

# the arabian sun

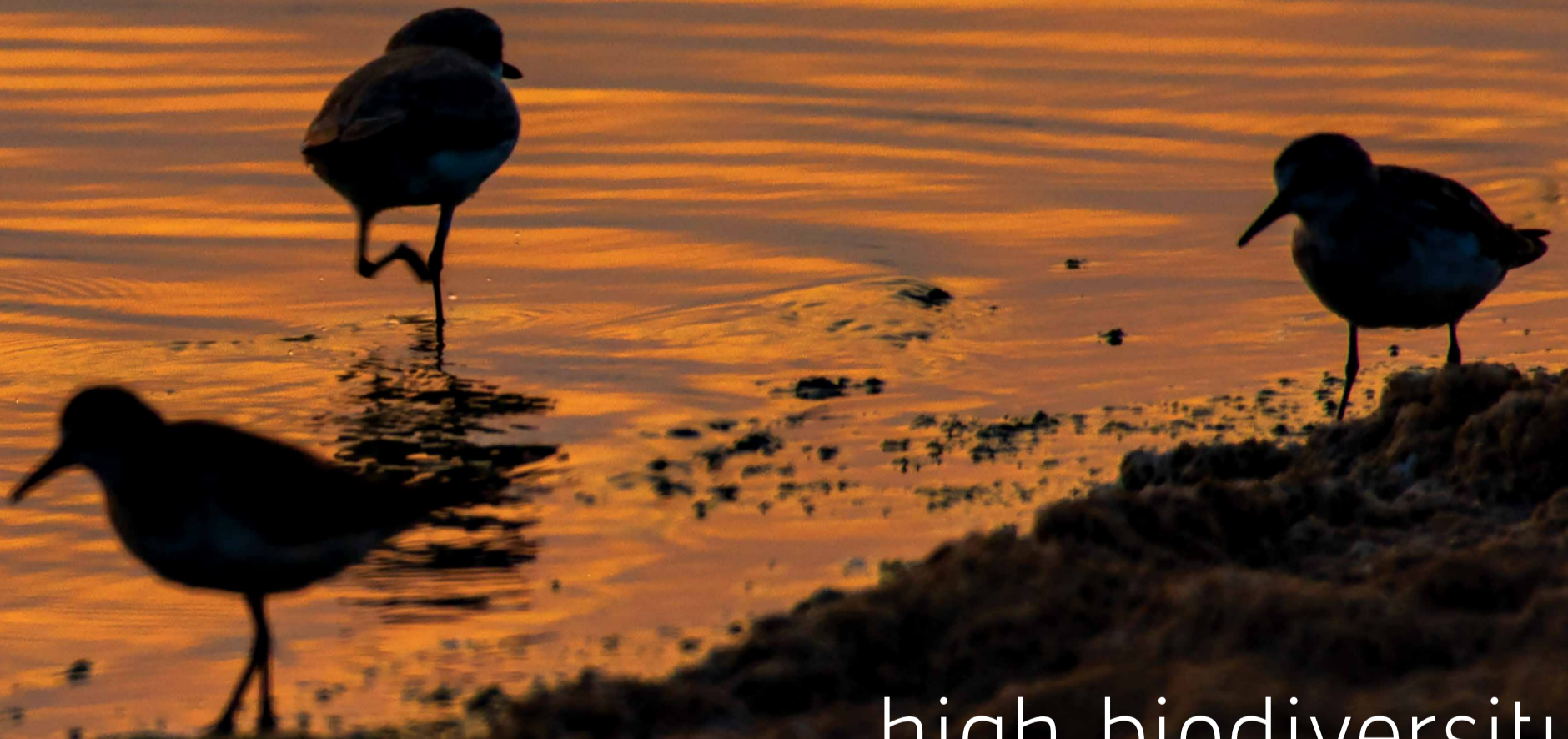
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King Salman celebrates sustainability through King Khalid Award

see page 2



pioneering plant on environmental frontline



high biodiversity standards are taken seriously at **Berri Gas Plant**

*Against a golden sunset at Berri Gas Plant, a group of plovers quickly forage for a last bite before darkness falls over the site's wastewater marshland, and settle down to overnight within the cordgrass (spartina anglica) that has grown for years around the shores. Various plover species migrate thousands of kilometers through Saudi Arabia each year on their way to breeding grounds across Europe. (Photo: Habeeb Al Hadad/MPD)*

see pages 6 and 7



King Salman ibn 'Abd Al-'Aziz Al Sa'ud, Custodian of The Two Holy Mosques, presents trophies to winners of the King Khalid Award, including Saudi Aramco president and CEO Amin Nasser. The company was given the award for efforts by the Yanbu' Refinery Department in implementing innovative practices to enhance sustainability.

# King Salman celebrates sustainability through King Khalid Award

**Riyadh** — Under the patronage of the Custodian of The Two Holy Mosques, King Salman ibn 'Abd Al-'Aziz Al Sa'ud, Saudi Aramco has been awarded the King Khalid Award 2019 for Corporate Sustainability.

The Yanbu' Refinery Department (YRD) won top honors in this category and was recognized during the award ceremony in Riyadh on Monday.

"I feel very proud for being honored by King Salman ibn 'Abd Al-'Aziz Al Sa'ud for Saudi Aramco's Yanbu' Refinery," said Amin Nasser, Saudi Aramco president and CEO. "It is a badge of honor to every employee in the company — especially that the essence of this award revolves around corporate sustainability which is considered — more than ever — to be a pivotal subject in energy transformation during the 21<sup>st</sup> century.

"Saudi Aramco is an international leader in the oil and gas industry within this field, and this reflects on the company's excellence, and its transformation into the world's biggest integrated company in energy and chemicals, which constantly contributes in supplying the world with needed energy for the continuity of its prosperity, in addition to increasing its economic growth," Nasser added.

## innovation driving excellence at Yanbu' Refinery

Yanbu' Refinery earned the first place recognition in the Corporate Sustainabil-

ty category by distinguishing itself for the innovative incorporation of sustainability in its practices, as well as operations on social, economic, and environmental levels in the Kingdom.

Nasser noted that Yanbu' has been one of the company's local refineries with a strategic importance since its establishment in 1983. With a processing capacity of 250,000 barrels of crude oil per day, it is efficiently led and operated by a highly qualified Saudi workforce. It is considered a vital artery in supplying the local market with petroleum products.

Yanbu' Refinery is also an exceptional example of the oil and gas refining systems in the Kingdom, as it has attained groundbreaking levels in efficiency, reliability, and safety in an economical and sustainable way.

"This award reflects the commitment and dedication of all leaders and staff at Yanbu' Refinery in achieving the goals of Saudi Aramco's Operational Excellence program, which has led Yanbu' Refinery to win multiple awards throughout Saudi Aramco, across the Kingdom, and around the world in the past few years, in the fields of energy, safety, environment, cybersecurity, and social responsibility, in addition to sustainability.

"It is considered an exemplar of Saudi Aramco's facilities that implement sustainability in their core operations through the use of low-carbon energy solutions, following regulations and stan-

dards in operations, maintenance, and innovation fields," said Nasser. "This is in addition to raising the employees' awareness on the importance of a commitment to environmental standards, and successfully implementing social, economic, and environmental initiatives such as the use of advanced technology toward creating a clean energy industry."

Nasser also highlighted YRD's restoration of natural habitats, which are essential for marine organisms and birds, through the planting of a mangrove forest — something that is considered to be the most important natural basin for the absorption of carbon dioxide.

"It is also a platform for Saudis to gain the necessary skills that will enable them to work in the oil and gas industry through training institutes — all while still maintaining outstanding safety performance with no incidents and no injuries," he said.

## relying on our people, our processes, and the spirit of R&D

Nasser credited YRD's win in the Corporate Sustainability category to the application of development initiatives that includes many aspects, such as:

- Employee capabilities and their knowledge of the company's strategies
- Identifying best practices locally and globally through building a local networking platform to exchange expertise and overcome challenges

- Incorporating social responsibility and citizenship

- Adopting the spirit of research and development.

Nasser expressed his pride and happiness with an award that comes from the prestigious King Khalid Foundation, adding that the award will present a motivating factor for employees and departments toward excellence and creativity.

Nasser also thanked HRH Prince Faisal ibn Khalid ibn 'Abd Al-'Aziz Al Sa'ud (King Salman's consultant and the Chairman of the Board of Trustees of the King Khalid Foundation), who has worked diligently to encourage private businesses through this award, enabling them to play a crucial role in the development of the Saudi community.

## about the King Khalid Foundation

The King Khalid Foundation is a platform to celebrate, honor, and recognize enterprises that have created a competitive advantage through the innovative use of sustainable business practices and in doing so, have helped spur Saudi Arabia's social, economic, and environmental progress. The nominees are selected on the basis of their positive contribution in social challenges, as well as social sustainability.

These awards enable others who strive to achieve economic growth to follow the same path.



# technology driving industry



## Saudi Aramco welcomes 'sci-fi' technology of Fourth Industrial Revolution



Muhammad M. Al Saggaf, Saudi Aramco's senior vice president of Operations and Business Services, speaks during the panel session "How is the Industry Embracing Digital Innovation?" at the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) on Monday. Al Saggaf discussed the company's development and deployment of TeraPOWERS — a technology that models reservoir physics from the original generation to final production. (Photos: Ahmad El Itani/IMPD)

Abu Dhabi — Saudi Aramco is participating in the 2019 Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) this week, with members of the company's senior management encouraging industry representatives to press ahead with implementing Fourth Industrial Revolution (IR 4.0) technologies.

### embracing digital innovation

At the conference, of which Saudi Aramco is a partner sponsor, the company's senior vice president of Operations and Business Services, Muhammad M. Al Saggaf, joined a panel discussion Monday titled "How is the Industry Embracing Digital Innovation?" that examined the latest trends in technology.

Al Saggaf reflected on Saudi Aramco's research and development and deployment of the TeraPOWERS technology, which models reservoir physics from the original generation to final production. This technology enables the company to model the physics of its reservoirs to prioritize prospects, reduce exploration risks and costs, and sustainably manage its reservoirs.

### 'Downstream 4.0'

Abdulaziz M. Al-Judaimi, Saudi Aramco senior vice president of Downstream, will participate in a panel discussion on Wednesday titled "Downstream 4.0: Refining and Petrochemicals — Growth through Innovation and Digitization," on new strategies around digital, people, and business partnerships. Al-Judaimi welcomes the opportunities presented by IR 4.0 technologies, reaffirming Saudi Aramco's commitment to continue developing, harnessing, and fully utilizing the emergent technologies for value creation.

Saudi Aramco's efforts in the energy sector's IR 4.0 transformation were recognized by the World Economic Forum (WEF) in September 2018 when Saudi Aramco's 'Uthmaniyah Gas Plant was named one of the IR 4.0 "lighthouses."

The plant is the only facility in the Middle East recognized for this distinction by WEF, and Saudi Aramco is the first energy company globally to be included in this group of 16 manufacturing sites selected from an initial list of 1,000 manufacturers from around the world.



Among the company's IR 4.0 technologies on display at ADIPEC this week is the company's hydrogen fuel vehicle. It is just one of several cutting-edge advances being highlighted by Saudi Aramco at this year's event.



The Saudi Aramco exhibit at ADIPEC proved to be a popular booth this year. Featuring a range of company developed technologies, staff provided visitors from around the globe updates on how we identify needs, develop concepts, and carry out the development and deployment of a variety of IR 4.0 technologies.

## Saudi Aramco honors six local manufacturers at 2019 Quality Forum

**Dammam** — Saudi Aramco recently honored a number of local manufacturers distinguished for offering high-quality products at the 2019 Saudi Aramco Quality and Excellence Forum, which was held for a second consecutive year.

Conducted under the theme “Leading Change in the Quality of Manufacturing, Construction and Services,” the forum sought to boost excellence in quality by providing a platform where Saudi Aramco and key proponents in the manufacturing sector could share ideas in the area of quality. The event also sought to:

- Promote and upgrade local industry to become competitive globally
- Encourage competition among national manufacturers
- Increase the level of job localization in the industrial sector.

### encouraging ‘Made in Saudi Arabia’ and building trust

“Saudi Aramco seeks to recognize the advanced quality sector in the Kingdom and encourages the ‘Made in Saudi Arabia’ trademark by giving quality performance awards, which is one of the national quality criteria, and enhancing the customer trust in local products and enterprises,” said Abdullah O. Al Baiz, Saudi Aramco’s vice president of Engineering Services.



Abdullah O. Al Baiz, fourth from the left, poses with the representatives of the winning companies at the 2019 Quality Forum in Dhahran.

Al Baiz noted the forum is a Saudi Aramco initiative to improve quality on the national level — both in the area of manufacturing and projects of contractors and suppliers, which will lead to high-quality national products.

“It also represents an opportunity to showcase best practices in the area of quality and encourage competition among manufacturers and contractors to increase competency,” he said.

### this year’s winners

Speakers from a number of regional and world business organizations, academia, and industry leaders participated in the event, addressing a wide range of topics, including manufacturing quality systems, construction quality systems, inspection techniques, and the role of institutions in the field of quality.

This year’s top winner in the sector of major companies was ArcelorMittal Tubu-

lar Products in Jubail. Second place went to Jubail Energy Services Company, and Nasser Saeed Al Hajri Metal Forging Factory was awarded third place.

In the sector of small- and medium-sized enterprises, the first-place winner was the Industrial Valves Manufacturer Company, while S & T Gulf Ltd. Company came in second, with Ashcroft Al Rushaid Instrument Co. Ltd. awarded third place.

## Saudi chapter of American Chemical Society wins ChemLuminary award

Sowelim G. Al Shamrie accepts the “2018 Global Engagement Award for International Chemical Sciences Chapter,” which was presented at the ACS Fall 2019 National Meeting and Exposition recently in San Diego, California.



Recently, the Saudi Arabian International Chemical Sciences Chapter of the American Chemical Society (SAICSC-ACS) was selected as the winner of the 21<sup>st</sup> Annual ChemLuminary.

The “2018 Global Engagement Award for International Chemical Sciences Chapter” was presented at the ACS Fall 2019 National Meeting and Exposition in San Diego, California.

Representatives from 21 international chemical sciences chapters from around the globe attended the event, at which Sowelim G. Al Shamrie, superintendent of the Jazan Refinery Laboratories Division and SAICSC-ACS board director, was

honored to receive this award.

Al Shamrie noted that the SAICSC-ACS continues its journey toward operational excellence in the way it conducts business as a professional and technical chapter.

“I would like to tell the board members of SAICSC-ACS to lift their chin up and stick their chest out, as the chapter members are loving what we are doing to make our chapter great and a role model for other international chapters to imitate,” he said. “I can’t thank you enough for your dedication, hard work, and perseverance toward sustaining this excellence that resulted in achieving this distinguished award for a second time.”

## ‘Together for a Safer Environment’

### Saudi Aramco’s Industrial Security shows commitment to workplace and contractor safety with campaign

In an effort to increase safety awareness among contractors, the Industrial Security Support Department (ISSD) recently conducted a safety campaign titled “Together for a Safer Environment,” at the Industrial Security Operations (ISO) Academy.

Focusing on promoting safety in the workplace and ensuring contractors are aware of safety guidelines/procedures, the campaign was attended by 95 contractors from more than 25 companies.

The campaign started with a tour through the participating awareness booths, which included Dhahran Security Operations, the Loss Prevention Department, the Fire Protection Department, the Traffic Safety Signature Program, and Johns Hopkins Aramco Healthcare.

Contractors were acquainted with the provided security services such as the issuance of traffic violations, as well as advice on safety and loss prevention, traffic safety publications, and health care services.

ISSD manager Adel F. Al-Wuhaib delivered opening remarks, emphasizing the importance of safety in all business matters.

Three presentations were shared with the audience, covering safe driving behaviors, lifesaving rules in the workplace, and Saudi Aramco security procedures.

At the end of the campaign, ISO general manager Abdullah A. Al-Ghamdi, offered closing remarks, thanking contractors for their commitment to safety.



Adel F. Al-Wuhaib expressed his appreciation to contractors, saying “Safety has always been the center of our operations in Saudi Aramco and we wouldn’t be able to maintain safe operations without you, our partners.”



Abdullah A. Al-Ghamdi said in his closing remarks that “the strong bond between Security and the contractors in Saudi Aramco strives to make it the most secure workplace. It wouldn’t be achieved without your involvement. We encourage you to sustain it and persevere in your support as always.”

## new frontiers in chemistry

# Al-Khowaiter shares vision of circular carbon economy at ChemIndix 2019

by Musherf Alamri

**Manama** — The 11<sup>th</sup> International Conference and Exhibition on Chemistry in Industry (ChemIndix) was held last week under the patronage of HRH Prince Khalifa bin Salman Al Khalifa, Prime Minister of the Kingdom of Bahrain.

The conference, organized by the Saudi Arabian International Chemical Sciences Chapter of the American Chemical Society, revolved this year around the theme of finding “Breakthrough Solutions through Innovative Materials.”

Saudi Aramco has been supporting ChemIndix since its inception and this year was one of three diamond sponsors. The event focuses on developing breakthrough solutions to the challenges facing the energy and petrochemical industries.

Five main topics were discussed in three executive panels, five keynote speeches, 120 oral technical presentations, about 100 posters, and more than 35 think-tank sessions. The topics were on innovative materials in future cities and industries, digital transformation, breakthrough solutions in refining and chemicals, solutions in exploration and production, and on circular carbon economy and sustainability.

### circular carbon economy

During a panel session on the concept of a circular carbon economy, Saudi Aramco’s chief technology officer and the Executive Conference Advisory Board chairman, Ahmad O. Al-Khowaiter, presented the view of the oil and gas industry.

Al-Khowaiter defined a circular economy as moving from a linear model, where materials are used and then disposed, to a more circular manner through the reduction of consumption, reuse, and recycle.

For circular carbon use, CO<sub>2</sub> emissions from hydrocarbon combustion should be captured, reused, and recycled in other forms of energy to close the carbon cycle efficiently.



Ahmad O. Al-Khowaiter describes an economy that is more “circular” through the reduction of consumption, reuse, and recycle. Al-Khowaiter spoke on a panel at the 11<sup>th</sup> International Conference and Exhibition on Chemistry in Industry held last week in Bahrain. (Photo: Ahmad El Itani/MPD)

Al-Khowaiter emphasized the important role of oil and gas in powering the world economy through energy that sustains factories, mobility, and contributes to the growth and prosperity of societies. Leveraging renewables, he said, can ensure that these processes are carbon negative.

“Without that carbon-free energy, you can’t recycle the CO<sub>2</sub>,” said Al-Khowaiter. He noted that the circular concept presents an option to achieve a balance between societal needs, protecting the environment, and relying on the reduction and recycling of emissions only is insufficient.

The removal can be achieved via traditional methods such as forestry or industrial means. The goal, he said, is to

achieve a balance between the carbon emitted and the amount reduced, recycled, and removed.

### ‘natural order of things’

“This carbon balance is the natural order of things. So, taking our economies and making them aligned with nature just means restoring the carbon balance. That is what the Earth has been doing for billions of years, and we need to be able to emulate that,” he said.

Al-Khowaiter highlighted Saudi Aramco initiatives to move toward the circular economy via reducing, recycling, and removing CO<sub>2</sub>. The company has undertaken a number of initiatives to reduce carbon emissions from its operations,

ranging from the annual reduction of gas flaring since the 1980s, and committing to eliminate it completely by 2030, and to applying a comprehensive energy management program.

Beyond its operations, Saudi Aramco is collaborating with automotive engine manufacturers to maximize efficiency to reduce the emissions from using hydrocarbon fuels, he said. Additionally, the company is working with a number of partners to develop carbon capture and storage technologies for cars and trucks, and enabling the unloading of the CO<sub>2</sub> at fuel stations for recycling into another energy form.

The latest development in this program is the successful testing of technology for heavy-duty trucks and achieving the capturing and storing capability of 45% of the CO<sub>2</sub> emitted from the engine exhaust.

In terms of CO<sub>2</sub> removal, Saudi Aramco is sequestering 800,000 tons of CO<sub>2</sub> per year to enhance oil recovery in the ‘Uthmaniyah field. The company is also examining different options for sequestering carbon, including directly removing CO<sub>2</sub> from the air at an industrial scale.

Al-Khowaiter also spoke about Saudi Aramco’s ongoing research projects that are designed to achieve advancements in chemistry and material sciences to enable the direct conversion of oil into chemicals through which CO<sub>2</sub> emissions are reduced and efficiently captured and stored, achieving a level of recyclability of carbon.

### student hackathon

As part of the conference, ChemIndix hosted a student hackathon where students from various universities from throughout the Kingdom competed to develop innovative and breakthrough solutions in three challenging areas — circular carbon economy (which was sponsored by Saudi Aramco), innovative materials, and the Fourth Industrial Revolution.

## T&I Community of Practice unveiled at RT exchange meeting



More than 160 turnaround and inspection professionals gathered recently in Ras Tanura for the Second Turnaround and Inspection (T&I) Technical Exchange Meeting, which included 21 presentations on key T&I issues, as well as the unveiling of a new T&I Community of Practice.

**Ras Tanura** — Corporate Maintenance Services (CMS) recently hosted the Second Turnaround and Inspection (T&I) Technical Exchange meeting.

The meeting was sponsored by the Ras Tanura Refinery Maintenance Department (RTRMD) and was attended by both parties’ management.

The meeting, held on an annual basis with field organizations, focuses on sharing best practices, success stories,

lessons learned, technologies, as well as T&I performance improvements. The theme for the meeting was “Pursuing Excellence in Turnaround Planning and Execution.”

The event focused on the proper planning and execution of T&Is — especially in terms of safety, duration, and cost.

The event had 21 presentations delivered by field operating departments, as well as T&I associated teams such as the

Inspection Department and Loss Prevention, to more than 160 T&I subject matter experts from Saudi Aramco and its affiliates.

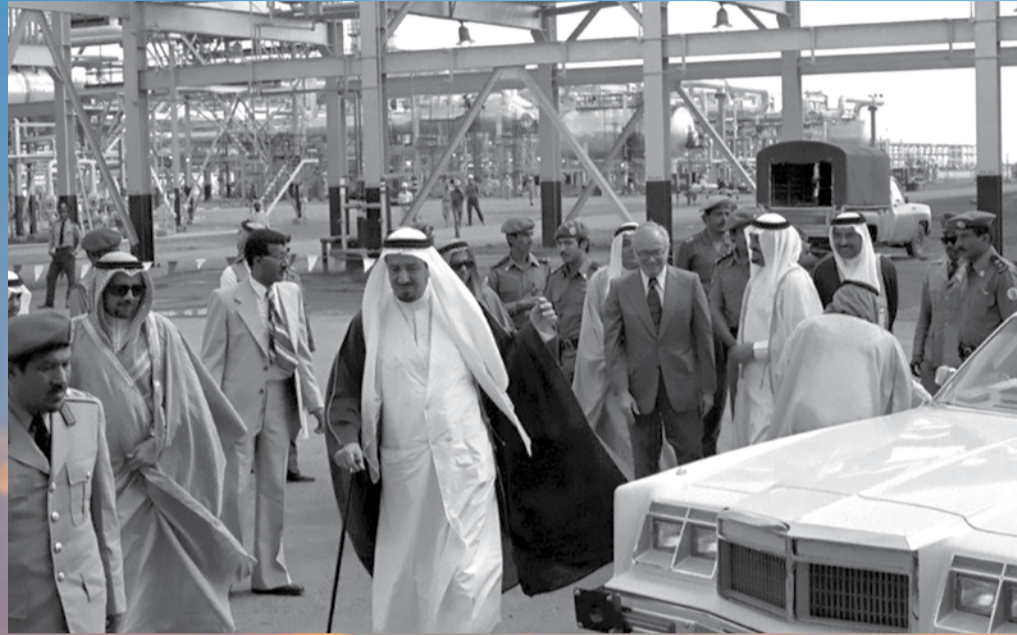
Also, the event promoted a CMS and RTRMD joint initiative — the T&I Community of Practice. The T&I knowledge sharing event benefits its members by providing a network to capitalize on the expertise of Saudi Aramco T&I professionals.

# pioneering plant on env

by Musleh Khathami and Janet Pinheiro

(Photos: Habeeb Al Hadad and Ding/MPD)

Berri — Carefully trickling water upon the ivory sands of the ad-Dahna desert has magically created an ecosystem more valuable than gold. Since its inauguration in 1977, eastern Saudi Arabia's Berri Gas Plant has funneled storm water running off its facilities into a carefully crafted artificial wetland that is situated next to the site's operating infrastructure.



King Khalid ibn 'Abd Al-'Aziz Al Sa'ud inaugurated the Berri Gas Plant in 1977 — the first facility constructed for the Master Gas System, which represented a giant leap in Saudi Arabia's industrial development to harness the power of gas into the Kingdom's local energy mix, allowing crude oil to be reserved for higher value uses. King Khalid and Saudi Aramco remain linked together regarding sustainability in the Kingdom to this day, as the company recently received the King Khalid Award for its Yanbu' Refinery and its efforts to innovatively pursue sustainability.

From a steady inflow of life-giving water, a tranquil marshland has spread, where in and around its shorelines, creatures thrive, nest, feed, and raise their young.

Berri is one of 18 sanctuaries of biodiversity within Saudi Aramco's operating areas, and Northern Area Gas Operations general manager Jumaan G. Al Zahrani explains the company recognizes it is vital

to preserve the Kingdom's biodiversity. "Each biodiversity area demonstrates the entrenched coexistence of environmental protection, oil and gas operations, and profitability," said Al Zahrani. "Berri's surrounding sanctuary of biodiversity is a testament toward the company's commitment to reliable mitigation management. "For more than four decades, Berri has shown that conservation and industry can coexist harmoniously."

### Environmental Excellence Award winner

The proliferation of birds, insects, reptiles, and mammals choosing to inhabit the five square kilometers of land adjacent to Berri's operating facilities serves as notice of the site's excellent mitigation management. The site's ongoing environmental management efforts were recognized with the receipt of the 2019 President's Environmental Excellence Award.

Berri Gas Plant manager Khalid A. Al Harthi said the site's hotspot of nature exists thanks to everyone's adherence to Saudi Aramco's best-in-class plant operational practices.

"Our team of more than 700 Berri workers keeps their distance from the

## Berri Gas Plant earns international environmental management cert

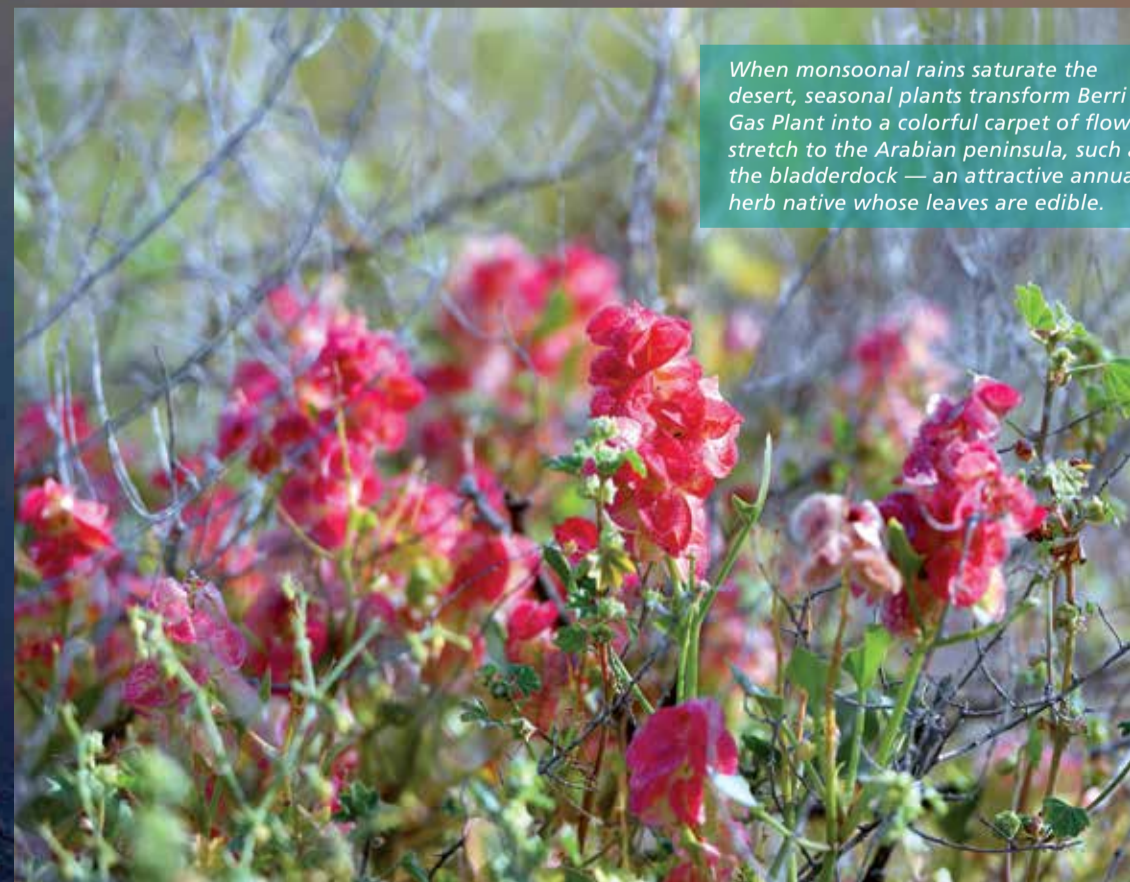
In December 2018, the "International Organization for Standardization" accredited Berri Gas Plant's environment management system (ISO 14001 EMS). The ISO 14000 family of standards provides practical tools for all kinds of companies looking to manage their environmental responsibilities, assessing a facility's implementation of environmental management,

supporting documentation, and on-site execution. Ahmad F. Al Ghamdi, Operation Excellence and Compliance group leader, said achieving the "ISO 14001 Environmental Management System" certification is part of Berri's ongoing environmental management enhancements. "Berri's products, activities, and services meet legal

requirements and customer expectations. We decided to challenge ourselves to achieve ISO 14001 certification requirements. Starting with a gap analysis, we then involved an initial assessment, and finally a s



Saudi Aramco protects and preserves habitats  
 ● Saudi Aramco Biodiversity Protection Area  
 ● Company area of significant biodiversity



When monsoonal rains saturate the desert, seasonal plants transform Berri Gas Plant into a colorful carpet of flowers that stretch to the Arabian peninsula, such as the bladderdock — an attractive annual herb native whose leaves are edible.

# Environmental frontline

## high biodiversity standards are taken seriously at Berri Gas Plant

pristine and sensitive area, just checking it from time to time to ensure the animals and plants are not exposed to unwanted intrusions," said Al Harthi.

### plans for more biodiversity

Once it completes a comprehensive

biodiversity survey later this year, Berri is looking to grow its biodiversity.

Environmental coordinator Homoud N. Mutrafi said the site's conservation plans include potentially constructing another artificial wetland, using treated wastewater to create habitats for local flora and

fauna, and a transitory home for migrating birds; publishing a Berri biodiversity atlas; and investigating planting a mangrove plantation close to the Midyan Gas Plant coastal area.

"The environment provides us with air to breathe, water to drink, and good soil

to grow food," Mutrafi said. "We all suffer if the environment is not protected."

Saudi Arabia's transformational Vision 2030 includes a strong emphasis on sustainability, conservation, and waste minimization.

### ification

er expectations. However, we elves by measuring our nt program against the ISO ements," said Al Ghamdi. ysis, the certification process ssessment, followed by a main surveillance audit.



Berri Gas Plant is a prosperous desert home to many creatures such as hedgehogs and lizards.

### making waste valuable

Nonoperational innovation is also raising environmental standards at Berri.

A three-month trial has seen organic waste converted into high-quality organic fertilizer for use in landscaping, and as an additive to enrich soil.

Berri Gas Plant tested depositing leftover food and garden cuttings into an industrial composter instead of having them end up in a municipal landfill.

Specialized natural microorganisms quickly and safely break down the waste into fertilizer for use in landscaping. It can also be used as an enriching soil additive, helping reduce landfill use and associated carbon emissions.

Converting organic waste proved to be valuable, calculating out to save the operation \$94,185.25 each year in related disposal costs, and the site is looking to purchase a permanent composter.

"The stainless steel composting

machine uses only 350 kilowatt hours/month, and it is designed to expedite composting while minimizing odor," said environmental coordinator Homoud N. Mutrafi, who adds that composting can be practiced virtually anywhere in nature, at homes, and in the garden.



Food and garden waste at Berri Gas Plant is tossed into a steel-encased compost machine, where it is converted into high-quality organic fertilizer in approximately 24 hours.



Checking Berri Gas Plant's surrounding biodiversity, environmental coordinator Homoud N. Mutrafi's daily routine includes monitoring the site's environmental metrics abide by compliance requirements, and advises that everyone will suffer if the environment is not protected.

# 'Don't Wait. Start to Create.'

## Southern Area Oil Operations showcases Innovation<sup>Plus</sup>

**Abqaiq** — Southern Area Oil Operation's (SAOO) journey of innovation reached a pivotal point recently by conducting its 2019 Innovation Incubation Recognition and Exhibition.

The theme, held under the patronage of Khaled A. Al-Buraik, SAOO vice president, was "Don't Wait. Start to Create."

The event featured four keynote speakers from prominent technology companies and Wa'ed, and included 11 exhibitors from technology providers, business incubators and accelerators, and a school — all of which showcased their approaches to incubate innovative ideas.

At the heart of the event, 11 SAOO teams exhibited their mature ideas that the organization has been further incubating since early on in the year, which have an estimated annual savings of several million dollars, in addition to the many patents that were filed.

At the conclusion of the event, SAOO management recognized exhibitors and SAOO teams.

Several hundred visitors attended the event, including schoolchildren.

SAOO's journey of innovation began several years ago with the active participation of its employees in the corporate innovation system. This journey is in line with the Kingdom's Vision 2030, where SAOO regularly seeks and adopts the latest global trends in applicable Fourth Industrial Revolution (IR 4.0) technologies to optimize use of resources and equip employees with best-in-class training and tools.

To further spur growth of the innovation culture among its employees and capture desired benefits, SAOO's journey of inno-



Mohammed Abdulmohsin presents on his "Smart Performance Monitoring Solution" to members of Southern Area Oil Operations management. Developed internally, the system offers innovative solutions by providing prioritized improvement efforts to focus on, and diagnostic tips.

vation contained several milestones, including certifying employees in innovation, and conducting annual innovation events.

### designed to incubate — Innovation<sup>Plus</sup>

SAOO also realized early on that the existing innovation system, with its many steps, could be further supported to reach the targets at today's required fast pace. So, to transform SAOO's performance to the next level, the innovation journey continued in 2019 with the development and deployment of a different approach to accelerate the evaluation-to-implementation process, which has been called Innovation<sup>Plus</sup>.

Innovation<sup>Plus</sup> is an integrated approach that is designed to incubate innovations to completion, wider adoption, patenting,

commercialization, and licensing by utilizing integrated incubation, which is a seamless process of providing support, know-how and resources to a startup idea with a potential for growth.

This approach focuses on increasing engagement with employees, further fostering the culture of innovation, accelerating to reach the desired results, and anchoring this concept. The concept mimics the setting of the TV show "Shark Tank," through which individuals pitch their ideas to venture capitalists to try to convince them to invest.

SAOO selected this approach to make the experience more appealing and fuel the spirit of competition among the various departments. The approach is designed to have a panel of experts to engage SAOO

presenters, and then rank the presented ideas.

### making a pitch to innovate

In early 2019, SAOO departments were requested to submit their top two mature ideas for initial screening. The ideas were to span fields of IR 4.0, process improvements, and maintenance activities, among others.

Subsequently, SAOO departments submitted 40 ideas, and throughout this critical stage, very close work took place in vetting the submissions with the goal of pushing forward the top ideas. At the end, 19 ideas were selected to move on to the next stage of evaluation.

Earlier this year, SAOO teams came eager to pitch their ideas to the panel, which had a combined experience of more than 130 years. The panelists were selected with areas of expertise that included venture capitalism, marketing, and entrepreneurship. The panel scored the maturity of the ideas, and at the end of the day, the top 11 teams were invited to attend a full day of incubation training.

Mentors from Management and Professional Development and the Technology Strategy Department (TSD), as well as Planning, delivered a daylong training and coaching session, with the intent of increasing the teams' knowledge in the different stages of innovation evolution — from start, to actually delivering the final product.

Throughout this journey, TSD has been working hand-in-hand with the innovators by facilitating individual incubation sessions to accelerate reaching the desired results, including exploring the potential for licensing and commercialization.



Left, students, such as these from Saudi Aramco Expatriate Schools, were among the hundreds who visited the exhibition to see some of the company's most innovative efforts.

Southern Area Oil Operations teams listen to a 3-D demonstration of an idea during innovation incubation training.



## spotlight



The Operational Excellence Department (OED) recently honored the contributions of OE representatives from across the company with a ceremony. The ceremony also included a progress report on OE and the department's future plans delivered by OED manager Mohammed A. Al-Zaid. OE was first rolled out in 2014 as an initiative of the Accelerated Transformation Program. Implemented throughout the company, more departments are becoming mature, and the ceremony was designed to recognize of excellence among the people and admin areas involved with OE's success. Among those recognized were Ghassan M. Dashash, Northern Area Oil Operations; Alaa M. Ali, Southern Area Oil Operations; Fahad Gethami, Drilling and Workover; Abdulmajid M. Hasan, Gas Operations; Abdullah M. Mohammad, Petroleum Engineering; Ahmed F. Tayyeb, Pipelines, Distribution and Terminals; Abduljameed A. Ali, Domestic Refining and NGL Fractionation; Ali A. Buraik, Marketing and Supply Planning; Majdi S. Otaibi, Chemicals; Bader S. Shahrani, Power Systems; Ghazi A. Qahtani, Engineering Services; Kassem Kaisy, Information Technology; Mohammad S. Qahtani, Project Management; Khalid S. Otaibi, Procurement and Supply Chain Management; Ali M. Qassimi, Industrial Services; Bader M. Alotaibi, Community Services; Bander A. Ruwaili, Safety and Industrial Security; Hussain M. Alshahi, Training and Development; Nada A. Al-Omoor, Controller; Ahmed Marzooq, Treasury; Fatin H. Hussain, New Business Development; Naveed A. Cheema, Planning and Performance Management; Edmund Hald, Business Information Solutions Department; Neil McDougall, Strategy and Market Analysis; Salma H. Ajaji, Law; Fahad Alothman, Human Resources; Omaimah A. Aljarallah, Corporate Affairs; Hind J. Seybani, Technology Oversight Coordination; Tariq A. Msmali, Internal Auditing; Ahmed Y. Yousef, Downstream Capital Portfolio and Planning Department; and Hamad Grouni, International Operations.



**King Abdulaziz Center for World Culture**  
by saudi aramco



# Ithra movies

## in cinema

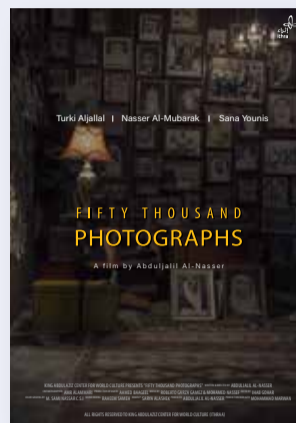
### Ithra Heroes Adventure

Nov. 16, 18 10:30 a.m.



### 50 Thousand Photographs

Nov. 14, 15, 18, 19, 20 4 p.m.



### 50 Thousand Photographs

In the current era, where he captures about two billion photos around the world daily, Turki lacks having one photo of his father after his family wasted all of his photos at the Burning Photos Wave that some people attended in the 80s in the Kingdom. While searching for photos of his father, he recognizes the old man "Nasser," who owns in his house 50,000 photos of city people.

### A Mouse Tale

Nov. 13, 16 6:30 p.m.  
Nov. 14, 15 7:30 p.m.



### The Investor

Once the bars of jail locked behind him, Omar finds himself in a confrontation with reality, after spending a lifetime escaping to a world of his imagination, sharing a cell with a major criminal. Upon his cellmate's curiosity, Omar narrates the story of how he came to be the criminal that he is through the scheming impersonation of typical characters found in society. To escape his cellmate, Omar must carry on one last impersonation attempt to find freedom.

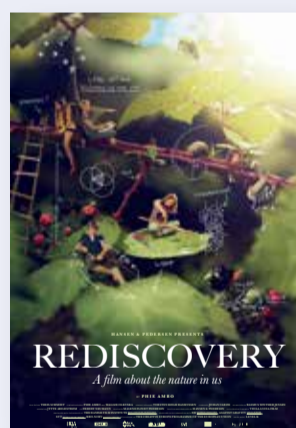
### Apollo 11: The Untold Story

Nov. 18, 19, 20 6:30 p.m.



### Rediscovery

Nov. 18, 19, 20 2 p.m.



### Rediscovery

47 children are given free reign on an abandoned construction site near the center of Copenhagen — a hidden spot where nature has long since taken over. Here, they will go to school for 10 weeks and discover how and what nature can teach them. The film is told through scenes with the children, but also with nature's voice as a continuous narrator: "For what does it mean to learn from nature?"

### The Investor

Nov. 13, 16 4 p.m.  
Nov. 14, 15 6 p.m.



### The True Story of King Tut's Treasure

Nov. 13, 14, 15, 16 2 p.m.



### A Mouse Tale

To save their Kingdom from evil rodents, two young mice go on a quest to a forbidden world to find a legendary magic crystal that has the power to restore order to their Kingdom.



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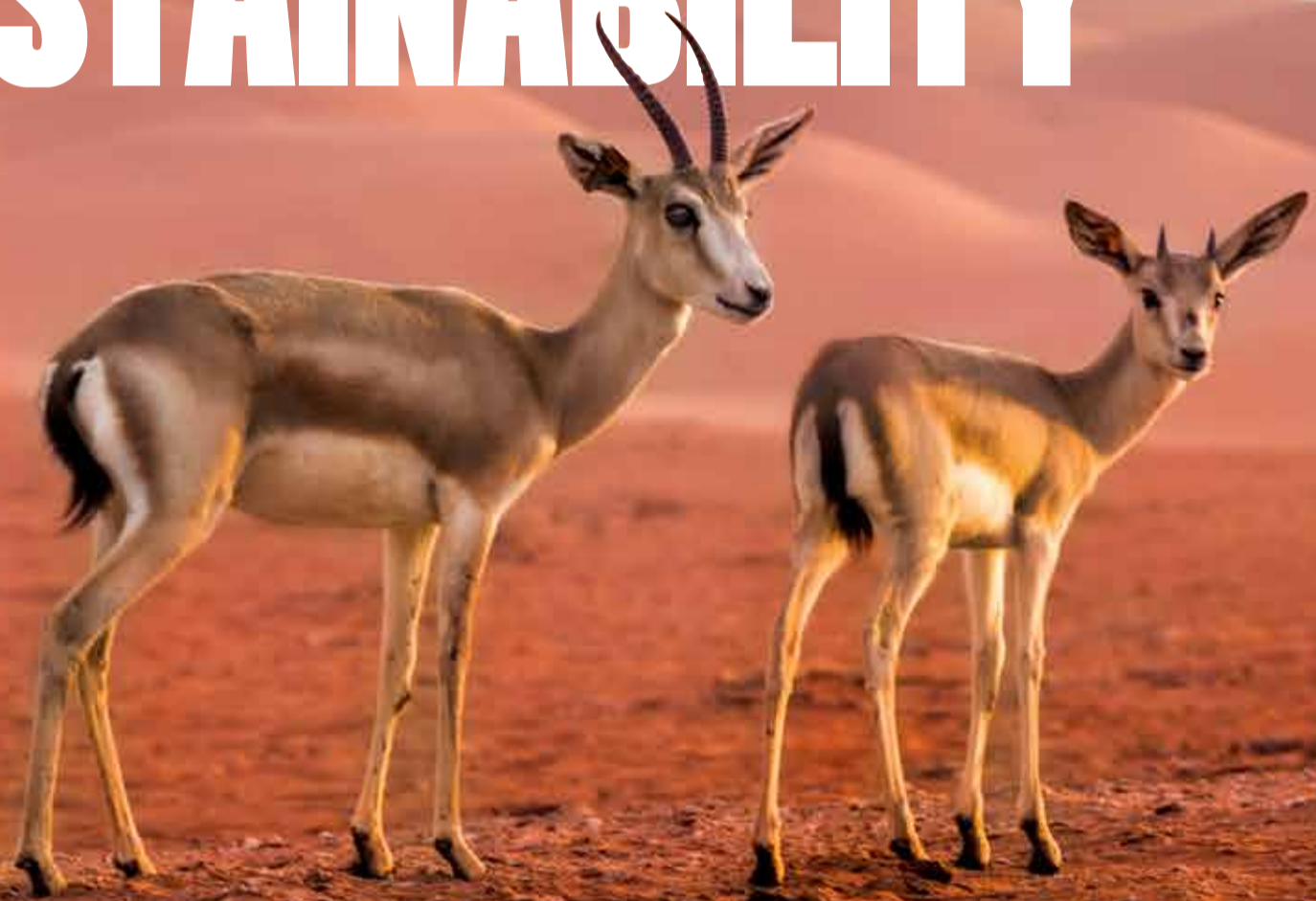


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