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A monthly publication issued by Zayed International Foundation for the Environment





HH Sheikh Mohammed bin Rashid addresses Leaders' Summit on Climate

Reimagine the Future: The future of cars is electric!

We are honored to extend our congratulations to





His Highness SHEIKH KHALIFA BIN ZAYED AL NAHYAN President of the United Arab Emirates



His Highness SHEIKH MOHAMMED BIN RASHID AL MAKTOUM

Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai

And Their Highness Members Of The Supreme Council Rulers Of The Emirates And The People Of United Arab Emirates On The Occasion Of The UAE Golden Jubilee "Year Of The 50th"

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Limate change has received considerable and early attention in the UAE, and as a strong advocate of environmental protection, the country has renewed its resolve and ambition to address the effects of climate change through numerous efforts. Accordingly, the UAE has adopted important and relevant policies such as the economic diversification policy, focus on green economy principles, energy sources diversification policy, impetus to renewable and clean energy, and taken substantive measures to promote energy efficiency, sustainable transport policy, sustainable urban planning, etc.

Earlier this year, the country took a new step on the path to a climate-safe future with the submission of its second nationally determined contribution where it pledged to reduce its greenhouse gas emissions by 23.5 per cent by 2030 through regulatory and technology interventions.

Chairman's Message

Having invested over \$40 billion in clean energy projects locally, the UAE's clean power capacity, including solar and nuclear, which stood at just above 100 MW in 2015 is now on track to reach 14 GW by 2030. In addition, ambitious plans are in place for reducing energy





Prof. Mohammed bin Fahad Executive Editor

consumption and improving energy efficiency across demand sectors.

Right from the beginning, the UAE has adopted an approach that seeks to address risks and challenges while harnessing opportunities for growth and diversification. In its transition to a green economy, the nation is focusing on a long-term climate and energy policy pathway through the implementation of its National Climate Change Plan 2050 and the National Climate Change Adaptation Program, both adopted in 2017, in addition to other relevant policies and programs.

The efforts of one or a few countries alone will not pave the path for a climate-safe future. All countries should step up efforts to strengthen their climate commitments. The economic benefits of early, decisive action cannot be overlooked, and continuing to invest in climate solutions, adaptation, and resilience, while also promoting innovations is the way forward to increase the scope for meaningful outcomes.

Contents





COVER STORY

Ruler of Dubai reaffirms UAE's commitment to tackle climate crisis at virtual Leaders' Summit on Climate



FOOD SECURITY UAE aims for top status in global food security index by 2051



CONSERVATION: Emirates Marine Environmental Group, Procter & Gamble launch P&G Dubai Mangrove Forest

ECO-DESIGN

Bangladesh

AUS architecture

students propose winning sustainable

design for school in

24

EMERGING TECHNOLOGIES RTA and Cruise sign deal to operate selfdriving taxis and ridehailing vehicles



SUSTAINABILITY: Ruler of Sharjah inaugurates Khor Kalba Mangrove Center



AVIATION: Etihad Airways Operates First ecoFlight of 2021, saves 60kg CO2 emissions

> ELECTRIC MOBILITY 2021 is said to be the pivotal year for EVs with a deluge of new models entering the market



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GREEN CITY: San Francisco implements innovative, comprehensive approaches to urban sustainability



KIDS' UNIVERSE

Interesting trivia, general knowledge, games, and more, for the young ones



REFORESTATION: UAE-based Goumbook launches new global reforestation and offsetting program for UAE companies



Upcoming events

World Migratory Bird Day

Date: May 8

Virtual Event

This campaign aims to raise awareness for the conversation of migratory birds and the habitats they live in. The theme for WMBD 2021 is 'Birds Connect Our World'.

Through a series of virtual activities being undertaken on the three major flyways of migratory birdsand the resulting exchange of information, WMBD aims to increase the level of awareness about the threats that birds are facing. By comparing their experiences and concerns, sharing their stories and activities, people around the world will make their voices and actions reach out even further, throughout the flyways, underlying the fact that bird conservation is, indeed, a global issue.

World Bee Day

Date: May 20 Virtual event

Bee Day celebrations raise awareness about the threats to pollinators like bees by human activities.

Under the 2021 theme, "Bee Engaged", the United Nations is focusing upon the bee-keeping awareness and importance of bee derived products.

International Day for Biological Diversity

Date: May 22 Virtual event

From nature-based solutions to climate, health issues, food and water security, and sustainable livelihoods, biodiversity is the foundation upon which we can build back better.

Under the slogan, "We're part of the solution", Biodiversity Day 2021 will be commemorated through an online-only campaign which aims to encourage people to become actively involved in the reduction of biodiversity loss that is responsible for more extinction of life on this planet.

Sheikh Mohammed bin Rashid addresses world leaders at Leaders' Summit on Climate

is Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai, has reaffirmed the UAE's commitment to transform the challenges of climate change into future opportunities for the next generation.

While addressing US President Joe Biden's virtual 'Leaders' Summit on Climate', he also



The Ruler of Dubai was one of the 40 world leaders invited by US President Biden to the Leaders' Summit on Climate which aimed to galvanize efforts by the major economies to tackle the climate crisis committed to working closely with the US, the global community and the private sector to make a step-change in the global response to climate change.

His Highness Sheikh Mohammed bin Rashid said: "Although the UAE is one of the largest oil exporting countries in the world, we made a strategic decision 15 years ago to invest in renewable energy and low-carbon technology."

His Highness noted the UAE's progress in the energy sector: "Today, we operate two of the largest solar plants in the world and we will soon break ground on a third that is even larger.

"The UAE is home to the International Renewable Energy Agency, and we also invested in successful renewable projects in 70 countries around the world by providing concessional "We must unite our efforts to safeguard the planet for future generations or risk paying heavier costs in the future." - HH Sheikh Mohammed bin Rashid



capital that makes sound economic sense. We believe that renewable energy is the answer to building a better future for humanity."

The Ruler of Dubai added: "In addition, the UAE was the first country in the Middle East to pioneer carbon capture and storage technology, and our oil sector is the lowest carbon emitter in the world." His Highness Sheikh Mohammed announced that the UAE will partner with other critical climate champions to launch Agricultural Innovation Mission for Climate (AIM-C) a new initiative to support agricultural research and development, and innovation for food systems over the next five years.

"Climate change is not a temporary concern, but a global challenge that is here to stay. We must unite our efforts to safeguard the planet for future generations or risk paying heavier costs in the future," His Highness stated.

Noting the UAE's commitment to concerted climate action His Highness Sheikh Mohammed bin Rashid concluded: "Today, we are ahead of a new opportunity with the leadership of President Biden, and we look forward to working together to unlock the major opportunities born from the pressing challenge of climate change."

The Leaders' Summit sets a milestone on the road to the UN Climate Change Conference (COP26) this November in Glasgow and is designed to increase the chances for meaningful outcomes on global climate action at COP26.

The Ruler of Dubai was one of the 40 world leaders invited by US President Biden to the Leaders' Summit on Climate which aimed to galvanize efforts by the major economies to tackle the climate crisis.



UAE's scheme for climate-ravaged agriculture

The Agricultural Innovation Mission for Climate (AIM-C), launched by the UAE in partnership with Britain, the US and others, will develop technology that helps farmers in developing nations cope with the effects of climate change.

"This is a new initiative to support research and development and innovation for food systems over the next five years," His Highness said while announcing the project at the virtual Leaders' Summit on Climate.

Brazil, Denmark, Israel, Singapore, Australia and Uruguay are also involved in the plan.

The planet has so far warmed by 1.2°C and is headed for at least 3°C this century. Globally, farmers are struggling against the effects of increasingly frequent droughts, flash floods and soil degradation.

According to the UN's Food and Agricultural Organization, climate change has affected rainfall patterns, drought, flooding and the distribution of locusts and other pests, threatening the livelihoods of smallholder and subsistence farmers.

The UAE has over the decades developed knowhow in irrigation, water management to use its arid soil for farming. The mission will focus on research and development of farming innovations. It remains unclear how much funding is associated with the project.

In his address, Sheikh Mohammed called on governments to unite efforts to safeguard the planet for future generations.

The Agricultural Innovation Mission for Climate (AIM-C), launched by the UAE, will develop technology to help farmers in developing nations cope with the effects of climate change



At the same session, Microsoft co-founder and philanthropist Bill Gates praised the initiative, saying subsistence farmers in poor countries needed help to cope with the effects of climate change.

"We have to address the climate impacts that are going to come because of the heating that's already taken place," Gates said. "This means accelerating agricultural innovation so that subsistence farmers can withstand the shocks that come with more unpredictable weather."

Dr. Sultan Al Jaber, UAE Minister for Industry and Advanced Technology and Special Envoy for Climate Change, pointed out that the plan promised "far-reaching and long-lasting socioeconomic benefits".

"By investing in innovation and technology in the

agricultural sector, we can unlock opportunities for effective mitigation and adaptation, feed growing populations in resource-stressed areas, and create economic growth," Dr. Al Jaber said.

US climate envoy John Kerry, who recently visited Abu Dhabi, said he was proud to be involved in the initiative.

"I was impressed by the ingenuity being applied to food and climate challenges during my recent trip to the UAE and know that we all stand to benefit by sharing best practices and raising innovation ambition when it comes to climatesmart agriculture," Kerry said.

"AIM for Climate can serve as a unique platform for co-operation among many countries on these shared challenges."

Speaking on the second day of the two-day

COVER STORY



climate summit, US President Biden said America would boost co-operation with India, the UAE, Britain, Russia and other nations in efforts to tackle pollution, rising temperatures and the impacts of climate change.

At his gathering of 40 world leaders and business and technology chiefs, Biden announced plans to work with India and Sweden on cleaning up the industrial sector and creating carbon-free power networks with the UK.

He added: "And the agricultural sector, where we will launch the agriculture innovation mission for climate with the United Arab Emirates and other partners."

UAE is a key player in climate action

The UAE continues to strengthen its position as a key player in climate action by developing

innovative plans to establish a low-carbon economy. Last December, the UAE became a trailblazer in the region when it submitted its second Nationally Determined Contribution (NDC) to the Secretariat of the UN Framework Convention on Climate Change.

The second NDC underscores the UAE's unwavering commitment to reduce greenhouse gas emissions to 23.5 percent compared to business-as-usual emissions for the year 2030, which translates into an absolute emissions reduction of around 70 million tonnes.

The UAE's efforts to reduce emissions include boosting reliance on clean energy, expanding its carbon capture, utilisation, and storage capacity, conserving blue carbon ecosystems, promoting sustainable agriculture, and utilising environmentfriendly waste management systems. The UAE continues to strengthen its position as a key player in climate action by developing innovative plans to establish a low-carbon economy



The UAE is a regional pioneer in adopting effective public policies, including the policies on economic diversification focusing on transforming into a green economy, diversifying energy sources through enhancing its renewable energy production capacity, and enhancing sustainable urban planning and efficiency across the energy and transportation sectors.

The UAE is also at the forefront regionally in terms of developing climate change policies since the signing of the Paris Agreement, where it initially committed to increasing the share of clean power to 24 percent of the total energy mix by 2021, raising the target soon after that to 50 percent by 2050.

With the US seeking to strengthen global partnerships towards mitigating the climate change fallout, the UAE continues to be a key

partner in this field through its efforts to reduce emissions, develop innovative solutions and provide financing, in addition to boosting its capacity in responding to climate change.

In April this year, the UAE further strengthened its role as a climate action leader by hosting the Regional Dialogue for Climate Action, with the participation of 10 major economies from the MENA region, along with John Kerry, US Special Presidential Envoy for Climate, and COP26 President Alok Sharma. The event focused on enhancing climate action efforts in preparation for COP26, to be held in Glasgow next November.

Aimed at delivering tangible results towards controlling the climate crisis, the Leaders' Summit on Climate is a key milestone on the road to COP26.



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UAE aims for top status in global food security index by 2051

The UAE's aim to further enhance food security in the country and attain number one ranking in the Global Food Security Index by 2051 were the key focus areas at a webinar titled "Agritech - Enhancing Food Security in the UAE", organised by DP World, UAE Region and Jebel Ali Free Zone (Jafza) in collaboration with the Middle East Economic Digest (MEED).



Efficient food supply chain, top priority of UAE leadership: Mariam Almheiri

The webinar was held virtually in the presence of Mariam bint Mohammed Almheiri, UAE Minister of State for Food and Water Security, who delivered a keynote speech and Mohammed Al Muallem, CEO & Managing Director of DP World, UAE Region and CEO of Jafza, who delivered the opening remarks.

Abdulla bin Damithan, Chief Commercial Officer, DP World, UAE Region; Djamal Djouhri, CEO, Al Ghurair Resources Oils and Proteins (AGROP) and Al Ghurair Foods (AGF), Al Ghurair; Ralph Nehme, Senior Director, AeroFarms participated in a panel discussion moderated by Richard Thompson, Editorial Director, MEED.

Almheiri said, "Ensuring the efficiency of the food supply chain is a top priority for our leadership in the UAE. Key players such as DP World, UAE Region and their flagship port and

The UAE's goal is to increase food production by 30-40 per cent by 2030



free zone play a pivotal role in enhancing the UAE's leading position as a global trade hub, and especially food trade. This supports our National Food Security Strategy in facilitating food trade, in which the strategy serves as a roadmap to overcome all food-related challenges via innovative solutions such as accelerated adoption of agricultural technology (Agritech), a strategic direction for the UAE. Agritech will help increase our domestic food production while minimising the use of water, one of the scarcest resources in our region."

"Agritech is transforming the UAE with a growing landscape of Controlled Environment Agriculture (CEA's) in the form of indoor greenhouses and vertical farms that typically use 95 percent less water than traditional farms," she added.

Sultan Ahmed bin Sulayem, Group Chairman and

CEO of DP World, said, "Food security has been a priority in the UAE since its inception. From being a country that primarily has vast stretches of desert land to now being a booming hub for Agritech, we have indeed come a long way. It is the concerted efforts of our wise leadership that have helped us attain a leading status in this sphere, whilst being a testimony of our commitment to achieve the Sustainable Development Goals."

DP World, UAE Region has been a key contributor to the growth of the F&B sector in the UAE and the region owing to its foodstuff, livestock, and agricultural products sector in Jafza that is valued at AED13.3 billion. The flagship free zone's dedicated F&B cluster is spread over an area of 1.55 million square metres and supports more than 4,700 port customers and hosts over 550 companies from more than 70 countries in Jafza.





Al Muallem said, "Our wise leadership has made great efforts to tackle the environmental challenges, including the inadequacy of water and rain, the consequences of climate change, global warming, the scarcity of fertile land, and the growing population with initiatives such as the National Food Security Strategy 2051 and the Emirates Food Security Council to enhance the flow of the food supply chain. In fact, in June last year, the Federal Cabinet approved a national system for sustainable agriculture to improve the efficiency of farms in the UAE, enhancing our self-sufficiency in food."

As part of the panel discussion, Bin Damithan said, "Supply chain has a pivotal role in the growth of any economy. Disruption in the supply chain has a direct impact on food security. There is huge scope on how we can achieve sustainability with technological innovation and management of food and agriculture with futuristic solutions. The recently launched F&B Terminal at DP World is a progression in achieving this goal, which is aligned with the country's vision to establish the UAE through Dubai as a leading innovation and F&B hub."

Djouhri said, "Dubai is the gateway to 61 percent of the UAE's F&B trade by value. However, despite being a nation that is largely food secure it is essential to carve a roadmap that will help us prepare for the challenges of the future, which can include increased pressure on demand and supply for food and water resources."

DP World, UAE Region, takes full advantage of its network that efficiently reaches global markets and over 3.5 billion consumers.

Commenting on the urgent need for sustainability

Agritech is transforming the UAE with a growing landscape of indoor greenhouses and vertical farms that typically use 95 per cent less water than traditional farms





Giving insights on urban agriculture, Henry Gordon Smith, Sustainability Strategist, Agriculture Consulting said, "According to a report by Fitch Solutions, the UAE consumer spending over 2021 in terms of real household spending is projected to reach AED505.6 billion in 2021. Higher spending power will lead to an increase in demand in the sector. To guarantee no food shortage, countries around the world can use the power of urban agriculture that can provide the global population with at least 10 percent of its fresh fruit and vegetable supply."





Sustainability and the new normal



The outcome will significantly impact whether or not we succeed in accomplishing the many urgent targets outlined in the UN Sustainable Development Goals (SDGs). Ver the past months, as we've wrestled with making near-term adjustments to our lives, we have been trying to understand what changes may result in longerterm alterations of societal and organizational behavior in the wake of the coronavirus disease 2019 (COVID-19) outbreak. We've drafted the following to outline a few changes that will resonate well beyond this current stage of acute stress, and influence how companies and government bodies operate. The outcome will significantly impact whether or not we succeed in accomplishing the many urgent targets outlined in the UN.

Sustainable Development Goals (SDGs)

And why are the SDGs relevant in this context? If we look at problems like public health in a vacuum, they may seem disconnected from the topic of sustainability. That thinking stems, in part, from inconsistent definitions of sustainability that are also often quite narrow, solely being limited to topics such as corporate reporting or climate change. Another contributor to this disconnect is the common tendency to treat individual problems as discrete and independent from other elements of complex adaptive systems in which they exist. In reality, the types of challenges outlined in each SDG are interdependent of many other SDGs. Challenges related to environmental degradation, climate change, and resource depletion are inextricably tied to human development, education, and inequality. All of these challenges are woven, in one form or another, into public health and how we tackle large-scale problems like the current pandemic. Here are a few headlines that will likely to be prominent as the impacts of the pandemic continue to unfold:

Supply Chain (In)visibility

This has been a time that we are acutely aware of the things on which we rely, and often take for granted. Many people haven't thought much about the anodyne topic of supply chains for rubber gloves and protective masks, but we certainly do now. Many businesses that may have felt a relative sense of security and control over their supply chains, now feel that the scale and complexity of these chains are greater than they originally understood. This sudden shock of realization will lead companies in a number of directions. Some companies will adopt fairly radical changes, including increasing local production and investing in increased capacity or redundancy (as opposed to just-in-time production), automation, or distribution production techniques such as 3-D printing of key products or components. Other companies will maintain similar supply chain models, but will strengthen their due diligence practices to better understand their exposure to supplier capacity and quality issues, security threats, social and environmental impacts, and overall business continuity practices. This will require strong management systems, risk intelligence, scalable technology, and skills to better engage suppliers to understand and manage risk further upstream.

Resilience Pivots from Concept to Practice

Several years ago, BSI authored the world's first standard on organizational resilience (BS 65000). Although the standard

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Inspiring trust for a more resilient world

was designed as a framework to understand and manage resilience, many people continued to struggle to understand such a large-scale, cross-disciplinary, and seemingly ambiguous topic. The pandemic has cast stark illumination on both effective and dangerously ineffective organizational practices. Exemplars include a Texas grocer that is running pandemic simulations and US government organizations that are rapidly deploying the build-out of temporary hospitals at scale. In the aftermath of the response, stronger organizations will take a sober look at their practices, and begin to develop their organizational practices, physical infrastructure, and human capital to better predict and respond to future risks. BSI is currently partnering with our clients to develop programs, risk models, skills development, and assessment of effectiveness in each of these areas so that when the next pandemic, cyberattack, or climate related risk happens, they are better prepared to respond.

Infrastructure Turnover (Physical & Behavioral)

The response to COVID-19 may lead us in a number of directions. One option is to pour significant capital into markets simply to keep the status quo afloat. As we know, that status quo does not lead to reduced inequality, material circularity, or meeting our 1.5 degree Celsius climate target. The other path deploys that enormous and rare funding opportunity to invest in the necessary infrastructure to reduce waste, strengthen resiliency, and transition from a carbon economy. Not only does that investment need to be into physical infrastructure, but also into education, human development, and the individual and organizational skills to support the behavioral changes that will enable advancement of the SDGs.

What Are We Measuring?

The global economy's success has been long measured across a range of topics with blunt instruments, such as GDP and quarterly returns, despite a dramatic evolution in potential measurement tools (e.g. computing power, satellite imagery, etc.). These traditional measurements have failed us in managing both this current COVID-19 pandemic and in protecting our environmental resources. Investors and insurers have only recently stepped up their demands of the business community in relation to sustainability impacts and continuity practices. BSI works with our clients on issues ranging from relatively simple environmental accounting to more challenging accounting of Scope 3 emissions in order to understand all of an organizations' costs - before regulators eventually catch up to force companies to account for them.

Cities React Fast

Even before the pandemic response, cities had become a crucible for experimentation in relation to resilience and sustainability. During the pandemic response, cities have demonstrated a similar ability to rapidly react to immediate constituent needs and make confident decisions about social distancing, especially when compared to lumbering federal bureaucracies beholden to a much wider range of stakeholders. Cities have a disproportionate impact from a sustainability perspective, for good or for ill, and



when they effectively leverage economies of scale and public transportation networks in distributing essential environmental and community services, hold the potential to reduce GHG emissions and drive innovation and economic development. BSI's work in this area leverages our experience in shaping the ISO 37101 standard on Sustainable Cities & Communities, which accounts for aspects such as resilience, responsible resource use, and social cohesion, among others. Look to cities to continue to pilot and adopt more innovative approaches to resiliency and sustainable development.

So how do we accelerate the modest progress we've made thus far in advancing the SDGs, and how do we define a new normal that supports regenerative systems and sustainable ways of working and living? Large-scale systems in which business and government operate will of course need to play a role. The business, finance, and insurance communities will need to continue to evolve their understanding of value. Sustainable practices strengthen long-term shareholder value and organizational resilience – full stop. The government has a role to play in aligning incentives with that evolved understanding of value, and through funding jobs focused on rebuilding our infrastructure to support the transition toward lower-impact forms of energy and transportation.

For those actors to adopt these changes, each one of us must channel both the collective wisdom and frustration of this experience to push entrenched centers of power to use this opportunity to act with both empathy and fearlessness. We have been forced to slow down, to appreciate the chirping of the birds and the importance of real human relationships. We're learning that we can survive without overconsumption of limited resources in the name of infinite growth. We're realizing that systems that don't effectively support stakeholder needs can be bad for some when things are going well but are simply broken when things don't go so well. Things that seemed weird not so long ago, like distance learning and reducing frequency of travel for work, are no longer a crazy experiment. This experience is teaching us that we can quickly and collectively change our behaviors. It is that ability to advance rapid, large-scale adaptation that we must embrace if we are to create a new normal that enables a regenerative and resilient world for this and future generations.

Would you like to learn more about how BSI can help you achieve your sustainability goals?

Visit: https://www.bsigroup.com/en-AE/topics/ sustainable-resilience/ Email: bsi.me@bsigroup.com Call: +971 4 336 4917

A 100% Self-Sustainable Mangrove Forest Opens in Dubai

Procter & Gamble (P&G) has accelerated its commitment to sustainability by unveiling P&G's Dubai Mangrove Forest project planted by the Emirates Marine Environmental Group (EMEG).

The mangrove forest planted in the Jebel Ali Wildlife Sanctuary marks a decisive action towards earth restoration by the creation of a



Emirates Marine Environmental Group, Procter & Gamble launch P&G Dubai Mangrove Forest forest in the desert coastline of the UAE.

Located on the Dubai coastline, the P&G Dubai Mangrove Forest itself will be set in an area comprising of coral reefs, mangroves, seagrass beds and a natural beach. The sanctuary selected for the Forest is a place of global significance, a United Nations protected reserve that is being managed by EMEG and has been included in the Ramsar List of Wetlands of International Importance. The initiative is in line with the Dubai 2040 Urban Master Plan that maps out a comprehensive future map for sustainable urban development in the city.

Major Ali Al Suweidi, President of EMEG, commented, "We are delighted to be announcing this unique initiative together with P&G and EcoMatcher. Nature alone can help us solve up to one-third of climate change. The aim of the Dubai A first-of-its-kind, the Dubai Mangrove Forest comprises of coral reefs, mangroves, and sea grass beds



Mangrove Forest is to help balance out Dubai's cosmopolitan impact in agreement with Dubai 2040 Urban Master Plan, which aims to expand green spaces focused on enhancing the population's well-being. Dubai Mangrove Forest will not only be used for foresting but also for animal rescue and species preservation."

Accelerating its commitment to environmental sustainability is a critical component of the P&G's growth strategy and its focus on innovation to improve consumers' lives. The company has aims to commit 2,021 acts of good this year – inspiring people to take action and spread kindness. The campaign builds on P&G's support of the United Nations' Sustainable Development Goals through Lead With Love, an ongoing campaign that touches on issue areas like community impact and environmental sustainability.

Omar Channawi, CEO of P&G Middle East, East &

West Africa and General Export Markets, added, "We are thrilled to see P&G's Dubai Mangrove Forest project come to life here in the UAE, our first Forest as part of P&G ForestsforGood Programme. P&G ForestsforGood is something we hope will flourish around the world. P&G has undertaken a large number of initiatives to help protect, improve and restore nature around the world. Regionally, this campaign is focused on helping bring nature back to life, and we felt it particularly significant for the regeneration to take place in the desert. The move aligns with Dubai 2040 Urban Master Plan's mission to double green areas to provide a healthy environment for residents and visitors."

The teams will be using this specially designated land next to the sea to plant a mangrove forest. Mangroves are an ideal natural climate solution as they use salt water that they self-filtrate,

GREEN DUBAI



removing irrigation from the equation and making them ideal for water conservation as well. They are also able to store three to five times more carbon than forests found on land, and also crucial to biodiversity health with three quarters of all tropical fish species being born within mangrove forests. P&G intends to plant new mangroves on the Jebel Ali site and adopt some mangroves that are older (4 or 5 years old) to maximize the future carbon sequestration and offsetting potential.

P&G has partnered with Hong Kong-based EcoMatcher for the initiative, which will allow it to see progress virtually through its technology platform. Using blockchain technology to ensure traceability, the aim of the program is to offer full transparency with tree-planting projects, allowing each individual to view their trees that have been planted through the EcoMatcher website in line with P&G's mission to ensure sustainable growth and accountability.

The Forest initiative also aligns with the UAE Vision 2021 objectives towards a more sustainable environment and is the latest in a series of innovative ecological initiatives P&G is putting its weight behind as a Force For Good. By 2030, P&G is committed to making a difference on all environmental footprint actions including becoming carbon neutral within this decade.





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RTA and Cruise sign deal to operate self-driving taxis and ride-hailing vehicles

H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council, witnessed the signing of an agreement between the Road and Transport Authority (RTA) and Cruise, a leading US-based autonomous vehicle company, as part of which Cruise will operate self-driving taxis and ride-hailing services in the emirate.



Hamdan bin Mohammed attends signing of agreement between 'RTA' and 'Cruise' The agreement will make Dubai the first non-US city in the world where Cruise will commercially operate these vehicles.

The deployment of these self-driving vehicles is expected to significantly improve road safety levels as over 90 percent of accidents are due to human errors. The all-electric vehicles are environmentally friendly and capable of serving a wide range of clients from different community segments, including seniors and people of determination.

This agreement will support Dubai's 2030 vision for self-driving technology, as part of which the emirate seeks to reduce transportation costs by AED900 million a year and save AED1.5 billion a year by reducing environmental pollution by 12 percent, as well as generate AED18 billion in annual economic returns by increasing the Dubai will be the first non-US city where the Cruise Origin, the first purpose-built all-electric, self-driving vehicle, will be launched



efficiency of the transportation sector in Dubai.

Mattar Mohammed Al Tayer, Director-General, Chairman of the Board of Executive Directors of the RTA, signed the agreement on behalf of RTA. Cruise's Chief Legal Officer Jeff Bleich signed on behalf of Cruise. The agreement was signed in the presence of Abdulla Al Basti, the Secretary General of The Executive Council of Dubai, Philip Frayne, Consul General of the United States in Dubai, and Ahmed Bahrozyan, Chief Executive Officer of The Public Transport Agency at RTA.

Sheikh Hamdan praised the agreement between the RTA and Cruise noting that it will raise the global profile of Dubai in self-driving transport and support efforts to transform Dubai into the smartest city in the world.

"This agreement, which is the first of its kind worldwide between a government entity and a leading developer of autonomous vehicles, and autonomous vehicle technology, is a major step towards realising Dubai's Self-Driving Transport Strategy aimed at converting 25 percent of total trips in Dubai into self-driving transport trips across different modes of transport by 2030," said His Highness Sheikh Hamdan.

Cruise's partnership with auto manufacturing giants gives them the ability to build their selfdriving cars on standard production lines, which will ensure the highest performance and safety standards. Among other factors, this has enabled Cruise to be the exclusive provider of self-driving taxis and ride-hailing services till 2029.

Dubai will be the first non-US city where the Cruise Origin, the first purpose-built all-electric, self-driving vehicle, will be launched.

Sharjah Ruler inaugurates Khor Kalba Mangrove Center

is Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, Member of the Supreme Council and Ruler of Sharjah, opened Khor Kalba Mangrove Center in Kalba City, as part of the emirate's vital projects to support environmental biodiversity and to preserve local wildlife.

His Highness was briefed on the various



Kalba set to be transformed into a vibrant cultural and tourism destination

departments that the center includes, and His Highness listened to a detailed explanation on center's facilities, its importance, and its main roles in preserving the environment.

Khor Kalba Mangrove Center was designed in a distinctive, innovative artistic and architectural style, inspired by the seashells of the sea hedgehog located in the reserve in a symbolic simulation of the environment that the center works to preserve with all its components.

In implementation of the directives of His Highness the Ruler of Sharjah, the Authority has rehabilitated Khor Kalba and added it to the network of reserves it manages and maintains, due to the importance of local environmental life.

Speaking at the opening, the Ruler of Sharjah

26

The new mangrove centre is part of Sharjah's efforts to support environmental biodioversity and preserve local wildlife



stated that Khor Kalba Mangrove Center contains many diverse organisms that Environment and Protected Areas Authority has worked to preserve and provide the appropriate environment for their proliferation and the continuity of their survival, whether on land or marine.

His Highness Sheikh Sultan Al Qasimi announced the mobile touristic car project, which will be implemented in the cities of Kalba and Khorfakkan, as it will provide visitors with the opportunity to wander through air-conditioned vehicles within specific paths that enable them to see the tourist sites and the picturesque views that characterize the two cities, indicating that the implementation of the project will suit the nature of each city will take three years.

The Ruler of Sharjah referred to many new projects that will be worked on Kalba, including

the Sports Sciences Academy, which is the first of its kind in the region, Al Thiqah Club for the Disabled, which will provide the opportunity to care for and rehabilitate people with disabilities in the field of sports, and Victoria International School advanced project in the educational aspect which will be worked on soon to provide boys and girls with advanced education.

His Highness explained that in addition to the tourism and educational projects, there are infrastructure projects such as roads, sanitation, housing, and health projects that include a hospital for treatment and dialysis.

Khor Kalba Mangrove Center has been designed in a distinctive, innovative artistic and architectural style, inspired by the seashells of the sea hedgehog located in the reserve in a symbolic simulation of the environment that the center works to preserve.

The opening was attended by Sheikh Saeed bin Saqr Al Qasimi, Deputy Head of the Ruler's Office in Khorfakkan, Sheikh Haitham bin Saqr Al Qasimi, Deputy Head of His Highness the Ruler's Office in Kalba, Mohammad Obaid Al Zaabi, Head of the Protocol and Hospitality Department, and a number of notables of the city.



UAE empowers youth to actively shape green recovery

The UAE will harness the power of youth to bring about green recovery of the country over the next 50 years, authorities said. The ongoing pandemic has bolstered the appreciation of nature and passion to protect the environment of the UAE's youth.

Over numerous majlis discussions and events organised by Connect with Nature, the youth has



Connect with Nature inspires, empowers and mentors young changemakers to actively shape the UAE's next 50 years reinforced its view that nature is a priority in the COVID-19 recovery and that it is eager to cocreate the roadmap for the next 50 years.

Connect with Nature has engaged with the youth since the inception of the initiative in 2019 to harness its curiosity about the natural heritage and equip it with a platform and tools to actively co-create the future.

Co-founded by Emirates Nature – WWF and the Environment Agency – Abu Dhabi (EAD), Connect with Nature has engaged with more than 10,000 UAE youth across over 225 events such as nature hikes, wetland exploration, upcycling workshops, beach clean-ups, and most recently, virtual majlis discussions, the UAE Ambassadors for Nature mentorship programme and the Nature Champions programme. The initiative will continue to evolve to reach more UAE youth and drive a bigger impact in its next phase. Connect With Nature initiative launched in 2019 has engaged with over 10,000 UAE youth through more than 225 events



In 2020, 1,900 youths participated in the Reimagine Youth Circle Series of virtual majlis discussions with government leaders, academics and experts. Insights from these discussions are captured in a whitepaper written by youth, for youth.

Hundreds of youth competed for an intensive mentorship journey as one of 20 UAE Ambassadors for Nature.

Dr. Shaikha Salem Al Dhaheri, Secretary-General at the EAD said, "The UAE's youth continues to impress us with its understanding of global environmental challenges coupled with a sense of responsibility for restoring the health of nature and our communities, and their dynamic optimism for the future.

As we gear up for the next journey forward, it is vital that we continue to engage, inspire and involve today's youth in preparations for the next

50 years."

Laila Mostafa Abdullatif, Director-General at Emirates Nature-WWF said, "The ongoing pandemic has accelerated concern for the environment across all age groups and especially amongst the youth. Our vision is to reach 500,000 youths through Connect with Nature, bring them closer to nature and support their transition to become future leaders of sustainability."

Peter Cornthwaite, Chief Executive Officer, WWF-Hong Kong said, "Youth will play an instrumental role in our journey to achieve a green economic recovery. We are inspired by the success of Connect with Nature in the UAE and look forward to engaging Hong Kong youth in our global endeavour to build a future where people and nature thrive."

New agritech venture empowers UAE farmers to increase local fresh produce

Silal, Abu Dhabi's new fresh produce and agritech company, has signed agreements with more than 850 local farms in Abu Dhabi to supply more than 30,000 tonnes of fresh produce during the current crop season. The initiative is in line with Silal's endeavours to support farmers, promote local food production, and become a leading supplier of high quality, locally farmed fresh produce across the UAE.





His Excellency, Eng Jamal Salem Al Dhaheri, CEO of Silal: "Silal amplifies farmers' capabilities in AbuDhabitoboostlocalproduction of agricultural crops and build strong and smart food supply chains. Silal will continue to expand contract farming in Abu Dhabi and deploy advanced agritech solutions by working with local and international partners. This is to achieve increased volumes of fresh agricultural crop production and raise the UAE's self-sufficiency in selected products."

Silal provides farming inputs to its contracted farmers and has a team of qualified agricultural engineers who work in collaboration with farmers to improve production quality and yields and encourage sustainable farming practices. Silal offers premium pricing options to empower and protect farmers livelihoods from market price volatility. The company operates 16 collection centres across the emirate of Abu Dhabi, and three pack-houses.

Additionally, it manages a distribution centre where it receives products from local farms, conducts quality control and distributes to customers across the UAE. Silal has also strengthened its collaboration with major retail outlets, wholesalers, food distribution companies, hotels and the catering trade, offering a range of high quality, locally farmed fresh produce across the nation.

Silal will carry out its mandates to diversify food products' sources and spur the local agri-food industry and will continue its cooperation with Abu Dhabi Agriculture and Food Safety Authority (ADAFSA) to elevate the agricultural sector and support farmers.

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UAE Architecture Students Design Winning Sustainable School

A rchitecture students from American University of Sharjah (AUS) were awarded first, second and third place for their original designs for a sustainable floating school in a flood-impacted area of Bangladesh.

The competition was integrated into the Fall 2020 curriculum for students of architecture at AUS, as well as students from UAE University in



AUS architecture students propose winning sustainable design for school in Bangladesh

Al Ain and Manipal Academy of Higher Education in Dubai. Over 15 weeks, the students were required to brainstorm, research and employ design thinking towards an efficient, resourceful and easy-to-implement floating school that will function both as a boat as well as a classroom for students in flood-impacted areas of Bangladesh, while proposing solutions to elevate the living conditions of vulnerable communities.

Conceived by Mourad Ben Ayed, advisor to SMEs and non-profit organizations on topics of sustainability and climate change, the inaugural challenge aimed to engage UAE youth in proposing sustainable solutions for developing communities impacted by floods and rising water levels.

First-prize winners Maitha Al Hammadi and Afra Al Falasi said the competition pushed them to The innovative design incorporates the use of locally sourced bamboo as the primary material and is powered by solar energy



think beyond aesthetics in finding sustainable solutions to environmental factors such as heat, rain, wind and floods.

"Given the social, climatic, and environmental conditions of the project's site in Bhangura, Bangladesh, we had to consider and overcome a number of challenges—the most critical of these being its vulnerable position along the floodprone banks of the Gumani River. The solution we opted for was a floating foundation that would adapt to the constant radical changes in water level, which introduced questions of buoyancy, stability, materiality and sustainability," said Al Hammadi and A IFalasi.

Their winning design, "Floating Community, Bangladesh", also addressed the need to provide quality childhood education on a floating foundation while considering questions of sustainability and energy in its off-the-grid location. Their innovative design incorporates the use of locally sourced bamboo as the primary material and is powered by solar energy.

"The entire studio achieved some exemplary results tackling complex issues of global warming and resource availability in a remote area, and realizing the design potential and possibilities in addressing those problems," said Newlands.

While there is no confirmed time frame, the winning design is expected to be constructed in Bangladesh, engaging the local community and using local, sustainable resources.

The next Climate Change Challenge is expected to engage design students on a sustainable solution for a community in Africa.

WGEO explores ways to advance circular economy in UAE

op officials from the World Green Economy Organization (WGEO) headed by His Excellency Saeed Mohammed Al Tayer, Chairman of WGEO, welcomed a high-level delegation from Italy's Confindustria Cisambiente (Confederation of Environmental Services) on April 6, 2021.

The meeting was held to explore possible areas



World Green Economy Organisation to advance climate-resilient and sustainable solutions in line with UAE's Green Economy agenda

of cooperation with UAE-based companies, share best practices and learn from UAE's pioneering circular economy businesses.

HE Al Tayer commended the visit of the business leaders, that comprised 10 leading Italian entrepreneurs and company owners involved in propagating environmental services and circular economy in their businesses. He highlighted that their keen interest opens doors for new areas of cooperation in the field of circular economy, an important trend that can play a vital role in advancing climate-resilient and sustainable solutions in line with the green economy agenda.

"It is a great opportunity to witness organizations that share a common vision for the environment come together and make an important step to work towards rebuilding our communities beyond the current crisis," Al Tayer said.

34

The UAE Circular Economy Policy is a comprehensive framework for determining sustainable governance and the ideal use of natural resources



Al Tayer further shared the UAE's commitment to advance sustainable development and public and private partnerships through the WGEO, which was formed under its flagship. He also discussed the UAE's recent adoption of the UAE Circular Economy Policy and the creation of a Circular Economy Council to oversee the policy's implementation.

Prof. Giovanni Bozzetti, Chairman of International Affairs at Confindustria Cisambiente and heading the delegation added, "Environmental protection is a strategic territorial marketing leveraged globally and the real challenge is to switch from a linear economy to a circular economy. We admire the achievements of the UAE and Confindustria Cisambiente, with its 600 Italian companies that cover the entire cycle of waste management and renewable energies, is at disposal to bring the Made in Italy of the environmental protection, sharing know-how, expertise and technologies with our Emirati friends."

He further added, "Today's meeting represents a starting point to strengthen the friendship between Italy and the UAE in the name of circular economy and sustainability. We will work together, and we will win the challenge to deliver a better world to future generation."

The Italian confederation's green industries have grown to over 600 members, engaged in doing sustainable businesses with a combined annual turnover of more than EUR 25 billion. These businesses operate with a more than 40,000 workforce. The meeting concluded with both parties agreeing to expand cooperation to enhance the role of entrepreneurs in promoting a green economy in both countries.

Etihad Airways Operates First ecoFlight of 2021

tihad Airways, the national carrier of the UAE, has operated its first ecoFlight for 2021, continuing research and testing under the Etihad Greenliner programme to assess environmental sustainability initiatives during scheduled services.

This is Etihad's fourth ecoFlight, operated on the airline's signature Greenliner aircraft which is



Rome service is first of many planned trials for 2021 under Etihad Greenliner Programme

fully offset for all operations through 2021 as part of the airline's mission toward carbon neutral flying.

The maiden 2021 ecoFlight, EY83, departed Abu Dhabi for Rome on April 17, testing a range of flight and engine optimisation initiatives, as well as onboard product enhancements to reduce weight and single-use plastics, with successful trials to be incorporated into regular scheduled operations.

On board, the trial focused on three key pillars: sustainable products, incorporating initiatives identified on past ecoFlights to reduce singleuse plastics, and an overall weight reduction study. Etihad also tested initiatives to mitigate the challenges imposed by Covid-19, driving home the Etihad Greenliner Programme mission to identify challenges and call upon the industry The Rome ecoFlight removed and replaced 1,731 single-use plastic items from onboard service, reducing weight by 108kg and saving 60kg CO2 emissions



to work together for meaningful solutions that ensure safety, environmental and fiscal inclusivity.

Tony Douglas, Group Chief Executive Officer, Etihad Aviation Group, said: "Etihad made a significant and tangible commitment to sustainability and the future of aviation over a year ago when we launched the Greenliner programme in partnership with Boeing, GE and other aviation leaders. We also announced our commitment to achieving net zero emissions by 2050 and halving our net emission levels by 2035.

'Since then, and throughout the pandemic we have remained on track, with several ecoFlights during 2020, as well as partnering with Boeing, NASA and Safran on the 2020 ecoDemonstrator programme. Now in 2021 we are stepping up our efforts to ensure that eco testing will always be an ever-present part of operations to test, refine and implement sustainability initiatives. This kind of incremental, real world testing is the foundation of the Greenliner programme, which will allow us to continue R&D efforts into decarbonisation opportunities.

"This isn't about solving only Etihad's emissions, but about supporting the entire industry to address the biggest challenge we face over the next three decades."

The Rome ecoFlight saw the removal and replacement of 1,731 single-use plastic items from onboard service, with a weight reduction of 108kg, saving 60kg CO2 emissions. This follows efforts on the first ecoFlight to Brisbane in 2019, where 43 single-use plastic items were removed from onboard operations, resulting in an annual saving of 17 tonnes of waste from landfill and



again in 2020, when the airline operated an ecoFlight to Brussels, removing 2,639 single-use plastic items from the flight, equal to approximately 8.8kg in weight reduction.

Feasible initiatives trialed on the latest ecoFlight will be adapted for standard operations moving forward, contributing to Etihad's goal to remove 80 percent of single-use plastics. Based on circular theory efforts, the airline tackled international waste regulations head on with a recycling initiative to better manage cabin waste.

Strict waste regulations force international airlines to incinerate all contaminated materials, and efforts were made to identify suppliers offering products that will not release harmful emissions in incineration, such as EcoWare bagasse pots, which are compostable and made from plants. Boasting a range of sustainable suppliers, the flight focused on avoiding single use items, finding replacements that are locally produced or UAE-sourced and meet the requirement of being lightweight and non-energy intensive in the cleaning process or non-impactful in the disposal process.

The ecoFlight showcased Al Ain Water's sustainable plant-based water bottles onboard. It also featured Abu Dhabi based startup 'The Concept's' sustainable inflight meal trays made from used water bottles, and BambuuBrush, for their highly sustainable up-cycled Bamboo Toothbrush.

Operational initiatives trialed continue to evaluate and confirm learnings from past ecoFlights for flight path optimisation, including optimised climb and continuous descent. A previous ecoFlight to Dublin showed when Based on circular theory efforts, Etihad tackled international waste regulations head on with a recycling initiative to better manage cabin waste



compared to a standard Boeing 787 flight on that route, the ecoFlight reduced journey time by 40 minutes and reduced CO2 emissions by three tonnes.

Following extensive trialing and collaboration with Air Navigation Authorities globally on previous ecoFlights, flight optimisation has become an Etihad standard operating procedure wherever possible. The ecoFlight saw the airline avoid 1,386kg CO2 through operational efficiencies alone.

The flight also leveraged Boeing's proprietary Probabilistic Flight Planning tool to optimise routing and fuel efficiency by evaluating possible routes, taking uncertainty in the weather forecast into account to use less fuel, regardless of the actual winds. This technology has the potential to reduce Etihad's fleet-wide annual CO2 emissions by approximately 2 million kgs.

"Flight optimisation is one of the first places we should be looking to for fuel and CO2 savings as an industry. It's an elegant, simple solution for massive, incremental savings that would fundamentally change the industry and put us on the path to a sustainable future," said Douglas. "However, simple does not mean easy to implement. It requires cooperation across the industry, and importantly, across borders as a coordinated global response, and that sort of cooperation needs to be led at the regulatory level."

Adding valuable testing data to operational efficiency initiatives such as potable water optimization favours these trials greatly, with this ecoFlight reducing CO2 emissions by 189kg from this practice alone. The results from the flight will help develop a more efficient method to calculate potable water requirements for future operations, with a potential annual impact of up to 800 tonnes of fuel, or 2,500 tonnes of CO2 saved across the entire fleet.

The ecoFlight follows the recent announcement of Etihad's partnership with GE Aviation, licensing the airline for the groundbreaking GE 360 foam wash jet engine cleaning system. The system will remove more than 7,000 metric tonnes of CO2 in 2021 from Etihad's GE90 and GEnx fleets. Impacts are already proving invaluable, with this initiative saving 290kg of CO2 emissions on this flight.

The flight once again leveraged electric tractors, which were successfully trialed on previous ecoFlights and are permanently deployed to service 37% of Etihad and other airline flights at Abu Dhabi airport, with a 309.5 tonne CO2 annual benefit in emissions.

Dubai's Sustainable City commits to net-zero carbon by 2040

n the occasion of Earth Day, April 22, The Sustainable City – Dubai's first community designed to achieve net-zero energy – joined The Climate Pledge, a global commitment to be net-zero carbon by 2040, a decade ahead of the Paris Agreement targets. This ambition is in line with the company's long-term target to spearhead the way towards net-zero carbon living.



The Climate Pledge was launched in 2019 by Amazon and Global Optimism and aims to unite leading global businesses in a forward-thinking and ambitious commitment to reverse the detrimental effects of climate change. The Sustainable City is the first entity from the Middle East to join this global pledge.

"Less than two years ago, Amazon co-founded The Climate Pledge and called on other companies to reach the Paris Agreement 10 years early today, more than 100 companies with over \$1.4 trillion in global annual revenues and more than 5 million employees have signed the pledge," said Jeff Bezos, Amazon founder and CEO.

All signatories to The Climate Pledge agree to three primary components. The first, to measure and report greenhouse gas emissions on a regular basis; the second to implement decarbonization strategies through real business changes and innovations; and lastly to neutralize any remaining emissions with credible offsets. In 2020, The Sustainable City achieved net positive energy in all common areas of the city, producing 150% of all electricity consumption from rooftop solar parking. The city's robust sustainability philosophy, which combines social, environmental and economic sustainability, enable the city to achieve these targets.

The Sustainable City infrastructure supports the climate challenge through urban farming, renewable energy, waste and water reuse and recycling and widespread electric transportation. By signing The Climate Pledge, The Sustainable City is sending an important signal that there will be rapid growth in demand for products and services that help reduce carbon emissions.

Virtual art exhibition marks Earth Day 2021 celebrations in UAE

bubai Municipality celebrated Earth Day, which falls on April 22 every year, under the slogan "Restore Our Earth," by holding a virtual art exhibition on April 22, in cooperation with art4u gallery.

The virtual art exhibition enabled visitors to see a variety of arts that embody the environmental aspect through paintings, 3D plastic art, digital



art, and photography.

The exhibition aims to encourage the public to promote ecotourism that promotes the efforts to preserve sustainability and protect the environment, as well as highlighting the Municipality's keenness in educating society in general and the emerging generations in particular through entertaining educational initiatives that contribute to inculcating the concepts and habits of protecting and preserving the environmental heritage for future generations.

A virtual panel discussion was also organized on this year's theme of the Earth Day, "Restore Our Earth," during which the linkage of art with the environment was highlighted and the possibility of raising the level of environmental awareness of society through various arts. The seminar witnessed the presence of a number of specialists in various artistic fields to enhance the importance of preserving natural resources surrounding us through art in a positive way.

Dubai Municipality is keen to spread the culture of environmental awareness in order to enhance the preservation of the quality of the elements of the environment in the emirate and the upgrading of the environment.



he road to a fully electric future is just around the corner.

Potential new partnerships between automakers and Electric Vehicle (EV) start-ups, advancements in battery range and heightened efforts to reduce CO2 emissions are accelerating this trend globally. 2021 is said to be the pivotal year for EVs with a deluge of new models



2021 is said to be the pivotal year for EVs with a deluge of new models entering the market entering the market. An estimated 30 EVs from 21 brands are said to hit the market this year.

Stimulus packages announced to boost recovery following the economic fallout from COVID-19 has fuelled the EV momentum particularly across Europe where Norway, is all set on course to meet its targets of banning sales of all internal combustion engine vehicles by 2025. In North America, EV penetration is steadily rising but not as quickly as in Europe and China.

With battery technology and charging infrastructure constantly improving, EVs are quickly turning from niche vehicles to a viable replacement to combustion-engined cars. However, for a zero emission, hydrogen and battery-powered vehicle to become commercial in their own right, a key tipping point will come when they cost as much to produce as conventional vehicles.

Reimagine the Future!

By the end of 2024, a record number of almost 100 pure electric EV models will mark their debut worldwide



The interest of Apple, the maker of the iPhone to enter the industry possibly through a tie-up with Hyundai, could rev up mass production and competition. A key challenge for the industry is how to produce cheaper and more efficient batteries.

According to the 2021 Trend Report issued by ABI Research, this is the year when EVs will start gaining acceptance as mainstream. The report states that more affordable models are scheduled to start rolling into dealerships throughout this year. A remarkable shift is expected at the end of this decade when it is estimated that EVs may make up a quarter of all new vehicles shipped. For instance, Volkswagen has doubled its plans for its VW brand, stating that by 2030, 70% of its total European vehicle sales will be battery electric.

Smart charging technologies, support for

occasional Direct Current fast charging, and battery management will be critical in supporting mainstream consumers in their transition from internal combustion engines to EV ownership.

By the end of 2024, a record number of almost 100 pure electric EV models will mark their debut worldwide. These include cars, an increasing number of SUVs and pickups, and a wide range of plug-in hybrid models that can run on electric power for a stretch before a gasoline engine kicks in and operates the vehicle more like a traditional hybrid.

As prices fall and models diversify thanks to increased investment and roll-out of charging networks, what can we expect to hit the road in the next few years?

Audi Q4 e-tron

In the luxury electric-vehicle space, Audi is gearing up to expand its e-tron nameplate later this year with the Q4 e-tron and Q4 e-tron Sportback. Smaller than the mid-size e-tron SUV, the Q4 siblings sit on a footprint similar to the compact gasoline-powered Q5 crossover.

While the base powertrain is a single 201-hp electric motor and a 77.0-kWh battery pack, a more powerful 295-hp dual-motor setup with all-wheel drive is optional. The battery pack is said to deliver up to 250 miles of driving range per charge.

BMW i4

With an 80.0-kWh battery pack and a range of up to 300 miles, a 150-kilowatt charging will allow the more conventionally styled i4 to recharge up to 80 percent of the car's driving range in as little as 35 minutes.

The stylish "four-door coupe" also promises sports-car performance, with 530 hp and 0-to-60-mph acceleration in under 4 seconds.



Porsche Macan EV

The electric Macan will arrive in 2022 and initially be a high-performance model in the mould of the Taycan, carrying the same Turbo badging to identify it as the top-of-the-range version.

Utilising the new PPE (Premium Platform Electric) underpinnings jointly developed with Audi, the Porsche Macan EV will benefit from a very versatile layout that will offer both rear- and four-wheel-drive options as well as a range of battery capacities.

Tesla Roadster

As an all-electric supercar, Roadster maximizes the potential of aerodynamic engineering—with record-setting performance and efficiency.

Scheduled for a 2022 launch, the Roadster is a vehicle with formidable specs. It is the quickest

car in the world, with record-setting acceleration, range and performance. The car's 200kWh battery pack enables it to have a 620-mile range, which will break the record for a production electric vehicle.

Top speed is expected to be in excess of 250 mph. Its triple-motor drive system (which includes one electric motor in the front and two at the rear) will allow the car to accelerate from 0 to 60 in just 1.9 seconds, and from 0 to 100 in 4.2.

Cadillac Lyriq

The Lyriq signal's Cadillac's shift to a fully electrified lineup over the next decade. The 2023 LYRIQ will be well-equipped with premium features and technologies, including a stunning 33-inch-diagonal advanced LED display, Super Cruise1, the industry's first truly hands-free driver-assistance feature, and an AKG Studio With battery technology and charging infrastructure constantly improving, EVs are quickly turning from niche vehicles to a viable replacement to combustion-engined cars



19-speaker audio system with headrest speakers.

At launch, LYRIQ will be available with premier technologies and stirring performance capabilities enabled by the vehicle's dedicated electric architecture. A 12-module, 100 kilowatthour battery pack and a rear-wheel-drive Ultium Platform deliver a Cadillac-estimated 340 horsepower and 440 Nm of torque — and a Cadillac-estimated over 300 miles of range with a full charge.

GMC Hummer EV

As the world's first zero emissions, zero limits allelectric supertruck, the revolutionary Hummer EV Pickup is engineered to conquer nearly any terrain.

The resurrected Hummer features up to 1000 horsepower from its top powertrain option, which uses three electric motors, offers an estimated

range of 350 miles per charge, and leaps to 60 mph in just 3.0 seconds. The Hummer EV also features removable roof panels, an optional adjustable air suspension, and a cool four-wheel steering feature that allows it to "crab" sideways or drive diagonally, which makes it apt for off-roading adventures.



Abu Dhabi Installs Region's First Ultra-fast Electric Vehicle Charging Stations

n response to growing demand for electric vehicle infrastructure, ION, the UAE-based sustainable transportation joint venture between Bee'ah and Crescent Enterprises has installed high-power, ultra-fast charging stations with a total capacity of up to 350KW, on Yas Island, Abu Dhabi.

Capable of charging electric vehicles (EV)



through a connection to a user interface unit, the stations can supply combined charging system (CCS) EVs. Through its compatibility with all manufacturers, the stations also solve a common issue with EV charging infrastructure by catering to all types of e-vehicles including buses.

Another major benefit of the ION stations is its offer of the fastest charging times in the UAE, fully charging vehicles in less than 15 minutes on average and reducing user waiting time drastically. They are 25 times faster than a traditional home charger and are also costeffective and reduce carbon footprint.

ION is fast-tracking the development of electric transportation in the UAE, and has achieved significant milestones within a few short years since its launch. Within Abu Dhabi, ION manages on-demand electric transportation in Masdar

City, matching residents to a fleet of electric vehicles and autonomous electric shuttles through a mobile app.

ION also recently concluded a successful pilot trial of the Navya shuttles in the University City of Sharjah as well as launching Sharjah's first network of public electric vehicle charging stations. In partnership with Navya, ION is promoting the use of shared autonomous transport to the MENA region.

ION's electric vehicles and drivers have been deployed, pro bono, for the transport of Sharjah Medical District's doctors to facilitate home visits and COVID-19 testing. ION's electric fleet are also utilised for medicine logistics services by University Hospital Sharjah for fast and efficient deliveries.



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Smarter, Sustainable San Francisco

S an Francisco, the cultural and financial centre of the United States is also one of the greenest cities in North America and considered a global powerhouse in the ecoscene. In terms of cleaning up the environment, San Francisco is leading the way when it comes to proper disposal of waste, eco-friendly buildings, air quality, carbon emissions, transportation, and land use.



One of the most innovative cities in the world, San Francisco has implemented new comprehensive approaches to urban sustainability In December 2014, former US President Barack Obama recognised San Francisco as a Climate Action Champion due to the city's unwavering devotion and leadership concerning climate change initiatives.

San Francisco has set aggressive goals which have not only reduced carbon pollution but have also saved the city and their residents' money in the process. As far back as 2010, San Francisco's greenhouse gas emissions were 14.5 percent below 1990 levels. San Francisco was not only the very first American city to prohibit the use of plastic bags; but they also implemented the use of reusable totes, compostable bags, and bags made from recycled material. Due to this initiative, San Francisco has admirably diverted more than 1.6 million tons of waste from its landfills annually.

San Francisco has led the way in instituting

A record-breaking 77 percent of San Francisco's municipal waste is recycled

composting and recycling, banning non-Styrofoam packaging, biodegradable and providing for convenient disposal of unwanted medication, which has diverted over 40 tons of pharmaceuticals from the Bay and landfills. A record-breaking 77 percent of San Francisco's municipal waste is recycled. There are mandates concerning composting and it has the largest public-transportation network in the U.S. Since 2009, residential and commercial properties are required to have water-efficient plumbing fixtures.

In April 2013, Walk Score, the leading analysts of travel data, awarded San Francisco second place on the list, "Top 10 US Cities to Travel Car-Free." In fact, more than 43,000 Bay Area residents use a bicycle as their primary means of commuting to work every day. More than one-tenth of the city's commuters walk to work.

San Francisco has also created legislature like the Green Taxi Law, which forced cab companies to reduce their greenhouse-gas emissions to below 1990 levels by 2012. More than 60 per



cent of the city's taxis run on alternative fuel. The city's buses are even powered by biodiesel fuel. In addition to this, those employed by the city are required to buy the most fuel-efficient,



environmentally friendly automobiles when upgrading public service vehicles.

Sustainable City

Sustainable City is a dedicated initiative to achieve the long-term sustainability of San Francisco's built and natural environment. It includes city-wide and neighborhood-scale efforts addressing classically environmental sustainability categories: climate protection, energy, water, waste and materials, air quality, ecology and resilience.

In its commitment to the long-term vitality of San Francisco's built and natural environment, the Planning Department embeds a comprehensive sustainable lens (Environment, Equity, Economy) **GREEN CITY**



across all of its initiatives. These include neighborhood plan development, land use, housing, and transportation policies, public space and urban design, community engagement, and more.

The Sustainable City Team leads creative and collaborative partnerships with other City agencies and key stakeholders to support and exceed existing environmental regulations, maximize co-benefits, and facilitate widespread innovation and implementation.

Green Bonds

San Francisco is expanding its green bonds offering to provide financing for sustainable infrastructure. The city is currently the second largest municipal issuer of green bonds in the United States and have sold over \$1.5 billion in these bonds to date.

Zero Waste

By 2030, San Francisco and 23 other cities in the United States, commit to reduce municipal waste generation by 15 percent and cut landfill disposal in half. The International Solid Waste Association estimates that increased recycling and composting efforts could cut 10 to 15 percent of greenhouse gas emissions globally. San Francisco currently recovers more waste than perhaps any other city in the United States.

Decarbonise Buildings

San Francisco aims to decarbonise the fuel used for buildings and transportation by promoting policies requiring energy efficiency improvement in existing buildings and by new construction such as adoption of high-efficient heat pump technologies. By 2030, all new construction in San Francisco will be running on 100% renewable

A record-breaking 77 percent of San Francisco's municipal waste is recycled



energy, and by 2050, all buildings in San Francisco will be net-zero for carbon emissions.

Zero Emission Vehicles

San Francisco targets rapidly expanding charging and refuelling infrastructure to scale Zero Emission Vehicle (ZEV) technologies across the city through partnerships and various other policy developments. The city aims to transition light and medium duty vehicle classes to ZEVs through partnerships, coalition building, increasing consumer awareness and demand, and bulk procurement.

San Francisco is setting a stellar example for the rest of the world. It has earned its reputation by actively participating in the initiative to reduce their carbon footprint, fighting climate change and creating innovative strategies to protect our precious environment. The San Francisco Bay



Area has more than 580 philanthropies dedicated to promoting a greener lifestyle which will help sustain our natural resources and help lay the groundwork for future generations to follow in their significantly reduced carbon footprints.



Middle East's largest wind farm reaches halfway mark on construction

RH Prince Abdulaziz bin Salman, Minister of Energy, Kingdom of Saudi Arabia, HRH Faisal bin Nawaf bin Abdulaziz, Prince of Al Jouf, His Excellency Ludovic Pouille, French Ambassador to Saudi Arabia, His Excellency Ole Mosby, Danish Ambassador to Saudi Arabia, Faisal Al Turki, President of Nesma, Bruno Bensasson, EDF Group Senior Executive Vice-President Renewable Energies, and Fawaz Al



Consortium led by EDF Renewables and Masdar are delivering the 400 MW Dumat Al Jandal utility-scale wind farm project in Saudi Arabia Muharrami, Acting Executive Director, Clean Energy, Masdar visited the Dumat Al Jandal wind farm construction site on April 11th, 2021, to mark the achievement of 50 percent of the project.

The 400-megawatt (MW) utility-scale project, the Kingdom of Saudi Arabia's first wind farm and the largest in the Middle East, is being developed by a consortium led by EDF Renewables and Masdar, two of the world's leading renewable energy companies.

The installation of the first turbines began in August 2020 on the site, located 900km north of Riyadh, in the Al Jouf region of Saudi Arabia, and the project is expected to be completed in 2022. The wind farm will comprise 99 wind turbines, each with a power output of 4.2 MW. The first power produced by the wind farm is expected in the coming weeks.

Wind farm to start electricity production in 2021



When complete, Dumat Al Jandal will generate clean energy that can power up to 70,000 Saudi households per year, while the project will save 988,000 tonnes of CO_2 per year in support of the Kingdom's climate change mitigation goals.

Under Saudi Arabia's National Renewable Energy Program, the Ministry of Energy awarded the US\$500 million Dumat Al Jandal wind farm to the EDF Renewables-Masdar consortium in January 2019 after it submitted the most costcompetitive bid of US\$21.3 per megawatt hour (MWh). At financial close, the project made a 6.5 percent gain on levelized cost of energy (LCOE) that reached US\$19.9/MWh.

The Dumat Al Jandal wind farm will supply electricity under a 20-year power purchase agreement (PPA) with the Saudi Power Procurement Company, a subsidiary of the Saudi Electricity Company (SEC), the Saudi power generation and distribution company.

Osama bin Abdulwahab Khawandanah, Chief Executive Officer of Saudi Power Procurement Company, which is responsible for purchasing the entire production of the Dumat Al Jandal project, said: "This project shall be the first large utilityscale wind farm in the Kingdom. Saudi Power Procurement Company (SPPC) will purchase all electricity production from this green energy project as principal buyer (the energy off-taker) as per the executed long-term contract of 20 years."

Mohamed Jameel Al Ramahi, Chief Executive Officer of Masdar, said: "As a global leader in the development of commercially viable wind power, Masdar is committed to advancing clean technology across the region and we will continue our efforts to support the country's ambitious energy program," he added.



Global design award for contemporary lamp inspired by the ghaf tree

nterior designer Rand Al Drei has received global acclaim with a Best of Year 2020 Award from Interior Design magazine.

An alumna from American University of Sharjah's College of Architecture, Art and Design, Al Drei's conceptual lamp design Dayih was inspired by the UAE's native ghaf tree. "The ghaf tree is a symbol of tolerance and the evergreen tree of



Inspired by the UAE ghaf tree, the conceptual lamp design signifies the region's heritage and tradition

the Arabian Gulf. The lamp design Dayih is a contemporary light sculpture that explores and captures the beauty of the ghaf at a macro and micro level - macro being the three elements that make up the sand, stem, and leaves, while the micro level explores the nyctinasty process.

"This is a process that causes the ghaf leaves to close in response to changes in light intensity. These observations were studied up-close and are embedded in the design with a delicate and sustainable approach," said Al Drei, who hails from Syria but was born and raised in the UAE.

The lamp is made of resin and brass, is minimal in form, and its organic details reflect the poetic beauty of the ghaf and its UAE heritage. When lit, its delicate vein-like surface textures and marbled effect create a radiating ambiance, bringing its cultural and traditional significance

54

The lamp is made of resin and brass, is minimal in form, and its organic details reflect the poetic beauty of the ghaf and its UAE heritage



into the space.

A member of AUS's incredibly successful interior design alumni network, Al Drei is currently working for award-winning design studio H2R, based in Dubai, yet her foray into product design is one into which she would like to dive deeper.

"It is not easy to balance both working and experimenting with product design, but what is important here is immersing myself in the design process. Design is an umbrella, and both product and interior design influence each other greatly to me they just vary in scale," she said.

As a student at CAAD, Al Drei was exposed to a wide range of design practices and was encouraged to experiment with a variety of materials in the college's impressive CAAD labs. One of her latest projects, Upcycled, conducted while she was a student at AUS was displayed at the Conscious Consumption exhibition hosted by Tashkeel. Al Drei worked under the mentorship of Associate Professor Ammar Kalo, an internationally acclaimed furniture designer, architect and educator, and Director of CAAD Labs.

"Receiving this international recognition gave me the push and the confidence to believe that it's not about the results—it's always about the process. A person should always believe in their skills and success will come along the way," she said.

"The key is to be curious and always ready to learn. Graduating is not the end of the learning process; it is the beginning. You just have to be patient and confident about your skills."



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Bord Search



Across

- 4. Air pollution can cause us to have an upper respiratory disease called
- 6. Any substance or form of energy that can cause harm to the environment and make it unfit for use by organisms
- 7. Contamination of the earth
- 8. Smoke and other pollutants combined with fog
- 10. Air pollution/global warming can cause ozone

Down

1. When we cannot see as far or as clearly through the air

11

131

1

- 2. River in India polluted by trash and untreated sewage
- Carbon-containing fuels that formed millions of years ago from remains of living things
- 5. The most abundant gas in the air we breathe
- 9. Protects humans from radiation etc. to a place where they are made into something new
- 9. Containing poisonous substances

noitalqaC

Arvers: 1) Visibility 2) Ganges 3) Fossil Fuels 4) Asthma 5) Nitrogen 6) Pollution (7) Pollution 8) Some 10)

WORD OF THE DAY: FOSSIL FUELS

What is a renewable resource?

All the machines of modern life require energy to make them run. About 90 percent of that energy comes from burning fossil fuels. Fossil fuels include petroleum (oil), coal, and natural gas. These materials are called fossil fuels because, like fossils, they are the remains of organisms that lived long ago. Organisms are plants, animals, and other living things.

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

Fossil fuels formed in the Earth hundreds of millions of years ago. Dead organisms sank into mud and rock. Over time many layers of rock built up. The remains of the organisms slowly changed in form to become different kinds of fossil fuels. Petroleum and natural gas came mainly from microscopic organisms such as algae. In most area, a thick liquid called oil formed first but in deeper hot regions underground, the cooking process continued until natural gas was formed. Coal was formed from dead trees, ferns and other plants that lived 300 to 400 million years ago, even before dinosaurs.

FACTS ABOUT FOSSIL FUELS!

- Fossil fuels are widely used in construction.
- Fossil fuels are not a renewable resource even though we have not located all of the reserves there are in the world. They take millions of years to produce.
- Fossil fuels are responsible for majority of environmental issues like global warming, acid rain, air pollution, water pollution that we are dealing with today. Its production and consumption is one of the biggest contributors to pollution in the world.



WORLD TURTLE DAY -MAY 23RD

Turtles are a type of reptile that exists in many environments throughout the world and have found their way throughout the world's history. World Turtle Day celebrates these noble reptiles and their place in the world and encourages people to take action to help protect both the common pet turtle and the ever-endangered sea turtle.

First created in 1990 by American Tortoise Rescue, World Turtle day recognizes that some species of our hard (and soft!) shelled friends are suffering and almost on the edge of extinction due to environmental hazards, issues with hunting and harvesting of their eggs. Getting accidentally caught in fishing gear is probably the biggest threat to marine turtles. It's also estimated that more than 50% of marine turtles have ingested plastic or other human rubbish - often mistaking it for food such as jellyfish. Plastic washed up on beaches can also limit space for nesting and block tiny hatchlings' paths to the ocean. Turtle habitats are being destroyed and put under threat. For example, 50% of the world's coral reefs have been lost and the rest could disappear completely by 2050 if climate change remains unchecked.

WORLD TURTLE DAY FACTS!

- Turtles and tortoises aren't the same thing! The term "turtle" is an umbrella term for all 200 species of the testudine group, including both turtles and tortoises, among others. So, the word "turtle" may mean more than you first expected!
- Leatherback sea turtles have existed in their current form since the age of the dinosaurs!
- Turtles do not have teeth! They use their beak like mouth to grasp their food, this beak is made up of keratin.
- Sea turtles have an amazing sense of direction and are known for their ability to return to the exact beach where they were born years later.
- There are currently 356 known species of turtles!



What can you do to help?

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Things to Do...





UAE releases 86 falcons into the wild in Kazakhstan

he Sheikh Zayed Falcon Release Programme (SZFRP) returned this year to Kazakhstan, where it released 86 falcons, including 51 Peregrine and 35 Sakr falcons, after an exceptional session last year in Uzbekistan.

The release confirms the continuity of the eternal legacy of the late Sheikh Zayed bin Sultan Al Nahyan, who established the



programme in 1995. The programme is now being held under the patronage of President His Highness Sheikh Khalifa bin Zayed Al Nahyan, and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy

The programme is supervised by Environment Agency - Abu Dhabi (EAD), in partnership with the International Fund for the Conservation of Houbara (IFCH) who oversees the technical and field aspects, and the Abu Dhabi Falcon Hospital (ADFH) who undertakes the provision of veterinary services.

Supreme Commander of the UAE Armed Forces.

In this session, 11 falcons were fitted with satellite-tracking devices, powered by solar energy, which will monitor survival, propagation rates and traditional migratory routes. It will also collect scientific data that will help develop methods for preparation, training and release.

The supervisors of the programme thanked the competentKazakhauthorities for the cooperation in dealing with the exceptional circumstances of COVID-19 and logistical difficulties in domestic and international transportation.

The programme has continued to annually encourage all falconers and wildlife enthusiasts to participate with wild falcons including Sakr falcons and Peregrine to deliver them to the Abu Dhabi Falcon Hospital after the end of the hunting season or at any time of the year. Once the falcons are returned, they are examined, rehabilitated, and released in accordance with the scientific regulations and protocols used to enhance wildlife and support falcon's conservation efforts in their natural habitats.

New Global Reforestation and Offsetting Program for UAE Companies

A smore organizations in the UAE become increasingly aware of their important role in reducing carbon dioxide (CO2) emissions and commit to goals aimed at mitigating the risks of climate change, Goumbook has launched a new program designed to facilitate companies' efforts to achieve carbon neutrality.

In partnership with the United Nations Trillion



Under Goumbook's "Trees Matters", organizations can engage in projects focused on ecosystem restoration, energy efficiency, and renewable energy

Tree Campaign, the new global planting program is a call to action for enterprises and entities to join efforts for a sustainable future.

The social enterprise, which has been leading the 'Give a Ghaf' Tree Planting Program in the UAE since 2010 and has planted tens of thousands of Ghaf trees and seeds to raise awareness about the importance of planting indigenous species in a such a fragile ecosystem as the desert, is now offering its clients and other organizations in the country the opportunity to offset their carbon footprint and meet their sustainability goals through a range of global planting projects.

Goumbook has partnered with certified organizations from the Middle East, Europe, and North America to offer accredited projects involving ecosystem restoration, energy efficiency, and renewable energy, combining Goumbook has been leading the 'Give a Ghaf' Tree Planting Program in the UAE since 2010



environmental with socio-economic benefits in a holistic, community-centred approach.

Tatiana Antonelli Abella, Founder and Managing Director of Goumbook, said: "Through the Give a Ghaf Tree Planting Program we have started locally with planting indigenous species that require little water while providing huge benefits to the ecosystem", the social entrepreneur explained. Carbon offsetting is a scheme where individuals or companies can invest in environmentally sustainable projects often located in developing countries to balance the CO2 emissions produced by their activities elsewhere. Regionally the focus lies on the UAE, Saudi Arabia, Jordan, and Lebanon, while global projects are located in Asia, the Americas, Africa, and Europe.

In addition to the global efforts, a new local

component is launched under the "Trees Matter" campaign: The "Heritage Forest" is a concept developed by Goumbook in line with the UN Sustainable Development Goals.

Heritage Forests are a network of green spaces that take the shape of low-density urban, suburban, or desert areas, planted with a mix of indigenous and heat tolerant tree species and an understory of shrubs and herbaceous plants.

The forests, which can be sponsored or adopted by corporates, will have specific added benefits for the community depending on their location and focus, serving for instance as recreational spaces for residents to enjoy activities in nature and improve their health and wellbeing or as additional income sources for farmers and food forest workers.

Al Ain Zoo Continues Its Efforts To Conserve The Humboldt Penguin

April 25 by highlighting its efforts in conserving the species and nurturing penguins, including the Humboldt Penguin.

This aquatic animal is listed as vulnerable species on International Union for Conservation of Nature (IUCN) Red List of Threatened Species due to poaching and climate change.



The Humboldt Penguin is listed as vulnerable species on the IUCN Red List of Threatened Species due to poaching and climate change

Al Ain Zoo is home to around 60 penguins who enjoy their aquatic activities in an environment resembling their natural habitat. Spanning 150 sq m, the exhibit includes a pool fitted with around-the-clock filtering system which can clear its water throughout the day. In addition, Al Ain Zoo ensures the penguins receive comprehensive care to the highest international standards and educates guests on their importance and the challenges they face in the wild.

Al Ain Zoo is set to launch the first ever outdoor beach for penguins in the region, consisting of an outdoor area, pool and beach. The new outdoor beach will feature a state-of-the-art water filtering system, pathways for guests, as well as several animal and plants models.

The new beach will be home to 10-20 Humboldt

Al Ain Zoo is home to around 60 penguins who enjoy their aquatic activities in an environment resembling their natural habitat



penguins, a flightless marine bird with high adaptation to life near water bodies. Their black and white feathery coat keeps them camouflaged, while their wings morph to work as fins and as balance support for walking on land.

Al Ain Zoo guests can visit the beach area to feed the penguins and learn about these charming animals while watching them skillfully navigate underwater through the glass windows.

Al Ain Zoo welcomed 645 newborn animals in 2020

As part of ongoing efforts to conserve and protect endangered species at the highest husbandry standards, Al Ain Zoo welcomed 645 new born animals belonging to 43 species in 2020 through its natural breeding programme.

Mayas Ahmad Al-Qarqaz General Curator at Al

Ain Zoo commented, "The COVID-19 pandemic presented challenges in executing animal exchange programmes, which we implement in order to introduce new blood lines to the gene pool for our breeding programmes and genetic improvement processes. Despite these challenges we have maintained a steady and balanced pace, in line with international standards of breeding programmes, while adhering to best practices in veterinary care."

To improve the results and quality of its breeding programmes, Al Ain Zoo follows carefully planned scientific methodologies and processes. This includes introducing new maternal and paternal lines to animal groups and herds to increase genetic diversity, which in turn reflects positively on the animals' general health and their ability to coexist, adapt, and breed.

New Energy Storage Technology

Electricity is a life necessity, yet it is expensive and pollutes the environment. We must switch to solar power to reduce our footprint on Mother Earth.

One of the main challenges facing this noble intention is the energy storage technology. The batteries currently available are expensive, short lived, emit poisonous gases, and add to the hazardous waste.

As part of its endeavour to unveil new environmental technology, the Zayed International Foundation for the Environment organized a webinar in collaboration with the Fraunhofer Institute for Ceramic Technologies and Systems in Germany, titled, 'Established Technology of Sodium Nickel Chloride Batteries'.

The Fraunhofer Institute has been working on innovative battery technology and has





Dr. Eisa M. Abdelllatif Chief Technical Advisor Zayed International Foundation for the Environment

unveiled its new ceramic battery. The Sodium Nickel Chloride Battery is better than the traditional Lithium or Nickel Cadmium batteries in several aspects:

- It is safe to use as it emits no poisonous gases and does not pose any environmental hazards at the end of its lifecycle.
- It has no mechanical components that need maintenance or changing.
- The raw materials of table salt and ceramic are widely available and very cheap, cutting down the cost by more than 65%.
- It is a heavyweight battery that works well for residential, industrial and agricultural sectors as well as at energy stations such as solar parks.
- It can store from 1 KW 10MW of energy.
- It can run up to 10 years, 3 times that of normal batteries.

The only shortcoming is that it does not work in automobiles, except perhaps for large ships and trains where weight is not a big issue.

These batteries are already in the market, but the Institute is working to reduce the cost and further improve their efficiency and capacity.

We hope to be able to use these batteries very soon for residential solar systems to give us stable power.

The webinar ended by extending all cooperation with the Fraunhofer Institute to adapt the new technology to this region.

GREEN FLASH

THE FUTURE OF OUR WORLD IS IN OUR HANDS.

ACT NOW!





Zayed International Foundation for the Environment

يوم البيئة العالمي World Environment Day 5 June 2021

Together we can be #Generation_Restoration



معاً يمكننا #استعادة_الجيل

