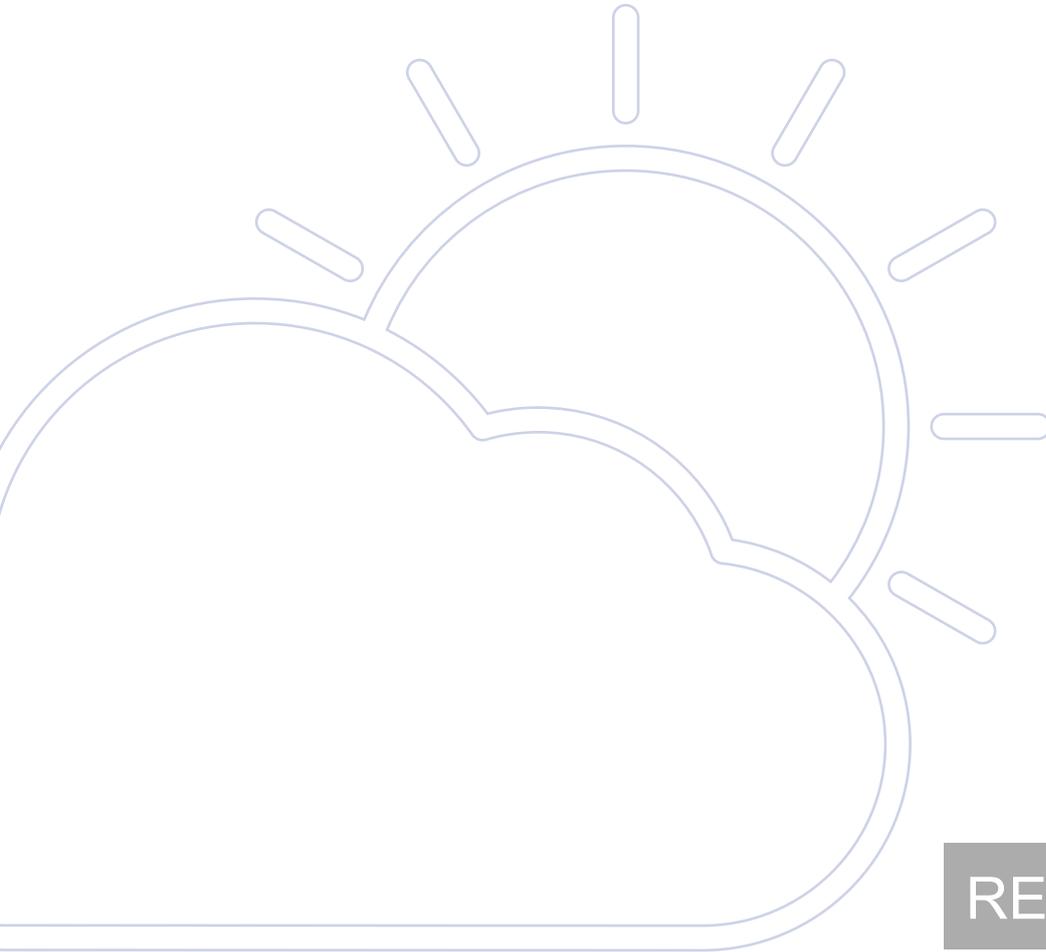


Take urgent action to combat climate change and its impacts.



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## Context and Background

Climate change is considered as one of the greatest global threats; it has affected the national economies, peoples' lives, and various communities. It has led to major such as rising sea levels, extreme weather, and increasing greenhouse gas (GHG) emissions.

In the UAE, climate change is expected to result in warmer weather, less precipitation, droughts, higher sea levels, and more storms. The UAE has engaged in the fight against climate change and listed this issue amongst its priority targets to maintain the country's sustainability and growth. The UAE has developed many strategies and initiatives, including the Abu Dhabi Global Environmental Data Initiative, and several governmental organizations headed by the Ministry of Climate Change and Environment.

To highlight this importance, the UAE renamed Ministry of Environment and Water to Ministry of Climate Change and Environment, bringing the management of climate change within the scope of one ministry. In December 2015, at the COP21 United Nations Climate Change Conference, the UAE re-affirmed that by 2021, it will have 24 percent of its electricity generated from clean energy sources.

The UAE Government formed the UAE Council for Climate Change and Environment; the council will create partnerships with the private sector, conduct studies, and lead scientific research in fields related to the ministry's work. In 2014, the UAE and the USA launched the first annual bilateral energy dialogue to facilitate new and ongoing initiatives to secure the global energy market.

In September 2016, the commitment to climate change was demonstrated by the UAE is one of the first to ratify the Paris Agreement. This was backed by an ambitious 'Nationally Determined Contribution' to generate an increase of 24 percent of national clean energy by 2021; ahead of the COP 21 (October 2015) this was increased to 27 and will do through large-scale nuclear and renewable energy projects.

## Need

The UAE is seeking to manage Green House Gas emissions from major sectors inclusive of heavy industries, oil, and gas, building and transportation sectors. In 2016, the UAEs National Climate Change Plan aimed to foster and facilitate engagement of the private sector and others in climate change.

Several studies have been undertaken to increase scientific understanding of the impact of climate change in the UAE and the region. Abu Dhabi Global Environmental Data Initiative (AGEDI) conducted several studies, which looked at the impact of climate change at the local, national and regional levels, inclusive of terrestrial and marine ecosystems, coastal zones, food security, and water resources. AGEDI's coastal vulnerability assessment project resulted in a quantitative assessment of near-term (10-15 years) coastal zone vulnerability associated with climate change and the development of a 'Coastal Vulnerability Index' (CVI) to highlights the need for sustainable management of coastal zones, a priority for the UAE given its extensive coastline.

## Idea

The UAE government decided to adopt several environmental initiatives and projects that improved the quality of the environment, reduce greenhouse gas emissions and protect the potentially vulnerable coastline.

## Projects

### **Zayed International Foundation for the Environment**

Zayed International Foundation for the Environment promotes sustainable development through environmental initiatives by raising public awareness, addressing sustainability issues, conducting international and regional conferences, workshops, seminars, and community activities. The foundation also awards the Zayed International Prize for the Environment that recognizes and encourages environmental achievements in line with the vision and philosophy of H. H. the late Sheikh Zayed bin Sultan Al Nahyan, the Founding President of the UAE.

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### **The UAE Ecological Footprint Initiative 2006**

The initiative aims to highlight the ecological footprint of the UAE to reduce it through the promotion of cooperation between government and private entities.

### **Mohamed bin Zayed Species Conservation Fund**

Mohamed bin Zayed Species Conservation Fund was established in October 2008 as a charity working on giving grants and identifying individual initiatives to conserve species.

### **Environmental Performance Card**

The goal of this initiative is to encourage industrial establishments to comply with environmental standards and reduce the negative impacts on the environment.

### **UAE Strategy for Green Development**

In 2012, the UAE launched Green Economy Initiative under the slogan 'A green economy for sustainable development,' it aims to make the UAE one of the global pioneers in the green economy, products, and technologies and to achieve its Vision 2021.

### **My City, My Environment program**

The My City, My Environment program in Dubai plans door-to-door awareness programmes for families covering 22 neighborhoods and 26,000 houses.

The UAE Government organizes awareness campaigns to promote and enhance the environmental behavior of its citizens and conserve the country's natural resources. In May 2014, the UAE hosted 'Abu Dhabi Ascent' to bring together individuals from the government, private sector, and society to create momentum for serious discussion and action on climate change.

In recent years, environmental education has become one of the prominent elements in the UAE's educational system, with efforts to include environmental content in school curricula and textbooks.

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In November 2016, Ministry of Climate Change and Environment and Ministry of Education jointly launched the 'Our Generation' initiative. It involves developing a school curriculum that raises awareness of students and encourages them to take measures to reduce their carbon footprint. The curriculum is built on the successful modules of 'Sustainable School Initiative' and 'Sustainable Campus Initiative' initiated by Environment Agency, Abu Dhabi.

In 2016, the Ministry of Climate Change and Environment in partnership with Her Excellency Shamma Bint Suhail Al Mazrui, Minister of Youth in cooperation with Emirates Youth Council hosted a number of 'Youth Circles' to raise awareness on climate change and environmental sustainability. These include a session at the Conference of the Parties (COP 22) Marrakech Climate Change Conference (November 2016), where 30 youth joined over 200 UAE delegates experienced first-hand international climate change negotiations first-hand.

The Ministry of Climate Change and Environment, in coordination with the Ministry of Education and Environment Agency-Abu Dhabi, agreed to introduce sustainability programs and green curriculum in every school. The sustainable curriculum will be applied across several subjects, such as economics and science. In 2018, a group of government and private schools across the country will be part of a pilot scheme that will start.

The Eco-Schools Initiative was launched as a global initiative led by the Emirates Wildlife Society, in collaboration with the World-Wide Fund for Nature (WWF), aiming to encourage environmental action in schools.

## Story

### Climate Change and the UAE

In 1990, the UAE emitted 32.6 tons of CO<sub>2</sub> per person per year; in 2010, the figure dropped to 21.9 tons per person per year. The UAE is engaged in the implementation of 14 projects aimed at reducing the emissions of GHGs. The expected total annual reduction of these projects is estimated to be about one million tons of carbon dioxide equivalent (CO<sub>2</sub>Eq). The UAE is committed to expanding the role of low-carbon technologies in the economy and investing in renewable energy and nuclear power.

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The Ministry of Climate Change and Environment has undertaken a technology of cultivation without soil in several agricultural projects. This technology helps to control the internal domestic climate (temperature, humidity, and ventilation), roots environment (select of the adequate media and provide it with feeders). This has led to a more organic number of fruits and vegetables.

The UAE is committed to reducing emissions from flaring, which involves burning off waste gas or oil during petroleum testing or production. Abu Dhabi National Oil Company (ADNOC) has zero-flaring as a strategic objective. From 1995 to 2010, ADNOC reduced gas flaring by up to 78 percent.

The UAE has launched several innovative programs to increase energy efficiency that such as:

- The UAE Green Building and Sustainable Building standards (2010): Ministry of Infrastructure Development applies these standards, which expected to save AED 10 billion by 2030 and reduce around 30 percent of carbon emissions
- The 'Green Building Regulations and specification' in Dubai (2011): The code aims to reduce energy and resource consumption as well as improve public health and general welfare
- Dubai's Smart City strategy (2014): The strategy lays out steps toward optimizing energy, smarter transport, and recreational areas.

### The Masdar initiative

The UAE's largest emirate, Abu Dhabi, has committed more than USD\$ 15 billion to renewable energy programs through the Masdar initiative. Masdar underscores twin commitments to the global environment and diversification of the UAE's economy. Masdar focuses on the development and commercialization of technologies in renewable energy, energy efficiency, carbon management and monetization, water usage, and desalination.

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### Renewable energy

The UAE is the first Gulf country to start on the new energy strategy, which involves nuclear power and solar energy in addition to natural gas, which covers most of the UAE's needs. The country is looking to increase its target for power generation from clean energy to 30 percent by 2030; including both nuclear and solar energy. The government has committed itself to produce at least 7 percent of total power generation from renewable sources by 2020.

### Transportation

Transportation is one of the fastest-growing sources of emissions worldwide. The UAE is investing in new mass transit systems such as the light rail, metro, and tram system. This will alleviate congested highways and roads within the country and reduce emissions within the country.

### Carbon capture and storage (clean fossil fuels)

Carbon capture and storage (CCS) is a technique to mitigate climate change by capturing carbon dioxide (CO<sub>2</sub>) from large point sources and storing it safely underground, instead of releasing it into the atmosphere. The UAE is developing a major CCS project in Abu Dhabi, which is managed by Al Reyadah Abu Dhabi Carbon Capture Company. It is the first in a planned series of CCUS projects in the emirate. The source of CO<sub>2</sub> for this Project is an off-stream from Emirates Steel Industries (ESI) factory in Mussafah, UAE.

The country is developing a scientific, robust, and credible national GHG emissions management system. A substantial number of initiatives broadly contributing to climate change mitigation are underway, focused on clean energy and efficiency measures. The management system is expected to:

- Enhance coherence across planning and coordination of relevant strategies, plans, and policies;
- Inform and support climate and green growth programs;
- Enhance monitoring and reporting on progress; and

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- Reinforce the nation's international reputation as a leader in climate action.
- Increase climate resilience by minimizing risks and improving adaptive capacity.

Promoting a climate-resilient economy is a prerequisite for the UAE to realize the transformative change outlined in the UAE Vision 2021. A systematic and scientific assessment of climate risks and vulnerabilities is at the heart of the Climate Plan. It emphasizes the need to make the nation's economy and infrastructure "climate-proof," protecting its people and ecosystems against climate-related impacts.

As the UAE continues to invest in non-oil sectors with high growth potential, the Climate Plan will facilitate a stronger growth momentum in key emerging sectors. This will be achieved by deploying resource-efficient, innovative measures to generate high added value from the emerging industries, encouraging job creations in green businesses, and leveraging the mutually reinforcing relationship between climate action and economic diversification.

## Impact

Climate change affects all economic sectors and all segments of society. The growing scientific evidence on climate change affirms the urgent need for ramping up climate action. The UAE is located in a water-scarce hyper-arid environment; therefore, climate adaptation is also of particular importance, and our actions are being scaled up. As a result, water conservation is increasing in all seven emirates.

Although climate change is a threat to the UAE; however, it is also an opportunity for diversifying the economy and tapping into new growth engines in the form of innovative green products and services. The UAE has deployed large-scale solar energy projects, exemplifying UAE's leadership in climate action and addressing the global sustainable development agenda.

Through this Climate Plan, the UAE is on the frontline of global efforts to prove that climate action can go hand in hand with continuous economic development. More jobs are being created to combat climate change and more investments are being allocated to ensure that the people of the UAE continue to enjoy a high quality of life.

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The UAE Green Agenda 2015-2030 builds on the national policies relevant to green growth and sustainable development and reflects the various stakeholder inputs from the public, private, and non-governmental sectors. The Climate Plan is envisaged to strengthen the momentum as it is not a stand-alone policy; in fact, it serves as a complementary plan of action that specifically addresses climate change.

The UAE Climate Plan has addressed some of the following issues and will continue to address them in the future further:

- Manage GHG emissions while sustaining economic growth.
- Build climate resilience by minimizing risks and increasing capacity for climate adaptation.
- Advance the UAE's economic diversification agenda through innovative solutions

The UAE's total GHG emissions are expected to continue rising in line with projected economic and population growth. However, the Climate Plan aims to manage these emissions to reduce emissions and facilitate the achievement of economic goals and growth.

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