SEPTEMBER
2021
ISSUE 199

Society & Environment

creating green communities for a better tomorrow

A monthly publication issued by Zayed International Foundation for the Environment

06

Ruler of Dubai inaugurates fifth phase of Mohammed bin Rashid Al Maktoum Solar Park

38

Hyundai's IONIQ 5: Redefines Electric Mobility Lifestyle

His Highness

SHEIKH KHALIFA BIN ZAYED AL NAHYAN

President of the United Arab Emirates

His Highness

SHEIKH MOHAMMED BIN RASHID AL MAKTOUM

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

AND THEIR HIGHNESS MEMBERS OF THE SUPREME COUNCIL,
RULERS OF THE EMIRATES AND THE PEOPLE OF UNITED ARAB EMIRATES

On the occasion of

THE UAE GOLDEN JUBILEE

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Chairman's Message

Dubai is now a step closer to realising its goal of obtaining 75 per cent of its total power capacity from clean energy sources, as envisioned under the Dubai Clean Energy Strategy 2050.

With the opening of the 300 MW first stage of the 900MW fifth phase of the Mohammed bin Rashid Al Maktoum Solar Park, Dubai Electricity and Water Authority has increased its capabilities to power 270,000 homes. By the close of this year, an additional 600 megawatts of clean energy capacity will be added to the emirate's clean energy production, increasing its capacity to 13.3 per cent of its total energy mix.

As the largest single-site solar park in the world, the Mohammed bin Rashid Al Maktoum Solar Park has a planned total capacity of 5,000MW by 2030 and when completed, will save over 6.5 million tonnes of carbon emissions annually - this is the equivalent of taking around five million passenger vehicles off the road yearly.

Prof. Mohammed bin Fahad
Executive Editor

Only a few years ago, Dubai was nearly 100% reliant on fossil fuels for its energy needs. Today, the emirate has made giant strides in facilitating the transition to a clean economy with advances in nuclear energy, green hydrogen projects, and an ongoing feasibility study of wind power generation in Hatta. Achieving such impressive feats stems from the ambitious vision of the nation's leadership and their investments in human capital, and research and development to explore innovations that both reduce energy costs and advance the renewable sector.

The UAE is a leader and key partner in the international effort to address climate change and is committed to expanding the role of low-carbon technologies in the economy. Through multilateral cooperation, the UAE has also provided dozens of nations with the resources, infrastructure and technology required to adopt more efficient, sustainable sources of energy.

Contents

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Upcoming events

Wastewater and Emerging Pollutants: Unfolding A Toxic Story

Date: 09 September 2021

Time: 3pm to 4.30pm Nairobi time

Webinar

Emerging pollutants are contaminants that have been detected in water bodies. These may cause harm to human health and the ecological systems and pose a great risk to our livelihood. Some of these negative impacts include the death of aquatic life, algal blooms, habitat destruction from sedimentation, debris, increased water flow and other short and long-term toxicity from chemical contaminants.

This webinar aims to discuss these matters with reference to wastewater and will focus on case studies, projects, and examples that will present the current trends and ways to tackle these issues.

UN General Assembly, 76th Session

Date: 14 - 30 September 2021

Location: New York, United States of America

All 193 Member States of the United Nations are represented in the General Assembly. The General Debate is each member's opportunity to discuss and work together on a wide array of international issues. The theme for the 76th session is "Building Resilience through hope to recover from COVID-19, rebuild sustainably, respond to the needs of the planet, respect the rights of people, and revitalise the United Nations."

Accelerating sustainability in the textile value chain: inspiring action and behaviour change

Date: 15 September 2021

Time: 7:00 to 8:00 EDT

Online Event

As the world produces and consumes more textiles than ever before, the very low reuse and recycling rates mean that more textiles are also being thrown away than ever before.

This online event discusses the need for shift to circular models in delivering sustainability for the industry and discusses new visions and radically different ways of doing business.

Ruler of Dubai Opens 5th Phase of Solar Park

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai, has inaugurated the 300 megawatt (MW) first stage of the 900MW fifth phase of the Mohammed bin Rashid Al Maktoum Solar Park.

Implemented by Dubai Electricity and Water Authority (DEWA) using the Independent Power

Ruler of Dubai inaugurates 300MW first stage of fifth phase of Mohammed bin Rashid Al Maktoum Solar Park

Producer (IPP) model, the solar park is the largest single-site solar park in the world with a planned total capacity of 5,000MW by 2030.

The Solar Park's projects constitute one of the key pillars of the Dubai Clean Energy Strategy 2050, which aims to provide 75 percent of Dubai's total power capacity from clean energy sources by 2050. The fifth phase investments amount to AED2.058 billion, according to DEWA.

During his visit to the site, Sheikh Mohammed was accompanied by H.H. Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum, Deputy Ruler of Dubai; H.H. Sheikh Ahmed bin Mohammed bin Rashid Al Maktoum, Chairman of Dubai Media Council; H.H. Sheikh Ahmed bin Saeed Al Maktoum, Chairman of the Dubai Supreme Council of Energy: and Mohammed Ibrahim Al Shaibani, Director-General of His Highness the Ruler's Court in Dubai.

The fifth phase will provide clean energy to over 270,000 residences in Dubai and will reduce 1.18 million tonnes of carbon emissions annually

Sheikh Mohammed was welcomed at the solar park by Saeed Mohammed Al Tayer, MD and CEO of DEWA, and board members of the Dubai Supreme Council of Energy, including Dawood Al Hajiri, Director-General of Dubai Municipality; Abdulla bin Kalban, Managing Director of Emirates Global Aluminium; Saif Humaid Al Falasi, CEO of Emirates National Oil Company; and Nasser Abu Shehab, CEO of the Strategy and Corporate Governance Sector at the Roads and Transport Authority, in addition to Mohammad Abdullah Abunayyan, Chairman of ACWA Power; and Li Xuhang, Consul-General of the People's Republic of China in Dubai.

In November 2019, DEWA announced the consortium led by ACWA Power and Gulf Investment Corporation as the Preferred Bidder to build and operate the fifth phase of the Mohammed bin Rashid Al Maktoum Solar Park using photovoltaic (PV) solar panels based on the IPP model. DEWA achieved a world record by receiving the lowest bid of US$1.6953 cents per kilowatt hour (Levelised Cost of Energy) for this phase. A total of 60 Requests for Qualifications (RFQ) were received from international developers.

To implement the project, DEWA established Shuaa Energy 3 in partnership with the consortium led by ACWA Power and Gulf Investment Corporation. DEWA owns 60 percent of the company, and the consortium owns the remaining 40 percent.

Latest solar photovoltaic bifacial technologies

To be commissioned in stages until 2023, the project uses the latest Solar photovoltaic bifacial technologies, which allows solar radiation to

reach the front and back of the panels, with single axis tracking to increase generation.

The fifth phase will provide clean energy to over 270,000 residences in Dubai, including 90,000 residences by the commissioned first stage, and will reduce 1.18 million tonnes of carbon emissions annually.

His Highness Sheikh Mohammed bin Rashid also launched a project to study the feasibility of generating electricity by utilising wind energy in Hatta. Based on field visits and available preliminary data on wind in Hatta, DEWA has identified the location for a wind farm with a total capacity of about 28MW. Actual wind speed for a full year is currently being measured at the location using a 150-metre metal tower. The purpose is to collect accurate data and study the total capacity of the power plant as well as other technical details in terms of number of turbines, capacity of each, annual operating hours, among other things.

"At DEWA, our strategy and plans are guided by the vision and directives of HH Sheikh Mohammed bin Rashid Al Maktoum to promote sustainability, innovation and the shift towards a green sustainable economy. The project to generate electricity using wind power is part of our efforts to diversify clean and renewable energy sources in Dubai. These include photovoltaic solar panels technology, Concentrated Solar Power (CSP), green hydrogen production using renewable energy, and pumped-storage technology in the hydroelectric power station in Hatta," said Al Tayer.

Capacity of clean energy now at 1,310MW

"Commissioning the 300MW first stage of the

The fifth phase investments amount to AED2.058 billion, according to DEWA

fifth phase of the Mohammed bin Rashid Al Maktoum Solar Park increases DEWA's total capacity of clean energy to 1,310MW. This brings clean energy capacity in Dubai's energy mix to around 10 percent. DEWA's production capacity has increased to 13,200MW of electricity and 490 million imperial gallons of desalinated water per day (MIGD). By the end of 2021, clean energy capacity will increase to 13.3 percent of Dubai's total energy mix after adding 517MW from solar photovoltaic panels and CSP in the fourth phase of the solar park. These include 100MW from the world's tallest CSP tower at 262.44 metres, 200MW from first project of the parabolic trough, and 217 MW using photovoltaic solar panels," he added.

Al Tayer emphasised that DEWA's major project in cooperation with the private sector and using the Independent Power Producer (IPP) model contributes to the economic growth of the Emirate. Through this model, DEWA received the lowest solar energy prices (Levelised Cost of Energy) globally five consecutive times, making Dubai a global benchmark for solar power prices. DEWA has attracted investments of around AED40 billion from the IPP model.

Mohammad Abunayyan, Chairman of Saudi Arabia based ACWA Power, said, "Our company is at the forefront of global efforts in progressing the energy transformation. Based on our long-term strategic partnership with DEWA, the launch of the first stage of the fifth phase of the Mohammed bin Rashid Al Maktoum Solar Park has been completed in record time of less than 12 months."

He added: "The milestone reached today is a testament to our commitment to fulfil our mission despite the challenges imposed by the

The Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park in the world with a planned total capacity of 5,000MW by 2030

pandemic, and reinforces our support of DEWA's ambitious vision of strengthening the green ecosystem in Dubai and adopting innovative sustainable solutions. These solutions have already been demonstrated through our portfolio of projects that span 13 countries in three continents."

Ibrahim Al Qadhi, CEO of Gulf Investment Corporation (GIC), said, "GIC is pleased to participate in the development of the Mohammed bin Rashid Al Maktoum Solar Park (Phase V) together with the Dubai Electricity and Water Authority and ACWA Power, and to achieve the commissioning of the first phase of this landmark project ahead of the target date despite the challenges caused by the COVID-19 outbreak."

"GIC is a leading investor in energy projects with over US$11billion in investments in the sector and intends to continue to play a major role in utilities projects in the Arabian Gulf region," Al Qadhi added.

'New phase enhances UAE's climate action efforts'

Dr. Abdullah Belhaif Al Nuaimi, Minister of Climate Change and Environment, has said that the launch of the new phase of the Mohammed bin Rashid Al Maktoum Solar Park with a capacity of 300 megawatts helps advance the UAE's shift towards a green economy and enhances its climate action efforts.

He attributed the country's achievements in the deployment of clean energy to the forward-looking vision of its wise leadership that aims to build a better future for the current and next generations.


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Expo 2020 Reveals 'Programme For People and Planet'

Expo 2020 Dubai has revealed the calendar for its 'Programme for People and Planet,' a schedule of events, experiences, thought-leadership and public conversations that aims to find solutions for some of the most pressing problems facing our world.

Designed with and for the global community, the programme will harness the connecting power of

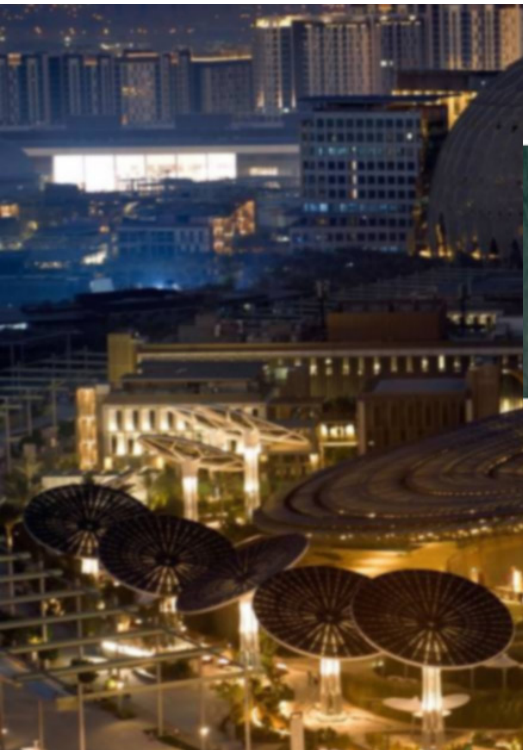
Running across the entire six months of Expo 2020, the programme is anchored by 10 Theme Weeks and 18 International Days, each of which explore key issues of global significance

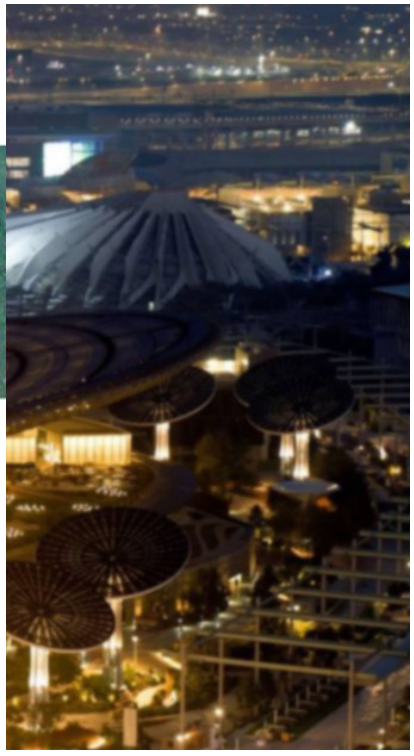
World Expos to catalyse a legacy of transformative change, according to a press release issued by Expo 2020.

The 'Programme for People and Planet' will run across the entire six months of Expo 2020, anchored by 10 Theme Weeks and 18 International Days, each of which explore key issues of global significance. Through the Theme Weeks, participants will investigate solutions to critical global challenges, ranging from mitigating climate change and biodiversity loss and making human habitats more sustainable, to bridging the digital divide and ensuring equal access to education and healthcare.

More than 220 events will take place as part of the programme - from large forums and public conventions to seminars and workshops. Expo 2020's signature platform for connecting minds,

The Programme for People and Planet reflects challenges and opportunities impacting all 7.8 billion people on the planet





the World Majlis series will play a prominent role, with 53 individual sessions set to engage visitors over the course of six months.

Underpinned by the themes of technology and innovation, youth and women and girls' empowerment, the Programme for People and Planet will assemble an unparalleled array of perspectives, fostering exchanges of impactful ideas between leading experts, including wildlife advocate Dame Jane Goodall, Eden Project founder Sir Tim Smit, and Sarah bint Yousif Al Amiri, Minister of State for Advanced Sciences and the woman behind the Emirates Mars Mission, and the 191 nations participating in Expo 2020, as well as business leaders, grassroots actors, and the wider global community.

Unlocking bold aspirations to shape a healthier, safer, cleaner and more equitable future for all, the programme will demonstrate that every one of Expo 2020's partners, participants and visitors, whether attending Expo physically or participating remotely, can – and must – become an agent of change.

Nadia Verjee, Chief of Staff, Expo 2020 Dubai, said, "Sitting at the heart of our World Expo, and taking place at a moment in time that could not be more urgent or opportune, the Programme for People and Planet is the manifestation of our theme and purpose – 'Connecting Minds, Creating The Future'.

"It will not only form an essential part of our event-time activities, but will also catalyse a one-of-a-kind movement to shape the legacy that Expo 2020 leaves the world, long after we close our doors, resulting in a meaningful and measurable impact for generations to come."

The Programme for People and Planet reflects challenges and opportunities facing not just the decision-makers of today, but all 7.8 billion people living on this planet.

Five tracks cut across the programme, forming a rich tapestry of exciting events that explore the 10 Theme Weeks through distinct lenses.

Expo's cultural track, Build Bridges, will break down boundaries, harnessing the power of storytelling, art and music to foster intercultural dialogue and knowledge exchange.

Expo's social-development track, Leave No One Behind, will spotlight the importance of opportunity for all, asking the question: what can we do today to create a more equitable tomorrow? This track will also have a particular focus on gender equality and last-mile communities at risk of marginalisation.

Climate change is the most serious threat facing our planet – the actions we take now will impact the environment we leave for future generations. The Live in Balance track will focus on how the global community can work together to restore balance with the planet.

At a time of global economic change, the Thrive Together track concentrates on tangible business opportunities. It puts the prospect of robust and resilient growth, and productive partnerships, at the centre of Expo 2020.

Fifty years ago, the Founding Fathers of the UAE conceived a bold vision to carve out a new future for their people. The fifth track, Vision 2071, focuses on the future and how anything is possible if we – the global community – work together.

UAEU Raises Awareness Of Vital Role Of Sharks In UAE's Marine Ecosystem

The United Arab Emirates University (UAEU) has launched a campaign aiming at raising the community's awareness regarding the pressing need to protect sharks, as they play a vital role in maintaining the balance of the marine ecosystem.

Dr. Mohammad Abdul Mohsen Alyafei, Associate Professor, Vice Dean, College of Food and Agriculture, Chair of Integrative Agriculture Department at UAEU, said that sharks are considered one of the most important species in seas and oceans. They have been contributing to maintaining the marine ecosystem's balance for more than 400 million years.

Recently, shark populations have witnessed a decline due to over-fishing, mainly due to the high value of their fins and meat. In the marine food chain, sharks play an essential role in maintaining the marine ecosystem's balance and increase its productivity, he added.

Alyafei stated, "The Ministry of Climate Change and Environment in the UAE has earlier announced a new plan to protect sharks. It has launched the 'National Plan of Action for the Conservation and Management of Sharks 2018-2021', presenting concrete steps towards promoting shark conservation and sustainability in the UAE and enhancing food biodiversity", he added.

He added that a study co-conducted by the MoCCAE and the International Union for Conservation of Nature along with its governmental and non-governmental partners, revealed that the UAE is home to more than 80 different species of sharks and rays, most of which are endangered at three different levels: Critically endangered, endangered, and vulnerable.

"Within the UAEU, we hope to start the marine research programme to maintain our natural resources as a sustainable source for the future generation. It is our responsibility to protect these species from getting extinct due to overexploitation," he concluded.

Arab Youth Centre launches Arab Youth Council for Climate Change

The Arab Youth Centre (AYC) has launched a new platform for Arab youth to join the fight against climate change. Launched on International Youth Day 2021, the Arab Youth Council for Climate Change (AYCCC) will enable youth climate activists to find ways to stem the tide of wildfires, floods and other challenges.

The initiative was announced just days after the release of the world's largest report on climate change by the UN Intergovernmental Panel on Climate Change, which has confirmed that human activity is unequivocally to blame for the exacerbation of extreme weather conditions and rapid global warming. Engaging youth in climate activism is critical to global efforts to stem the tide of wildfires and floods that have upended the planet's equilibrium.

Platform to enable Arab youth climate activists to fight the threat of the century

Goals

Shamma bint Suhail Faris Al Mazrui, Minister of State for Youth Affairs and Vice president of AYC, said, "The launch of AYCCC could not have come at a more critical time. The move marks a qualitative leap in the interaction of Arab youth with environmental issues, and directly supports Arab efforts to protect our environment against the devastating impact of climate change." AYCCC will also play a key role in supporting the

Collaboration to spur private sector action to achieve the Global Goals by 2030

UAE's bid to host the 28th session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP28) – the world's most prominent high-level meeting on climate change.

AYC has launched the Council in cooperation with several key partners, including the Arab League, the UAE Ministry of Climate Change and Environment (MOCCAE) and the Office of the UAE's Special Envoy for Climate Change.

AYCCC has outlined several strategic goals, including equipping young Arabs with the skills required to face the challenges posed by climate change, representing their voices at Arab and international environmental events, supporting Arab countries in achieving their climate objectives, making strategic recommendations to decision-makers in the Arab world, proposing effective solutions in partnership with the public and private sector, and encouraging investment in start-ups and small and medium enterprises (SMEs) in the field of environmental protection and combating climate change.

Areas of specialisation

AYCCC members will be selected for a two-year period. The work of the Council will cover six areas: optimal natural resources and water management; clean and renewable energy; circular economy; agriculture and food security; reducing greenhouse gas emissions and improving air quality; and adaptation to climate change.

Outlining the various measures undertaken by the Ministry to empower youth to play an active role in tackling climate change, Dr. Abdullah Belhaif Al Nuaimi, Cabinet Member and Minister of Climate Change and Environment, said,

"Empowering young people to become active players in our fight against climate change at home and abroad is a key priority for the UAE."

Youth empowerment

Al Nuaimi said that MOCCAE had launched the Emirates Youth Climate Strategy in 2018 to raise awareness about the climate crisis among the international youth community and develop youth capacities to combat climate change, while platforms such as the Abu Dhabi Climate Meeting in 2019 was launched to bridge the gap between youth and policy makers and ensure that young voices are heard in shaping the future of the nation.

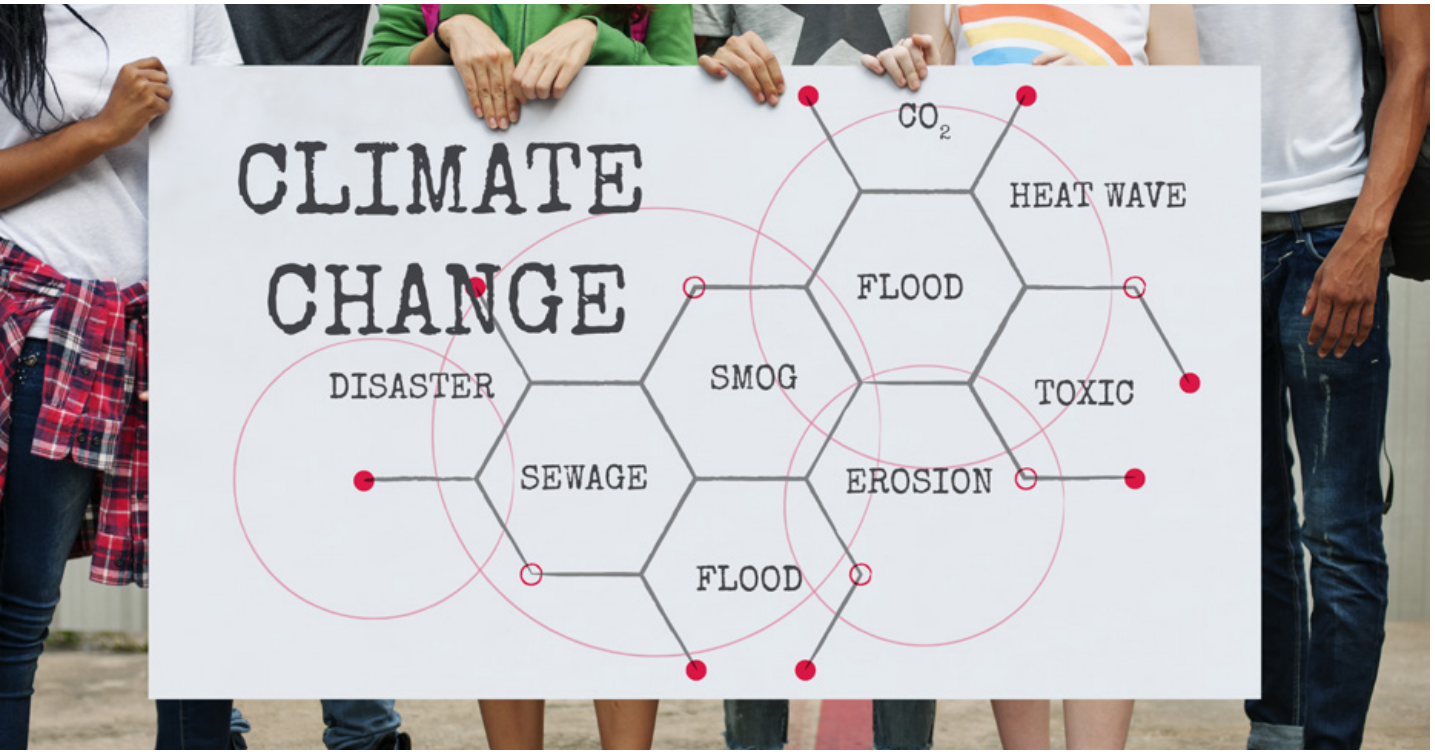
He added, "The expertise that our youth has acquired from these initiatives will serve as a foundation for the work of AYCCC. I am confident that this all-inclusive Arab youth driving force will go a long way in boosting climate change mitigation and adaptation efforts in the region."

Pioneering Initiatives

Dr. Sultan bin Ahmed Al Jaber, Minister of Industry and Advanced Technology and the UAE's Special Envoy for Climate Change, said, "To fulfil the economic potential of the UAE, it is crucial the nation has a mobilised and active youth population. The launch of AYCCC is a strategic step that will enhance youth participation in climate action."

He highlighted the UAE's initiatives that embody a model of active commitment to climate action and how its youth play a key role in the nation's strategic programs. Dr. Al Jaber also stressed the promising economic opportunities for future generations that will be created through diversifying the energy mix, as the country

Engaging youth in climate activism is critical to global efforts to stem the tide of wildfires and floods that have upended the planet's equilibrium



develops further capabilities in clean and renewable energy and in mitigating the impact of climate change.

Quantum leap in youth engagement

Shamma Al Mazrui added, "Climate change has become a daily challenge in many parts of the world. It is threatening food and water security, and negatively affecting quality of life in cities and communities.

"As the interest of young people in pressing issues increases, AYC – under the guidance of His Highness Sheikh Mansour bin Zayed Al Nahyan – responded by launching AYCCC to achieve a quantum leap in Arab youth's engagement with environmental issues."

AYCCC's strategic partners from the ranks of government entities, companies, the business community, and Arab and global environmental organisations and initiatives that address climate change will deliver advanced training to the Council's members, provide them with focused advice, and facilitate forwarding their proposals to decision makers as well as access to vital funding.

A council member must be an Arab youth between the ages of 18-35, with a track record of achievements in combating climate change and environmental advocacy, motivation and drive, leadership abilities and advanced communication skills.

Candidates must also have experience in climate change work, or an academic degree in environmental sciences or a similar discipline, or a passion for the cause that is proven by projects they have completed.

Aligning with global sustainability

5 June is World Environment Day, where millions of people gather to celebrate and promote global environmental awareness. However, due to the global response to the coronavirus pandemic, it will be the first ever digital World Environment Day. What can you do to help? Here are some suggestions:

Create a climate strategy to futureproof your business

As changing environmental conditions transform the business landscape, it's vital that companies everywhere adapt and respond appropriately. Adequate preparation is important to survive and thrive in the face of climate uncertainty.

ISO 14001 provides organizations with a framework to respond to climate change and protect the environment, in balance with socio-economic needs. It requires top-level management to set accurate, meaningful and sustainable targets that can be reviewed and continually optimized, based on current needs.

The standard also calls for strong internal and external communications. Gain employee buy-in and build a pro-environmental culture at work, then share your efforts with relevant stakeholders to boost your brand's reputation.

Use energy and water wisely – and save money, too

Climate change affects both the supply of - and demand for - water and energy. When organizations lack proper resource management, this only heightens the problem, further contributing to growing global scarcity and rising prices.

Optimizing your company's energy and water footprint protect finites resource, while also providing cost savings. Use ISO 50001 to help establish current energy use, predict future consumption and identify how your business can reduce its consumption, as well as gain recognition from the two major environmental certification programs, BREEAM and LEED.

ISO 14046 helps businesses assess water use and contribute towards better water management, both locally and globally. Other standards, like BS 7592 and BS 8580 support safe water initiatives.

Both help prevent and control outbreaks by testing water systems for legionella bacteria. Meanwhile, the upcoming BS 8680 standard will provide a code of practice to govern water safety planning in buildings.

Crack down on carbon emissions

Finally, as the world moves toward a low-carbon economy, businesses have an opportunity to lead the way. By taking action on your emissions you can improve your company's overall efficiency, cut costs and become more resilient in the process.

> Join the global transition to a low carbon economy and capitalize on the opportunities this brings.

Refer to PAS 2050 to reduce your carbon emissions, pre-empt legislation and credibly demonstrate carbon neutrality to external stakeholders. You could also consider completing the process of Carbon Footprint Verification (CFV) to gain ISO 14064-1 certification.

It is undeniable that all businesses must take responsibility and play their role to play in combatting climate change. A standards-based corporate sustainability strategy ensures you'll take the right steps to optimize your organization's efforts and be part of the solution.

Summary:

- Business owners everywhere must recognize the reality of our changing climate and take direct action to fight the effects and protect their enterprise.
- Devising a corporate sustainability strategy is the first step. Create, implement and continually improve yours with ISO 14001 – and build a strong pro-environmental culture and reputation.
- It's also vital to engage in sustainable resource management. Maintain economic viability and limit global scarcity using ISO 50001 to reduce your company's energy consumption and ISO 14046 to lower your water footprint.
- Other standards, like BS 7592 and BS 8580 support safe water initiatives, while the upcoming BS 8680 standard will provide a code of practice to govern water safety planning in buildings.
- Finally, join the global transition to a low carbon economy and capitalize on the opportunities this brings. Take action to cut your emissions with PAS 2050 or ISO 14064-1, cut costs and become more resilient in the process.

Our sustainability expertise

As sustainability becomes key to achieving long-term, enduring organizational resilience, we have been growing and developing our expertise in this area.

At BSI, our experts are close to the markets, whether shaping standards to best practice or finding ways to measure greenhouse gashouse emissions, we understand the issues surrounding your sustainability challenges.

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DEWA's Innovation Centre Launches Cleantech Youth Programme

The Innovation Centre at Dubai Electricity and Water Authority (DEWA) has launched the Cleantech Youth Programme to expand the technical and scientific knowledge of talented young energy leaders in clean and renewable energy and entrepreneurship.

The programme comprises a wide range of training workshops, specialist education

The Cleantech Youth Programme empowers youth from different sectors and expands their technical and scientific knowledge in clean and renewable energy and entrepreneurship

sessions, and field visits to accredited institutions with the participation of academics, specialists and experts.

"The Innovation Centre at the Mohammed bin Rashid Al Maktoum Solar Park supports DEWA's efforts to achieve the directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to empower youth and enrich their experience to become the cornerstone of sustainable development. It also supports the Dubai Clean Energy Strategy 2050 to provide 75 percent of Dubai's total power capacity from clean energy sources by 2050," said Saeed Mohammed Al Tayer, MD and CEO of DEWA.

He added: "The Centre consolidates Dubai's experience in anticipating and shaping the future of energy and water within an integrated system

The Innovation Centre has strong collaboration with schools, universities, start-ups, local and global organisations in innovation, knowledge exchanges and in organising exhibitions

run by Emiratis in addition to attracting the best regional and international professionals, making it a global platform for clean and renewable energy innovations. Through the Innovation Centre, DEWA strives to strengthen the skills of the next generation of innovators and experts in clean technologies while focusing on skilled Emiratis and nurturing them."

Workshop organised for over 3,000 students

Dubai Electricity and Water Authority (DEWA)'s Innovation Centre recently organised a virtual workshop in Arabic and English on the best practices in protecting the environment and natural resources.

The workshop presented the Innovation Centre's role at the Mohammed bin Rashid Al Maktoum Solar Park, to promote clean technologies and provide sustainable and clean energy. Some 3,488 students participated in the workshop, representing public and private schools, as well as People of Determination centres in the UAE.

"The Centre invests in youth and their interest in clean energy, to achieve the objectives of sustainable development and use research and the latest innovative technologies to achieve these directives. The Centre is an educational platform that hosts events, conferences, seminars and workshops. It also builds strong collaboration with schools, universities, start-ups, local and global organisations in innovation, knowledge exchanges and organising exhibitions," said Saeed Mohammed Al Tayer, MD and CEO of DEWA.

The workshop is part of the Centre's efforts to expand collaboration with schools and universities to raise the next generation of sustainability leaders and innovators. It also strengthens their skills and capabilities in clean energy technology through exchanging knowledge and experiences. The workshop provides a unique opportunity to discover the latest innovations in clean technologies, while nurturing Emirati talents.

Building Resilience Of Cities Vital To Develop Their Readiness For Future Transformations

The World Government Summit has launched a report, "Time to Future Proof: A blueprint for holistic urban resilience", in partnership with Strategy& Middle East, part of the PwC network.

The report emphasises the importance of building the resilience of cities in the region and developing their institutional capacities to enhance their ability to face and recover from challenges.

Launched by the World Government Summit, the report – "Time to Future Proof: A Blueprint for Holistic Urban Resilience" offers an evidence-based framework to guide cities in building resilience

The COVID-19 pandemic has been a severe test of the ability of countries and cities to withstand the unexpected, placing a strain on economic, health, social, and urban infrastructures. Beyond the pandemic, natural and human-caused hazards have been increasing in frequency and scale, and that trend could continue, depending on mitigation efforts.

To prepare for the future, cities should build their urban resilience to anticipate and respond to shocks, recover quickly, and transform themselves innovatively in the face of adversities, disasters, and stresses.

The report includes a comprehensive tool that enables cities to do that, assess resilience levels and study their institutional capacities.

To prepare for the future, cities should build their urban resilience to anticipate and respond to shocks, recover quickly, and transform themselves innovatively

The tool includes 131 performance indicators covering 36 key dimensions, and an institutional readiness checklist. As part of the analysis, the tool was used to assess the level of resilience in 9 major cities in the Middle East and North Africa region, including Abu Dhabi, Dubai, Amman, Kuwait City, Muscat, Riyadh, Jeddah, Casablanca, and Cairo.

Strategy& selected these cities based on their levels of urbanisation and population growth, economic contribution and their business and tourism appeal.

A comparison was also done with 11 cities from different geographic regions, namely: Cape Town, Houston, London, Nairobi, Sao Paulo, Seoul, Singapore, Sydney, Tokyo, Toronto, and Zurich. These cities were selected based on several criteria including urbanisation, adoption of resilience strategies, and governance structures and frameworks.

"The report provides a comprehensive interactive tool that will support governments to enhance the resilience of their cities, increase their readiness to face challenges, and launch initiatives and programs that will support their recovery in vital sectors," said Mohamed Al Sharhan, Deputy Managing Director of the World Government Summit Organisation. He also added that the report sheds light on the most prominent future trends and transformations facing governments and societies and recommends solutions and advanced initiatives.

"To develop resilience, decision makers must understand their city's exposure to natural and human-caused threats," said Dr. Raed Kombargi, Partner with Strategy& and the leader of the

firm's Energy, chemicals, and utilities practice in the Middle East. "They must then eliminate any structural vulnerabilities that might intensify the impact of a disaster in terms of basic, social, economic, and urban environment needs, through developing all required institutional capacities."

Characteristics of resilient cities

Resilient cities have eight critical features. They are anticipatory and use proactiveness and foresight to future-proof, which include developing future plans that ensure the ability of cities to withstand, mitigate and recover from the effects of shocks. They are resourceful, which secures the availability, diversity, and optimal utilisation of resources including contingency funding.

Furthermore, resilient cities are agile and can adapt to changing circumstances. They promote a participatory operating model through joint work and cooperation between the public and private sectors. Another aspect of resilient cities is their ability to be citizen-centric by providing for citizens' needs and developing innovative and experimental plans within cities to aid recovery. They also adopt a holistic approach to deliver solutions based on their impact on systems and ensuring the ability to measure them.

The importance of cities lies in the fact that they represent the heart of the economy of countries, as they achieve economic development, innovation and growth of up to 80 per cent of the GDP, and host 55 per cent of the world's total population, not to mention that this percentage is expected to reach 68 per cent by 2050.

According to the report, the cities of Abu Dhabi and Dubai occupied advanced resilience positions

According to the report, the cities of Abu Dhabi and Dubai occupied advanced resilience positions when compared to assessed cities, scoring among the top 10

when compared to assessed cities, scoring among the top 10. The report, "Time to Future Proof: A blueprint for holistic urban resilience", highlights the efforts made by the government of Dubai in facing the pandemic caused by the COVID-19 virus. It also showcases the city's ability to control the spread of the virus and reduce its effects on both the short and long run by launching several initiatives and programs and adopting different governance models.

Customised urban resilience blueprints for MENA region

MENA cities face several major hazards such as climate change, landslides, pollution and cybersecurity, and many others. They also face various vulnerabilities such as emergency care, social protection, and inclusion, and localisation of supply chains, among others. These challenges can be tackled by developing comprehensive resilience blueprints and plans for infrastructure development to achieve great results.

The report recommends a set of steps and measures that cities in the Middle East and North Africa could focus on during the next phase, and which would aid in devising their customised urban resilience blueprints.

These cities should assess the extent of their exposure to natural and human-caused hazards and address areas that need to be developed to minimise their vulnerabilities across basic needs, the economy, the society and the urban environment. This may involve for example increasing reliance on local production of basic commodities necessary to ensure their sufficiency in emergency situations, providing comprehensive health care coverage and social safety nets, and redressing budget shortcomings and areas that need development at the financial level.

Consequently, cities will need to strengthen their institutional capacities that will help them address their hazards and vulnerabilities. These come in the form of strategies or policies, governance and partnerships, capabilities and processes, delivery of public services, financing, and data and systems.

For instance, it is likely that some countries will benefit from increased decentralisation and the level of autonomy of cities in decision-making, given the size of these countries and the large differences in the level of exposure to risks and areas that need development in the main cities. Also, investing in advanced capabilities, data and systems is critical, such as foresight and early warning systems, utilisation of real-time, big and open data, and integrated whole-of-government e-systems.

RTA Plans 100% Electric, Hybrid Taxi Fleet By 2027

About 50 per cent of the Dubai Taxi fleet are electric or hybrid vehicles, the Roads and Transport Authority (RTA) has said. The authority is now aiming to convert the entire fleet to green vehicles by 2027.

According to Mattar Mohammed Al Tayer, Director-General, Chairman of the Board of Executive Directors of the Roads and Transport

As of 2020, the total number of hybrid, electric taxis and limousines in Dubai is 4,683

Authority (RTA), the total number of hybrid/ electric taxis and limousines in Dubai amounted to 4,683 in 2020. Of these, about 50 percent - 4,510 - are hybrid taxis, and 173 others are electric/hybrid limos of the Dubai Taxi Corporation.

"The RTA intends to change the entire fleet of Dubai Taxi to eco-friendly vehicles by 2027, a move considered the first of its kind worldwide. The move is part of a master plan to reduce carbon emissions of the taxi and limousine sector by two percent in compliance with the requirements of the Dubai Supreme Council of Energy," he added.

In 2008, RTA became the first entity in the region to roll out the trial run of hybrid vehicles powered by fuel and electricity. Results over a four-year period showed that vehicles covered more than

In December 2019, RTA launched the trial run of the first hydrogen-powered taxi in the Middle East

550,000 kms without sustaining major defects or requiring major maintenance.

"Consequently, saving in fuel consumption amounted to 34 percent, and carbon emissions were reduced by 34 percent. In 2017, RTA deployed Tesla electric vehicles featuring several components of self-driving technologies and in December 2019, it launched the trial run of the first hydrogen-powered taxi in the Middle East," Al Tayer added.

More than 300 Green Charger stations opened for electric vehicle users across Dubai

The Dubai Electricity and Water Authority (DEWA) has added new benefits to the EV Green Charger services, in a step to promote sustainable transport in Dubai and increase the number of beneficiaries.

All commercial and non-commercial EV users can now easily use the EV Smart Charging service and benefit from more than 300 Green Charger stations across Dubai. There is also a new feature to locate the nearest green charger station and check its availability.

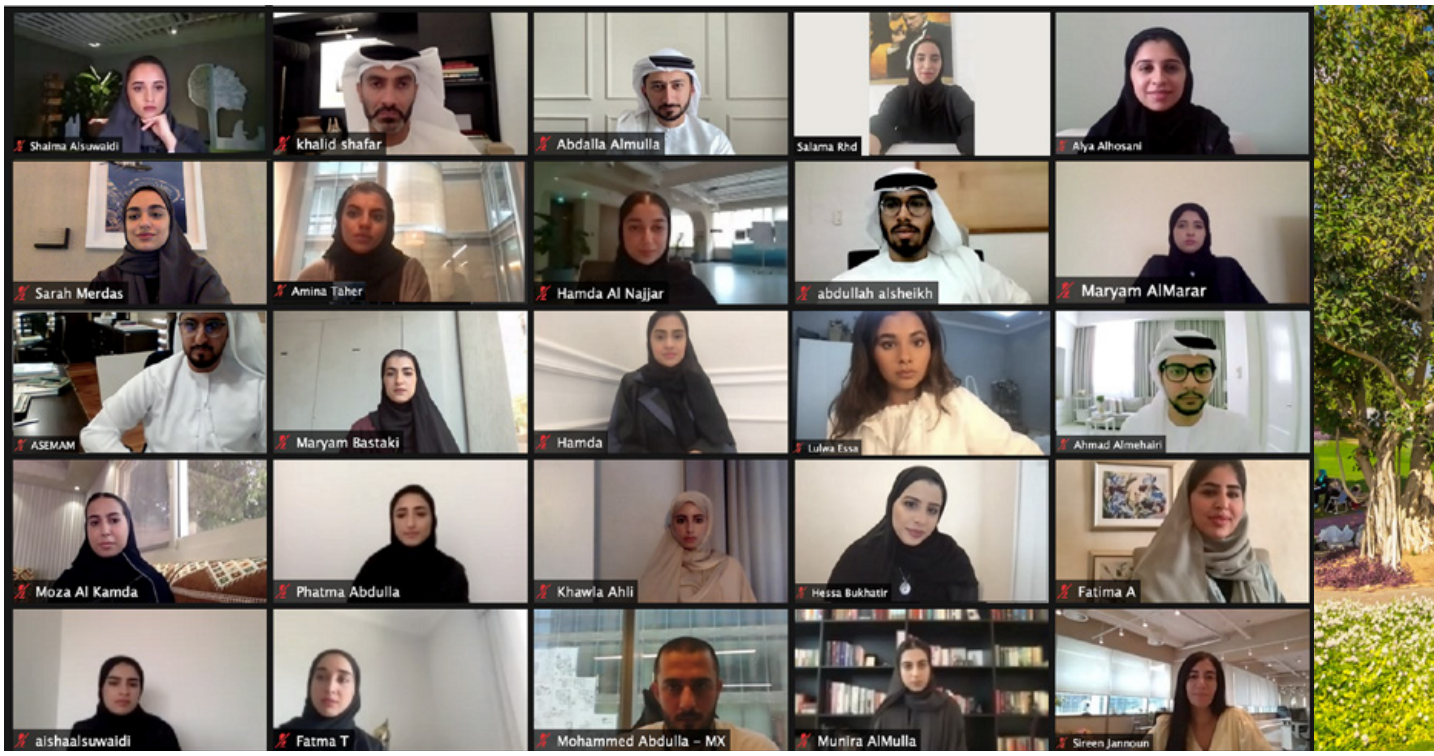
The EV Smart Charging service enables customers who have DEWA EV accounts as well as guest users (who are not registered with the DEWA EV account service) to charge their electrical vehicles smartly by scanning the QR code placed on DEWA Green Charger stations available across Dubai.

Customers can locate DEWA charging stations through its website and smart app as well as through a variety of digital map platforms; ride-share platforms; car navigation maps; as well as dedicated charging station platforms.

Virtual Session Hosts 30 Emiratis Selected To Redesign 10 Public Parks In Dubai

Brand Dubai, the creative arm of the Government of Dubai Media Office, in cooperation with Dubai Municipality, hosted a virtual session for 30 participants selected to redesign 10 public parks in the emirate as part of a joint redevelopment project.

The session, led by leading industry experts in the fields of architecture, interior design and



Organised by Brand Dubai and Dubai Municipality, session led by industry experts explored key design requirements for urban parks

event management, explored key design requirements for urban parks and strategic urban design principles aimed at guiding participants as they develop their proposals in the next phase of the project.

Brand Dubai and Dubai Municipality recently selected the participants after an evaluation of over 100 submissions from the Emirati creative community for designs of public park elements and concepts for community events. The participants, who include Emirati creatives and design and event professionals, will work with multi-disciplinary teams to revitalise parks across the emirate.

Asem Abdulrazzaq Al Qassim, Acting Director of Executive Planning Department, Dubai Municipality said: "The virtual session sought to familiarise the participants selected for the

Emirati creatives and design professionals will work with multi-disciplinary teams to revitalise parks across Dubai

redesign project with the finer aesthetic, social and technical aspects of the redevelopment process and help them align their concepts with the city's broader vision for urban redevelopment as well as the needs of the community. The talks delivered by industry experts at the sessions were aimed at helping the participants fine tune their ideas to create engaging green spaces and contribute to enhancing the wellbeing and sustainability of the city."

Shaima Al Suwaidi, City Branding Manager, Brand Dubai, said: "Organising the virtual session is part of our efforts to support the participants in refining their ideas for redesigning elements of public parks as they begin to develop their proposals before the final showcase at an exhibition in September. During the session, design experts shared transformational concepts and insights that provided new perspectives on making public parks more engaging and sustainable. We are excited to see young Emiratis being actively involved in enhancing Dubai's urban environment in line with the Dubai 2040 Urban Master Plan."

Speaking at the session, Emirati product designer Khalid Alshafar said that when designing a public space, participants must take into consideration key factors such as purpose for design, demography, surrounding landscape and materials to integrate in their design process.

Internationally awarded Emirati Architect and founder of MULA design studio Abdalla Almulla told participants that their "designs should be able to consider all the different components of the project and have the flexibility to evolve in line with Dubai's dynamic development."

Pure Salmon Establishes Global HQ In Abu Dhabi

Abu Dhabi Investment Office (ADIO) has announced a partnership with global land-based salmon aquaculture company Pure Salmon to establish its headquarters in the UAE capital, as part of its AED2 billion (USD545 million) innovation programme.

Through the partnership, Pure Salmon will receive financial and non-financial incentives to expand local food sustainability efforts with its salmon farming technology. This is one of ADIO's latest partnerships in the agricultural technology (AgTech) space as the investment office continues its support for aquaculture and promoting innovations that address global food security challenges.

In partnership with Abu Dhabi Investment Office (ADIO), Pure Salmon aims to strengthen agricultural technology system in the emirate

Speaking on the occasion, Dr. Tariq Bin Hendi, Director-General of ADIO, said, "Over the last year, Abu Dhabi's AgTech sector has experienced exponential growth, led by rapid technological developments that are enabling sustainable agriculture and farming practices to take root in arid and desert climates. The introduction of Pure Salmon's pioneering technology and knowledge to Abu Dhabi's ecosystem will enhance the emirate's aquaculture capabilities and create a hub from which new agriculture solutions can proliferate."

By using Recirculating Aquaculture System technology, Pure Salmon will sustainably farm clean, fresh and traceable healthy Atlantic salmon

Dr. Shaikha Salem Al Dhaheri, Secretary-General of the Environment Agency – Abu Dhabi (EAD), said, "The aquaculture sector has been identified as a priority sector for development by the Government of Abu Dhabi. One of the key initiatives of the emirate's sustainable aquaculture policy is to encourage economic investment in the sector, thereby reducing pressure on the UAE's severely overexploited fisheries."

Abu Dhabi's aquaculture sector seeks to satisfy market demand using sustainable technologies that preserve biodiversity and ensure the protection of healthy, productive and resilient ecosystems.

Pure Salmon is a portfolio company of private equity funds managed by 8F Asset Management. It uses Recirculating Aquaculture System (RAS) technology to sustainably farm clean, fresh, traceable and healthy Atlantic salmon in close proximity to end consumers, which considerably reduces transport and carbon footprint, minimises the negative impact on the oceans' ecosystems, and significantly lowers resource consumption.

The company's Abu Dhabi headquarters will manage global production facilities in Poland, Japan, USA and France. ADIO's partnership enables Pure Salmon to expand its operations and become the largest global sustainable salmon producer with its target production of 260,000 tonnes per year. In addition, Pure Salmon will establish academic collaborations based on the proprietary Pure Salmon Academy knowledge base to share its aquaculture know-how and capabilities within the Abu Dhabi ecosystem.

New Tech Project At Masdar City To Extract Commercial Quantities Of Water From Air

The world's first project to produce commercial volumes of an uninterrupted water supply from a sustainable source has been unveiled in Masdar City in Abu Dhabi.

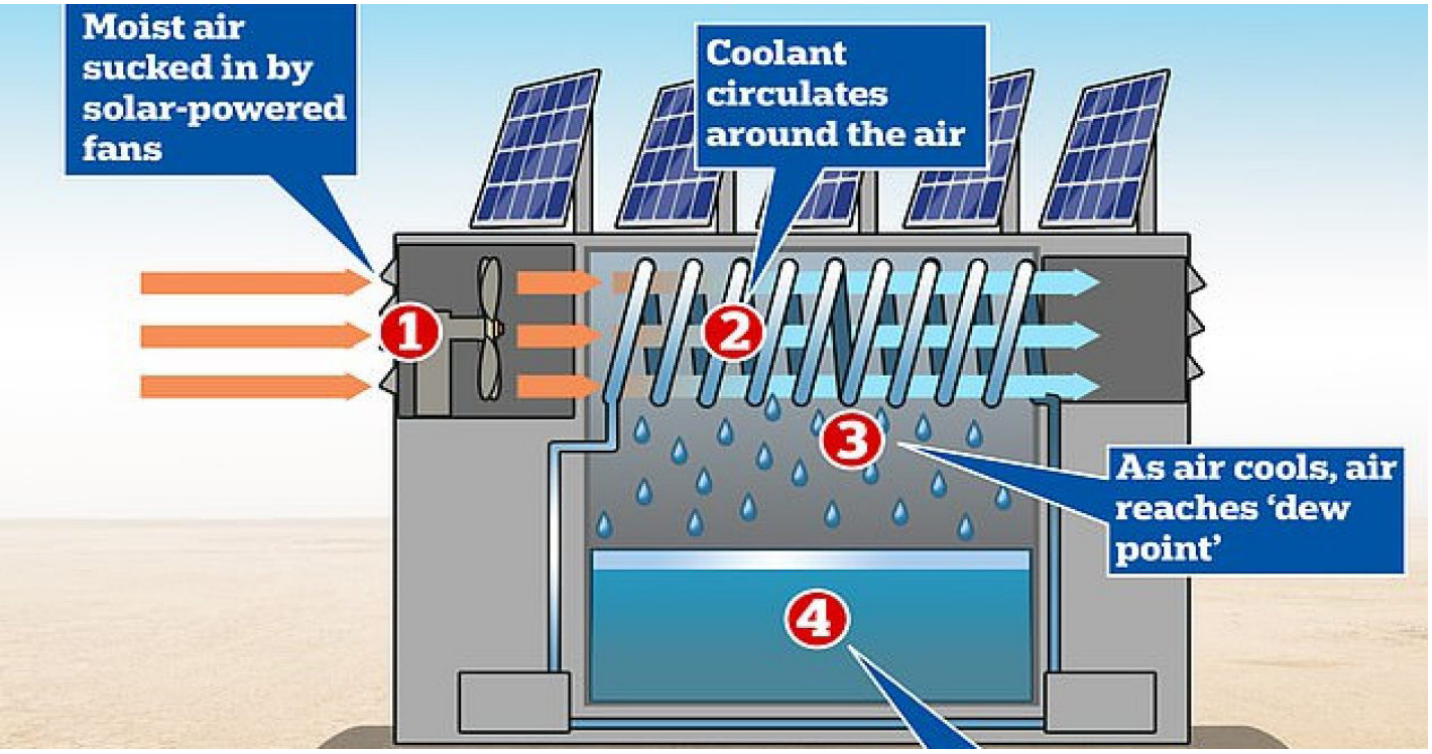
The innovative pilot project will be run by US-based water technologies company, AQUOVUM, in partnership with Masdar and Khalifa University of Science and Technology, as part of a three-party research and development agreement.

Masdar in pact with US company to build world's first solar/thermal energy storage-powered project to extract water from air

The project, which began in August, will evaluate the performance of AQUOVUM's large format Atmospheric Water Generation (AWG) technology in combination with a renewable energy source, and its ability to be included in current and/or future sustainable water projects. The AWG technology, which extracts water from the atmosphere using a renewable energy source, is a promising addition to the innovative sustainability-focused projects being run in Abu Dhabi's R&D hub, Masdar City.

The carbon-free technology will create access to clean water, a fundamental necessity in building a greener future, while contributing to the United Nations Sustainable Development Goal 6 of ensuring the availability and sustainable management of water and sanitation for all.

The project combines Atmospheric Water Generation technology with a renewable energy source to extract water from the atmosphere



Abdulla Balalaa, Executive Director, Sustainable Real Estate at Masdar City, said, "Water underlies all areas of human and environmental health and it is also essential to food and energy production. Developing technologies that both protect and guarantee a constant and secure source of water, is therefore of utmost importance. The AQUOVUM pilot will be installed at Khalifa University's Masdar Institute Solar Platform in Masdar City and will operate from 100 percent renewable power, a process that is completely carbon neutral.

"The project will positively contribute to regional and global water security in line with the UAE Water Security Strategy 2036, and as the only planned and approved R&D cluster in Abu Dhabi, we are committed to facilitating R&D projects that bring ground-breaking new technologies to the world and contribute to building a more sustainable future for all. Masdar City is already home to over 900 companies, dedicated to developing innovative technologies across the sectors of renewables, energy storage, water, artificial intelligence, health, space, and mobility," Balalaa continued.

Robert Wood, CTO of AQUOVUM, said, "To support and progress the global green transition and to ensure water security, we recognised that we must power our systems on 100 percent renewable energy to provide a truly sustainable water supply. Our bleeding-edge technologies work with nature and are the way forward to deliver lasting, sustainable solutions."

This project will run for 12 months and provide valuable performance data for a full year's weather cycle.

UAE Firms Sign MoU For Region's First Green Steel Manufacturing Operation

Abu Dhabi National Energy Company PJSC (TAQA) has announced a partnership with Emirates Steel, the leading integrated steel plant in the Middle East, to develop a large-scale green hydrogen project enabling the first green steel produced in the MENA region.

A Memorandum of Understanding (MoU) was signed by Jasim Husain Thabet, TAQA Group CEO

and Managing Director, and Saeed Ghumran Al Remeithi, CEO of Emirates Steel.

Under the agreement, TAQA and Emirates Steel will consider utilising green hydrogen to optimise clean steel production level. The hydrogen will enable green and low carbon steel manufacturing, saving energy while creating a sustainable and clean manufacturing process.

The MoU also lays the groundwork for the project design to be expanded to meet the anticipated growth in international demand for low carbon steel. This is one of the innovative solutions aiming to reduce the carbon footprint of construction, transportation and industrial sectors, among others.

Thabet commented, "TAQA is setting out to become a recognised champion of low carbon power and water, and this partnership leverages our combined expertise to lower the overall cost of production and reduce carbon emissions.

"Finding commercially viable industrial-scale solutions like this is key to unlocking the potential of green hydrogen as an emerging clean energy source. TAQA is uniquely well-placed in this region to combine our world-leading solar PV, water and energy know-how to unlock opportunities that work for our stakeholders."

Al Remeithi said, "The production of green steel through a sustainable and clean manufacturing process based on green hydrogen supports Emirates Steel's efforts to preserve the environment and its natural resources. Emirates Steel is the first steel manufacturer in the region and one of the first 50 companies in the world to be verified for LEED documentation."

Hydroponic Fodder Project Commences In Hamriyah Free Zone

Al Aliyo HydroFarms, a hydroponic fodder farm in the UAE, has inaugurated two warehouses in the Sharjah Food Park of Hamriyah Free Zone Authority (HFZA) with initial investments estimated at AED9 million.

The two facilities covering an area of 12,000 square feet will have a daily production capacity of about 10 tonnes of hydroponic fodder,

marking the company's first phase of investments in the Hamriyah Free Zone after a lease agreement signed with HFZA during the 26th edition of Gulfood 2021.

Al Aliyo HydroFarms will run the UAE's first unique project to produce and grow organic fodder for livestock in hydroponic farms based on an innovative concept using the latest technologies in the field. Saud Salim Al Mazrouei, Director of HFZA, inaugurated the two facilities in the presence of Tarannum Malik, CEO of Al Aliyo Hydrofarms, as well as a high-profile delegation from the HFZA.

Al Mazrouei was briefed about the company's products and innovative solutions developed based on advanced hydroponics technologies that are not dependent on temperatures and seasonality. The entire production process is 100 percent organic, and therefore does not use pesticides or fertilisers. Moreover, there is no wastage.

Tarannum Malik said that with minimal carbon emissions and reduced energy consumption, Al Aliyo is economical, sustainable, green and environmentally friendly. With enhanced nutritional content and hygienic-sanitary growing processes, the fodder is an excellent addition or replacement to synthetic feeds, which will reduce feeding costs by 20 to 45 percent.

Hyundai's IONIQ 5 Redefines Electric Mobility Lifestyle

As the first model in Hyundai Motor Company's new IONIQ brand dedicated to battery electric vehicles (BEV), the newly launched IONIQ 5 sets the benchmark to redefine the electric mobility lifestyle with sustainable and innovative features.

IONIQ 5 is built upon Hyundai Motor Group's dedicated BEV architecture called Electric-Global Modular Platform (E-GMP), enabling it to have unique proportions on an elongated wheelbase.

IONIQ 5 – the all-electric, midsize CUV reflects commitment to sustainability by utilizing eco-friendly materials and nature-inspired colors in many touchpoints

With E-GMP, IONIQ 5 offers innovative interior design with eco-friendly materials in many touchpoints, strong performance mated with ultra-fast charging and a Vehicle-to-Load (V2L) function as well as advanced connectivity and driver assistance features that will offer the ultimate in-car experience while ensuring safety.

Heralding a new era for EV design

IONIQ 5's unique exterior design offers a new mobility experience for the next generation and is characterized by an extended 3,000-mm wheelbase while the front of the car is equipped with Hyundai's first clamshell hood that minimizes panel gaps for optimal aerodynamics.

Hyundai's new IONIQ brand represents the company's strong commitment to sustainability and innovation

IONIQ 5's unique exterior design is characterised by clean and sharp lines, creating a sleek and sophisticated look. The BEV's precisely modelled surfaces and shapes give it an angular, almost geometric appearance.

In addition, Hyundai's designers integrated cutting-edge Parametric Pixel lights on the front and rear. This unique design element signifies Hyundai's intent to fundamentally reinvent electric mobility with an EV-specific design that will carry over to future IONIQ models.

Sustainability at its heart

IONIQ 5's progressive design language offers a bridge to the future of electric mobility that is technologically advanced, eco-friendly and plugged into today's customers' needs.

IONIQ 5's demonstration of environmental responsibility doesn't stop with electrification. Sustainability is at the center of IONIQ's brand vision, which can be found throughout IONIQ 5 in eco-friendly materials and nature-inspired colors.

Many of its interior touchpoints — seats, headliner, door trim, floor and armrest — use eco-friendly, sustainably sourced materials, such as recycled PET bottles, plant-based (bio PET) yarns and natural wool yarns, eco-processed leather with plant-based extracts, and bio paint with plant extracts.

IONIQ 5 can also be equipped with an eco-friendly solar roof, which supports the vehicle's electric power source by collecting energy and transferring it to the battery pack, improving efficiency. The solar roof can prevent battery discharge while providing an additional driving range.

A range of power electric systems

IONIQ 5 is available with a range of power electric (PE) configurations to fit the mobility needs of every customer, with no compromises on performance. Customers can select from two battery pack options, either 58 kWh or 72.6 kWh and two electric motor layouts, either with a rear motor only or with both front and rear motors. All PE variations provide outstanding range and deliver a top speed of 185 km/h.

At the top of the electric motor lineup is an all-wheel drive (AWD) option paired with the 72.6-kWh battery, producing a combined power output of 225-kW and 605 Nm of torque. This PE configuration can go from 0 km/h to 100 km/h in 5.2 seconds.

When equipped with two-wheel drive (2WD) and 72.6-kWh battery, IONIQ 5's maximum driving range on a single charge will be around 470-480 km, according to the Worldwide Harmonized Light Vehicle Test Procedure (WLTP) standard.

Innovative Vehicle-to-Load (V2L) function

IONIQ 5's E-GMP can support both 400-V and 800-V charging infrastructures. The platform offers 800-V charging capability as standard, along with 400-V charging, without the need for additional components or adapters. The multi-charging system is a world's first patented technology that operates the motor and inverter to boost 400 V to 800 V for stable charging compatibility.

With a 350-kW charger, IONIQ 5 can charge from 10 percent to 80 percent in just 18 minutes. IONIQ 5 users only need to charge the vehicle for five minutes to get 100 km of range, according to WLTP. IONIQ 5 also provides an innovative V2L

Provides Vehicle-to-Load (V2L) function, which can turn the vehicle into a charger on wheels

function, which allows customers to freely use or charge any electric devices, such as electric bicycles, scooters or camping equipment, serving as a charger on wheels.

High-performance connectivity

IONIQ 5 seamlessly integrates advanced technologies for an enhanced digital user experience. The wide, configurable, dual cockpit features a 12-inch, full-touch infotainment screen and hoodless 12- inch digital gauge cluster that can be customized to meet customers' needs.

Hyundai is offering the latest version of its upgraded Bluelink® connected car services that allows customers to control their car with their smartphone or voice to make their drive more convenient and enjoyable. New Bluelink features include Connected Routing, Last Mile Navigation and a new User Profile feature.

The Bluelink app displays the vehicle's range, battery state and charging times when plugged into public or private charging points. Customers can access an advanced battery management system in order to select charging times that best fit their schedule or their budget by making the most of off-peak electricity rates.

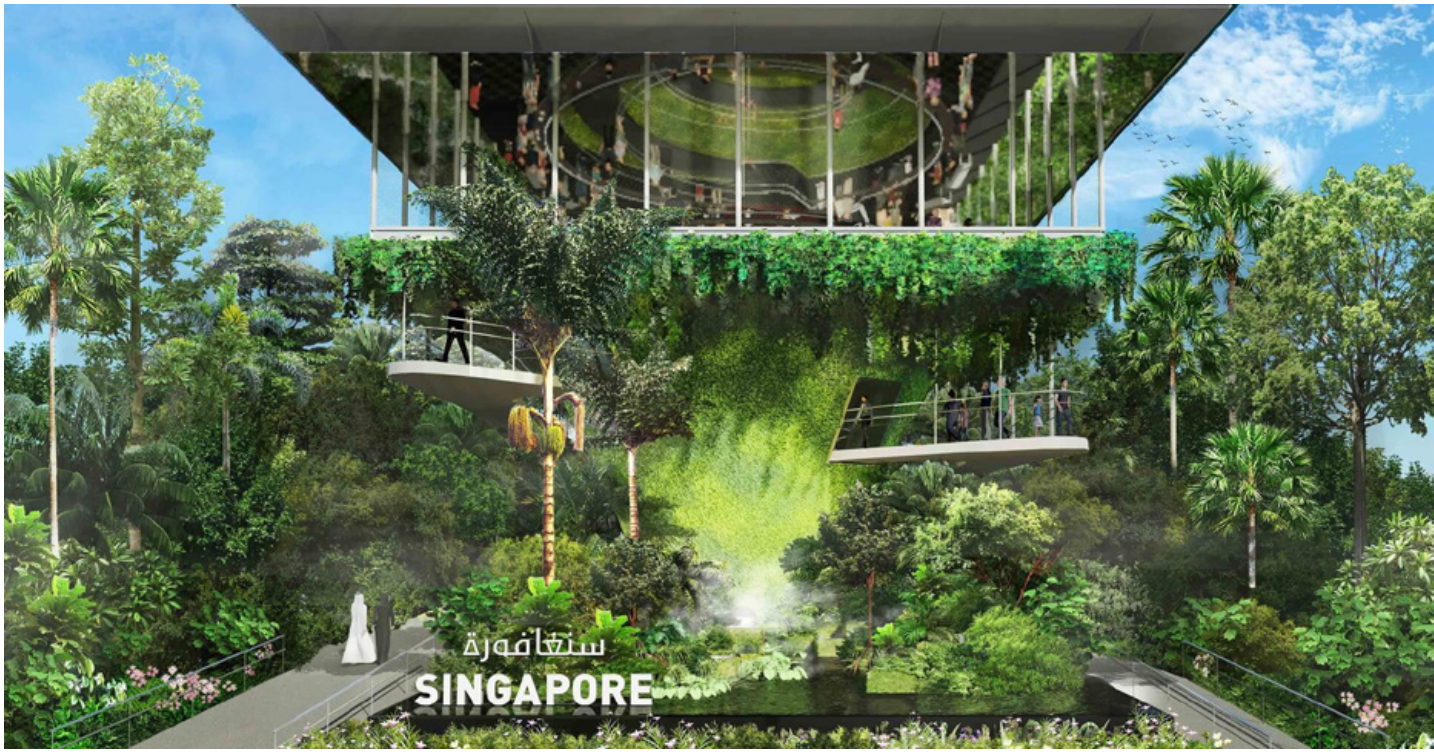
Head-Up Display with AR technology

For the first time in Hyundai, IONIQ 5 features an Augmented Reality Head-Up Display (AR HUD), essentially turning the windshield into a display screen. Drivers can choose to use AR technology to project relevant information, such as navigation, advanced safety and the car's surroundings, to their line of sight across the windshield. This allows drivers to process information quickly while keeping their attention on the road ahead.

Singapore Pavilion At Expo 2020 Dubai Integrates Nature Within Urban Environments

The Singapore Pavilion at Expo 2020 Dubai puts green architecture at the forefront, to help visitors appreciate the benefits and possibilities of integrating nature within the urban environment.

Layered with a showcase of greenery, digital solutions and art, the Pavilion exemplifies Singapore's vision of becoming a City in Nature,



Placing green architecture at the forefront, the Singapore Pavilion helps visitors appreciate the benefits and possibilities of integrating nature within the urban environment

and ethos of sustainable development via innovative and impactful urban solutions.

Yap Lay Bee, Deputy Commissioner-General of the Singapore Pavilion and Group Director, Architecture & Urban Design Group at the Urban Redevelopment Authority, said, "The Singapore Pavilion demonstrates the potential to push the envelope to integrate nature, architecture and technology through various design strategies and digital elements.

"We wish to invite visitors to contemplate their relationship with nature as they explore the Pavilion's green, digital ecosystem and its artistic representation of the Pavilion's integrated system of greenery, water and energy management. In doing so, visitors will be able to appreciate the challenges in realising the Singapore Pavilion, and the ways we can co-exist

The Pavilion capitalises on technology to augment bold landscaping design

with our natural and built environment, where both people and ecologies are cared for."

The Pavilion takes into account the local environment within its Rainforest Cone and the Flower Cone areas to sustain rainforest plants. The growth of the multitude of plant varieties despite the ground conditions demonstrates the possibility for such lush landscapes to thrive in different environments around the world while using renewable resources.

The Pavilion also capitalises on technology to augment bold landscaping design. Caring for the varieties of plants within the Pavilion is no easy feat, especially those on the curved green walls of the Pavilion's iconic cones.

To address this challenge, three prototype climbing robots will traverse the green walls around the Flower Cone to inspect the health of the plants, as well as to collect environmental data to monitor the performance of the Pavilion's systems.

Visitors are invited to participate in a generative artwork at the Galleria that allows them to visualise the performance of the Pavilion's integrated ecosystem and how it impacts the environment. The customised planting palette and innovative technological applications used in water and energy management are design strategies that enable the Singapore Pavilion to achieve its net-zero energy target.

Preparations for the Singapore Pavilion are at the final phase. Landscaping works have wrapped up and finishing touches are being made to the digital exhibits ahead of its opening on 1st October 2021.

Book on sustainable agriculture released

The General Secretariat of Khalifa International Award for Date Palm and Agricultural Innovation has released a new book titled, "Bio-Stimulants for sustainable agriculture in oasis ecosystem towards improving date palm tolerance to biotic and abiotic stress", in English.

Authored by Dr. Abdelilah Meddich, Cadi Ayyad

Book titled, "Bio-Stimulants for sustainable agriculture in oasis ecosystem towards improving date palm tolerance to biotic and abiotic stress", explores the use of bio-fertilizers in the production of sustainable crops

University, Faculty of Science Semlalia, Morocco, the book mainly highlights the Bayoud disease, drought, salinity, the lack of organic substance in the soil and its mineral content, and the spread of pests, as it is considered one of the main reasons for the losses of date palm farmers during the past decades. These problems can be addressed by exploiting the use of bio-fertilizers in the production of sustainable crops.

Dr. Abdelouahhab Zaid, Secretary General of Khalifa International Award for Date Palm and Agricultural Innovation, said the book aims to spread the culture of date palm and agricultural innovation and helps identify innovative approaches to developing agricultural sustainability in fragile ecosystems of the date palm oases, and establishing biological efficiency, by integrating organic amendments, such as compost with natural soil microorganisms

Factors impacting date cultivation includes the Bayoud disease, drought, salinity, poor mineral content of the soil, and the spread of pests

such as beneficial bacteria and fungi populations including arboreal fungi (AMF), and phyto-growth-promoting rhizomes (PGPR).

These bio-fertilizers also contribute to the development and production of date palms that are resistant to harsh climatic conditions, and can overcome environmental stresses, he added.

MoU to strengthen cooperation in date palm cultivation

Under the directives of Sheikh Nahyan Mubarak Al Nahyan, Minister of Tolerance and Coexistence and Chairman of the Board of Trustees of Khalifa International Award for Date Palm and Agricultural Innovation, the Award's General Secretariat signed a Memorandum of understanding (MoU) with the Ministry of Climate Change and Environment (MOCCAE) and the United Arab Emirates University (UAEU) to strengthen cooperation in date palm cultivation and agricultural innovation sectors in the UAE.

Sultan Alwan, Acting Under-Secretary of MOCCAE, Dr. Ghaleb Al Hadrami Al Braiki, President of UAEU, and Dr. Abdelouahhab Zaid, Secretary-General of Khalifa International Award for Date Palm and Agricultural Innovation, signed the MoU at UAEU.

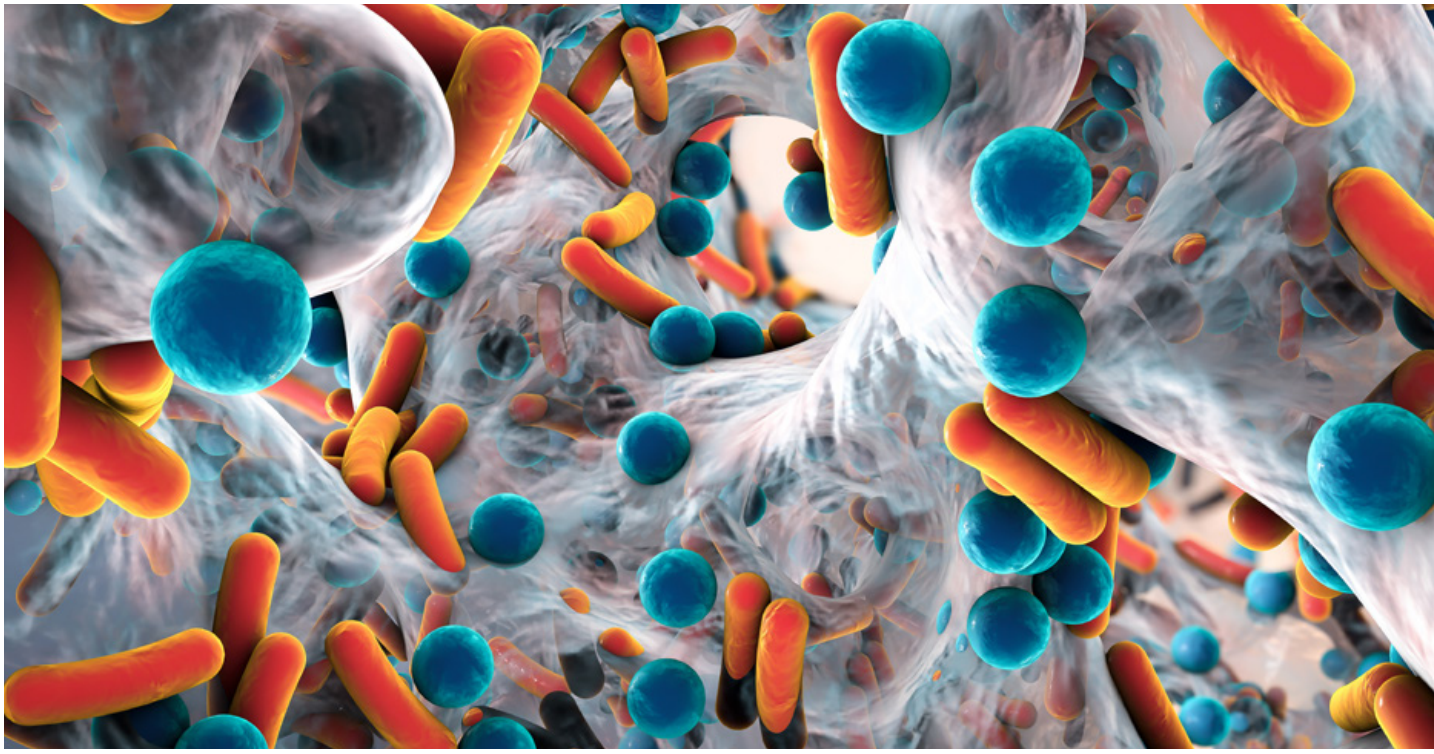
Sultan Alwan noted that the three entities aim to launch an award for innovative local farmers who have marked outstanding achievements in date palm cultivation.

The partners will also implement a joint initiative to replace economically unviable date varieties with more economical ones and promote the adoption of modern technology in date palm farming, including irrigation and pest control.

Joint Project To Address Environmental Dimensions Of Antimicrobial Resistance

The UN Environment Programme (UNEP) and Indian Council of Medical Research (ICMR) have launched a new collaborative project marking an important step towards recognizing and addressing the environmental dimension of Antimicrobial Resistance (AMR).

The project is titled 'Priorities for the Environmental Dimension of Antimicrobial Resistance (AMR) in India'.



India and UNEP have jointly launched 'Priorities for the Environmental Dimension of Antimicrobial Resistance (AMR) in India', to recognise and address the environmental dimension of AMR

Antimicrobial resistance is a multi-faceted, complex global public health issue and has been recognized as a 'One Health' issue owing to its significant linkages with the human health, animals, and environment. While aspects addressing AMR from the human health perspective have received much attention, focus on the environmental dimensions of AMR has been limited. This includes the effects of discharging antibiotics and other antimicrobial compounds, such as disinfectants and heavy metals, into natural environments which has the potential to drive the evolution of resistant bacteria.

The project aims to strengthen environmental aspects of national- and state-level AMR strategies and action plans. It will undertake

Antimicrobial resistance is a multi-faceted global public health issue with significant linkages with the human health, animals, and environment

secondary research and stakeholder consultations to enhance understanding of the environmental dimension of AMR in India. Outreach activities targeting environmental authorities and ministries at the regional and state level in India are also planned. The work will also contribute to a regional brief on the environmental dimensions of AMR being prepared by UNEP Regional Office for Asia and the Pacific.

UNEP is supporting this project in India under the larger framework of Environment and Health, which is being led by the Inter-Ministerial Steering Group on Environment and Health.

"ICMR-NICED is the implementing organization for UNEP-funded project. NICED will generate information on environmental risk factors for developing AMR, environmental spread of AMR and strategies for its containment. This will provide guidance on collective action and integration in policy and decision-making," said Dr. Shanta Dutta, Director, ICMR-NICED.

"The term 'One Health' is very vast with many interfaces. The demand on NICED which is a national institute and on India is huge – as it is also for other countries – to find ways to address issues around 'One Health', which is intricately linked with antimicrobial resistance," added Dr Samiran Panda, Head, ECD, ICMR.

In December 2017, the UN Environment Assembly recognized that AMR is an increasing threat to global health, food, security and sustainable development, and underlined the need to further understand the role of environment in the development and spread of AMR.

Oslo: A City for the Future

It is hard to imagine a more deserving winner of the European Commission's prestigious title of European Green Capital 2019, than Oslo. The win cemented the city's reputation as a great location for sustainable living, leisure and business tourism.

Oslo is now in the top 5 most sustainable cities in the world and has set ambitious targets for reducing carbon emissions in the European Green City Index. The capital city of Norway is also leading the country down the green path to a net zero carbon future.

The capital city of Norway seeks a greener tomorrow, making strides in sustainable living globally

Oslo's aim, put simply, is to be the most sustainable city in the world—and to inspire others to follow in its footsteps. The city has implemented some of the most effective climate and environmental measures in Europe. In 2016, Oslo set itself some highly ambitious goals, including a greenhouse gas emissions reduction of 95 per cent by 2030. This is being done not by offsetting, but by implementing actual emissions cuts. In just one year, from 2016 to 2017, emissions were reduced by 9 per cent.

So where did this city, a leading light of sustainability in a country with great green credentials, start its journey—and what does its

Oslo is a city filled with sustainable neighbourhoods, car-free streets, and eco-friendly gourmet restaurants

future hold?

Electric Vehicles

The mobility sector is the main source of emissions in Oslo, so green mobility solutions are key to its efforts to become a zero-emission city.

Oslo claims to be 'the electric vehicle capital of the world' with over half of all vehicles sold in the year 2020 being electric vehicles. The government has ensured electric vehicles are cheap to buy, offering exemption from purchase tax and VAT, while city authorities have offered incentives such as free parking in the city centre, access to taxi lanes, a rapidly developing free charging infrastructure and reductions or exemptions from toll fees.

From 2023 onwards, all taxis in Oslo will have to be zero emission and soon, Oslo will be the first city in the world to install wireless charging systems for electric taxis, hoping to make recharging quick and efficient enough to increase the take-up of non-polluting cabs. The project will use induction technology, with charging plates installed in the road at taxi ranks. This is more energy efficient and will be much quicker and more convenient than conventional charging, enabling taxis to charge while they're in slow-moving queues at taxi ranks.

Public transport is steadily going green and already, most public transport journeys are powered by renewable energy. The target is for all public transport to run on renewable energy and to be totally emission free by 2028.

Climate Budget

Oslo's city government has adapted its administrative tasks and strategies around the

common goal of cutting the carbon emissions down by 95% by 2030. This is achieved by integrating the climate goals into Oslo's municipal budget – making the allocation of resources for creating zero emission or carbon neutral solutions for the community easier and more transparent.

The Climate Budget contains certain necessary measures and states what must be done and by whom – all city departments are involved in the process and encouraged to propose measures to be included in the budget. Thus, the climate work in Oslo is not a responsibility of one single department – the environmental department – but the responsibility of every department in the city administration with clear allocation of roles and tasks among them.

Oslo's Waterways and Ports

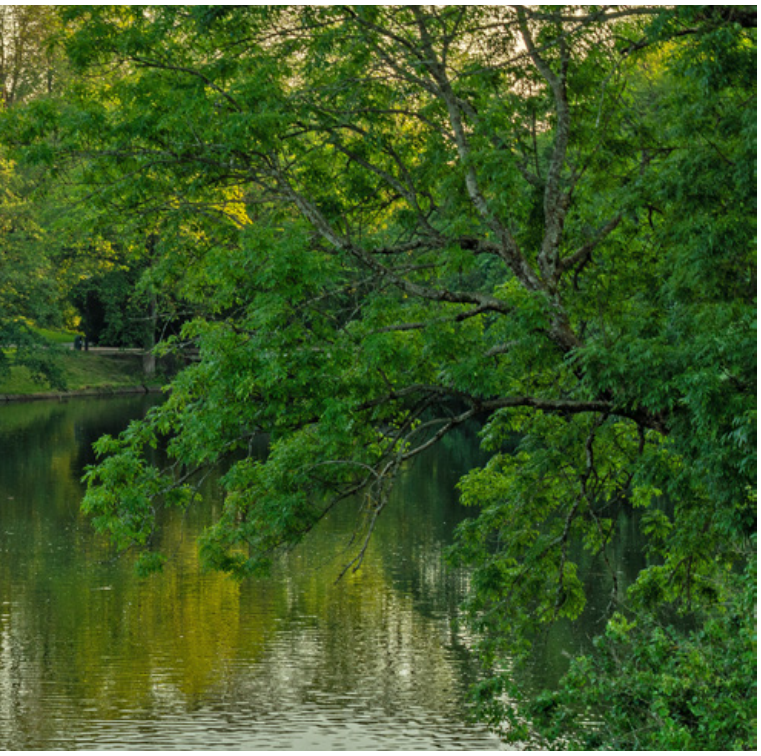
Oslo has 10 main waterways, equating to 354 km of rivers and streams. Once covered due to issues with pollution, sewage leakages, and convenience for urban development, they are now being reopened. This will help prevent flooding and is increasing biodiversity, water quality and recreational opportunities for residents.

In the past decade, 2,810 metres of waterways have been reopened and the city plans to open up 30 more stretches, including an additional eight kilometres in the next decade.

Several of the projects are planned and developed as natural cleaning systems. Sedimentation basins, water rapids and shallow waters with dense vegetation for the uptake of excess nutrients provide a sustainable solution for water management and pollution control.

The city endeavours to make the aquatic habitat and surrounding environment as natural as

Oslo aims to reduce its greenhouse gas emissions by 95 per cent by 2030



possible and create natural bottom substrates for invertebrates and fish. This has restored migration paths for fish, enabling breeding and population growth of migratory fish in the region.

Oslo Port is taking a lead in developing emission free solutions, aiming to reduce its emissions by 85% by 2030 and become emission free by 2050. Traditionally, ships use their own fossil powered generators for lighting, ventilation, heating and technological equipment, but the Port provides shore-based electrical power from the onshore, hydro-powered grid.

Sustainable City Planning

Oslo is one of the fastest growing capitals in Europe, and has seen a lot of large construction projects over the last few decades. Sustainability has been a guiding principle for many of them. For example, the new Oslo neighbourhood, Vulkan, is a poster child for eco-friendly city planning. The developers' wish to create an energy-efficient neighbourhood has resulted in a local energy central with geothermal wells, buildings with extensive solar water heating systems and hotels that recycle energy from coolers and elevators.

Oslo continues to focus on sustainable urban living and the activities offered to citizens and visitors reflect this attitude. The future is looking green for the city and the Norwegian capital will continue to be a beacon of inspiration in the years

World Water Week Shows How The World Can Solve The Water Crisis

World Water Week ended on August 27 with a strong message: we have many solutions to fix the water crisis and tackle climate change, but we need political will and sufficient investments. This is what the conference called on the international community to activate.

The world's leading water event, World Water Week, was held from August 23-27 against a dramatic backdrop of unprecedented climate-induced disasters in many parts of the world, enhancing the importance of the Week's theme: Building Resilience Faster. The event concluded on a cautiously optimistic note as it held over 400 sessions, co-created with leading international organizations, demonstrated a number of solutions to mitigate water scarcity, the climate crisis and poverty.

Participants from all over the world discussed ways to develop solutions to help the world address challenges such as water scarcity, the climate crisis, poverty, and biodiversity loss

The results will now be used locally by the 13,000 participants from 188 countries but also fed into other global processes such as the UN's upcoming High-level events on food and energy and the Climate Summit COP26 in November.

"Events such as the World Water Week, as well as the High-Level Dialogue on Energy and the Food Systems Summit later in September, provide a

A strong trend at World Water Week was about creating pathways or roadmaps to transform entire sectors, industries, or countries

historic opportunity to shine a light on the much-needed energy, water and food revolution so that we can secure a safer future for all," said Usha Rao-Monari, Associate Administrator UNDP, in the Closing plenary.

Cate Lamb, water lead of the UK High-Level Champion ahead of COP26, emphasized the role of water for effective climate action, putting the planet on a path to zero carbon emissions. "At COP26, we want more countries to prioritize adaptation and translate their risks into resilient water investment," she said, highlighting the importance of protecting wetlands and forests, reducing energy use, and tackling poor sanitation and waste treatment.

The recipients of the world's most prestigious water award the Stockholm Water Prize, which was presented by the Swedish King H.M King Carl XVI Gustaf during World Water Week, also stressed the role of water in addressing major global challenges. "We don't have time to solve the water, climate, and biodiversity crisis piecemeal and one at a time," said the 2021 Laureate Sandra Postel during the award ceremony on 25 August.

Torgny Holmgren, Executive Director of the organizers Stockholm International Water Institute (SIWI), promised that World Water Week 2022 will continue to provide concrete solutions to major global challenges. "Next year's edition will have a special focus on valuing water, which I believe holds the key to solving the looming water crisis and tackle climate change.

"We will look especially at the invisible water, like groundwater, that we might not be aware of but that is critical to our survival," he said.

Dr. John Cherry, leading groundwater expert and the recipient of Stockholm Water Prize 2020, welcomed the focus on valuing water and especially groundwater. The world is headed for a catastrophic water crisis unless we start taking this water into account, he argued, but emphasized that the problems are possible to solve.

"Many solutions have been tried out somewhere around the world. At this amazing turning point in human history, we have all the means to solve the big water problems and now it is just a matter of the public learning about them and putting pressure on the politicians," Dr. Cherry said.

Henrika Thomasson, Director of World Water Week at SIWI, described the 2021 event as a resounding success: "We are of course very pleased to have been able to welcome a record number of participants from a record number of countries, offering them more sessions than ever before. But the real measurement of success is the impact we are making, all the solutions discussed at World Water Week that will now be implemented around the world. It is impossible to overestimate the importance of water in building a more resilient future.

Unique Collaboration To Fight Plastic Pollution In Rivers

With new research showing the major role that rivers play in bringing plastic pollution to the oceans, countries are looking for ways to tackle the root causes of the problem in their own waterways.

In response, the Sri Lankan government is set to partner with the UN Environment Programme's (UNEP) CounterMEASURE project to track down

sources and pathways of plastic waste in the country's rivers.

The CounterMEASURE project has developed a unique approach to tracking plastic pollution, using frontier technology like machine learning, GIS mapping, drones, microplastic sampling and citizen science. The methods and models have been tested and deployed along the Mekong River in Cambodia, Lao PDR, Thailand, Viet Nam and along the Ganges and its tributaries in India. Findings are used to develop bespoke policy recommendations for lawmakers and regulators at local, regional and national levels.

"This project is timely and complements the Government initiative to introduce an Extended Producer Responsibility (EPR) system for post-consumer plastic waste and prohibit number of plastic products that are harmful to the ecosystem," said Dr. Ananda Mallawatantri, Country Representative of the International Union for Conservation of Nature (IUCN), a partner organization to the UN Environment Programme's CounterMEASURE implementation in Sri Lanka.

Dr. Anil Jasinghe, Secretary for Sri Lanka's Ministry of Environment stated: "The CounterMEASURE project will be a boost to the Surakimu Ganga program initiated by the Ministry of Environment to make all our rivers clean. The objectives of CounterMEASURE are very much in line with Sri Lanka's efforts to minimize ocean plastic pollution through land-based activities. The Government cannot do this alone and we appreciate the UN Environment Programme's initiative to bring global experience on hotspot analysis and cutting-edge technology."

Word Scramble

LBOGLA

NORTAETOSEDIF

OUAOTPPLIN

XGYEON

ELWIDILF

HSEUEGNROE

TRAYSCUNA

DSUNO

_____ _____

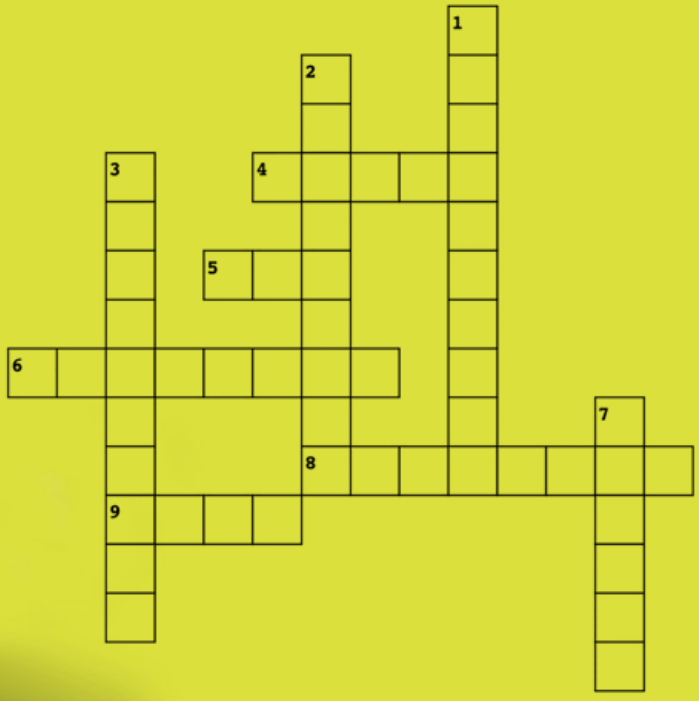
_____ _____

_____ _____

_____ _____

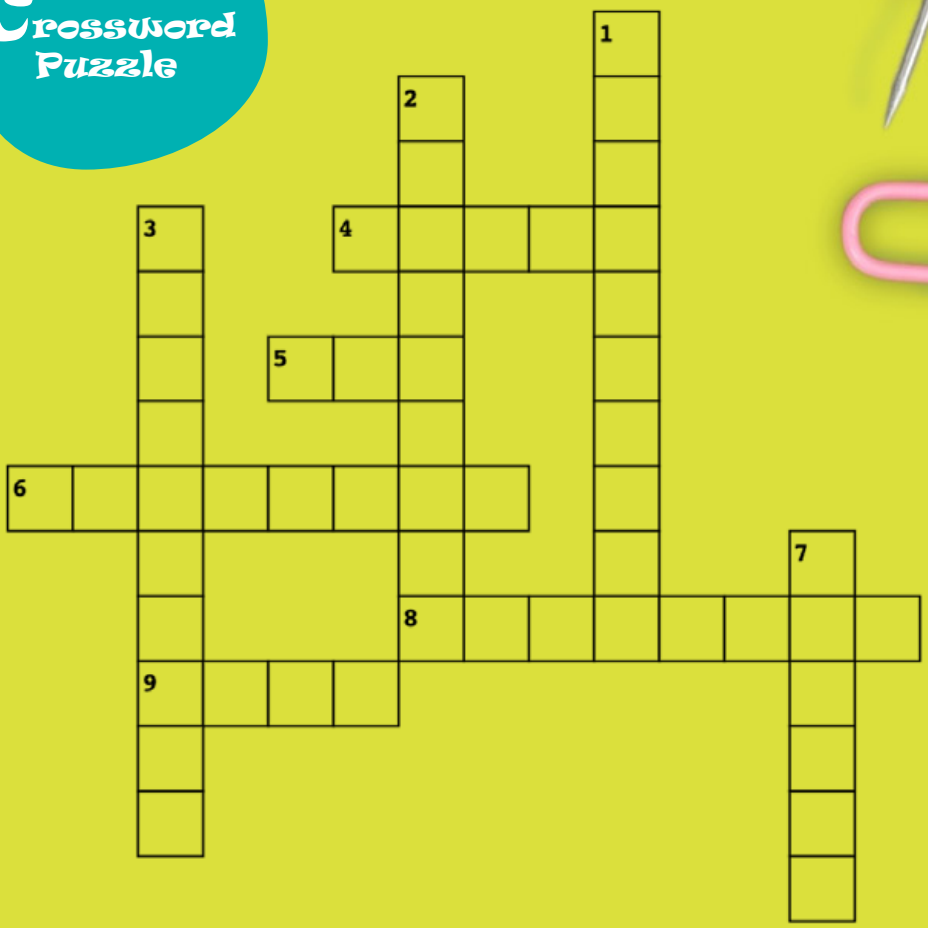
Answers: 1) POPULATION 2) GLOBAL 3) OXYGEN 4) WILDLIFE 5) SANCTUARY 6) GREENHOUSE 7) DEFORESTATION 8) SOUND

Word Search



ORGANIC
REUSE
SOLAR
LANDFILL
CARBON
ATMOSPHERE
DESERT
OCEANS
OASIS
RECYCLE
POLLUTION
HABITAT
GREENERY
CLIMATE
ECOSYSTEM

Crossword Puzzle



Across

4. The solid surface of the Earth.
5. Manmade structure that blocks a river. Used to harness hydroelectric power.
6. The amount of water in the air.
8. That can be used again and again.
9. Visible air pollution.

Down

1. Chemical products used in agriculture for killing insects.
2. Used to measure the air pressure in the area.
3. An organism that breaks down dead things.
7. Excess water in areas that can cause severe damage.

Answers: 1) Pesticides 2) Barometer 3) Decomposer 5) Dam 6) Humidity 7) Floods 8) Reusable 9) Smog

WORD OF THE DAY:

DEFORESTATION

When large amounts of forests are cut down to make room for other purposes it is called deforestation. The word is normally used to describe the actions of humans in removing forests from the planet, rather than destruction caused by such natural events as hurricanes. People have been cutting down trees for thousands of years. In recent times, however, the number of forests being lost through deforestation has grown enormously.

WHY DEFORESTATION?

Trees are cut down so their wood can be burned or used to make things, such as buildings, furniture, or paper. Large areas of trees are removed so that the land can be used to grow crops or to provide places where farm animals can graze. In tropical areas large areas of forest are cleared in order to plant such crops as coffee, rubber trees, or palm trees. Deforestation also takes place when people want to clear an area to build new settlements.

EFFECTS OF DEFORESTATION:

• Excess Carbon Dioxide

Since trees remove carbon dioxide from the air, the loss of trees also means more carbon dioxide will be present in the air. The deforestation from 2001 to 2019 released 105 gigatons of carbon dioxide into the atmosphere - the same as almost two and a half years of total CO2-emissions globally.

• Habitat Loss

When large areas of the rainforest are cleared, many species lose their natural homes. Some may be able to move to other areas, but most will perish. Even those that can move may not survive. There is a limit to how many species an area can support.

• Soil Erosion

In the rainforest, the roots of all the trees help stop the soil being washed away by rainwater. When the trees are chopped down, the rain washes away the soil, causing rivers and streams to be blocked. This can cause flooding and also affects the quality of drinking water for local people.

Without vegetation to slow down the movement of water, localised flooding and flash floods are more likely to occur.

• Climate Change

Deforestation can change the local climate. When trees are cleared, the temperature in the daytime can increase, and nighttime temperatures decrease. With fewer trees creating water vapour, there is less cloud and less rainfall. All of these changes affect the species in the area directly and indirectly.

INTERNATIONAL DAY OF CHARITY

Charity, like the notions of volunteerism and philanthropy, provides real social bonding and contributes to the creation of inclusive and more resilient societies. Charity can alleviate the worst effects of humanitarian crises, supplement public services in health care, education, housing and child protection. The International Day of Charity was established with the objective of sensitizing and mobilizing people, NGOs, and stakeholders all around the world to help others through volunteer and philanthropic activities. Charity assists the advancement of culture, science, sports, and the protection of cultural and natural heritage. It also promotes the rights of the marginalized and underprivileged and spreads the message of humanity in conflict situations.

The date of 5 September was chosen in order to commemorate the anniversary of the passing away of Mother Teresa of Calcutta, who received the Nobel Peace Prize in 1979 "for work undertaken in the struggle to overcome poverty and distress, which also constitute a threat to peace."

What can you do to help?

WORLD PEACE DAY

Each year the International Day of Peace is observed around the world on 21 September. The UN General Assembly has declared this as a day devoted to strengthening the ideals of peace, through observing 24 hours of non-violence and cease-fire. The International Day of Peace was established in 1981 by the United Nations General Assembly. The First International Peace Conference occurred in Paris, and it used Pablo Picasso's 'Dove of Peace' as its emblem. Since then, people have known the dove as the most recognizable symbol of peace. Two decades later, in 2001, the General Assembly unanimously voted to designate the Day as a period of non-violence and cease-fire.

The 2021 theme for the International Day of Peace is "Recovering better for an equitable and sustainable world". As the world heals from the COVID19 pandemic, we must begin to think consciously about how we can transform this world into one that is more equal, more just, equitable, inclusive, sustainable, and healthier. The pandemic is known for hitting the underprivileged and marginalized groups the hardest and has been accompanied by a surge in stigma, discrimination, and hatred, which only cost more lives instead of saving them. Confronting this common enemy of humankind, we must be reminded that we are not each other's enemy. To be able to recover from the devastation of the pandemic, we must make peace with one another.

COLOUR ME!

17 Rescued Sea Turtles Released Into UAE Waters

The Environment Agency – Abu Dhabi (EAD) and Nawah Energy Company, the joint venture nuclear operations and maintenance subsidiary of Emirates Nuclear Energy Corporation (ENEC), have released a group of rehabilitated turtles into Abu Dhabi waters in Al Dhafra region.

The turtles were initially rescued by Nawah's

team of environmental volunteers, who conduct regular checks of the beaches that surround the Barakah Nuclear Energy Plant. Following their rehabilitation, in partnership with National Aquarium, 17 turtles were released back into their natural marine environment in the presence of Ali Al Hammadi, CEO of Nawah, and Ahmed Al Hashmi, Acting Executive Director, Terrestrial and Marine Biodiversity Division of EAD.

Al Hashemi said, "Nawah is a prime example of leadership in the conservation space. Throughout our partnership, its team has shown their utmost devotion to the preservation of the environment. This has primarily been reflected in the great lengths they have gone to in rescuing distressed turtles, and joining us in releasing them back into the wild so they can thrive once again."

Since June 2021, the Environment Agency – Abu Dhabi has taken part in three turtle release programmes. The first event involved the release of 150 sea turtles to their habitats after rehabilitation, and in the second a large group of previously rescued turtles were released at Saadiyat Rotana in celebration of World Sea Turtle Day.

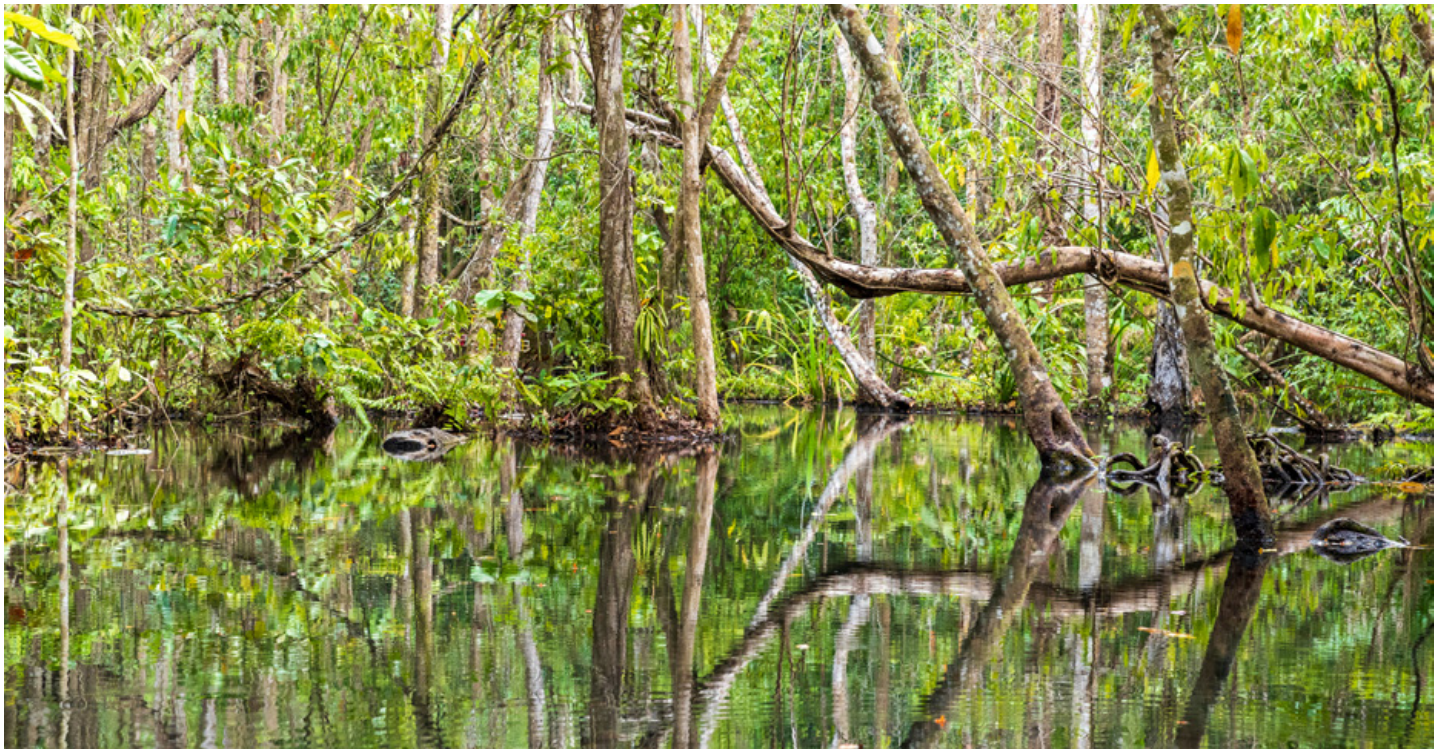
The Agency plans to release more than 150 turtles, with some tagged with satellites to monitor their behaviour, habits and migration paths.

Abu Dhabi is home to 5,500 marine turtles – both Green Turtles and Hawksbills, and the occasional loggerhead. The Green Turtles and Hawksbills being the two predominant species found in the Emirate's waters and have been monitored by a longstanding research programme founded by the Agency in 1998.

Management Of World's Forests Must Be Water-Centred

Forests and trees play a vital role in meeting the world's increasing demand for water and need to be managed for water-related ecosystem services, according to a new guide launched on August 25 at the World Water Week.

The guide is co-published by the UN's Food and Agriculture Organization (FAO), the International Union of Forest Research Organizations (IUFRO),



New FAO-led report provides guidance on integrated forest-water management

the Joint Research Centre of the European Commission, the United States Forest Service and partners.

'A Guide to Forest-Water Management' is the first comprehensive global publication to provide guidance on the contribution of forests for a holistic approach to water resource management, including the management, monitoring and valuation of forests to deliver water-related ecosystem services.

Forested watersheds contribute substantially to the world's accessible freshwater for agricultural, industrial, environmental, and domestic uses, with the world's major cities increasingly reliant on water from forested watersheds. Two-thirds of urban water supplies would benefit from increased water quality with improved forest management, such as

'A Guide to Forest-Water Management' provides guidance on the contribution of forests for a holistic approach to water resource management

protection, restoration and/or reducing forest fuel loads to minimize fire risk.

"Water security is a significant global challenge, with repercussions for agriculture, energy production, people's basic needs and our supporting ecosystems," said FAO Deputy Director-General Maria Helena Semedo. "The twin challenges of climate change and a growing population are increasing pressure on our ecosystems. We need to recognize that forests play a key role in water security and prioritize water in forest management and governance decisions," she continued.

Accessible freshwater

The forest and water connection is essential to achieving the 2030 Agenda for Sustainable Development, especially Goals 6 (Clean Water and Sanitation), 14 (Life below Water), 15 (Life on Land) and 13 (Climate Action).

Forests and trees are integral to the water cycle. They also play significant roles in regulating water quantity, quality and timing and provide protective functions against soil and coastal erosion, flooding and avalanches, collectively known as water-related ecosystem services.

According to FAO's Global Forest Resources Assessment 2020, only 12 percent of the world's forests are managed with soil and water protection as a primary objective.

The guide calls for enhanced forest management that prioritizes the provision of water-related ecosystem services. This is needed to ensure forests also fulfill their potential as a nature-based solution to address water security, helping ensure sufficient quality water to sustain resilient communities and ecosystems.

"We are convinced that the valuation of ecosystem services is the starting point for managing forests and all the benefits they provide," said Shirong Liu, IUFRO Vice President and Deputy Coordinator of the IUFRO Task Force on Forests and Water Interactions in a Changing Environment.

Practical guidance

The new guide is aimed at natural resources practitioners with the goal of upholding and actively managing forests for the provision of water services and engaging the community, policy makers and investors in this commitment.

The guide reviews emerging techniques and methodologies, provides practical guidance and recommendations on how to manage forests for water ecosystem services, and features case studies from ecosystems where the two resources are strongly connected, such as mangroves, peatland, drylands and tropical montane cloud forest.

The publication also suggests that citizen science - public participation in scientific research and monitoring - as well as new online tools can help improve forest-water assessment and in turn beneficially influence policy and management decisions. In particular, FAO's System for Earth Observation Data Access, Processing and Analysis for Land Monitoring, which is based on user-friendly image-processing technologies, and its Forest and Landscape Water Ecosystem Services tools are highlighted as new ways of monitoring and reporting on the forest-water nexus. A mechanism for benefit-sharing and cooperation between the forest and water sectors is also outlined.

REPORT

New Report Highlights State Of Food Waste In West Asia

Improved awareness, appropriate policies and a strong regulatory framework are needed to reduce food waste in West Asia, according to a new report, The State of Food Waste in West Asia, released by the UN Environment Programme's Regional Office for West Asia.

The report, conducted in 12 countries in the region, sets out a comprehensive view of the

current situation across the region, in which around 34 percent of the food served is wasted, with an estimation ranging from 100 to 150kg/cap of food waste occurring at the household stage, similar to levels in Western Europe and North America.

Countries in the region have unique cultural habits generating significant amounts of food waste over short periods. For instance, during the month of Ramadan, research shows that between 25 percent and 50 percent of the food prepared is wasted.

Collecting data on national food loss and food waste is key to understanding the scale of the problem, target hotspots, and assess policy actions. The report flagged that several countries in the region need consistent support in setting food waste baselines.

"This report aligns with the goals of SDG 12, which seeks to ensure sustainable consumption and production patterns. Target 12.3 calls for halving per capita global food waste at the retail and consumer level. Given the considerable amount of wasted food annually and its repercussions on food security, the environment, the economy, natural resources and livelihoods, our report sheds light on food waste in West Asia," said Sami Dimassi, Regional Director and Representative for UNEP in West Asia.

The Food Waste report also highlights the potential of promoting sustainable lifestyles and empowering youth to positively impact at consumer level, raising awareness on the consequences on the environment, economy, and food security, as well as of promoting gender inclusive strategies across the food value chain.

Swiss Resort Uses Blankets to Keep Glacier Cool

We use blankets to keep us warm, but the opposite is happening at a ski resort in the Swiss Alps which is now using blankets to protect a glacier from melting in the summer sun.

This month, I would like to reference a very interesting article by Olivia Rasane published on the EcoWatch website, and reproduced here with minor edits.

This innovative strategy is being employed atop the 10,623-ft. Mount Titlis. The mountain's glacier experienced considerable loss of ice in the last few decades and

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

is expected to disappear entirely within the next 50 years due to climate change.

To delay this process, resort employees have been spending five to six weeks every summer - since 2004 - covering parts of the glacier with protective polyester fleece. This radiates the sun's energy back into the atmosphere, preventing the glacier from melting. The employees then remove the coating and use collected snow to fill any cracks in the glacier's surface.

What is interesting to note is that the amount of glacier covered has increased over the years to almost 100,000 square meters today. This is a clear indication of how the climate crisis is impacting mountain glaciers, in addition to polar ice. A recent study concluded that mountain glaciers were melting at unprecedented rates, with the fastest-melting glaciers found in Alaska and the Alps. This has serious implications for the ski industry.

The blanketing is effective to protect small glaciers around resorts, preventing approximately 60 percent less ice and snow loss than other glaciers nearby. However, it would cost around $1 billion a year to cover all glaciers in Switzerland, which is phenomenally expensive.

The study leader, Matthias Huss, concluded that reducing greenhouse gas emissions is the only way to effectively limit the global retreat of glaciers. It is important to realise that melting snow releases methane gas which will increase global warming, according to the US-based National Snow & Ice Data Center.

THE FUTURE OF OUR WORLD IS IN OUR HANDS.

ACT NOW!

مؤسسة زايد الدولية للبيئة

Zayed International Foundation for the Environment

رئيس و أعضاء مجلس إدارة مؤسسة الإمارات العامة للبترول (امارات)
والمدير العام وكافة العاملين بالمؤسسة

امارات
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X: 243 cm
Y: 328.69 cm