

OPINION

Rainfed Agriculture In Pakistan: The Problems And Their Solutions

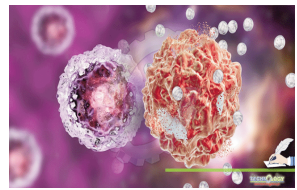


Nazeer Bangulzai

The areas of rainfed agriculture in Pakistan are those which totally depend on the rainfall for the cultivation. The total geographic land of Pakistan is 79.6 MHA, of which the crop area covers 23.04 MHA. The rainfed agriculture in Pakistan concentrate in another upland, northern mountains, and north-eastern plains of the country.

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Cancer Stem Cells In Solid Tumors: Identification, Characterization And Future Prospective



Roeha Akhtar

Cancer Stem Cells are a subpopulation of tumor cells that have undifferentiated properties like stem cells, producing the heterogeneous lineages of disease cells that contain the tumor.

Accordingly, Cancer Stem Cells (CSCs) must be characterized by their capacity to imitate the age of a constantly developing tumor. CSCs, also called tumor initiating cells have been seriously considered in the previous decade, concentrating on the potential source, origin, cell markers, study of mechanism, and advancement of therapeutic approaches targeting on their pathway.

Recent researches on cancer stem cells verified the presence of CSCs in particular diseases and molecular markers for isolation of cancer stem cells. Numerous years after the reasonable suggestion of the presence of stem-like cancer cells, experimental proof was first given in a leukemia model, affirming that CD34+ CD38- leukemic cells which indicated bone marrow hematopoietic undifferentiated cell properties.

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The Blue Economy Of Pakistan: The Opportunities And Challenges



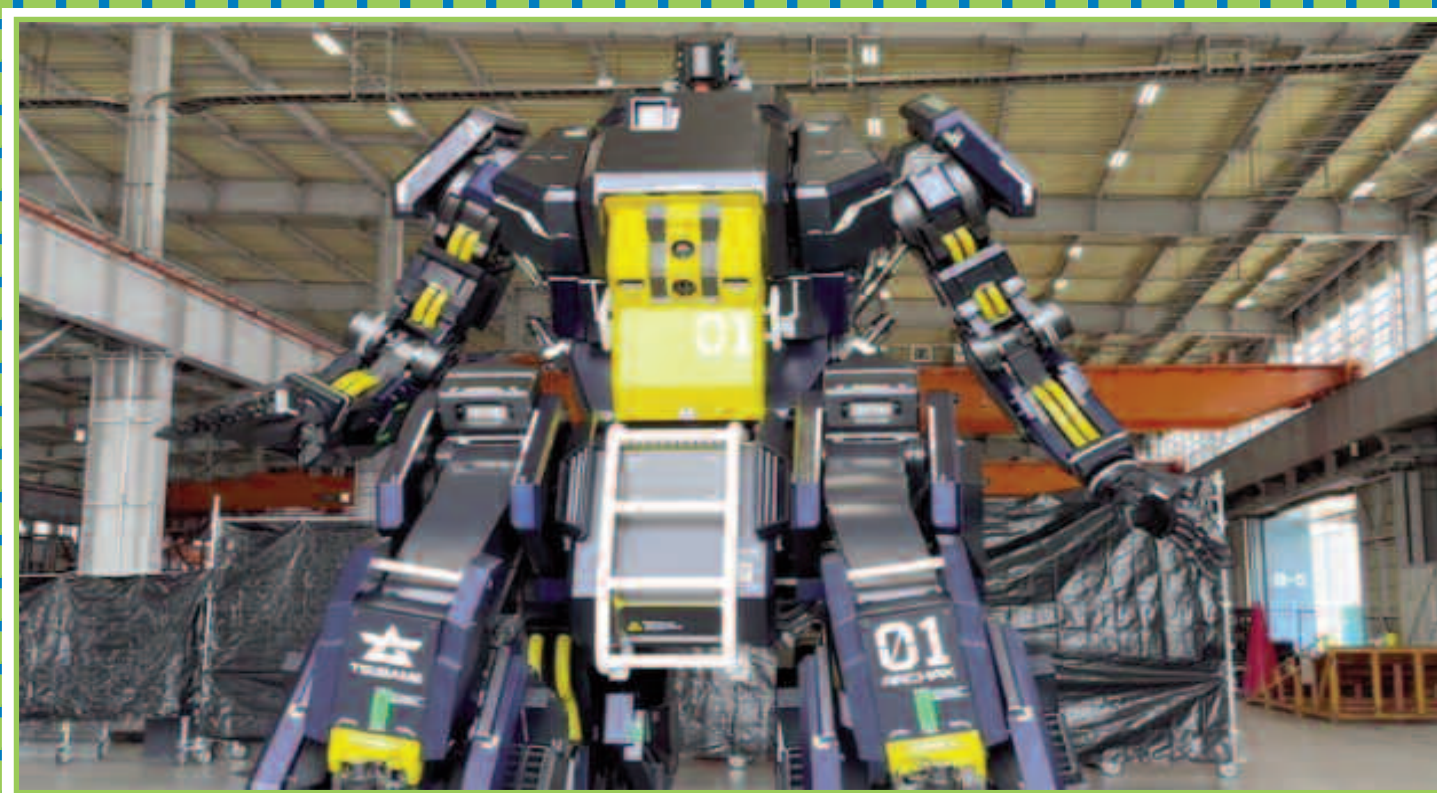
M S Sodhar

Pakistan fish catch about 0.6mln annually; however, exports only 10 percent of it. This gap undermines prospect of blue economy of Pakistan.

According to one estimate, Pakistan fish catch about 600,000 annually; however, the country only exports 10 percent of it.

This huge gap in the fish industry undermines the prospect of the blue economy of Pakistan. In 2010, Gunder Pauli, innovator, and economist coined the term "Blue Economy" in his book The Blue Economy: 10 Years, 100 Innovations, and 100 Jobs in which he averred miraculous advantages of oceanic and sea potential in the progress of the economy.

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Tokyo Startup Unveils Gundam-Inspired Robot, Available For \$3 Million

Tsubame Industries has revealed a towering 4.5-meter-high robot reminiscent of the iconic "Mobile Suit Gundam" from the widely adored Japanese anime series.

Tsubame Industries, a Tokyo-based startup, has revealed a towering 4.5-meter-high robot reminiscent of the iconic "Mobile Suit Gundam" from the widely adored Japanese anime series. Dubbed ARCHAX, after the prehistoric bird-like creature archaeopteryx, this mechanized marvel is available for purchase at a price tag of \$3 million.

ARCHAX boasts a cockpit

equipped with monitors that relay images captured by external cameras, enabling the pilot to deftly manipulate its arms and hands using joysticks from within the torso.

Weighing in at 3.5 tons, this robot, set to make its debut at the Japan Mobility Show later this month, offers two distinct modes: the towering 'robot mode' and a versatile 'vehicle mode' that enables speeds of up to 10 kilometers (6 miles) per hour.

Ryo Yoshida, the 25-year-old CEO of Tsubame Industries, shared his inspiration behind this extraordinary creation,

stating, "Japan is very good at animation, games, robots and automobiles so I thought it would be great if I could create a product that compressed all these elements into one. I wanted to create something that says, 'This is Japan'."

Yoshida envisions producing and selling five of these machines to cater to affluent robot enthusiasts. Beyond this niche market, he harbors aspirations for the robot's potential applications in disaster relief efforts and within the burgeoning space industry.

Yoshida's passion for manufacturing took root in his early

years when he learned the art of welding at his grandfather's ironworks. This initial spark ignited a journey that led him to establish a company specializing in myoelectric prosthetic hands.

He expressed a keen desire to preserve Japan's edge in the manufacturing arena.

"I hope to learn from previous generations and carry on the tradition," Yoshida affirmed.

Tsubame Industries Co., Ltd. is a Japanese company that develops piloted robots. The company was founded in 2022 and is headquartered in Tokyo, Japan.

Japanese Startups Look To Nasdaq Amidst Challenges In Home Market

Around seven Japanese firms are poised to list on Nasdaq in the next few months, with an additional ten to twenty planning to do so next year.

Dozens of Japanese startups are eyeing listings on Nasdaq in the coming years as entrepreneurs seek opportunities and capital abroad. Around seven Japanese firms are poised to list on Nasdaq in the next few months, with an additional ten to twenty planning to do so next year.

This shift is driven by a changing corporate culture in Japan, with more young talent opting for startups or launching their own ventures rather than pursuing traditional roles...[Read More](#)

IOFS Hosts High-Level Forum On Food Security In Doha



The second high-level forum of the Islamic Organization for Food Security (IOFS) is set to commence in Doha, starting from Sunday.

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The event, organized by the Qatari Ministry of Municipality

in collaboration with the Islamic Organization for Food Security and the Organization of Islamic Cooperation, will focus on crucial matters related to bolstering food security within the Islamic world. The Union of News Agencies (UNA) confirmed this in a statement released on Saturday.

Scheduled to run from October 1 to October 3, 2023, the

forum will delve into a range of topics aimed at enhancing food security across the Islamic world. These include exploring the involvement of civil society in combating food insecurity, promoting agricultural technology for sustainable food security, and fortifying intra-OIC food markets.

A key objective of the conference is to evaluate the present state of agriculture and food security in OIC Member States, identify priorities, and devise strategies to tackle challenges associated with advancing food security in OIC nations. Additionally, the forum will scrutinize the endeavors of the Islamic Organization for Food Security (IOFS)...[Read More](#)

Big Oil & Heavy Industry Join Forces To Reduce Emissions Ahead Of COP28

In a groundbreaking move, leaders from major oil and gas corporations engaged in high-level discussions with heavy industry executives in the United Arab Emirates on Sunday, with the aim of solidifying a resolute commitment to curb carbon emissions in advance of the upcoming United Nations Climate Change summit, COP28.

The COP28 summit, scheduled to convene in Dubai from November 30 to December 12, is viewed as a pivotal opportunity for nations to accelerate efforts towards limiting global warming. Recent reports have underscored that countries are falling short of their promises to cap the increase in global temperatures at 1.5 degrees Celsius.

Adnan Amin, CEO of COP28, expressed the unprecedented nature of the gathering, stating, "What we have done today is something quite unprecedented in the COP process, to bring together both the demand and supply side in terms of emissions."

The objective is to secure commitments for decarbonization from major industry players, thereby contributing to the collective effort to combat global warming. Amin emphasized the goal of finalizing these agreements before the COP28 summit, ensuring optimal positioning during the conference.

CEOs from over 50 companies in the oil and gas sector, representing the supply side, convened alongside...[Read More](#)

Prolonged Electricity Shortage In Gaza Strains Mental Health, Study Finds

A recent study reveals that the enduring 18-year electricity crisis in the besieged Gaza Strip is taking a toll on the mental health of its residents.

The research highlights elevated levels of anxiety and depression among individuals grappling with chronic power shortages, underlining the positive impact of access to reliable energy sources on well-being.

The study encompassed approximately 350 families residing in the coastal enclave, with 81 of them enduring intermittent electricity supply. Shockingly, the findings indicated that about 93 percent of participants reported experiencing moderate to severe anxiety, in contrast to a mere six percent in the broader West Bank population.

Moreover, 44 percent of the

surveyed families disclosed suffering from moderate to severe depression, a stark contrast to the 5.6 percent recorded in the general population.

Co-author Raya al-Dadah, from the University of Birmingham, emphasized the gravity of the situation, stating, "We found that electricity issues, especially when combined with

other stress factors associated with living in Gaza, lead to serious mental health concerns."

Al-Dadah called for focused efforts towards establishing sustainable, dependable, and cost-effective energy supplies, which she believes are imperative for both short- and long-term health and community development...[Read More](#)



World Habitat Day 2023 Focuses On Building Resilient Urban Economies

World Habitat Day, a globally recognized event, marks the commencement of 'Urban October' every year on the first Monday of October. The inaugural World Habitat Day was hosted in Nairobi, Kenya, in 1986, centered around the theme 'Shelter is my right.'

This year, World Habitat Day 2023 adopts the theme of "Resilient Urban Economies: Cities as Drivers of Growth and Recovery." The key objective of this event is to gather influential stakeholders from cities worldwide to deliberate on strategies for rejuvenating urban centers in the aftermath of the dual impacts of Covid-19 and conflicts on the global economy, as stated by the UN in its concept note.

The objectives of World Habitat Day 2023 include:

Addressing Economic Slowdown:

This involves a comprehensive examination of the various facets of the economic slowdown affecting cities, with a focus on identifying actionable measures that cities can implement to stimulate...[Read More](#)

EU Launches World's First Carbon Border Tariff To Curb Dirty Imports



The European Union launched the world's first carbon border tariff on Sunday, marking a historic step in its efforts to combat climate change and protect its green transition.

The tariff will impose a fee on imported goods from countries with less stringent carbon pricing policies, such as steel, cement, aluminum, fertilizers, and electricity. This move aims to safeguard its green transition by curbing the influx of environmentally detrimental foreign goods.

The proposed carbon border tariff has stirred concerns among trade partners, and China's top climate envoy, Xie Zhenhua, urged nations last month to refrain from unilateral measures akin to the EU levy.

Although the collection of CO2 emission charges at the border will not commence until 2026, Sunday marks the commencement of an initial phase of the Carbon Border Adjustment Mechanism (CBAM). EU importers will now be obligated to disclose the greenhouse gas emissions...[Read More](#)



Faiza Hassan

Lemongrass can be infused into desserts like sorbets and custards, adding a subtle citrus note. It's also used in cocktails and mocktails for a refreshing twist



Exploring Remarkable Benefits Of Lemongrass

Lemongrass is a remarkable herb that not only adds a burst of flavor to culinary creations but also offers a range of potential health benefits.

Lemongrass, scientifically known as *Cymbopogon citratus*, is an herbaceous plant native to tropical and subtropical regions of Asia, Africa, and Australia. It is renowned for its distinct lemony aroma and a wide array of health benefits. From culinary uses to medicinal applications, lemongrass has been valued for centuries for its versatility and healing properties. In this article, we will delve into the numerous benefits of lemongrass, spanning its culinary uses, medicinal potential, and other practical applications.

Lemongrass is a remarkable herb that not only adds a burst of flavor to culinary creations but also offers a range of potential health benefits. Its rich antioxidant content, digestive aid properties, anti-inflammatory potential, and more make it a valuable addition to both the kitchen and holistic wellness practices.

Whether you're sipping on lemongrass tea or enjoying it in a savory dish, incorporating this versatile herb into your life can enhance your overall well-being. As with any natural remedy, it's advisable to consult with a healthcare professional before using lemongrass for medicinal purposes, especially if you have underlying health conditions or are taking medications.

Culinary Delight:

One of the primary reasons for the popularity of lemongrass is its culinary versatility. It adds a unique flavor and aroma to various dishes, making it a favorite in many cuisines around the world. Here are some ways lemongrass is used in the kitchen:

Flavorful Seasoning:

Lemongrass is often used as a seasoning in soups, curries, and stir-fries. Its citrusy and slightly spicy flavor enhances the taste of these dishes, giving them a refreshing and aromatic twist.

Herbal Tea:

Lemongrass can be brewed into a delicious and soothing

herbal tea. It is caffeine-free and known for its calming properties, making it an excellent choice for relaxation.

Marinades and Sauces:

The stalks of lemongrass can be crushed or minced to make marinades and sauces for meat, seafood, and vegetables. It imparts a zesty, lemony flavor that complements a variety of ingredients.

Desserts and Beverages:

Lemongrass can be infused into desserts like sorbets and custards, adding a subtle citrus note. It's also used in cocktails and mocktails for a refreshing twist.

Medicinal Marvel:

Lemongrass has been used for centuries in traditional medicine systems, such as Ayurveda and traditional Chinese medicine, for its potential health benefits. Modern research has started to shed light on the medicinal properties of this herb. Here are some of its notable health benefits:

Digestive Aid:

The essential oils in lemongrass, like citronellal, have been found to promote healthy digestion by reducing stomach cramps, bloating, and indigestion. It can also help relieve gastrointestinal issues like gastritis. It may also promote

healthy bowel movements.

Antioxidant Power:

The presence of antioxidants in lemongrass, such as citral, helps combat free radicals in the body. This, in turn, may reduce the risk of chronic diseases and aging.

Anti-Inflammatory:

Lemongrass has anti-inflammatory properties that may be beneficial for individuals with inflammatory conditions like arthritis. It may help reduce pain and swelling.

Antibacterial and antifungal: Lemongrass contains essential oils with antibacterial and antifungal properties. This can assist in maintaining a healthy immune system and preventing infections.

Stress Reduction:

The aroma of lemongrass is known to have a calming effect. Aromatherapy using lemongrass essential oil may help reduce stress and anxiety.

Cholesterol Management:

Some studies suggest that lemongrass may help lower cholesterol levels. High cholesterol is a risk factor for heart disease, and incorporating lemongrass into your diet could contribute to heart health.

Weight Management:

Lemongrass tea is often recommended for weight management as it may help boost metabolism and aid in the burning of fat.

Supports Immune Health:

Lemongrass is a source of vitamins and minerals, including vitamin C, vitamin A, potassium, and zinc. These nutrients play a role in maintaining a robust immune system, helping

the body ward off infections.

Practical Uses:

Beyond its culinary and medicinal applications, lemongrass offers several practical uses that can enhance daily life:

Natural Insect Repellent:

Lemongrass essential oil is a natural insect repellent. It can be applied topically or used in candles and diffusers to keep pesky insects at bay.

Aromatherapy:

The pleasant scent of lemongrass makes it a popular choice for aromatherapy. Diffusing lemongrass essential oil can create a refreshing and uplifting atmosphere.

Cosmetic and Skincare Products:

Many cosmetic and skincare products, such as soaps, lotions, and shampoos, contain lemongrass for its fragrance and potential skin benefits.

Pesticide Alternative:

Lemongrass oil can be used in gardening as a natural pesticide to protect plants from pests.

In conclusion, lemongrass is a remarkable herb that offers a plethora of benefits, from enhancing the flavor of dishes to providing potential health advantages and practical applications.

Whether you incorporate it into your meals, use it for aromatherapy, or explore its medicinal potential, lemongrass stands as a testament to the bountiful gifts nature provides. Embrace the refreshing essence of lemongrass and unlock the manifold advantages it brings to your life.



Hameed Ullah Baloch

Fat content in fish meat is also low in comparison to other animals, where a high amount of fat causes obesity and heart problems, whereas fish fats and oils have health benefits as they prevent diseases, improve the immune system, and prevent many diseases



DNA Barcoding Of Fish Family Cyprinidae

Pakistan has varied water resources, comprising dams, rivers, streams, and canals. The Indus River System is the largest river system in Pakistan.

Pakistan has varied water resources, comprising dams, rivers, streams, and canals. The Indus River System is the largest river system in Pakistan. These water tributaries have a very rich and expanded fauna of freshwater fish.

The reason for this rich variety in fish fauna might be attributed to the geographical location of Pakistan, as it is an interim zone of zoogeographical regions, i.e., between the Oriental region, the Ethiopian region, and the Palearctic region. Numerous studies conducted on freshwater fauna gave us information that there are about one hundred and eighty-three reported freshwater fish species in Pakistan.

Cyprinidae is one of the largest families. It has the highest number of genera and species. Approximately 74 species represent this family in Pakistan. The family Cyprinidae consists of highly important freshwater fish of commercial significance that have a chief role in aquaculture and fish farming.

Sixteen species of this family have major economic importance among the local freshwater fish fauna. Moreover, there are almost thirty freshwater fish

of economic and commercial importance. However, the diversity of commercially and comically important fish is diminishing.

As compared to other animals, fish have a high protein content. Moreover, fat content in fish meat is also low in comparison to other animals, where a high amount of fat causes obesity and heart problems, whereas fish fats and oils have health benefits as they prevent diseases, improve the immune system, and prevent many diseases.

Moreover, fish are environmentally friendly because of

their low carbon emissions. The identification of the species of any animal is one of the most difficult tasks of taxonomy.

For identification purposes, taxonomists use morphological keys to identify fish or any other animal, and they are based solely on the visible characters and features.

In the present age, processed and ready-made fish and their products are the main focus and centre of attention for fish traders. These ready-made fish products are more susceptible to mislabelling and fraud and can be replaced by some low-quality

fish.

Our research

Pakistan has the richest fish fauna. The family Cyprinidae is a freshwater fish family with 74 reported species. This vast and diversified fauna compensates for the increasing demands on food for the growing population of the country. However, fish trading has been disputed by fish scams.

DNA barcoding has the potential to resolve such issues.

DNA barcoding is a taxonomic method that uses small genetic markers in organisms mitochondrial DNA (mtDNA) for identification

of particular species. It uses sequence diversity in a 658-base pair fragment near the 5' end of the mitochondrial cytochrome c oxidase subunit I (COI) gene as a tool for species identification.

It is a more accurate and reliable method as compared to morphological identification. It is equally useful in juveniles as well as adult stages of fishes. The present study was conducted to identify two fish species from Pakistan (*Cyprinus carpio* and *Hypophthalmichthys molitrix*).

Methodology

Samples are collected and stored at -20 °C. Muscle fin is isolated and stored at -20. DNA extraction was done using phenol chloroform.

Quantification of DNA

The quantity of isolated DNA was checked through 0.8% agarose gel electrophoresis incorporated in IX TAE buffer.

PCR

The isolated DNA cytochrome oxidase gene was amplified by polymerase chain reaction using the thermal cycler BIO_RAD under optimized conditions. After sequencing, the obtained sequences were examined by the bioinformatics tools. Sequence homology was checked by using BLAST.MEGA 3.0 software to develop a phylogenetic tree.

Conclusion

DNA barcoding works on a molecular level by using specific fragments of DNA. The purpose of DNA barcoding is identification. The subunit of the cytochrome oxidase gene COI was used to develop the barcode.

The maximum elution efficiency was achieved between pH 7.0 and 8.5. Purified DNA was analysed on a gel, adding one volume of loading dye and five volumes of purified DNA. Identified the dyes according to migration distance and optimization the agarose gel run time. By using statistical software, we can find authentic data.



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Nazeer Bangulzai

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The areas of rainfed agriculture in Pakistan are those which totally depend on the rainfall for the cultivation. The total geographic land of Pakistan is 79.6 MHA, of which the cropped area covers 23.04 MHA. Further, the cropped area split into two areas. About 18 MHA is irrigated, and the rest is rainfed.

The rainfed agriculture in Pakistan concentrate in another upland, northern mountains, and northeastern plains of the country. The rainfall in these areas varies from less than 100 mm in the hot desert to over 1500 mm in the outer Himalayas. Mostly, rainfall occurs in summer about 60-70 percent from July to September and the rest is falling in winter.

Since its inception, there are so many problems which the masses of the nation have been facing. One of them is the perpetuated growth of the population. These people require food to sustain their life but on

account of limited resources and food, there are so many chronic problems that took birth such as food insecurity and so on.

These challenges treat by adopting better agriculture techniques in the irrigated areas as well as rainfed agriculture in Pakistan where the water is not sufficient.

However, rainfed areas are

Glancing the importance of rainfed areas, it is, therefore, necessary to bring improvement in rainfed agriculture. It not only strengthens the economy of the country but also provides food to the people.

Problems of rainfed agriculture to the diversity of climate, soil, topography, and man-

Soil erosion: soil erosion is the serious cause in the country (Pakistan). Water and wind cause soil erosion. Water erosion is prevalent mostly when high rainfall occurs, whereas wind erosion is most active in low rainfall sandy desert areas.

Nutrients depletion: The rain fed areas depend on the rain only and the climatic uncertainties make the farmers compel to do not take risk, because of this they use low inputs. For instance, the actual use of nitrogen for rainfed wheat is 32 kg/ha against the optimum use of 71 kg/ha and the actual use of phosphorus is only 9 kg/ha against the optimum use of 48 kg/ha.

Thus, the actual fertilizers use in rainfed areas is far less than the optimum use. Crop requires optimum amount of nutrients to grow flourish. But due to this, they make the soil exhausted and cause nutrient deficiency.

Weed infestation: weed is an unwanted plant which grows out of its proper place. It is similar to the crop plant and competes with main crop mostly for light, moisture, nutrients, and space. Weed infestation occurs greatly in rainfed areas and damages the main crops.

Solutions
Farmers need to do some prac-

tice to eradicate the problems. These are discussing below:

For management of soil erosion, an integrated approach by having a mixture of crops, forages, trees, and forest plants has been quite useful to farmers to make the best use of degraded lands. Measure to control wind and water erosion are given below:

Effective control and a check on the uprooting, cutting and burning of natural vegetation on sandy ridges.

Special tillage practices, especially minimum tillage, should adopt. This will help in the formation of big clods, which cannot easily erode.

On affected areas, vegetation by strip cropping should create.

Establishment wind breaks, which help to slow down wind velocity, should be establishment. Conservation of moisture in rain fed areas are tillage practices, use of suitable mulches, and addition of organic materials and planting cover crops.

In high rainfall areas, practically it is impossible to grow a kharif crop without proper weed management. Weeds can be eradicated and problem well managed by hoeing, tillage operations, and proper use of herbicides.

The rainfed agriculture in Pakistan concentrate in another upland, northern mountains, and northeastern plains of the country. The rainfall in these areas varies from less than 100 mm in the hot desert to over 1500 mm in the outer Himalayas. Mostly, rainfall occurs in summer about 60-70 percent from July to September and the rest is falling in winter

very vast natural resources and the contribution of rainfed agriculture in Pakistan is quite sufficient. Research has found that the rainfed areas of Pakistan sustain 80 percent of the livestock population and contributes 12 percent of wheat, 27 percent of maize, 69 percent of sorghum, 21 percent of millet, 25 percent of rape and mustard, 77 percent of a gram, 90 percent of groundnuts and so on.

induced changes, rainfed agriculture confronts several problems which indulge a serious threat to the productivity of rainfed areas. Some major problems are discussed below:

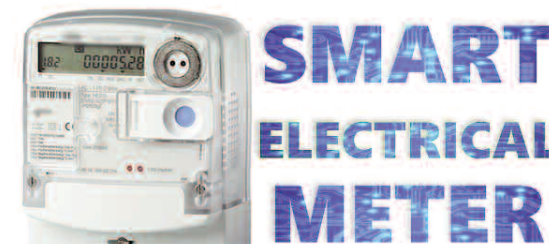
Drought stress: water shortage is the primary concern of rainfed areas, where crops barely take water to complete their lifecycle. The intermittent rains dominate the drought stress; the moisture content of the area is very low.



"Technology will never replace great teachers but technology in the hands of great teachers is transformational."

--George Couras

Imagine receiving a notification on your smartphone when your electricity usage approaches your predefined limit. This feature can be a significant money-saver, helping you avoid unexpected spikes in your energy bills



Sayyed Shehzer

Transforming Islamabad's Energy Landscape: The Smart Meter Revolution

This historic moment marks the inauguration of a transformative project, funded by ADB, aimed at implementing advanced metering infrastructure (AMI) throughout Pakistan.

As the sun sets over the picturesque city of Islamabad, a new dawn is breaking on the energy landscape. In a groundbreaking move, although yet not confirmed from IESCO sources, a leading company specializing in smart grid solutions, has installed Islamabad's very first smart meter.

This historic moment marks the inauguration of a transformative project, funded by the Asian Development Bank (ADB), aimed at implementing advanced metering infrastructure (AMI) throughout Pakistan. Smart Meters Revolution

The installation of smart meters in Islamabad is more than just a technological upgrade; it is a pivotal step towards a smarter, more efficient energy future. Let's delve deeper into the various facets of this revolutionary project and understand how it is poised to change the way we consume and manage electricity.

Enhancing Reliability
One of the primary goals of this ambitious project is to enhance the reliability of electricity supply in Islamabad. Frequent power outages have been a persistent challenge for

the city. However, with the introduction of smart meters, the energy distribution system is set to become significantly more dependable.

Smart meters are equipped with real-time monitoring capabilities, which means they can detect issues in the electrical grid as soon as they occur. This rapid detection allows utility companies to respond proactively, often preventing power outages before they happen. Imagine a future where you can count on your lights staying on, regardless of external factors.

Reducing Losses and Theft
Energy losses and theft have plagued the power sector in Pakistan for years. Smart meters are here to combat this challenge head-on. By making energy distribution more efficient and transparent, they promise to significantly reduce losses and eliminate theft.

The advanced technology within smart meters can pinpoint precisely where energy losses occur. This information empowers utility companies to identify and rectify issues swiftly, ultimately saving valuable resources. Additionally, the transparency of smart meters means that attempts at energy theft can be detected and prevented, ensuring that every unit of electricity generated is accounted for.

Empowering Consumers
Smart meters are not just a boon for utility companies; they are also a game-changer for con-

sumers. These meters provide real-time insights into electricity consumption, allowing customers to monitor their usage more effectively. But that's not all; they also come equipped with alert systems.

Imagine receiving a notification on your smartphone when your electricity usage approaches your predefined limit. This feature can be a significant money-saver, helping you avoid unexpected spikes in your energy bills. It also encourages a more conscious approach to energy consumption, contributing to a greener and more sustainable future.

The Smart Meter in Action
Now, let's take a closer look at how these smart meters operate in practice:

Automatic Data Collection:
Smart meters automatically record electricity usage and balance data. This information is then communicated to both the utility company and the customer. This real-time data transmission ensures that everyone stays informed about their electricity consumption.

Load Management:
One of the standout features of smart meters is their ability to disconnect the load if the balance is exhausted. This means that in cases where customers might inadvertently exceed their electricity budget, the meter can step in to prevent further usage. Such load management capabilities can significantly reduce the occurrence of power outages

and help consumers save money on their bills.

A City-Wide Transformation
While the initial phase of this transformative project is kicking off in Islamabad, the plan is to extend its reach to cover other regions of Pakistan. This ambitious endeavor promises to bring the benefits of smart meters to a broader population, ultimately ensuring a more efficient and reliable energy supply for the entire nation.

Islamabad Electric Supply Company (IESCO): Leading the Way
To fully appreciate the significance of the first smart meter installation in Islamabad, it's essential to understand the broader context. The Islamabad Electric Supply Company (IESCO) has been at the forefront of Pakistan's efforts to modernize its energy infrastructure.

In 2017, IESCO secured a substantial loan from the Asian Development Bank (ADB) to embark on a project of monumental importance. The objective? To roll out smart meters across its extensive service territory, which encompasses not only Islamabad but also adjacent areas.

This undertaking is no small feat, and it comes with a clear timeline. IESCO is targeting the completion of this ambitious smart meter rollout project by 2025. As the project progresses, more regions within Islamabad and its surroundings will benefit

from the advantages that smart meters bring.

The Future of Islamabad's Energy Landscape

While the precise timeline for the initial installation of smart meters in Islamabad remains undisclosed, the groundwork is being laid for a brighter energy future. As this project gathers momentum, residents of Islamabad can look forward to a host of advantages.

Real-Time Energy Monitoring
The smart meters are in place, residents will have the power to track their energy consumption in real-time.

This feature allows them to gain precise insights into their usage patterns, empowering them to make informed decisions about how and when they use electricity.

Demand Response Programs
Smart meters open the door to participation in demand response programs. These initiatives enable customers to adjust their electricity consumption during peak demand periods. By doing so, they not only contribute to the overall stability of the electrical grid but also stand to save money on their electricity bills.

Improved Network Efficiency
IESCO has indicated that the introduction of smart meters will bolster the efficiency of its network.

With more granular data at their disposal, utility companies can optimize their operations, leading to fewer power

outages and a more robust and resilient energy distribution system.

Accurate Billing and Energy Theft Reduction

Accurate billing has been a persistent challenge in Pakistan's energy sector. Smart meters are expected to address this issue by providing precise data on electricity consumption. This accuracy not only benefits consumers by ensuring fair billing but also helps utility companies reduce energy theft, which has been a significant issue in the past.

A Transformative Journey

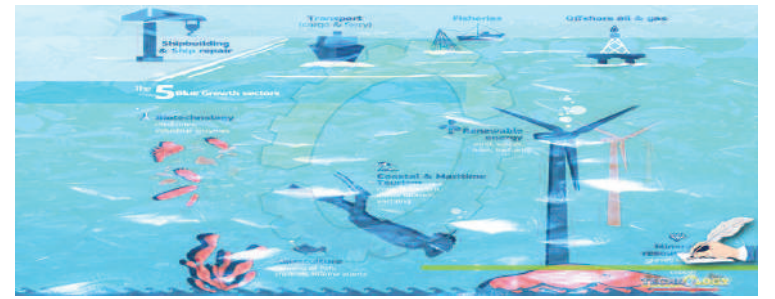
In conclusion, the installation of Islamabad's first smart meter by KBK Electronics is a milestone in the city's journey towards a smarter, more efficient energy landscape. While we cannot confirm whether this specific meter is part of IESCO's ambitious project, the broader context is clear: Islamabad is on the cusp of an energy transformation.

As we eagerly anticipate updates on the IESCO smart meter rollout project, one thing is certain—the future of energy management in Islamabad is looking brighter than ever. With enhanced reliability, reduced losses, empowered consumers, and a more efficient network, the city is poised to become a shining example of how technology can revolutionize the way we power our lives. Stay tuned as we continue to monitor this transformative journey.



M S Sodhar

Road freight in Pakistan takes an average of 3-4 between ports and the north of the country which is twice what it takes to cover the same distance in other Asian countries. Thus, low-quality of infrastructure deviates from the dream of the blue economy



The Blue Economy Of Pakistan: The Opportunities And Challenges

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In 2010, Gunder Pauli, innovator, and economist coined the term "Blue Economy" in his book *The Blue Economy: 10 Years, 100 Innovations, and 100 Jobs* in which he averred miraculous advantages of oceanic and sea potential in the progress of the economy. Further, he considered blue economy business model will shift society from scarcity to abundance.

The prospect of the ocean and sea economy is also praised by several international institutions. In this wake, OECD (The Organization for Economic Cooperation and Development) estimated that the blue economy would outpace the global economy in the next 15 years.

It provides even today worth 1.5 trillion dollars of the economy and more than 10 percent of the world population lives on ocean trade and sea

tourism. These prospects of the blue economy can create astonishing opportunities for developing countries such as Pakistan.

The blue economy of Pakistan is also eschewing its remarkable prospects, the first and foremost opportunity for Pakistan is fish industries and seafood. The country has one of the biggest rivers, lakes, and basin systems that provide seafood and fish caught every year.

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Moreover, marine fisheries are smuggled from Pakistan in huge quantities every year. As mentioned in reports by the Ministry of Maritime Affairs, local people illegally export nearly 200 tonnes of fish to other countries. For this reason, Pakistan lacks in achieving the prospects of an ocean economy.

Another potential is maritime tourism which Pakistan has multiple benefits. Ocean and sea beaches are paramount sites for foreign visitors and local people. By building beautiful sea resorts and restaurants, Pakistan can benefit its economy.

As maritime tourism can

contribute to revamping the tourism industry of the country, the best sites are Kund Malir, Gawadar, Gadani, Somiani, Paradise Point, and other beaches present in Karachi and Baluchistan's coastal area where investment can be made to grow the blue economy of Pakistan.

The blue economy of Pakistan is the future, because of its countless benefits; nevertheless, it also possesses some challenges that can hinder these prospects.

Above all, marine pollution is a major drawback in the depressing potential of blue economy of Pakistan. Despite

marine species in the sea.

Second, the poor infrastructures near ports depress the true potential of the blue economy of Pakistan.

The problem with the dearth of roads and railway lines is that it slows down the logistics chain across the country.

Among these, Pakistan's transportation industry suffers from low-quality roads, long traveling times, and poor reliability, particularly rail transport.

Road freight in Pakistan takes an average of 3-4 between ports and the north of the country which is twice what it takes to cover the same distance in other Asian countries. Thus, low-quality of infrastructure deviates from the dream of the blue economy.

Amid these challenges, Pakistan has still room for improvement to gain maximum advantage from the blue economy.

Above all, Pakistan needs to work on its maritime policy strategy. In 2002, the country the first time adopted its national maritime policy; however, with the changing global scenario,

it requires to be updated. This revision will set out a guideline for overarching vision and direct stakeholders towards an integrated approach to maritime affairs.

In the line with the 18th amendment, the maritime strategy will allow provinces to establish their policies under an integrated structure to promote sustainable maritime development. In this way, the country can perform outstandingly in the blue economy.

To conclude, the blue economy can lead the country towards prosperity when the country exploits its untapped potential of maritime tourism, offshore resources, and fish industries.

Pakistan is blessed with one of the largest mangrove systems that are home to multiple medicines and cosmetics.

The country also has many magnificent beaches in Baluchistan and Sindh that can be converted into tourist hubs for revenue generation.

By adding aesthetic beauty to such sites, the country would promote the blue economy to the central role in the country's GDP.

However, maritime blindness and apathy to sea trade are losing the country's giant economic resources. Marine pollution also put a burden on the future of the blue economy of Pakistan,

that has to take a conscious look at integrated maritime policy and infrastructural building. Only then would Pakistan play an effective role in the blue economy.

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According to World Travel & Tourism Council, sea travel and tourism sector contributed 10.4 percent to global GDP and accounted for one in four of all new jobs created across the world in 2019. On the contrary, in the case of Pakistan, this sector contributed only 3.3 percent to the country's GDP indicating a wide gap in growth.

being part of the London Convention on preventing ocean waste, Pakistan still throws huge litter into the sea including plastic bags, bottles, and infectious hospital waste. Owing to large-scale dumping, the blue-color water at famous tourist points turned black. This debris of plastic not only damages the aesthetic beauty of coastal points but also kills



Iqra Shamshe

Peer pressure is the biggest factor contributing to the addiction and has become a big concern for members of the middle and upper classes of the country, she told



Shisha Smoking For An Hour As Harmful As Smoking 200 Cigarettes

There is a misconception that shisha smoking can be used as supporting factor in the treatment of smokers, because it is less toxic than cigarettes.

Shisha smoking, also called narghile, water pipe, hookah, or hubble bubble smoking, originates from the Middle East and certain areas of Asia but has recently become more popular in the UK, especially with young people.

Hookah, shisha, or waterpipe is a single or multi-stemmed instrument for heating or vaporizing and then smoking either tobacco, flavored tobacco, or sometimes cannabis, hashish, and opium. The smoke is passed through a water basin often glass-based before inhalation. These days the modernized form of Hookah is being used for ice drug smoking.

Crystal meth (ice) is short for crystal methamphetamine that is just one form of the drug methamphetamine. Methamphetamine is a white crystalline drug that people take by snorting it (inhaling through the nose), smoking it, or injecting it with a needle.

Some even take it orally, but all develop a strong desire to continue using it because the drug creates a false sense of happiness and wellbeing—a rush (strong feeling) of confidence, hyperactiveness, and energy. One also experiences decreased appetite. These drug effects generally last from six to eight hours but can last up to twenty-four hours.

Reasons of shisha smoking popularity

There is no single reason why people use crystal methamphetamine several things act in combination. Regardless of why someone starts to use ice or shisha, there is a risk of it becoming a problem. Common reasons for using stimulant drugs such as ice include:

To fit in/feel part of a social group

To reduce inhibitions and increase confidence

Out of curiosity or to experiment

To escape reality

Out of boredom

To manage mental health issues (e.g. low mood, anxiety, depression) and the impacts of trauma

To forget or help cope with problems (e.g. unemployment,

unstable housing, financial difficulties, lack of social support, stress)

To enhance work performance

To enhance sexual experiences and intimacy.

Social networks and activities can also play a role in facilitating ice use. People who use ice often have friends, family, or partners who use the same drugs and frequently spend time in places where these types of drugs are accessible and normalized (e.g. parties and nightclubs). These drugs are mostly used by young people and wealthy students Use as supporting treatment.

Another misconception is that shisha can be used as supporting factor in the treatment of smokers, because it is less toxic than cigarettes. Due to this patient instead of recovery get addicted to shisha or ice.

Loads of meth found at schools

Crystal meth, if consumed consistently, can be "a more addictive stimulant than others, its users become risky, violent, prone to anger and being hostile," Naila Aziz, Lahore-based clinical psychologist, told the media.

"It's unfortunate that this is

more common among the educated classes," Aziz, who works with treating drug addiction, added.

Peer pressure is the biggest factor contributing to the addiction and has become a big concern for members of the middle and upper classes of the country, she told.

Citing official figures, Aziz said the vast majority of crystal meth seized by narcotics forces in 2018 was found at educational institutions.

Meth dealers are well connected, said Lubna Sajid, an Islamabad-based psychologist. Some dealers get new addicts admitted into educational institutions so they can peddle drugs to students, she added.

Health hazards of shisha smoking

Those who consume ice can quickly become addicted. One report estimates that 80% of consumers become addicted. It is common for meth addicts to lose their ability to care for themselves, children, or others for whom they are responsible.

The chemical itself is corrosive and harmful. Consumption can cause inflammation of the heart and can severely damage teeth, requiring complete replacement

with prosthetics.

Methamphetamine users may hallucinate that insects are crawling under their skin and crawling to try to get them out, resulting in injuries to the face or other parts of their bodies. Consuming methamphetamine can also damage blood vessels, due to its stimulating effect that increases blood pressure and body temperature. This can contribute to strokes.

A methamphetamine is someone who is addicted is regularly distrustful and may, with weighty use, experience the ill effects of maniacal scenes. This can certainly lead to a person getting in trouble with the law. The drug can also cause tremors, seizures, and aggressive or violent behavior. Crystal methamphetamine use is associated with numerous serious physical problems. The drug can cause rapid heart rate, increased blood pressure, and damage to the small blood vessels in the brain, which can lead to stroke.

Chronic use of the drug can result in inflammation of the heart lining. Overdoses can cause hyperthermia (elevated body temperature), convulsions, and death.

Individuals who use crystal

methamphetamine also may have episodes of violent behavior, paranoia, anxiety, confusion, and insomnia. The drug can produce psychotic symptoms that persist for months or years after an individual has stopped using the drug.

Affects of shisha smoking on brain

Meth is a highly addictive drug with potent central nervous system (CNS) stimulant properties. Those who smoke or inject it report a brief, intense sensation, or rush. Oral ingestion or snorting produces a long-lasting high instead of a rush, which reportedly can continue for as long as half a day. Both the rush and the high are believed to result from the release of very high levels of the neurotransmitter dopamine into areas of the brain that regulate feelings of pleasure.

Long-term meth use results in many damaging effects, including addiction. Chronic meth users can exhibit violent behavior, anxiety, confusion, insomnia, and psychotic features including paranoia, aggression, visual and auditory hallucinations, mood disturbances, and delusions – such as the sensation of insects creeping on or under the skin. Such paranoia can result in homicidal or suicidal thoughts...[Read More](#)