

AUGUST 2016

# Society & Environment

A monthly publication issued by Zayed International Foundation for the Environment



إكسبو 2020  
دبي، الإمارات العربية المتحدة  
DUBAI, UNITED ARAB EMIRATES



Issue 162

creating green communities for a better tomorrow



Liwa Date Festival 2016 celebrates Emirati heritage and culture

Masdar to implement 3rd phase of the Mohammed bin Rashid Al Maktoum Solar Park



## **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

For 12 years now, the annual Liwa Date Festival has been celebrating the country's venerable palm dates which are valued for its nutritional benefits, contributions to ecosystems and role in preserving traditional knowledge. Dates are also a source of national pride to the Emirati people and this much-awaited event seeks to relive the culture, heritage and tradition of the people of the UAE.

Every July during the harvest time in the UAE, this heritage event therefore provides a unique opportunity for the young and old generations alike to discover and learn about the traditions of their ancestors. There is no doubt that the palm tree was and will continue to remain an integral part of the UAE's history and cultural identity.

As a fruit that has sustained generations even in pre-oil Arabia and often honored as one of the blessings of heaven, it is essential for us to take steps towards enhancing the role of the palm tree and dates in our daily life and preserving its preeminent, historical status in our culture.

According to the United Nations, the UAE has planted about 22 million palm trees over the past few decades. The UAE also holds a leading position among more than 40 countries in the production and export of dates.

While the dates' competition is the heart of the Liwa Date Festival, the event also serves to educate farmers on the ways of modern farming and caring for palm trees. Through the exchange of technical expertise, farmers gain better understanding of how to grow the best quality produce.

Indeed, the UAE government, in the framework of its development plans has placed the establishment of a date production industry as one of its priorities. Biotechnology and other innovative techniques have been introduced as major resources for modern date palm cultivation and in due course, dates could become a strategic agricultural cornerstone for food security and afforestation in the UAE.

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## From the Managing Editor



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

It was a great honor for me to be invited to deliver the keynote address at the fifth biennial High-level Meeting of the Development Cooperation Forum (DCF) held at the United Nations Headquarters in New York last month as part of the High-level Segment of the United Nations Economic and Social Council (ECOSOC).

The invitation came about as the Zayed International Foundation for the Environment is due to host the eighth annual Global South-South Development Expo (GSSD Expo) to be held from October 31 to November 3, 2016 in Dubai.

In my capacity as Secretary-General of the Zayed International Foundation for the Environment, I spoke about how the UAE's experience of being both a developing country and a major donor, reinforces for us how critical development cooperation is for the 2030 Agenda for Sustainable Development – and how much we have to gain from each other, especially through joint innovation.

The monumental transformation of the UAE since its formation in 1971, I pointed out, has been the result of good governance, strong investment, an emphasis on education and gender equality, and the recognition that partnership accelerates development. Under the UAE's wise leadership, the nation is determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path.

The GSSD Expo, organized by the Zayed Foundation on behalf of the UAE, is therefore a platform for showcasing and scaling up development initiatives in addressing global and regional challenges. It is a proud moment for the Zayed Foundation to embark on this collective journey especially as it has established the groundwork for South-South Cooperation through its prestigious award - the Zayed International Prize for the Environment - which recognizes the efforts made by scientists, institutions, and environmental advocates to promote sustainable development.

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## ‘Record growth in renewable energy, especially in developing countries’

[The Renewables 2016 Global Status Report reveals that renewables are now firmly established as competitive, mainstream sources of energy in many countries around the world.](#)

Last month, REN21 (Renewable Energy Policy Network for the 21st Century) published the most comprehensive annual overview of the state of renewable energy. The Renewables 2016 Global Status Report reveals that renewables are now firmly established as competitive, mainstream sources of energy in many countries around the world.

2015 was a record year for renewable energy installations. Renewable power generating capacity saw its largest increase ever, with an estimated 147

gigawatts (GW) added. Modern renewable heat capacity also continued to rise, and renewables use expanded in the transport sector. Distributed renewable energy is advancing rapidly to close the gap between the energy haves- and have-nots.

According to the REN21 Renewables 2016 Global Status Report, these results were driven by several factors:

- Renewables are now cost competitive with fossil fuels in many markets;
- Government leadership continues to play a key role in driving

the growth of renewables, particularly wind and solar, in the power sector. As of early 2016, 173 countries had renewable energy targets in place and 146 countries had support policies. Cities, communities and companies are leading the rapidly expanding “100 per cent renewable” movement, playing a vital role in advancing the global energy transition; and

- Additional growth factors include better access to financing, concerns about energy security and the environment and the growing demand for modern energy



ess for a better tomorrow

2015 was a record year not only for new installations, but also for investment - reaching USD 286 billion worldwide in renewable power and fuels.

services in developing and emerging economies.

Commenting on the report Dr. Stephan Singer, WWF's Director for Global Energy Policy, said: "Globally, renewables continue to grow fast. We now have five times more solar and wind energy compared to 10 years ago. But still they constitute only 6 per cent of all electricity generated. Despite rapid growth of investments into those clean energy sources, fossil fuel and nuclear investments are still three to four times higher."

While some European nations like Denmark, Germany, Sweden,

Portugal and Spain still lead on per capita installation of wind, solar and biomass, the overall largest investments into renewables last year came from China, US, India and Japan. The European investments into renewables have been declining for the past five years, he said.

Leadership on zero-carbon development is moving to the South, he said. "Like last year, overall investments and installations of renewables have been significantly larger in developing nations than in the OECD and Russia. More striking, poorer nations like Morocco,

Uruguay, Honduras, Nicaragua, South Africa and Jordan for example, have spent around one per cent and more of their GDP for renewable energy expansion, much more than for instance China, US, Japan or Germany."

Tanzeed Alam, Climate & Energy Director, EWS-WWF also commented: "It is encouraging to see renewable energy reach new record-breaking levels around the world, something that is crucial to maintain if we are to address climate change in line with the goals of the Paris Agreement to stay below 1.50C of warming.

Cover Story

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

Liwa Date Festival  
2016 celebrates  
Emirati heritage  
and culture



The Liwa Date Festival this year attracted more than 70,000 visitors to the Western Region town of Liwa and reinforced the role of heritage in creating “an honorable and promising future”.

**The annual Liwa Date Festival is not only a celebration of the new harvest of dates across UAE, but also a celebration of Emirati heritage and a great economic support to the Al Gharbia population.**

**L**iwa Date Festival 2016 concluded in the Western region of Abu Dhabi on 30th July under the patronage of H.H. Sheikh Mansour bin Zayed Al Nahyan, Deputy Prime Minister and Minister of Presidential Affairs.

The event was organized by the Cultural Programmes and Heritage Festivals Committee – Abu Dhabi.

Over 11 days, the festival achieved the vision of the organising committee to make it a magnet for farm owners, lovers

of heritage and those interested in agriculture. It was a platform for economic and industrial stimulation and revival of the ancient heritage and traditions through activities and various programmes featured over a land area of 20,000 square meters.

The festival has become a tourism hub, which celebrates the Western Region every year.

The festival saw the influx of about 70,000 visitors, including a large number of foreign tourists who came to enjoy the UAE’s authentic heritage.



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

Around 70,000 visitors, including a large number of foreign tourists, came to enjoy the UAE's authentic heritage.

Obaid Khalfan Al Mazrouei, director of the festival said that the event was a bright evidence of the presence of the late Sheikh Zayed bin Sultan Al Nahyan and his memory. He added that the event is a translation of his love for the blessed palm tree.

He stressed that the festival also celebrates the heritage of the UAE in line with the directives of President His Highness Sheikh Khalifa bin Zayed Al Nahyan and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces.

Al Mazrouei said it is a reflection of the vision of wise leadership in preserving this legacy in terms of customs, traditions, heritage, agriculture and industries and handicrafts, particularly the palm cultivation and dates production.

**A celebration of Emirati heritage**

The Emirati heritage festival, which was held from July 20 to July 30, awarded 220 prizes worth Dh6 million to the winners of a range of heritage, cultural, art and farm produce competitions, including the producers of the best dates, lemons and mangoes.

“The festival is one of the most significant” in terms of reinforcing the role of heritage in creating “an honorable and promising future”, said Obaid Al Mazrouei, the festival’s director. “Such an endeavor ensures cultural development that celebrates heritage for generations to come.”

The festival also aims to stimulate the Western Region’s economy. One of its top priorities is to encourage farmers to produce better quality fruit to gain local and international recognition.

Over 100 baskets of Dabbas



were lined up on tables awaiting judgment for the tastiest, healthiest and the best looking date of them all. This variety of date, especially popular in Liwa oasis, was the first of the 10 Ratab - half ripen dates - competitions to kick-start the 12th annual Liwa Dates Festival.

Organised by the Cultural Programmes and Heritage Festivals Committee, Abu Dhabi, the festival is a celebration of the new harvest of dates across UAE, but also a celebration of Emirati heritage and a great economic support to the Al Gharbia (the Western Region of Abu Dhabi Emirate) population.

“Dabbas, khallas, kunaizi, farth, bou maan, these are the

most popular and most grown varieties of dates in the UAE, and that is why we selected them for the Ratab competitions,” said Abdullah Butti Al Qubaisi, Director of Projects Management and Communication for the Committee.

“Participants have the option to compete with other varieties of Ratab in the Nukhba competition, which awards the best basket of mixed Ratab,” he added.

Also in the Ratab “Mazeinah” (beauty competition), there is the Biggest Bunch competition as well, awarding from AED 2,000 to AED 50,000 for the top five heaviest bunch of dates.

The Festival included around

35 exhibitors specializing in palm trees and dates, and shed light on the latest technical and counselling services available to date farm owners.

**Menace of red palm weevil**

At the event, the Abu Dhabi Farmers’ Services Centre updated farmers about how it is currently combatting the red palm weevil and other pests threatening the palm trees of the UAE. The centre also provided training and technical advice to farm owners in order to raise awareness of the need for water rationing, and methods of improving productivity and increasing quantity.

The red palm weevil (rhynchophorus ferrugineus), is

The Liwa Date Festival is a magnet for farm owners, lovers of heritage and those interested in agriculture.



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a species of snout beetle also known as the Asian palm weevil. The adult beetles are relatively large, ranging between two and five centimetres long, and are usually a rusty red colour. Weevil larvae can excavate holes in the trunk of palm trees up to a metre long, thereby weakening and eventually killing the host plant.

There are 6.7 million palm trees in Abu Dhabi, and between January 2013 and June 2016, over five million red palm weevils were removed, thanks to the efforts of the Abu Dhabi Farmers' Services Centre.

This was achieved with an emirate-wide programme using pheromone traps that are monitored and maintained on the

farmers' behalf by ADFSC.

### **UAE dates are becoming the world's most wanted**

Some 35 government and private companies have set up pavilions in the exhibition area of Liwa Dates Festival, promoting the latest trends and achievements in the business of dates.

Among the active participants in the festival are: Al Dhafra, one of UAE's largest dates company, which recently reported that the Emirates are now the world's biggest exporter of dates exceeding 100,000 tons per year; the UAE University, which has a dedicated research programme for the cultivation of date palm trees and Talah Board, a new company that wants to

turn discarded palm tree fronds, which usually end up in landfills, into wooden boards, something that has never been done before.

The company is now at the festival to convince farmers to give them their palm waste, for which they will even get a bit of cash: AED 85 per ton when collected or AED 150 per ton when delivered by farmers to Talah Board's factory in Khalifa Industrial Zone Abu Dhabi (Kizad).

There is also the Abu Dhabi Farmers Services Centre, which six years ago was the first to show farmers here how to prune, treat and care for date palms.

One of the farmers working with



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the Centre, Saleh Al Mansouri, brought to the festival his - and UAE's - first harvest of dates grown using hydroponics, an agricultural method using water mixed with nutrients instead of soil to grow plants.

"I have 32 types of fruit trees in my farm in Liwa, including 30 palm trees. Hydroponics is an ideal system for our environment as it saves 90% of water from irrigation, and it doesn't affect the quality of the fruit," he said.

Not just orchards, but vegetables greenhouses and even a fish farm are in Mansouri's "backyard".

Liwa, Madinat Zayed and Al Ain are the cradle of UAE's date palm farming, and while they are also

oasis of centuries old Emirati traditions, when it comes to agriculture, modernity is heartily welcomed.

Now in its 12th year, the Liwa Dates Festival has had a major impact on raising the bar on date palm farming. It did so by substantially awarding the best produced dates and the best kept farms.

"One of the condition to win a best date award is the state of the farm. When judges choose the best dates entered in the competition, they go to inspect the farm, which adds to the final score. They look at the general aspect of the farm, at irrigation efficiency - not to waste water - and whether it uses pesticides

and other chemicals, which we strongly advise against," explained Abdullah Butti Al Qubaisi, Director of Projects Management and Communication at the Committee.

"Over the years, we witnessed great improvements in farming practices and, as a result, the quality of dates has improved too," he added.

"Furthermore, winning at Liwa Dates Festival is not just about the financial prize. Winners become well known and their dates get high demand in the market," Al Qubaisi said.

It is this circle of wealth - sustainable, healthy agricultural methods that produce high

Now in its 12th year, the Liwa Date Festival has had a major impact on raising the bar on date palm farming.



quality dates that yield greater financial income - that is the ultimate aim of Liwa Dates Festival: to help the economy of Al Gharbia while preserving and enlivening its deeply rooted heritage.

Thus, the festival not only awards the best 15 positions in 10 rataf (half ripe dates) competitions with top prizes varying from AED 50,000 for Biggest Etheq - branch of dates to AED 200,000 for Best Nukhba - basket of mixed rataf, but it also encourages heritage related arts and crafts, through competitions, but also through the traditional souk, where Emirati women get to sell their handicrafts and traditional products.

#### **AED1million for model farm award**

H.H. Sheikh Hamdan bin Zayed Al Nahyan, Ruler's Representative in the Western Region, has donated AED1 million in support of a model farm award.

Sheikh Hamdan's support comes in the framework of encouraging farmers to exert more efforts in accordance with the highest

international standards, and highlighting the significance of the Liwa Date Festival in the development of the agriculture in the UAE.

The annual event has a major effect on the local population as it encourages all to preserve and maintain the date palm, and restore the agricultural infrastructure in the region.



Cover Story

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## Masdar to implement 800MW 3rd phase of the Mohammed bin Rashid Al Maktoum Solar Park



A consortium led by UAE-based renewable energy company Masdar including the Spanish companies FRV and Gransolar Group, has won the bid for the 800 MW third phase of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai.

**H**E Saeed Mohammed Al Tayer, MD & CEO of Dubai Electricity and Water Authority (DEWA) announced on 27th June 2016 the selected bidder for the 800 megawatt (MW) third phase of the Mohammed bin Rashid Al Maktoum Solar Park, which will be constructed based on the Independent Power Producer (IPP) model.

HE Dr. Sultan Ahmed Al Jaber, Minister of State, and Chairman of Masdar, the Abu Dhabi Future Energy Company, was present at the press conference at

the Armani hotel in Dubai. The selected bidder for the project is a Masdar-led consortium including the Spanish companies FRV (Fotowatio Renewable Ventures) and Gransolar Group. The consortium bid a Levelised Cost of Electricity (LCOE), of 2.99 US cents per kilowatt hour (kW/h).

The announcement was made at a press conference which was attended by Mohamed Jameel Al Ramahi, Chief Executive Officer of Masdar, Executive Vice Presidents and Vice Presidents from DEWA, the senior management team of Masdar, and

local and international media.

The consortium was selected following a sizable competition and an evaluation of numerous offers. DEWA has received 95 Expressions of Interest (EOI) from international energy companies, in response to its tender request over 8-29 September 2015.

DEWA requested companies to submit their requests for qualification before November 2015. This was followed by a Request for Proposals (RFP), to qualified bidders on 28 December 2015. DEWA received 5 bids



A group led by Abu Dhabi's renewable energy company Masdar has won a bid to build an 800 megawatt solar power plant in Dubai.

from international organisations. The lowest recorded bid at the opening of the envelopes was 2.99 US cents per kW/h. In preparation for the next phase, DEWA will develop shareholder and power-purchase agreements that will be signed in Q4 of 2016.

“The selection of the Masdar-led consortium is a testament to the vision of the UAE leadership, the foresight of the Dubai Clean Energy Strategy 2050, and the commitment of Dubai Electricity and Water Authority to realise ambitious renewable energy projects,” said H.E Dr Sultan

Ahmed Al Jaber. “It also reflects the technical expertise and proven track record that Masdar has built over the last ten years.”

“The UAE firmly believes that meeting the world’s growing energy demand requires a mix of energy sources, where we build on our existing assets of conventional energy, complementing them with alternative sources. By using multiple sources of energy such as natural gas, nuclear and solar, we are delivering both baseload generating capacity and the ability to meet peak energy

demand efficiently and cost effectively.”

“Phase three of the Mohammed Bin Rashid Al Maktoum Solar Park is a clear signal that solar power is a reliable and commercially viable technology, and a key part of the UAE’s well-diversified energy strategy,” Al Jaber added.

“Today’s important meeting supports the directives of His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of



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the UAE and Ruler of Dubai, His Highness Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the UAE Armed Forces and Chairman of the Abu Dhabi Executive Council,” said Al Tayer.

“Today, we take another step forward for solar energy by announcing the selected bidder for the 800 megawatt (MW) third phase of the Mohammed bin Rashid Al Maktoum Solar Park.

“We have a roadmap to achieve this, which includes ambitious initiatives and development projects to provide excellent government services based on world-class standards, to achieve everyone’s happiness. This is

a new phase of our economy that is based on environmental sustainability and clean energy to make Dubai the city with the lowest carbon footprint in the world.”

“DEWA has received a globally-competitive price of 2.99 US cents per kilowatt hour (kW/h) for the park’s third phase, which will use photovoltaic technology and will be operational by 2020. This is based on the IPP model, thanks to the Masdar-led consortium including the Spanish companies FRV (Fotowatio Renewable Ventures) and Gransolar Group.

“The importance of the Mohammed bin Rashid Al Maktoum solar park lies in two

points: it is the first of its kind in the region, and in its capacity. It is the first of several promising projects to use renewable energy to generate electricity in Dubai,” added Al Tayer.

“Since the announcement of the Mohammed bin Rashid Al Maktoum solar park, the project has attracted huge interest from the business and energy sectors. DEWA received several offers from international solar energy companies, reflecting the trust and interest from investors in large projects by Dubai Government.

“This has been encouraged by favorable current regulations and legislation in Dubai that permit private sector partnerships in

The AED 50 billion Mohammed bin Rashid Al Maktoum Solar Park launched the first phase of its operations in 2013.



power-production projects in the Emirate.”

“We are very proud of the UAE’s achievements. We have accomplished significant success in photovoltaic energy. We strive to implement the Dubai Clean Energy Strategy 2050 to diversify the energy mix so clean energy will generate 25% of Dubai’s total power output by 2030 and 75% by 2050. This strategy relies on innovation, and Research and Development (R&D) as the basis for the future of energy, preparing the plans and initiatives to make developments in science and technology.”

“Earlier in June, and in adherence with the directives of His

Highness Sheikh Mohammed bin Rashid Al Maktoum, we launched the largest Concentrated Solar Power (CSP) project in the world, using the IPP model, with an expected capacity of 1,000 MW by 2030, at the Mohammed bin Rashid Al Maktoum Solar Park, which is the largest single-site solar park in the world with a planned capacity of 5,000MW by 2030 with a total investment of AED 50 billion,” said Al Tayer.

“DEWA has released a tender for leading international CSP consultants to submit their proposals for advisory services for the 200MW first project of the CSP plant. It will be operational by April 2021.

“DEWA will generate 1,000MW

using this technology by 2030 at the Mohammed bin Rashid Al Maktoum solar park. The solar park’s 13MW first phase became operational in October 2013.

“The 200MW second phase will be operational in April 2017. When it’s completed, the project will achieve a reduction of approximately 6.5 million tonnes of carbon emissions annually.”

“Energy is an integral part of the social and economic development of all countries, and the transformation towards clean energy has positive environmental, social, and economic effects, making conventional energy less competitive and attractive for further investments. Clean



energy is a great opportunity for the future as demand keeps rising around the world. Oil prices and improved technology have helped increase the share of renewable energy in the energy mix. This makes technology a key factor in the transformation towards clean energy. At DEWA, we encourage research and development in solar energy, to enhance energy security and sustainability.”

“Our wise leadership has a vision to make the UAE the most sustainable country in the world by launching projects in clean and renewable energy, ensuring the Emirate’s continuous growth, while at the same time protecting its natural resources, and shaping the future of energy

in the region as a whole, to achieve sustainable development and promote the welfare of citizens, residents, and visitors, to ensure a sustainable future, for generations to come,” concluded Al Tayer.

“The selection of the Masdar consortium to develop phase three of the Mohammed Bin Rashid Al Maktoum Solar Park is a historical achievement for our company as we mark ten years of operations,” said Mohamed Jameel Al Ramahi, Chief Executive Officer of Masdar.

“The Masdar consortium will devote all of its experience and expertise to realising this world-class project. It is thanks to the technical clarity and

transparency provided by DEWA that we have been able to deliver such a highly competitive bid.”

“Masdar is committed to accelerating the adoption of clean technologies and renewable energy, building on our decade-long experience and supporting the UAE’s strategy to increase the share of clean energy in its energy mix,” Al Ramahi added. “We stand ready to develop new opportunities in the UAE and elsewhere in the GCC, including new markets such as Saudi Arabia.”





## Campaign aims to rationalize energy consumption

**T**he Emirates Central Cooling Systems Corporation, Empower, has announced the saving of 8 percent more energy compared to last year during the first month of its summer campaign, “Saving Starts at 24 C” which targets all of its customers and aims to reduce electricity consumption, protect the environment and contribute to lowering CO2 emission.

In line with the directives of Vice President of the UAE and Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum, regarding the importance of preserving energy resources, and the need to educate all of society on energy conservation, Empower continues to support the

philosophy of optimum utilisation of natural resources and supports sustainable development plans.

As part of the summer campaign launched in June this year, Empower offered its customers many tips to reduce the consumption of district cooling, such as setting the indoor temperature on air conditioners to 24 C, the ideal temperature to use air conditioners without wasting energy while not compromising on indoor comfort. This reflected on the efficiency of the services and a reduction in electricity bills.

“Empower continues to rationalise energy consumption and positively impact the consumption of natural resources

to support the sustainable development plans in order to achieve Dubai’s vision. The success of the campaign’s initial stage reflects our commitment to achieving our strategic plans that place the environmental cause at the top of our priorities,” said Ahmad bin Shafar, Chief Executive Officer of Empower.

“The annual campaign has been well-received by our customers. 24 degrees is the ideal indoor temperature for the summer and this was reflected positively on the reduction of electricity consumption bills. Other benefits of the campaign include customer satisfaction, environmental protection, improvement in efficiency of services and dealing with malfunctions,” added bin Shafar.

## Recognition

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

Global recognition for Bu Tinah shoal as it features on UN's top 10 list



[Bu Tinah shoal has been recognised as one of the 10 most important sites for marine turtles in Indian Ocean region.](#)

The Environment Agency - Abu Dhabi, EAD, has recently been advised by the Indian Ocean and South East Asia, IOSEA, MoU Secretariat, of the inclusion of Bu Tinah shoal in the IOSEA Marine Turtle Site Network as an important site for marine turtles. The Secretariat is part of the United Nations Environment Programme's Regional Office for Asia and the Pacific based in Bangkok, Thailand.

Of the seven species of marine turtles in the world, two can be

found in Abu Dhabi's waters: the critically endangered Hawksbill turtle, *Eretmochelys imbricata*, and the endangered Green turtle, *Chelonia mydas*. In Abu Dhabi, turtles nest on at least 17 offshore islands from mid-March to mid-June and EAD's aerial and field survey findings indicate that about 5,750 sea turtles inhabit Abu Dhabi's waters during the winter season and 6,900 during the summer season.

H.H. Sheikh Hamdan bin Zayed Al Nahyan, Ruler's Representative in the Western

Region, Chairman of EAD, said in his congratulatory note, "I am extremely delighted to learn that Bu Tinah shoal and its biodiversity is being recognised globally. It is a matter of pride for the country and its rich culture of preserving our natural resources. I congratulate the Environment Agency - Abu Dhabi and the Ministry of Climate Change and Environment for their endeavours in successfully showcasing Bu Tinah shoal in a global forum."

Congratulating EAD, Dr. Douglas



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

THE BU TINAH shoal is a core area within the established Marawah Marine Biosphere Reserve, the first and largest UNESCO Man and Biosphere marine site in the region.

Hykle, coordinator of the IOSEA Secretariat, said, "Bu Tinah's official certification will hopefully bring about an even greater appreciation among the authorities and the general public of the area's richness in biodiversity. It should also help to stimulate even closer ties and cooperation with other network sites that have similar conservation challenges and needs."

Razan Khalifa Al Mubarak, the Secretary General of EAD, said, "The inclusion of Bu Tinah shoal in the IOSEA

Marine Turtle Site Network recognises its importance as a regional foraging area and nesting ground for species of global importance. It also acknowledges the EAD's long-lasting conservation efforts at the site. Bu Tinah is one of only 10 sites in nine countries across the Indian Ocean to have received this distinction. I am delighted and congratulate all of our stakeholders and partners who made this a reality."

Dr. Shaikha Salem Al Dhaheri, Executive Director

of Terrestrial and Marine Biodiversity Sector at EAD and the technical focal point of the UAE for the IOSEA Marine Turtle MoU, said, "The inclusion of Bu Tinah under the Network of important Marine Turtle sites is a matter of great honour for the Emirate of Abu Dhabi. The network serves as a mechanism for the management authorities of sites to cooperate with each other and encourages regional collaboration to research and management."

Ayesha Y. Al Blooshi, Director



- Marine Biodiversity Division, explained, "Bu Tinah is one of the 10 sites selected by the IOSEA secretariat based upon 18 evaluation criteria which were divided into four categories including ecological/biological, governance, socio-economic and regional and global representativeness. All of the sites were deemed to be of particular importance for marine turtles and other biodiversity after a rigorous selection process that carefully evaluated their many ecological attributes."

The Bu Tinah shoal, which has been managed and monitored by EAD since 2000, is a core area within the established

Marawah Marine Biosphere Reserve, the first and largest UNESCO Man and Biosphere (MAB) marine site in the region. At a distance of almost 150km west of Abu Dhabi city, the island can easily be accessed from the coastal towns of Al Mirfa and Jebel Dhana.

The Bu Tinah shoal and its surrounding waters are strictly protected from human activities such as fishing. In spite of the harsh temperatures and high salinity, its habitats and species, including coral, seagrass, mangroves, Green and Hawksbill turtles, dolphins and many species of birds, continue to thrive, making the island an important location and a living

laboratory for climate change studies. The shoal is also home to one of the most charismatic but endangered marine mammals, the dugong.





## Ministry of Climate Change and Environment holds workshop with private sector

**T**he Ministry of Climate Change and Environment (MoCCA), hosted a workshop on 2nd August with representatives from the private sector, to seek their input on the UAE National Climate Change Plan, which is aimed at furthering the country's ambitious economic diversification agenda, and its transition into new, knowledge-based industries in line with UAE Vision 2021.

"This plan will show that climate action can go hand in hand with continued economic growth," Dr. Thani Ahmed Al Zeyoudi, Minister of Climate Change and Environment, said.

"Engaging the private sector is a key priority for the ministry

across all our activities, and we want to find new and innovative ways in which we can leverage the huge steps being taken by UAE businesses and companies to reduce their emissions and enhance their corporate social responsibility."

The workshop was the first step in seeking private sector inputs and alignments.

The MoCCA together with advisors from the Global Green Growth Institute, heard from high level representatives about their existing plans, and the regulatory gaps that could be filled through the new Climate Change Plan.

"This is only the beginning of our engagement with the private

sector and we aim to keep these dialogues going on. We are preparing a comprehensive national strategy for climate change in accordance with our leadership's vision to boost the UAE's economic, social and environmental competitiveness and resilience," Dr. Al Zeyoudi added.

The national strategy, which is the first of its kind in the region, seeks to integrate environmental policies and existing measures in accordance with the country's economic development plans.

It will also build on the National Green Growth Strategy and Green Agenda, the UAE's plan to transition to a green and diversified economy by 2030.

Innovation

24 creating green communities

“Solar Impulse 2 journey provides new proof of renewable energy efficiency”



More than a year after beginning its 25,000-mile trek around the world using only the sun as a fuel source, Solar Impulse 2 has returned to the UAE where its historic flight began.

HH Sheikh Hamdan bin Zayed Al Nahyan, Ruler’s Representative in the Western Region, has congratulated President His Highness Sheikh Khalifa bin Zayed Al Nahyan and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, for the successful circumnavigation of the globe by Solar Impulse 2 and safe return to Abu Dhabi.

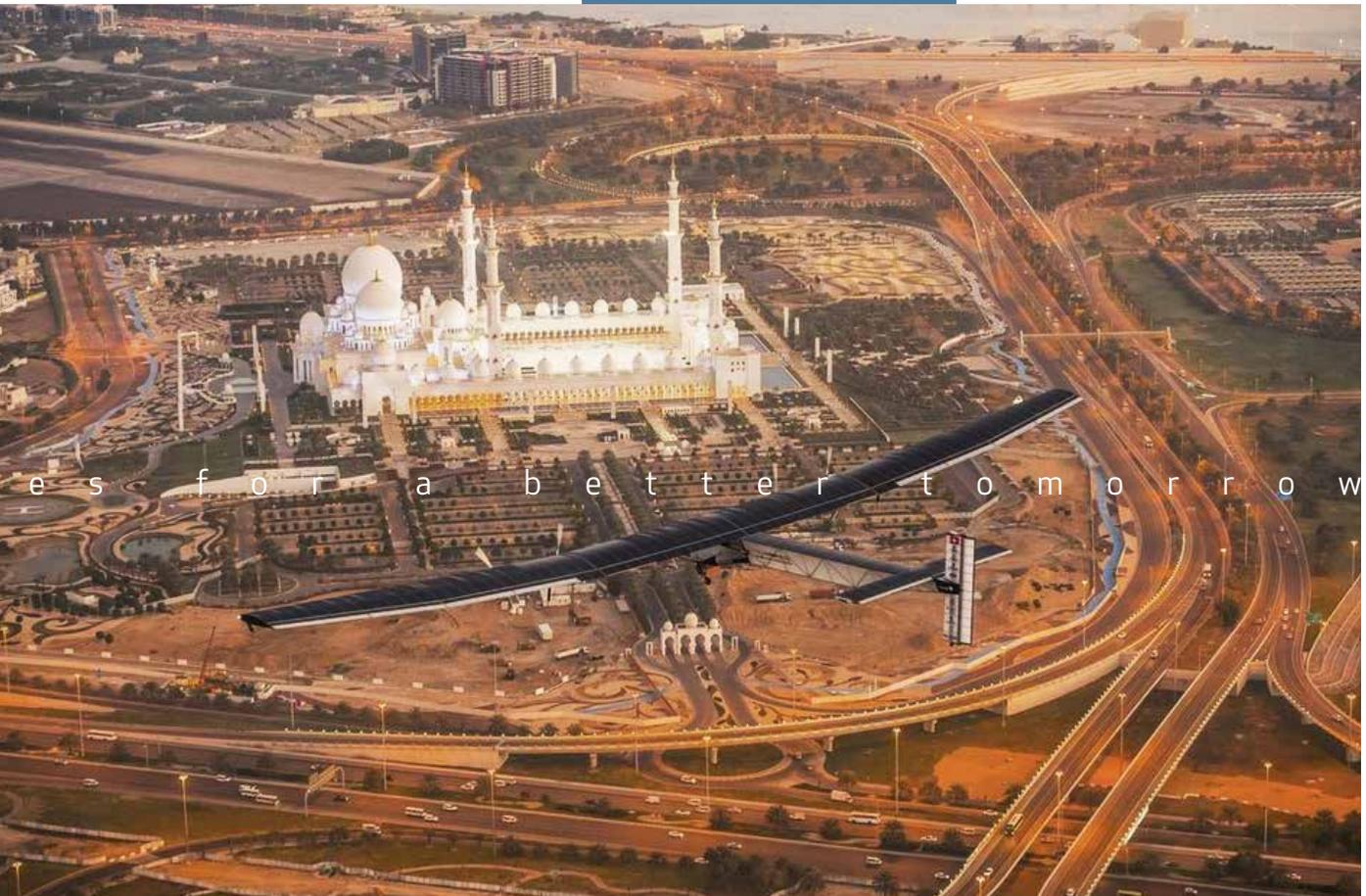
Solar Impulse 2 landed on 26th July at Abu Dhabi’s Al Bateen Airport, after flying around the

world without using a single drop of fuel. The plane arrived in Abu Dhabi, from where Solar Impulse had started in March last year, after taking off from Cairo on Sunday and flying for about 48 hours. Solar Impulse 2 began its journey from Abu Dhabi in March 2015, with stopovers in Oman, India, Myanmar, China, Japan, the United States, Spain and Egypt.

In a statement on the safe return home of the Si2, Sheikh Hamdan emphasized on the UAE leadership’s directives to enhance the UAE’s leadership in renewable energy so as to deliver sustainable

development goals, deploy clean and renewable energy technology, and create an innovation-drive environment that generates job opportunities and stimulates economic growth.

“The landmark return of Solar Impulse 2 to Abu Dhabi serves an important message to future generations that it is high time to think differently and that the humanity is capable to induce change. We need to make innovation and sustainability part of daily life and the foundation on which the future will be built,” said HH Sheikh Hamdan bin Zayed.



es for a better tomorrow

THE 16-LEG journey around the world provides a new testimony of how clean renewable energy technologies are efficient enough to build a more sustainable future.

The 16-leg journey around the world, he added, provided a new testimony of how clean renewable energy technologies are efficient enough to build a more sustainable future.

As it circumnavigated the world, Solar Impulse 2 flew over countries where Masdar projects are already demonstrating the potential of renewable energy to extend energy access, reduce carbon emissions and diversify the energy mix.

**“Positive message about the success of partnership and collaboration”**

Dr. Sultan bin Ahmad Sultan Al Jaber, Minister of State of the UAE and Chairman of Abu Dhabi’s Masdar, has stressed that Abu Dhabi’s support of the first solar-powered flight around the globe by Solar Impulse 2 (Si2), a cooperative venture between the UAE and Switzerland, sends a positive message about the success of partnership and collaboration.

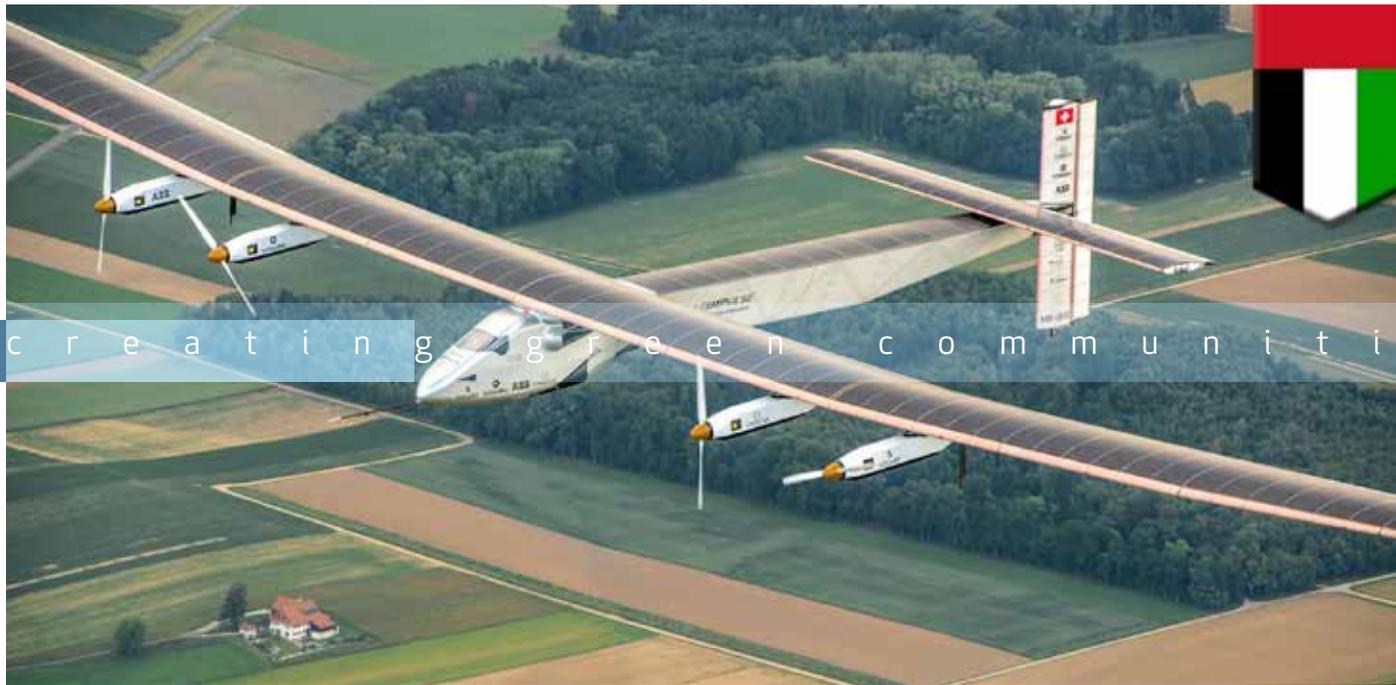
Al Jaber made the remark in an article entitled *“The lasting impact of Solar Impulse”*, published in *Gulf News*.

“The partnership that brought Solar

Impulse to life showed us that what unites humanity is more powerful than what divides us,” he said.

Stating that landing Solar Impulse 2 in Abu Dhabi, pilot Bertrand Piccard completed an odyssey that few thought possible, he went on to say that “When the Solar Impulse team first looked for partners in their ambitious venture, many experts, including big players in the aviation industry, deemed their craft too light and too big to control.

“But the UAE leadership, Abu Dhabi, and Masdar, along with other strategic partners, backed



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creating green communities

the Swiss adventurers' vision, and together they proved that, if you dare, the impossible can become the achievable."

He continued: "The effort that helped take Solar Impulse from the drawing board to reality represented the very best of what can be achieved when people unite around a single purpose. With the wingspan of a 747 and the weight of a car, Solar Impulse 2 is a proof of concept not just of the harnessed power of the sun, but the transformative impact of light, composite materials and efficient design that aligns perfectly with the UAE's drive to integrate clean technologies and renewables into a diversified global energy mix."

**UN Environment chief lauds first**

**solar-powered circumnavigation of globe by airplane.**

UN Environment chief Erik Solheim released the following statement congratulating the Solar Impulse team, who on 26th July completed the first circumnavigation of the globe in a solar-powered airplane:

"Congratulations to the Solar Impulse team, and particularly pilots Bertrand Piccard and André Borschberg, for their historic achievement. Like Lindbergh's Atlantic crossing or Yeager's breaking of the sound barrier, Solar Impulse has accomplished something truly groundbreaking, proving practical what was once thought impossible.

"While they have achieved

another milestone in flight, their circumnavigation is even more momentous for what it demonstrates about clean technology. We may not be flying on a commercial solar plane in the next few years, but we are already driving electric cars, powering our homes with sunlight and running entire countries on renewable power.

"We live in a world where renewables are no longer an alternative source, but already the norm for a good deal of our energy needs. This transition is critical to fight climate change and improve the health of our planet and people. Solar Impulse has shown not only the pace of the transition, but that the sky is the limit to what we can do with clean technologies."



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

## Tadweer collects around 74,000 tonnes of waste during Ramadan and Eid al-Fitr

**T**adweer, the Centre for Waste Management - Abu Dhabi, has announced that it collected around 74,000 tonnes of waste during the Holy Month of Ramadan and Eid Al-fitr, in collaboration with all relevant parties in Abu Dhabi to ensure seamless operations.

Eisa Saif Al Qubaisi, General Manager of Tadweer, said, “During the Holy month of Ramadan, our public awareness campaign tackled key community matters, including the importance of waste separation, food excess, and conscious purchasing. Our aim is to promote an environmentally aware society and reinforce the positive socio-economic and environmental benefits that can be achieved through waste

reduction and conversion.”

“Our Ramadan and Eid al-Fitr plans came in line with our strategic vision to create a sustainable environment, and offer unparalleled services which contribute to the creation of an ideal healthy environment. We pride ourselves on the adoption of the highest environmental safety and security standards locally and globally,” he added.

Around 35 workers and supervisors were allocated to maintain the cleanliness of Sheikh Zayed Grand Mosque every day during the Holy Month and Eid, where a total of 60,115.6 tonnes of household waste was collected, with Abu Dhabi residents’ food waste adding up to 1,803.42 tonnes per day.

In addition to that, Tadweer also delegated a team dedicated to maintaining and handling relevant emergencies during the Eid holiday in which 13,554.7 tonnes of waste was generated.

Tadweer’s Eid al-Fitr action plan also focused on the roads leading to mosques and prayer areas and ensured that bins were emptied regularly before Eid prayer. Additionally, Tadweer was assigned to unload Islamic scripture boxes in mosques and supervise public sites and facilities such as parks, the Corniche and other recreational areas. This move came after Tadweer’s announcement of plans to ensure that the streets are properly cleaned given the heavy foot-traffic witnessed during these times.

Innovation

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

Industrial innovation  
for date palm  
industry launched in  
the UAE



Talah Board participates in the Liwa Date Festival with a sustainable solution for the abundance of date palm waste in the country.

Using innovative technology to recycle palm tree waste into high quality wooden board products made locally, Talah Board's sustainable business model can contribute to the reduction of wooden board imports to the UAE. In 2015, the UAE imported around 1.25 million cubic metres of wooden board products at a total cost of AED 1.6 billion.

Equipped with a number of patents, the company's factory in KIZAD has the capacity to produce 75,000 m<sup>3</sup> of wooden board annually. The UAE alone generates more than 500,000

tonnes of palm waste annually of which Talah Board anticipates a requirement of roughly 10% to meet the factory's production capacity. Talah Board attended the recently concluded Liwa Date Festival this year to spread awareness on the environmental and economic sustainability of recycling palm waste to the date palm industry.

According to Hatem Farah, Chairman of Talah Board, "Talah Board's business supports the UAE Vision 2021 and the Abu Dhabi Vision 2030. By sourcing

our raw materials locally and manufacturing locally, we are contributing to a circular economy through sustainable resource recovery. Our business model is one in which there is a 'triple bottom line'- meaning that there is benefit in three major aspects of sustainability: economic, environmental, and community."

The durability and strength of the fibers in palm tree waste (fronds and fruit stems) are both an industrial benefit and an environmental hindrance to the country. Dried palm waste



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

TALAH BOARD requires roughly 10% of the country's palm waste annually while the UAE alone creates more than 500,000 tonnes of palm waste every year.

typically gets sent to landfills or is composted where it can take a long time to biodegrade. Although an illegal practice, in some cases the palm waste gets burned.

Burning, aside from the illegality, is hazardous for the environment and creates a health and safety burden for agricultural businesses. In terms of industrial benefit, Mr. Farah realized the inherent structural value and durability of palm tree waste and developed the Talah Board concept to serve the local and regional markets. Employing the services of Germany-based

BINOS, GmbH, a leading plant manufacturing company for the panel board industry, the required technology was developed. The wooden boards are relevant for a variety of industries including: interiors, furniture, and the construction industry.

“As a longtime resident in the UAE, I am proud of Talah Board's participation at the Liwa Date Festival. Partnering with the UAE community, we are demonstrating how we can bring modern day economic relevance to the tradition and heritage of living off the date

palm,” continued Mr. Farah.

The festival has kept the date palm tradition flourishing in the country for more than a decade by organizing annual exhibitions and competitions that embrace Emirati culture and heritage. This year the exhibition was spread over 20,000 square metres in the Liwa Oasis, Abu Dhabi.

**UAE date palm tree owners to receive cash for palm waste**

On 22nd July, 2016, Talah Board announced an exciting offer for agricultural businesses and farmers



at this year's 12th Annual Liwa Date Festival. The industrial company plans to offer cash for date palm waste, and is encouraging farming and agricultural entities to register their participation. This 'Cash-for-Palm Waste' opportunity will help the date palm industry discard of palm tree trimmings sustainably and in compliance with the environmental laws of the nation. Talah Board will offer a monetary sum for each ton of fronds or fruit stems.

According to Rami Farah, CEO of Talah Board, "Date palm waste is a strong and fibrous material that does not biodegrade easily. Its natural structure presents unique challenges for people in agricultural and farming

businesses, and some may choose to burn the trimmings rather than contend with the issue of proper disposal. We are offering date farms cash for this waste, which will ease this burden."

Talah Board will recycle the date palm tree trimmings into high quality wooden board products to answer the demand for this product in UAE and regional markets; using technology patented specifically for this purpose. The UAE produces 500,000 tonnes of palm waste annually; 50,000 tonnes are required annually for Talah Board's industrial operation. The company's operations are aligned with both the UAE Vision 2021 and the Abu Dhabi Vision 2030 in

terms of bringing sustainable and industrial innovation to a non-oil sector.

Mr. Farah further added, "Regular palm tree trimming is necessary and beneficial for the tree as it promotes healthy growth and helps to inhibit the infestation of red weevils - a palm tree pest that can diminish the quality of dates and eventually cause the death of the tree. As farmers have a raw material that they wish to discard easily, we will buy it and produce this locally-made product. In this way, the entire community benefits - farmers can protect the health of their trees, earn cash, and solve a waste management problem, and we can all help our environment and economy."



## Dubai's Dh2bn plant to convert solid waste into energy

Dubai Municipality has announced that it will establish the largest plant in the Middle East to convert solid waste into energy at a cost of AED2 billion in Warsan district 2, to achieve the vision of the civic body to make Dubai the most urban, sustainable and smart city by the year 2021.

The move also comes in line with the national agenda to reduce the landfill by 75 percent by 2021, in addition to protecting the environment from methane gas emitted by the landfill.

Eng. Hussain Nasser Lootah, Director General of Dubai Municipality, said that the implementation period will take three years, and the plant will be operational in the second quarter

of 2020 during which it will receive 2,000 metric tonnes of municipal solid waste per day in the first phase to produce 60 megawatts.

Engineer Essa Al Madoor, Deputy Director of DM, said the waste incineration project is the first of the four projects to produce green energy. He added that DM, in co-ordination with the Dubai Supreme Council of Energy and DEWA, conducted studies to achieve the strategy of Dubai for Clean Energy, to produce 7 percent of Dubai's total energy from clean energy sources by 2020.

### **Initiative to recognize most environmentally-friendly household**

The Dubai Electricity and Water Authority (DEWA) has launched

an initiative, called Ideal Home, in cooperation with a number of government departments, to encourage the creation of more environmentally-friendly homes in the emirate. The initiative will recognize the household that meets the highest standards of public health and safety, including environmental protection, as well as achieving best practices for the 'ideal' home environment.

Ideal Home, which concludes in September, is being carried out in cooperation with Dubai Police, Dubai Municipality, Dubai Health Authority (DHA), the Community Development Authority in Dubai (CDA), Dubai Smart Government, Dubai Corporation for Ambulance Services, and the General Directorate of Civil Defence.

## Nuclear Energy

32 c r e a t i n g



g g r e e n c o m m u n i t y

### Barakah Nuclear Energy Plant completes safety tests for Unit 1

[Major milestone in testing and commissioning phase of Barakah Plant successfully completed - Structural Integrity Test \(SIT\) and Integrated Leak Rate Test \(ILRT\) completed for Unit 1.](#)

**T**he Emirates Nuclear Energy Corporation (ENEC) has recently completed important tests at Unit 1 of the Barakah Nuclear Energy Plant. This represents another major achievement in the testing and commissioning phase of the plant.

The Structural Integrity Test (SIT) and Integrated Leak Rate Test (ILRT) were performed over a period of several weeks, on Unit 1 at Barakah, with the Federal Authority for Nuclear Regulation (FANR) providing full oversight, and conforming to the highest

international standards of safety and quality. Both of these tests demonstrate the integrity and robustness of the structure in terms of force and leak tightness, and the structure's ability to perform safely under normal and extraordinary circumstances.

The SIT evaluates the strength of the Reactor Containment Building (RCB), the structure at the heart of the plant, which houses the reactor and major components, by pressurizing and depressurizing the building to simulate regular and extraordinary conditions.

Similarly, the ILRT assesses the leak tightness of the containment building under a variety of conditions.

“With the completion of these tests on Unit 1, we are moving closer to achieving our goal of supplying up to a quarter of our nation’s electricity needs with low-carbon, sustainable nuclear energy. Our work at Barakah continues to support the UAE’s energy mix strategy as well as the future social and economic growth of the UAE,” said Mohamed Al Hammadi, ENEC CEO.



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

ENEC's teams worked closely with Korea Electric Power Corporation (KEPCO) and FANR, throughout the complex testing process.

The excellent results of both tests show that the RCB can perform its primary function – to contain radiation and prevent any radioactive release into the environment – under normal operation conditions as well as emergencies and extraordinary events. The tests also show that the RCB was constructed in accordance with the highest international safety standards, exceeding expectations and displaying exemplary quality performance.

ENEC's teams worked closely

with Korea Electric Power Corporation (KEPCO) and FANR, throughout the complex testing process. The testing is part of the commissioning phase, and has been progressing with the highest standards of safety and quality assurance.

Other recent commissioning milestones completed safely and successfully on Unit 1 include Reactor Systems Flushing, Turbine Lube Oil Flushing, and Cold Hydrostatic Testing (CHT), which verified that the reactor coolant system and other

associated systems met FANR's regulations.

The project at Barakah is progressing steadily. Overall, construction of Units 1 to 4 is now more than 65 percent complete and these will deliver safe, clean, reliable and efficient nuclear energy to the UAE grid.

When completed, the UAE's peaceful nuclear energy program will provide approximately 25% of the UAE's electricity needs and save up to 12 million tons of greenhouse gas emissions each year.

Award

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

## DEWA wins 3 Golden Globe Tigers Awards in Sustainability Leadership



The awards are for Best Renewable Resources - Energy, Best Renewable Resources - Green Building, and Best Renewable Resources - Sustainable Transport.

Dubai Electricity and Water Authority, DEWA, has won three Golden Globe Tigers Awards in Sustainability Leadership.

The awards are for Best Renewable Resources - Energy, Best Renewable Resources - Green Building, and Best Renewable Resources - Sustainable Transport, for the Green Charger initiative. DEWA received the awards in a special ceremony in Malaysia. The awards underline DEWA's intensive efforts to protect natural resources, and achieve sustainable development across all areas.

Saeed Mohammed Al Tayer, MD and CEO of DEWA said he was proud of DEWA's achievements.

"Winning three awards at the Golden Globe Tigers Awards 2016 emphasizes our success and commitment to the vision of Vice President of the UAE and Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum. It also reflects our commitment to the UAE Vision 2021, and the Dubai Plan 2021, which have clear roadmaps with ambitious initiatives and development projects that combine economic development

with the sustainability of energy and a clean, healthy, and safe environment.

This helps to make Dubai a smart, integrated, and sustainable city that achieves sustainability of resources and provides a clean, healthy, and sustainable environment. This in turn ensures green growth, enhances energy efficiency and management of waste, optimizes resources, establishes sustainable communities, and focuses on research and planning to promote sustainable development," said Al Tayer.



THE AWARDS underline DEWA's intensive efforts to protect natural resources, and achieve sustainable development across all areas.

"In line with the Smart Dubai initiative launched by HH Sheikh Mohammed bin Rashid Al Maktoum to transform Dubai into the smartest city in the world, DEWA has launched three smart initiatives. These are 'Shams Dubai', to connect solar energy to buildings, 'Smart Applications through Smart Meters and Grids', and the 'Green Charger' to establish the infrastructure and build electric vehicle charging stations. Our objective in the transition to become the smartest city in the world is to achieve the happiness of society and provide instant and seamless smart

services anytime, anywhere," added Al Tayer.

"The construction of the eco-friendly Sustainable Building in Al Quoz supports the Green Economy for Sustainable Development initiative, launched by HH Sheikh Mohammed bin Rashid Al Maktoum, to build a green economy and drive sustainable development. DEWA's Sustainable Building is the largest government building in the world to receive a platinum rating for green buildings from Leadership in Energy and Environmental Design, LEED, in the USA. The building uses 66 percent

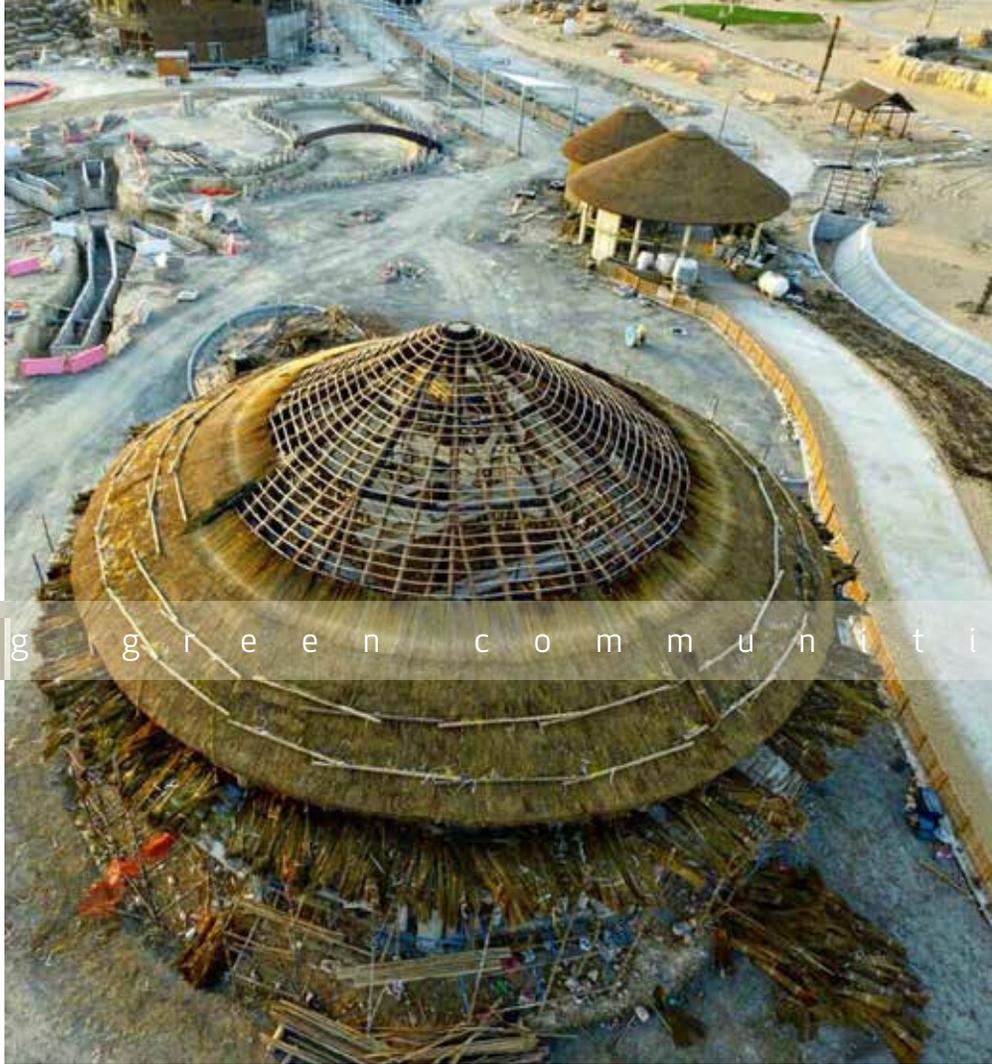
less energy and 48% less water than other buildings by adopting the best international standards in green buildings," said Al Tayer.

"In line with our vision to become a sustainable world-class utility, DEWA has achieved unprecedented results, and is today a global role model in performance, reliability, efficiency and service, compared with leading global organisations. This award reflects our aspirations and ongoing efforts to be in the lead by implementing the best international standards across all of our projects," concluded Al Tayer.

## Safari Park

36 creating green communities

### Dubai Safari Park to open by end of 2016



Dubai Safari Park is one of several eco-friendly landmark projects implemented by Dubai Municipality with an estimated total cost of up to AED1 billion.

Work on the Dubai Safari Park project is proceeding according to schedule, with the park already 75 per cent done and scheduled for completion by the end of 2016, according to a press release by the Dubai Municipality.

Developed in accordance with the most advanced and best international standards, the park's main building costs AED 151 million, while the auxiliary service buildings are collectively worth AED 131 million. A total of 10,500 animals from all over the world representing more than 350

rare and endangered species are planned for the park which will act as an international reserve in cooperation and coordination with its sister safari parks worldwide.

Dubai Safari Park will help preserve the diversity which supports life on earth. Its biodiversity will involve the genetic breeding of plants and animals and the hosting of diverse species from different parts of the world.

The Park's strategic plan involves the development of an effective program for the preservation

of nature and the creation of a prestigious modern and advanced zoo that will be admired internationally for its adoption of the best practices in dealing with endangered species in arid environments.

The Park has already begun bringing in animals such as lions, bears and bats. A group of Asian elephants are also scheduled to arrive soon. According to WWF, Asian elephants are the continent's largest terrestrial mammals.

They can reach almost six-and-



Covering an area of 119 hectares and at a cost of Dh150 million, Dubai Safari Park incorporates international best practices.

a-half metres in length and three metres at the shoulder, and can weigh as much as five tonnes.

### **Environment-friendly project**

Dubai Safari Park is a distinguished environment-friendly project carried out by the Dubai Municipality as an entertainment landmark in Dubai covering an area of 119 hectares in the Al-Warqa Fifth district and built at an estimated cost of around AED 1 billion.

The project aims to establish the best wildlife center in the region. The Municipality has been keen on pursuing environmental

excellence in the accomplishment of this project by transforming the site from a construction waste landfill to a tourist attraction and a diverse wildlife environment which takes advantage of its diverse terrain which is incorporated as an essential element of the project design.

### **Harnessing Renewable Energy**

In light of the park's ideal location, efforts have been made to take advantage of renewable energy to generate electricity and operate the irrigation system as well as the introduction of automatic vehicles and other modes of

transportation. The safari park is built over a former construction waste landfill which was leveled and reclaimed to provide a suitable site.

The Municipality formed technical committees specializing in selecting animals and distributing them in places mimicking their natural habitats and geographical distribution.

Various environment-friendly means of transportation such as the tram, cable cars, bicycles, as well as electric vehicles will carry people inside the park or from the facility's 3,600 parking lots.

## Masdar Institute model to allow near real-time dust-storm forecasting

The advanced dust forecasting system will help inform government officials and UAE residents about anticipated dust-storms so that the country can better prepare for them.

**T**he Masdar Institute of Science and Technology, an independent, research-driven, graduate-level university focused on advanced energy and sustainable technologies, has announced on 18th July 2016, the launch of a real-time dust forecasting system that provides accurate, up-to-date dust information for the Middle East region.

The advanced dust forecasting system will help inform government officials and UAE residents about anticipated dust-storms so that the country

can better prepare for them. The web-based forecasting system is available online at Masdar Institute's official web-site.

The limited visibility produced by dust-storms causes road accidents and flight delays. The high levels of mineral dust and other pollutants wafted into the air during a dust-storm can trigger asthma, respiratory diseases, and other infectious diseases. Dust-storms also coat solar panels with residue, reducing their power output until cleaned, and can have detrimental effects on agricultural crops. Thus, through

the configured and calibrated dust forecasting system at Masdar Institute, the "Atmospheric Composition and Weather Forecast System", the UAE will be better equipped to prepare for and tackle the negative impacts of dust-storms.

"This is a turning point in the region's ability to properly manage the impacts of dust-storms. With access to accurate forecast of dust events and sandstorms, people can better prepare for them. This information will be extremely useful for the transportation





es for a better tomorrow

THE LAUNCH of a real-time dust forecasting system provides accurate, up-to-date dust information for the Middle East region.

sector, as it will help show motorists, pilots and air traffic controllers where the dust will be and for approximately how long," said Dr. Hosni Ghedira, Director of the Research Center for Renewable Energy Mapping and Assessment, ReCREMA, and Professor of Practice at Masdar Institute.

The forecasting system provides nearly real-time maps of atmospheric dust and other pollutants across the UAE. It is similar to the UAE Solar and Wind Atlases created by ReCREMA. These atlases provide nearly real-

time satellite maps of the UAE's solar and wind resources. Both are publicly available and have been integrated into the International Renewable Energy Agency's Global Atlas for Renewable Energy.

By being able to better predict the UAE's dust-storms, the country can more effectively and efficiently manage its agricultural sector, renewable energy infrastructure, transportation, health, environment and climate policy, key socio-economic sectors affected by dust-storms, and provide advanced warning

ahead of extreme dust events in order to reduce risk to human life.

Dr. Ghedira is part of the research team that is the first to use the advanced chemistry-transport model, called CHIMERE, over the Middle East to simulate dust concentrations across the region. CHIMERE is an open source model for air quality forecasting and simulation that enables researchers to enter weather and land surface parameters to produce forecasts of atmospheric ozone, aerosols and other pollutants, and run simulations for emission control scenarios.

Renewables

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

G20 energy ministers recognize progress on renewables, set stage for more action



[IRENA-led toolkit for renewable energy deployment moves to mobilise finance, reduce costs and chart renewable potentials.](#)

IRENA-led toolkit for renewable energy deployment moves to mobilise finance, reduce costs and chart renewable potentials.

Energy Ministers and other senior officials recognised recent progress to scale up renewable energy and examined opportunities for even greater action on 30th June, 2016 on the sidelines of the G20 Energy Ministers meeting in Beijing. Before the start of the official meeting, participants joined the International Renewable Energy Agency (IRENA) to take stock of work completed under the *G20 Toolkit of Voluntary Options for*

*Renewable Energy Deployment*, adopted last year at the first-ever G20 Energy Ministers meeting in Istanbul.

“The dramatic and ongoing shift in the global energy sector accelerated in 2015. Renewable energy costs have declined dramatically and will continue to do so, investment reached record levels, and global capacity additions set new record highs,” said IRENA Director-General Adnan Z. Amin.

“Much of this can be attributed to the G20’s strong commitment to renewables.” In 2015, Energy

Ministers endorsed an 11-point Communiqué, including the adoption of a renewable energy toolkit, which provides options for G20 countries to increase their deployment of renewable energy. Led by IRENA under the guidance of the G20 Energy Sustainability Working Group, the toolkit focuses on five areas. During the meeting on 30th June, IRENA Deputy Director-General Sakari Oksanen, highlighted progress achieved to date in each area:

1. Driving down technology costs: Prices for solar PV modules and wind turbines have fallen roughly



IRENA is mandated to be the global hub for renewable energy cooperation and information exchange by 149 Members (148 States and the European Union).

80 per cent and 30 to 40 per cent respectively since 2009. New analysis from IRENA finds these cost reductions will continue well into the future. *The Power to Change: Solar and Wind Cost Reduction Potential to 2025*, released in June, estimates that by 2025, average electricity costs could decrease a further 59 per cent for solar PV, 35 per cent for offshore wind, and 26 per cent for onshore wind compared to 2015. Electricity prices for concentrated solar power could also decrease as much as 43 per cent. The report highlights the significant cost differences

that exist today, signaling a strong potential for future cost reductions in G20 countries.

2. Exchanging good practices on enabling policy frameworks and power system integration: As of 2016, 173 countries have renewable energy targets, up from 43 countries in 2005. To facilitate the sharing of best practice, IRENA and the International Energy Agency (IEA) continually update the joint *IRENA/IEA Policy and Measures Database*, which contains more than 700 policies for G20 countries.

3. Mobilising finance through risk mitigation: A record USD 286 billion was invested in renewables in 2015, 3 per cent higher than the previous record in 2011. But to increase deployment of renewable energy to the levels needed to meet global climate and development goals, this figure must double by 2020 and more than triple by 2030. Today, IRENA officially released a new report outlining a global action agenda to scale up investment in renewable energy. *Unlocking Renewable Energy Investment: The role of risk mitigation and structured*



Investing in green communities

finance, finds that achieving this level of investment is entirely possible if policymakers employ a portfolio of approaches that target different investment constraints.

4. Technology potentials and roadmaps: Renewable power generation capacity grew 8.3 per cent in 2015 – the highest rate ever – but a much higher growth rate is both technically and economically feasible. In March, IRENA released *REmap: Roadmap for a Renewable Energy Future*, which assessed the feasibility, costs and benefits of doubling the global share of renewables by 2030. It found that doubling the share of renewables in the global energy mix by 2030 can save up to USD

4.2 trillion annually by 2030 – 15 times more than the costs – thanks to avoided expenditures on air pollution and climate change. Today, IRENA released *Country Options for Sustainable Growth Based on REmap*, a background paper summarising REmap results for all G20 countries and identifying action areas for G20 policy makers to scale up renewable energy in their countries.

5. Deployment of modern bioenergy: In April, IRENA released the paper *Boosting Biofuels: sustainable Paths to Greater Energy Security*, which provides an overview of the challenges of scaling up biofuels and different means for G20 countries to overcome those

challenges.

Meeting participants welcomed the work undertaken in these areas and examined further action opportunities to take the toolkit forward. IRENA will continue to coordinate the implementation of the toolkit to accelerate the deployment of renewable energy, under the guidance of the G20 and with the support of other international organisations including the IEA)and the World Bank.

Building on the success already achieved through the toolkit, Energy Ministers are now considering a *G20 Voluntary Action Plan on Renewable Energy* to drive the continued expansion of renewable energy in G20 countries.



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

## FM company introduces use of bio organic pesticide solutions as part of innovative initiative

Long-term use of conventional pesticide can lead to a range of harmful side-effects to the environment, as well as to the people who are constantly in contact with it. However, as bio-organic pesticides have been introduced to the market, companies are no longer confined to using synthetic solutions.

The product offers a wide range of benefits that can address the needs of the customers without posing a significant risk. As bio pesticides can effectively target particular pests and specific areas, they are more effective even in small quantities. They are also more environmentally friendly and reduces risk of prolonged exposure to the operators. In addition, they also

decompose quickly and are less likely to have resistance issues.

In light of this, Imdaad, a leading provider of integrated facilities, environment and energy management solutions in the GCC, has recently announced that it is gradually replacing its chemical pesticides with organic bio-chemical pesticides.

The move falls in line with Imdaad's CSR projects and Green Environment initiative with the company's Pest Control Division which aims to ensure that a significant percentage of the total chemical purchase in 2016 will include organic bio chemicals.

Jamal Abdullah Lootah, CEO, Imdaad said, "We are excited to

pursue this new program as this is an important aspect of our Green Environment initiatives. We remain committed towards initiatives that will promote sustainability, protect the environment and ensure the health and safety of our workers and the public. We are currently developing a strategy for its gradual implementation so that we can make this change across all our projects."

Green pesticides are not yet widely adopted, as most companies within the sector are not aware of the negative and potentially harmful effects of environmental pesticides. As a result, very few companies have integrated this change to their operations.

Study

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

## Abu Dhabi completes scientific assessment of sand gazelle



This is the first of its kind study on a global scale for this particular species within its natural and historic distribution in the Arabian Peninsula.

The Environment Agency - Abu Dhabi, EAD, has completed the implementation of a pioneer project that is aimed at assessing the genetic diversity of the sand gazelle population in EAD managed forests. This is considered the first of its kind on global scale for this particular species within its natural and historic distribution of this antelope in the Arabian Peninsula.

The project assessed the genetic diversity and verified any current or future threats to genetic characteristics resulting from inbreeding and crossbreeding

with other species, which may affect the physiological and morphological characteristics and may lead to genetic drifting and mutations that threaten the survival of this culturally important species.

Razan Khalifa Al Mubarak, Secretary-General of EAD said, "EAD, as the competent authority mandated for managing the forests of Abu Dhabi, has sought to develop and implement a comprehensive strategy for forestry in the emirate. This strategy includes a number of policies and principles tailored

to enhance environmental sustainability in our forests, a heritage that was established in Abu Dhabi in the mid-sixties in realization of the vision of the founder of the UAE, the late Sheikh Zayed bin Sultan Al Nahyan.

"EAD's efforts in forest sustainability are not limited to sustaining native vegetation/flora and management of invaluable groundwater resources, but also include scientific management of wildlife populations that are using Abu Dhabi forests as a refuge and shelter due to their suitability



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

THE SAND GAZELLE population constitutes the largest percentage of the total animal populations in AD forests.

of in providing animals with life supporting conditions, helping them withstand harsh weather conditions” Al Mubarak added.

Al Mubarak explained that 34 forests have been developed as reproduction sites for wildlife populations. Today, these forests shelter around 54,000 individuals of different species of antelopes and sand gazelle. Since EAD received the mandate of managing the forests of Abu Dhabi, it has been making extensive efforts to provide appropriate standardised conditions for wildlife populations living within the forests through

the development of infrastructure and logistics allocated for the nutritional processes and ensuring that adequate veterinary care and biosecurity procedures are in place.

Al Mubarak also pointed out that “EAD has focused on studying and assessing the genetic status of the sand gazelle population due to the fact that this species constitutes the largest percentage of the total animal populations in AD forests, 70%, on the one hand, and due to the importance of this species in the natural heritage of the UAE on the other.”

Dr. Shaikha Al Dhaheri, Executive Director of Terrestrial and Marine Biodiversity Sector at EAD, said, “The programme for the assessment of the genetic diversity of the sand gazelle population, which is implemented by EAD and Barari Forests management company, is the first of its kind in the Arabian Peninsula and the Levant, which is the natural and historical range of this species. The outcomes of this project will allow EAD to be a scientific reference for many institutions wishing to repeat this project at the national or regional level.



Al Dhaheri stressed on the significance of the programme, which was implemented over two years by a team specialised in wildlife management and genetic studies. Given its outcomes represented in the key information base, individuals carrying desirable genetic traits can be determined for EAD to develop programmes and plans for the management and sustainability of wildlife populations inside the forests and protected areas.

She added that EAD has completed the implementation of its first phase of the project and that other wildlife species will be targeted in the following phases, such as mountain gazelles and the Arabian Oryx.

### **Briefing of programmes and strategies of Ministry of Climate Change and Environment**

H.H. Sheikh Saud bin Rashid Al Mu'alla, Supreme Council Member and Ruler of Umm Al Qaiwain, has been briefed on future plans, programmes and strategies of the Ministry of Climate Change and Environment for the UAE in general and the Emirate of Umm Al Qaiwain in particular.

This came when H.H. Sheikh Saud received Dr. Thani bin Ahmed Al-Zeyoudi, Minister of Climate Change and Environment.

Sheikh Saud was given a detailed explanation by Dr. Al-Zeyoudi about the policies and strategies

of the Ministry, which will be implemented, including a waste disposal project, one of the most important for the ministry, serving the Emirates of Umm Al Qaiwain, Ajman and Ras al-Khaimah, and taking advantage of other emirates' expertise in waste disposal.

The UAQ Ruler praised the efforts of the Ministry in the field of environmental protection which, he said, maintains a sustainable environment free from pollution.





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

## Call to put biodiversity conservation at the forefront of sustainable development

**G**reen Hope UAE, a UAE-based youth-oriented organisation, celebrated World Environment Day this year with a conference that put biodiversity conservation at the forefront of the sustainable development. Tree planting is at the core of all Green Hope campaigns.

Over 150 passionate youth environmentalists from schools and universities alongside two student delegations from the British School of Bahrain and Indian School Muscat were present at the summit. The summit saw eminent international sustainability expert, Brendon Jack and Dima Abo Kous, from the International Fund for Animal Welfare share their positive thoughts and insightful messages

with the attendees.

The key note speaker, Dr. Iyad Abumoghli, Director and Regional Representative of UNEP, West Asia, gave an inspiring speech urging the youth, young leaders to take the initiative to make the world a better place.

Simon Jones, CEO, Green Hope, UAE, urged the youth attendees to join in and conserve the environment together by optimistically sharing a video link.

To conclude the summit, Kehkashan Basu, Founder President, Green Hope, UAE, said, "The escalating rate of environmental degradation is pushing thousands of species to the brink of extinction. Young

people like us can no longer afford to be silent observers. Our future is at stake and we must all join hands and take action today."

Green Hope is closely associated with rhino conservation, having adopted a critically endangered Northern white rhino recently through an international charity Helping Rhinos.



## UAE leads GCC region in smart buildings solutions: report



According to the study, the Middle East's average smart building score is 48 out of 100 with Doha, Qatar, leading with 70 points, followed by Dubai at 65 and Abu Dhabi at 48.

**T**he UAE is leading the GCC initiatives in smart building solutions with more than two-thirds of the 1,236 Leadership in Energy & Environmental Design (LEED)-certified projects, according to a study by technology firm Honeywell International.

"It is also the frontrunner in the region in implementing unified building codes for new buildings. Since 2014, the Abu Dhabi International Building Code (ADIBC) standards have become compulsory for all projects in the emirate," the study noted.

The international smart building market is expected to touch \$36.3 billion by 2020 from \$7.26 billion in 2015, growing at a compound annual growth rate (CAGR) of 38 per cent, according to a recent report.

Quick to respond to this global trend, the GCC continues to bolster its smart building solutions sector with the implementation of strict environmental regulations.

Dubai, on the other hand, has recently launched the green building rating system called Al

Safat, which classifies facilities under the Platinum, Gold, Silver and Bronze categories. Every building constructed in the emirate after 2014 has to adhere to the minimum Bronze requirement to receive a permit.

The new building codes not only support Expo 2020's theme 'Connecting Minds, Creating the Future' through 'Opportunity, Mobility and Sustainability' but also facilitate Dubai's move towards becoming a smart city. They also complement Dubai Clean Energy Strategy 2050, which aims to provide seven per



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

The GCC has been quick to bolster its smart building solutions sector with the implementation of strict environmental regulations.

cent of the emirate’s energy needs from renewable sources by 2020, increasing its capacity to 25 per cent by 2030 and 75 per cent by 2050.

Imdaad, a leading provider of integrated facilities, environment and energy management solutions in the GCC, has expressed that building owners in the GCC are not harnessing the full potential of building management systems (BMS), noting that 80 per cent of these systems still operate manually.

Despite talks about integration

of BMS with heating, ventilation and air-conditioning (HVAC) with the help of state-of-the-art technologies such as the Internet of Things (IoT), there has been a moderate response from building owners in acknowledging smart building solutions.

According to Jamal Abdullah Lootah, CEO, Imdaad, “Initially, building owners were not aware of the numerous benefits of smart building technologies such as energy efficiency, building longevity, and enhanced living experiences for residents. However, the implementation

of the new codes in the UAE has brought about a definite change in the mind-set of people.”

According to the study, the Middle East’s average smart building score is 48 out of 100 with Doha, Qatar, leading with 70 points, followed by Dubai at 65 and Abu Dhabi at 48. The survey also reported that airports in the region have a score of 80 while hotels are second at 57, followed by hospitals at 56 and retail at 52. Those with the lowest average scores are private offices at 46, high-rise residential buildings at 45 and educational facilities at 41.

## 2nd meeting for Higher Committee for Environmental Coordination held in Ajman



[The Higher Committee for Environmental Coordination met to follow up on its progress and evaluate the implementation of policies and action plans of its four sub-committees.](#)

**D**r. Thani bin Ahmed Al-Zeyoudi, Minister of Climate Change and Environment, headed the second meeting of the Higher Committee for Environmental Coordination for 2016, hosted by the Municipality and Planning Department in Ajman. The meeting was held on 30th July at the Al Zorah Nature Reserve in Ajman and was attended by the committee members from concerned departments across the UAE.

In line with the directives of UAE leadership for effective coordination and integration

between federal and local authorities, a key pillar of UAE Vision 2021, the committee holds a series of regular meetings to follow up on its progress and evaluate the implementation of policies and action plans of the four sub-committees; the National Committee for Biodiversity, the National Committee for Education and Awareness, the National Committee for Air Quality, and the National Committee for Waste and Hazardous Materials Management.

During the meeting, the National Committee for Waste and

Hazardous Materials Management reviewed the challenges facing the majority of local bodies and provided an assessment of the procedures followed in waste treatment in the UAE.

The Committee highlighted the need to consolidate the procedures for the management of hazardous materials across the UAE and recommended creating centralized waste projects in coordination with environmental authorities and also encouraging investments in treatment projects in waste and hazardous material sector.



The Committee also reviewed the outcome of the second phase of the air quality satellite monitoring project in collaboration with "Masdar".

The National Committee for Biodiversity showcased its achievements, which focused on supervising the implementation of the operational plan for the National Strategy for Biodiversity, combating desertification and the National Programme for the Sustainability of Wildlife, in addition to overseeing the development of a national plan for the preservation of sea turtles, sharks and nature reserves.

The meeting touched on the national indicators related to air quality, where the National Committee for Air Quality

provided a detailed review on the current developments and stressed the importance of developing an integrated system in the field of air quality, as well as implementing national standards for the specifications and locations of air quality monitoring stations and emphasised the importance of applying Specification 17025 at all UAE air monitoring stations.

The Committee also reviewed the outcome of the second phase of the air quality satellite monitoring project in collaboration with "Masdar". The Higher

Committee for Environmental Coordination also reviewed the latest developments in the implementation of the national strategy for education and awareness, where the National Committee for Education and Awareness presented a report on the national indicators associated with the implementation of the UAE strategy for green development. Dr. Al Zeyoudi underlined the importance of developing a national strategy for education and awareness and the need to unify efforts in adopting best practices and educational programs across the UAE.

Sustainability

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

Countries move closer to an agreement to further curb greenhouse gases



[Governments set the stage for a possible agreement to reduce potent greenhouse gases under the Montreal Protocol.](#)

The endorsed solutions will serve as a basis for further discussions during the 28th Meeting of the Parties (MOP28) to be held in October in Kigali, Rwanda.

The 197 parties to the Montreal Protocol on Substances that Deplete the Ozone Layer laid the groundwork for an amendment to the protocol in 2016 to phase down the heat-trapping hydrofluorocarbons (HFCs), during their meetings held in Vienna, Austria from 15 to 23 July.

HFCs are used in air conditioning, refrigeration, foams and aerosols as replacement for many ozone-depleting substances. An agreement to phase down HFCs under the Montreal Protocol would avoid an estimated 105 gigatonnes of carbon dioxide equivalent by

2050, and up to 0.4°C of global warming by the end of the century, while continuing to protect the ozone layer.

An HFC amendment in 2016 would be a significant contribution to meeting the goals of last year's Paris Agreement, which binds countries to limiting the rise in global temperature by 2100 to 2°C compared to pre-industrial levels.

"It's such good news that we are all committed to phasing down HFCs, working on the positive premise that we can and will find a way to resolve the remaining challenges," said UN



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AN AMENDMENT on reducing HFCs would be a significant step towards meeting the goals of the Paris Agreement on climate change.

Assistant Secretary General and UN Environment Deputy Executive Director Ibrahim Thiaw.

“It is no accident that the Montreal Protocol is quoted again and again as an example of what can be achieved when 197 parties set their minds to it. With such a powerful tool at our disposal, the choice before us is alarmingly simple: we can choose to save our children or not.”

Also attending the meeting, U.S. Secretary of State John Kerry said that countries were well on the way to achieving a very big win in the

fight against climate change.

“By adopting an amendment to phase down the use of HFCs, we can honor the legacy of our predecessors, we can move closer to the goals we set in Paris, and - more importantly - we can help protect the future of the only planet that we have,” he said.

The Third Extraordinary Meeting of the Parties, held 22 - 23 July and attended by 35 environment ministers from all over the world endorsed a range of solutions to the important challenges identified under the ‘Dubai Pathway on HFCs’,

which requires the parties to work towards an HFC amendment in 2016.

The endorsed solutions will serve as a basis for further discussions during the 28th Meeting of the Parties (MOP28) to be held in October in Kigali, Rwanda.

As a basis for the further discussion, the Extraordinary Meeting also endorsed proposals on baselines for phasing down HFC production and consumption and potential dates of freezing HFC use by developed and developing countries.

## Zero tolerance approach adopted to curb annual slaughter of 25 million birds in the Mediterranean



[Mist nets are used to trap flying birds extend for 700 kilometers along coast of Egypt, where an estimated 5.7 million birds are illegally killed every year.](#)

**G**overnments throughout the Mediterranean have agreed to the need for tougher penalties and stricter surveillance in order to enforce a new “zero tolerance” policy that seeks to clamp down on the annual slaughter of millions of migratory birds in the region.

An estimated 25 million birds are killed every year in the Mediterranean as they migrate between Europe and Africa, leading to the rapid decline of species like the now vulnerable European Turtle Dove, whose numbers have dropped by up to

90% in some countries since 2000.

To curb the slaughter of migratory birds, which are shot, glued to sticks or trapped in nets, governments meeting in Egypt last July have agreed on a raft of strong political commitments that include calls for heavier penalties and increased surveillance to better counter offenders. This includes the deployment of more rural police to deter poaching.

These commitments were included in the Cairo Declaration, which was adopted on 14th July at the first ever meeting

of the Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean, a meeting convened by the Convention on the Conservation of Migratory Species of Wild Animals (CMS) - an intergovernmental treaty administered by the United Nations Environment Programme.

“Birds are being hunted down, trapped and slaughtered on an industrial scale as they make their long journeys across the Mediterranean,” said Bradnee Chambers, Executive Secretary of the CMS. “This senseless slaughter



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

SMUGGLED DEAD or alive, songbirds, including finches, pipits and larks, make up the vast majority of traded birds.

has triggered an alarming decline in many species.

“But it’s not just the birds that suffer. International criminal networks are cashing in on an illegal trade that stretches from the Gulf to Italy, undermining security in countries throughout the region. Today’s declaration in Cairo sends a strong message to criminals that these barbaric practices will no longer be tolerated.”

The Task Force brings together the governments of countries bordering the Mediterranean, including Syria, Algeria, Malta and

Morocco, as well as international organizations, the European Union, legal networks, hunting organizations, and NGOs.

Songbirds that breed in continental Europe and migrate towards their wintering grounds south of the Sahara, as well as pigeons, birds of prey and migratory waterbirds, are being killed in shocking numbers throughout the region. In Egypt, where an estimated 5.7 million birds are illegally killed every year, “mist nets” erected along the coastline extend for 700 kilometers. In Italy, which is thought to have the highest number

of illegal killings in the EU, an estimated 18 birds are killed per square kilometer every year.

While some communities depend on these birds for subsistence, illegal activities are on the rise as criminals cash in on the highly lucrative trade. The birds are sold to restaurants, which offer them as delicacies, kept in captivity, traded in markets and caught for falconry.

Smuggled dead or alive, songbirds, including finches, pipits and larks, make up the vast majority of traded birds. Birds of prey, particularly falcons, are mostly sent



to countries in the Arabian Gulf, where demand is growing. A large number of these trapped birds do not survive the smuggling chain. Many die in captivity.

To crack down on these illegal activities, which are reducing avian biodiversity across much of Europe and Africa, the Task Force has identified 20 key hotspots where these practices are particularly rampant in the Mediterranean, including Italy, Cyprus, Egypt, Syria, Malta and Lebanon.

A recent BirdLife International report identified three individual locations - the Famagusta area in Cyprus, the Menbej-Tishreen Dam area in Syria and the El Manzala area in Egypt - where, staggeringly, more than half a million birds are

being illegally slaughtered each year in each location.

While the specific measures needed to tackle bird crime will vary for each country in the Mediterranean, the Task Force has agreed to strengthen three key areas as part of the Cairo Declaration's zero tolerance approach to this type of wildlife crime:

#### **Legal**

Penalties must be increased, legislation enforced, and the number and quality of wildlife rangers boosted to better prosecute criminals. These actions could bring immediate benefits as this year's autumn migration nears.

#### **Conservation and monitoring**

Targeted research must be carried

out on the illegal killing of birds in order to determine what species are affected, where the worst locations are, and what impact trapping has along the birds' flyway. Some species can be legally hunted, like the European Quail or the European Turtle Dove, but much of the hunt is done illegally and unsustainably.

#### **Education and public awareness**

It is vital to understand the social, economic and cultural drivers behind bird trapping, especially in communities that depend on it for part of their livelihoods. Alternative livelihoods, for those communities have been identified, such as fish farming or quail raising. As a result, educational activities and awareness-raising among local communities.



## Sustainability program aims to achieve 70% turnover from green revenues

Royal Philips has announced the launch of its new 5-year sustainability program, 'Healthy people, sustainable planet', during a webinar hosted by the company's CEO Frans van Houten on 5th July, 2016.

This new program builds on Philips' objective to improve the lives of three billion people a year in 2025 [1] by making the world healthier and more sustainable through innovation.

The program objectives are based on three pillars: creating value for Philips' customers through sustainable solutions, leading by example in its sustainable operations, and multiplying its impact by driving sustainability through its supply chain.

The program builds on the success of EcoVision, Philips' sustainability approach that spanned the years 1994 to 2015.

In 2015, Philips was recognized as a world leader for corporate action on climate change, achieving a perfect score in the CDP Climate Change survey for the third year in a row, and being named industry leader in the 'Industrial Conglomerates' category in the Dow Jones Sustainability Index.

Important targets set in the new program for 2020 include:

- 70% of turnover from green revenues and 15% from circular revenues
- Carbon-neutral operations,

100% renewable electricity

- Enhanced supplier sustainability to deliver structural improvements

"Our new program reflects our commitment to the universally agreed UN's Sustainable Development Goals, especially those to ensure healthy lives and promote well-being for all at all ages, and to ensure sustainable consumption and production patterns," said Frans van Houten.

*[1] Market intelligence and statistical data are used for the number of people touched by our solutions that contribute to a healthy life or a sustainable planet. The average time these solutions are used is then multiplied by the number of solutions delivered in a year. After elimination of double counts, this results in the number of lives improved.*

## Developing countries show world way forward on Green Finance



Developing countries embrace green finance policies as part of wider effort to finance the real economy and meet social, economic and environmental needs.

**D**eveloping countries such as Kenya, Bangladesh and Jordan are leading the world on green finance, which is essential to meet the world's sustainable development aspirations, according to a new report from the Inquiry into the Design of a Sustainable Financial System.

Released to coincide with the High-Level Political Forum on Sustainable Development in New York, the report, Green Finance and Non-G20 Developing Countries, captures progress being made by 13 countries across Africa, Asia and Central America.

"Today, there are numerous examples of developing countries showing strong leadership on green finance," said Erik Solheim, Executive Director of UN Environment. "This is extremely positive, as private capital will be a major contributor to delivering on the Sustainable Development Goals and climate commitments."

In order to reach the US\$5-7 trillion a year needed to implement the Sustainable Development Goals, the financial system must mobilize finance for specific sustainable development priorities and ensure sustainable development factors

are included in financial decision-making.

The report shows how developing countries are leading the world in taking these steps, highlighting the lessons that can be drawn from their leadership in aligning financial market development with national priorities and sustainable development.

The countries surveyed, as part of their innovative approaches, are implementing new models inspired by developments in fintech (the use of technology to make financial services more efficient).



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GREEN FINANCE policies are inspired by new models such as developments in fintech; US\$5-7 trillion a year needed to implement the Sustainable Development Goals.

“Green finance is burgeoning; it has reached the point of spontaneous combustion,” Nuru Mugambi, Director of Communications for the Kenya Bankers Association. “But it needs to be aligned. It needs to go beyond the leadership of a few champions and be coordinated across regional trading blocks.”

**Green Finance in Action**

- In Kenya, the rapid growth of mobile banking has become a platform to enable renewable energy. Several companies offer pay-as-you-go solar home systems that use mobile payments to unlock the use of the

solar panel and battery system each day. This in turn enables customers to build up a credit history, which can be used to access additional loans.

- In Bangladesh, the central bank has led a sustained initiative to ingrain inclusive and environmentally sustainable financing in the country’s financial sector, establishing mandatory environmental risk management and also offering a low-cost refinance window for green lending.
- The Central Bank of Jordan has

launched a national strategy on financial inclusion including SME finance, women’s access to financing and the protection of consumers of financial services.

- Morocco’s Central Bank has committed to sustainable development as part of its formal strategy and is taking first steps in the field of green finance. It has held meetings with banks to explore regulatory and voluntary options towards developing a roadmap for finance reform for a green economy.
- The Philippines is developing a



public-private disaster insurance pool, and will make disaster insurance compulsory for homeowners and SMEs.

This will provide families and small businesses with more rapid and reliable support for reconstruction and will support fiscal and financial stability in a country where natural events can result in losses of several points of GDP.

- In Central America, the regional business school INCAE has developed an ECOBANKING programme to improve the Latin American financial sector's competitiveness through better environmental management and by designing innovative financial products.

- The State Bank of Vietnam and the Vietnam Bankers Association have been working to develop Environmental and social risk management guidelines for the banking sector. They have drawn on international best practices on environmental and social risk management, including through South-South knowledge with the China Banking Regulatory Commission and Industrial Bank.

The Inquiry into the Design of a Sustainable Financial System was established in January 2014 with a mandate to advance policy options that would improve the effectiveness of the financial system in supporting sustainable development. The Inquiry has worked with central banks, environment ministries,

international financial institutions as well as major banks, stock exchanges, pension funds and insurance companies.





## New report shows world heritage icons at risk from climate change

Climate change is fast becoming one of the most significant risks for World Heritage sites, according to the report “World Heritage and Tourism in a Changing Climate” released on 26th May by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Environment Program (UNEP), and the Union of Concerned Scientists (UCS).

“Globally, we need to better understand, monitor and address climate change threats to World Heritage sites,” said Mechtild Rössler, Director of UNESCO’s World Heritage Center. “As the report’s findings underscore, achieving the Paris Agreement’s goal of limiting global temperature rise to a level well

below 2 degrees Celsius is vitally important to protecting our World Heritage for current and future generations.”

The new report lists 31 natural and cultural World Heritage sites in 29 countries that are vulnerable to increasing temperatures, melting glaciers, rising seas, intensifying weather events, worsening droughts and longer wildfire seasons. It documents climate impacts at iconic tourism sites - including Venice, Stonehenge and the Galapagos Islands - and other World Heritage sites such as South Africa’s Cape Floral Kingdom; the port city of Cartagena, Colombia; and Shiretoko National Park in Japan.

“Climate change is affecting World Heritage sites across the globe,”

said Adam Markham, lead author of the report and Deputy Director of the Climate and Energy Program at UCS. “Some Easter Island statues are at risk of being lost to the sea because of coastal erosion. Many of the world’s most important coral reefs, including in the islands of New Caledonia in the western Pacific, have suffered unprecedented coral bleaching linked to climate change this year. Climate change could eventually even cause some World Heritage sites to lose their status.”

Because World Heritage sites must have “Outstanding Universal Value,” the report recommends that the World Heritage Committee consider the risk of prospective sites become degraded by climate change before they add them to the list.

Campaign

62 creating green communities

Urban dwellers drive massive deforestation locally and abroad



Cities' sustainability efforts may be undermined by urban destruction of forested carbon sinks.

Urban centers lie at the root of an important - and often neglected - source of emissions: deforestation. According to Senior Researcher Tom Prugh in *Can a City Be Sustainable?*, deforestation caused by growing urban consumption is contributing to massive emissions globally, despite increasing sustainability efforts locally.

Tropical deforestation accounts for an estimated 3 billion tons of carbon dioxide per year - equivalent to the emissions of some 600 million cars - according to researchers at Winrock

International and the Woods Hole Research Center.

Urban growth drives deforestation in at least two ways. First, as rural migrants to cities adopt city-based lifestyles, they tend to use more resources. Their incomes rise and their diets shift to a greater share of animal products and processed foods. This, in turn, drives land clearance for livestock grazing and fodder, either locally or in other countries that export such products or their inputs. Meeting the food needs of a rising and urbanizing global population could require an additional 2.7 - 4.9 million hectares

of cropland per year.

"In Brazil, a surge of deforestation in the Amazon in the early 2000s has been attributed to the expansion of pasture and soybean croplands in response to international market demand, particularly from China," writes Prugh. There, economic growth and diets richer in meat products have boosted soy imports from Brazil to feed pork and poultry.

Even in highly productive European agriculture, it takes an estimated 0.3 square meters of farmland to produce an edible kilogram of



es for a better tomorrow

CAN A CITY Be Sustainable? examines the core principles of sustainable urbanism and profiles cities that are putting them into practice.

vegetables, but 7.3 for chicken, 8.9 for pork, and 20.9 for beef.

A second factor linking urban growth to deforestation is that cities are often expanding into areas of farmland and natural habitat. Cities worldwide are growing by 1.4 million new inhabitants every week. Urban land area is expanding, on average, twice as fast as urban populations. The area covered by urban zones is projected to expand by more than 1.2 million sq kms between 2000 and 2030.

“Even as urban expansion

drives forest clearance for agriculture, it simultaneously consumes existing farmland,” writes Prugh.

“Urbanization may cause the loss of up to 3.3 million hectares of prime agricultural land each year. The impact of urban expansion can, in principle, be attenuated by focusing on proven methods of shaping urban form to emphasize compact development and higher densities.” Reducing consumption, however, is more complicated.

One option is to increase the efficiency of economies at

delivering human well-being per every unit of resource input. The impact of the dietary share of higher consumption could be reduced sharply by reducing food waste and creating incentives for much lower meat consumption.

Cities also may have a role in determining broader agricultural policies. In addition to reducing meat consumption, it is possible to reduce the impacts of meat production by shifting from intensive, fossil fuel-based livestock systems to more-diverse, coupled systems that emulate the structure and functions of ecosystems.

## Luxury resort wipes out the use of plastic bottles



[Conrad Maldives Rangali Island pledges environmental commitment by promising to diminish the use of all plastic bottles by August 2016.](#)

Conrad Maldives Rangali Island has announced its commitment to improve environmental surroundings by promising to diminish the use of all plastic bottles by August 2016.

The island has implemented a range of environmental responsibility practices in the effort to become the world's first island resort to reduce plastic, grow crops and support local communities with sustainable school programs.

By the end of August, the resort will have alleviated all non-biodegradable plastic bottles with

the majority being replaced with glass bottles. In areas where glass bottles cannot be used such as the poolside and on excursion boats, the resort is switching to paper or specially made biodegradable pulp water bottles- a specially blended combination of wheat straw, bamboo, husks and sugar cane.

The resort also plans to cease the use of non-biodegradable cling wrap by the same time and replace either with paper product or eco-friendly degradable plastic cling wrap.

"Sustainability is a priority to

Conrad Maldives and a key driver in our daily operations. Caring for people and nature is now an essential element of the resorts ethos and reducing plastic bottles across both islands is only the first step towards a more sustainable future," Lyle Lewis, general manager, Conrad Maldives Rangali Island said.

Conrad Maldives have also implemented a robust corporate responsibility program that encompasses sustainability and community investment initiatives designed to make a lasting impact on the lives of the people living in



es for a better tomorrow

THE OPERATING cost of the hydroponics herb garden is less than \$USD 300 a month and the garden saves the resort USD \$24,000 annually (USD \$2,000 monthly) in the purchase of herbs.

these communities. Moreover, they have expanded on their sustainable practices by encouraging local communities to do the same. After a successful implementation of its hydroponics garden at the resort, team members from Conrad Maldives installed a hydroponics system in a school in Dhigurah (which is located in the same Atoll).

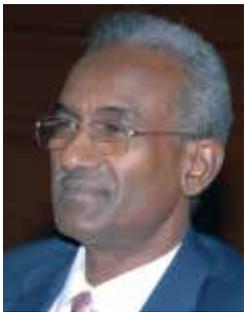
The system is utilized by the school's student environment club and after two successful harvests; the students have started to sell the crops to local guest houses, with the proceeds being used for school development projects.

The island also operates a water desalination plant on the team member island. With the resort's remote location, there is a challenge in accessing substantial fresh water supply; however, the desalination plant overcomes this by turning seawater into fresh drinkable water. The purified water is cooled and some is carbonated and decanted into re-usable Conrad Maldives branded bottles, for supply to the rooms and restaurants. The desalination plant produces 2,500 litres of drinkable water every day.

In July 2014, the island introduced

a hydroponics herb garden. The garden helps reduce consumption of natural resources, to preserve and support biodiversity, promote recycling and limit the amount of waste produced in its premises.

The garden was inceptioned two years ago and supplies a range of produce to the resort's kitchens including Italian basil, mint, butter lettuce, peppers, oregano and chilies. The produce was carefully chosen by the resort's gardening team after researching what crops can be effectively grown using a hydroponics system in a tropical climate.



## **A Thrilling Report on Renewable Energy**

Considering the iron will of its leaders, the UAE is really exceptional in the pace at which it is developing its renewable energy capacity and spreading the culture of renewable energy use. Buildings in Dubai can now be powered with solar energy and be connected to the grid.

Looking for similarly thrilling models, I have been reviewing recent literature on solar energy and found a thrilling report on Chile, by Lorraine Chow, indicating an incredible solar boom in this Latin American country.

Solar capacity from the country's central grid has increased four fold to 770 megawatts since 2013. It is also planning to add 1.4 gigawatts this year with many solar power projects under development.

Chile has taken advantage of the economic boost from increased mining production to build 29 solar farms with another 15 in the pipeline. Chile's largest solar PV project connected to the grid was commissioned recently with a 160-megawatt facility located in the northern part of the country.

There is so much clean power available that the price of solar electricity costs nothing for certain regions in recent months. Spot prices reached zero in parts of the country during a span of 113 days through April, a number that's on track to beat last year's total of 192 days, according to Chile's central grid operator.

However, the bad news is that, due to the nation's bifurcated power grid, the central and northern grids are not connected. The high demand is in the central grid, yet the best solar resource in the country resides in the Atacama Desert in the north. The northern grid represents approximately 24% of installed capacity whereas the central grid holds 74% of installed megawatts.

The northern grid is where solar prices are going to zero, while the majority of the population resides in the south. Hence, Chile should invest in its transmission infrastructure in order to distribute solar power and stabilize demand.

The good news is that the Chilean government is addressing the problem with its planned 1,865-mile transmission line that will link the two grids by 2017.

Moreover, Santiago's Metro System is to become the world's first to be powered largely by solar and wind.

Therefore, if we look at such successes in different regions of the developing world, it becomes clear that leadership and political will are the key factors deciding the progress made in any country towards fulfilling the commitments towards the Paris Accord and the satisfaction of the population.

The most prominent case is the UAE which is a global leader in this field and it is helping many countries in different regions to move towards a low carbon economy. Chile is an example in Latin America while both China and India are leading Asia to this end. We hope that all world leaders will follow suit.

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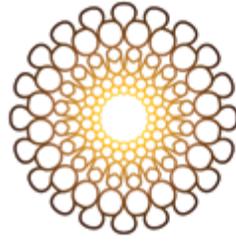
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