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LOCAL

Decision of ICJ to
be a gamechanger

for Palestine

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Pearl of the South



Global economic growth to slow further in 2024



THE TIMES KUWAIT REPORT

ampered by tight monetary policy, restrictive financial conditions, and feeble global trade and investment, the global economy in 2024 could witness the third consecutive year of slow economic growth, and the slowest half-decade growth in 30 years, said the World Bank in its latest 'Global Economic Prospects – January 2024' report.

In his foreword to the report, the World Bank Group's Chief Economist and Senior Vice President Indermit Gill noted that by the end of 2024, as the world nears the mid-way point in a decade that was expected to be a positively transformative one, growth will remain feeble. This would leave many developing countries, especially the poorest, stuck in a trap: with paralyzing levels of



debt and tenuous access to food for nearly one out of every three people living there.

The report indicated that instead of the 2020s being the decade when extreme poverty was to be extinguished, when major communicable diseases were to be eradicated, and when greenhouse-gas emissions were to be cut nearly in half, the world is headed for the weakest economic-growth performance of any half-decade since the 1990s. One out of every four developing economies is expected to be poorer by the end of 2024 than it was before the pandemic.

Most economies in the world, advanced as well as developing, are set to grow more slowly in 2024 and 2025 than they did in the decade before COVID-19. Global growth is expected to slow from 2.6 percent in 2023 to 2.4 percent in 2024 before ticking up to 2.7 percent in 2025.

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The decision of ICJ will be a test for humanity

The decision of the ICJ will be a gamechanger for Palestine



By Tareq Yousef AlShumaimry

srael and South Africa have each made their cases in public hearings at the International Court of Justice (ICJ last week (January 11, 12, 2024). Now that the public hearings are over, what can we expect next? And how long will we have to wait for any outcomes?

In a matter of weeks "provisional measures" will take priority over all the cases and a decision is expected to be taken.

The decisions of the ICJ are binding upon countries and cannot be appealed. However, the ICJ has no way of enforcing its rulings and they are sometimes completely ignored.

In its filing to the ICJ, South Africa asked for the court to issue several orders to be placed upon Israel. These include having Israel "immediately suspend" its Gaza offensive, stop forced displacement of Palestinians in the territory and enable humanitarian access, as well as preserve evidence.

The ICJ can order all of the measures requested by South Africa. It could also decline to order anything. It could order something completely different, or even decide it is not competent to judge.

After the court decides whether or not to apply emergency measures, it will then look at the broader case "on the merits" - South Africa's charge that Israel is in breach of the UN Genocide Convention. A ruling of the broader case "on the merits" on the other hand will probably take several years.

It is important to note that the ICJ rules on questions of state responsibility—that is, on when a state has violated a rule of international law or an international legal obligation. It is not a criminal court. It does not decide, for example, on individual criminal responsibility. A different, unrelated court in The Hague, the International Criminal Court (ICC), serves this function, and South Africa, with other like-minded states, has already referred the situation in Gaza to it for investigation. While the ICC was set up to investigate and prosecute individuals at the highest levels who are accused of planning and directing war crimes, the ICJ exists to peacefully settle disputes between nations.

The ICJ proceedings allow South Africa to make a clear statement in an official venue about Israel's actions in Gaza: that there is international support for Palestinians and that the past three months of relentless bombardments, as well as the denial of access to the necessities of life, is an urgent matter of international concern.

But what does South Africa have to do with what is happening in Gaza? South Africa's ruling



African National Congress has long shown its support for Palestinians and backed their right to self-determination, considering them to be subject to a long-standing regime of apartheid, like South Africa was.

The Genocide Convention also allows any state party to bring a case against another state party to the ICJ on issues including responsibility for genocide, conspiracy to commit genocide, or attempt to commit genocide. The ICJ in the past confirmed this in a case brought by The Gambia, which accused Myanmar of committing genocide against the Rohingya population.

I recall during my tenure at The Hague a case was instituted by The Gambia in November 2019, with provisional measures hearings in December of that year. On 16 October 2023, the ICJ issued another order for The Gambia to submit its Reply to arguments made by Myanmar by 16 May 2024 and for Myanmar to submit a Rejoinder – its response to The Gambia's Reply – by 16 December 2024.

This is one example of the timeline that is expected to take for the South Africa vs Israel case. Similarly the question remains: what will be the content of the decision? Will something

similar to that issued for Russia and Ukraine to stop the fighting? Or will it relate to the entry of humanitarian aid?

The ICJ by Order of March 16, 2022, had already indicated among its provisional measures that "the Russian Federation shall immediately suspend the military operations it began on February 24, 2022 in the territory of Ukraine". Russia did not accept this order, and raised "preliminary objections" to the Court's jurisdiction and the inadmissibility of the application. The hearings are ongoing and expected to take a long time to get a conclusive judgement

Unsurprisingly, the response from many states to this case has been divided. On the same day South Africa filed its application, the Palestinian Authority's foreign ministry welcomed the case and called for the international community to support the proceedings.

Besides the Organisation of Islamic Cooperation was similarly supportive, calling on the court to "take urgent measures to stop this mass genocide." UN human rights experts also welcomed the case and praised South Africa "for bringing this case to the ICJ at a

time when the rights of Palestinians in Gaza are being violated with impunity."

Formal declaration to intervene on the side of South Africa have so far been filed by Malaysia, Turkey, Jordan, Bolivia while countries such as Maldives, Pakistan, Namibia have expressed interest. Kuwait along with many more countries are expected to join the side of South Africa in the coming weeks.

Israel, of course, also has its strong supporters. Germany, one of Israel's closest European allies, has called the claim that Israel is committing genocide false and said it is not covered by the Genocide Convention. Hungary has also expressed its opposition to the case. The United States, for its part, has said the allegations against Israel "are unfounded" and called the submission at the ICJ "meritless, counterproductive, and completely without any basis in fact whatsoever." It has been reported that UK Foreign Secretary David Cameron said that he did not think the case at the ICJ was helpful and that the United Kingdom's view is that "Israel has a right to defend itself."

Whatever the outcome this will be the first time the ICJ will play out as a case where Israel, stands as a defendant before the world's most important court. The outcome of this case could set a precedent, opening the way for multiple cases in the future, both individually and collectively, for Israel's victims. More importantly, a ruling in favor of South Africa will force the ICC to step in and look into what Israeli soldiers, officers, and politicians have done, or even said, to instigate what much of the rest of the world already defines as genocide.



Tareq Yousef AlShumaimry, served as Chairman of the Finance Committee and Chairman of the General Budget Committee of the Permanent Court of Arbitration in The Hague (PCA) and an observer in the 124th Administrative Council of the Court and the Consular at the Embassy of the State of Kuwait in the Netherlands during this period from 2013 to 2020.

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Mongolia and Kuwait seek to boost relations further

Ambassador of Mongolia H.E. Sergelen Purev

By Reaven D'Souza **Executive Managing Editor**

n an interview last week with The Times Kuwait, Ambassador of Mongolia H.E. Sergelen Purev spoke at length about the growing economic and cultural ties between Mongolia and Kuwait, and his hope that bilateral relations between the two countries will continue to grow from strength to strength.

Since his arrival in Kuwait in June 2022, Ambassador Sergelen has been working diligently to serve the best interests of his country in Kuwait and the region, as he is also the non-resident Ambassador to Qatar and Bahrain.



The support to Kuwait was a milestone in our bilateral relations. Since then, our bilateral relations and cooperation have been expanding and developing year by year. On the diplomatic level, we will mark our half-century of diplomatic relations next year.

Ambassador Sergelen began the interview by expressing his gratitude to the leadership, government and people of Kuwait for the warm welcome accorded to him, and for the support given to the Mongolian embassy and to the Mongolian community in Kuwait. "I would like to thank the Amiri Diwan, the Government, Ministry of Foreign Affairs, Kuwait Fund for Arab Economic Development, Public Authority for Food and Nutrition,

partner companies. as well as the Kuwaiti people for their warm hospitality and cooperation." Noting that bilateral relations between the two countries were on a firm footing and growing

stronger, Ambassador Sergelen said: "Kuwait is the first Gulf country to establish diplomatic relations with Mongolia back in 1975. In 1990, when Iraq invaded Kuwait, Mongolia was one of the first countries to denounce the foreign invasion. And Mongolians are very proud that we did so.

"The support to Kuwait was a milestone in our bilateral relations. Since then, our bilateral relations and cooperation have been expanding and developing year by year. On the diplomatic level, we will mark our half-century of diplomatic relations next year. On the eve of this 50th anniversary,

the embassy has planned many events for 2024.



MONGOLIA

"I would also like to highlight that the Kuwait Fund for Arab Economic Development plays an important role in bridging cooperation between our two countries, and provides funding for five projects in Mongolia in the fields of road, transportation, energy and health sector. The Government and the people of Mongolia are thankful to the Kuwait Fund for this assistance.

"In economic relations, we are looking forward to continued mutually beneficial cooperation with our Kuwaiti partners. Within this framework, we successfully organized the first Mongolia – Kuwait Business Forum in Kuwait City on 8 March of last year. The forum was attended by 30 Mongolian businessmen from agriculture, meat export, tourism and cashmere sectors, and by 20 Kuwaiti businessmen from agriculture, construction, investment sectors. The gathering was also attended by highranking officials from both sides, as well as representatives of the Mongolian National Chamber of Commerce and Industry and the Kuwait Chamber of Commerce and Industry.

"Ahead of the forum, the Mongolian and Kuwaiti Chambers of Commerce and Industry signed a Memorandum of Understanding on cooperation and coordination. During the



products was held, while business delegations from both sides held B2B meetings to discuss business opportunities in the fields of agriculture, meat export, tourism and investment in infrastructure. In addition, we are working with our partners to open a Mongolian barbecue restaurant in Kuwait in the near future."

Elaborating on his country's initiative to popularize Mongolian food products and increase exports, the ambassador stated, $\hbox{\it ``Within the framework of Mongolian President's initiative of Food}\\$ Revolution and the Government's policy to support export, the Embassy dedicated significant time and effort in 2023 to start the export of meat to the State of Kuwait and other Gulf countries.

The main requirement of the meat export to Gulf countries is halal certification. The Embassy has worked with the Gulf accreditation center based in Riyadh since December 2022 to get Mongolian agency for standardization and metrology to be accredited to issue halal certification. As a result of our efforts, the Mongolian agency was accredited and obtained the accreditation certificate on 20 December 2023. Also, the ban on Mongolian meat import to Kuwait has been lifted simultaneously by the Public Authority for Food and Nutrition.



ROYALE HAYAT DENTAL DEPARTMENT

A BETTER YEAR STARTS WITH A BEAUTIFUL SMILE











NDHR reiterates commitment to human rights in Kuwait

ational Diwan for Human Rights (NDHR) has underscored its commitment to upholding and advocating for human rights in Kuwait. Member of the Board of Directors of NDHR and Chairman of the Permanent Committee for Complaints and Grievances at the Diwan, Dr. Abdulredha Assiri affirmed the important role of the Diwan in providing proposals and recommendations to improve human rights work in Kuwait.

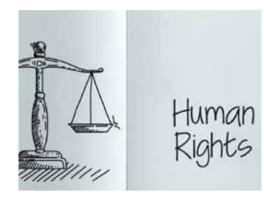
Speaking at a press conference organized by the Center for Gulf and Arabian Peninsula Studies at Kuwait University, Dr. Assiri said that the symposium on human rights policies in Kuwait and interaction with the local and international situation, held last December, had come up with several important recommendations..

Among the recommendations was the need to increase public awareness on human rights and develop educational programs about the role of NDHR, as well as engage in international collaboration, participate in formal meetings and training programs so as to exchange experiences and learn about new approaches to humanitarian issues.

Dr. Assiri continued that one of the recommendations was to hold a periodic meeting or forum with the public in order to spread the culture of human rights, increase public human rights awareness, and shed light on the policies and activities carried out by all governmental and non-governmental agencies related to human rights.

He said that the recommendations included holding closed or limited workshops for specialists and stakeholders in human rights matters to discuss issues and develop plans, policies, strategies, and problem solving in order to deepen the common understanding of those concerned with human rights.

Moreover, Dr. Assiri also added activating



strategic relations with Kuwait University, public and private educational institutions, civil society institutions, and other official governmental and private bodies concerned with human rights to prepare an accredited academic or training program that provides human rights activists with the understanding and skills necessary to deal with international, regional and national systems while developing capacities for negotiating and managing human rights projects.

He also stressed the need to establish a joint Gulf system for national human rights institutions, similar to the Arab Network for National Human Rights Institutions, which is entrusted with raising the capabilities of workers in national human rights institutions in the Gulf Cooperation Council (GCC) countries.

He went on to explain the importance of preparing a comprehensive draft on human rights laws that explicitly stipulates the repeal of any issue that can cause violations of the aforementioned rights in the draft.

Finally, Dr. Assiri reiterated the importance of initiating laws that regulate interaction with technologies and artificial intelligence techniques in a way that guarantees and preserves the basic requirements of human

Study suggests developing new economic areas to drive growth



recent study commissioned by the $oldsymbol{A}$ government has emphasized the need to set up new economic areas in each region of the country to drive economic development in Kuwait. The study suggested that these new economic zones would enhance the country's ability to diversify its revenue sources, reduce reliance on income from crude oil exports, revitalize the private sector, increase employment opportunities for national cadre, and enable Kuwait to compete effectively, both regionally and internationally.

The study highlights the significance of establishing new regional areas as part of Kuwait's fourth structural plan, which recently received official approval. After conducting a thorough assessment of current assets, the study proposes the following activities for each region:

Northern Regional Area, which would encompass the ongoing mega-port project, a main logistics area, a business zone, and tourist attractions. A Southern Regional Area that will focus on petrochemicals, manufacturing, and energy initiatives. And, a Western Regional Area, which will include agricultural, marine, and food-related projects, along with renewable energy initiatives and various tourism projects.

The study acknowledges that in the Eastern Region, Kuwait already has the foundations of economic clusters in the urban area and in Kuwait City. The proposed policies aim to strengthen these existing and emerging economic clusters by improving surrounding infrastructure, enhancing road connectivity, and fostering synergy and relationships between commercial opportunities.

The research noted that Kuwait needs to capitalize on new opportunities and leverage existing ones across sectors to successfully

diversify its revenue sources. In this regard, the study specifically highlighted the potential for the agricultural sector to contribute to Kuwait's gross domestic product through integrating new agriculture technologies that could enhance food security, promote innovation, and position the country as a regional leader in innovative agricultural production.

The study also drew attention to the current underutilization of Kuwait's tourism sector, and called for the establishment of a comprehensive tourism industry that could contribute significantly to the country's GDP. The study suggested the drawing up of an overall national tourism plan to guide the future development of the tourism sector, identify Kuwait's unique tourism offerings, and secure the necessary land for the sector's development.

The proposed projects should also aim to incentivize and attract investments in nonoil sectors, reduce Kuwait's dependence on oil revenues, thereby increasing the country's resilience to potential shocks arising from fluctuating international oil prices, as well as create a more competitive and appealing business environment, said the study. Adding that successful implementation of these projects would make Kuwait more attractive to investments from both local and international private sector companies.

The study also highlighted the role of the private sector in Kuwait's economic diversification, and the importance of efforts to ease restrictions on foreign companies operating in Kuwait and thereby facilitating their contributions to the country's GDP. In addition, these initiatives should aim to generate more job opportunities for Kuwaitis in the private sector, tackling the current unprecedented economic challenges.

Government spends a million dinars a day on subsidies

The government spends over a million L dinars per day on subsidies for citizens, including for essential food supplies, milk, and children's nutrients, as well as for subsidized construction materials.

Data provided by the Ministry of Commerce and Industry (MoCI) show that the monthly expenditure on these items from

January to October 2023 was around KD315 million, for an average of KD31.5 million per month. This amount reflected a 21 percent increase compared to the same period in

Breaking down the expenditures for the first 10 months of 2023, the figures show that 38 percent of subsidies, or KD119 million, went to support essential food supplies. Milk and child nutrition support constituted approximately 3.5 percent of the overall subsidy support at KD11.2 million. Support for specific construction materials comprised 58.6 percent of the total spending to reach KD184.5 million.

Empowering working women is part of social responsibility



ecognizing the pivotal role that women $oldsymbol{\Gamma}$ play in various social and economic fields, $\,$ such as personal leadership embodiment, the recruiting, training and retaining women in the workforce is pivotal to the success of companies, and the overall development of the country. Acknowledging this need, Boubyan Bank has implemented various sustainable and institutional inclusion policies aimed at empowering women in the bank's workforce.

Emphasizing this policy, General Manager of the Human Resources Group at Boubyan Bank, Adel Al-Hammad, explained that the bank held the view that empowering women in leadership roles is an integral aspect of its social responsibility strategy.

Elaborating further, Al-Hammad said that the bank's 'Empowering Women Leaders' program aims to enhance the skills of national female professionals, equipping them for the highest leadership roles. The training focuses on effective management, practical tools, and methods to achieve success, providing a conducive work environment and opportunities for excellence, career advancement, and a balance between work and personal life.

He added that the program addresses topics development of a strong identity, fostering ways of interaction, and managing work team dynamics to establish a climate of constructive trust and collaboration.

Boubyan Bank has taken significant measures to increase the representation of women in senior positions. With women constituting 26.5 percent of the bank's workforce, currently five women from the national cadre hold top positions in senior management across various departments, said the HR chief.

Al-Hammad highlighted Boubyan Bank's commitment to equality, providing training opportunities and equivalent job tasks for all Kuwaitis, regardless of gender. The bank recorded a high training rate for female employees in 2022 and 2023, encompassing leadership programs, professional certificates, and specialized training opportunities.

He added that the bank's future vision aligns with activating gender diversity in job tasks within the work environment, fostering creativity and innovation.

Survey reveals career preferences in the Middle East

recent survey on career preferences and experiences of professionals in Kuwait and the wider Middle East area found that 74.4 percent of respondents believe that a diverse and inclusive workplace is important when considering a job opportunity, highlighting the significance of diversity and inclusion in organizations across the Middle East.

The 'Middle East Career Insights Poll 2023', conducted by Bayt.com a leading job site in the region, indicated that with more professionals recognizing the inherent value of diverse and inclusive workplaces, companies embracing diversity will create an environment that fosters innovation and drives success.

"Workplace diversity is not just a buzzword; it is a fundamental pillar of successful organizations in the Middle East, said Ola Haddad, Director of Human Resources at Bayt.com. The survey also sheds light on various other aspects of the job market, including job search strategies, loyalty to current employers, work-life balance assessment, and more.

When it comes to staying updated about industry-specific job openings and trends, 55 percent of respondents rely on



job search websites, making them the most popular source of information. On the other hand, 15.6 percent attend professional networking events, while only 3.7 percent depend on industry-specific publications.

The poll findings indicate that career growth opportunities (29.85%) and worklife balance (24.4%) are among the top priorities. Competitive salary (21.1%) and positive company culture (20.4%) also play significant roles in attracting employee loyalty. Employers who prioritize these

aspects can enhance employee satisfaction and retention.

Regarding competitiveness of the job market in the Middle East , the survey showed that 72.9 percent of respondents believe that the job market has become significantly more competitive, while 18.6 percent see a slight increase in competition. The job market is also witnessing a significant shift as professionals display a growing willingness to relocate for better career prospects.

A majority of respondents (62.2%) are willing to relocate anywhere, showing a high level of mobility within the region. Meanwhile, 21.5 percent are willing to relocate within the Middle East, and 12.2 percent state that they would only consider relocating for exceptional opportunities.

Job seekers need to equip themselves with relevant skills and stand out from the competition to secure lucrative career Regarding opportunities. upskilling and further education, 80.1 percent of professionals expressed a high interest in advancing their careers through these means, while only 1.4 percent show a lack of interest. When it comes to professional networking, employment-focused social media platforms emerge as the leading platform, with 79.5 percent of respondents using them to enhance their network. Online Networking Groups and Industry Conferences were also mentioned, at 7.1 percent and 3.6 percent respectively.

Finally, the survey revealed the top challenges facing job seekers in the Middle East today, with 36.6 percent believing that lack of suitable job opportunities is their main hurdle, followed by 24.2 percent who highlighted visa and work permit issues.

PAM to implement part-time work in private sector

 $P^{\text{ublic Authority for Manpower (PAM) is reportedly developing the } necessary framework, including controls and work-mechanism, to$ implement the government decision allowing workers to undertake part-time work in the private sector, includi.

Sources at PAM said that the entire process would be automated and conducted in line with the programs already approved by the



Authority. This will ensure services applications for workers and employers alike, and will be accessible through the Authority's website. According to the source, a special form will be made available on the Authority's website. Workers will need to fill out this form and upload it online, which will then require approval from

both the first and second employer. The aim of this process is to streamline the approval process and ensure transparency.

The Authority is also said to be working on other controls and work conditions related to the decision, and once it is finalized it would be submitted to the Minister of Interior for approval.

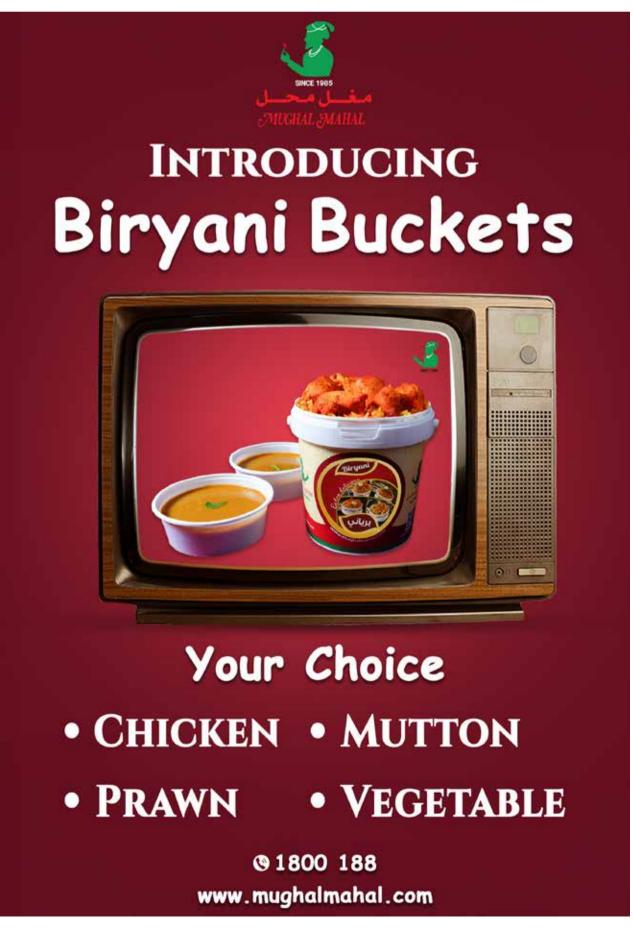
Surge in registering companies of special nature

lince the issuance of Decision No. 82/2023 in May last year, which allowed Of or specific activities to be practiced through the 'companies of special nature' scheme, the number of applications for registering to engage in these activities have increased phenomenally.

In May 2023, Minister of Commerce and Industry and Minister of State for Youth Affairs, Muhammad Al-Aiban had issued the decision regulating 109 activities eligible for practice through 'companies of a special nature'. Subsequently, Resolution No. 86/2023 outlined 54 additional activities, while Resolution No. 170/2023 introduced 50 more activities, and Resolution No. 176/2023 added five additional activities to the list of activities of a special nature in the country.

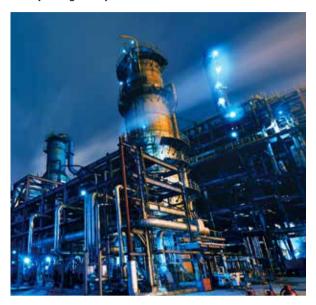
The decision stipulates that companies of a special nature can be registered without the need for a physical commercial establishment, or obtaining approval from any other regulatory body. These companies can be operated independently by the owner, without hiring any employees. This exemption from requirements outlined by the Commercial Shop Licensing Law, is designed to facilitate and support innovative projects by individuals.

Official data released by the ministry of commerce and industry reveal a significant increase in applications submitted through the ministry's Single Window Department for the establishment and licensing of companies of special nature. As of October 2023, the total number of applications reached 1,862, with October 2023 alone witnessing 839 applications. The data also showed that of the total applications received till September, 351 were approved while 672 were rejected.



Kuwait aims to become major gas exporter

Tuwait is making rapid progress in its efforts to become a major player in the production and export of natural gas. The country is no longer content with just being a spectator in the regional energy race but aims to meet the increasing demand for gas both locally and globally.



Kuwait recently achieved a significant milestone in its strategy for producing free non-associated gas, with Kuwait Oil Company reporting that it had successfully commenced operations at the Jurassic production stations, JPF 4 and JPF 5, located in northern Kuwait. These stations are adding 320 million cubic feet per day of associated gas and 100,000 barrels per day of light oil to Kuwait's gas production capacity.

Gas production in Kuwait is set to increase as part of the country's strategy to achieve self-sufficiency in gas and become an exporter. Joining the exporters' club will also have a positive impact on Kuwait's economy, especially given the current rise in energy prices, The strategy aims to reduce the costs of importing gas from abroad, and is in line with the country's 2040 strategy to meet growing energy demand. Kuwait's Petroleum Corporation and its subsidiaries are also focused on utilizing gas resources for energy production.

Although the implementation of gas projects is a complex process, requiring continuous work and high efficiency, Kuwait Oil Company has successfully completed the construction of the Jurassic gas production stations. The source revealed that the operation of the Jurassic production stations, JPF 4 and JPF 5, faced a delay of 40 months due to approval delays from the Central Agency for Public Tenders. These delays had a significant impact on the schedule and cost of completing the stations.

In this regard, it is noteworthy that Kuwait and Saudi Arabia signed a memorandum of understanding to develop the Dorra field, with the goal of producing one billion standard cubic feet per day of gas and 84 thousand barrels of condensate per day, divided equally between the two countries.



KSE positive performance propels market value to KD43 billion

 $K^{ ext{SE}}$ maintained its momentum, reaching record levels and gains in the first nine sessions of the current year. The positive performance of the Kuwaiti stock market in 2024 has propelled the market value to 42.6 billion dinars at the end of the latest trading session.

Over the past nine sessions, the market value added approximately 2.3 billion dinars in gains, marking an increase from 40.26 billion dinars at the end of the previous year. The rates of liquidity flowing into the market have surged, with the daily average reaching 57 million dinars, compared to 43 million dinars in 2023. The total value of market trading during this period amounted to 514 million dinars, with 155 million dinars in the first week and 359 million dinars in the completed week, reports Al-Anba daily.

Trading volumes have seen an uptick, with 2.2 billion shares being traded since the beginning of the year. Notably, trading has been concentrated around banking stocks such as KFH and Watani, as well as various sectors including Arzan, Kuwait Real Estate, IFA and Sanam.

The continuous upward trend in the stock market is fueled by optimism among traders. Several positive factors contribute to the market's activity,

- Anticipation of favorable year-end results, with expectations of continued profit growth in the last quarter, similar to the achievements of the first nine months of 2023.
- Positive outlook for global financial markets, supported by expectations of interest rate cuts by the US — Federal Reserve and central banks worldwide.
- Seizing opportunities after the decline in many stocks, especially blue-chip stocks, making them more attractive to investors.
- Increased foreign interest in primary market shares, evidenced by a significant rise in ownership value, reaching 5.2 billion dinars by

Investment circles are eagerly anticipating the disclosure of the annual results of the market division after the upcoming Sunday trading session. This annual review is conducted by the stock exchange to determine the stocks listed in each of the three markets, following established rules and regulations.

Al Muzaini's Transfer and Win Campaign

Transfer your money through Al Muzaini or use any of L Al Muzaini Exchange's services for a chance to win incredible prizes worth over \$30,000!

Al Muzaini Exchange, the number one money exchange in Kuwait since 1942 announces its "Transfer and Win Campaign 2023". Participants of the campaign must transfer money through Al Muzaini either by visiting any of Al Muzaini's branches and self-service kiosks, transferring online through the website and by using the Al Muzaini application. Utilizing services such as Foreign Currency Exchange, Western Union, Bill Payments, Visa Direct and Bank-to-Bank transfers for the purpose of transferring money shall make customers eligible to win with Al Muzaini.

- The exciting Grand Prize for the campaign is \$10,000.
- The campaign lasts from December 26, 2023 to February 29, 2024
- There shall be daily winners winning cash prizes of \$100, weekly winners winning cash prizes of \$1000 and monthly winners winning cash prizes of \$2500 each month until the end of the campaign.

Mr. Hugh Fernandes, the General Manager of Al Muzaini said "We are extremely excited to bring forth our Transfer and Win Campaign and wish to reward our customers for performing transactions with us and for giving us the chance to serve them. There are lots



of prizes to be won and the campaign spans the length of two months. We will be immensely happy to see you winning big with the Al Muzaini Transfer and Win Campaign.'

Al Muzaini, always near you!

Mongolia and Kuwait seek to boost relations further

CONTINUED FROM PAGE 3

"In addition five Kuwaiti meat importing companies expressed their interest to buy chilled and frozen Mongolian grass-fed sheep meat from Mongolia and signed initial contracts with seven Mongolian meat exporting companies during the business forum back in March 2023. A delegation from three Kuwaiti companies also visited Mongolia in November 2023 and went on a site tour of the Mongolian meat factories and companies. We are expecting the first import of Mongolian meat to Kuwait to be in the first quarter of 2024."

Turning to tourism in Mongolia and establishing air links between the two countries, the ambassador disclosed that the civil aviation authorities of Mongolia and Kuwait have finalized the Air Service agreement that was initialed in February 2023, and both sides were working on signing the agreement during a high level visit in the near future. He added, "In terms of tourism cooperation, our two governments are working on finalizing an agreement on framework for cooperation.'

Pointing to touristic attractions in his country, Ambassador Sergelen said: "Mongolia, a country with its nomadic heritage and culture, stands as a testament to the harmonious coexistence of age-old traditions and vast, untouched landscapes. From the dunes of the Gobi Desert to the dazzling streets of our capital Ulaanbaatar, Mongolia offers a travel experience that is both enriching and unique.

"The Government of Mongolia has announced the 2023-2025 period as special tourism years to visit Mongolia, and launched the 'Welcome to Mongolia' campaign. As a result, the Lonely Planet nominated Mongolia as one of the top 10 destinations to visit in 2024. The Embassy is planning to organize a group trip from Kuwait to Mongolia, in coordination with the Ministry of Environment and Tourism of Mongolia and Mongolian tourist companies."

Asked about cultural exchanges between the two countries, the envoy detailed, "Last year the embassy, in coordination with Kuwait's

cooperation, which will give us the legal National Council for Culture Arts and Literature, organized a 'Mongolian Days' event on 8 and 9 March, which was well received by the public. Within the framework of Mongolian Days event, the Mongolian Great Theatre of National Art with its 30 members, including singers, dancers and musicians performed for the first time in Kuwait at the Abdulhussain AbdulRedha Theater.

'The exceptional performance entitled 'The Legend of the Nomads' provided insight into Mongolian nomadic history and culture. Also, on the occasion, an art exhibition of our famous artists was displayed, as was a fashion show featuring top Mongolian models in traditional and modern clothing. In addition, there was a great performance by Mongolia's famous opera singer.

"The embassy also organized a 'Welcome to Mongolia' reception at Grand Hyatt Hotel, where our artists performed Mongolian dance and music, while models showed traditional and modern clothes, in addition to an art display of paintings. The events were highly appreciated by the people of Kuwait and also by members of the diplomatic corps.

"In order to further strengthen people to people ties, the embassy has also been advertising Mongolia to Kuwaitis through its social media pages. Meanwhile, in Mongolia, the country's TV channels and daily newspapers have been advertising Kuwaiti culture, tradition, and about Kuwait in general to the Mongolian public. As a result, the number of people visiting Kuwait and Kuwaitis traveling to Mongolia increased. We hope that the numbers will double in 2024."

Rounding off the interview, Ambassador Sergelen said: "The current focus of the embassy is on starting the export of Mongolian meat to Kuwait, signing of the air Service agreement and the tourism cooperation agreement, promoting Mongolian tourism in Kuwait, and holding high level visits and intergovernmental meetings.

"I would also like to take this opportunity to invite all Kuwaiti citizens and residents to visit my beautiful country and experience the nomadic tradition, culture, and hospitality, as well as the breathtaking nature of Mongolia.

"Welcome to Mongolia."

Interior minister streamlines domestic worker recruitments



Tn a bid to alleviate the suffering of citizens Lwho face difficulties in hiring domestic workers through private recruitment offices, the government is keen to strengthen the services offered by the state's Al Durra Company.

Last week, First Deputy Prime Minister and Minister of Interior, Sheikh Talal Al-Khaled, requested Foreign Minister Sheikh Salem Al-Abdullah to help address challenges faced by AlDurra Company in recruiting domestic workers, by coordinating with Kuwaiti embassies in countries exporting domestic workers.

The goal is to overcome obstacles and expedite the recruitment process, thereby meeting the domestic market's demand for such workers and serving the needs of citizens.

Additionally, Sheikh Talal Al-Khaled instructed Al-Durra Company to introduce a user-friendly service on its website, which would enable citizens to complete the processes of hiring domestic workers online, without the need to visit the company's head office. This would streamline and ease the process of hiring domestic workers.

Meanwhile, it was reported that a joint committee of the Ministry of Interior, the Public Authority for Manpower, and the Ministry of Commerce conducted inspections on private domestic worker recruitment offices in the Farwaniya and Jleeb Al-Shuyoukh regions on the third day of implementing the ministerial decision on domestic worker recruitment prices.

The inspections revealed 15 violations related to 'violating contracts' and led to the arrest of nine offices lacking K-Net devices. Legal actions will be taken against these offices to address the non-compliance.



Kuwait to experience coldest period of the year

The Al-Ujairi Scientific Center declared the conclusion of the Al-Murabbaniyah season on January 14th, marking the transition into the upcoming "carpfish" season, which is renowned as the coldest period of the year.

Starting next Sunday, the center expects the climate to take a chilling turn. Providing further information, the center explained that the Shabat season spans over 26 days annually, commencing on January 14th. The season is divided into two distinct phases: "Al-Na'em" and "Al-Baladah," each lasting for 13 days. During the first half, known as the "bliss" phase, temperatures drop significantly with cold mornings, increased frost, and gusty

New flights to Antalya and Trabzon in the SunExpress winter 2023 and summer 2024 flight schedules



unExpress, a joint venture of Lufthansa and Turkish Airlines, will operate its inaugural flights from Kuwait International Airport (KWI) to Trabzon International Airport (TZX) on February 8, 2024 and to Antalya International Airport (AYT) on April 4, 2024. The airline, which has been awarded "Best Leisure Airline in Europe" by Skytrax, will offer 2 weekly flights to Trabzon from Winter 2023 onwards and to Antalya during 2024 summer season.

"With the best leisure airline in Europe, who wouldn't want to get on those flights to Antalya and Trabzon? Our vibrant and diverse home city offers everything that makes for a successful holiday: great hospitality, fascinating culture, crystal-clear water, beautiful beaches, excellent cuisine, and unbeatable value for money. In Trabzon, our guests can explore cities rich cultural heritage from the oldest ages of history with its semi-tropical climate at the Black Sea Coast Region" says Peter Glade, SunExpress Commercial Director.

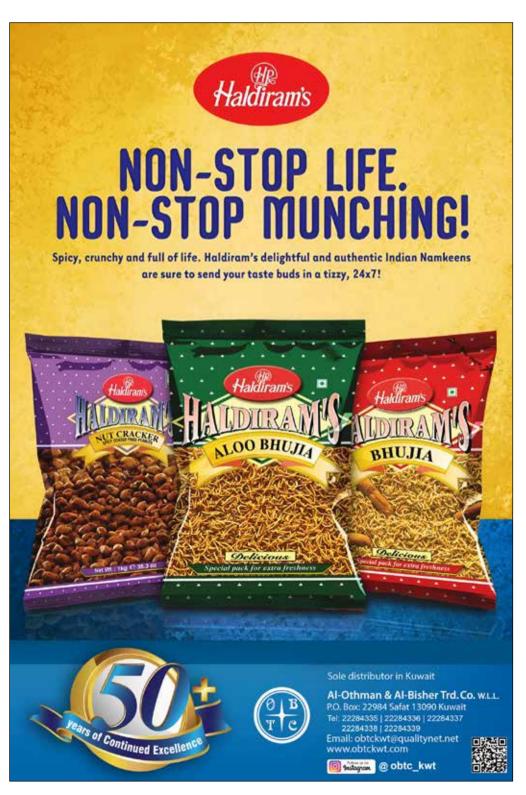
Trabzon will be served with 2 weekly flights on each Monday and Thursday starting from February 2024 until the end of October 2024 and Antalya with 2 weekly flights on each Thursday and Sunday starting from April 2024 until the end of October 2024. SunExpress will also offer several connections from Kuwait via Antalya to destinations across Europe.

Caesars Int'l Travel to fly SunExpress

SunExpress has chosen Caesars Int'l Travel Co.W.L.L as its General Sales Agent (GSA) in Kuwait. Caesars Int'l Travel will be responsible for sales and marketing at the Kuwait International Airport. You can contact Caesars Int'l Travel at Al Jawhara Tower, M2, Ali Al Salem Street, Al Salhiya, Kuwait, Email: sunexpress. sales@ctgkwi.com, Telephone +965 22260290.

About SunExpress

Established in Antalya in 1989 as a joint venture of Turkish Airlines and Lufthansa, SunExpress acts as a tourism ambassador between Türkiye and Europe with its 30 years of experience and leisure airline expertise. SunExpress flies to more than 175 destinations in 30 countries and carries more than 10 million passengers every year. With its headquarters in Antalya and Frankfurt and bases in Izmir and Ankara, SunExpress has more than 3500 employees and a fleet of 66 aircraft. SunExpress named the 'Best Leisure Airline in Europe' in the latest global survey by Skytrax. You may find detailed information about SunExpress at www.SunExpress.com.



EXCLUSIVE to THE TIMES KUWAIT

Harmonizing Global Green Taxonomies



By Makhtar Diop

Makhtar Diop is Managing Director of the International Finance Corporation.

Pootball (soccer) has been around for centuries, but it did not always look like the game we know today. It did not even look the same across geographies. In some places, players were allowed to use their hands, while in others, goals did not have a crossbar; still elsewhere, pushing an opponent was allowed, though pulling was not. But in the mid-nineteenth century, the rules were standardized, so that teams from different places could compete against one another. With that, football began to expand and develop rapidly. Today, it is the world's most-played sport.

Just as shared rules enabled football's development, a single set of guidelines would accelerate progress in the fight against climate change. The logic is straightforward. Given the scale of the climate challenge, addressing it requires action at all levels of society, government, and the economy. If such a huge number of actors are to work, worldwide, toward a common goal, often through direct collaboration, everyone must operate according to the same principles, define terms and concepts in consistent ways, and measure progress using established metrics.

This is particularly important for the financial sector. If investors are to have enough confidence and clarity to direct trillions of dollars toward the highest-impact projects, they need access to a shared set of criteria for assessing the "green credentials" of assets and activities.

At the country level, "green taxonomies" are already having an impact. The year after China published its first "project catalogue" for green bonds in 2015, the value of its green-bond market



surged from zero to \$40 billion. But there is a limit to what national action can achieve. Since different jurisdictions define their own standards and metrics, what qualifies as "green" in one country might still be considered "brown" in another, creating uncertainty for investors and undermining their confidence.

The lack of a single shared green taxonomy also fragments the market, creating opportunities for firms to circumvent rules and regulations aimed at boosting sustainability. For example, if a government imposes strict rules on carbon emissions, companies might simply move their high-emitting activities abroad or start importing carbon-intensive goods manufactured in more lenient jurisdictions.

Of course, it would be unrealistic – and unfair – to expect all countries to adopt a single green taxonomy immediately. Each country has its own needs and priorities, faces particular economic and development challenges, and possesses a

unique set of resources with which to achieve its goals. Their green taxonomies must reflect this. For example, Colombia places special emphasis on agriculture, livestock, and forestry – economically vital sectors that are also leading sources of greenhouse-gas emissions and major drivers of environmental degradation.

Again, football can offer some clarity here. While the rules are the same everywhere, leagues around the world operate in different ways, reflecting local conditions. They have different budgets, calendars, and rules for promotion and relegation of teams from one division to another. Ultimately, however, players can move across leagues, and teams can compete across jurisdictions, with relatively little friction.

This kind of interoperability must be built into national green taxonomies, to enable green capital to flow across borders at scale. To this end, policymakers and regulators must identify common design features, align impact metrics and accounting standards, and embrace an "adopt or adapt" approach to the rest, borrowing templates or criteria from others and adjusting as needed.

Several initiatives aimed at supporting this process are already underway. In 2021, the International Financial Reporting Standards Foundation created the International Sustainability Standards Board, an independent, private-sector body that develops and approves sustainability reporting standards. The G20 has defined six high-level principles to guide jurisdictions as they develop their own approaches for aligning investments with sustainability goals, thereby helping to ensure comparability and interoperability. And the Sustainable Banking and Finance Network provides its 86 members in 66 emerging-market countries with toolkits and progress reports.

Once national rulebooks are created, regional harmonization must follow. Here, too, positive steps are already being taken. The Working Group on Sustainable Finance Taxonomies for Latin America and the Caribbean – with the support of the International Finance Corporation and other multilateral institutions – is helping countries in the region align their frameworks, such as by establishing guiding principles and designing objective classification systems for sectors and activities. Regional forums like Asia-Pacific Economic Cooperation (APEC) should also step up, incorporating the harmonization of green taxonomies into broader integration plans.

The final step is global harmonization, which the G20 is well-positioned to lead. Brazil should attempt to kick-start the process during its presidency of the group this year, setting the stage for further progress under South Africa's leadership in 2025. Unlike the evolution of football – which took over a century and a half – we do not have the luxury of time. To tackle climate change, a global green taxonomy cannot come soon enough.

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Global economic growth to slow further in 2024

CONTINUED FROM PAGE 1

Those rates, however, would still be far below the 3.1 percent average of the 2010s. Global trade growth in 2024 is expected to be only half the average in the decade before the pandemic, and per capita investment growth in 2023 and 2024 is expected to average just 3.7 percent, barely half the average of the previous two decades.

In advanced economies, growth is set to slow to 1.2 percent this year from 1.5 percent in 2023 on continued high interest rates and softening labor market. Meanwhile, in developing economies the medium-term outlook appears bleak due to slowing growth in most major economies and sluggish global trade. Constrained by the tightest financial conditions in decades and global interest rates that remain stuck at four-decade highs, developing economies, especially those with poor credit ratings, face steep borrowing costs.

In low-income countries, which witnessed a disappointing performance last year, growth could reach 5.5 percent in 2024, but this would still be weaker than previously expected. By the end of 2024, people in nearly one out of every four developing countries and about 40 percent of low-income countries will still be poorer than they were in 2019.

In low-income countries, which witnessed a disappointing performance last year, growth could reach 5.5 percent in 2024, but this would still be weaker than previously expected. By the end of 2024, people in about one out of every four developing countries and about 40 percent of low-income countries will still be poorer than they were in 2019.

In the Middle-East and North Africa (MENA) region, assuming the ongoing conflict in the area does not escalate, growth is expected to pick up to 3.5 percent in

2024 and 2025 — 0.2 and 0.5 percentage point higher, respectively, than previously projected, and significantly higher than the 1.9 percent growth registered in 2023. But this growth would vary across the region, being more visible in the oil exporting countries and less so in other places. Growth in Gulf Cooperation Council (GCC) countries is forecast to rise to 3.6 percent in 2024 and 3.8 percent in 2025.

Among the GCC states, growth would be slowest in Kuwait with the country's economy set to experience a growth of 2.6 percent in 2024 before ticking a point higher to 2.7 percent in 2025. Although this marks a significant increase compared to the 0.8 percent growth expected in 2023, it is still well below the regional average. Saudi Arabia is anticipated to achieve an economic growth rate of 4.1 percent in 2024 and 4.2 percent in 2025, while the UAE's economy is expected to grow by 3.7 percent and 3.8 percent during the same periods. Bahrain, Oman, and Qatar, are also expected to see positive economic growth.

The predicted GDP growth for Kuwait in the 2024-25 period is based on several factors, including higher oil prices and production, stronger liquidity ratios, robust non-oil activity, and sound monetary policies. Additionally, the formation of a new government in Kuwait, which is expected to focus on economic development and major projects, supports the optimistic outlook.

However, the ongoing conflict in the

Middle-East and the likelihood of its spillover to neighboring countries adds an element of uncertainty to growth forecasts for the Middle-East and North Africa (MENA) region. Additional risks to regional growth expectations include geopolitical challenges, fiscal policy uncertainties, and exposure to natural disasters and climate-change related repercussions.

In particular, volatile fiscal policies reduce output growth by exacerbating macroeconomic instability. Fiscal volatility is intimately related to procyclic policies. [To refresh Economics 101: Economic indicators such as Consumer Price Index (CPI), Unemployment figures, or Gross Domestic Product (GDP) can have one of three different relationships to the economy — Countercyclical (indicator and economy move in opposite directions); acyclic (indicator has no relevance to the state of the economy); or procyclic (indicator and economy move in tandem; growing when the economy grows and declining when the economy declines.]

Studies show that fiscal policy in developed countries is either acyclical, or countercyclical, while in developing countries it tends to be more procyclical. For example, in many developed countries, governments tend to increase public spending or cut taxes during an economic slowdown, thereby reducing economic fluctuations and ensuring macroeconomic stability. In contrast, many developing countries follow a procyclical fiscal policy — increased spending during good times and cutting back when the economy slows down.

Developing countries often follow procyclical policies due to limited access to financing during

economic slowdowns, or from profligacy during economic upswings that deplete state treasuries. This places governments in the unenviable position of raising taxes, cutting spending or shelving productive projects during economic downturns.

Also, in some countries, governments may not be able to withstand political pressure to open the purse-strings during economic upturns, leading to fiscal imprudence and non-productive expenditures. Procyclical fiscal policies can be detrimental to economic growth, both in the short- and long-term. It increases fiscal volatility and negatively impacts macroeconomic stability, in addition to austerity measures during slowdowns affecting the most vulnerable groups in society.

The World Bank report points out that commodity exporting economies in the developing world are especially prone to debilitating boom-and-bust cycles and procyclical fiscal policies that drag down growth potential. The Bank noted that these countries could benefit by enacting strong fiscal policy frameworks to regulate government spending, adopting flexible exchange-rate systems, and avoiding restrictions on international movements of capital, among others.

In Kuwait, the hope among many people is that with an eminent economist at the helm as premier, and an imminent new cabinet, the country could witness a new era of economic revival that enables the country to leverage its ample fiscal reserves and human resources to grow sustainably and to realize its full economic, social, and political potential in the years ahead.



Phu Quoc

In Viet Nam, the image of Phu Quoc island is often associated with sparkling beaches, seafood feasts, and indigo sunsets. Despite its popularity, the island still retains much of its original charm, attracting tourists from around the world every year. And the best part about Phu Quoc is that international tourists can visit here for up to 30 days with no visa needed.

Heritage of the sea

Phu Quoc Island welcomes all types of travelers, from luxury seekers to young parents to college friends, with a sea-breeze atmosphere that cannot be mistaken for anywhere else.

The island's northern part is covered by forest and there exists one of the most protected and diverse national parks. There will be spots for activities such as camping, bird-watching, and hiking, welcoming outdoor lovers to enjoy.

During the day, you may like to visit one of the island's many fishing villages to see daily life up close. The villages are easily accessible, and the docks are dotted with brightly painted boats that will make you feel like you're in a Phu Quoc postcard.

Phu Quoc is also famous for its fish sauce, and it's well worth touring a fish sauce factory to see how this fermented treasure is made. The island has a long tradition of creating a premium type of fish sauce that's used not only in Vietnam but around the world.









A world of joy

If you're coming to Phu Quoc with your family, you'll be happy to know the island is perfectly set up with activities for all ages.

In the theme parks, you can immerse yourself in the aweinspiring architecture inspired by the splendors of Europe, where vibrant commercial streets meticulously recreate renowned global entertainment hubs. At the same time, you shall be able to witness the grandeur of Vietnamese culture through magnificent festivals and captivating shows that showcase the rich heritage of this vibrant nation.

Another way to experience the island is to take the 15-kilometer cable car to Hon Thom to play on the slides and rides of the water park, then tour through the Safari back on the main island. The zoological park in Phu Quoc is the largest in Viet Nam, doing important conservation work to protect hundreds of plant and animal species, including rare and endangered ones.

Phu Quoc also offers an abundance of world-class luxury resorts. Here you can wear yourself out hiking and swimming during the day, then come home to pool-side spa services and mixologist-perfected cocktails at upscale bars. The island's resorts have won international awards for world-class style and services;



in fact, Phu Quoc hosted the Gala Ceremony for the World Travel Awards in 2019.

With all this fun awaiting travelers from East to West, be sure to visit Phu Quoc island before the rainy season in July. You will surely enjoy every moment in this wonderful pearl of Southern Viet Nam.

- Images from Viet Nam Tourism Board, VinPear





EXCLUSIVE to THE TIMES KUWAIT

AI Revolution in Climate Science



Giulio Boccaletti

Scientific Director of the Euro-Mediterranean Center on Climate Change, he is the author of Water: A Biography.

e have just witnessed the start of a paradigm shift in earth science. A paper published in Nature in July showed that a neural network (artificial intelligence) predicted weather better than the European Center for Medium-Range Weather Forecasts, which has the world's most advanced forecasting system. Then, in November, Google's DeepMind announced that its weather-forecasting Al had produced even stronger predictions.

The traditional approach to weather forecasting is to use observations taken at a point in time as initial conditions for equations based on physical principles. By contrast, an Al will ingest data collected over long periods of time and then 'learn' the dynamics that traditional equations must describe explicitly. Both the traditional and the Al-based method rely on supercomputers, but the Al has no need for formally developed



theories. Weather forecasting matters; it determines when and where planes fly, which routes ships take, and helps manage all manner of civilian and military risks that come with a variable environment. While these are still relatively early days for Al applications in this field, and much still needs to be worked out, as in other sectors, Aldriven forecasting may displace skilled labor, since

neural networks do not require knowledge of dynamical meteorology (the authors of the Nature paper are engineers with no such background). But the implications hardly stop there.

Writing about the problem of statistical forecasting in the 1950s, Norbert Wiener, the father of cybernetics, pointed out that if we already know the history of a system that exhibits certain properties, adding knowledge of the equations that govern its dynamics will not necessarily improve our predictions. Wiener was making a largely theoretical point, because limitations in observations, data, computing power, and other factors allowed for nothing else at the time. But now, his argument strikes at the heart of the matter, capturing the broader implications of recent advances in Al.

Just in the last few years, we have vastly increased our observational data of Earth. Between 1993 and 2003, just 25 Earth-observing satellites were launched into space; but between 2014 and 2022, the number shot up to 997, bringing the total fleet of Earth-observing and other satellites currently in orbit to some 7,560. With a vast space infrastructure that beams down data on just about anything — from plant growth, water vapor, and infrastructure installations, to infrared radiation, canopy height, and measurements of the state of the atmosphere — we have entered a golden age of Earth observation. This growing archive of data describes almost everything that both we and nature do on Earth. When combined with new Al models and our ever-expanding computational infrastructure, it could upend our understanding of the planet and our role on it.

Consider climate change. For the last 40 years, humanity's response to the climate crisis has been guided by the Intergovernmental Panel on Climate Change, a scientific body that is compartmentalized by discipline: the physical sciences use large Earth system models that have much in common with those used in weather forecasting, while, separately, economists and geographers quantify the impact and focus on the role of adaptation and mitigation policies on our societies. This division of labor — reflected in the IPCC's tripartite working groups — corresponds with a division in methodologies. While physicsbased Earth system models follow from firstprinciples equations, economists and impact modelers use a portfolio of empirical methods and irreducible theories.

Al could disrupt all of this. While it is unlikely to supplant traditional climate modeling completely — our observational record is not long enough to offer a statistically abundant picture of climate phenomena over the centuries — it is already playing an important role in the field.

More to the point, what matters most to us is

not how the climate system behaves but how it affects the world we and other creatures live in. Al models, being agnostic to any current scientific theories or disciplinary paradigms, could help us infer and possibly predict how biomass on the landscape changes over time. That, in turn, could improve how we manage forests and agriculture, construct diagnostic tools and early-warning systems for fire or flood risk, understand how energy economics connects to these changes, or predict their effects on the broader economy and even on climate negotiations. And all of this would come on top of how Al can accelerate the transition to a low-carbon economy.

Of course, Al is no substitute for scientific understanding. Science will remain a quintessentially human pursuit, where the value lies more in asking the right question rather than just extracting an answer from data. Nonetheless, we should try to make the most of the epistemological shift that the rise of Al heralds. It can help us identify new observable phenomena that have thus far escaped disciplinary lenses. It can assist us in managing landscape-scale systems that are too complex to be susceptible to theorization. It is the ultimate exploratory instrument to break down disciplinary boundaries.

This shift also poses a profound policy challenge. The infrastructure driving it — Earthobserving satellites and computation — is increasingly controlled by the private sector. The single largest owner of Earth-observing satellites is a company called Planet Labs. High-tech companies, from IBM and Nvidia to DeepMind and Huawei are at the frontier of machine learning. With access to unparalleled capital and resources, these companies can easily outcompete most public research centers. Some can be quite philanthropic, but they ultimately have no obligation to deliver public goods or to worry

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Of course, AI is no substitute for scientific understanding.
Science will remain a quintessentially human pursuit, where the value lies more in asking the right question rather than just extracting an answer from data.

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about equitable access to their infrastructure.

As we grapple with the implications of the digital revolution and a natural environment that is changing before our eyes, Al may hold the key to unraveling some of the complexity that has exceeded our comprehension. But with the means of research firmly in private hands, policymakers will need to be vigilant to ensure that these new tools provide public goods, rather than just private benefits, and that the questions being asked of them produce answers that inform countries' legitimate policy aims.



Art Dubai announces programs and partnerships for 2024 edition

rt Dubai announced on 11 January 2024, the details of the programming and partnerships for its 17th edition, which will take place at Madinat Jumeirah, Dubai from 1 to 3 March, (previews on Wednesday 28 and Thursday 29 February).

Highlights will include:

- A series of newly commissioned performances on themes of healing, hope and the power of art in challenging times.
- The 17th edition of Art Dubai's flagship summit, the Global Art Forum, examining the relationship between extreme weather and extreme change, organised by Commissioner Shumon Basar and Curator Nadine El-Khoury.
- The largest talks programme of any international art fair, including a series of Modern and Collector Talks, presented in partnership with Dubai Collection, the first institutional collection for the city of Dubai.
- The largest edition of the A.R.M. Holding Children's Programme, devised by Goa-based artist Sahil Naik, launching at the fair before expanding to over 100 schools and 15,000
- The premiere of 'Heart Space', a major new commission by digital artist Krista Kim, presented by Julius Baer as part of their global NEXT initiative.

Art Dubai's 2024 will feature an expanded programme of collaborations with local and international partners, underscoring the fair's position as the meeting point for the Global South's creative communities and its mission to redefine the role an art fair can play in supporting local and regional ecosystems.

Programme highlights will include major new commissions and premières by internationally renowned artists and the most extensive education, talks and thought-leadership programme of any international art fair.

Since its founding, Art Dubai has been committed to working with institutional and commercial partners to develop new commissioning models and long-term innovative, high-impact cultural programming.

These collaborations place particular emphasis on education and digital technologies, which are cornerstones of Art Dubai's extensive year-round programming; they play a crucial role in shaping the future of Dubai's cultural infrastructure, as well as responding to some of the most important issues of our time.

Pablo del Val, Art Dubai's **Artistic Director commented:**

"Art fairs like Art Dubai have a responsibility to be far more than commercial platforms and Art Dubai continues to play an important institutional role in this region's cultural ecosystem, supporting artists, scholarship, thought-leadership."

"Our programme this year reflects the increasingly diverse and multicultural communities of our home city, providing more opportunities than ever for artists from across the Global South."

"Dubai is a place of relentless reinvention, possibility and opportunity, and these commercial and institutional partnerships are central to all our activity, supporting our world-class noncommercial programmes."

Art Dubai's Executive Director Benedetta **Ghione commented:**

"Art Dubai Group is committed to laying foundations for a thriving cultural and creative ecosystem, inspired by and responding to our home city of Dubai. The cultural scene here is maturing rapidly and we are proud of the role we play in engaging and inspiring audiences of all ages and backgrounds, and in supporting the next generation of cultural professionals."



"Our year-round education, scholarship, and thought-leadership programmes, developed alongside our long-term partners, create significant opportunities for people from all over the world to build careers in the creative industries in Dubai."

Art Dubai is held under the patronage of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. The event is held in partnership with A.R.M. Holding. It is sponsored by Swiss Wealth Management Group Julius Baer. Art Dubai's exclusive high jewellery and watch partner is Piaget. Culturally driven lifestyle developer HUNA is a partner of Art Dubai. The Dubai Culture & Arts Authority (Dubai Culture) is the fair's strategic partner. Madinat Jumeirah is the home of Art Dubai.

Full speaker line-ups and conference session timings will be released in early February. View the list of galleries participating in Art Dubai 2024 here.

Thought-leadership

In the 21st century, extreme weather - from floods, droughts and storms to smog - is no longer limited to "the developing world," but is now nappening everywhere. Meanwhile, the threat of extinction elicits urgent innovations and imagination.

Over two days, Art Dubai's flagship transdisciplinary summit the 'Global Art Forum' will present the cultures, technologies, sciences and initiatives around extreme weather and extreme change with many of the world's most compelling artists, architects, academics, curators, and

Entitled "Whether or Not," Global Art Forum 17 is organised by Commissioner Shumon Basar and Curator Nadine El-Khoury, and will take place on 29 February and 1 March 2024. Speakers contributing to the forum include Dr. Stephanie Rosenthal, Director, Guggenheim Abu Dhabi, Samir Bantal, Director, AMO at Office of Metropolitan Architecture, Rotterdam, Anne Holtrop, Founder, Studio Anne Holtrop, Bahrain, Monira Al Qadiri, Artist, Kuwait and Berlin, Gabriel Alonso, Artist and Researcher, Madrid, amongst others.

Supporting Art Dubai's commitment to scholarship, 'Modern and Collector Talks' are presented in partnership with 'Dubai Collection', the first institutional art collection for the city of Dubai.

'Art Dubai Modern Talks' will highlight the artistic links made possible by Soviet geopolitics of the Cold War, shifting the focus from Western metropoles and focusing the conversations on the impact of Soviet education and exhibitions on artists from the Middle East, South Asia, and Africa.

Though these East-East and South-South networks may no longer be obvious today, they were critical to the formation of modern art in the region. Bringing together a culturally diverse group of curators, scholars, and gallerists, each panel will highlight the personal stories of the artists represented in Art Dubai Modern.



They will also provide historical context to the unique grouping of artists in the section, revealing why these works remain valuable and relevant to audiences, collectors, and institutions.

Individual and institutional collectors are driving cultural shifts in emerging cultural centres. With a focus on topics including philanthropy, corporate support for the arts and institutional collecting, 'Art Dubai Collector Talks' will shed light on the unique forces, strategies and passions that are shaping global arts and culture.

Education

Reinforcing the fair's longstanding commitment to education, professional development and thought-leadership will be the largest-ever programme of talks, workshops and events, taking place across all five days of the fair.

The 'A.R.M. Holding Children's Programme' is now in its fourth year and the 2024 edition will be the largest to date, reaching more than 15,000 students in over 100 schools in what is the most ambitious such education programme in the UAE.

Each year, an artist is selected to develop the workshops, which begin at Art Dubai before expanding to private, government, and special educational needs schools across all seven

Goa-based artist Sahil Naikhas been selected to develop the 2024 programme and his sculptural, architectural and arts education-based practice will take participants on a journey through creation using dioramas, memory and the built environment as sources of inspiration.

Centering on themes of ecology and nature, these workshops will invite children to explore the central question: "How do younger generations imagine future cities, and what they will comprise?"

Aimed at nurturing emerging talent and future cultural leaders, the fair will continue to run Campus Art Dubai (CAD) professional development and traineeship programme.

Celebrating its 11th year, the initiative is designed to provide recent graduates with mentorship, masterclasses and hands-on experience across diverse departments at the fair.

Additionally, participants will benefit from curated tours of leading cultural organisations in the city, providing practical insights and a clear pathway for them to enter and thrive within the dynamic art scene.

New Commissions

This year's Art Dubai Commissions will feature a series of new performances, films and activations focusing on topics of hope, community and the power of art to help us navigate challenging times.

Complementing Art Dubai's Bawwaba gallery section, and curated by Emiliano Valdes, participating artists hail from the Global South, and will explore various aspects of the healing process, creating spaces for contemplation and introspection, socially-oriented practices that engage with local communities as well as creating nurturing and liberating experiences.

The Swiss Wealth Management Group Julius Baer, lead partner of Art Dubai will present a newly commissioned digital installation by Canadian-Korean artist Krista Kim.

'Heart Space' مساحة القلب is an immersive experience that will allow guests to connect with one another through the universal language of the human heartbeat. In real-time, each visitor's unique heart rhythm will be visualised through hypnotic patterns and meditative shapes displayed across a dynamic LED canvas.

The installation puts forward the concept of 'oneness' where participants come together to create a social fabric harnessing the power of art

Heart Space is a continuation of Kim's ongoing exploration into the creative potential of screens as digital instruments of well-being and longevity, and is part of Julius Baer's NEXT universe, which explores investment thematics around the emergence of megatrends across arts, science, and technology. This is the second major digital commission by Julius Baer to debut at Art Dubai, following the acclaimed collaboration with Refik Anadol in 2023.

Inaugurating a new partnership with Art Dubai, returning partner 'Piaget' will debut a new exhibition 'The House of Gold' at Art Dubai 2024. Spotlighting gold as the ultimate luxury and a symbol of perfection, central to the brand's philosophy, the presentation will showcase a series of high-end jewellery and watches, patrimony pieces and private collections in a bespoke booth featuring newly commissioned artworks, workshops and immersive experiences.







Indermit Gill and M. Ayhan Kose

Indermit Gill is Chief Economist and Senior Vice President for Development Economics at the World

M. Ayhan Kose is Deputy Chief Economist and Director of the Prospects Group at the World Bank.

s 2024 begins, the outlook for the global economy seems to be improving. Major economies are emerging mostly unscathed from the fastest rise in interest rates in 40 years, without the usual scars of financial crashes or high unemployment. Countries rarely succeed in taming steep inflation rates without triggering a recession. Yet a 'soft landing' is now becoming more likely. Not surprisingly, financial markets are in a celebratory mood.

But caution is in order. The World Bank's latest Global Economic Prospects indicates that most economies, developed as well as developing, will grow much more slowly in 2024 and 2025 than they did in the decade before COVID-19. Global growth is expected to decelerate for a third year in a row, to 2.4 percent, before ticking up to 2.7 percent in 2025. Per capita investment growth in 2023 and 2024 is expected to average just 3.7 percent, barely half the average of the previous two decades.

The 2020s are shaping up to be an era of wasted opportunity. The end of 2024 will mark the halfway point of what was supposed to be a transformative decade for development when extreme poverty was to be eliminated,

major communicable diseases eradicated, and greenhouse-gas emissions nearly halved. What looms instead is a wretched milestone: the weakest global growth performance of any half-decade since 1990, with average per capita incomes in a quarter of all developing countries set to be lower at the end of 2024 than they were on the eve of COVID-19 pandemic.

Feeble economic growth threatens to undercut many global imperatives and make it harder for developing economies to generate the investment needed to tackle climate change, improve health and education, and achieve other key priorities. It would leave the poorest economies stuck with paralyzing debt burdens. It would prolong the misery of the nearly one in three people in developing countries who suffer food insecurity. And it would amount to a historic failure: a lost decade not just for a few countries, but for the world.

of fiscal policies that often derail economic progress and contribute to instability.

The evidence from advanced and developing economies since World War II shows that the right mix of policies can increase investment even when the global economy is not strong. Countries around the world have managed to generate nearly 200 windfall-producing investment booms, defined as episodes in which per capita investment growth accelerated to 4 percent or more and stayed there for more than six years. Both public and private investment jumped during these episodes. The secret sauce was a comprehensive policy package that consolidated government finances, expanded trade and financial flows, strengthened fiscal and financial institutions, and improved the investment climate for private enterprise.

If each developing economy that engineered such an investment boom in the 2000s and to the two-thirds of developing economies that rely on commodity exports. They can do better simply by applying the Hippocratic principle to fiscal policy: First, do no harm. These economies are already prone to debilitating boom-and-bust cycles (because commodity prices can rise or fall suddenly), and their fiscal policies usually make matters worse.

When commodity-price increases boost growth by one percentage point, for example, governments increase spending in ways that boost growth by an additional 0.2 percentage points. In general, in good times, fiscal policy tends to overheat the economy. In bad times, it deepens the slump. This "pro-cyclicality" is 30% stronger in commodity-exporting developing economies than it is in other developing economies. Fiscal policies also tend to be 40% more volatile in these economies than in other developing economies.

The result is a chronic drag on their growth prospects. This drag can be reduced by, among other things, establishing fiscal frameworks to discipline government spending, adopting flexible exchange-rate systems, and avoiding restrictions on international movements of capital. If these policy measures were instituted as a package, commodity-exporting developing economies would achieve an increase in per capita GDP growth of one percentage point every 4-5 years.

So far, the 2020s have been a period of broken promises. Governments have fallen short of the "unprecedented" goals they promised to meet by 2030: "to end poverty and hunger everywhere; to combat inequalities within and among countries; ... and to ensure the lasting protection of the planet and its natural resources." But 2030 is still over a half-decade away. That is long enough for emerging markets and developing economies to regain lost ground. Governments acting immediately to implement the necessary policies would create cause for everyone to celebrate.

The secret sauce was a comprehensive policy package that consolidated government finances, expanded trade and financial flows, strengthened fiscal and financial institutions, and improved the investment climate for private enterprise.

It is still possible to turn the tide. Our analysis suggests that most developing economies' performance in the second half of the 2020s can be at least no worse than in the pre-COVID decade if they do two things. First, they must focus their policies on generating a broadly beneficial investment boom — one that drives productivity growth, rising incomes, a reduction

in poverty, higher revenues, and many other

good things. Second, they must avoid the kinds

2010s repeated the feat in the 2020s, developing economies would move one-third of the way closer to their full economic potential. And if all developing economies repeated their best tenyear performance in improving health, education, and labor-force participation, that would close most of the remaining gap. Developing economies' potential growth in the 2020s would be closer to what it was during the 2010s.

There is also an additional option available



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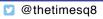
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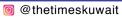
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EXCLUSIVE to THE TIMES KUWAIT

Question we should be asking about Al





Refik Anadol and Karel Komárek

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Karel Komárek, Founder of KKCG, is a co-founder of the Karel Komárek Family Foundation and the Dvořák Prague International Music Festival.

Ithough our age is defined by humanity's disproportionate influence on the planet, we ourselves are undergoing profound changes. Tasks that previously could be accomplished only through human labor are increasingly being performed by machines, including many tasks that rely on creativity. Far from a distant theoretical possibility, artificial intelligence (Al) has arrived, and it is here to stay.

In considering Al's potential, it can be tempting to channel the techno-optimism of the 1990s, when IBM's Deep Blue triumphed over the world chess champion, unleashing a wave of interdisciplinary interest in how Al might be deployed and commercialized in other domains. But it can also be tempting to adopt the opposing view and insist that Al will become an intolerable threat to most people's livelihoods and perhaps even to human existence itself.

Both reactions are not new: they have often accompanied the emergence of major innovations. They also make similar mistakes, because both treat technological progress as if it were something separate from us. Nowadays, the optimists fixate on what AI might do for us, while the pessimists worry about what it will do

66

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that makes AI's output
meaningful and intelligible.
Only by maintaining
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to us. But the question we should be asking is what AI will do with us.

This question is as pertinent to fine art as it is to finance, despite the apparent differences between these domains of quintessentially humanactivity. New-media art is best understood as a dialogue between experimentation and tradition. The human longing for novelty and tradition are mutually dependent: only by appreciating what came before an artwork can we comprehend what makes it new. No work is fully independent of cultural heritage, just as light cannot be understood in the absence of darkness.

Investing, too, is a hybrid enterprise. Success lies in recognizing genuine forms of innovation,



which in turn requires an appreciation of what has already been done.

This interplay between past and present also describes generative AI itself. By drawing on vast stores of previous human expression — in the form of data — AI can achieve near-universal applicability and facilitate innovation across many areas of culture and industry.

It was this understanding of AI that led us to pursue our collaborative project Dvořák Dreams. By harnessing the power of machine learning, we transformed the nineteenth-century Czech composer Antonín Dvořák's compositions, visual archives, and legacy into a 100-square-meter installation that was exhibited throughout the annual Dvořák Prague Festival in September in front of the UNESCO-listed Rudolfinum. As the inaugural project of the 0xCollection, a new cultural initiative dedicated to digital art, the piece exemplified AI's potential as a tool for both transforming human creativity and enriching cultural heritage.

Artists working with AI can map out a path for the technology's role across society more broadly. Today's algorithmic models rely on massive quantities of training data, most of it created by and for human consumption, and this makes them immensely powerful tools for pursuits like research and development. From hundreds of hours of classical music to more quantitative types of data, it is human input that makes AI's output meaningful and intelligible. Only by maintaining this symbiotic connection between us and our rapidly evolving technologies can we ensure that AI's development brings more benefit than harm.

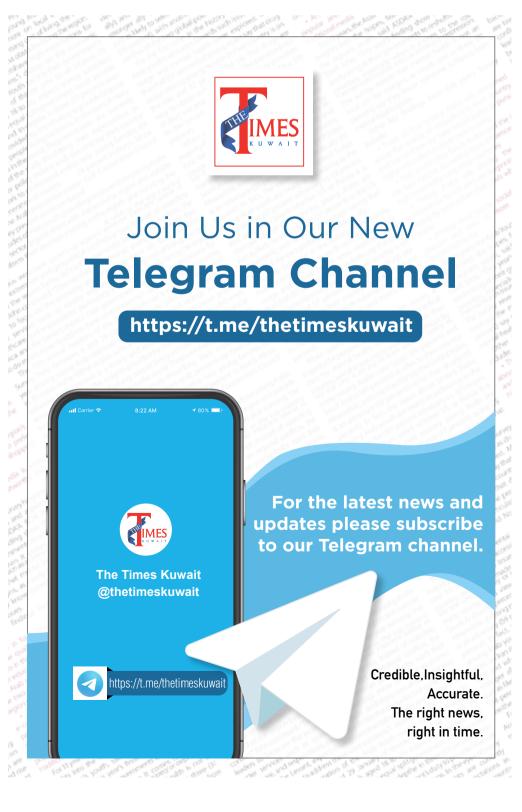
Make no mistake: the benefits of machine learning could be profound. As novel and alien as it may seem to us now, Al is uniquely capable of serving human ends — from optimizing technological efficiency to aiding in the creation of artwork that can be appreciated by audiences around the world. The human response to Al's output is what will determine its utility, including as an instrument of meaning-making. There is no denying that Al will play an expanding role in our increasingly digitalized world. What we need is a strategy of coexistence that respects, elevates, and optimizes both human and machine.

To that end, we see Dvořák Dreams as a proof of concept. Rooted firmly in human sources and imaginative expressions, it leveraged Al to retrieve, synthesize, and extend the legacy of an earlier cultural pioneer. The resulting presentation was not simply a machinegenerated 'hallucination'; it was a display of coevolution. An 'artificial' intelligence, guided by human intervention, made a past cultural production real to us in the present. It both revived history and created it anew. Finding value lies in uniting tradition with novelty. Without both elements, the final product would not move us.

Dvořák Dreams required us to put aside debates about humans versus humans and humans versus machines. The result was beneficial both for the development of technology and for the progress of contemporary art. Now, we find ourselves calling for a revolution — not of technology, but of humanity's attitudes toward it. Al is admittedly extraordinarily powerful, but it is hardly the first

technology to alter the human condition.

We need not assume the position of either a true believer or an unbending critic. Human progress emerges from collaboration between us and, beyond that, between us and our machines. In this sense, the role of artists, investors, and innovators in the AI revolution is the same: to combine openness toward the future with informed appreciation of the past.





Every man is rich or poor according to the proportion between his desires and his enjoyments.

> - Samuel Jonson **English** writer

Parsely Juice For Your Kidneys and More...

Ask Mira: Eating Right to Live Happy & Healthy



idneys are important in the cleansing of your body since the kidneys wash the toxins from the body. And so kidney's health is crucial!

Parsely juice is a natural remedy used to wash out toxins

and eliminate your bidy water retention.

It contains a big amount of carotene and vitamin C. This juice contains elements which are necessary for the oxygen exchange in the body, for the correct functioning of adrenal and thyroid glands and also for strengthening the walls of blood vessels.



Parsely filters blood by removing salt and poison that accumulates by time.

Parsley also helps neutralize particular carcinogens, including the benzopyrenes that are part of cigarette smoke and charcoal grill smoke.

Parsley contains a compound named Apoil, which has recently been isolated and used as a treatement for kidney stones.

Parsley Juice may be beneficial for the treatment of prostate and liver malfunctions as well as anemia, arthritis, and microbial infections. It has also been found useful as a diuretic and laxative.

Parsley juice is a great detoxifier and cleanser for a toxic colon and even helps relieve bad breath.

In brief, Parsley Juice may be beneficial for:

- Bladder, kidney, and urinary tract problems.
- Water retention.
- Cancer prevention due to its high anti-oxidant content.
- Heart health
- Immune system booster
- Regulating monthly periods
- Vision health

Parsley is one of the powerful juices, so you can mix it with carrots and celery for extra benefits.

You can also boil it with plain water, a great tip I recommend to my clients who suffer from bloating and water retention.

Drink one glass daily and you will notice all salt and other accumulated poison coming out of your kidney by urination.



To subscribe to my diet programs, don't forget to log in to: www.eatlikemira.com.



RECIPE

Parsley-Arancini Balls



rancini rice balls are a traditional dish from the Sicilian region of Italy. Rolled in bread crumbs and deep fried in oil, they can be stuffed with meat or cheese. Besides Sicily, other areas of Italy have their own variations of this traditional dish.

Total time 1hour Serving: 12 to 15 balls.

Ingredients:

- 1 cup Arborio Rice (cooked)
- 2tbsp butter
- 2 tbsp onion (finely chopped)
- 1tbsp ginger-garlic paste
- 1/2 cup parsley puree
- 1/2 cup grated cheddar cheese
- 1/4 cup parmesan cheese Salt as per taste
- 1/2 tsp chili flakes
- 1/4 tsp black pepper powder.
- 10-12 small mozzarella cheese cube
- Bread crumbs for coating

Directions:

- Heat a pan, add butter and let it melt
- Add onion, ginger-garlic paste and cook for a few minutes
- Add parsley puree and heat under reduced flame till water content

Chef Chhaya Thakker

- Add the cooked rice, cheddar and parmesan cheese, salt, black pepper.chili flakes
- Mix well and remove from heat
- Using your hand, make 10-12 arancini balls from the mixture.
- Press your finger into the center of each ball and insert the cheese cube. Then, pinch the rice mixture around the filling to enclose, adding a little more if necessary.
- Place bread crumbs on a plate
- Coat each ball in bread crumbs
- Place on a baking trav
- Cover with clear-wrap and refrigerate for half an hour
- Spray oil on each ball.
- Bake for 12 to 15 minutes
- Alternatively, you can deep fry the arancini balls until golden brown, 3-5 minutes, turning them occasionally. Remove from the pan and drain on a paper towel.
- Serve the arancini balls with the chili sauce or ketchup, or any other dip.

Indian Chef Chhaya Thakker, who has a huge following online on WhatsApp and YouTube will be sharing her favorite recipes and cooking tips with readers of The Times Kuwait. For feedback, ou can write to editortimeskuwait@gmail.com



Mira is a go-to source for nutrition and wellness and has joined The Times Kuwait team in a new weekly column discussing nutrition and answering queries. You can send in your questions to infotimeskuwait@gmail.com

CoScientist, a new AI partner in the lab

Researchers at the Carnegie Mellon University in the United States have designed an Al powered robot that could soon be an efficient lab partner to assist scientists in their laboratorial work, or in the future may even act as a guide to scientists.

The Al-empowered robot, named CoScientist, demonstrated its prowess by autonomously learning about complex chemical reactions and then designing a laboratory procedure to make them. Known in organic chemistry as 'palladium catalyzed cross couplings' these chemical reactions won the team of scientists who invented it the 2010 Nobel Prize in chemistry. The importance of these reactions come from umpteen applications they now have in industrial and academic fields.

What was even more impressive in CoScientist's achievement was that while the Nobel Prize winning reactions were the result of years of painstaking research and repeated experiments, the CoScientist system achieved the same process in just a few minutes, and got it right on the very first attempt.

The abilities that CoScientist demonstrated point to its potential to assist scientists to productively use AI to increase the pace and number of scientific discoveries, as well as improve the replicability and reliability of

experimental results. Beyond the chemical synthesis tasks demonstrated by the system, its high level of efficiency means it could be used for multiple other scientific purposes.

At the core of Coscientist's software and silicon-based parts are the large language models that comprise its artificial 'brains'. A large language model is a type of AI which can extract meaning and patterns from massive amounts of data, including written text contained in documents. Through a series of tasks, the research team tested and compared multiple large language models, including GPT-4 and other versions of the GPT large language models made by the company OpenAI.

Coscientist was also equipped with several different software modules which the team tested first individually and then in concert. The software modules allowed CoScientist to do things that all research chemists do — search public information about chemical compounds, find and read technical manuals on how to control robotic lab equipment, write computer code to carry out experiments, and analyze the resulting data to determine what worked and what did not. High-tech robotic chemistry equipment is commonly used in laboratories but such robots are usually controlled through computer code written by human chemists.



This was the first time such robots would be controlled by computer code written by Al. Researchers put CoScientist through several tests to examine its capabilities and assess its potential. As the machine learned from each test conducted its abilities grew significantly.

In the final test, CoScientist had to put its various modules and training together and fulfill the researchers command to perform a cross-coupling reaction known as 'Suzuki and Sonogashira reactions'. Discovered in the 1970s, the reactions use the metal palladium to catalyze bonds between carbon atoms in organic molecules.

The Nobel-Prize winning 'Suzuki Coupling' (for short) reactions have proven extremely useful in producing new types of medicine to treat inflammation, asthma and other conditions. They are also used in organic semiconductors in Organic Light Emitting Diodes (OLED) found in many smartphones and monitors.

Coscientist sought answers predominantly on Wikipedia, along with a host of other sites including those of the American Chemical

Society, the Royal Society of Chemistry and others containing academic papers describing Suzuki and Sonogashira reactions.

In less than four minutes, CoScientist was able to design an accurate procedure for producing the required reactions using chemicals provided by the team. When it sought to carry out its procedure in the physical world with robots, it made a mistake in the code it wrote to control a device that heats and shakes liquid samples.

Without any prompting from the research team, CoScientist spotted the problem, referred back to the technical manual for the device, corrected its code and tried again. The results were analyzed and found to hold the spectral hallmarks of Suzuki and Sonogashira reactions.

The researchers envision a future where Al-assisted systems like CoScientist become a solution to bridge the gap between the unexplored vastness of nature and the fact that trained scientists are in short supply -- and probably always will be. Moreover, while scientists have human needs, like eating, sleeping and taking time off, the human-guided Al enabled robots can 'think' and work around the clock. Robots such as CoScientist could run autonomously, discover new phenomena, new reactions, new ideas, all the time.

It can also significantly decrease the entry barrier for basically any field. For example, if a biologist untrained in Suzuki reactions wanted to explore their use in a new way in the biological field, they could ask the assistance of CoScientist to help them plan experiments. This could lead to a massive democratization of resources and understanding.

Science is an iterative process of trying something, failing, learning, and improving. This process can be substantially accelerated by systems such as CoScientist, and bring about dramatic changes on how science works in future.

Octopus inspired camouflage

chameleon of the marine world, the blue ringed octopuses are known for their ability to change the color and size of the ringed patterns on their body almost instantaneously, enabling it to lure prey as well as camouflage itself from predators.

Taking inspiration from this marine wonder, researchers at the University of California in the US have developed a technological platform with similar capabilities, which could find use in a variety of fields including, military, medicine, robotics and sustainable energy.

The properties of this innovative invention, such as its dynamically adjustable fluorescent and spectroscopic aspects, as well as its ease



of manufacturing, and potential for scaling to larger areas. The device could be adapted in the future to design of products that require camouflage or signaling capabilities, including military equipment, vehicles, uniforms and other fabrics. It could be used by advertisers on billboards, or by designers and architects to improve aesthetic and protective features of entire buildings, or find use in more traditional equipment such as LED bulbs and to improve efficiency of solar panels.

The Greater Blue-ringed octopus (Hapalochlaena lunulata) is a species of octopus native to tide-pools and coral reefs along the Western Pacific Ocean and Indian Ocean. They can be identified by their yellowish skin and characteristic blue and blackish-brown rings that can change color when the animal is threatened or attract prey with its flash of blue rings.

Although relatively small in size, this species is one of the most venomous marine animals in the world, with their venom loaded with tetrodotoxin, a powerful neurotoxin that

causes destruction of nerve tissues stunning and killing prey.

H. lunulata achieves its camouflaging capabilities from millions of tiny organs called chromatophores containing specific dyes on their skin that can be expanded or contracted using a network of tiny skin muscles. The motion of the muscles allows the octopuses to change the shape of the chromatophores, to repaint their skin in less than a second.

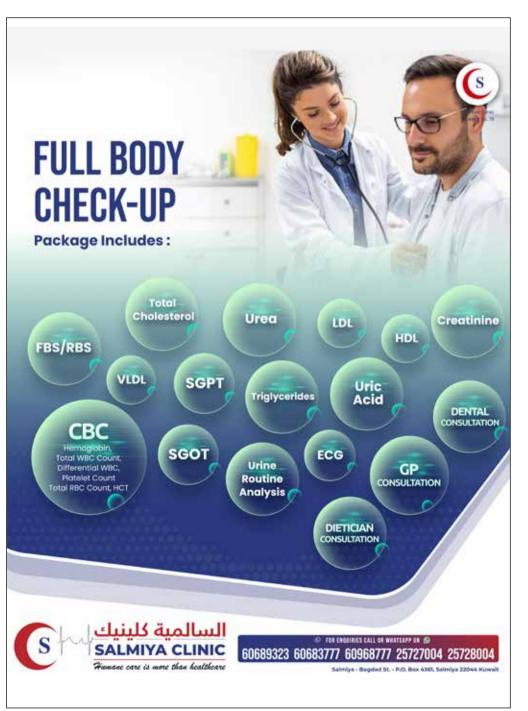
Underneath the top layer of H. lunulata skin is a second skin layer which harbors cells called iridophores that are rich in slabs of protein that behave like reflectors. The skin's bottom layer is a carpet of white cells, or leucophores, which form a bright canvas on which the color from the two upper layers can stand out.

For their project, the researchers worked to mimic the natural abilities of H. lunulata by developing a device from unique materials specifically synthesized in their lab. The result was a camouflaging and signaling system that is straightforward to fabricate, functions for a long time when operated continuously, and can even repair itself when damaged.

The unique capabilities of the new device came from a thin film of nonacene-like molecules similar to the organic compounds called acenes, The film was made up of linearly fused wrinkled blue rings around a flatter brown circle above an acrylic membrane, and the two layers sandwiched between a top and bottom layer of transparent proton conducting polymer electrodes.

Acenes are organic hydrocarbon molecules with a host of advantageous characteristics, including ease of synthesis, adjustable electronic characteristics, and controllable optical properties. The synthesized acene-like molecules were also exceptional in that they can survive years of storage in air, and last for over a day of continuous irradiation with bright light.

In their laboratory tests, the team found that the bioinspired devices could change its visible appearance over 500 times with little or no degradation, and they also could autonomously self-repair without user intervention. Additionally, it possessed a desirable combination of capabilities in the ultraviolet, visible light, and near-infrared parts of the electromagnetic spectrum. This would enable the devices to disguise other objects from detection or to clandestinely signal observers.





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