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# Society & Environment

creating green communities for a better tomorrow

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06

## HH Sheikh Mohammed bin Rashid launches Dubai 2040 Urban Master Plan

Drive to the future with Renault ZOE, an  
icon for electromobility



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tabreed

رمضان كريم

تتقدم شركة تبريد  
بأسمى آيات التهنية  
والتبريكات بمناسبة  
حلول شهر رمضان

## Chairman's Message

Guided by the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, the emirate of Dubai has unveiled an ambitious vision for development which strikes a balance between growth and sustainability, as it takes the leap forward in creating an integrated smart city adapted to the emirate's unique requirements and characteristics.

The "2040 Urban Master Plan" focuses on the individual and on making the city increasingly easy to live in. One of the cornerstones of Dubai's plan is to enhance the happiness of its people and boost social, environmental, and economic wellbeing.

Accordingly, the plan sets out to improve the quality of life, with the doubling of green and leisure areas, and presents promising opportunities for a green future across all sectors. The Plan aims to protect Dubai's environmental and cultural assets, enhance the efficiency and sustainability of its resources, and raise the quality of its infrastructure.

Dubai already scores highly on indices of international cities by liveability, and the "people-



**Prof. Mohammed  
bin Fahad**  
Executive Editor

led" plan is centred on green mobility with aims to encourage mass transit use, walking, cycling and the use of flexible means of transportation.

By creating a new model for city planning and sustainable urban development, the new master Plan will boost Dubai's status as a regional and international hub for business, tourism, and investments. It will stimulate greater economic growth, raise its competitiveness, and strengthen the foundations of sustainable development.

With a vision to develop more comprehensive facilities, green spaces, and fully fledged communities, the Master Plan will usher in a new era for investments in the city and pave the way for more economic development to greatly enhance the lives of its residents. Integrating world-leading smart urban planning standards and design principles, the "2040 Urban Master Plan" is a vital strategic development roadmap that will support His Highness's vision of making Dubai a global leader across sectors.



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**REPORT:** Only %18.0 of announced COVID19- recovery spending can be considered 'green'



## Upcoming events

### Lessons Learned and Best Practice from Pledge to Net Zero Participants

**Date:** April 15, 5pm – 6pm

#### Virtual Event

This webinar will present practical climate actions from year 1 of Pledge to Net Zero. Join to gain insight from WSP, IEMA and others, sharing their most impactful actions to cut carbon, plus an update on the Race to Zero.

### The Festival of Circular Economy

**Date:** April 20 - 21

#### Virtual event

This two-day event provides a forum for all actors – from start-ups to multinationals, from research projects to governments – to generate the ideas and connections which will accelerate our progress to a world without waste. You will hear from thought-leaders in circular economy in the conference programme and meet with service providers and innovators on the virtual Festival Exhibition.

### Earth Day

**Date:** April 20 - 22

#### Virtual event

On April 20, a global youth climate summit consisting of panels, speeches, discussions, will be held with special messages from today's youth climate activists.

On April 21, the multilingual virtual "Teach for the Planet: Global Education Summit" will focus on why we need transformative climate education now.

Workshops, panel discussions, and special performances on April 22 will focus on the 2021 theme, Restore Our Earth™.

## Ruler of Dubai launches Dubai 2040 Urban Master Plan

**H**is Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai, has launched the Dubai 2040 Urban Master Plan that maps out a comprehensive future map for sustainable urban development in the city.

Aligned with the UAE's vision for the next 50 years, the Plan is focused on enhancing people's



Aligned with the UAE's vision for the next 50 years, the Plan is focused on enhancing people's happiness and quality of life

happiness and quality of life.

The people-centric Plan focuses on reinforcing Dubai's competitiveness as a global destination by providing a wide diversity of lifestyle and investment opportunities for citizens, residents and visitors over the next 20 years. Designed to realise His Highness's vision to make Dubai the city with the world's best quality of life, the plan aims to provide the highest standards of urban infrastructure and facilities.

His Highness Sheikh Mohammed bin Rashid Al Maktoum said the visionary development journey started by the late Sheikh Rashid bin Saeed Al Maktoum in the 1960's continues to guide Dubai's evolution into a city that promotes the greatest human values and possibilities and an environment where people from around the world can thrive.



*The Urban Master Plan has designed a strategic structural layout for Dubai over the next 20 years, integrating all urban development master plans in the emirate*



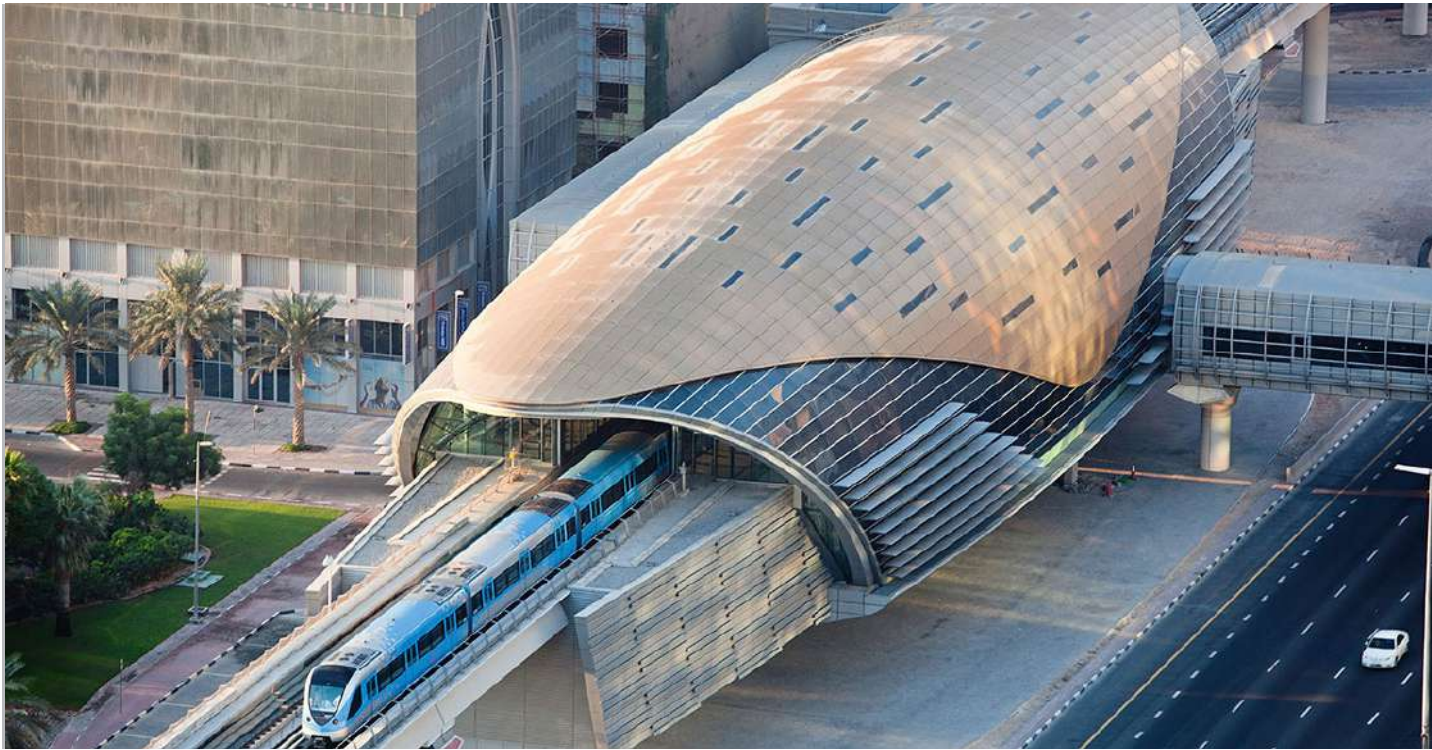
"Our strategic development plans are focused on creating the best possible environment and infrastructure to enhance the community's happiness and wellbeing and support the fulfilment of the greatest human aspirations for both our citizens and people from around the world. Drawing inspiration from global best practices and adapting them to local needs and requirements, we have created a development model that offers the best possible quality of life and creates the conditions for sustainable prosperity. Our goal is to create a truly inclusive environment that not only meets the needs of Dubai's diverse population, but also inspires them to tap into their creative and innovative capacities and realise their true potential," His Highness said.

"By constantly striving to raise benchmarks and implementing diligent strategic planning, we have

joined the ranks of the world's leaders in various spheres and sectors. With a clear vision and a deep understanding of what it takes to succeed in an evolving global environment, we continue to work to shape an even greater future rich with opportunities," Sheikh Mohammed added.

The launch of the Plan was attended by H.H. Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum, Deputy Ruler of Dubai; H.H. Sheikh Ahmed bin Saeed Al Maktoum, President of the Dubai Civil Aviation Authority, Chairman of Dubai Airports and Chairman and Chief Executive of Emirates Airline and Group; H.H. Sheikh Ahmed bin Mohammed bin Rashid Al Maktoum, Chairman of Dubai Media Council; members of the Dubai 2040 Urban Master Plan Higher Committee, and leaders from the Dubai government.

The new Master Plan is the seventh such plan



developed for the emirate since 1960. Between 1960 and 2020, the population of Dubai has multiplied 80 times from 40,000 in 1960 to 3.3 million by the end of 2020 and increased in cultural diversity to include people from over 200 nationalities. The urban and built area of the emirate increased 170-fold from 3.2 square km in the same period.

### Enhanced quality of life

The Plan envisages upgrading Dubai's urban areas, with development mainly focused on five key centres. Some of the key priorities include improving the efficiency of resource utilisation, developing vibrant, healthy and inclusive communities, and doubling green and leisure areas as well as public parks to provide a healthy environment for residents and visitors.

The new Master Plan also seeks to provide

sustainable and flexible means of mobility as well as foster greater economic activity and attract foreign investments to new sectors. Other objectives include enhancing environmental sustainability, safeguarding the emirate's cultural and urban heritage and developing a comprehensive legislation and planning governance model.

### Five urban centres

The Dubai Urban Master Plan is focused on development and investment in five main urban centres (three existing and two new centres) that support growth of economic sectors and increased job opportunities for its diverse population, in addition to providing a wide range of lifestyle facilities that cater to the needs of all sections of the population.

The existing urban centres include Deira and Bur



*To reinforce Dubai's competitiveness, the Plan will provide a wide diversity of lifestyle and investment opportunities for citizens, residents and visitors*



Dubai, historic areas that highlight the emirate's tradition and heritage; the business and financial heart of the city encompassing Downtown and Business Bay; the hospitality and leisure centre encompassing the Dubai Marina and Jumeirah Beach Residence that serves as an international tourism and leisure hub.

The two new centres include Expo 2020 Centre, an economic and growth hotspot featuring affordable housing and a focal point for the exhibitions, tourism and logistics sectors; and Dubai Silicon Oasis Centre, a science and technology and knowledge hub that drives innovation, digital economy development and talent generation.

### **Equitable access to facilities**

The new Master Plan has defined an integrated approach to the development of the urban

centres by providing equitable access to facilities, services and opportunities across the city for all residents.

Depending on urbanisation levels, the Master Plan defines a hierarchy of communities in the city. The largest of them, the emirate, includes the five main 'towns' built around each of the five main urban centres segmented by the strength of population in these areas. Based on these levels, infrastructure and transit systems, energy and government services, and facilities such as hospitals, schools, service centres, and leisure centres will be provided across of Dubai.

### **Population**

According to recent studies, the number of Dubai residents is expected to increase from 3.3 million in 2020 to 5.8 million by 2040, while the day-time population is set to increase from 4.5 million in



2020 to 7.8 million in 2040. The Master Plan focuses on utilising available spaces within the limits of the current city and concentrating development in existing urban areas. Easily accessible integrated service centres will be established across Dubai to ensure that the needs of all sections of the population are catered to. The plan seeks to raise the quality of life of the city while increasing population densities around key mass transit stations.

### **Growth rooted in sustainability**

Under the Plan, green and recreational spaces and areas dedicated to public parks will double in size to serve the growing number of residents and visitors. Nature reserves and rural natural areas will constitute 60 percent of the emirate's total area.

Several green corridors will be established to link

the service areas, residential areas and workplaces, facilitate the movement of pedestrians, bicycles, and sustainable mobility means across the city, in coordination with developers and government departments.

The land area used for hotels and tourist activities will increase by 134 percent, while that used for commercial activities will increase to 168 sq kms.

Dubai will continue to be a global hub for innovative start-ups, international corporations, and strategic investments. The Master Plan will also increase the land area allocated to education and health facilities by 25 percent, while the length of public beaches will increase by as much as 400 percent in 2040 to increase the quality of life for residents and visitors.

Along with its Urban Master Plan 2040, Dubai will



*Dubai will continue to be a global hub for innovative start-ups, international corporations, and strategic investments*



issue an integrated and flexible urban planning law that supports sustainable development and growth, taking into consideration the future aspirations of the emirate's diverse population.

The Master Plan features a model for integrated governance of the urban planning system that streamlines the mutual relationships and responsibilities of all stakeholders.

The new Plan will raise the efficiency of development and promote the optimal utilisation of the infrastructure by developing vacant urban spaces. The Master Plan aims to encourage mass transit use, walking, cycling and the use of flexible means of transportation, besides developing a comprehensive planning database to support decision-making and enhance transparency.

The Dubai Urban Master Plan 2040 integrates

the Hatta Development Plan, which has created a framework for the comprehensive development of the area. The Plan seeks to both develop and raise the profile of Hatta's natural and tourism attractions, as well as protect its environment in partnership with the private sector.

The Hatta Development Plan will offer people in the locality the opportunity to participate in efforts to promote tourism and preserve the natural beauty and identity of the area.

The Plan also seeks to develop integrated sustainable housing complexes to meet the needs of citizens. The 2040 Urban Master Plan will develop integrated communities according to the highest planning standards, with green spaces, commercial centres and recreational facilities aimed at enhancing human well-being.



## Dubai successfully launches its first environmental satellite

**D**MSat-1, the United Arab Emirate's first nanometric environmental satellite, developed by Dubai Municipality in collaboration with the Mohammed Bin Rashid Space Centre (MBRSC), reached its orbit 550 km above Earth on March 22, following its successful launch from the Baikonur Cosmodrome in Kazakhstan aboard the Soyuz 2.1a space rocket.



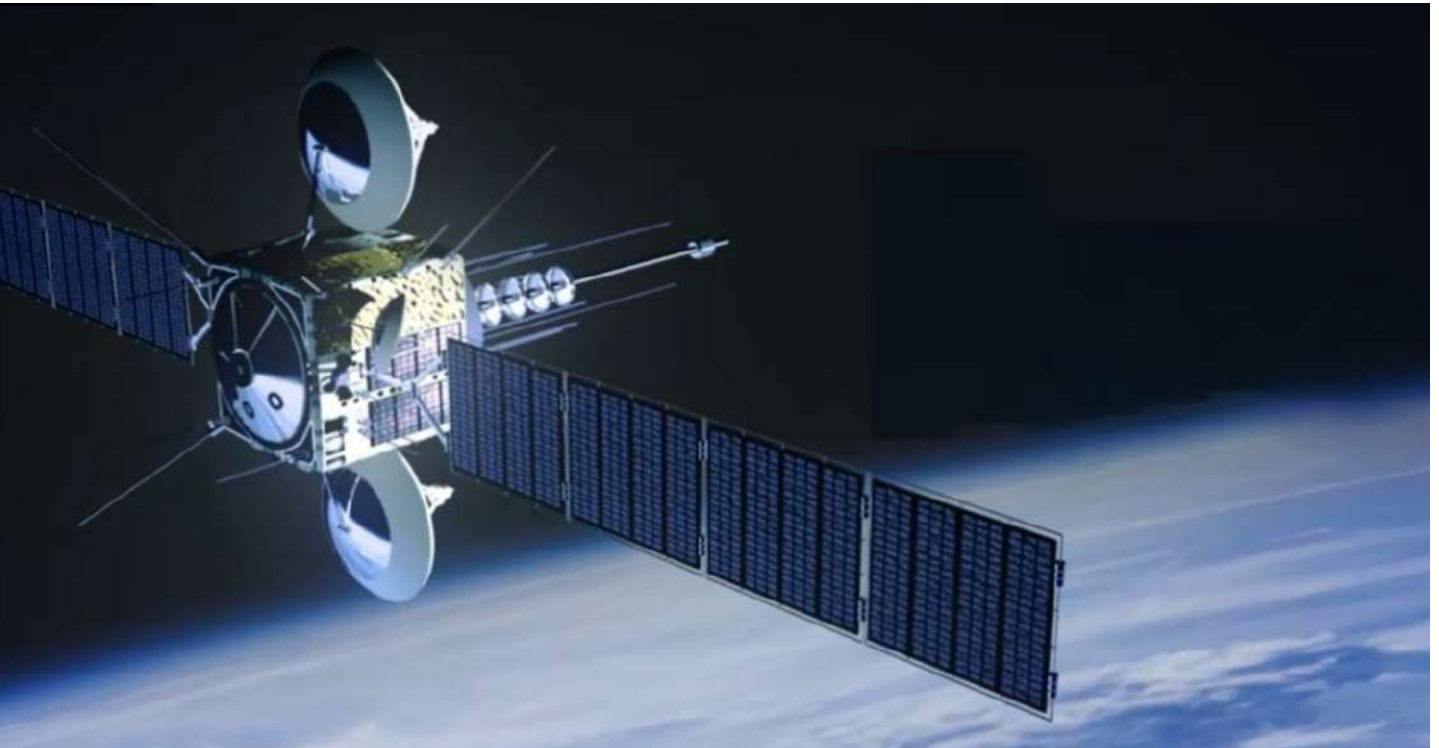
DMSat-1, the UAE's first environmental satellite reached its orbit 550 km above Earth

The launch was supervised by a team of officials and engineers from MBRSC and Dubai Municipality.

The first signal from DMSat-1 was received at MBRSC's mission control centre at 4:42 PM on the 22nd, signalling that the satellite had reached its orbit and begun its scientific mission. Under the supervision of MBRSC, once the testing of onboard subsystems and instruments is completed and verified, the satellite will move into its operational phase, in which it will monitor, collect and analyse environmental data as well as measure air pollutants and greenhouse gases.

The satellite was fully manufactured and developed by the Space Flight Laboratory (SFL) at the University of Toronto in Canada, and a team from MBRSC supervised the development and worked on the final testing of the satellite

*The DMSat-1 satellite contains state-of-the-art scientific instruments to monitor air quality and detect greenhouse gases*



before being moved to the Baikonur Cosmodrome in Kazakhstan. A second team of engineers and experts from MBRSC joined the base team to complete final functional testing and integration of the satellite with the launch vehicle. The DMSat-1 carries state-of-the-art environmental monitoring equipment.

After the successful launch, the DMSat-1 begins the in-orbit testing, calibration and validation phase to ensure all systems and instruments on board are fully functional and ready for the next phase. During the second phase, the satellite will monitor, collect and analyse environmental data, measure air pollutants and greenhouse gases, develop maps of the concentration and distribution of greenhouse gases as well as study and monitor seasonal changes of these gases. The data provided by the satellite will be used to find solutions and develop long-term plans to

confront the challenges of urban pollution and climate change and explore the future environmental reality in Dubai and the UAE.

DMSat-1 confirms the UAE's commitment to the terms of the Paris Climate Agreement, which calls for the provision of information and data on greenhouse gas emissions, as well as building national capacities in the field of studying and analysing the phenomenon of global warming. The launch of the satellite is part of the Dubai Clean Energy Strategy 2050 and UAE Energy Strategy 2050 and contributes to the implementation of the national system for managing greenhouse gas emissions within the UAE National Plan for Climate Change 2017-2050.

The DMSat-1 satellite launch project is an exceptional opportunity to build new research

*The data provided by the satellite will be used to find solutions and develop long-term plans to confront the challenges of urban pollution and climate change*



and technical capabilities in the fields of environmental scientific research at the local level. It will also contribute to opening new horizons for harnessing space technology to serve the environmental sectors and achieve sustainability.

Dawoud AlHajri, Director, Dubai Municipality, said, "DMSat-1 is an embodiment of the will to excel that characterises the UAE. Guided by the wisdom of our leadership, our national space programme has been able to engage in qualitative areas and enhance its contributions to human civilisation."

Hamad Obaid AlMansoori, Chairman, MBRSC, said, "The DMSat-1 satellite constitutes a new impetus for the UAE to achieve its developmental strategies and make it the leading country in the world capable of using the latest global

technologies to build sustainable cities. The satellite will contribute to providing accurate scientific information that helps decision-makers take necessary measures to improve the environment."

Weighing 15 kgs, the DMSat-1 satellite contains state-of-the-art scientific instruments to monitor air quality and detect greenhouse gases as well as fine particles in the atmosphere. Data will be stored on the onboard storage system and downloaded to MBRSC's ground station.

Over a period of three to five days, the satellite will monitor a single site more than once from seven different angles. It will orbit the earth 14 times a day and will pass over the MBRSC ground station four to five times a day to receive new imaging orders and enable downloading of data.



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## UAE to host MENA Climate Week in March 2022

To boost the momentum of climate action in the Middle East and North Africa (MENA) region and support the shift towards a new model for sustainable growth, the UAE will host the MENA Climate Week 2022, the first event of its kind in the MENA region.

Set to take place on March 2 and 3 next year on the sidelines of Expo 2020 Dubai, the forum will



The roundtable will highlight the urgency of addressing climate change and current global development challenges

highlight the urgency of addressing climate change and current global development challenges. The UAE Ministry of Climate Change and Environment (MoCCA) and the World Green Economy Organisation (WGE) will host the event in collaboration with the UN Development Programme (UNDP), the UN Environment Programme (UNEP), UN Climate Change, and the World Bank Group.

The dates were announced at the Regional Climate Weeks Virtual Roundtables that marked the launch of the upcoming editions of the Regional Climate Weeks - Latin America and Caribbean, Asia-Pacific, and Africa - that will run in 2021, and the MENA Climate Week in 2022.

The roundtables drew the participation of high-level dignitaries, including Luis Abinader, President of the Dominican Republic; Dr.



*The Regional Climate Week will enable participants to follow up on the discussions raised during the 26th Climate Change Conference (COP26) in November 2021*



Abdullah Belhaif Al Nuaimi, UAE Minister of Climate Change and Environment; Saeed Mohammed Al Tayer, Chairman of WGEO; Patricia Espinosa, UNFCCC Executive Secretary; Carolina Schmidt, COP25 President; Alok Sharma, COP26 President-Designate; Shinjirō Koizumi, Japan's Minister of the Environment, and Sam Cheptoris, Minister of Water and Environment of Uganda.

Organised by the UN Framework Convention on Climate Change (UNFCCC), the meeting was the first in a series of preparatory events that engaged regional stakeholders in a dialogue on their priorities and needs in relation to three thematic tracks: national actions and economy-wide approaches, managing climate risks and seizing transformation opportunities.

In his remarks at the roundtable, Dr. Al Nuaimi said, "The UAE is proud to host the first MENA

Climate Week on March 2 and 3, 2022. As the world emerges from COVID-19, we have a prime opportunity to pursue a path of green recovery and develop low-carbon and climate-resilient economies, and this important platform will help steer us on the right course."

Al Tayer said, "The MENA Regional Climate Week will provide individuals and stakeholders with a unique opportunity to discuss national plans for climate action aimed at supporting the Paris Agreement and achieving the United Nations' 2030 Sustainable Development Goals."

He noted that UAE-led activities, such as the World Green Economy Summit (WGES) that will take place in Dubai in October 2021, will help build the momentum for climate action in the days leading up to the regional event.



## SDGs resonate strongly in UAE's strategic vision locally, globally: Reem Al Hashimy

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EXPO 2020



Reem bint Ibrahim Al Hashimy,  
Director General of EXPO - 2020

Dubai Bureau delivered a  
keynote address on the Global  
Goals as part of Expo Talks

In the United Arab Emirates, the Sustainable Development Goals (SDGs) resonate so strongly and their multifaceted approach to development is reflected in its own strategic vision, both at home and abroad, which looks beyond just GDP as a measure of our worth, stated Reem bint Ibrahim Al Hashimy, Minister of State for International Cooperation, Director General of EXPO - 2020 Dubai Bureau, and



Chairperson of the National Committee on the  
Sustainable Development Goals.

"From a domestic perspective, it incorporates access to opportunity, through quality education and healthcare. It has inspired the appointment of Ministers for Youth, Tolerance, Happiness and the Future. And it demands not just of governments, but of the whole of society, if we are to achieve our collective goal of a smarter, cleaner and healthier future for all," said Reem Al Hashimi in a keynote address on the Global Goals as part of Expo Talks on March 9, 2021.

"Overseas, meanwhile, this approach has been demonstrated through decades of partnership and collaboration. The UAE has long been one of the world's largest donors of official development aid, relative to national income, and we are at the forefront of global vaccine

*The Opportunity Pavilion at Expo 2020 is  
a testament to the UN's 2030 Agenda  
and the power of the individual as an  
agent of change*



delivery and logistics, speeding much-needed doses to those countries that need them most," she said.

"We are also the founders of the Global Council on Sustainable Development Goals, an outcome of the 2018 World Government Summit and a platform for interdisciplinary stakeholders from government, international organisations, academia and the private sector, to share and explore innovative approaches to global challenges."

She continued: "The success of this partnership-based philosophy was reflected in global support for our hosting of Expo, when the member states of the Bureau International des Expositions once more affirmed their belief and their passion for an Expo in Dubai."

"We do all this and more because it is our way, our

history and our future. And we know instinctively, as well as through decades of experience, that for any community to truly develop, then there must be equal and dignified opportunity for all. We can't stand out if we're not inclusive. And we can't do it at all, if we're not altogether," she further added. "This principle will underpin our gathering at Expo 2020 Dubai in October."

"One of the focuses of our Expo," Al Hashimy continued, "and in particular our three thematic pavilions, is to show people how we can get there. To help them imagine how they can contribute tangibly to solutions for global challenges so that together we move the needle on our ambitions from difficult... to possible, to probable and one day inevitable."

"Our Opportunity Pavilion is a testament to the 2030 Agenda and the power of the individual as





an agent of change. Titled 'Mission: Possible', the pavilion experience imagines a world in which our finite resources might be turned to infinite uses, through smart and innovative solutions... and it shows us an empathetic world, one in which conversation and connection can inform positive acts and practices, enabling us all to lead our best lives while taking individual responsibility for collective existence," she said.

### **Sustainability choices at Terra**

"Meanwhile, in our Sustainability Pavilion, Terra, which is already open to the public, we help visitors to understand the environmental impact of the daily choices they make. The building itself deploys cutting-edge innovations which enable it to create its own electricity and water, and after Expo has closed its doors the pavilion will become a youth science centre, in the future city known as District 2020."

"So far, we have welcomed more than 50,000 visitors to Terra, and we have been asking them what impact this unique experience might have on their everyday behaviour. To our delightful surprise, almost 97 percent of all visitors who came confirmed that they will change their behaviour and be more cognisant of the fragile environment in which we live.

"It's a positive, aspirational and practical experience. Just as Agenda 2030 is framed in a spirit of optimism for the future, we share this hope and will do all in our power to realise it."

"Over 100 nations and organisations have told us that they will be addressing the issues that run across the 17 SDGs, or will be highlighting their urgency during Expo's six-month period. What they have also told us is that they are coming to Dubai with the intention of making new



# *The Sustainability Pavilion, Terra, at Expo 2020 deploys cutting-edge innovations which enables it to create its own electricity and water*



connections and building new partnerships with a view to leap-frogging ahead towards our collective target of Opportunity for All."

"This multilevel approach, motivating individuals to make the everyday changes that can make a generational impact... while also harnessing international cooperation for productive ends this is the philosophy of the UAE in action and the breadth and power of a World Exposition," she concluded.

Abdulla Lootah, Director General, UAE Prime Minister's Office, and Deputy Chairperson of the National Committee on the Sustainable Development Goals, said: "To ensure that no student or family was left out during those unprecedented times, the Ministry of Education, the lead agency for SDG 4 - Quality Education, and the Telecommunications and Regulatory Authority, worked closely together to ensure all

families with children at school, had Internet access at home."

On the medical front, he added, "no one will ever forget the great dedication and sacrifices of our frontline heroes during the pandemic." As of 28 February 2021, the UAE ranked second globally by the Our World in Data index in 'Vaccinations administered per 100 people' indicator.





## UAE launches National Integrated Energy Model

The Ministry of Energy and Infrastructure, in partnership with Khalifa University (KU) and the International Renewable Energy Agency (IRENA) launched the National Integrated Energy Model on March 2, 2021.

The model supports the formulation of the future of Energy for UAE, and the design of the next 50 years in the energy sector, according to



The model supports the formulation of the future of Energy for UAE, and the design of the next 50 years in the energy sector

the vision of the future government, representing also a roadmap for a new phase of Energy sector sustainability.

It also provides a common framework that brings together the stakeholders in the energy sector, and it defines the contours of the future as part of the UAE's efforts to maximize the benefits of this sector by developing strategies and foundations for work in it during the next phase in line with the National Energy Strategy 2050. This aims to obtain safe and sustainable energy for everyone at competitive prices, raising the efficiency of individual and institutional consumption by 40 percent by the year 2050, and increasing the contribution of clean energy in the total energy mix produced in the country to 50 percent.

In parallel with the launch of the National



# *The National Integrated Energy Model represents a roadmap for a new phase of Energy sector sustainability*



Integrated Energy Model, an understanding was made to develop the energy modeling capabilities with Khalifa University and the International Renewable Energy Agency.

Moreover, a partnership bringing together the three entities was formed to develop the UAE energy model. This partnership will also benefit from the experience of the IRENA and the research capabilities of Khalifa University to establish a programme to support the review of the energy strategy in the UAE, and engage strategic partners to continue developing the energy policy in the country.

Sharif Al Olama, Under-Secretary of the Ministry of Energy and Infrastructure for Energy and Petroleum Affairs, said, "The National Integrated Energy Model is a major supporter of the national energy strategy that was launched in 2017; work

is currently under process on developing a national energy strategy to harmonize developments in the energy sector at local and global levels, and it takes into account the UAE's orientation towards diversifying energy sources and developing the sector, finding various solutions in addition to traditional energy, in a way that supports sustainable development, national economies, and the country's passage to the next 50 years of achievements, up to the UAE Centennial 2071."

For his part, Francesco La Camera, Director General of IRENA, stressed that the energy system based on renewable energy sources is at the core of any national commitment under the Paris Agreement on Climate Change, which in turn will support economic growth and create new job opportunities.

## Economic and social resilience addressed at Sustainability Leadership Conference

Dubai Electricity and Water Authority (DEWA) organised the 4th Sustainability Leadership Conference virtually March 23, 2021, in collaboration with the University of Cambridge Institute for Sustainability Leadership (CISL), as part of DEWA's Virtual Sustainability Week.

Saeed Mohammed Al Tayer, MD & CEO of DEWA,



In collaboration with Cambridge Institute for Sustainability Leadership, the conference was part of DEWA's Sustainability Week

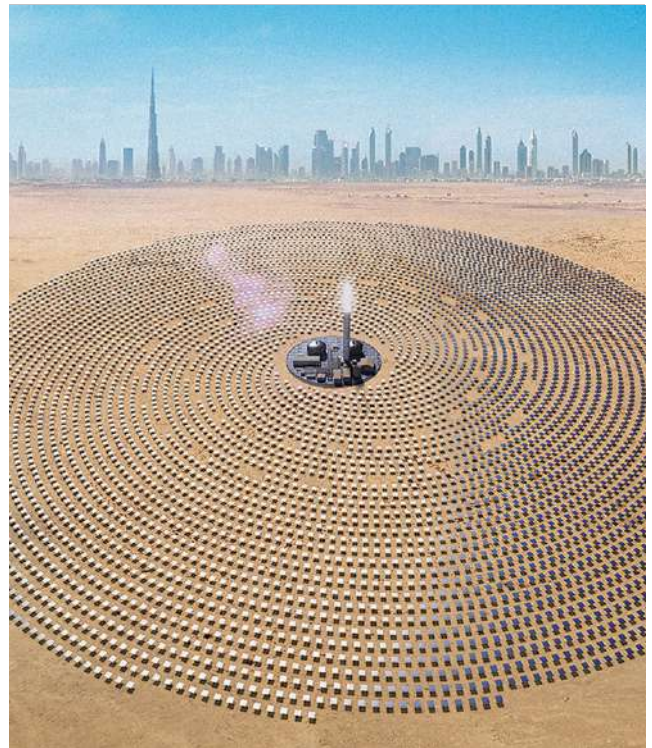
inaugurated the conference, which brought together a large number of sustainability experts and specialists to discuss several topics related to sustainability, such as recovering from crises, economic and social resilience in fighting COVID-19.

In his opening speech, Al Tayer said that the conference is part of the shared vision of DEWA and CISL to consolidate the concept of sustainability. Al Tayer commended the CISL team for their continuous collaboration and especially thanked Dame Polly Courtice, DBE, LVO, Director, Cambridge Institute for Sustainability Leadership, for her efforts since the establishment of the Institute over 30 years ago. Today, it is a global platform for excellence in sustainability.

"Organising the conference during DEWA's



*DEWA is implementing the 900MW 5th phase of the solar park as well as the 250MW pumped-storage power station in Hatta, which is the first of its kind in the region*



Virtual Sustainability Week is part of our ongoing efforts to support Dubai's vision to balance economic development with the environment. Despite the COVID-19 pandemic, DEWA continued to implement its sustainable projects and initiatives in line with its plan to increase the share of clean and renewable energy. This supports the UAE Energy Strategy 2050 to provide 75 percent of Dubai's total power capacity from clean energy sources by 2050. We also employ digital transformation, smart grids, and the disruptive technologies of the Fourth Industrial Revolution," Al Tayer said.

He noted that DEWA is currently implementing key strategic clean and renewable projects, including the 4th phase of the Mohammed bin Rashid Al Maktoum Solar Park, which is the largest single-site solar park in the world with a planned capacity of 5,000 megawatts by 2030.

When completed, the solar park will reduce 6.5 million tonnes of carbon emissions a year.

"In recognition of its efforts in sustainability, DEWA received several local and international prestigious awards, including the European Foundation for Quality Management's UN Sustainable Development Goals Challenge 2021. DEWA eliminated its paper use and received the 100 percent Paperless Stamp from Smart Dubai. DEWA's adoption of the latest technologies has helped it to prevent using more than 22 million pieces of paper in 2020. This made financial savings of over AED85 million, as well as saving 2,700 trees that would have been used to produce this. DEWA also works to increase the efficiency of its power and water plants. It has recorded one of the lowest water losses in the world of 5.1 percent," Al Tayer said in conclusion.

## Environment at the core of Ras Al Khaimah's development and prosperity

Ras Al Khaimah is charting a course to a bright and sustainable future because at the heart of every decision made by the Emirate's leadership is the environment, with no effort being spared to safeguard its precious resources and enhance the quality of life.

The Emirate's landmark Energy Efficiency and Renewables Strategy 2040 is putting Ras Al



The Emirate's landmark  
Energy Efficiency and  
Renewables Strategy 2040  
is putting Ras Al Khaimah  
at the vanguard of  
sustainability

Khaimah at the vanguard of sustainability. The strategic plan, adopted in 2018, aims to cut energy use by 30 percent, water consumption by 20 percent and ensure 20 percent contribution from renewables by 2040.

The Ras Al Khaimah Municipality is leading the strategy with its dedicated Energy Efficiency and Renewables Office (Reem), along with the cooperation of major entities, stakeholders and the public, all under the guidance and leadership of H.H. Sheikh Saud bin Saqr Al Qasimi, Supreme Council Member and Ruler of Ras Al Khaimah.

"Energy and water are essential to our lives and prosperity. They are an integral part of the social and economic development that we aspire to, so we must preserve and invest in them," said His Highness Sheikh Saud, reinforcing RAK's sustainability agenda.



# *The Energy Efficiency and Renewables Strategy comprises nine programmes that boost the emirate's economic competitiveness*



"The strategy stems from the vision of H.H. Sheikh Saud bin Saqr Al Qasimi to have sustainability as a source of competitiveness for Ras Al Khaimah. Considering the global climate change challenges, this strategy is part of Ras Al Khaimah's contribution to the climate change mitigation efforts of the UAE and the world. It addresses all energy and water consumers across Ras Al Khaimah," said Munther Mohammed bin Shekar, Director-General of Ras Al Khaimah Municipality.

The Energy Efficiency and Renewables Strategy comprises nine programmes that boost the emirate's economic competitiveness by cutting costs associated with energy, renewable energy and water, all the while reducing dependence on electricity and fuel. The strategy also seeks to establish a new market for renewable energy products and services, as well as to upskill the

local workforce and prepare them for these sectors.

The all-encompassing plan touches on practically every aspect of government policy and public life, with all of its programmes activated. The first is Barjeel, introduced in 2019, which represents a rigorous set of green regulations for all new buildings in the emirate. All buildings constructed under Barjeel are expected to consume 30 percent less energy and water than a typical building, resulting in significantly lower utility bills.

A one-year voluntary phase of Barjeel was rolled out in 2019. During this period, Barjeel was applied to more than 270 pilot projects across the emirate, including villas, schools and hotels. The municipality offered financial incentives to increase uptake, while public awareness campaigns were launched. Industry professionals





and government officials were systematically trained via face-to-face sessions and through an online platform in the equipment and methods used to apply the Barjeel standards. By 2020, Barjeel became mandatory for all new buildings with more than 2,000 buildings permitted so far.

"We are proud to say today that Barjeel is appreciated and recognised for its innovative approach among building regulations in the Gulf Cooperation Council region," said Mohamed Nazmy, Building Permit Section Head at the municipality.

Another programme in the strategy is Efficient Street Lighting. With the planned expansion of the lighting of highways and roads over the next few years, Ras Al Khaimah is committed to using highly efficient light-emitting diodes (LEDs) in all new street-lighting projects.

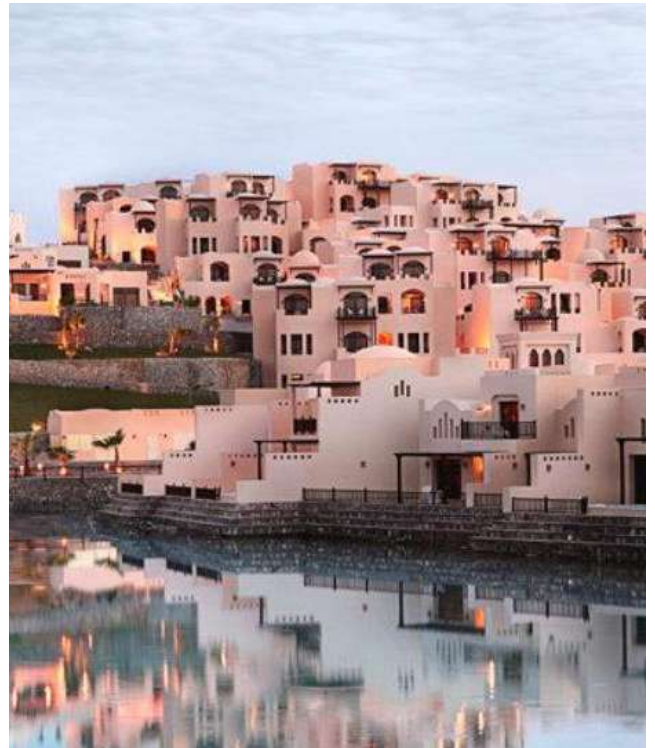
Reinforcing this commitment, Ras Al Khaimah Public Services Department has also embarked on a retrofit programme. In 2019, 18 kilometres of streetlights were replaced with efficient LEDs. In addition, Ras Al Khaimah Economic Zone (RAKEZ) has replaced conventional street lighting on around 50km of roads with energy-efficient LEDs in the industrial zones.

"We have installed cloud-based smart controls and a real-time monitoring system as part of this project. This not only improved the luminance level on the industrial zone roads, but it also resulted in direct energy savings of 70 per cent and about 10 per cent additional indirect savings from the improved lighting management, scheduling and controls," said Eyad Ismail, Group Director of Engineering at RAKEZ.

The third programme is Building Retrofits. The



*Ras Al Khaimah is committed to using highly efficient light-emitting diodes (LEDs) in all new street-lighting projects*



building stock in the emirate comprises varying levels of energy performance, with this presenting a huge opportunity to make existing buildings more energy-efficient.

In 2019, retrofit works were completed on four municipality buildings. This represented the first such scheme for government buildings in the Emirate. Contracting for new retrofit projects is ramping up, including at nine RAKEZ buildings and 15 RAK Academy buildings, with expected energy savings of 38 percent and 34 percent, respectively.

### **The Model Villa initiative**

Progress is also being made in the residential sector. The Model Villa initiative, in collaboration with Abu Dhabi-based Masdar, aims to showcase the benefits of sustainability in private dwellings.

Select villas are being retrofitted and the hope is that the financial and environmental benefits of retrofitting will be understood and appreciated by the public.

"Masdar is proud to have launched the Model Villa initiative together with the municipality. We consider this a first step in educating residents about the benefits of retrofitting their homes," said Yousef Baselaib, Executive Director, Sustainable Real Estate at Masdar.

The Energy Efficiency and Renewables Strategy 2040 is a clear and definitive plan that will shape the development of Ras Al Khaimah in the years to come, keeping the welfare of the public at the heart of decision-making while guiding the emirate to a green, sustainable and environmentally friendly future.

## Fujairah steps up efforts to boost environment and biodiversity conservation

**H**.H. Sheikh Mohammed bin Hamad bin Mohammed Al Sharqi, Crown Prince of Fujairah, attended the signing of a partnership agreement between Etihad Rail, Emirates Nature-WWF, the Fujairah Environment Authority and the Fujairah Adventures Centre.

The visit marked the occasion of the launch of the "Environment Protection Programme and



Fujairah Crown Prince attends signing of agreement to protect environment in Al Bithnah, Fujairah

the Restoration of Natural Habitats in Al Bithnah, Fujairah." on March 3, 2021.

The agreement involves three key pillars, which are supporting the growth of the local community, protecting the environment and biodiversity and preserving the UAE's natural heritage.

Sheikh Mohammed bin Hamad stressed the importance of protecting the environment and biodiversity and the necessity of preserving natural heritage in the UAE, through encouraging cooperation between the public and private sectors and the participation of the local community, in addition to implementing local and national legislation focussing on environmental protection.

The agreement was signed by Mohammed Al Marzouqi, Executive Director of the Rail Affairs



*Sheikh Mohammed bin Hamad emphasised public-private sector cooperation to protect biodiversity and preserve natural heritage*



Sector at Etihad Rail; Laila Mostafa Abdullatif, Director-General of Emirates Nature-WWF; Eng. Ali Qasim, Member of the Board of Directors of the Fujairah Environment Authority, and Saeed Al Muamari, Director of the Fujairah Adventures Centre. The signing was followed by a field tour to several irrigation channels in Al Bithnah Fort, Fujairah.

### **Etihad Rail relocates over 300 animals from Misanad Protected Area in Sharjah**

Etihad Rail, the developer and operator of the UAE's railway network said that over 300 wild animals in the Misanad Protected Area in Sharjah have been relocated to different habitats.

In line with its commitment to implement the highest environmental standards and preserve the diverse natural heritage of the UAE, Etihad Rail carefully organised the transport of animals

from the Misanad Protected Area to other suitable and protected habitats.

The relocation, completed in line with leading international best practice, was conducted in cooperation with the Sharjah Environment & Protected Areas Authority (EPAA), along with environmental experts, specialists, and other relevant national authorities.

Misanad Protected Area is home to a range of wildlife species, including snakes, Cheeseman's Gerbils, scorpions, and pigeons. The rare and endangered Persian wonder gecko, which is one of the most colourful types of gecko in the UAE, lives in the Misanad Nature Reserve. Etihad Rail relocated over 300 animals, including 242 Middle Eastern Short-Fingered geckos, 24 Baluch rock gecko, 5 Saw-faced vipers, and others.

With its compact, sculpted shape, Renault ZOE is a modern 5-seater electric city car featuring some of the most advanced electric technology yet.

Its range and vivacity, its attractive and comfortable design, as well as its galaxy of connected services make ZOE an icon for Groupe Renault and electromobility in a wider sense.

## Drive to the future with Renault ZOE



Clean air, silence, zen interior, ideal temperature, plenty of features to make driving easier – the Renault ZOE has all these and much more!

The ZOE offers a great balance between form and function, and pure aesthetics that are timeless. Packing a punchy performance, this 100% electric, zero emissions electric car boasts a sleek, futuristic design, and a homely, zen interior styling, plus agile response with a chassis specifically designed for electric power.

The interior design styling in Renault ZOE evokes natural elements. Its emblematic white dashboard, underlined with chrome, looks like a wind turbine blade, symbolising renewable energy. Thanks to the 'Z.E.40' battery, ZOE has a record range of 300km in real-life use, among the highest of any electric vehicle in this segment. With the 'Z.E.40' battery, ZOE also wipes away driver anxiety on vehicle recharge.

The car incorporates plenty of features to make driving easier. An automatic gearbox provides a



*Since an electric motor does not burn any fossil fuel, Renault is fully committed to the electric vehicle as the innovative solution capable of meeting today's environmental challenges.*



linear and fluid acceleration whilst adapting to every situation, enhancing real driving pleasure. Renault ZOE is equipped with climate control and a combined filter, and both rain and light sensors that come on automatically when you need them.

### **Innovative technology**

With more than 60 patents filed for its design, Renault ZOE is the first mass production electric vehicle to be approved for a driving range of up to 240 km in NEDC cycle with the R240 and 210km with Q210 engine. The NEDC or New European Driving Cycle is the European emissions and fuel consumption measurement standard. This consumption measurement method is based on identical test drives for all vehicle types in Europe, whether fuel-powered, electric or hybrid.

Whatever the conditions, the Range OptimizEr system manages consumption for optimised

driving range.

Enjoy multimedia through simple features tailored to the Renault ZOE, including a large touch screen, modern interfaces, and Bluetooth, along with USB sockets and a jack on the front panel. All these make listening to your portable music player, syncing your phone book and accessing vehicle information that much easier.

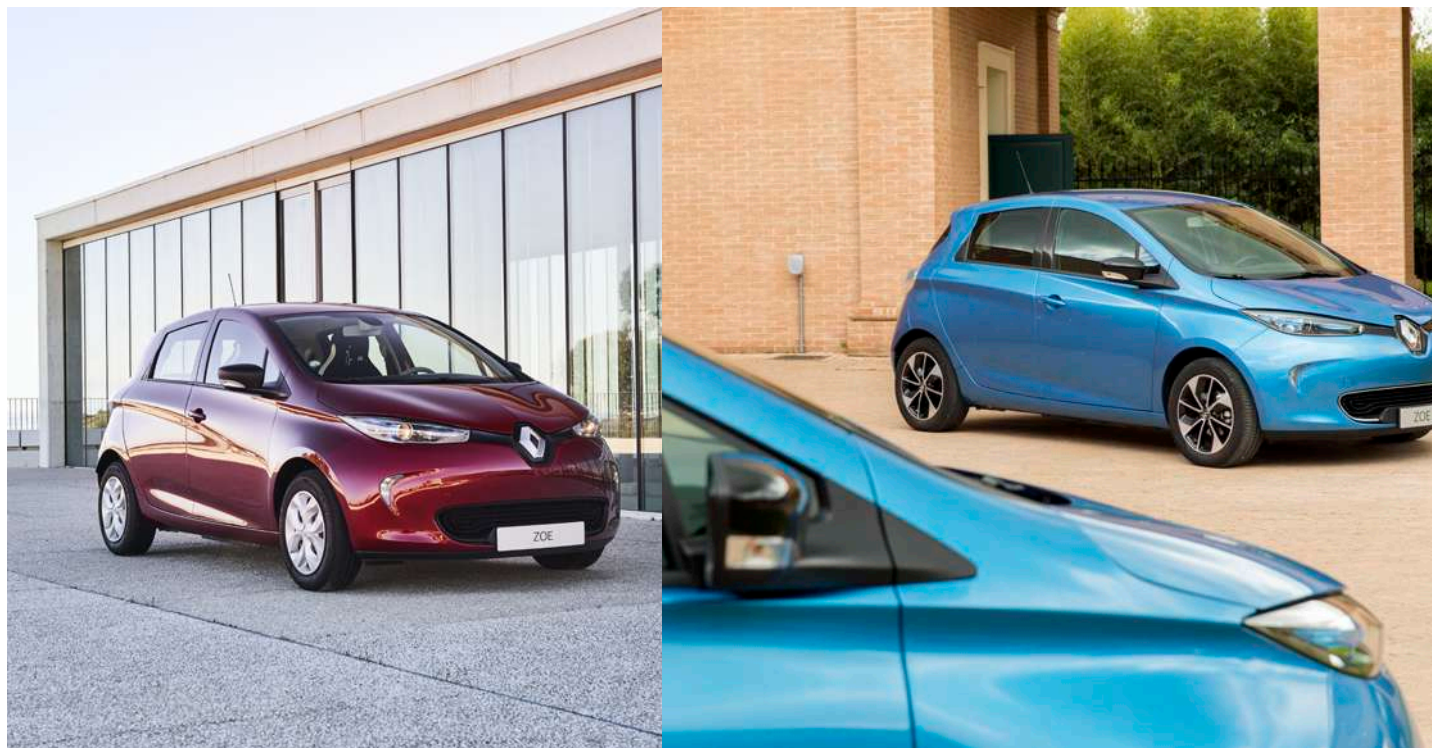
Safety is built into the Renault ZOE, with anti-lock braking system, electronic stability control, and a protected battery pack built into the floor.

### **Charging times**

Fitted with the smart Chameleon™ charger unit, Renault ZOE's battery can be charged for between 1 hour and 4 hours depending on the charging power.

Thanks to its patented Chameleon charger, the Renault ZOE can adapt to the available charging





powers (from 2 to 44 kW), which makes it one of the best performing vehicles. Its Z.E. charge indicator flashes slowly when the re-charge is active and continually informs you of the level of energy, the extent to which the battery is charged and the charging time remaining.

In Standard Charge, usually at home, Renault ZOE charges completely in 4 hours from a public charging station, a wall box – a certified Z.E. re-charging box Ready, installed at home by a certified professional, or a green-up socket.

### **Re-charge at Renault's Sheikh Zayed showroom**

How do you re-charge Renault ZOE away from home? Simply plug your Renault ZOE into a standard charging terminal: located in the carparks of certain shopping centres, Renault dealerships etc. In 22 kW Accelerated Charge, it

re-charges to 80% in one hour, from a public terminal.

In Dubai, Renault has recently installed a public electric vehicle charger at its showroom on Sheikh Zayed Road where the Renault ZOE can be completely re-charged in one hour.

### **Meeting environmental challenges**

Since an electric motor does not burn any fossil fuel, Renault is fully committed to the electric vehicle as the innovative solution capable of meeting today's environmental challenges. EVs have a key role to play in improving air quality, with the attendant benefits to public health, especially in urban areas.

As a nation committed to a low-carbon and sustainable economy, the UAE has been working towards its long-term goal of electrification by



*The sole distributor for Renault vehicles in Dubai and across the Northern Emirates, Arabian Automobiles has aligned its corporate strategies with the UAE government's initiatives to support EV*



encouraging sustainable choices among its residents. The UAE currently has the largest number of EV charging stations in the world, and the emirate of Dubai is emerging as one of the global leaders in adopting zero-emission and electric vehicles.

The emirate's green mobility agenda is in line with the Dubai Clean Energy Strategy 2050, which seeks to produce 75 percent of the Emirate's energy from clean energy. Accordingly, the Dubai Supreme Council of Energy has mandated that the public sector in Dubai must increase its percentage of hybrid and electric vehicles to at least 10 per cent of their overall annual procurement of vehicles through end of 2024.

### **Thinking Green with Arabian Automobiles**

As the 2nd largest automobile distributor in the UAE, Arabian Automobiles Company offers

consumers yet another reason to start thinking green, when deciding on an electric car purchase. The sole distributor for Renault vehicles in Dubai and across the Northern Emirates, Arabian Automobiles is committed to placing the convenience of the community at the forefront and has aligned its corporate strategies with the UAE government's initiatives to support EV.

Established in 1968, Arabian Automobiles Company is the flagship company of the AW Rostamani Group (Abdul Wahid Al Rostamani Group). With 40+ years in business, the company has become a trusted name in the UAE automotive market, renowned for excellence in customer service and for fostering enduring customer relationships as the name behind the world-class portfolio of products the company retails and maintains.

## Emirates Group reaffirms commitment to wildlife, habitat conservation

On World Wildlife Day on March 3, 2021, the Emirates Group reaffirmed its long-standing commitment to protecting wildlife and habitats and also shone the spotlight on conservation efforts across the organisation at an online Environment Forum for its global employees.

During the forum, experts from the Dubai Desert Conservation Reserve, Emirates One&Only



In addition to reducing emissions and consuming responsibly, the preservation of wildlife and habitats is integral to The Emirates Group's environmental sustainability strategy

Wolgan Valley in Australia, and Emirates SkyCargo spoke about the work being done to protect endangered species and habitats in Dubai, restoration efforts in the aftermath of the Australian bushfires, and how the airline was playing its part to foil wildlife trafficking across its network.

In addition to reducing emissions and consuming responsibly, the preservation of wildlife and habitats is one of the three pillars under The Emirates Group's environmental sustainability strategy. The group believes that future generations should enjoy seeing wildlife in the wild and that the world's beauty and biodiversity is an inspiration for travel.

Since 2003, The Emirate Group has funded and supported the 225-square kilometre Dubai Desert Conservation Reserve (DDCR), a



*The Emirate Group funds and supports the  
225 sq km Dubai Desert Conservation  
Reserve that houses more than 560  
different species*



protected inland desert habitat that houses more than 560 different species and where 31,000 native trees have been planted.

Amongst its achievements, is the DDCR's successful reintroduction programme that started in 1999. Since then, the programme has grown the ungulate population - including the Arabian oryx, Arabian gazelle and sand gazelle, to more than 1,300. The reintroduction programmes have proved so successful that they have triggered the process of relocating some species to other protected areas within the region.

Additionally, over 2,800 houbara, or MacQueen's bustard have been reintroduced into the DDCR, while other important bird species such as the pharaoh eagle-owl and the lappet-faced vulture are resident in the reserve, and some birds are monitored via satellite tags.

The DDCR is a regional leader in ecological research, actively collaborating with local and international educational and research institutions with over 30 biodiversity projects completed so far.

In Australia, Emirates has been supporting the protection of Australia's wilderness and bush for over 12 years; Emirates One&Only Wolgan Valley demonstrates a strong commitment to its carbon neutral status by scaling up its environmental, heritage and environmental initiatives.

After the bushfires in early 2020, which affected a portion of the Blue Mountains, the teams at One&Only Wolgan Valley embarked on regeneration of the landscape, and habitat restoration work has been stepped up at the resort.

## Expo 2020 Dubai invites children for entertaining spring break at 'Terra'

Expo 2020 Dubai invites children for entertaining and inspiring spring break at Terra – The Sustainability Pavilion, a fun-filled and educational day out for the entire family.

After enjoying the experience inside the Sustainability Pavilion, visitors can relax and enjoy the rest of their afternoon or evening in



The Terra experience has already inspired 96 percent of visitors to change their behavior towards sustainable living

the pavilion's unique surrounding public spaces, which feature a children's playground, live entertainment, and even the chance to meet Expo 2020's official mascots.

The Sustainability Pavilion is one of Expo 2020's signature visitor attractions. The pavilion's emotive exploratory experience includes an interactive walk through the roots of the forest and a journey under the ocean.

Visitors can then discover how their actions and choices impact the environment, before being empowered to make positive changes in their everyday lives.

The Terra experience has already inspired 96 percent of visitors to change their behaviour, according to a survey, including avoiding waste, saving water, growing plants and making



*The Sustainability Pavilion is one of Expo 2020's signature visitor attractions*



conscious efforts to use less plastic. Terra – The Sustainability Pavilion is open from 15:00-21:00 on Tuesdays to Thursdays and 16:00-22:00 on Fridays and Saturdays until 10 April 2021.

### **Expo 2020 Dubai to celebrate earth's nature and biodiversity**

Expo 2020 Dubai will celebrate World Wildlife Day 2022 to spearhead a series of programmes dedicated to wildlife conservation and biodiversity, in partnership with the UAE Ministry of Climate Change and Environment and the United Nations Environmental Programme.

UN World Wildlife Day, celebrated annually on 3rd March, will be marked during Expo 2020's Climate and Biodiversity Week. Bringing together experts and thought leaders, Expo 2020 will be a launching pad for inspiring new ideas in ecosystem preservation and restoration, and will feature a

Youth Circle, held in association with the UAE's Federal Youth Authority, to ensure future generations play an essential role in policies and recommendations around preserving wildlife and biodiversity.

The importance of protecting the planet's ecosystems will be brought to life across Expo's buildings and screens in vivid colour with a kaleidoscope projection of unique imagery.

Through its Climate and Biodiversity Week, Expo 2020 will highlight real-life solutions to help protect our planet's flora and fauna and support the rich diversity of our planet, including inspiring initiatives from Expo's Global Best Practice Programme and Expo Live Grantees, as well as from Expo's Partners and International Participants.

## Sustainable City partners with EFATE to recycle toxic electronic waste

The Sustainable City (TSC), the Middle East's first fully-operational sustainable community has introduced a new electronic waste (e-waste) collection and management solutions for the community.

The 24-Hour e-Waste drop-off station - created in collaboration with EFATE, a UAE based e-waste management company - will provide a



free and efficient e-waste management solution to residents and the general public.

EFATE has installed a container that is specialised in recycling and providing smart waste solutions inside the TSC. Residents and the public can drop their e-waste at this station, where it will be collected and taken to a recycling facility and separated. Useful components that contain raw materials will be reused in manufacturing new products and useless parts will be crushed without causing any harmful emissions. Recyclable e-waste including laptops, printers, tablets, mobile phones, CPUs, TVs and other electronic items will be collected at the station.

The drop-off station will also ensure the right re-use of the collected e-waste as after sorting, the electronics in working condition will be donated to charity. EFATE will also attempt to refurbish

and repair the possible items and hand them out for free to those who come from socially disadvantaged groups.

Faris Saeed, CEO and co-founder of Diamond Developers, said, "In the past years, the level of electronic waste has seen an unprecedented increase. As a responsible society, we need to identify better methods and means of not just disposing of the e-waste but, most importantly, reusing and recycling it."

Mohammed Al Hammadi, CEO of EFATE, commented, "We follow the best practices in waste management and collection. And with the support of e-waste data, we spread awareness among our customers about the deeper impact that improper management of e-waste has on our environment."



ADIB



مصرف أبوظبي  
الإسلامي

ARE YOU THE NEXT "GHINA"  
MILLIONAIRE?

وفّر واحصل على فرصة الفوز  
بـ 3 مليون درهم

مع حساب التوفير "غنى"  
من مصرف أبوظبي الإسلامي

السحب الكبير القادم  
في 8 أبريل 2021

أكثر من 90 مليون درهم مجموع جوائز المدخرين منذ إطلاق  
غنى من مصرف أبوظبي الإسلامي.

أنت أيضًا يمكنك الانضمام إلى غنى وتحصل على فرصة بأن تكون:  
• فائز بـ 3 ملايين درهم كل 4 أشهر!  
• من بين الفائزين العشرة بـ 10,000 درهم شهرياً.

التوفير والفوز مع غنى من مصرف أبوظبي الإسلامي أمر سهل:  
• مقابل كل 20,000 درهم تقوم بادخارها في حساب توفير "غنى" الخاص بك كل شهر،  
تحصل على قسيمة واحدة يتم إدخالها تلقائياً في السحب.

لفتح حساب التوفير "غنى" استخدم تطبيق مصرف أبو ظبي الإسلامي الخاص بك،  
أو اتصل بنا على الرقم 600 500102.

قم بتنزيل تطبيق  
الخدمات المصرفية  
عبر الهاتف المتحرك



تطبق شروط وأحكام مصرف أبوظبي الإسلامي. يتم توزيع جوائز "غنى" وفقاً لتقدير مصرف أبوظبي الإسلامي ومن أرباح المساهمين حصراً. تحقيق الأرباح الذي يرتكز على المضاربة وفقاً لأحكام الشريعة الإسلامية هو الهدف الأساسي لحساب "غنى" الاستثماري. سحبات "غنى" لا تشمل الموظفين في مصرف أبوظبي الإسلامي.

## Ambitious Green Energy Plans for Zurich

Zurich, the largest and most populated city in Switzerland, renowned for its history and environmental splendor was rated by Dutch architecture company, Arcadis, as the most sustainable city in the world. The city also leads the way in their environmental index and ranks very high economically.

The survey conducted by Arcadis used 32



Zurich is the most sustainable city in the world and has unbeatable environmental credentials, according to new research

indicators to compile the list which ranged from life expectancy, education and income inequality to energy consumption, greenhouse gas emissions and green space within cities. The city has a multicultural population of 380,500 and is also known as one of the world's most livable cities in Central Europe.

Zurich has enforced outstanding sustainable measures such as:

### Public Transport Services

An important factor in creating more sustainable cities is reducing the dependence on the car. Improving public transport networks that are cheap and efficient for those living in the city and the surrounding suburbs is just one aspect that needs to be addressed. The city of Zurich has a very efficient public transport system that makes it easy to move around. There are bus or



*In Zurich, 82% electricity is from renewable sources, 42% of waste is recycled, and 74% of hotels are green certified*



tram stops every 300m in the city and trains that regularly transport people within the city itself and to other European cities as well. Public transport is also affordable for the city populations making it attractive for people to use over private transport.

Zurich also has a very unique cap-and-trade scheme on car parking within the city. For every new car park space that is constructed, one must be removed which means there cannot be any more parking spaces than there currently are now. With the disincentives for the use of cars in Zurich combined with the efficient and affordable public transport, the need for private transport is reducing drastically.

### **Preservation of Water Quality**

Zurich has the highest water quality standard in the world. Switzerland has many lakes and

waterways such as the Rhine and Rhone and, as such, has taken to improving water quality as much as possible.

ARA Bern, a wastewater treatment plant, is considered to be one of most technologically advanced in the whole of Europe. The plant cleans 90 million litres of wastewater per day whilst also producing biogas from the sewage sludge. This gas is then used by public transport systems. By 2022 ARA Bern will be adding an additional cleaning process to remove micro-pollutants from wastewater.

### **Maintaining Biodiversity**

Switzerland places high emphasis on enhancing and maintaining its parks, which are referred to as 'Parks of National Significance'. The 18 parks in operation or planned cover a 610,900 hectare-area, correspond to 14.8 percent of Switzerland's



surface. These Swiss parks host an above average number of protected areas and are committed to preserving and strengthening their natural habitats. 125 years of legislation has ensured that 30% of Switzerland's surface is made up of forests and woodlands, helping to sink CO<sub>2</sub> levels.

### **Waste Management**

The city is also without a doubt one of the world leaders in recycling and waste management.

They successfully separate and recycle organic and recyclable waste whilst converting the rest to energy. For example, the KVA Thun waste-to-energy plant processes "100,000 tons of combustible waste every year, serving a total of 300,000 residents in 150 communities."

The plant located at Thun, Switzerland, also has an efficient air pollution control system which

ensures air quality standards are met and emissions are kept to a minimum.

### **Ambitious green energy plans**

"Sustainability" is Zurich's primary objective in terms of urban policy, and the city council has sketched a path to the future in its "Zurich Strategies 2035". The city has set itself far-reaching targets in important areas as far as sustainable development is concerned. To achieve these aims, Zurich intends to continue unflinchingly down the path it has chosen which includes regularly analysing what has already been achieved.

Economically and socially, Zurich is also doing amazing things. There are numbers of innovative businesses that are attracted to the city because of a greater quality of life for those living there. The combination of high levels of productivity



*Zurich is one of the world's most livable cities in Central Europe and has the highest water quality standard in the world*



and low non-wage labour reduces the costs of production compared to other cities around the world.

The report by Arcadis also cited Zurich's ambitious green energy goal of using just 2000 watts per person by 2050. In addition, the city's investments in sustainable energy sources and energy efficiency were key to its placement on the list. As a global financial centre, Zurich was also high on the rankings for both economic success and the quality of life of its residents.

Zurich is a city that is leading the way in sustainability and still aims for much higher. The sustainability initiatives that are ongoing in this Swiss city provide lessons that cities around the world can learn from despite the much smaller population to some of the global cities of the world today.

Zurich is just one example of how cities can realistically aim and achieve a sustainable future.



## Operating License for Unit 2 of Barakah Nuclear Power Plant Issued

The Federal Authority for Nuclear Regulation (FANR), the UAE's independent nuclear regulator, issued the Operating License for Unit 2 of the Barakah Nuclear Power Plant to Nawah Energy Company (Nawah), the Emirates Nuclear Energy Corporation's (ENEC) subsidiary, responsible for the operation of the nuclear power plant located in the Al Dhafra region of Abu Dhabi on March 9th, 2021.



The Operating License was issued by the UAE's independent nuclear regulator, following a systematic review process that included multiple thorough assessments

The decision to issue the Operating License is a culmination of efforts made by FANR since it received the Operating License Application from ENEC, on behalf of Nawah, in 2015 for Units 1 and 2. FANR followed a systematic review process that included multiple thorough assessments.

The assessment included reviewing the plant's layout design and the analysis of the site's location in terms of geography and demography.

The assessment also included the reactor design, cooling systems, security arrangements, emergency preparedness, radioactive waste management and other technical aspects. FANR also assessed Nawah's organisational and manpower readiness with all the required processes and procedures to ensure the safety and security of nuclear power plant.



*FANR followed a systematic review process that included a thorough assessment of the application documentation, conducting robust regulatory oversight and inspections*



"This is another historic moment for the UAE, being the first Arab country in the region to operate a nuclear power plant and culminating efforts of 13 years in building such a programme. This milestone was achieved due to the UAE's vision and its leadership to build a peaceful nuclear energy programme to cater for the future needs of energy in the country," said Ambassador Hamad Al Kaabi, UAE Permanent Representative to the International Atomic Energy Agency (IAEA) and Deputy Chairman at FANR.

"The UAE Nuclear Energy Programme, including the nuclear law and regulations, conforms to the safety standards of the IAEA and the international best practices, where FANR has ensured its implementation during the construction of the Barakah Nuclear Power Plant," added Al Kaabi.

Following the issuance of the Operating License

for Unit 2, Nawah will undertake a period of commissioning to prepare for the commercial operation where FANR will conduct around-the-clock inspections, using its resident inspectors located at the Barakah Nuclear Energy Plant in addition to deploying other inspectors, to ensure the Fuel Load and Power Accession processes are completed according to regulatory requirements.

To ensure implementing the highest international standards of nuclear safety, security and non-proliferation, the UAE received in the past decade 11 major peer review missions from the IAEA to review and assess various aspects from nuclear infrastructure, the legal and regulatory system, nuclear safety, nuclear security, emergency preparedness and non-proliferation.

One of the principles of the nuclear policy is transparency to which the Government of the United Arab Emirates has been committed to by adhering to international conventions and agreements such the IAEA's Safeguard Agreement and its Additional Protocol and the Convention on Nuclear Safety and other instruments.



## DEWA marks World Water Day 2021

DEWA has a robust integrated strategy in place that aims to raise awareness on the importance of conservation and engage with all customers and society members in efforts to protect the environment and conserve natural resources, stated Saeed Mohammed Al Tayer, MD & CEO of Dubai Electricity and Water Authority (DEWA), on the eve of World Water Day, observed on March 21.



"DEWA's strategies are guided by the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to build a more sustainable environment under the UN Sustainable Development Goals (SDGs) 2030, and the Demand Side Management Strategy which aims to reduce 30 percent of electricity and water consumption by 2030," he added.

"As a socially responsible government organisation, DEWA has several integrated programmes, initiatives and awards every year to encourage a responsible lifestyle in electricity and water consumption."

DEWA's efforts have resulted in significant savings over the past years. Its conservation programmes and initiatives have achieved cumulative savings of 2.6 terrawatt hours (TWh)

of electricity and 8.5 billion gallons of water between 2009 and 2020. This is equivalent to saving AED1.5 billion and reducing 1.136 million tonnes of carbon emissions, he noted.

DEWA harnesses the latest disruptive technologies and Fourth Industrial Revolution applications to provide smart and innovative services that help customers reduce their electricity and water consumption, limit waste, discover leakages, and fix interruptions without contacting DEWA.

In this regard, DEWA launched the Smart Response Service for electricity and water technical notifications and the High Water Usage Alert. These initiatives have saved more than 3.7 billion gallons of water and more than AED204 million in savings for customers till date. This is equal to savings of AED195 million.



# Dubai Municipality awarded for applying AI in wastewater treatment process

Dubai Municipality won the Ideas Arabia international award, organised by Dubai Quality Group on March 7, 2021, in the "Sustainability" category, through the initiative "Applying Artificial Intelligence System to Monitor and Control Wastewater Treatment Processes at Jebel Ali Plant."

Eng. Mohammad Al Rayes, Director of Sewage



Treatment Network and Plants Department at Dubai Municipality, said: "The initiative aims to implement a smart and innovative system that allows automatic and self-control and tuning of the aeration level of treated wastewater.

"This contributes to improving the quality of the water produced after treatment, which will be reflected in a positive way for raising the level of customer and beneficiary satisfaction."

He added, "This initiative comes in response to the strategic objectives of Dubai Municipality, which are: providing smart and integrated services and solutions, protecting the environment and sustaining its natural resources, and implementing pioneering sustainable systems."

He added that the implementation of the initiative

contributed to reducing the electrical energy consumption required for operation, raising the efficiency of the jets operating on aeration through automatic operation, optimal investment of the necessary human resources and raising the efficiency and quality of productivity.

In addition, it will also improve the quality of the water produced after treatment due to the oxygen ratio control.

"Obtaining this award is considered a pioneering step for Dubai Municipality in the field of implementing vital projects and operating them in line with the concepts of Artificial Intelligence and its applications in the field of sustainability adopted globally, in addition to being a great incentive to pursue, study and elicit knowledge from international best practices," he added.

## Low carbon oil to play central role in energy transition: ADNOC Group CEO

Dr. Sultan Ahmed Al Jaber, Minister of Industry and Advanced Technology, and Managing Director and Group CEO of the Abu Dhabi National Oil Company (ADNOC), said that will play a central role in the energy transition.

Speaking at CERAWeek held on March 3, 2021, alongside Vicki Hollub, CEO of Occidental, during



The UAE is uniquely positioned to provide lower carbon oil and gas for as long as the world still relies on hydrocarbons energy

a virtual panel session, Dr. Al Jaber explained that the UAE is uniquely positioned to provide lower carbon oil and gas for as long as the world still relies on hydrocarbons energy.

"When it comes to low carbon oil and gas, the UAE has a dual advantage; a leadership that has always put environmental protection first, and a natural advantage, because our geology gives us some of the least carbon-intensive oil in the world," Dr. Al Jaber said and went on to explain that the UAE has been preparing for the energy transition for over 15 years.

"Rather than shy away from it, we have always seen the energy transition as an opportunity to diversify and develop our economy. As the founding CEO of Masdar, I was closely involved in growing the UAE's renewable investments, and today, the UAE has three of the largest and



*ADNOC is delivering on its mission to reduce its carbon intensity by a further 25 percent over the next 10 years*



lowest-cost solar projects in the world with significant renewable energy projects in thirty countries globally.

"Having said that, we also understand that the world will still need oil and gas for many decades to come, so our mission at ADNOC is to provide that oil and gas as responsibly as possible."

ADNOC is delivering on this mission as it reduces its carbon intensity by a further 25 percent over the next 10 years, Dr. Al Jaber said, adding that the company is exploring the potential of new fuels such as Hydrogen, which shows 'great promise as a close to zero-carbon fuel' that could be produced at scale as part of ADNOC's existing hydrocarbon value chain.

"In short, ADNOC will continue to commercialise opportunities that strengthen the UAE's position

at the center of gravity of an integrated energy mix," he added.

Responding to a question on climate change from the moderator of the session, the leading energy economist and Pulitzer-Prize winning author Dr. Daniel Yergin, Vice Chairman of IHS Markit, Dr. Al Jaber stressed the UAE will continue its role as a regional leader and convener of progressive climate action, building on its record as the first country in the region to sign the Paris Accords.

He highlighted the importance of carbon capture utilisation and storage (CCUS) in the fight against climate change and said ADNOC saw the technology as a 'game-changer' when it introduced it in the region four years ago by building the region's first and largest industrial-scale CCUS facility. "The truth is, there is no credible way of reaching global climate goals without the



widespread adoption of CCS and this goes beyond just the oil and gas industry. In fact, I see an important role for CCS across sectors that are hard to decarbonise and use the most energy such as heavy industry manufacturing and chemicals. And ADNOC is ready to partner with others within and outside our industry to enable wider CCS adoption," Dr. Al Jaber continued.

"With vaccines rolling out around the world, 2021 is looking brighter. Here in the UAE, we have a very proactive vaccination programme. More than six million doses have been administered so far and we are closing in on 50 percent coverage across our entire population – the second-highest rate in the world.

"Vaccination coverage is one of the keys to recovery. The other is economic activity. In response to the pandemic, governments have

been quick to unleash stimulus like we have never seen before. There is likely more on the way, and while we should remain vigilant about potential inflationary risks, we should acknowledge leaders around the world for acting quickly decisively.

"Looking regionally, we see that one of the major powerhouses of the global economy, China, has already recovered in GDP terms, and is back to robust growth. And we expect another key player in the global economy, the US, to return to its pre-COVID-19 level of GDP this year and continue growing into 2022," Dr. Al Jaber noted.

He pointed out the rebound in oil demand has also been robust from last year's low of around 75 million barrels per day. "Global consumption is currently around 95 million barrels per day and we expect it to rise above pre-COVID-19 levels by the end of this year."



*Global consumption of oil is currently around 95 million barrels per day and is expected to rise above pre-COVID-19 levels by the end of 2021*



Stressing the need for the oil and gas industry to focus on 'what we can control,' Dr. Al Jaber explained how ADNOC adopted this approach as part of its transformation.

"Over this period, we have focused on improving our performance and enhancing efficiency throughout our operations. For ADNOC, we believe one of the essential enablers for increased efficiency is technology. For example, through technology upgrades to our drilling business, which is the largest in the region, we have driven efficiency gains of more than 35 percent, enabling substantial cost savings.

"At the same time, we remain focused on capital efficiency by proactively managing our asset and resource base, while attracting top tier global investors to the trusted, business-friendly environment of the UAE. In short, to remain

competitive, you have to be a low-cost producer, and we continually focus on ways to enhance our position as one the lowest cost producers in the world," he added.



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Answers: (1) WATER (2) POLLUTION (3) HEAT WAVE (4) MOUNTAINS  
(5) ZOOLOGY (6) HURRICANE (7) DROUGHT (8) WILDFIRE

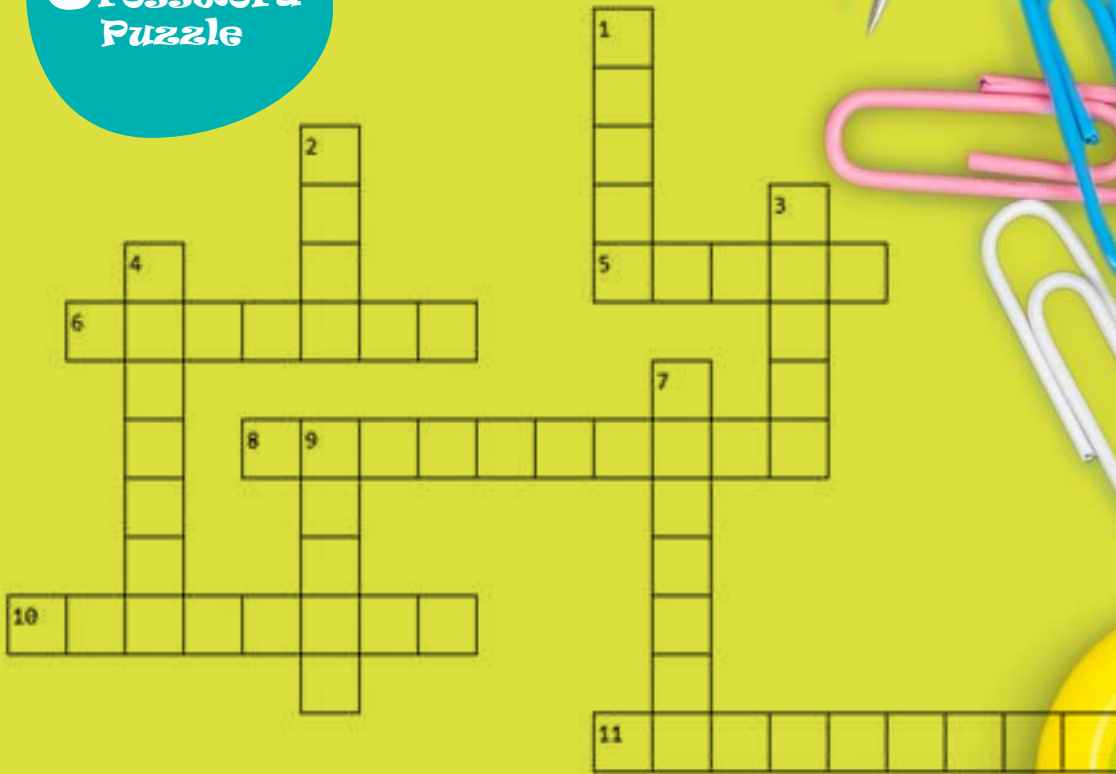
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RESOURCES  
GAS  
VEGANISM  
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SPECIES  
FOSSILS  
RAINFALL  
OIL  
ENERGY  
HATER  
EARTH  
AGRICULTURE  
LANDSLIDE  
GLOBE  
CLIMATE



# Crossword Puzzle



## Across

5. Produced by or using the sun's light or heat.
6. The continuous absence of rain, thus causing the land to dry up.
8. The whole mass of air that surrounds the Earth.
10. A system in which waste materials are buried under the ground.
11. Restored or replaced by natural processes.

## Down

1. Gases and vapor (usually harmful).
2. Polluted air which is a mixture of smoke and fog.
3. Material that is left over or that is unwanted after something has been made, done, used, etc..
4. The process by which something is eroded or worn away.
7. To send (used newspapers, bottles, cans, etc.) to a place where they are made into something new.
9. Containing poisonous substances.

Answers: (1) Fumes (2) Waste (3) Smog (4) Erosion (5) Solar (6) Drought (7) Recycle (8) Atmosphere (9) Toxic (10) Landfill (11) Renewable

**WORD OF THE DAY:****RENEWABLE RESOURCE****What is a renewable resource?**

A renewable resource is a resource which can be used repeatedly and replaced naturally. Renewable energy is made from resources that nature will replace, like wind, water and sunshine. Renewable energy is also called "clean energy" or "green power" because it doesn't pollute the air or the water.

Gasoline, coal, natural gas, diesel, plastics are other fossil fuels are not renewable. They take millions of years to be made, and cannot be renewed in a human's, or even a nation's lifetime.

**Why don't we use renewable energy all the time?**

Unlike natural gas and coal, we can't store up wind and sunshine to use when we need to make more electricity. If the wind doesn't blow or the sun hides behind clouds, there sometimes isn't enough power for everyone.

**TYPES OF RENEWABLE RESOURCES:**

- **Solar Energy:** Solar power is the technology of obtaining usable energy from the light of the sun. Solar energy has come into use where other power supplies are absent, such as in places off from the national electrical grid and in space.
- **Wind Energy:** Wind power is using the energy of wind to do something useful. Wind has been used since ancient times to move ships, and for hundreds of years to pump water or grind corn and grain into flour, now it is usually changed into electricity using wind turbines.
- **Hydropower:** Hydropower is changing the energy of moving water into more useful forms. Even in ancient history hydropower was used for irrigating crops and milling of grain into flour, and later for textile manufacture (making cloth) and running sawmills to cut wood.
- **Geothermal:** Geothermal energy uses the heat from deep underground to make electricity. It can be used to produce steam which goes up a pipe, which then pushes a turbine.
- **Biomass:** Biomass includes sawdust and other leftover parts of trees or lumber. It can also be grease and food waste, straw, and plants grown for energy. Some of this is burned to make electricity; some is made into biogas or biofuel as a replacement for gasoline.

Small write up on tidal



# EARTH DAY 2021

Earth Day is celebrated every year on the 22nd of April! Earth Day 2021 will mark the 51st anniversary of this holiday. Typically, Earth Day is assigned a different theme or area of focus each year; this year's theme is "Restore Our Earth."

The theme is based on the emerging concept that rejects the idea that our only options to save the planet are to reduce or adapt to the impacts of climate change and other environmental damage. Scientists, non-governmental organizations, business, and governments worldwide now are looking at natural system processes and emerging green technologies to restore the world's ecosystems and forests, conserve and rebuild soils, improve farming practices, restore wildlife populations and rid the world's oceans of plastics.

Most years, Earth Day events range from river cleanups to removals of invasive plants. With social distancing still in place for many of us this April, Earth Day has gone digital. Virtual events, such as environmental lectures and films, will take place on Earth Day.

## FACTS ABOUT EARTH DAY!

- The first Earth Day was celebrated on April 22, 1970.
- Earth Day originated in the US but became recognized worldwide by 1990.
- On the very first Earth Day, 20 million people gathered in the streets of America to protest the industrial revolution. An environmental movement was born as a result.
- Gaylord Nelson founded Earth Day while he was working as a US senator.
- On Earth Day 2012, more than 100,000 people rode bikes in China to reduce CO2 emissions and save fuel.
- In an Earth Day celebration in 2011, 28 million trees were planted in Afghanistan by the Earth Day Network.
- In Panama, 100 endangered species of orchids were planted and maintained to prevent their extinction in honor of Earth Day



APRIL 22

EARTH  
DAY

What can you do  
to help?

### Things to Do...

- ☒ Use reusable bags! \_\_\_\_\_
- ☒ Print less paper! \_\_\_\_\_
- ☒ Volunteer for a cleanup drive! \_\_\_\_\_
- ☒ Create a compost pile! \_\_\_\_\_
- ☒ Carry your own water bottle! \_\_\_\_\_

COLOUR ME!





# BMW Group Becomes First Customer For UAE's Solar-Powered Celestial Aluminium

Emirates Global Aluminium (EGA) has announced that BMW Group is the first customer for EGA's CelestiAL aluminium, made with the power of the desert sun.

EGA has supplied metal to BMW Group since 2013 for use in the German carmaker's engines and other parts. EGA will supply 43,000 tonnes of CelestiAL aluminium to BMW Group per year.



which will reduce BMW Group's emissions by 222,000 tonnes of CO2 per year.

EGA's CelestiAL metal will cover almost half the annual requirements of Plant Landshut, the BMW Group's only production facility for light metal casting in Europe. Last year, Plant Landshut produced 2.9 million cast metal components including engine parts such as cylinder heads and crankcases, parts for electric drive trains, and vehicle body parts.

EGA's CelestiAL aluminium is made using electricity generated at the Mohammed bin Rashid Al Maktoum Solar Park, located in the desert outside Dubai and operated by Dubai Electricity and Water Authority. EGA began production of CelestiAL in February this year, the first-time solar power has been used to produce aluminium commercially worldwide.

Producing aluminium is energy intensive and generating electricity accounts for some 60 per cent of the global aluminium industry's greenhouse gas emissions. The use of solar power significantly reduces the emissions associated with aluminium smelting.

Abdulnasser bin Kalban, Chief Executive Officer of EGA, said, "Aluminium is lightweight, strong and infinitely recyclable, and it has an important role to play in developing a more sustainable society and making modern life possible. One key example of this is by improving the efficiency of vehicles through reducing their weight. But it also matters how sustainably aluminium is made. Solar aluminium is a step forward – using a natural and abundant source of energy in our desert environment to make a metal that is vital to our planet's future."

More than 930 million tonnes of food sold in 2019 landed in waste bins, according to new UN research released in March this year, in support of global efforts to halve food waste by 2030.

Produced by the UN Environment Programme (UNEP) and partner organisation WRAP, the Food Waste Index Report 2021, reveals that

## Wasting Food Feeds Climate Change

60

FOOD WASTE



New UN environment reports  
17 percent of all food  
consumed is dumped having  
substantial social and  
environmental impacts

between food wasted in homes, restaurants and shops, 17 percent of all food is just dumped. Some food is also lost on farms and in supply chains, indicating that overall a third of food is never eaten.

The study represents the most comprehensive food waste data collection, analysis and modelling ever done, and offers a methodology for countries to accurately measure loss.

"If we want to get serious about tackling climate change, nature and biodiversity loss, and pollution and waste, businesses, governments and citizens around the world have to do their part to reduce food waste," said Inger Andersen, Executive Director of the UNEP.

Although food waste had been thought of as a problem mostly affecting rich countries, the



## *More than 930 million tonnes of food sold in 2019 landed in waste bins*

report found levels of waste were surprisingly similar in all nations, though data is scarce in the poorest countries.

The study reveals that households discard 11 percent of food at the consumption stage of the supply chain, while food services and retail outlets waste five and two percent, respectively.

This has substantial environmental, social and economic impacts, according to the report, which points out that eight to ten per cent of global greenhouse gas emissions are associated with unconsumed food. In 2019, some 690 million people were impacted by hunger and three billion were unable to afford a healthy diet.

Against that backdrop and with COVID-19 threatening to exacerbate these numbers, the study urges consumers not to waste food at home. It also pushes for food waste to be included in Nationally Determined Contributions (NDC), plans through which countries commit to increasingly ambitious climate actions in the Paris Agreement.

Meanwhile, target 12.3 of the Sustainable Development Goals (SDGs) aims to halve per-capita global food waste at retail and consumer levels and minimize food losses along production and supply chains.



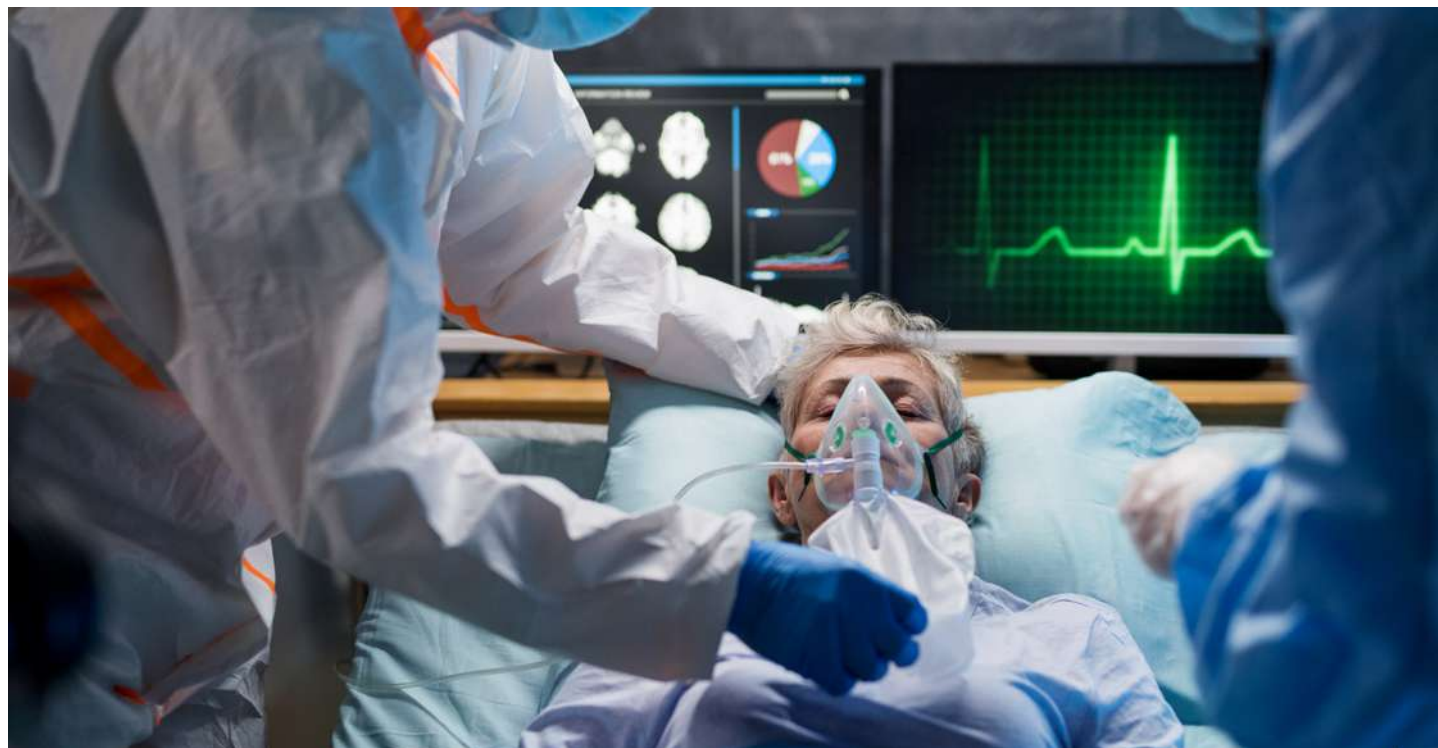
While the household breakdown between edible and uneatable food, like shells and bones, is available only in select high-income countries, there is a lack of information in lower-income countries where proportions may be higher. It is crucial to fill this knowledge gap, according to the report.

UNEP will launch regional working groups to aid countries' capacities to measure and record food waste in time for the next round of SDG 12.3 reporting in late 2022. It will also support these countries as they develop national baselines to track progress towards the 2030 goal, and design strategies to prevent food waste.

One year from the onset of the pandemic, recovery spending has fallen short of nations' commitments to build back more sustainably.

An analysis of spending by leading economies, led by Oxford's Economic Recovery Project and the UN Environment Programme (UNEP), finds only 18.0% of announced recovery spending can

## Are we on track for Green Recovery?



A comprehensive analysis of COVID-19 related spending of leading economies reveals that only \$368bn of \$14.6tn was green

be considered 'green'. The report: 'Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery Spending', calls for governments to invest more sustainably and tackle inequalities as they stimulate growth in the wake of the devastation wrought by the pandemic.

The most comprehensive analysis of COVID-19-related fiscal rescue and recovery efforts by 50 leading economies so far, the report reveals that only \$368bn of \$14.6tn COVID-induced spending in 2020 was green.

UNEP's Executive Director, Inger Andersen: "Humanity is facing a pandemic, an economic crisis and an ecological breakdown - we cannot afford to lose on any front. Governments have a unique chance to put their countries on sustainable trajectories that prioritize economic opportunity, poverty reduction and planetary



*Only 18.0% of announced COVID-19 recovery spending can be considered 'green'*



health at once - the Observatory gives them the tools to navigate to more sustainable and inclusive recoveries.”

Brian O’Callaghan, lead researcher at the Oxford University Economic Recovery Project and the report’s author: “Despite positive steps towards a sustainable COVID-19 recovery from a few leading nations, the world has so far fallen short of matching aspirations to build back better. But opportunities to spend wisely on recovery are not yet over. Governments can use this moment to secure long-term economic, social, and environmental prosperity.”

The report emphasizes that green recovery can bring stronger economic growth, while helping to meet global environmental targets and addressing structural inequality. To keep decades of progress against poverty from unwinding, low-

income countries will require substantial concessional finance from international partners.

It raises five key questions for the road to sustainable recovery:

- What is at stake as countries commit unprecedented resources to recovery?
- What spending pathways could enhance economic recovery and environmental sustainability?
- What is the role of recovery spending in addressing inequalities exacerbated by COVID-19?
- What kind of recovery investments countries are currently making to tackle climate change, nature loss, and pollution?

*\$86.1bn announced for green transport through electric vehicle subsidies, investments in public transport, cycling and walking infrastructure*



- What more needs to be done to ensure a sustainable and equitable recovery?

According to the report, on the whole, so far, global green spending “has been incommensurate with the scale of ongoing environmental crises,”

### **Key findings of the analysis in terms of recovery spending:**

- \$341bn or 18.0% of spending was green, mostly accounted for by a small group of high-income countries. Global recovery spending has so far missed the opportunity for green investment.
- \$66.1bn was invested in low carbon energy, largely thanks to Spanish and German subsidies for renewable energy projects and hydrogen and infrastructure investments.
- \$86.1bn announced for green transport through electric vehicle transfers and subsidies, investments in public transport, cycling and walking infrastructure.
- \$35.2bn was announced for green building upgrades to increase energy efficiency, mostly through retrofits, notably in France and the UK.
- \$56.3bn was announced for natural capital or Nature based Solutions (NbS) ecosystem regeneration initiatives and reforestation.
- \$28.9bn was announced in green R&D. Green R&D includes renewable energy technologies, technologies for decarbonising sectors such as aviation, plastics, and agriculture, and carbon sequestration. Without progress in green R&D, meeting the Paris Agreement targets would require far-reaching pricing and lifestyle changes.



# Exploring The Long-Standing Sociocultural Connection Between Falcons And Humans

Falcons are important birds, both biologically and culturally in the MENA region and beyond.

In a new review article drawing upon more than 150 scientific papers, researchers from the Center for Genomics and Systems Biology at NYU Abu Dhabi have examined the diversity, evolutionary history and genomics of falcons in

RESEARCH



the context of their conservation and interactions with humans. The researchers offer perspective on the remarkable potential of utilizing new genomic approaches to expand our understanding of these areas.

Over thousands of years, humans and falcons have developed unique relationships through falconry, religious rituals, conservation efforts and other interactions. Yet, from an evolutionary perspective, falcons remain an enigma.

To date, researchers have likely only captured a very small fraction of genetic variation within falcon species. Most of the genes, or alleles that could be responsible for observable variation in falcons remain unknown.

In the article, published in the journal, *Ecology and Evolution*, authors NYUAD Postdoctoral Associate at the Evolutionary Genomics Lab

Justin Wilcox, NYUAD Program Head of Biology Stéphane Boissinot, and NYUAD Assistant Professor of Biology Youssef Idaghdour write that falcons have experienced several recent adaptive radiations, or development of new subspecies, around the world. This newly developed diversity, which has resulted in many “genomic peculiarities”, means there is incredible potential for genome-wide approaches to studying falcons.

The high levels of diversity in falcons also makes them exceptional candidates for studying how and why new species arise at the genomics level. Collectively, this research has great potential to inform conservation efforts in other species and provide insights into the process of domestication and adaptation to humans in wild animals.

## Pesticides: A Threat to Ecosystems & Human Health

According to news reported in *EcoWatch*, a US study has found high incidence of central nervous system cancer in children born within 4 kms from agricultural land that was sprayed with pesticides during the period of 1998 - 2011. The California-based study covered more than 800,000 agricultural workers although mothers not working in agriculture also exposed their children to the danger of pesticides.

These results are quite worrisome for our region where villages are part of the large agricultural schemes. This is a reality in countries like India, Sudan, and Egypt where more farmland is being developed over time. We certainly need



**Dr. Eisa M. Abdellatif**

Chief Technical Advisor  
Zayed International  
Foundation for the  
Environment

more policy interventions to reduce pesticide exposure of population in agricultural fields.

We also need to seriously consider toxicity of pesticides to non-target species such as pollinators and aquatic life as well as on ecosystems and biodiversity. It was found that the use of highly toxic pesticides such as pyrethroids and neonicotinoids in the US has doubled the toxicity during the period 2005 - 2015. These chemicals were found to clearly impair learning ability, memory, foraging behavior, and pollination in bees. The increased use of herbicides also affected ecosystems, mainly terrestrial plants.

My personal experience with this issue goes back to the 1980s and 90s when I was working on pesticide poisoning in Sudan. I was studying the environmental and health impact of a pesticides dump where large quantities of DDT was buried inside an agricultural chemicals' storage area. We found DDT in mother's milk and human blood while children suffered from allergies and chronic diseases. We had to mobilize the local community to demand rehabilitation of the area and prevent the continuous transfer of chemicals from the store to the houses via wind and rain. This was in addition to the impact on livestock and biodiversity.

Pesticides present a clear threat to the future of life on Earth and to Humanity. We seriously need to consider developing green alternatives.



**THE FUTURE OF OUR WORLD  
IS IN OUR HANDS.**

**ACT NOW!**



**Zayed International Foundation for the Environment**



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