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creating green communities for a better tomorrow

سيجمع محمد بن راشد آل مكتوم للطاقة الشمسية
المرحلة الثانية

200
MW



HH Sheikh Mohammed inaugurates
Phase 2 of AED 1.5 billion
Mohammed bin Rashid Al
Maktoum Solar Park



UAE puts the spotlight on climate change as it marks Earth Hour



Emirates Appreciation Award for the Environment

Together for a green home

Chairman's Message

creating green communities for a better tomorrow

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Prof. Mohammed bin Fahad
Executive Editor

In keeping with the bold approach that has become its calling card; the UAE is continuing to dominate the solar power industry in the Middle East and North Africa region with the implementation of its mega projects. Indeed, the bold plan by the UAE to boost its use of renewable electricity from less than 1 percent to 24 percent in the next five years could be a game-changer for the region, experts say.

Last month's inauguration of the second phase of the Mohammed Bin Rashid Solar Park constitutes a renewable energy landmark and will contribute in fulfilling Dubai's ambition to become a green technology hub. It also brings about the realization that though the UAE is a land synonymous with oil reserves, Dubai has the potential to be the first city in the Arab world to commit to 100 per cent renewable energy and to completely break free from fossil fuels in the near future.

The announcement last year of the launch in Dubai of the largest Concentrated Solar Power (CPS) project to be built on a single site in the world is also driving the UAE's renewables push. It is expected that the new CPS site will generate 1,000 megawatts (MW) of power by 2030 as part of the Dubai Clean Energy Strategy to generate 75 per cent of Dubai's power from clean energy by 2050.

Dubai also plans to install around 100 electric car charging stations as part of its Green Charger Initiative. By 2050, Dubai wants to reduce its carbon emissions by 6.5 million tons every year, with the aim of becoming the city with the world's lowest carbon footprint and thereby ensure that the UAE meets its commitment to the Paris Agreement to keep global warming temperature increases below 2 degrees Celsius this century.

The focus on a cleaner, self-sufficient future for the UAE reinforces the wisdom of the nation's leadership in taking a long-term view and moving to be a leader in renewable energy and energy productivity. As for the rest of the Gulf States, they just need to look to the UAE as an example of how to tap into clean energy's potential.

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From the Managing Editor



Dr. Meshgan Al Awar
Secretary General
Zayed International Prize for
the Environment

"The education of our people is a great wealth. We are proud of our educated nation because through knowledge and science we will open the horizons of a glorious future."

- Sheikh Zayed bin Sultan Al Nahyan

It was an honor and a privilege to be part of the Harvard Alumni meeting held last month where I got the opportunity to convene with the next generation of thinkers around the world, alongside accomplished leaders from a variety of fields.

Highlighting the role of science, technology and innovation as being vitally important to the future of the UAE, His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, called on the youth to invest in science to

lead the nation forward in his address at the event.

There is no doubt that science is critical to help meet the challenges for sustainable development, as it lays the foundations for new approaches and technologies to tackle global challenges for the future. The Zayed International Foundation for the Environment also believes that the youth are the backbone of innovation and the future and that science education and capacity building in science needs to be strengthened to make the most of the transformational change it can bring about on the road towards sustainable development.

Accordingly, the Zayed Foundation has unveiled several initiatives for education in science and the youth over the years including the launch of a new category of the prestigious Zayed International Prize for the Environment to be conferred for the first time in the 7th cycle of the Awards which will be celebrated soon. Titled 'The Young Scientists Award for Environmental Sustainability', this new category recognizes, rewards and promotes pioneering contributions of talented young scientists worldwide for their research in Environmental Sciences and Green Technology that have contributed significantly to Environmental Integrity and Sustainable Development.

Our celebration of Earth Hour also shows that we remain steadfast in delivering on the goals of the Paris Agreement while shining a light on climate action.

thereby promote the young generation as one of the core elements of both national and sustainable development.

Executive Editor

Prof. Mohammed Bin Fahad

Managing Editor

Dr. Meshgan Al Awar

Advisor

Dr. Eisa Abdellatif

Editor

Sangeetha Swaroop
editor@zayedprize.org.ae

Design Director

Nash - Intoto
nash@intotoadz.com

Marketing

marketing@zayedprize.org.ae

Published by



P.O. Box 28399, Dubai, UAE

Tel: +971 4 3326666

Fax: +971 4 3326777

Website: www.zayedprize.org.ae

email: zayedprz@emirates.net.ae



Cover Story

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Phase 2 of Mohammed bin Rashid Al Maktoum Solar Park inaugurated



The AED 1.5 billion solar plant is expected to generate clean energy for 50,000 residences in Dubai and reduce 214,000 tonnes of carbon emissions annually.

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, inaugurated Phase 2 of the Mohammed bin Rashid Al Maktoum Solar Park at Seih Al Dahal in Dubai on 20th March, 2017.

H.H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council and H.H. Sheikh Mansour bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Presidential Affairs, accompanied

HH Sheikh Mohammed at the event.

Implemented by DEWA in partnership with a consortium led by Saudi Arabia's ACWA Power as the main developer and Spain's TSK as the main contractor, the second phase of the AED 1.5 billion solar plant is expected to generate clean energy for 50,000 residences in Dubai and to reduce 214,000 tonnes of carbon emissions annually.

Located near Al Qudra in Dubai, the world's largest single-site solar park has more than 2.3

million thin-film photovoltaic panels spanning 4.5 sq kms.

Sheikh Mohammed also toured the sideline exhibition that displays DEWA's projects and initiatives in the field of clean energy since 2011. Sheikh Mohammed congratulated DEWA staff and partners on the implementation of the Phase 2 and what has been achieved in a record time. He also deemed the event as a national achievement accomplished by the country.

Saeed Mohammed Al Tayer, CEO and MD of DEWA welcomed



e s f o r a b e t t e r t o m o r r o w

The Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park in the world.

Sheikh Mohammed’s long-term vision for clean energy, which directly contributes to the efforts aiming to secure community happiness and welfare.

In the speech he delivered during the inauguration, HE Saeed Mohammed Al Tayer noted that Phase 2 of the solar park is ready for operation ahead of schedule. Previous statements from DEWA had the target completion date set for April of this year.

“This is the first and largest project of its kind in the region, based on the Independent Power

Producer (IPP) model. The UAE has started its early preparations to bid farewell to the last drop of oil to fulfil the vision of our wise leadership. We are doing this by implementing a clear strategy that includes investments in energy projects that use various solar power technologies,” he said.

Sharing details about the development, Al Tayer said: “This phase installed 2.3 million photovoltaic solar panels over 450ha (4.5km²), with 1.5 million safe man-hours without Lost Time Injury (LTI) during project execution.” The head of DEWA also

highlighted that Phase 2 is the first and the largest of its kind that is based on the independent power producer (IPP) model.

Dr. Amal Abdullah Al Qubaisi, FNC Speaker, H.H. Sheikh Ahmed bin Saeed Al Maktoum, Chairman of Dubai Civil Aviation Authority, Sheikh Nahyan bin Mubarak Al Nahyan, Minister of Culture and Knowledge Development; Ahmed Juma Al Za’abi, Deputy Minister for Presidential Affairs; Dr. Thani bin Ahmed Al-Zeyoudi, Minister of Climate Change and Environment; Dr. Sultan bin Ahmad Sultan Al Jaber, Minister of State; Matar



Humaid Al Tayer, Chairman of the Board of DEWA; Dhahi Khalfan Tamim, Deputy Chief of Dubai Police and Public Security; Khalifa Saeed Sulaiman Director General of Dubai Protocol Department and a host of senior officials attended the inauguration ceremony.

The Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park in the world. It spans over 8,500ha (85km²), and is expected to generate 1,000MW by 2020 and 5,000MW by 2030, with total investments worth up to \$13.6bn (AED50bn). Upon completion, the solar park is also expected to reduce over 6.5 million tonnes of carbon dioxide emissions annually.

MBR Solar Park: An Overview

The Mohammed bin Rashid Al Maktoum Solar Park was announced in January 2012 in line with the vision and directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai, to enhance the sustainable development of Dubai. It also supports the Dubai Clean Energy Strategy 2050 to make Dubai a global center of clean energy and green economy.

The strategy also aims to provide 7% of Dubai's energy from clean energy sources by 2020, 25% by 2030 and 75% by 2050. DEWA is managing the Solar Park, which is the largest renewable-energy project on a single plot in the

world with a planned production capacity of 5,000 MW upon completion in 2030.

Mohammed Bin Rashid Al Maktoum Solar Park Projects

First Phase: HH Sheikh Mohammed bin Rashid Al Maktoum i inaugurated the first phase on 22 October 2013, with a capacity of 13 MW. The inauguration coincided with World Energy Day, which takes place on 22 October every year.

Facts and Figures:

- The generating capacity is 13MW of clean energy
- The project generates 24 million kilowatt hours (kWh) of electricity per year
- The project required more than 1.4 million man-hours to

The Mohammed bin Rashid Solar Park will be the largest single-site solar energy project in the world, with a planned total production capacity of 5,000 megawatts by 2030.



complete, all of which were accident-free

- The project reduces greenhouse gas emissions by 15,000 metric tons of CO2 per year
- Performance Ratio is more than 83%
- The project is powered by 152,880 photovoltaic modules
- The project covers an area of 280,000 square meters

Second Phase: The 200MW photovoltaic was opened on March 20, 2017. The second phase was completed in partnership with the public and private sectors based on the Independent Power Producer model. In January 2015, DEWA announced that the production capacity of the second phase

of the Mohammed bin Rashid Al Maktoum Solar Park would be increased from 100 MW to 200 MW. DEWA also selected the consortium led by Saudi Arabia's ACWA and Spain's TSK as a preferred bidder based on its proposed LCOE (Levelised Cost of Energy).

Facts and Figures:

- Over 2.3 million thin-film photovoltaic panels
- Can power up to 50,000 residences annually
- Over 1,100 manpower to build the plant
- 23 fils per kilowatt hour, the lowest tariff globally upon project tendering
- Over 1.5 million safe man hours without lost time to injury

- Cleaning is done every three weeks; if it's dusty, energy generation could go down to 170MW

Third Phase: 800MW photovoltaic will be launched in stages, ending by 2020. In June 2016, DEWA announced the Abu Dhabi Future Energy Company (Masdar)-led consortium as selected bidder for the 800MW third phase of the solar park. The project capacity will be added in a phased manner - 200 MW by April 2018 followed by 300 MW in April 2019 and another 300 MW by April 2020.

Fourth Phase: 200MW CSP will be launched in April 2021. DEWA is working to build the largest Concentrated Solar Power (CSP)

مجمع محمد بن راشد آل مكتوم للطاقة الشمسية المرحلة الثانية



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project in the world, based on the IPP model. The 200 megawatt first phase of the CSP plant will be operational by April 2021. It is expected to be the largest CSP power plant located within the same area worldwide, when fully developed by 2030.

Future Phases: Up to 5,000MW by 2030

Innovation Centre: This interactive centre is equipped with the latest technologies in renewable and clean energy.

Objectives:

- Further developing national skills in clean energy
- Promoting the competitive edge of businesses in Dubai, developing renewable energy

technologies and supporting the region's energy industry

- Spreading awareness on sustainable energy
- Creating interactive presentations and organising educational tours for visitors
- Educating people about solar energy and the Solar Park and highlighting Dubai's leading role in the field of sustainability

Research & Development Centre Objectives:

- Conducting studies to meet industrial and social requirements
- Leading regional efforts for scientific research on renewable energy
- Serving as a link between

researchers and developers

- Developing formal channels linking universities to local and global research centres
- Developing output strategies for innovative productive ideas

Photovoltaic Powered Reverse Osmosis Water Desalination Project (PVRO)

- For research and development purposes in the field of water desalination using solar energy, DEWA built a pilot solar-powered reverse osmosis water desalination plant.
- Production capacity is 50 m³ per day of drinking water (with bottled water quality) by desalinating brackish water using solar energy with Energy Storage Batteries.



Children's education promotes sustainability culture and awareness: UAE Ambassador to UN

Obaid Salem Saeed Al Za'abi, UAE's Permanent Representative to the United Nations Office in Geneva, has said that educating children about the importance of sustainable environment and its dimensions during all levels of education will promote a culture of sustainability and raise student awareness about the importance of a healthy lifestyle and a clean environment.

He added that it is important to raise children's awareness about the 2030 agenda at an early age, which will promote their abilities to confront sustainability challenges. Al Za'abi's statements were made during the 43rd session of the Human Rights Council in Geneva.

Al Za'abi welcomed experts who participated in a panel discussion on strengthening the understanding of the relationship between children's rights and the 2030 Sustainable Development Plan, especially on integrating a methodology based on children rights in all aspects of implementing, monitoring and evaluating this plan, and identifying good practices and relevant future challenges.

He added that the 2030 Sustainable Development Plan will classify children from vulnerable categories that should be empowered, to fulfil their needs and provide them with a safe environment to guarantee their growth away from violence, diseases and exploitation.

The plan states that children and youth are considered to be factors of change and that the new goals will enable them to create a better world.

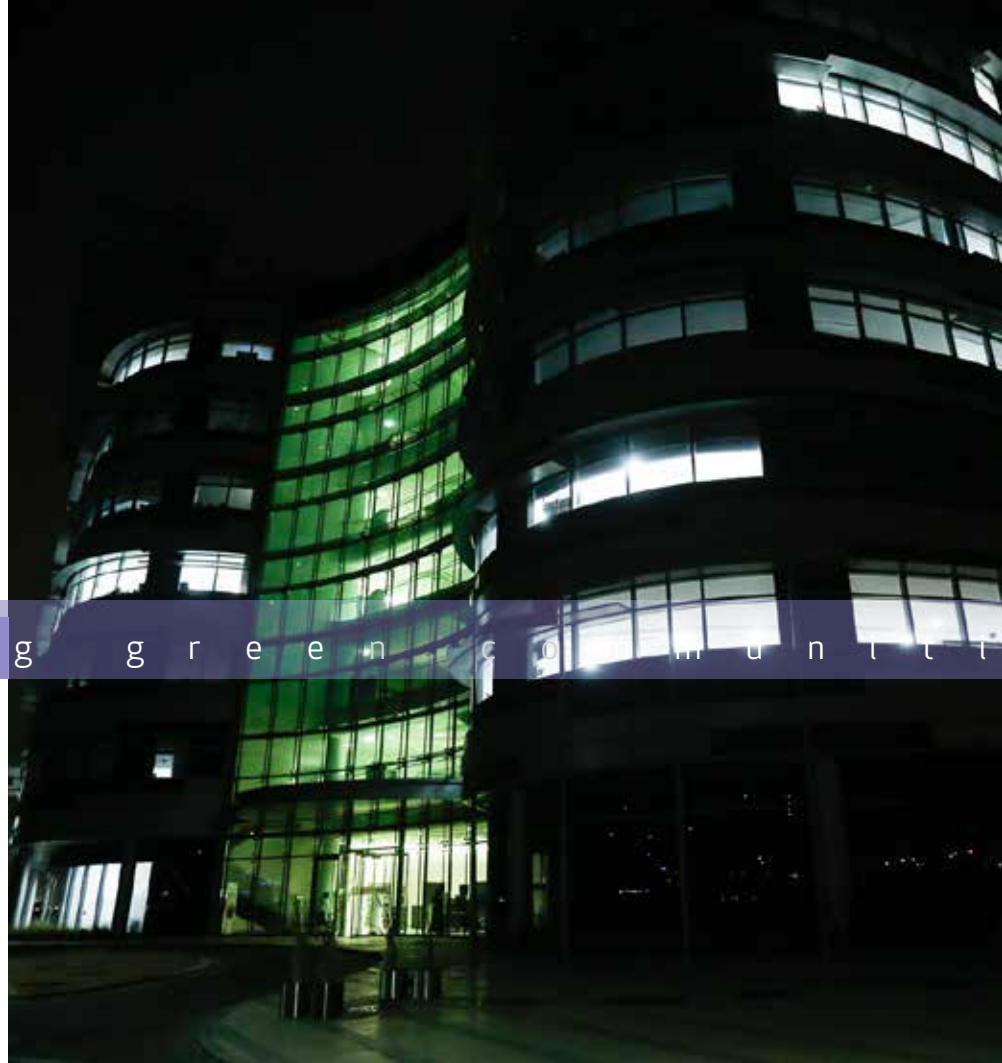
In his speech, Al Za'abi presented the UAE's national experience with regards to children's education.

He said that the UAE established sustainable schools that aim to prepare new generations to understand and manage new global challenges, by promoting environmental sustainability concepts and managing them with available methods, and to implement field activities that help with its understanding, as well as to make positive changes to student behavior.

Cover Story

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'Earth Hour strengthens UAE's role in tackling climate change'



[UAE puts the spotlight on climate change as it joins millions around the world in marking Earth Hour on March 25.](#)

Suhail Bin Mohammed Faraj Faris Al Mazrouei, Minister of Energy, has said the United Arab Emirates is keen to join global environmental conservation and preservation efforts to protect the environment and reduce greenhouse gases.

In a statement marking Earth Hour, a global event observed worldwide to encourage individuals, communities, households and businesses to turn off their non-essential lights for one hour, from 8:30 to 9:30 p.m., as a symbol of their

commitment to the planet, the minister reiterated the UAE's commitment to continuously work for rationalizing the use of water and electricity in collaboration with the education sector in the country.

Al Mazrouei cited a series of initiatives made across the country to enhance public awareness and ensure sustainability through field visits to colleges and schools to instill a culture among different generations to protect the environment. 'Rationalizing the use of water and energy

has become incumbent on each person living on the planet, it is our collective responsibility to ensure sustainability,' said the minister, calling upon all members of society to contribute to the nation-wide efforts made to reduce the state's carbon footprint.

Dubai saves 244MW of electricity and 107 tonnes of CO2 emissions

Dubai has achieved a remarkable reduction of carbon emissions and energy use during Earth Hour 2017, which was organised by Dubai Electricity and Water Authority (DEWA) in cooperation



e s f o r a b e t t e r t o m o r r o w

Earth Hour is a global event that aims to address and minimize the effects and impact of global warming on the Earth's climate and on future generations.

with the Dubai Supreme Council of Energy and the Emirates Wildlife Society (EWS).

DEWA organizes Earth Hour in adherence with the directives of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, and under the patronage of HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Executive Council of Dubai.

DEWA recorded a reduction of 244MW in energy use, compared

to 22MW last year. This resulted in offsetting 107 tonnes of carbon emissions compared to 11 tonnes last year.

The significant results, which Dubai has achieved, indicate the importance of the rational use of energy and reducing Dubai's carbon footprint to protect the environment and natural resources to achieve sustainable development.

DEWA has been organizing Earth Hour annually since 2008, to raise awareness on the importance of the sensible consumption of

electricity, promote rational consumption, and highlight practices that contribute positively to environmental work.

It also supports national efforts to reduce carbon dioxide emissions and environmental pollution, and find sustainable solutions to global warming, climate change, environmental protection, while conserving natural resources for generations to come.

Earth Hour was organized by DEWA for the 10th consecutive year on Saturday, 25 March 2017



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creating green community

at Bay Avenue Park in Business Bay. Lights went off at 8:30pm, joining millions around the world in this environmental event.

At the beginning of the events, HE Dr. Thani bin Ahmed Al Zeyoudi, Minister of Climate Change and Environment toured the Earth Hour activities with HE Saeed Mohammed Al Tayer, Vice Chairman of the Dubai Supreme Council of Energy, and MD & CEO of DEWA. The stands included that of Dubai Police, Dubai Municipality, RTA, the Green Charger, Climate Change Champions, ENOC, Heritage Village, and Noor & Hayat stand.

Thousands of Dubai residents and visitors participated in the Earth Hour Walk carrying

environmentally-friendly candles and lanterns.

HE Saeed Mohammed Al Tayer participated in the walk alongside HE Abdulla Al Shaibani, Secretary General of the Executive Council of Dubai, HE Major General Mohammed Ahmed Al Marri, Director General of the General Directorate of Residency and Foreigners Affairs-Dubai, HE Saif Al Falasi, CEO of Emirates National Oil Company (ENOC), Habiba al Marashi, Founder and Chairperson of the Emirates Environmental Group (EEG), officials from government organisations, private companies, universities, schools, and the media, and a large number of people from all age

groups and nationalities.

“Earth Hour is a global event that aims to address and minimize the effects and impact of global warming on the Earth’s climate and on future generations. Today, with the participation of various government organizations, we seek to draw the attention of the whole society and increase their awareness about the importance of protecting the environment and support the Dubai Plan 2021 to be a sustainable city where people are healthy and happy,” said HE Abdulla Al Shaibani, Secretary General of the Executive Council of Dubai.

Sharjah saves 29 MW of electricity, reduces 17 tonnes of carbon emissions

Dubai recorded a reduction of 244MW in energy use during Earth Hour 2017, compared to 22MW last year. This resulted in offsetting 107 tonnes of carbon emissions compared to 11 tonnes last year.



The Emirate of Sharjah was able to save 29 megawatts of electricity and reduce 17 tonnes of carbon emissions in one hour, thanks to the response of individuals, households and businesses in the emirate to calls to observe the Earth Hour, according to the Sharjah Electricity and Water Authority (SEWA).

The Environment and Protected Areas Authority in Sharjah, in collaboration with various government agencies in Sharjah, organized a variety of activities and programmes at Al Majaz Waterfront in Sharjah City and Khorfakkan in the Eastern Region of Sharjah on Saturday, to mark the Earth Hour initiative and raise public awareness about the

need to rationalize electricity consumption.

Held under the tagline “Shine a Light on Climate Action”, the activities, which were aimed at rationalizing energy consumption and raising community awareness on the importance of conserving natural resources and the environment, attracted a huge amount of community involvement.

Hana Saif Al Suwaidi, Chairperson of the Environment and Protected Areas Authority in Sharjah, said, “Earth Hour is a global campaign through which countries and organizations contribute to saving energy and protecting natural resources by reducing carbon emissions, which

affect the environment and living organisms. By organizing this activity in collaboration with SEWA, we are looking forward to building a better future for the next generation by enabling them to benefit from sustainable resources.”



National Plan

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Sheikh Mohammed launches five-decade government plan 'UAE Centennial 2071'



Under the theme 'UAE Centennial 2071', the blueprint dissects the UAE of the future, in order to set future generations up for success and prosperity.

On 22nd March, 2017, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, chaired a Cabinet meeting and launched 'UAE Centennial 2071', a long-term government plan aimed at sustaining UAE's development into its 100th anniversary.

This plan he announced, is based on the recent and crucial keynote lecture given by His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces.

The plan dissects the UAE of the future, in order to set future generations up for success and prosperity.

'UAE Centennial 2071' is a comprehensive government plan that encompasses a national strategy to strengthen the country's reputation and soft power; ensure that government revenue is diversified, relying less on oil; introduce education programmes focused on advanced IT and engineering and consistently build Emirati values and ethics for future generations. Enhancing the productivity of the

national economy and enhancing community cohesion are also important aspects of the project.

His Highness Sheikh Mohammed bin Rashid Al Maktoum said, "Sheikh Mohammed bin Zayed's lecture has charted a path and laid the foundation for the future of the UAE. Our objective is for future generations in the UAE to live happier lives in a thriving environment with abundant opportunity, more connectivity and global influence."

UAE Centennial 2071 was launched at a Cabinet meeting



e s f o r a b e t t e r t o m o r r o w

The UAE Centennial 2071 project was launched by the Cabinet to make the UAE the best country in the world by 2071.

attended by H.H. Lt. General Sheikh Saif bin Zayed Al Nahyan, Deputy Prime Minister and Minister of the Interior, and H.H. Sheikh Mansour bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Presidential Affairs. The programme focuses primarily on investing in UAE youth, and working toward making the UAE the best country in the world by 2071, the nation's 100th anniversary.

Sheikh Mohammed elaborated, "We have established a clear strategy for 2021; UAE Centennial goes beyond that, with

a five-decade vision for future generations that provides the government a clear roadmap for long-term development."

He explained, "We must plant the seeds today for future generations to grow and prosper tomorrow. The world is rapidly changing, and we must equip our youth with the new tools, knowledge and skills needed to thrive in an ever-evolving environment."

"Establishing a long-term strategy based on a vision for happy future generations will guarantee

sustainable development and lasting joy for decades in our country," he said.

UAE Centennial 2071 aims to prepare young Emiratis for the future to ensure prosperity, growth and the continuity of the UAE's values. This will create security and happiness, allowing future generations to excel and contribute to making the UAE the best country in the world.

The programme will focus on four main objectives. The first is to develop a flexible government with mindful leadership and a



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creating a thriving green community

clear vision that prioritises the people and spreads positive messages. The second is to invest in education, focusing on advanced IT and establishing professionalism and ethics in educational institutions.

The third is to establish a diversified, globally competitive economy, and the fourth is to consolidate the values of tolerance, social cohesion and respect in society within a comprehensive development plan to make the UAE the best country in the world.

The objectives of the government, under UAE Centennial 2071, include establishing the government of the UAE as the best government

in the world, with a long-term vision and inspirational leadership that anticipates, and prepares for, the future.

Other objectives include achieving happiness in society and spreading positive messages internally and to the world, developing mechanisms for monitoring long-term variables in various sectors and measuring their impact on future generations, and establishing Youth Advisory Councils to consider young citizens' perspectives when establishing development policies.

One key objective is to create an effective government mechanism to oversee the implementation and progress of the plan.

Regarding education, UAE Centennial 2071 highlights the importance of excellent quality of education in ensuring future generations are ready to serve their communities and excel. Certain areas of focus in education include advanced science and technology, space science, engineering, innovation and health sciences. Also included is the importance of teaching students to look ahead and instilling a culture of openness by teaching history, culture, the civilizations of other countries and teaching new languages such as Japanese, Chinese and Korean.

Other educational measures include teaching students mechanisms for discovering their

“Establishing a long-term strategy based on a vision for happy future generations will guarantee sustainable development and lasting joy for decades in our country.” - HH Sheikh Mohammed bin Rashid Al Maktoum



individual talents early. On the institutional level, educational institutions are encouraged to innovate and transform to become international research centres, strengthening the system of continuous learning and ensuring the presence of UAE universities on lists of the best universities in the world to attract globally diversified students, academics and researchers.

In terms of the economy, UAE Centennial 2071 seeks to establish a diversified economy by, among other things, increasing the productivity of the national economy, supporting national companies so they may become competitive on the global stage and investing in research and development in

promising sectors. The objective is to establish an economy based on innovation, leadership and advanced industries, developing a national economic and industrial strategy that envisions future sectors and places the UAE among the world's major economies.

In this regard, another objective is to nurture a generation of Emirati inventors and scientists, supporting their contributions, and exporting advanced national products and services to the world through specialized incentive programmes, and supporting the growth of UAE's leading companies globally.

Community development is an integral part of UAE Centennial

2071. Some objectives in this regard include establishing a secure, tolerant, cohesive and ethical society that embraces happiness and a positive lifestyle, and provides a high quality of life (including in health and sports). Investing in people is also important, including consolidating the values of humility and serving the nation through the development of training programmes for students.

The pillar also focuses on developing programmes to prepare future generations to serve as UAE ambassadors and role models, as well as promoting women's participation in all sectors, making the UAE one of the best places in the world to live.

Award

20 c r e a t i n g g r e e n c o m m u n i t i

Dubai Tourism announces new Sustainability Awards



[Awards will recognise Dubai's most eco-friendly hotels and reflects the city's goal to become one of the world's leading sustainable tourism destinations.](#)

Dubai's Department of Tourism and Commerce Marketing (Dubai Tourism) has announced the launch of Sustainability Awards that are part of the Dubai Sustainable Tourism (DST) initiative.

The awards have been inaugurated as part of Dubai Tourism's commitment to supporting The United Nation's announcement of 2017 being the 'International Year of Sustainable Tourism for Development', and aim to recognise hotels and individuals who are driving environmental awareness and are

adopting tangible measures to ensure enhanced sustainability within the tourism sector.

The inaugural award ceremony will be held in October 2017 to coincide with Dubai Green Week. The award criteria have been designed to meet the challenges outlined in Dubai's Carbon Abatement Strategy; issued by the Dubai Supreme Council of Energy, which commits to reducing carbon emissions by 16 per cent by 2021. It also supports the UAE's Green Growth Strategy that aims to build an economic system that has sustainability at

its core. These initiatives in turn, are in line with Dubai Plan 2021 and Dubai Integrated Energy Strategy 2030.

His Excellency Helal Saeed Almarri - Director General of Dubai Tourism said: "Tourism plays a crucial role within the diversification strategy of Dubai. Alongside the growth of this industry comes responsibility, and sustainability within tourism has long been a significant focus for the government of Dubai. As we look forward to capacity expansion and increased visitor volumes in the lead-up to 2020



es for a better tomorrow

All hotel establishments and desert camps are invited to submit their nominations for the new Sustainability Awards.

and beyond, it is paramount for us to implement measures for this industry to conserve resources, saving money for the city of Dubai in the process of doing so. Raising awareness of conservation practices is a key pillar of the Dubai Sustainable Tourism initiative and the launch of the Sustainability Awards supports Dubai's vision to become a leader in sustainable tourism."

The awards will feature 20 awards, with the 13 main awards targeted towards hospitality establishments. There will also be seven special awards that

recognise the efforts of the leaders and individuals who truly embody the sustainability principles of DST in the sector, and who have created remarkable changes within their organisations. The categories of these seven special awards are: Sustainability Champion, Best Green Team, Conservation Champion, CSR Record Holder, Green Procurement Patron, Best Retrofit Implementation and Renewable Energy Leader.

The Sustainability Awards are now open for entries. All hotel establishments and

desert camps are invited to submit their nominations. The adjudication process will cover strategic and operational initiatives implemented by the establishments. These will be benchmarked against standards by highly qualified experts representing various entities, with process being supervised by a highly-respected jury panel.

To participate in the awards, hotels and desert camps must enrol through the DST website (<https://dst.dubaitourism.ae>). The deadline to submit the applications is 20th of July 2017.

Plantation Week

22 c r e a t i n g

37th Plantation Week marks opening of five new parks in Dubai



Half a million flower plants, 50,000 saplings were distributed by Dubai Municipality to mark the celebrations during the 37th Plantation Week.

Dubai Municipality opened five new parks in March 2017 as part of the 37th UAE Plantation Week celebrations. The week-long programmes held under the slogan 'Let's plant a greener Emirates together' kick started with the opening of Al Warqa'a 3 Park on 12th March.

Nad Al Sheba 2 Park, Al Khawaneej Pond Park, Al Mizhar 2 Park, Hatta Valley Park and the Hatta Square are the other parks that were opened to the public during the Plantation Week organized from 12th to 16th March.

As part of the activities of the Plantation Week and the 2017 Year of Giving initiative, Dubai Municipality also distributed more than 500,000 flower plants and 50,000 saplings to the public and visitors to the different parks in Dubai.

The new park at Al Warqa-3 was opened in the presence of HE Dr. Thani Bin Ahmed Al Zeyoudi, Minister of Climate Change and Environment, Eng. Hussain Nasser Lootah, Director General of Dubai Municipality, Assistants to the Director General, Directors of Departments and other senior

officials of the Municipality and the Ministry of Climate Change and Environment.

After taking a tour of the new park in Al Warqa-3, the Minister said he values the remarkable care that has been given by the public and private sector establishments in the country on environmental affairs.

"This year's Plantation Week celebrations coincide with the implementation of the directives of President HH Sheikh Khalifa Bin Zayed Al Nahyan on the Year of Giving 2017. It is also



e s f o r a b e t t e r t o m o r r o w

The Plantation Week, organized from 12th to 16th March, was held under the slogan, "Let's plant a greener Emirate together".

in line with the directives and the care of the wise leadership on preserving the environment, protecting plants and creating awareness among members of the community on the importance of the sustainability of vegetation thereby contributing to the great efforts made by the UAE in the preservation of the natural environment," said Al Zeyoudi.

"Those efforts have resulted in achieving stunning successes in spreading green areas and transforming cities of the country to lush parks, in addition to promoting agricultural

development and increasing plantation projects as well as using the best practices in agricultural projects and managing them efficiently and effectively," he said.

Lootah stated that the city of Dubai has made many achievements in the field of afforestation in order to keep pace with the urban expansion and development. He stressed that the Plantation Week aims to educate the community of the importance of afforestation. "We want to make sure the participation of different age

groups in the preservation of agriculture and implant agricultural values in the minds of young people, including students. We also want to further educate the general public on the role played by the municipalities of the country in this area," he said.

"Dubai Municipality plays a vital role in providing great natural outlets, parks and resorts and in beautifying the streets of the city. We are keen to provide multiple alternatives and options for the population, frequenting parks and resorts, matching the latest international systems and



standards for services on an ongoing basis through the many vital projects in this area," Lootah explained.

Plantation Week activities in Abu Dhabi

The Abu Dhabi City Municipality kick-started Monday the events of the 37th Plantation Week under the theme, Let's Plant the UAE Together, at Mohammed bin Zayed City, with an array of different events.

The Municipality called on the public to attend the launch of the Plantation Week's events marked by a variety of traditional functions to mark this annual occasion. Activities that were held included a number of performances about the

environment, landscaping, tree, and agricultural development in the UAE in cooperation with students of various schools.

During the opening ceremony, a palm tree was planted in keeping with the annual tradition marking this occasion. During the Plantation Week an agricultural exhibition was also held to showcase the latest agricultural technologies, irrigation means

and new concepts of agriculture, parks and landscaping.

The Municipality is moving ahead with its efforts to expand the greens and construct more public and residential parks. In 2016 a number of agricultural projects and parks were accomplished. More parks and landscaping projects are being undertaken in 2017 with emphasis on environmental and local flora.





Minister of Climate Change launches Lulu initiative to promote locally grown organic produce

The UAE government has placed a high priority on promoting the food production industry in hopes of finding new ways to increase its contribution to the national economy's food security and diversification, said Dr. Thani bin Ahmed Al-Zeyoudi, Minister of Climate Change and Environment, while launching the new initiative of Lulu hypermarkets to support locally grown organic farm produce through their stores across the UAE.

The initiative was inaugurated at Lulu Hypermarket in Mushrif Mall, Abu Dhabi, in the presence of Yusuff Ali Musliam, Chairman of Lulu Group and other top officials.

During the inauguration ceremony, Dr. Thani bin Ahmed Al-Zeyoudi indicated that there is a high demand for organic products made in UAE, which will benefit the farmers' community.

"We focus on the adoption of appropriate and viable agricultural patterns of climate-smart agriculture, such as hydroponics, organic and protected agriculture. We also concentrate on employing modern techniques, systems, innovative solutions and best practices to cope with the pressures and challenges faced by the sector, in addition to strengthening the partnership initiatives between the public and private sectors," Dr. Al-Zeyoudi explained.

Yusuff Ali said, "We are proud to associate with Ministry of Climate Change and Environment and the Zayed Higher Organisation for promoting organic produce from the UAE. Through this arrangement, not only we will be promoting the local agricultural sector and supporting the special needs community but also cut down carbon emission due to the reduction in transportation of locally grown vegetables."

These initiatives contribute effectively to supporting the marketing of national agricultural products. For example, the volume of national organic products sales, through only two partners, increased to AED20 million by the end of 2016.

2016 a record year for renewables: IRENA Report



[Solar outpaces wind for new power capacity; Asia accounted for 58% of new renewable additions last year, making it the fastest growing region for green energy in the world.](#)

Global renewable energy generation capacity increased by 161 gigawatts (GW) in 2016, making the strongest year ever for new capacity additions, according to data released on 30th March, 2017 by the International Renewable Energy Agency (IRENA). Renewable Energy Capacity Statistics 2017 estimates that by the end of last year the world's renewable generation capacity reached 2,006 GW, with solar energy showing particularly strong growth.

"We are witnessing an energy transformation taking hold around

the world, and this is reflected in another year of record breaking additions in new renewable energy capacity," said IRENA Director-General Adnan Z. Amin.

"This growth in deployment emphasizes the increasingly strong business case for renewables which also have multiple socio-economic benefits in terms of fueling economic growth, creating jobs and improving human welfare and the environment. But accelerating this momentum will require additional investment in order to move decisively towards decarbonising the energy sector and meet climate

objectives. This new data is an encouraging sign that though there is much yet to do, we are on the right path," he added.

IRENA's new data shows that last year's additions grew the world's renewable energy capacity by 8.7 per cent, with a record 71 GW of new solar energy leading the growth. 2016 marked the first time since 2013 that solar growth outpaced wind energy, which increased by 51 GW, while hydropower and bioenergy capacities increased 30 GW and 9 GW respectively —the best ever year for growth in bioenergy



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Global renewable energy generation capacity increased by 161GW in 2016, making it the strongest year on record for new capacity additions.

capacity. Asia accounted for 58 per cent of new renewable additions in 2016, according to the data, giving it a total of 812 GW or roughly 41 per cent of the global capacity. Asia was also the fastest growing region, with a 13.1 per cent increase in renewable capacity. Africa installed 4.1 GW of new capacity in 2016, twice as much as 2015.

Highlights by technology:

Hydropower: In 2016, about half of new hydro capacity was installed in Brazil and China. Other countries with major hydro expansion (over 1 GW) included: Canada; Ecuador; Ethiopia and India.

Wind energy: Almost three-quarters of new wind energy capacity was installed last year in just four countries: China (+19 GW); USA (+9 GW); Germany (+5 GW); and India (+4 GW). Brazil continued to show strong growth, with an increase of 2 GW in 2016.

Bioenergy: The majority of bioenergy capacity expansion occurred in Asia last year (+5.9 GW) and Asia is fast approaching Europe in terms of its share of global bioenergy capacity (32 per cent compared to 34 per cent in Europe). Europe (+1.3 GW) and South America (+0.9 GW) were the

other two regions where bioenergy capacity expanded significantly.

Solar energy: Asia saw the most growth in solar capacity last year, with capacity of 139 GW (+50 GW). Almost half of all new solar capacity was installed in China in 2016 (+34 GW). Countries with significant expansion included: USA (+11 GW); Japan (+8 GW) and India (+4 GW).

Geothermal energy: Geothermal power capacity increased by 780 MW in 2016, with expansions in Kenya (+485 MW), Turkey (+150 MW), Indonesia (+95 MW) and Italy (+55 MW).

Initiative

28 creating green community

DEWA to double e-vehicle charging stations across Dubai



Up to 200 charging stations will be installed in malls and petrol stations across Dubai in second phase of the Green Charger initiative

Dubai Electricity and Water Authority (DEWA) is all set to double its electric vehicles charging stations to 200 across Dubai as the second phase of the Green Charger initiative gets underway, according to a top Dubai Electricity and Water Authority (DEWA) official.

The build-up of infrastructure and charging stations for electric vehicles — including fast-chargers at petrol stations — forms part of DEWA's strategy to develop the advanced facilities that meets the vision of His Highness Sheikh Mohammed

bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to make Dubai the smartest and happiest city in the world.

“Through this initiative, DEWA aims to encourage people to use sustainable transportation of hybrid and electric vehicles, to help reduce carbon emissions in the transport sector, which is the second highest contributor of greenhouse gas emissions in Dubai,” said HE Saeed Mohammed Al Tayer, MD & CEO of DEWA.

“This initiative will contribute

effectively to the achievement of the UAE Vision 2021 and Dubai Plan 2021, to make Dubai a smart, integrated and connected city that is fully sustainable with its resources, and where environmental components are clean, healthy and sustainable.

“The Green Charger initiative also contributes to the objectives of the Dubai Clean Energy Strategy 2050, to transform Dubai into an international hub for clean energy and green economy and to enhance Dubai's position as the city with the lowest carbon footprint worldwide. And it



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The Green Charger initiative contributes to the objectives of the Dubai Clean Energy Strategy 2050 to transform Dubai into an international hub for clean energy and green economy.

also supports the Dubai Carbon Abatement Strategy to reduce carbon emissions by 16% by 2021," he added.

"The Supreme Council launched the Dubai Green Mobility initiative, to encourage the use of sustainable transport and electric vehicles among its member companies. The Supreme Council issued directive number 1 of 2016 for all government organisations that at least 2% of their vehicle purchases must be hybrid or electric vehicles from 2016 to 2020. This will then increase to 10% from 2021 to 2030," he said.

"Dubai Government identified the rate per kilowatt hour (kW/h) for public charging of an electric vehicle as 29 fils per kW/h. This figure constitutes significant savings for electric car owners, compared with those that use fuel.

"For example, a Renault electric car can be charged for a full hour for a cost of only AED 7, where you can drive it for 130 km and can reach the same speeds as conventional cars. The larger the size of the battery the more time is needed to charge the battery, lengthening the distance that can be driven by a car during one

charging cycle," added Al Tayer.

DEWA is setting up different types of charging stations, including fast-charging stations installed at petrol stations that take 20-40 minutes. Medium-charging stations installed at shopping malls, parks, and Dubai Government customer service centres take 2-4 hours.

DEWA launched the Green Charger initiative in April 2014 to install and manage the required infrastructure to charge electric vehicles. The move complements its efforts to reduce air pollution.

Sharjah Ruler attends conversation panel on climate change with Al Gore



Former US VP stresses role of governments in reaching global consensus to fight climate change.

His Highness Sheikh Dr. Sultan bin Mohamed Al Qasimi, Member of Supreme Council and Ruler of Sharjah attended a conversation panel on 22nd March, 2017 with Al Gore, former US Vice President and founder-chairman of the Climate Reality Project as part of the sixth edition of International Government Communication Forum (IGCF 2017) at the Expo Centre Sharjah.

Headlined 'Climate Change... Are there Real Solutions?' the lively panel discussion was moderated by HE Sheikh Fahim

bin Sultan Al Qasimi, Executive Chairman of the Department of Government Relations in Sharjah. The discussion explored the role of governments in educating society on the existential threat of climate change and raising awareness of sustainable climate changing solutions.

Disturbing numbers pertaining to environmental degradation continue to sound alarm bells across the globe at regular intervals. The World Bank, in collaboration with the Institute for Health Metrics and Evaluation, published a report in September

2016 pointing out that air pollution costs the world economy over US\$225 billion a year due to employee absences from work and the accrued costs of healthcare. The report also noted that an astounding 5.5 million deaths in 2013 were the direct result of air pollution.

Al Gore said: "The climate crisis is very different from any crisis we have ever confronted before. The population has quadrupled, and as technologies continue to become more powerful, the prevailing pattern of short-term thinking does not provide an impetus to



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Disturbing numbers pertaining to environmental degradation continue to sound alarm bells across the globe at regular intervals.

make the investments in long-term infrastructure changes that are needed to achieve sustainable reductions in greenhouse gas emissions.”

Doomsday projections related to the environment continue unabated. The one silver lining to emerge from such data is perhaps the fact that people are increasingly questioning what they can do to mitigate the conscious as well as the inadvertent environmental impact triggered by human actions.

However, hurdles still exist and

convincing the public to change their habits and lifestyles to help reduce global warming and prevent even worse consequences than those already happening is yet another challenge for governance, emphasized the former US Vice President.

Referencing a survey by Pew Research Center, Sheikh Fahim bin Sultan Al Qasimi noted that while two-thirds of people surveyed believe major lifestyle changes will be needed to limit greenhouse gas emissions, awareness of the solutions that are readily available is still low.

In response, Al Gore said: “Some of the conversation has been dominated by inaccurate information. We cannot afford to allow science and reason to be undermined. Governments are in denial and we cannot continue to let political disagreements impair collective efforts to protect the environment.”

Praising the UAE leadership’s focus on renewable energy, he added that the country’s efforts should be replicated elsewhere. In addition, he expressed hope that governments will develop a solid consensus in the pursuit



of environmental goals by highlighting the evidence that is widely available and the consequences that are already occurring.

In closing, Al Gore said: “We see these catastrophes. Connect the dots and make it clear what the causes are. There are three questions about the climate crisis that we must ask ourselves: Must we change? Can we change? Will we change? The will to change in itself is a renewable resource.”

Under the patronage of His Highness Sheikh Dr. Sultan bin Mohamed Al Qasimi, UAE Supreme Council Member and Ruler of Sharjah, the sixth edition of the International Government

Communication Forum (IGCF 2017) was held from 22 to 23 March at Expo Centre Sharjah.

Themed ‘Societal Participation... Comprehensive Development’, IGCF 2017 examines how nations around the world can leverage effective government communication to achieve the United Nations’ Sustainable Development Goals (SDGs) that have become the top priority of government programmes,

international institutions, media organizations and civil society.

Offering a transparent platform to examine current issues and formulate recommendations to help governments optimize the impact of their communication, IGCF 2017 convened more than 2,500 local and international personalities from the ranks of government officials, experts, thought leaders, and government communication professionals.





Dubai Silicon Oasis opens electric vehicle charging stations for free public use

Dubai Silicon Oasis Authority, DSOA, the regulatory body for Dubai Silicon Oasis, DSO, the integrated free zone technology park, has launched a new initiative that allows electric vehicle owners to use charging stations on its premises free of charge from 22nd March until the end of the year.

As part of its aim to encourage people to purchase or rent zero-emission electric cars, DSOA is granting free use of the charging stations to the public. The stations will be open 24 hours, seven days a week.

The initiative follows a series of projects implemented by the authority in line with Dubai

Clean Energy Strategy, which promotes energy efficiency while reducing operational costs, with the ultimate objective of transforming Dubai into a city with the world's smallest carbon footprint by 2050.

Commenting on the announcement, engineer Muammar Al Katheeri, Executive Vice President of Engineering and Smart City at DSOA, said, "We are keen to support the vision of our wise leadership to transform Dubai into a sustainable and environment-friendly city by reducing carbon emissions. A pillar of our business model, sustainability allows us to contribute to strengthening the emirate's position as a leading

global example for achieving the highest standards in environment conservation."

Dubai Silicon Oasis currently has three electric vehicle charging stations installed on its premises, each of which can charge up to two vehicles at once and aims to increase the count to seven by 2018.

In addition, the authority recently introduced four electric vehicles, used by on-ground security patrols and attending facility management units within Dubai Silicon Oasis. DSOA recently received two Golf GTE plug-in hybrid models from Al Nabooda Automobiles, for use by Engineering Management and Smart City team within DSO.

Energy Efficiency

34 c r e a t i n g g r e e n c o m m u n i t i e s

100 buildings
in Dubai to be
'benchmarked' for
energy efficiency



EmiratesGBC invites Dubai-based hotels, shopping malls and schools to take part in the Benchmarking Project, the first Building Efficiency Accelerator pilot project in the UAE.

Emirates Green Building Council (EmiratesGBC), an independent forum aimed at conserving the environment by strengthening and promoting green building practices, in partnership with the Dubai Supreme Council of Energy (DSCE), has invited Dubai-based hotels, shopping malls and schools to take part in a 'Benchmarking Project' to assess their building efficiency.

The roll out of the Benchmarking Project follows a partnership announced between EmiratesGBC and DSCE in 2016 to support the

Building Efficiency Accelerator (BEA), an initiative under the 'Sustainable Energy for All' (SE4All), an initiative led by the United Nations Secretary-General, and funded by the Global Environment Facility (GEF).

Led by World Resources Institute and in partnership with the World Green Building Council (WorldGBC), Green Building Councils are engaging with leading cities to ramp up the energy efficiency of buildings under the BEA. EmiratesGBC is one of four GBCs working with governmental authorities such as

Dubai Supreme Council of Energy – a member of BEA – which has strong expertise in the realm of energy intensity and demand side management.

EmiratesGBC is now piloting a 'Benchmarking Project' that aims to measure the energy performance of 100 buildings in Dubai in the three focus groups – hotels, malls and schools. DSCE is reaching out to its partners to extend its support to the 'Benchmarking Project' and mark the first BEA demonstration project in Dubai, which will serve as a referral point in driving



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The initiative is in line with Dubai's commitment to the Building Efficiency Accelerator, under the United Nation's 'Sustainable Energy for All' programme.

forward the energy efficiency of buildings in the city, and double the rate of efficiency by 2030.

Saeed Al Abbar, Chairman of EmiratesGBC, said: "The Benchmarking Project is a major step towards mapping the energy use efficiency of existing buildings in Dubai. The findings will not only help in undertaking relevant retrofitting measures but will also support policy making in relation to sustainable buildings.

"For the project, we are drawing on our learnings and experience of conducting the first similar

benchmarking study in 2016 on energy efficiency in Dubai's hospitality sector. Our expert team of professionals will evaluate the data to present insightful findings that enable all stakeholders to work towards a greener future by enhancing energy efficiency in our buildings."

A consultation workshop on BEA was held in December 2016. The feedback received is serving as the referral point for the benchmarking project and a policy on energy performance labeling of existing buildings by DSCE. To participate in the pilot

Benchmarking Project, owners and operators of Dubai hotels, malls and schools are encouraged to contact the EmiratesGBC office directly.

Energy used in buildings often accounts for half of all carbon emissions of some cities, while buildings in some larger cities can be responsible for up to 80 per cent of emissions. With two-thirds of the world's population expected to live in cities by 2050, the benchmarking study complements further demand for buildings that are energy efficient and that enable a high quality of life.

Initiative

36 c r e a t i n g g r e e n c o m m u n i t i

Dubai's 'smart flower' harvests power from the sun



The UAE's first 'Smart Flower' re-centers its solar panels to catch sunlight throughout the day, and is the first initiative of its kind in the region.

A flower-shaped solar power generator that re-orient itself to catch the sun's rays through the day was unveiled in front of Dubai Municipality headquarters on 1st March, 2017 by Eng. Hussain Nasser Lootah, Director General of Dubai Municipality.

The solar power generating flower, a first of its kind initiative in the region, was opened in the presence of Ahmed Bin Bayat, Vice Chairman and Managing Director of Dubai Holding, Assistants to the Director General of Dubai Municipality, directors of

departments and other officials of the Municipality.

The Smartflower, developed by an Austrian firm, is considered to be a ground-breaking and innovative solar panel with built-in sensors that allow for the flower-shaped device to automatically track the rays of sunlight and re-orient itself accordingly, which results in a much higher efficiency of up to 23%, and 60% self-utilization as compared to traditional roof-top solar systems.

It also has a highly developed weather adapting mechanism and

its efficiency is not affected by the weather conditions of Dubai. A passive ventilation system has been integrated in the design of the Smartflower to ensure optimum efficiency during high temperatures.

Lootah said the Smartflower is in line with ideas of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, who has said that "through greater investment and innovation in a green economy, the country will achieve its objective to be the gold standard



The Smart Flower was developed by an Austrian company and automatically tracks the rays of sunlight with the help of sensors.

for sustainability worldwide.”

Sheikh Mohammed had said that “whoever does not think of energy is not thinking about the future” while launching the Emirates Energy Strategy 2050, aimed at enhancing the efficiency of consumption by 40%, raising the contribution of clean energy to 50% and a savings equivalent to Dhs700 billion by 2050.

Khalid Sharif Al Awadhi, Assistant Director General for Environment, Health and Safety Control Sector said the Smartflower is considered to be one of the several

initiatives launched by the Applied Sustainability and Renewable Energy Department of Dubai Municipality in 2017, along with the official launching of the Dubai Lamp, the world’s most efficient commercially-available LED lamp, which is expected to reduce energy consumption by 90%.

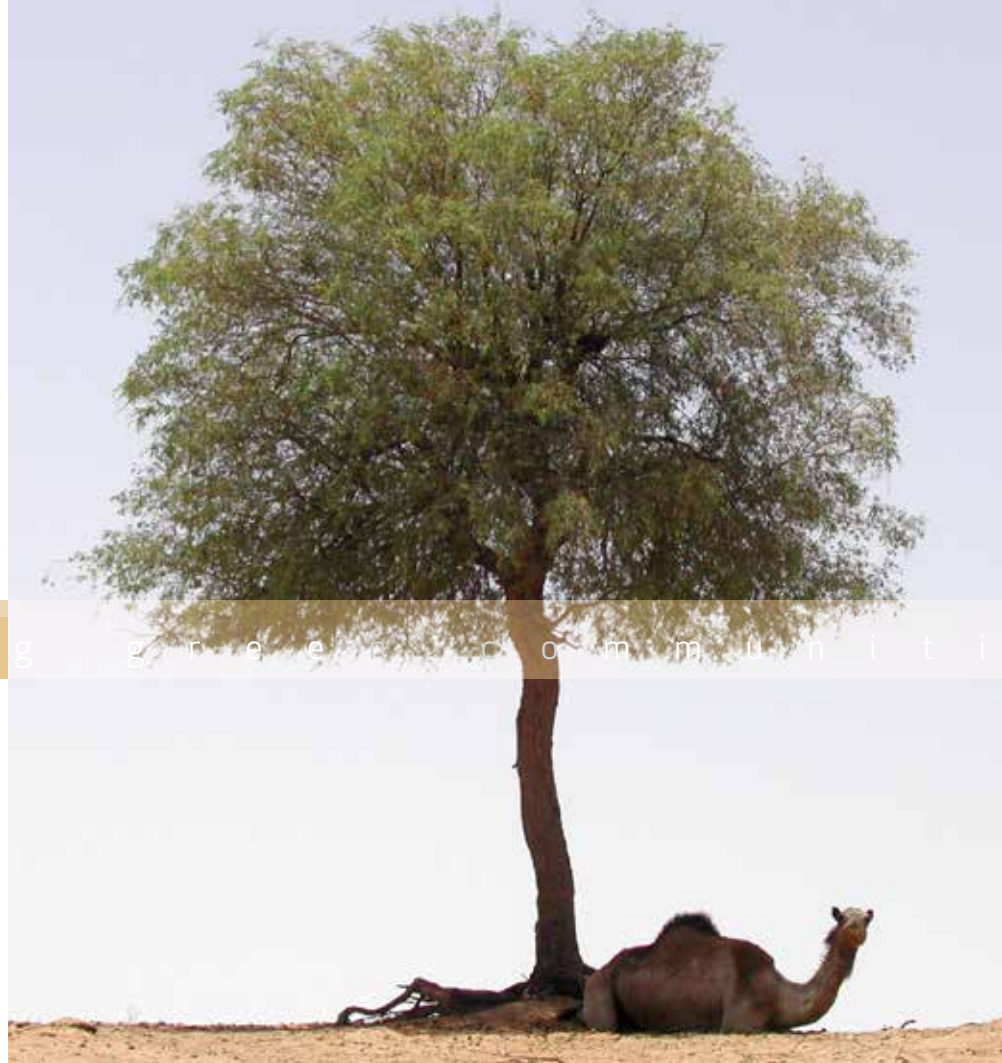
He added that Dubai Municipality continuously encourages and seeks to adopt innovative and creative products and initiatives that will better serve the citizens and residents of Dubai, and promote Dubai to be a global innovation hub in the field of sustainability and clean energy.



Initiative

38 c r e a t i n g g r e e n c o m m u n i t i e s

'Give a Ghaf –
Heritage Forest
Pilot Project'
inaugurated



250 Ghaf trees were planted on the occasion of the International Day of Forests and to mark the official start of the “Give a Ghaf - Heritage Forest Pilot Project” which will count 4,000 indigenous trees by 2020.

Goumbook, a leading social enterprise promoting sustainable living and green practices in the UAE and beyond since 2010, gathered with 150 associates of Marriott International at Al Wadi Desert, Ras Al Khaimah, a Ritz-Carlton Partner Hotel, on the occasion of World Planting Day and the International Day of Forests. They planted the first 250 Ghaf trees of the “Give a Ghaf - Heritage Forest pilot project” in the heart of the Al Wadi Nature Reserve.

The “Give a Ghaf - Heritage Forest pilot project” is a new, unique initiative born from the passion

and commitment of several organizations to make the UAE greener and more sustainable, including Goumbook, Al Wadi Desert, Ras Al Khaimah, a Ritz-Carlton Partner Hotel and the Ras Al Khaimah Tourism Development Authority as well as the Ras Al Khaimah Waste Management Authority and Public Works & Services department, Landscaping and agricultural department.

Al Wadi Desert, Ras Al Khaimah, a Ritz-Carlton Partner Hotel, chose to partner with Goumbook for this project. After years of experience planting Ghaf seeds and trees in

the UAE through its “Give a Ghaf” initiative, Goumbook provided 250 saplings of Ghaf trees, the UAE National tree, to officially unveil the “Give a Ghaf - Heritage Forest” pilot project in the Al Wadi Nature Reserve and establish a solid benchmark for green desert ecosystems in the UAE and beyond.

“This tree planting activity was fantastic way to gather all our associates from the region in one truly inspiring and meaningful activity that unites all of us”, said Amit Arora, General Manager of al Wadi Desert, Ras Al Khaimah, a Ritz-Carlton Partner Hotel. “We live



Inspired by the vision of the founding father of the UAE, the "Give a Ghaf - Heritage Forest" combines environment and sustainability, education, and research.

in the desert and therefore we are all responsible and committed to making it a more sustainable and responsible place to live in".

"Inspired by the vision established by the late Sheikh Zayed bin Sultan Al Nahyan, founding father and visionary of the United Arab Emirates, to "green the desert" in the early 1970s, the "Give a Ghaf - Heritage Forest" combines environment and sustainability, education, and research," said Tatiana Antonelli Abella, Founder and MD of Goumbook. "Since starting our "Give a Ghaf tree planting program" in 2011,

Goumbook planted 30,000 seeds across the UAE. When these seeds become saplings, we need to find them a proper home so they can develop into the strong, self-sufficient desert tree that will not only provide clean air but also a natural habitat for many fauna species to thrive.

With 2017 being declared the "Year of Giving", we are thrilled to collaborate with Al Wadi Desert, Ras Al Khaimah, and RAK authorities. By aiming to plant 4,000 more trees by 2020, the "Give a Ghaf Heritage Forest" will also provide a strong legacy for future generations to enjoy."



Conservation

40 c r e a t i n g g r e e n c o m m u n i t i e s

Nations meet to
save Dugongs
and their
seagrass habitats



Abu Dhabi is focusing global attention on the need to protect the dugongs and their seagrass habitats, and empower governments, researchers and local communities to work on conservation projects.

Delegates from 23 countries, along with the world's leading dugong and seagrass experts, gathered on 13th March, 2017 under the auspices of the Convention on Migratory Species (CMS) for the opening of the Third Meeting of Signatories (MOS3) to Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats (Dugong MOU).

The two-day meeting kicked off a week-long series of events in Abu Dhabi, UAE, to focus global attention on the need to protect threatened dugongs, conserve their

seagrass habitats and empower governments, researchers, local communities and the private sector to work together in partnership to save these iconic animals and the places where they live.

The CMS Dugong MOU is an international agreement signed by 26 Governments.

Opening the meeting, His Excellency Dr. Thani bin Ahmed Al Zeyoudi, UAE Minister of Climate Change and Environment, said: "The CMS Dugong MOU is one of many multilateral environmental agreements the UAE has signed to

promote international cooperation in the field of wildlife conservation. Our waters are home to more than 3,000 dugongs. As we recognized early on that any possible threat to seagrass beds poses a threat to dugongs, our country's dugong population is stable."

He added: "In line with the UAE Vision 2021, we established several marine protected areas. The UAE's efforts in the field of biodiversity conservation elevated the country's ranking in the Marine Reserves Sub-Index within the Environmental Performance Index (EPI) published by Yale University from 33rd place



The CMS Dugong MOU aims to promote internationally coordinated actions to ensure the long-term survival of dugongs and seagrass habitats throughout their range.

in 2012 to first place in 2014 and 2016.”

Her Excellency Razan Khalifa Al Mubarak, EAD Secretary General said: “Without seagrass, dugongs cannot survive – it is their main source of food. If we conserve seagrass meadows, the dugong’s food source is protected. If we can also encourage fishing communities to adopt practices that don’t destroy seagrass and accidentally catch dugongs, we will have helped secure the future of dugongs, seagrasses and those communities.

In Abu Dhabi we have recognized

this interdependent relationship and wish to share our learning and best practices. To support countries develop a strong scientific basis for achieving this goal we are very excited to be able to launch the Dugong and Seagrass Research Toolkit later in this meeting.”

The Dugong MOU Secretariat has been based in Abu Dhabi since 2009 with generous support from Environment Agency - Abu Dhabi (EAD), on behalf of the Government of the UAE.

With a range extending over 40 countries from East Africa to

Vanuatu in the Pacific, dugongs are central to many coastal communities’ cultural heritage. Their protection, together with the conservation of seagrass meadows upon which they feed, benefits marine biodiversity and contributes to human well-being. Seagrass meadows are one of the richest marine habitats on Earth harboring as many as 600 species of marine life and providing nursery grounds for fisheries that people depend upon.

As with other migratory species that move across international boundaries, dugongs are shared by



several countries. Their protection requires all countries where they reside to work together in a coordinated manner – a primary aim of the CMS Dugong MOU.

Developed in partnership between EAD, TOTAL, the CMS Dugong MOU Secretariat and the Dugong and Seagrass Conservation Project, the Toolkit has been developed by a team of technical experts and aims to help people assess and understand the interactions between dugongs, seagrasses and human communities.

It is an easily accessible online decision-support tool that will help people to identify the most appropriate research tools and techniques for their

circumstances. On 15-16 March, a Seagrass and Dugong Technical Workshop demonstrated the Toolkit and gave more than 100 invited participants the opportunity to work through examples under the guidance of the world's leading dugong and seagrass experts.

New adorable addition to Emirates Park Zoo and Resort

Emirates Park Zoo and Resort in Abu Dhabi is introducing its sea lions to visitors for tickets (Dh30 per head) that include a photo with the sea lions.

The educational presentation aims to inform audiences of a better understanding on the ecology of sea lions, and the role humans play in conserving the species

whose existence has recently come under threat. The audience will learn all about sea lions, its method of adaptation, behaviors, characteristics of its ecosystem, and effective conservation techniques.

Emirates Park Zoo and Resort participates in various conservation projects in order to protect endangered animals. Recently, the zoo trail blazed a campaign that raised awareness on the animal trafficking and abuse following the zoo's rescue of four cheetah cubs who were smuggled into the country to be sold as pets.

The four cubs were immediately treated for malnourishment and feline leukemia.



Mashreq launches the first Green Energy mobile ATM on wheels in the region

Mashreq Bank, the leading financial institution in the UAE, has strengthened its position as a pioneer in customer centric innovations, by launching the first ever green energy mobile ATM vehicle in the region.

The new mobile vehicle is the perfect solution to access ATM related services by customers during events and trade shows. The vehicle has a custom fabricated Mercedes Benz Sprinter, and is the first ATM vehicle to comply with the new international security standards.

The key feature of this innovation is the use of solar power and battery solutions that controls the ATM machine and air-conditioning up to 12

hours. It includes 6 solar panels, producing 900 watts of energy for charging the machine during daylight hours. The vehicle also features digital displays promoting innovative banking solutions.

Aref Al Ramli, Head of Digital Banking at Mashreq Bank commented, "Mashreq is proud to be the first bank to implement the green energy mobile ATM on wheels in the region. We are responsible towards the community through our products, services and policies and to a sustainable environment. These innovative ideas come as part of the bank's ongoing efforts to drive corporate responsibility and sustainability to the wellbeing of the community."

The ATM vehicle is fitted with the latest security features including: run flat tyres, access controls, armouring and GPS tracking. It also acts as a backup to the ATM services if there are any disruptions of ATMs at any of the banks' branches.

The mobile ATM was successfully launched at Dubai's music events, at Guns N' Roses and Bryan Adams concerts.



Eco-Tourism

44 c r e a t i n g g r e e n c o m m u n i t i e s

Sharjah unveils new luxury eco-tourism project



[The Kalba Kingfisher Lodge is due to be completed by the end of the first half of 2017 and will feature 20 luxury tents with private pools set against a stunning natural backdrop.](#)

Sharjah Investment and Development Authority (Shurooq) announced on 18th March, 2017 that it has begun work on the Kalba Kingfisher Lodge, an ecotourism project, in collaboration with the Sharjah Environment and Protected Areas Authority (EPAA).

Shurooq described that the five-star hospitality project, featuring a tented camp within the mangrove nature reserve in Kalba, is a “perfect addition to its strategy of promoting environmentally-friendly tourism.”

The Kingfisher Lodge, due to be completed by the end of the first half of 2017, will house 20 luxury tents. With a private swimming pool for each tent, the accommodation is designed to provide guests with comfort, privacy and amazing views overlooking the Indian Ocean and a forest of mangrove (Qurm) trees surrounding the lodge – also home to a number of kingfishers and a host of flora and fauna.

With an ambience of luxury and convenience, the Kingfisher Lodge will include an outdoor yoga and wellness center and a range of

public facilities, including an information desk, a reception lounge, restaurants and outdoor recreational areas.

The tented lodge is being constructed in compliance with the highest global standards of green and sustainable building in order to have minimal impact on the surrounding environment.

According to HE Marwan bin Jassim Al Sarkal, CEO of Shurooq, “There are so many parts of Sharjah that qualify as outstanding areas of natural beauty. We understand that



Shurooq has started work on the Kalba Kingfisher Lodge, an eco-tourism project it is developing in collaboration with EPAA in Sharjah.

there are a growing number of eco-tourists, and a shift in trends towards visitors who want to enjoy incredible natural surroundings in a luxurious environment.”

To avoid harming the environment with construction waste, Shurooq said that it is making sure that construction work is being completed outside the reserve, with ready-made structures and components transferred to – and installed at – the project site.

“We will adopt eco-friendly ways to dispose of construction waste

and recycle everything that can be recycled in line with the highest standards of sustainability,” Al Sarkal added.

Hana Al Suwaidi, Chairperson of the Environment and Protected Areas Authority in Sharjah, said: “Our collaboration with Shurooq on this flagship

project is the perfect example of how we can share the precious natural resources in Sharjah to visitors, while preserving them for generations to come. We will provide the Authority with all the necessary support in managing

the project’s natural resources and protecting mangrove trees, which form the natural foundation of the Kingfisher Lodge. The mangrove nature reserve is home to the number of the oldest mangroves in the region. It is also the perfect location for the existing activity center, where guests can enjoy some sports activities including kayaking and mountain biking in an eco-friendly environment.

She added: “We agreed with Shurooq that the lodge will be built high off the ground, so that the turtle nesting areas are not harmed in any way.”

Initiative

46 c r e a t i n g g r e e n c o m m u n i t i

Winners of
Grow Your Food
initiative to be
declared soon



Schools excel in cultivation techniques; 15 best schools shortlisted for using recyclable materials for cultivation, resourceful use of water through drip irrigation and utilizing food waste to make organic fertilizers.

Dubai Municipality is in the final stages of declaring the winners of its second “Grow Your Food” initiative. The Municipality had launched the green initiative in September last year encouraging Dubai residents to cultivate vegetables and fruits at balconies and terraces of their homes.

The campaign aims to raise public awareness on the importance of farming at homes and educational institutions and seeks to establish a culture of food sustainability and security of the UAE community in the long term.

The three-month period of the contest came to an end in March 2017. The gardens of the contestants are now being evaluated by a jury, who have shortlisted 10 contestants from each category and the final winner from each category will be declared soon.

The contest is open to four categories – educational institutions, government and private companies, centres for people with special needs, and residents. The criteria of the judgment will include creative utilization of space, healthy ways

of growing, sustainability, water saving (utilization mechanism), varieties farmed, team work, and planning / cleanliness.

“This year, the participation from educational institutions has been tremendous. The number of schools increased from 15 to 50, and the overall number of participants increased from 100 to 1600. They have cultivated more than 300kg of crops, which include more than 50 different varieties of fruits and vegetables,” said Khalid Mohammed Sharif Al Awadhi, Assistant Director General of Dubai Municipality for



A jury will evaluate the gardens and select 10 contestants before site visits will choose the winner from each category.

Health, Safety and Environment Control.

“We have shortlisted 15 best schools after our Food Safety Awareness Team visited their gardens to check out their creativity. We have found that many schools were using recyclable materials for cultivation and some of the schools were using drip irrigation and techniques that use less water for growing. There are schools that utilized the waste (fruit peels and left over from canteens) to make it into organic fertilizers,” he pointed out.

“Some schools have set up compost bins to have a completely natural produce. Some others have made fruit oils and medicinal plants for making cough recipes and face masks and other beauty products,” said Al Awadhi.

“Many schools encourage students to make their own lunch boxes using the organic veggies from the garden. Students have thus learnt about food security and food wastage through the garden, while companies - especially catering companies - are using their leftovers to cultivate crops and food wastage

to make compost,” he pointed out.

“We have the support of the United Nations Food and Agriculture Organization (FAO) in this year’s campaign. Through this campaign, the Municipality seeks to establish a culture of food sustainability and security of the UAE community in the long-term.

It also helps us in facilitating the Vision 2021 of Sustainable Green Dubai and also introduce the concept of making available food freshly produced by cost effective ways using recycled materials,” said Al Awadhi.

'Eliminating energy-related carbon emissions possible'



Decarbonization of global energy system, led by renewables and efficiency, would create economic gains, new IRENA study finds.

Global energy-related carbon dioxide (CO₂) emissions can be reduced by 70% by 2050 and completely phased-out by 2060 with a net positive economic outlook, according to new findings released on 20th March, 2017 by the International Renewable Energy Agency (IRENA).

Perspectives for the Energy Transition: Investment Needs for a Low-Carbon Energy Transition, launched on the occasion of the Berlin Energy Transition Dialogue, presents the case that increased deployment of renewable energy and energy efficiency in G20

countries and globally can achieve the emissions reductions needed to keep global temperature rise to no more than two-degrees Celsius, avoiding the most severe impacts of climate change.

"The Paris Agreement reflected an unprecedented international determination to act on climate. The focus must be on the decarbonization of the global energy system as it accounts for almost two-thirds of greenhouse gas emissions," said IRENA Director-General Adnan Z. Amin. "Critically, the economic case for the energy transition

has never been stronger. Today around the world, new renewable power plants are being built that will generate electricity for less cost than fossil-fuel power plants. And through 2050, the decarbonization can fuel sustainable economic growth and create more new jobs in renewables.

"We are in a good position to transform the global energy system but success will depend on urgent action, as delays will raise the costs of decarbonization," added Mr. Amin. While overall the energy investment needed for



The new IRENA study calls for policy efforts to create an enabling framework and re-design of energy markets.

decarbonizing the energy sector is substantial – an additional USD 29 trillion until 2050 – it amounts to a small share (0.4%) of global GDP. Furthermore, IRENA's macroeconomic analysis suggests that such investment creates a stimulus that, together with other pro-growth policies, will:

- boost global GDP by 0.8% in 2050;
- generate new jobs in the renewable energy sector that would more than offset job losses in the fossil fuel industry, with further jobs being created by energy efficiency activities;

- improve human welfare through important additional environmental and health benefits thanks to reduced air pollution.

Globally, 32 gigatonnes (Gt) of energy-related CO₂ were emitted in 2015. The report states that emissions will need to fall continuously to 9.5 Gt by 2050 to limit warming to no more than two degrees above pre-industrial temperatures. 90% of this energy CO₂ emission reduction can be achieved through expanding renewable energy deployment and improving energy efficiency.

Renewable energy now accounts for 24% of global power generation and 16% of primary energy supply. To achieve decarbonization, the report states that, by 2050, renewables should be 80% of power generation and 65% of total primary energy supply.

The report calls for policy efforts to create an enabling framework and re-design of energy markets. Stronger price signals and carbon pricing can help provide a level playing field and the report emphasizes the importance of considering needs of those without energy access.

Discussion

50 c r e a t i n g g r e e n c o m m u n i t i e s

EWS-WWF
fosters discussion
on a sustainable
UAE marine
environment



Several topics were explored, including the important role of our seas in a post-oil economy, climate change risks for industry & business, and key drivers of marine conservation.

The Emirates Wildlife Society in association with WWF (EWS-WWF) hosted an exclusive meeting with influential business leaders on 22nd March, 2017 to foster dialogue and raise awareness about the importance of the UAE marine environment and its relationship to the economy and industry.

The meeting was supported by the attendance of and keynote speech delivered by His Excellency Helal Saeed Al Marri, Director General of Department of Tourism and Commerce Marketing (DTCM), CEO of Dubai World Trade Centre

and EWS-WWF board member, and took place on a dhow trip off the coast of Dubai. Several topics were explored, including the important role of our seas in a post-oil economy, climate change risks for industry & business, and key drivers of marine conservation.

During his speech, delivered to the senior business leaders in attendance, HE Al Marri said: "The UAE, and Dubai in particular, is spending a lot of time diversifying the economy and tourism plays a big part in this. The well-being and happiness of tourists and residents is paramount and the marine

environment is an important factor. For people who grew up here, the sea is a source of passion, and for many of the visitors, Dubai is a beach and marine destination. My colleagues at EWS-WWF are raising awareness and working on critical marine programmes that need your support."

The discussions that ensued focussed on how a healthy marine environment provides a foundation for a strong and sustainable economy. Conversely, gulf waters are under pressure from ever increasing, unsustainable activities and



The health of our marine ecosystems has a direct impact on several industries including food, water, transport and energy, as well as tourism and recreation.

climate change. Thus, immediate action is required.

Laila Mostafa Abdullatif, Deputy Director General of EWS-WWF, added: “The health of our marine ecosystems has a direct impact on several industries including food, water, transport and energy, as well as tourism and recreation— in addition to having further impacts on many more. Accordingly, sustainable marine practices, planning and management directly benefits economy, business and society, facilitating the UAE’s future sustainability in a rapidly evolving

post-oil economy.”

She continued: “We encourage the private sector, civil society and key decision-makers to take a more active role in understanding and working to overcome the challenges that face our marine environment —and subsequent risks to UAE industry and business. We also invite them, and in particular the private sector, to collaborate with us through our Marine Programme, to help boost the resiliency and health of our marine environment.”

During the event, Shams

Ammar, former Regional Head of Corporate Sustainability at HSBC said, “In the absence of turtles and other marine species, everything else collapses. We need to reposition the marine conservation conversation to highlight the effects of change on the whole ecosystem”.

EWS-WWF’s Marine Programme seeks to create a network of marine protected areas with the united support of regional players. This programme will feed into WWF’s Global Priorities and contribute substantially to worldwide ocean conservation efforts.

Campaign

52 c r e a t i n g g r e e n c o m m u n i t i e s

UN, Smurfs team up for International Day of Happiness



[Small Smurfs Big Goals campaign inspires support for Sustainable Development Goals.](#)

Voice actors from the animated movie *Smurfs: The Lost Village* joined officials from the United Nations, UNICEF and United Nations Foundation at the world body's headquarters in New York on 18th March, 2017 to celebrate International Day of Happiness with a campaign promoting the Sustainable Development Goals (SDGs).

The "Small Smurfs Big Goals" campaign is designed to encourage young people everywhere to learn about and support the 17 Sustainable Development Goals adopted by world leaders in 2015

to help make the world more peaceful, equitable and healthy.

As part of the celebrations, Team Smurfs recognized three young advocates — Karan Jerath (20), Sarina Divan (17), and Noor Samee (17) — for their actions to promote the Goals.

Jerath, a UN Young Leader for the Sustainable Development Goals, invented a containment device that could prevent offshore oil spills and ensure the protection of marine life. Divan expanded a UN Foundation girl empowerment initiative at her high school and beyond, and Samee

is a UNICEF blogger and advocate on social justice issues and raising awareness of the Sustainable Development Goals.

The movie's U.S. stars — Demi Lovato, Joe Manganiello and Mandy Patinkin — presented the three young students with a symbolic key to the Smurfs Village in recognition of their work.

"This inspirational campaign highlights the fact that each and every one of us, no matter how young or old, small or big, can make our world a better and happier place," said Cristina Gallach, United



The “Small Smurfs Big Goals” campaign is designed to encourage young people everywhere to learn about and support the 17 Sustainable Development Goals adopted by world leaders in 2015

Nations Under-Secretary-General for Communications and Public Information. “We are grateful to creative partners like Sony Pictures Animation and Team Smurfs for their spirit of collaboration in helping the UN reach diverse audiences.”

The Small Smurfs Big Goals campaign culminates on the International Day of Happiness on 20 March, which emphasizes the importance of personal happiness and well-being. The idea is closely linked to the 17 Sustainable Development Goals, which include decent work for all, access to

nutritious food, quality education and health services, and freedom from discrimination.

“Today we have seen how the Small Smurfs Big Goals campaign is giving children and young people a platform to speak out about issues they are passionate about. As we celebrate International Day of Happiness, we hope many more young people are empowered to take action on the Sustainable Development Goals and help achieve a world free from poverty, inequality and injustice,” said Caryl M. Stern, UNICEF US Fund President and CEO.

The actors and UN officials addressed some 1,500 students attending an international Model UN conference in the iconic General Assembly Hall of the United Nations, where they encouraged all participants and the public to join “Team Smurfs”.

The campaign invites the general public to visit SmallSmurfsBigGoals.com to find out how to contribute to achieving the Sustainable Development Goals, and share information, ideas and images on social media.

The actors also premiered a new



public service announcement video starring cast members of the film that inspires viewers to join the campaign and champion the Sustainable Development Goals.

“We hope the campaign will help us all think about how our actions impact the planet,” said Demi Lovato, who voices Smurfette in the movie. “Every one of us, even a Small Smurf, can accomplish Big Goals!”

The United Nations Postal Administration closed out the blue carpet event by unveiling a special edition stamp sheet featuring the Small Smurfs Big Goals campaign. The film cast along with the Belgian Ambassador to the United Nations, Marc Pecsteen de

Buytswerve, and United Nations Assistant Secretary-General for Management, Stephen Cutts, presented the Small Smurfs Big Goals UN stamps to the press.

Along with the event at the United Nations, other celebrations took place in 18 countries around the world including Argentina, Australia, Belgium, Russia and the UK, to name a few, to help raise awareness for the “Small Smurfs Big Goals” campaign and the Goals.

“Since 1958, the Smurfs have embodied around the world the universal values of camaraderie, helping one another, tolerance, optimism, and respecting Mother Nature,” said Véronique Culliford, the daughter of Peyo, who created the Smurfs. “It’s been an honor

and privilege for The Smurfs to support the United Nations and to continue our longstanding relationship with UNICEF with this campaign focused on raising awareness for the Sustainable Development Goals.”





Reusing and recycling concepts promoted at ‘Waste Free Environment’ campaign

Aiming to enhance public awareness on waste recycling and promote responsible attitudes towards the problem of littering, employees from Borouge and TAKREER, as well as volunteers and school children from Abu Dhabi Education Council joined hands and cleaned up the Yas beach in Abu Dhabi and the ADNOC Beach in Jebel Al Dhanna near Ruwais as part of their contribution to the fifth edition of ‘Waste Free Environment’ campaign.

Advocating the principles of Reuse and Recycling, the ‘Waste Free Environment’ campaign, which was organized on 28th February in Ruwais and on 5th March 2017 in Abu Dhabi, aimed to enhance society’s awareness

about environment protection and the necessary actions that should be taken to stop irresponsible disposal of waste into the environment. Initiated by the Gulf Petrochemicals and Chemicals Association (GPCA), the clean-up drive brought together businesses and community members to share their responsibilities and contribute towards conserving our surroundings and protecting our planet.

“Borouge is committed to educate the public, particularly the youth, about the dangers of littering and its impact on nature and the marine life,” said Ahmed Omar Abdulla, CEO of Abu Dhabi Polymers Company (Borouge), in his speech during the launch of

the campaign in Abu Dhabi.

“It’s exciting to host this campaign with TAKREER to instill the culture of collection, segregation and recycling of waste as the optimum solution for addressing litter problem in a sustainable and responsible manner. Promoting the recycling of plastic waste is an essential part of our sustainability objectives.

“Holding the ‘Waste Free Environment’ campaign sequentially in the Western Region, Abu Dhabi, Mumbai, Shanghai and Singapore further embodies our strong commitment towards protecting and preserving the environment where we live and work.”

Is wastewater the new black gold?

A new UN report demonstrates how improved wastewater management generates social, environmental and economic benefits essential for sustainable development and is essential to achieving the 2030 Agenda for Sustainable Development.

What if we were to consider the vast quantities of domestic, agricultural and industrial wastewater discharged into the environment everyday as a valuable resource rather than costly problem? This is the paradigm shift advocated in the United Nations World Water Development Report, *Wastewater: the Untapped Resource*, launched on 22nd March in Durban on the occasion of World Water Day.

The United Nations World Water Development Report is a UN-Water Report coordinated by the UN World Water Assessment

Programme of UNESCO. It argues that once treated, wastewater could prove invaluable in meeting the growing demand for freshwater and other raw materials.

“Wastewater is a valuable resource in a world where water is finite and demand is growing,” says Guy Ryder, Chair of UN-Water and Director-General of the International Labour Organization. “Everyone can do their bit to achieve the Sustainable Development Goal target to halve the proportion of untreated wastewater and

increase safe water reuse by 2030. It’s all about carefully managing and recycling the water that runs through our homes, factories, farms and cities. Let’s all reduce and safely reuse more wastewater so that this precious resource serves the needs of increasing populations and a fragile ecosystem.”

“The 2017 World Water Development Report shows that improved wastewater management is as much about reducing pollution at the source, as removing contaminants from wastewater flows, reusing





es for a better tomorrow

The UN World Water Development Report is the result of the collaboration between the 31 entities of the United Nations System and the 38 international partners that comprise UN-Water.

reclaimed water and recovering useful by-products. [...] Raising social acceptance of the use of wastewater is essential to moving forward”, argues UNESCO Director-General Irina Bokova in her foreword to the Report.

A health and environmental concern

A large proportion of wastewater is still released into the environment without being either collected or treated. This is particularly true in low-income countries, which on average only treat 8% of domestic and industrial wastewater, compared

to 70% in high-income countries. As a result, in many regions of the world, water contaminated by bacteria, nitrates, phosphates and solvents is discharged into rivers and lakes ending up in the oceans, with negative consequences for the environment and public health.

The volume of wastewater to be treated will rise considerably in the near future especially in cities in developing countries with rapidly growing populations. “Wastewater generation is one of the biggest challenges associated with the growth of informal settlements (slums) in the developing world,”

say the report’s authors. A city like Lagos (Nigeria) generates 1.5 million m³ of wastewater every day, most of which ends up untreated in the Lagos Lagoon. Unless action is taken now, this situation is likely to deteriorate further as the city’s population rises to over 23 million by 2020.

Pollution from pathogens from human and animal excreta affects almost one third of rivers in Latin America, Asia and Africa, endangering the lives of millions of people. In 2012, 842,000 deaths in low- and middle-income countries were linked



to contaminated water and inadequate sanitation services. The lack of treatment also contributes to the spread of some tropical diseases such as dengue and cholera.

Solvents and hydrocarbons produced by industrial and mining activities, as well as the discharge of nutrients (nitrogen, phosphorus and potassium) from intensive farming accelerate the eutrophication of freshwater and coastal marine ecosystems. An estimated 245,000 km² of marine ecosystems—roughly the size of the United Kingdom—are currently affected by this phenomenon. The discharge of untreated wastewater also stimulates the proliferation of toxic algae blooms and contributes

to the decline in biodiversity.

Growing awareness of the presence of pollutants such as hormones, antibiotics, steroids and endocrine disruptors in wastewater poses a new set of challenges as their impact on the environment and health have yet to be fully understood.

Pollution reduces the availability of freshwater supplies, which are already under stress not least because of climate change. Nevertheless, most governments and decision-makers have been primarily concerned by the challenges of water supply, notably when it is scarce, while overlooking the need to manage water after it has been used. Yet these two issues

are intrinsically related. The collection, treatment and safe use of wastewater are at the very foundation of a circular economy, balancing economic development with the sustainable use of resources. Reclaimed water is a largely underexploited resource, which can be reused many times.

From sewer to tap

Wastewater is most commonly used for agricultural irrigation and at least 50 countries worldwide are known to use wastewater for this purpose, accounting for an estimated 10 % of all irrigated land. However, data remains incomplete for many regions, notably Africa. But this practice raises health concerns when the water contains pathogens that

The Report illustrates that “the costs of improved wastewater management are usually outweighed by benefits in terms of human health, socioeconomic development and environmental sustainability”.



e s f o r a b e t t e r t o m o r r o w

can contaminate crops. The challenge, then, is to move from informal irrigation towards planned and safe use, as Jordan, where 90% of treated wastewater is used for irrigation, has been doing since 1977. In Israel, treated wastewater already accounts for nearly half of all water used for irrigation.

In industry, large quantities of water can be reused, for example for heating and cooling, instead of being discharged into the environment. By 2020, the market for industrial wastewater treatment is expected to increase by 50%.

Treated wastewater can also serve to augment drinking water supplies, although this is still

a marginal practice. Windhoek, the capital of Namibia, has been doing this since 1969. To counter recurrent freshwater shortages, the city has installed infrastructure to treat up to 35% of wastewater, which is then used to supplement drinking water reserves. Residents of Singapore and San Diego (USA) also safely drink water that has been recycled.

This practice can meet with resistance from the public, who may be uncomfortable with the idea of drinking or using water they consider to have once been dirty. Lack of public support led to the failure of a project to reuse water for irrigation and fish farming in Egypt in the 1990s. Awareness-

raising campaigns can help gain public acceptance for this type of practice by referring to successful examples, such as that of the astronauts on the International Space Station who have been reusing the same recycled water for over 16 years.

Wastewater and sludge as a source of raw materials

As well as providing a safe alternative source for freshwater, wastewater can also be seen as a potential source of raw materials. Thanks to developments in treatment techniques, certain nutrients, like phosphorus and nitrates, can now be recovered from sewage and sludge and turned into fertilizer. An estimated 22% of global demand for phosphorus, a finite and



60

creating green communities

depleting mineral resource, could be met by treating human urine and excrement. Some countries, like Switzerland, have already passed legislation calling for the mandatory recovery of certain nutrients such as phosphorus.

The organic substances contained in wastewater could be used to produce biogas, which could help power wastewater treatment facilities, helping them transition from major consumers to becoming energy neutral or even net energy producers. In Japan, the government has set itself the target of recovering 30% of the biomass energy in wastewater by 2020. Every year, the city of Osaka produces 6,500 tonnes of biosolid fuels from 43,000 tonnes of sewage sludge.

Such technologies need not be out of reach for developing countries as low-cost treatment solutions already allow for the extraction of energy and nutrients. They may not yet allow for the direct recovery of potable water, but they can produce viable and safe water for other uses, such as irrigation. And sales of raw materials derived from wastewater can provide additional revenue to help cover the investment and operational costs of wastewater treatment.

Today, 2.4 billion people still do not have access to improved sanitation facilities. Reducing this figure, in keeping with Sustainable Development Goal 6 on water and sanitation of the UN 2030 Agenda, will

mean discharging even more wastewater, which will then need to be treated affordably.

Some progress has already been made. In Latin America, for example, the treatment of wastewater has almost doubled since the late 1990s and covers between 20% and 30% of wastewater collected in urban sewer networks.

But that also means that between 70% and 80% is released without treatment, so there is still a long way to go. An essential step on that road will have been taken with the widespread recognition of the value of safely using treated wastewater and its valuable by-products as an alternative to raw freshwater.



The Arctic sets grim new record for low levels of sea ice

Arctic sea ice set its lowest spring extent in 38 years of satellite measurement. The record has been confirmed by the US National Snow and Ice Data Centre. The ice maximum (when sea ice in the Arctic hits its greatest extent in spring) has been declining at a rate of about 3 percent per decade.

“This is extremely worrisome for animals at the margins of the ice extent, such as the European Arctic,” said Martin Sommerkorn, Head of Conservation for WWF’s Arctic Programme. “In the case of polar bears, they need the ice to reach denning areas, or to get out onto the ice to feed after a long fasting period in the den. Several species of seal also rely on the ice to give birth in the spring.”

Tanzeed Alam, Climate & Energy Director of the Emirates Wildlife Society in association with WWF (EWS-WWF), stated: “Unfortunately, yet another climate record has been broken and again, it shows the inextricable links between climate change, our environment and human well-being.

“Just as in the Arctic, we here in the UAE urgently need to manage the delicate balance needed to enable our marine environments, society and our economy to thrive in harmony. To facilitate this, EWS-WWF has closely studied the UAE’s climate change risks and resilience and hopes that the findings and recommendations will act as a catalyst for action, increasing

the prioritisation of climate change in the UAE.”

A recent study suggested that 50-70% of Arctic ice disappearance is caused by people. Manuel Pulgar-Vidal, leader of WWF’s Climate & Energy Practice, says this means people can, and must, take action to limit the disappearance of the ice.

“This is not just about the effects on Arctic animals; it is also about the people who rely on those animals,” said Pulgar-Vidal. “It will impact the lives and livelihoods of billions of people and cause untold damage to sensitive ecosystems. We must leverage the Paris Agreement through increased scale and speed of implementation.”

Wildlife

62 c r e a t i n g g r e e n c o m m u n i t i

Global airline and celebrities join UN campaign to help end wildlife crime

One of Africa's largest airlines and five celebrities from around the globe joined forces with UN Environment on World Wildlife Day to help put an end to the illicit international trade in wildlife driving myriad species to the brink of extinction.

The illegal trade in wildlife is lining the pockets of criminal networks with an estimated \$23 billion annually: putting the trade in the same league as the trafficking of drugs, arms and humans.

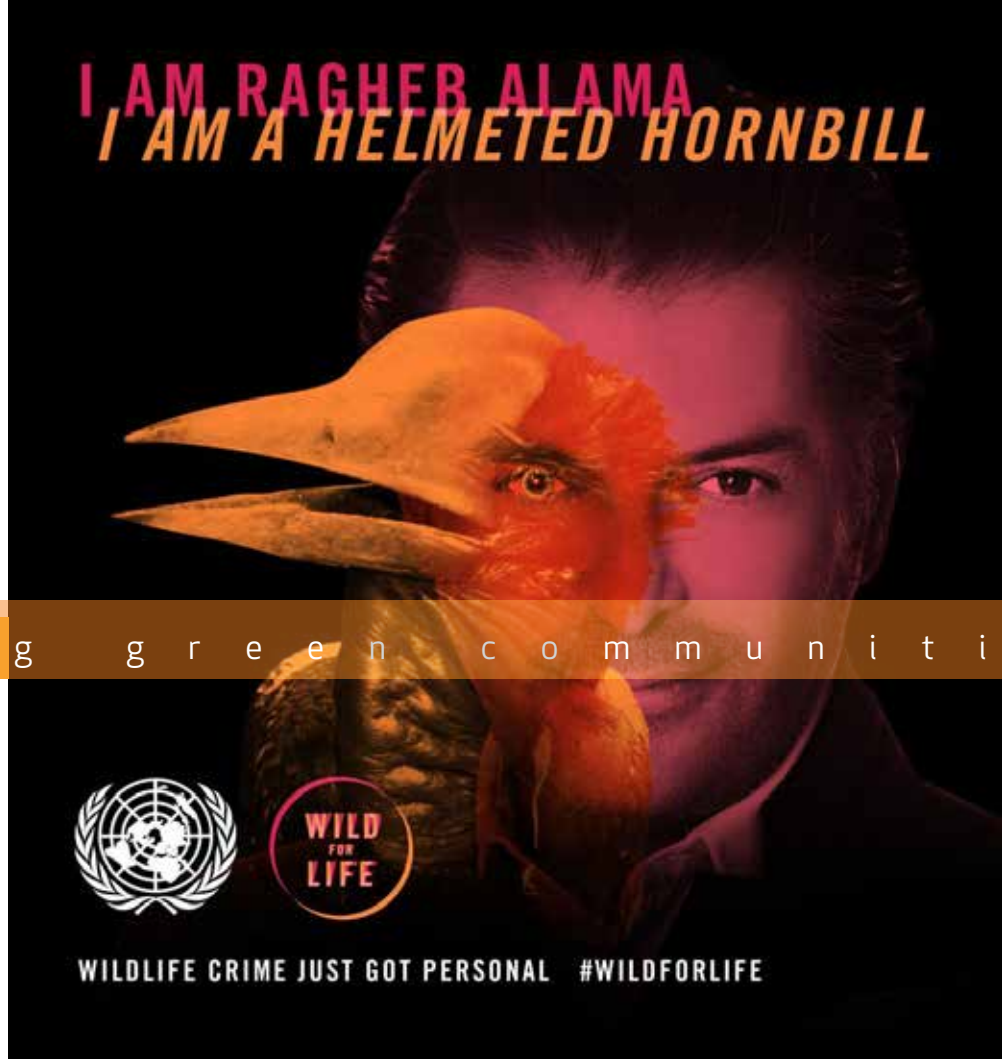
On 3rd March, 2017, Kenya's flagship international airline, Kenya

Airways, announced it is partnering with UN Environment to effectively cut off one of the main transport routes used by criminals to smuggle wildlife, dead or alive, from Africa to the Middle East and East Asia. The partnership comes in the wake of a poaching crisis across Africa that is wreaking havoc on creatures great and small, from elephants and rhinos to pangolins and African Gray Parrots.

"We are delighted to announce, on the occasion of World Wildlife Day, a partnership between Kenya Airways and UN Environment to help end the illegal trade in wildlife,"

said head of UN Environment Erik Solheim. "The engagement of private sector companies is critical to tackling wildlife crime. Airlines in particular connect a large global consumer base and unfortunately the illegal supply chain. They can act as a front line agent for change. We applaud Kenya Airways for this initiative and are pleased to support their commitment to help end this scourge."

Kenya Airways, which flies to 51 international destinations, has a zero-tolerance policy for illegal wildlife trade and works closely with governments and



On World Wildlife Day, Kenya Airways declares zero tolerance for smuggling of wildlife on its aircrafts.

I AM GISELE BÜNDCHEN
I AM A SEA TURTLE

I AM NEYMAR JR.
I AM A TIGER

e s f o r a b e t t e r t o m o r r o w



WILDLIFE CRIME JUST GOT PERSONAL #WILDFORLIFE



WILDLIFE CRIME JUST GOT PERSONAL #WILDFORLIFE

Since its launch, the Wild for Life campaign has engaged 35 celebrity champions, reached over 1 billion people, generated 4.5 million social media interactions, and 12,000 pledges of action.

aid agencies, especially at its hub in Jomo Kenyatta International Airport, Nairobi, to help ensure illegal wildlife products are not being transported on its aircrafts. The company now wants to scale up its efforts by working with UN Environment to provide regular messaging about wildlife crime prevention across its customer touch points, including in-flight entertainment and announcements, and staff trainings.

Kenya Airways Group Managing Director and Chief Executive Officer, Mbuvi Ngunze, said that the partnership with UN Environment

underlines the airline's commitment to fighting illegal wildlife trade.

"The threat facing wildlife is serious, especially in Africa, where cases of wildlife poaching are rampant, largely driven by the demand for ivory and rhino horn, but impacting many species. We all have a responsibility to support the conservation of wildlife and it is imperative that everyone gets more involved in stopping the vice," he said.

From pangolin scales to hornbill casques to rhino horn, elephant ivory and live animals like apes and parrots, there are endless examples

of purchasing decisions that are driving species toward extinction.

Helping to raise awareness and mobilize public action are four celebrities, who are joining UN Environment's Wild for Life campaign, each representing a different species threatened by illegal trade: Mexican actor/director Gael García Bernal as the Jaguar; youth actor, Aidan Gallagher as the Hyacinth Macaw; Indonesian actor Hamish Daud as the Sun Bear; and American actor Adrian Grenier as the Sawfish. Chinese actress Li Bingbing returns to the campaign as a Tibetan Antelope.

Mass coral bleaching hits the Great Barrier Reef - again



The latest coral bleaching, a phenomenon that can result in coral dying off, is part of a larger event that has damaged the world's largest reef over the past two years.

The Australian Government's Great Barrier Reef Marine Park Authority recently confirmed that one of the world's greatest natural icons is experiencing back-to-back mass bleaching for the first time.

This came as WWF released a dramatic new video showing the Great Barrier Reef suffering mass bleaching for an unprecedented second year in a row.

The Great Barrier Reef has now been hit by four mass bleaching events: 1998, 2002, 2016, and 2017. Last year's event was

the worst on record, killing an estimated 22 percent of all coral, with damage most severe in the remote far north.

This time, well known tourism locations, further to the south, from Port Douglas down to Townsville are being impacted. The situation is still evolving but coral mortality could potentially be even higher than last year.

John Tanzer, Oceans Practice Leader, WWF International said, "What is unfolding before our very eyes is the starkest evidence that climate change is already

wreaking havoc on the ocean."

"Coral reefs are a beloved natural wonder but less appreciated is that they also directly support the jobs, livelihoods and food supplies of many millions of people. What will happen to these people as large areas of coral die?"

"Mass coral mortality is fast becoming a humanitarian and economic concern, and will soon be elevated to a crisis if reefs die alongside densely-populated coastlines and islands. This issue is moving onto the core agenda for many leaders around the world,



© WWF-Aus and BioPixel

Widespread coral bleaching during back-to-back summers is particularly toxic, as it does not leave enough time for the corals to fully recover.

particularly those whose people's lives depend on healthy reefs."

"The solutions are clear: we need a major lift in action to bring down carbon emissions and scaled-up effort to reduce the local pressures on reefs so they have maximum chance of withstanding the onslaught of climate change."

WWF-Australia Head of Oceans, Richard Leck, said, "Scientists warned that without sufficient emissions reductions we could expect annual mass bleaching of the Great Barrier Reef by 2050. Consecutive bleaching events

have arrived 30 years early."

Mr. Leck said the unprecedented bleaching must serve to drive more urgent efforts to tackle climate change in Australia and globally. "We must address the climate crisis- fuelled by the burning of fossil fuels - that is driving coral bleaching."

The video and still pictures released by WWF were shot by Emmy award winning cinematographer Richard Fitzpatrick from Biopixel.

They were filmed on Monday,

6th March and feature Vlasoff Cay off Cairns where Fitzpatrick filmed many sequences for David Attenborough's Great Barrier Reef series.

"Vlasoff Cay used to have the best coral diversity in the area. Now with the water sitting at 32 degrees all the way to the bottom, the corals are dying. Many are already dead and covered in algae," Fitzpatrick said.

"The Reef is facing an imminent danger of mortality at a level that far exceeds last year over a greater geographical distance."



Climate Change Resilience in UAE

In spite of the UAE's commitment to reduce fossil-fuel based electricity production over time reaching a 27% renewable energy mix by 2021, a new EWS-WWF report released last month predicted a 2°C temperature increase and a 10% increase in humidity by 2050. This would mean a higher demand for energy to cool buildings creating an energy demand-supply gap over time, which will increase costs to end users and produce additional greenhouse gas emissions. The report, in fact expected a negative impact on at least 12 sectors across the country, posing risks to the country's economy, business and society. For eg; depending on the future CO2 emissions scenario, air conditioning demand in UAE residential villas may increase 10-35% by 2050.

High temperatures and humidity will pose a higher overall health risk to outdoor workers and decrease their productivity as they slow their pace, take longer breaks and shift their work to cooler hours, causing projected losses of up to \$2 trillion globally.

Food security is also prone to climate change impacts as the UAE imports 87% of its food supply. Reliability of international food markets and local agricultural output will both be affected, leading to higher food prices that will hit the lower-income households.

The report confirms that unconstrained carbon emissions have wide-reaching ramifications, posing a threat to nearly all socio-economic sectors. The authors call upon both private enterprise and governments to take further decisive action and to implement tangible measures to build up resilience and adaptation capacities that can mitigate the impacts of climate change. The responsibility should be shared by private and public sector policymakers and civil society leaders to develop and implement adaptation strategies in order to boost resilience and safeguard the economy, society and environment. They should act promptly, as the challenges and costs of implementing the UAE's national strategies and plans will increase with any delay.

What I can see clearly is that the UAE government, at both the federal and local levels, is doing a great job in planning and implementing sustainable development strategies. I think it is doing more than any other country worldwide. However, the private sector and civil society are still lagging behind, mainly because the investment in environmental education and awareness-raising is still very little compared to the ambitions and collaborative effort needed. The mass media, religious gatherings, clubs, shopping centers and sports events, as well as formal education modalities, should be intensively used to reach out to the community and private sector. This is the reliable route to achieving sustainable living that contributes significantly to adaptation and resilience to climate change at both local and global levels.

I am also optimistic that new technology in cooling systems (neighborhood cooling) and energy generation will reduce the GHG emissions significantly to allow for easier adaptation. This is based on many initiatives, especially the Bill Gates and fellow billionaires' \$1b 'Breakthrough Energy Ventures' that is aiming to develop new outstanding clean energy technology.

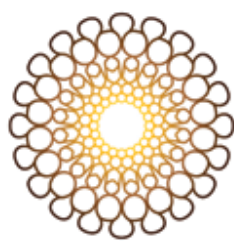
Dr. Eisa M. Abdellatif
Chief Technical Advisor
Zayed International Foundation for the Environment



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