



Global
Green Growth
Institute

GGGI

United Arab Emirates Country Planning Framework 2018-2022





GGGI
United Arab Emirates
Country Planning
Framework
2018-2022



Foreword

The United Arab Emirates (UAE) is committed to following a green growth path to achieve its economic, social and environmental goals as outlined in the UAE Vision 2021. As the country builds on the progress it has made over the past few decades, the Government of UAE has set the course for greening and diversifying its economy through reducing its reliance on fossil fuels and shifting its focus towards creativity, innovation and knowledge.

The cornerstone of this transition is the UAE Green Agenda 2015-2030, drawn up in partnership with the Global Green Growth Institute (GGGI) and closely aligned with the UN Sustainable Development Goals (SDGs). Under its five pillars and twelve programs, federal and local authorities as well as other stakeholders are jointly working towards shaping a green economy for the greater global good.

The UAE places the utmost importance on climate action. In line with this priority, the country adopted the National Climate Change Plan 2050 in June 2017, developed in partnership with GGGI. Expanding on the UAE Green Agenda 2015-2030, the Plan marks the first comprehensive framework in the Gulf Cooperation Council (GCC) region that consolidates the country's climate change mitigation and adaptation initiatives, and sets a clear roadmap for fulfilling its commitment to the Paris Agreement.

With investment in solar energy and green infrastructure ramping up in the last few years, the UAE continues to raise the bar. The UAE Energy Plan 2050, announced in January 2017, aims to increase the share of clean energy in the national energy mix to 50% by 2050, with 44% generated from renewable sources. It also plans to cut down the country's power generation carbon footprint by 70% and reduce residential energy consumption by 40% over the next three decades.

The UAE is a founding member of GGGI and has hosted its regional office in Abu Dhabi since 2012. The UAE Country Planning Framework (CPF) 2018-2022 serves as the guiding document for GGGI's continued engagement in the country as the Government pursues the implementation of the UAE Green Agenda 2015-2030 and the National Climate Change Plan 2050. The CPF outlines the four strategic outcomes expected from the partnership over the next five years and the support measures GGGI will provide to achieve those outcomes.

The UAE Government and GGGI encourage all stakeholders to become proactive partners in our national journey towards a green economy.



Dr. Frank Rijsberman
Director General
Global Green Growth Institute



His Excellency Dr. Thani bin Ahmed Al Zeyoudi
Minister of Climate Change and Environment
United Arab Emirates



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Abbreviations and Acronyms

CPF	Country Planning Framework
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
HDI	Human Development Index
MENA	Middle East and North Africa
MOCCA	Ministry of Climate Change and Environment
MRV	Measurement, Reporting and Verification
MtCO₂e	Mega Ton Carbon Dioxide Equivalent
NDC	Nationally Determined Contribution
SDG	Sustainable Development Goal
TWh	Terawatt Hour
UAE	United Arab Emirates



Executive Summary

Background

The United Arab Emirates (UAE) has experienced remarkable economic growth in the past few decades, transforming itself into one of the world's leading destinations for business and tourism. It has also made substantial progress in life expectancy, quality of life, education and health. However, the speed of urban development, volatile global energy markets, and global climate change have created a set of sustainability challenges.

National Priorities

In January 2015, the UAE Cabinet approved the *UAE Green Agenda 2030*, developed with the support of the Global Green Growth Institute (GGGI). The Agenda covers the key aspects required for the UAE to transition to a green economy – including technology, human capital, regulatory environment, green financing, international trade, intellectual property, consumer awareness, and integrated national planning and cooperation across the emirates.

In April 2016, the Ministry of Climate Change and Environment (MOCCA) began developing the *National Climate Change Plan 2017-2050* with the assistance of GGGI, which was approved by the UAE Cabinet in June 2017.

Underpinning these policies is the *UAE Vision 2021*, the national planning blueprint for social, economic and environmental development, which envisions a competitive

and resilient economy and a cohesive society that is secure in its national identity and has the highest standard of living in a nurturing and sustainable environment.

About the Country Planning Framework

This country planning framework (CPF) outlines four strategic outcomes that will guide GGGI's interventions in the UAE during the period 2018-2022. The CPF will help fulfill national objectives, the Nationally Determined Contribution and the United Nations Sustainable Development Goals (SDGs), and contribute to achieving the UAE's goal of a diversified and climate-resilient economy for the future.

GGGI's Theory of Change

Strategic Outcome 1: Improved implementation of the UAE Green Agenda 2030 results in achievement of national green growth objectives

GGGI's interventions aim to support the government's targets of:

- 75% municipal solid waste recovery by 2021;
- Improving air quality to achieve 90% of green days by 2021.

Mainstreaming green growth in the UAE will be achieved through the implementation of the *UAE Green Agenda 2030*. In order to fully implement the agenda, it is vital to ensure the expertise and capacity of implementing agencies and improve coordination among them to report on the initiatives outlined in the Agenda. GGGI will support the implementation of the Agenda by technically supporting the implementation of specific projects and building capacity along GGGI's thematic areas.

These projects will contribute to achieving national and local sector-specific objectives in maximizing waste recovery, improving air quality, growing the environmental goods and services sector, improving water resource management, and thus reducing the overall ecological footprint. It will also help meet several SDG targets, including decoupling economic growth from environmental degradation (SDG 8), and sustainable management and efficient use of natural resources (SDG 12).

Strategic Outcome 2: Enhanced institutional capacity to address climate change, enabling emissions reductions and adaptation

GGGI's interventions aim to support the government in achieving its climate-related objectives as set out in the *National Climate Change Plan 2017-2050*.

Climate change has moved up the government's agenda in recent years. The formation of MOCCA in 2016, the Cabinet's approval of the *National Climate Change Plan 2017-2050* and the Ministry of Energy's announcement of the *UAE Energy Plan* for 2050 in the same year, are indicative of this shift. The *UAE Energy Plan* includes a carbon dioxide emissions reduction target of 70% from electricity generation.

GGGI has been working with MOCCA to prioritize actions to address the gaps in national policy and will continue to support the government in delivering national targets. Actions include:

- Supporting the establishment of a robust GHG inventory and a measurement, reporting and verification (MRV) system;
- Supporting a comprehensive climate risk and vulnerability assessment and adaptation programming.

Over the next four to five years, the government will develop a clearer path toward achieving GHG emissions reductions and a single methodology for measurement and reporting. Emissions will be better monitored and the UAE's ability to adapt to climate change will be strengthened (SDG 13).

Strategic Outcome 3: Strengthened public-private partnerships, leveraging the private sector's contribution to a viable green industry sector and green jobs

GGGI's interventions aim to support the government in generating an estimated 160,000 new jobs from greening the economy by 2030.

The government aims to increase the share of non-oil sectors in the UAE's gross domestic product, from its current level of around two-thirds, and strengthen the investment climate in order to achieve a global top ten rank in the World Bank's *Doing Business* report by 2021. To achieve these objectives, private-sector financing and incentives for projects and businesses must be further developed. GGGI, through its Green Investment Services and expertise in bankable projects, will:

- Support the design of enabling policies and incentive mechanisms for private-sector investment;
- Provide technical advice on innovative green financing options.

Over the next five years, the UAE will see an increase in private-sector investment flows, especially in energy, transport, food and waste, as policies become better designed and risk is better understood and minimized (SDG 9).

Strategic Outcome 4: Enhanced leadership role for the UAE in disseminating the green growth model in the MENA region

One of the UAE government's priorities is taking on a leadership role in green growth in the MENA region. The region's human capacity and expertise remain a challenge as introducing and consolidating green growth concepts and methodologies are long-term processes. GGGI will support the UAE government in the following ways:

- Nurture knowledge sharing activities and South-South cooperation targeting twelve countries in the region, and leverage the UAE's comparative advantage as one of GGGI's three regional knowledge sharing hubs¹;
- Provide technical and coordination support for bilateral cooperation (e.g., with Jordan and Morocco), knowledge sharing and green growth planning;
- Set up the Green Growth MENA Network that includes an online platform targeting green growth professionals from government, academia and the private sector to stimulate knowledge exchange and transfer.

The UAE and its partner countries in the region can benefit immediately from exposure to the latest green growth theories and practices. Over time, capacity needs will be addressed so that the partner countries can apply knowledge directly to their own work (SDG 17).

1 GGGI's other two regional knowledge sharing hubs are located in Songdo, South Korea and Mexico City, Mexico

1. Introduction to the Country Planning Framework

The Country Planning Framework (CPF) of the Global Green Growth Institute (GGGI) is a high-level document guiding GGGI's joint program with the Government of UAE. The CPF will guide all in-country programming and the design of new projects during the five-year implementation period of the UAE-GGGI Green Growth Program, from 2018 until the end of 2022. The CPF is aligned with GGGI's overarching goals and strategies for achieving environmentally sustainable green growth.

The CPF objectives are derived from country needs as identified by the UAE government. It reflects GGGI's comparative advantage and builds on the organization's previous in-country programmatic experience. The CPF process began by conducting a situation analysis of the country from a green growth perspective. Stakeholders, including the Ministry of Climate Change and Environment (MOCCA), Ministry of Energy, and the Environment Agency – Abu Dhabi, provided feedback to refine the main findings and identify priorities for GGGI's interventions.

The CPF is demand-driven and its activities are tailored to specific circumstances of the UAE. The CPF accounts for national priorities, as well as international development objectives such as the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.

The CPF is aligned to GGGI's corporate values, demonstrating:

- **Transformational outcomes** – GGGI takes a long-term outlook and aims for catalytic CPF outcomes that can trigger transformational change. The achievement of these outcomes is enhanced through partnership and synergy with other development actors;
- **Boldness** – GGGI responds to challenges with optimism. CPF outcomes seek to design and scale up creative new solutions and continually learn and adapt to evolving local contexts;
- **Excellence** – The CPF process is underpinned by technical rigor, demonstrating thought leadership and drive toward continuous improvement;
- **Inclusiveness** – GGGI respects and prioritizes diversity, information sharing among a broad set of stakeholders and equal opportunity in its collaboration and interventions. The CPF is designed to respond to national poverty reduction and social inclusion challenges;

- **Integrity** – GGGI upholds high standards for transparency and accountability. CPF analysis balances the findings of analytical reports and data with stakeholder feedback.

In drafting the UAE CPF, GGGI has consulted extensively with green growth stakeholders from across government including the Ministry of Climate Change and Environment, Ministry of Energy and the Environment Agency Abu Dhabi. Consultations were held via bilateral meetings hosted jointly by GGGI and its partners in the UAE. The CPF aligns with national development policies and strategies, including the *UAE Green Agenda 2030*, the National Climate Change Plan, and UAE Vision 2021 as well as international commitments under the Sustainable Development Goals (SDGs) and UAE's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC).

GGGI's ability to implement this cooperation and achieve the long-term outcomes of the CPF is contingent upon GGGI's receipt of sufficient financing to cover the costs of its CPF activities, and the anticipated cooperation and support of the UAE government and other relevant stakeholders.

Box 1. About GGGI

GGGI was founded to support and promote a model of economic growth known as “green growth” which targets key aspects of economic performance such as poverty reduction, job creation, social inclusion and environmental sustainability.

GGGI envisions a resilient world achieved through strong, inclusive and sustainable green growth, and is dedicated to supporting the transition of GGGI partner countries toward a green growth model. In pursuit of these goals, GGGI works with developing and emerging countries to design and deliver programs and services that demonstrate new pathways to pro-poor economic growth.

GGGI supports stakeholders through two complementary and integrated work streams—Green Growth Planning & Implementation and Investment & Policy Solutions—that deliver comprehensive products and services designed to assist in developing, financing and mainstreaming green growth in national economic development plans.

GGGI's interventions emphasize change in four priority areas considered to be essential to transforming countries' economies including energy, water, sustainable landscapes and green cities.

Headquartered in Seoul, Republic of Korea, GGGI also has representation in a number of partner countries.

2. The UAE's Green Growth Context

2.1 Economic Development

The economy of the UAE is the second largest in the Arab world after Saudi Arabia with a current gross domestic product (GDP) of AED 1.47 trillion (USD 402.2 billion) in 2014.² The UAE has the most diversified economy in the Arabian Gulf region, while hydrocarbons still contributing to approximately one third of the country's GDP. The country's shipments of oil and natural gas account for 40% of total exports.³

Economic growth across the UAE has led to significant increases in the demand for electricity. Electricity consumption in the UAE rose from 77.9 TWh in 2008 to 105.4 TWh in 2013.⁴ Growth in overall energy demand has been estimated at 9% annually.⁵

With knowledge of finite natural resources, and due to concerns over climate change, the UAE government launched various initiatives aimed at applying alternative means for producing the power needed to fuel its economy.

The country is investing heavily in renewable energy with an aim to source 44% of its electricity needs from renewables by 2050. By that year, it is also planned that nuclear energy will produce 6% of the nation's electricity needs.

2.2 Environmental Sustainability

The UAE is facing diverse environmental pressures. The country lies in a hyper-arid region with limited arable land and freshwater sources. Nevertheless, municipal water consumption per capita is high at 564.2 l/day in 2015. Waste has become an environmental issue, as high standards of living have resulted in high rates of food, construction and municipal waste. Air quality is already a concern which is exacerbated by dust and sand storms from neighboring countries.

The Arabian Gulf is home to a range of coastal and marine ecosystems such as coral reefs, mangroves, seagrass beds, and mud and sand flats. These ecosystems help maintain genetic and biological diversity and

2 UAE Ministry of Economy, UAE Annual Economic Report 2016 (2016).
3 UAE Ministry of Economy, UAE Imports and Exports Guide (2016), <http://www.economy.gov.ae/Publications/UAE%20Imports%20and%20Exports%20Guide.pdf>.
4 UAE Ministry of Energy, State of Energy Report 2016 (2016).
5 UAE Ministry of Energy, State of Energy Report 2015 (2015).

provide diverse ecosystem services. Rapid development in Arabian Gulf countries, however, has put these ecosystems under pressure.⁶

Climate-induced changes to sea-surface temperatures, ocean acidification and sea level rise are potential risks to marine ecosystems in the Arabian Gulf region.⁷ Higher temperatures and humidity are expected, as are more irregular and severe patterns of rainfall.

2.3 Poverty Reduction and Social Inclusion

The UAE's Human Development Index (HDI) score improved from 0.797 in 2000 to 0.840 in 2015, placing the UAE 42nd among 188 countries.⁸ Progress has been made on all three components of the HDI, including human health, education and gross national income.

Table 1. Country at a glance

Total area (km ²)	71,024
Total population (2016)	9,121,167
GDP (USD billion) (2014, current)	402.2
Human Development Index (HDI) (2016)	0.840
HDI rank (2016)	42
HDI Gender Development Index (2014)	0.954
Environmental Performance Index (2016)	72.91
Environmental Performance Index rank (2016)	25th of 178
ND-GAIN Index (2016)	59.1
ND-GAIN Index rank (2016)	34th of 181
Global Competitiveness Index rank (2017)	17th of 137

Sources: UAE Government; United Nations, 2015; United Nations Development Programme, 2014; United Nations Development Programme, "Human Development Index 2016," <http://hdr.undp.org/en/content/human-development-index-hdi>; University of Notre Dame, "Notre Dame Global Adaptation Initiative (ND-GAIN) Index: Scores for 2016," <https://gain.nd.edu/our-work/country-index/rankings/>; World Economic Forum, "Global Competitiveness Index 2017-2018," <https://widgets.weforum.org/global-competitiveness-report-2017/>; and Yale University, "Environmental Performance Index 2016," <http://epi.yale.edu>.

6 Humood A. Naser, "Marine Ecosystem Diversity in the Arabian Gulf: Threats and Conservation," in Biodiversity – The Dynamic Balance of the Planet, ed. Oscar Grillo (InTech, 2014), <http://www.intechopen.com/books/biodiversity-the-dynamic-balance-of-the-planet/marine-ecosystem-diversity-in-the-arabian-gulf-threats-and-conservation>.
7 Abu Dhabi Global Environmental Data Initiative, Regional Ocean Climate Modelling (2015).
8 United Nations Development Programme, Human Development Report 2016: Human Development for Everyone (New York, 2016), http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf.

3. National Priorities

3.1 Economic Diversification

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the UAE Green Growth Strategy under the slogan “Green Economy for Sustainable Development” in January 2012. Through this resolution the UAE stated its determination to enhance the competitiveness and sustainability of its economy and preserve its environment for future generations with the ambition to become a global hub and a successful model of sustainable development.

Under this initiative, six strategic directions were outlined as focus areas, namely: Green Energy, Green Investment, Green City, Climate Change, Green Life and Green Technologies. To strengthen the actions of these six focus areas and ensure mainstreaming of the Green Economy into the strategic plans of federal and local governments, as well as industry and civil society, a stakeholder engagement and consultation process that extended for over a year from January 2013 was undertaken. This process was jointly led by the then Ministry of Environment and Water (now known as the Ministry of Climate Change and Environment), the Prime Minister’s Office and the then Ministry of Foreign Affairs (now known as the Ministry of Foreign Affairs and International Cooperation), with support from GGGI. This process resulted in the approval of the *UAE Green Agenda 2030* in January 2015, as an overarching framework for implementing the UAE Green Growth Strategy.

In line with the *UAE Vision 2021* and each emirate’s long-term development plan, five strategic objectives were identified in the *UAE Green Agenda 2030*:

- Competitive Knowledge Economy;
- Social Development and Quality of Life;
- Sustainable Environment and Valued Natural Resources;
- Clean Energy and Climate Action;
- Green Life and Sustainable Use of Resources.

The five strategic objectives and twelve programs of the *UAE Green Agenda 2030* are designed to cover all key aspects required for the UAE to transition to a green economy—including technology, human capital, regulatory environment, green financing, international trade, intellectual property, consumer awareness, and integrated national planning and cooperation across the emirates.

3.2 Climate Resilience

Many sectors in the UAE are vulnerable to climate change, especially water, coastal and marine, dryland ecosystems, buildings and infrastructures, agriculture and food security, and public health. Projections using climate models suggest an increase in annual average temperature in the UAE of around 1°C by 2020 and between 1.5-2°C by 2040.⁹ Coastal zones are likely to be most severely affected, where marine habitats will suffer from rising water temperatures and salinity, while infrastructure will be tested by storm surges and sea level rise. Other risks include weakened food security and health concerns in extreme heat events.

Addressing climate change in a coordinated and comprehensive manner has become of paramount importance, to avoid the worst impacts and to stay on course for reaching economic and social development goals. The UAE’s Nationally Determined Contribution (NDC) submitted prior to the twenty-first session of the Conference of the Parties in Paris in 2015 places great emphasis on realizing not only the economic opportunities inherent in mitigation, but also the need for adaptation, transparent reporting and awareness.

3.3 Finance

The cost of adapting to climate change is estimated to be between USD 100 billion and USD 300 billion annually by 2050 in developing countries, according to estimates by the United Nations Framework Convention on Climate Change and the United Nations Environment Programme.¹⁰

Global climate finance¹¹ rose from USD 342 billion in 2013 to USD 392 billion in 2014, an 18% increase. Most of this amount was concentrated in China (30%), Europe (25%) and the Americas (11%). The private sector was the source of the majority of climate finance, spending USD 241 billion (61%) in 2014, compared with public spending of USD 151 billion (39%). The International Energy Agency estimates that in order to fulfill NDC pledges, cumulative investment in energy efficiency and renewable energy must reach USD 12.3 trillion by 2030, and to keep emissions at levels that limit temperature increases to 2°C, USD 16.8 trillion is required.¹²

9 Abu Dhabi Global Environmental Data Initiative, *Regional Atmospheric Modeling for the Arabian Gulf Region: Future Scenarios and Capacity Building – Final Report for AGEDI’s Local, National, and Regional Climate Change Programme* (2015)

10 Lisa Dougherty-Choux, “The Costs of Climate Adaptation, Explained in 4 Infographics,” World Resources Institute, April 23, 2015, <http://www.wri.org/blog/2015/04/costs-climate-adaptation-explained-4-infographics>.

11 Climate Finance Landscape, “Global climate finance increased by 18% in 2014,” Climate Policy Initiative, 2016, <http://www.climatefinancelandscape.org/>.

12 International Energy Agency, *Energy and Climate Change: World Energy Outlook Special Briefing for COP21* (Paris, 2015).

Government alone cannot continue to bear the load of major infrastructure investments, including those for energy supply and climate readiness. New and innovative ways of attracting investment from private sources will be required to realize the required scale of investments to diversify the economy and meet climate commitments in the long term.

In Dubai, the announcement in November 2015 of the Dubai Green Fund was the first major attempt to create a vehicle for financing clean energy projects and involving the private sector in climate and energy finance.

The practices of green finance are well under way in the UAE, especially in renewable energy, but private institutions surveyed face perceived barriers to integrating this concept into their regular operations. The most significant barriers include inadequate legislative support, high risk of green sectors, long payback periods and low profitability, lack of clarity on benefits of green investments, data availability and lack of standardized MRV processes.

4. GGGI's Engagement in the UAE

The UAE is one of the founding members of GGGI and is a member of GGGI's Council. GGGI has been working with the UAE government since 2011, supporting the development of the *UAE Green Agenda 2030* by providing extensive analytics, and jointly organizing and managing the stakeholder consultation process.

Following the Cabinet reshuffle in February 2016, MOCCA became GGGI's focal point.

Regionally, GGGI's UAE office actively participates in green growth knowledge sharing activities. The UAE government funds capacity building and South-South cooperation programs for Middle East and North Africa (MENA) countries and a specific green growth program in Morocco aimed at strengthening capacity to develop national green growth strategies and implementation plans. Disseminating the latest experience and best practice across thematic areas is a significant component of these activities. Institutional capacity and expertise are key components to achieve policy goals.

GGGI's distinctive role or "niche" is based to a large extent on two elements. First, the green growth value chain, which sets out a green growth planning and implementation approach that proceeds from initial diagnosis and green

impact assessment, through sector and sub-sector strategy development and planning, to project design and financing. Second, with its extensive range of stakeholder relationships within the UAE and in the region, GGGI is uniquely placed to act as facilitator of turning concepts into practice regionally through facilitation and collaboration.

The strategic outcomes of the current CPF are built directly on GGGI's results, relationships and experiences throughout the last several years of engagement in the UAE. GGGI's success to date illustrates that the organization has established itself as a trusted advisor to the government on green growth planning, tools and investment. GGGI's achievements thus far include the following:

- GGGI played a critical role in the development and adoption of the *UAE Green Agenda 2030*. In partnership with the UAE Ministry of Foreign Affairs' Department for Energy and Climate Change since 2011, GGGI has worked systematically with stakeholders across economic sectors to assess the country's green growth needs and potential, identify knowledge gaps and capacity development solutions, and provide expert advisory services to guide the strategic formulation of the Agenda.
- GGGI remains an active partner in the implementation of the Agenda. MOCCA identified a number of projects for implementation in 2017-2018, including air quality management, eco-tourism, green jobs, sustainable public procurement and youth programs, which fall under the framework of the Agenda.
- In October 2015, GGGI and the UAE government convened a knowledge sharing program for government officials and development stakeholders from five countries in the MENA region to discuss shared sustainability challenges and exchange experience and best practices.
- In April 2016, MOCCA began developing the *National Climate Change Plan* with GGGI's assistance. This plan expands upon existing climate elements in the *UAE Green Agenda 2030* and allows the government to harmonize ongoing efforts across local and federal entities through the establishment of a common policy framework. The Plan was approved by the UAE Cabinet in June 2017.
- In October 2016, GGGI organized a regional policy dialogue for Middle East and African government delegates from twelve countries to discuss the latest trends and opportunities in green finance. This meeting provided delegates with pathways for strengthening investment climates and raising the share of clean energy in their respective countries.

5. Theory of Change

This chapter identifies key, medium-term, strategic green growth outcomes in which GGGI has a strong comparative advantage to make impactful and transformative changes. There are four key areas in which GGGI can be instrumental in supporting the UAE to achieve its green growth objectives.

5.1 Strategic Outcome 1: Improved implementation of the UAE Green Agenda 2030 results in the achievement of national green growth objectives

GGGI's interventions aim to support the government's targets of:

- 75% municipal waste recovery by 2021;
- Improving air quality to achieve 90% of green days by 2021.

Green growth has been identified by the UAE government as the means by which environmental challenges will be addressed, while simultaneously maintaining strong and diversified economic growth, and providing a growing population with sustainable jobs in the future.

Mainstreaming green growth in the UAE will be achieved through the *UAE Green Agenda 2030*. The Agenda addresses all major sectors such as energy, industry, waste, water and transport, and outlines the programs required to achieve the national targets set under the *UAE Vision 2021* (see Table 2).

Table 2. Key national targets and performance indicators				
Indicator	Source	2016 Result	2021 Target	Key Sponsor
Waste Recovery	MOCCAЕ	22.6%	75%	MOCCAЕ
Share of Clean Energy ¹⁵	Ministry of Energy	0.36% Electricity	27%	Ministry of Energy
Air Quality Level ¹⁶	MOCCAЕ	76.0%	90%	MOCCAЕ
Water Scarcity Index ¹⁶	Ministry of Energy	Ratio of 6.3	Ratio of 4.0	Ministry of Energy

13 Percentage of World Health Organization guidelines.

14 Water overuse, monitoring fresh water usage (including surface water, renewable water and fossil water) as a percentage of overall renewable water in the UAE. The result is weighted to take into account desalination and wastewater treatment.

The *UAE Green Agenda 2030* also monitors national performance through 41 UAE Green Key Performance Indicators including:

- Ecological footprint;
- Carbon intensity of electricity production;
- Greenhouse gas (GHG) emissions per GDP;
- Water consumption per GDP;
- Electricity consumption per GDP.

MOCCAЕ is responsible for monitoring the progress of the *UAE Green Agenda 2030* and coordinating the planning and implementation of Agenda projects, overseen by the UAE Council on Climate Change and Environment.

GGGI will support the implementation of the Agenda by providing technical assistance for the implementation of specific projects and building capacity along GGGI's thematic areas.

In the short term, this support measure will lead to the adoption of green growth projects in various sectors and provide a mechanism for continuous assessment and improvement.

The results of these projects will contribute to achieving national and local sector-specific objectives contained in the Agenda.

These activities will also help meet several SDG targets, including decoupling economic growth from environmental degradation (SDG 8), and the sustainable management and efficient use of natural resources (SDG 12).

5.2 Strategic Outcome 2: Enhanced institutional capacity to address climate change, enabling emissions reductions and adaptation

GGGI's interventions aim to support the government in achieving its climate-related objectives as set out in the *National Climate Change Plan*.

On October 22, 2015, the government submitted the UAE's NDC with the aim of diversifying its economy through plans and actions that will yield co-benefits in mitigation and adaptation to climate change. The NDC includes a target of increasing clean energy from 0.2% in 2014 to 24% of the total energy mix by 2021. Besides the clean energy target, measures targeting the energy, building and transport sectors are also listed in the NDC, as is the important adaptation measure of expanding the Blue Carbon Project for the protection of coastal marine ecosystems.

Adaptation and food security are also priorities for the UAE, as climate change threatens to affect the nation's

infrastructure, natural ecosystems and public health,¹⁵ and poses risks to food producing countries around the world from which the UAE imports around 90% of its food.

The formation of MOCCA in 2016 and the approval of the *National Climate Change Plan* in June 2017 signaled the intention to address climate change as a national priority.

The country's total GHG emissions were estimated at 74.4 MtCO₂e in 1994 and 201.6 MtCO₂e in 2015. While the Ministry of Energy has managed the national GHG inventory and compiled data annually since 2013, a national measurement, reporting and verification (MRV) system has not yet been established. This system is required if the UAE is to strengthen the accuracy, robustness and utility of the inventory and climate information system.

GGGI has been working with MOCCA to prioritize actions to address the gaps in national GHG accounting and will facilitate the following:

Establishing a national GHG MRV system, including –

- Setting the baseline;
- Establishing the inventory team;
- Supporting system development and a procedure for data collection;
- Designing inventory guidelines.

Coordinating a climate risk and vulnerability assessment and adaptation programming, including –

- Facilitating a national climate change risk and vulnerability assessment;
- Identifying and supporting the implementation of priority adaptation actions.

The immediate outcome of this support will be the harmonization of climate response across federal and local entities.

Over the coming four to five years, the government will provide stakeholders with a unified methodology for reporting, which will create strong national accountability for the commitments stated in its NDC. In addition, options for adaptation solutions will be better understood and implemented.

Once this harmonized system is in place, GHG emissions will be better monitored and the UAE's adaptability to climate change will be strengthened (SDG 13). Ultimately, emissions will decrease as low-carbon options find more fertile policy grounds and clean energy shares increase (SDG 7). The economy will thus develop resilience to climate change while reducing its dependence on fossil fuels.

15 UAE Government, Intended Nationally Determined Contribution of the United Arab Emirates (2015), <http://www4.unfccc.int/ndcregistry/PublishedDocuments/United%20Arab%20Emirates%20First/UAE%20INDC%20-%202022%20October.pdf>.

5.3 Strategic Outcome 3: Strengthened public-private partnerships, leverage the private sector's contribution to a viable green industry sector and green jobs

GGGI's support aims to help the government in generating an estimated 160,000 new jobs from greening the economy by 2030.

The UAE government has set itself on an economic diversification course that will increase the share of non-oil GDP in the coming decades. To achieve this, the government aims to engage the private sector as a driving force in the national economy.

Investment in clean energy, climate mitigation and air quality improvement measures are especially significant aspects of this drive. Achieving national and emirate-level clean energy goals will require an expansion of partnerships and maintenance of a stable investment climate. Already, public-private partnerships have been established for solar power deployments that have set world records in lowest price per unit of electricity. The Green Finance and Investment Support Scheme of the *UAE Green Agenda 2030* aims to further stimulate the country's financial sector toward investment in green projects and entrepreneurs by innovating green finance products and services.

Consultations with the private sector revealed that while companies recognize the benefits of investing in green products and services, and that these benefits are not solely economic but are reputational as well, there remain a number of perceived barriers to fully realize this potential that center on legislative support, investment risk, and knowledge and awareness of green finance and technologies.

GGGI, through its Green Investment Services and expertise in bankable projects, will work on improving project bankability, improve incentive mechanisms for private investment, and design innovative financing mechanisms that are suited to the local context and mitigate investment risks.

Over the next five years, the UAE is expected to see an increase in private-sector investment flows, especially in energy, transport, food and waste, and the environment (SDG 9) as risks will be better understood and minimized. As investment increases and the private sector's contributions expand, so too will job creation and the incentive to innovate.

In the long term, the unlocked potential for finance and innovation in the private sector will strengthen the transformation toward a green economy.

5.4 Strategic Outcome 4: Enhanced leadership role for the UAE in disseminating the green growth model in the MENA region

MENA countries face multiple development challenges. Common to them are securing energy and water resources, sustaining economic growth, and creating jobs for a growing population. The UAE's experience can act as a catalyst for developing similar strategies and actions in the region, and sharing knowledge from ongoing initiatives.

The region's human capacity and expertise remain a challenge. Green growth is still a relatively new concept and governments are either skeptical or limited in their understanding. Introducing and consolidating green growth concepts and methodologies must be seen as long-term processes that require constant support.

The UAE is already playing the role of a regional green growth hub through investment in renewable energy projects.¹⁶ Acting as a knowledge broker is a natural extension to this approach. With the support of GGGI, the UAE has organized multiple knowledge sharing and capacity building programs for MENA country officials and aims to facilitate more in the future.

GGGI will support the UAE in its regional role by:

- Nurturing knowledge sharing activities and South-South cooperation targeting twelve countries, through GGGI's Investment and Policy Solutions Division, including –
 - Policy dialogues;
 - Thematic workshops.
- Supporting bilateral cooperation for initiatives in capacity building and knowledge sharing (e.g., UAE-Jordan partnership) and green growth strategy development (e.g., the UAE's support to Morocco).
- Setting up the Green Growth MENA Network that includes an online platform for –
 - Communities of practitioners from government, academia and the private sector;
 - Webinars;
 - Formal and informal meetings;
 - Resource sharing.

The UAE's leadership role can benefit from multi-stakeholder collaboration. GGGI will continue working with relevant local, national and multilateral entities in pursuit of green growth opportunities that highlight the UAE's efforts and achievements.

Going forward, GGGI will focus its offerings and leverage its strength in its thematic areas, applying its expertise locally and regionally, and in partnership with other international organizations.

The UAE and its partner countries in the region can benefit immediately by deepening relationships with one another, and by exposure to the latest green growth theories and practices. Over time, capacity needs will be addressed so that partner countries can apply knowledge directly to their own work (SDG 17), and jointly implement projects. This will spread the UAE's national green growth efforts and transformative change in partner countries as more green growth policies are adopted and implemented.

16 Masdar, the Abu Dhabi government's clean energy investment vehicle, has invested in renewable energy projects in Jordan, Oman, Mauritania, Egypt and Afghanistan, and has over 1.5 gigawatt of renewable energy around the world in operation or under development.





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Green Growth
Institute

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The Global Green Growth Institute
19F Jeongdong Building, 21-15,
Jeongdong-gil, Jung-gu,
Seoul, Korea 100-784

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