi-at-glasgows-cop-26/>
- Sayigh, Y. (2022). *Retain, Restructure, or Divest? Policy Options for Egypt's Military Economy*. Retrieved from https://carnegieendowment.org/files/Sayigh_Egypt_Military_Economy_FINAL.pdf
- South Pole Spain. (2020). *Final carbon market options report ICP SEMED project*. Retrieved from <https://www.ebrd.com/documents/climate-finance/carbon-market-options-for-semec-countries.pdf?blobnocache=true>
- Space in Africa. (2020). Egypt Launches Centre For Environmental Studies and Application for Climate Change. *Space in Africa*, 29(January), 3. Retrieved from <https://africanews.space/egypt-launches-centre-for-environmental-studies-and-application-for-climate-change/>
- Tanchum, M. (2020). Egypt's Prospects as an Energy Export Hub Across Three Continents. *Istituto Per Gli Studi Di Politica Internazionale*, (September 24), 4. Retrieved from <https://www.ispionline.it/it/publicazione/egypts-prospects-energy-export-hub-across-three-continents-27408#.X2xuKMxdCE.twitter>
- The Arab Republic of Egypt. (n.d.-a). Sustainable Development Strategy: Egypt Vision 2030. Retrieved February 24, 2022, from <http://sdsegypt2030.com/>
- The Arab Republic of Egypt. (n.d.-b). The Sovereign Fund of Egypt. Retrieved February 24, 2022, from <https://tsfe.com/>
- The Arab Republic of Egypt. (2014). Presidential Decree-Law No.203/2014: Regarding the Stimulation of Producing Electricity from Renewable Energy Sources. Retrieved from <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/laws/2047.pdf>
- The Arab Republic of Egypt. (2015). *Egypt's Nationally Determined Contribution*. Retrieved from [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Egypt First/Egyptian INDC.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Egypt%20First/Egyptian%20INDC.pdf)
- The Arab Republic of Egypt. (2021). President El Sisi's Speech at COP26. Retrieved from https://unfccc.int/sites/default/files/resource/EGYPT_cop26cmp16cma3_HLS_AR.pdf
- Transparency International. (2021). *2021 CORRUPTION PERCEPTIONS Index Report*. Retrieved from https://images.transparencycdn.org/images/CPI2021_Report_EN-web.pdf
- Tschentscher, T. (2016). *Promoting Sustainable Development Through More Effective Civil Society Participation in Environmental Governance. United Nations Development Programme* (Vol. 1). Retrieved from <https://sgp.undp.org/all-documents/country-documents/692-promoting-sustainability-development-through-more-effective-civil-society-participation/file.html>
- U.S. Energy Information Administration. (2018). Analysis: Egypt Energy Sector Highlights. Retrieved March 24, 2022, from <https://www.eia.gov/international/overview/country/EGY>
- UK Government. (2021). New Global Coalition launched to address impacts of Climate Change. *UK Government*, 4. Retrieved from <https://www.gov.uk/government/news/new-global-coalition-launched-to-address-impacts-of-climate-change>
- UNFCCC. (2022). Egypt CDM Pipeline. Retrieved from cdmpipeline.org/publications/CDMPipeline.xlsm
- UNIDO. (2017a). *Integration of Energy Efficiency into Building Materials Sector Strategy*. Retrieved from https://ieeegypt.org/wp-content/uploads/2017/12/Building-Materials-EE-Strategy_20171107.pdf
- UNIDO. (2017b). *Integration of Energy Efficiency into Chemical Sector Strategy*. Retrieved from https://ieeegypt.org/wp-content/uploads/2017/12/Chemicals-EE-Strategy_20171107.pdf
- UNIDO. (2017c). *Integration of Energy Efficiency Into Food Manufacturing Sector Strategy*. Retrieved from <https://ieeegypt.org/wp-content/uploads/2016/04/Food-IEE-strategy.pdf>
- UNIDO. (2018). *Integration of Energy Efficiency into Textile Sector Strategy*. Retrieved from <https://ieeegypt.org/wp-content/uploads/2016/04/Textile-EE-strategy.pdf>
- Wardany, S. El. (2021). Egypt to Reopen LNG Plant In Push to Be Major European Supplier. *Bloomberg*, (January), 1. Retrieved from <https://www.bloomberg.com/news/articles/2021-01-27/egypt-set-to-revive-lng-export-push-by-reopening-damietta-plant?sref=P6xXtEaF>
- Watson & Schalatek. (2021). *Climate Finance Regional Briefing: Middle East and North Africa*. Retrieved from <https://us.boell.org/sites/default/files/2021-03/CFF9-ENG-2020-Digital.pdf>
- World Bank. (2020). *Egypt economic updates*. Retrieved from <https://thedocs.worldbank.org/en/doc/9dbe40280b581a94ff950a11cab42fb3-0280012021/original/4-mpo-sm21-egypt-egy-kcm2.pdf>
- World Bank. (2021a). *Climate Change Budget Tagging: A Review of International Experience*. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/35174/Main-Report.pdf?sequence=1&isAllowed=y>
- World Bank. (2021b). *Climate Risk Country Profile - Egypt*. Retrieved from www.worldbank.org
- World Bank. (2021c). *Global gas flaring tracker report*. Retrieved from <https://www.worldbank.org/en/topic/extractiveindustries/publication/global-gas-flaring-tracker-report>

- World Bank. (2021d). Overview of Egypt economic profile. Retrieved March 15, 2022, from <https://www.worldbank.org/en/country/egypt/overview#1>
- World Bank. (2022). Zero Routine Flaring by 2030 (ZRF) Initiative. Retrieved March 15, 2022, from <https://www.worldbank.org/en/programs/zero-routine-flaring-by-2030>
- Yara & Essam. (2021). Urban Climate Change Governance within Centralised Governments: a Case Study of Giza, Egypt. *Urban Forum*, 27(August), 25. <https://doi.org/10.1007/s12132-021-09441-9>
- Zinecker et al. (2018). *Real People, Real Change: Strategies for just energy transitions*. Retrieved from www.iisd.org/gsi