

# FORTNIGHTLY ENGINEERING REVIEW

The voice of engineers

Founded by **Najam ul Hassan (Merhoon)**  
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# With Gwadar at top, Balochistan under focus!

**Prime Minister Imran Khan's government has seemingly decided to give a push to development in Balochistan, recent decisions suggest.** However, it is not clear if this would yield results as quite a few efforts in the past have fallen short of desired results in a province where the affairs are not in order for long.

This time, Federal Minister for Planning, Development and Special Initiatives Asad Umar has constituted two special committees to accomplish the task.

They will prepare a program on a fast-track basis for the development of Gwadar Port and other development projects of Balochistan.

Asad Umer who chaired a meeting in Islamabad to discuss various issues related to development work in Balochistan. He set up two special committees in the moot.

A full team including Minister for Maritime Affairs, Minister for Water Resources, Minister for Industries and Production, Minister for Information and Technology, Advisor to Prime Minister on Commerce, Deputy Chairman Planning Commission, Secretary Planning, and senior officials attended the meeting.

Umer told the moot that in the current fiscal year, the federal and provincial governments would spend a total of Rs200 billion on the development of Balochistan.

Of this amount, Rs118 billion will be spent under the Annual Development Plan (ADP) by the provincial government and Rs82 billion under federal the Public Sector Development Program (PSDP).

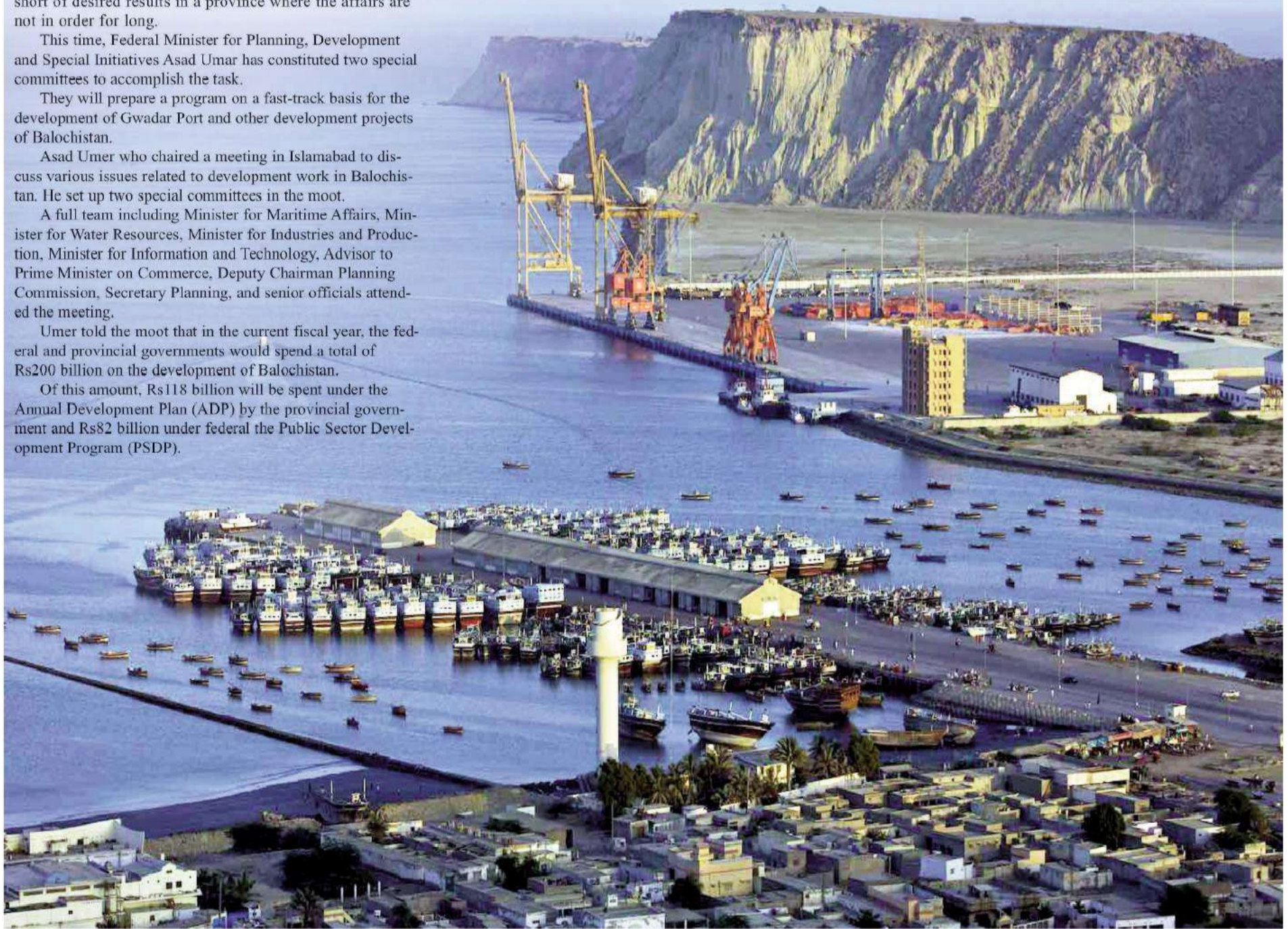
Of the two committees, one will be chaired by Deputy Chairman Planning Commission Dr Jehanzeb Khan, and the second one will be co-chaired by Maritime Affairs Minister Ali Zaidi, and Commerce Advisor Razak Dawood.

Deputy Chairman Planning Commission Jehanzeb Khan-led committee would make a plan for the development of

Balochistan to improve service delivery in areas of water resources, roads, agriculture, tourism, energy, and infrastructure.

Meanwhile, the minister and the advisor-led committee

*Contd on page 4*



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## Sindh, Balochistan to benefit from integrated power plan!

**80 of the 1 lakh MW will be through indigenous resources, says power minister**



**The federal government has devised an integrated plan to generate 100,000MW by 2047 through indigenous resources to ensure energy security and boost industries.**

Under the plan, the share of indigenous energy would be enhanced to 80 percent to get rid of expensive energy based on imported fuel.

Minister for Power Division Omar Ayub Khan said Renewable Energy (RE) policy has already been chalked

imported fuel resulting increase in tariff.

Unfortunately, the previous government generated expensive electricity through liquefied natural gas (LNG) and winded up many low-cost RE projects.

However, Omer said the incumbent government revived all RE projects to provide maximum relief to the consumers.

Regarding circular debt, the minister said circular debt had reached to Rs 450 billion during PML-N government and Rs39 billion per month was piling up in it.

The PTI government suc-

cessfully brought down it to Rs 12 billion per month, he added.

tripping particularly in the winter season, however, not a single tripping incident occurred after upgrading the transmission system. He said Pakistan Tehreek-e-Insaf (PTI) government collected Rs 121 billion more revenue in the energy sector. Around 80 percent of feeders had already been cleared from power pilferage and efforts were being made to clear the remaining 20 percent.

He said various mega projects including Diamer Basha, Mohmand dams and other hydel projects have been started to get cheap hydel electricity. ■



out with the consultation of all stakeholders and it would now be placed before Council of Common Interests (CCI).

Sindh and Balochistan would be major beneficiaries as many solar and wind projects would be set up in these provinces, he said.

The energy projects would be set up in areas under the integrated program.

As per the minister, the policy targets increasing the share of alternative energy in the energy mix up to a level of 20 percent by 2025 and 30 percent by 2030.

Some 8000 MW would be added through RE by 2025 and its share would be increased to 30,000 MW by 2030. The government believes that the past governments signed agreements with power companies at high rates and these projects were mostly based on

cessfully brought down it to Rs 12 billion per month, he added.

Omar Ayub said the previous government did not also enhance the power tariff despite NEPRA's determination. This move was aimed at winning the general elections and continued power supply to loss-making feeders resulted in the piling up of Rs 200 billion in dues, he added.

Regarding investment in the transmission system, Omar Ayub said the government enhanced the transmission capacity by 5500 MW during the last two years. Owing to the up-gradation of transmission lines, now over 25000 MW could easily be transmitted. Earlier, the system could only transmit 18,000 MW, he added.

He said in past the NTDC 500 kV and 220 Kv always witnessed frequent

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# 'Exploration and Evaluation of Coal in Balochistan' Mapping of the Nosham reaches completion

The geological experts have completed 100 percent mapping of the Nosham area of Balochistan under a coal exploration and evaluation project.

This project is included in the Public Sector Development Programme (PSDP) with an allocation of Rs 6.524 million for 2020-21.

The Rs 42.318 million project titled "Exploration and Evaluation of Coal in Nosham and Bahlol Areas, Balochistan" had

mapping has been commenced. 100 percent Geological Mapping of Nosham area has been completed and five stratigraphic sections have been measured, besides purchasing different field and lab items. Whereas, a compilation of field data, analysis and integration of data to prepare the required geological maps was in progress.

"Drilling of 1st borehole (BNCP#01) at Nosham area, District Barkhan has been completed to the depth of 297 meters, where coal seams encountered at different depths. Geo-



logical logging of exploratory borehole/logs and Geophysical Survey (Resistivity) has also been completed in the project area," officials said. Drilling engineers and other technical staff are busy in drilling operations for the next borehole. "Compilation of geological map and report is in progress." The experts believed that the project investigations would result in proving more than 20 million tonnes of coal worth over Rs 2000 million at the current market rate. -- APP

been approved in 2017 which made significant progress during the last two years, a senior official said. Elaborating the updated physical progress, he said the initial study of maps, toposheets, aerial photographs, and satellite imageries had been completed. While data had been transferred from aerial photographs/satellite imageries onto toposheets, he added. Preliminary reconnaissance geological

logical logging of exploratory borehole/logs and Geophysical Survey (Resistivity) has also been completed in the project area," officials said. Drilling engineers and other technical staff are busy in drilling operations for the next borehole. "Compilation of geological map and report is in progress." The experts believed that the project investigations would result in proving more than 20 million tonnes of coal worth over Rs 2000 million at the current market rate. -- APP

# With Gwadar at top, Balochistan under focus!

Contd from page 1 will work out a plan for Gwadar development.

Reports said Assad Umer has tasked various government ministries to prepare a program on a fast-track basis for the development of Gwadar and Balochistan, particularly, southern Balochistan.

This special initiative for southern Balochistan is being taken up on the directives of the prime minister who

wants urgent and tangible steps taken on priority to bring this under-developed part of Pakistan to a higher level of development.

Headed by Prime Minister Imran Khan, the National Development Council (NDC) on July 24th had tasked Assad Umar to develop the program in consultation with all the stakeholders.

The planning minister assured the provincial government that his ministry would release money for

development projects.

Another report quoted Assad as saying that any plan made for the betterment of Balochistan would be finalized with prior consultation of all the stakeholders of the province.

It is the vision of Prime Minister Imran Khan to provide better information technology and energy facilities to the people of Balochistan, and give priority to the weakest segment/areas of the country, said Assad Umar. ■



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# ECNEC approves ML -1, dry port on sharing basis!



**T**he Executive committee of the National Economic Council (ECNEC) has approved the project of up-gradation of Pakistan Railways existing Mainline-1 (ML-1) and establishment of a dry port near Havelian at the rationalized cost of \$6.806 billion on cost-sharing basis between the governments of China and Pakistan.

In the moot chaired by Adviser to the Prime Minister on Finance and Revenue Dr. Abdul Hafeez Shaikh Special Assistant to the Prime Minister on Information and Broadcasting and Chairman of China-Pakistan Economic Corridor Authority Lieutenant General (Retired) Asim Saleem Bajwa said that ECNEC had approved the transformational railway project with the cost of \$6.806 billion from Peshawar to Karachi (1872 KMs) including Havelian Dry Port and upgrading Walton Academy. According to Federal Minister

for Planning and Development Asad Umar ECNEC has approved the biggest project (ML-1) in Pakistan's history. The project would cost \$6.806 billion. According to the ministry of finance, the execution of the project shall be in 3 packages, and to avoid commitment charges, the loan amount for each package will be separately contracted. Under this project existing 2,655 KM track will be upgraded. The speed of passenger trains shall increase from 65/110 KM/h to 165 KM/h and line capacity will increase from 34 to 137/171

trains each way per day. Ministry of Railways would constitute a project steering committee for effective supervision and implementation of the project. The line is 1,872 km long, including the 55 km long Taxila-Havelian section and 91 km long Lodhran-Khanewal section. The project envisages upgrade of ML-1, the establishment of a dry port near Havelian Railway Station; upgrade of Pakistan Railway Academy Walton in Lahore; passenger facilities development of important railway stations,

including Karachi, Hyderabad, and Rohri in Sindh; Multan, Lahore, and Rawalpindi in Punjab; Naushehra and Peshawar in the Khyber-Pakhtunkhwa. Also, the moot approved the change in cost-sharing ratios of ADB and its co-financing Partners for "Construction of BRT Red Line Project, Karachi" costing Rs78,384.33 million including FEC of Rs66,378.33 million (with cattle-based biogas as fuel technology). The project was already approved by ECNEC on 29th August 2019. ■

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# 40 new blocks identified for oil, gas exploration

**P**etroleum Division has identified as many as 40 new blocks in different parts of the country to step up oil and gas exploration activities. The step is aimed at making discoveries as the existing reservoirs are fast-depleting and since long there is no major discovery, says a report

The new blocks would be awarded through international bidding, for which necessary work was in process. In September 2018, a

bidding round of 10 onshore exploration blocks was conducted, which was held after a gap of almost five years, wherein eight blocks were awarded.

"Next bidding round is being planned shortly whereby 20 Onshore Blocks would be offered and efforts are being made to attract foreign companies," officials say.

The country's total sedimentary area was around 827,268 square kilometers, out of which 320, 741 KM (39 percent of the area) is under exploration.

Pakistan fears to deplete its deposits by 60 percent by the year 2027, forcing it to accelerate exploration activi-

ties in potential areas on war-footing.

Total consumption of petroleum products in the country stood at 19.68 Million Tonnes (MTs) during the fiscal year 2019-20, out of which 11.59 MTs were achieved through local refineries and 8.09 MT through import.

While there was a gap of over 2 Billion Cubic Feet per Day (BCFD) gas between production and demand of the commodity to meet requirements of more than 9.6 million consumers across the country, Current gas production is around 4 BCFD against the demand of 6 BCFD, the gap is being

bridged through the import of LNG and LPG.

The Petroleum Division, a report says has granted open access to the private sector in the import of Liquefied Natural Gas (LNG) besides allowing them to set up their own terminals.

The government has planned to introduce Euro-V fuel in the country to meet the requirements of the hi-tech vehicles and tackle environmental issues like pollution and smog factors.

Officials say general sales tax on fuels had been fixed at the rate of 17 percent by law to streamline the matters related to the pricing of petroleum products.

The government has simplified the approval process for those who wanted to work in the exploration and production business. The official said the government had finalized new downstream oil policy, whereas the work on dualization of the white oil pipeline would start soon.

It merits mentioning that during a period from August 18, 2019, to April 30, 2020, exploration and production (E&P) companies have drilled around 142 wells, out of which 50 were exploratory and 92 appraisals/developmental.

As many as 26 discoveries with the initial flow of

6,799 Barrels per Day (BPD) oil and 234 Million Cubic Feet per Day (MMCFD) gas were announced.

The E&P companies added 9,444 BPD oil and 218 MMCFD gas was added in the national pool against the depletion of 9611 BPD oil and 279 MMCFD gas from the operational wells.

While the companies had acquired around 5,110 2D Line-Kilometre and 2,693 Square-Kilometer seismic data to assess the potential of hydrocarbon deposits in different pockets. ■

## NOWPDP to establish a plastic recycling facility

**P**hilip Morris announced its support to establish a

recycling facility as part of its anti-littering efforts.

Under the project, the not for profit organization Network of Organizations Working with People with Disabilities, Pakistan (NOW-

the most vulnerable minorities.

The project will also empower PWDs through inclusion in economic activities while addressing the serious civic issue of littering which impacts diverse locations—from streets and

management by collecting, storing, and converting PET plastic into items of daily usage such as plastic tiles, coasters, and small planters.

NOWPDP will also train and employ Persons with Disabilities (PWDs) for waste collection and process-

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PDP) will establish a plastic recycling facility while building the capacity of persons with disabilities, one of

city parks to beaches and oceans.

The recycling facility will ensure responsible waste

ing. Once the facility is operational, NOWPDP will run anti-littering campaigns for

Contd on page 0

# PSO opens first electric vehicle charging station in Islamabad



**Pakistan State Oil (PSO), the largest oil marketing company of the country continues to pave the way for a sustainable future for Pakistan by successfully installing and commissioning its first electric vehicle charging station under the brand name “PSO Electro” at PSO Capri Gas Station, F-7, Islamabad.**

Federal Minister for Power and Petroleum, Omar Ayub Khan and Special Assistant to Prime Minister on Petroleum, Nadeem Babar were the chief guests at the inauguration ceremony.

Federal Minister for Power and Petroleum Omar Ayub Khan appreciated PSO’s efforts and said: “We need to address the key challenges of environmental protection.

Electric vehicles will have a marked edge as they produce almost no running emissions”. Highlighting the government’s efforts in promoting this sustainable form of transportation, he further added: “EV manufacturing units will be established across the country under the National Electric Vehicle Policy

that will create job opportunities and have a positive economic impact”.

Special Assistant to Prime Minister on Petroleum, Nadeem Babar said: “Pakistan is moving forward to reduce air pollution and curbing climate change. We intend to move to 30 percent of renewable energy in our energy mix, together with another 30 percent of hydel power generation. These efforts coupled with a move towards electric vehicles will greatly help in achieving the mission of the Prime Minister of Pakistan of a Clean & Green Pakistan. The government is supporting all stakeholders involved as the world adapts to this eco-friendly technology”.

CEO, PSO, Syed Muhammad Taha said: “This is yet another step as part of PSO’s ongoing efforts in environmental stewardship. Under the guidance and support of GOP, we will continue to drive the future of e-mobility in Pakistan by installing more electric vehicle chargers at various highways and in major cities across the country. PSO is investing in cleaner energy solutions to reduce the carbon footprint and build a better environment for our future generations. As we lead the sustainable energy revolution, our next step is the introduction of

Euro-5 standard fuels at PSO retail outlets”. Living up to its role of the national energy company, PSO continues to enable the

journey of all Pakistanis while striving to create a sustainable future for the country’s future generations. ■

## NOWPDP to establish

*Contd from page 6*

plastic collection throughout the city of Karachi.

According to Omair Ahmed, CEO NOWPDP, “Inclusion of Persons with Disabilities in terms of economic empowerment would open up many avenues in all aspects of their life.

This project would in the long term also facilitate change in mindsets and standard of living of individuals from families of persons with disabilities, low-income communities, individuals engaged through the production process, awareness campaigns, and community outreach.”

Commenting on the partnership, Sadia Dada, Director Communications, shared, “The natural environment should remain unspoiled,

beautiful, and litter-free. The occurrence of littering—whether of cigarette butts or other waste—varies across the world, but, in general, it is linked to behavioral attitudes and availability of a waste disposal infrastructure. Changing the habit of littering requires action across three areas: awareness, disposal infrastructure, and social enforcement. We are glad to add our voice in the fight against littering and for sustainability, financial inclusion, and economic empowerment of people with disabilities.”

Sadia added, “We are ready to work with authorities, anti-littering organizations, and other relevant stakeholders to achieve the greatest impact. Littering isn’t an issue unique to us or our

products. Myriads of businesses and organizations and individuals have been tackling the problem for years. We’re simply adding our voice and efforts to the fight.”

Globally, PMI is also recycling its waste, implementing green design guidelines, promoting the circular economy, and contributing to global efforts to reduce environmental impacts. PMI’s global commitment is to achieve at least a 50 percent reduction of the plastic litter from our products by 2025 (vs. 2021).

Established in 2008, NOWPDP’s mission is to promote an inclusive society through holistic and sustainable endeavors in the areas of education and economic empowerment. ■

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# Gas Triggered Ion Source in Ionization Process

Engr. Muhammad Nawaz Iqbal

**I**onization is the procedure by which a particle or an atom obtains a negative or positive charge by picking up or losing electrons, regularly related to other substance changes.

The subsequent electrically charged iota or atom is called a particle. Ionization can result from the loss of an electron after impacts with subatomic particles, crashes with different iotas, atoms, and particles, or through the association with electromagnetic radiation.

Heterolytic bond cleavage and heterolytic replacement responses can bring about the development of particle sets.

Sources of an ion are utilized to frame particles for mass spectrometers, optical outflow spectrometers, molecule quickening agents, particle implanters, and particle motors.

Ions can be made in an electric gleam release. A shine release is a plasma shaped by the section of electric flow through a low-pressure gas. It is made by applying a voltage between two metal terminals in a cleared chamber containing gas.

At the point when the voltage surpasses a specific worth, called the striking voltage,

the gas frames a plasma.

Ions can also be made in an inductively coupled plasma, which is a plasma source in which the vitality is provided by electrical flows which are created by electromagnetic enlistment, that is, by time-changing attractive fields. Plasma electron temperatures can extend between ~60,000 K and ~1000,000 K (~6 eV - ~100 eV), and are generally a few significant degrees more prominent than the temperature of the impartial species. Argon ICP plasma release temperatures are regularly ~5,500 to 6,500 K and are accordingly tantamount to that reached at the surface (photosphere) of the sun (~4,500 K to ~6,000 K). ICP releases are of generally high electron thickness, on the request for  $10^{15} \text{ cm}^{-3}$ . Subsequently, ICP releases have wide applications where a high-thickness plasma (HDP) is required. Microwave instigated plasma particle sources are equipped for energizing electrodeless gas releases to make particles for follow component mass spectrometry. A microwave plasma is a kind of plasma, that has high recurrence electromagnetic radiation in the GHz go. It is fit for energizing electrodeless gas releases. Whenever applied in surface-wave-supported mode, they are particularly appropriate to create enormous zone plasmas of

high plasma thickness. If they are both in surface-wave and resonator mode, they can display a serious extent of spatial restriction. Glow via gas releases are utilized as a wellspring of light in gadgets, for example, neon lights, fluorescent lights, and plasma-screen TVs. Investigating the light created with spectroscopy can uncover data about the nuclear cooperations in the gas, so sparkle releases are utilized in plasma material science and scientific science. They are likewise utilized in the surface treatment procedure called faltering. In a sparkle release, the transporter age process arrives at a point where the normal electron leaving the cathode permits another electron to leave the cathode. For instance, the normal electron may cause many ionizing crashes by means of the Townsend torrential slide; the subsequent positive particles head toward the cathode, and a small amount of those that cause impacts with the cathode will oust an electron by auxiliary discharge. Low weight is utilized to build the mean freeway; for a fixed electric field, a more extended mean freeway permits a charged molecule to acquire vitality before crashing into another molecule. The phone is ordinarily loaded up with neon, however, different gases can likewise be utilized. An



electric capability of a few hundred volts is applied between the two cathodes. A little portion of the number of inhabitants in iotas inside the cell is at first ionized through arbitrary procedures, for example, warm crashes between molecules or by gamma beams. The positive particles are driven towards the cathode by the electric potential, and the electrons are driven towards the anode by a similar potential. The underlying populace of particles and electrons slams into different iotas, energizing, or ionizing them. For whatever length of time that the potential is kept up, a populace of particles and electrons remains. ■

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# COMSTECH organizes National Showcasing of Artificial Intelligence and IoT Products & Services

## 'Artificial intelligence, information technology a prerequisite to compete'

**N**ational Showcasing of Artificial Intelligence and IoT Products & Services" was organized by COMSTECH Secretariat and other partners in the capital.

The National Exhibit/Showcase was aimed to further foster interest in Science, Technology, and Innovation and to popularize the field of artificial intelligence among the youth of Pakistan, stimulating their interest in the sphere of innovation, and in high-tech areas of technology.

It was intended to bring a unique platform for innovators, technology developers, service providers, who are eager and ready to share experience and professional skills with participants of common interests in science, technology and innovation.

The National Exhibit/Showcase, as the organizers said was designed for projects and innovations in the realm of AI or allied technologies.

It aimed at next generation technologies, solutions and strategies from all over Pakistan, and an opportunity to explore and discover the

practical and successful implementation of AI and allied technologies in Pakistan.

It meant to bring all the stakeholders in Pakistan on one platform, providing the opportunity to network with relevant ministries, industry R&D organizations, academia, strategic organizations and peers.

President Dr. Arif Alvi addressed the moot stressing the need for the promotion of artificial intelligence and information technology in order to compete with the world.

He said Pakistan could become a major player in technology by aligning expertise with future demands adding that data was the 'new gold of contemporary age', which he said could be used to gain maximum benefit to boost the economy and enhance exports.

He mentioned that China and Japan were prominent examples of making strides in development by combining systems of governance with technology.

The President said Pakistan was working towards the implementation of a digital payment system for smooth and fast financial transactions.

He said with agriculture as the country's backbone, the use of drones for harvest operations and pest sprays, and monitoring crop growth through digital-imaging capabilities could help the farmers for making correct assessments about their fields.

The President stressed better optimization of the country's big database of individuals to explore areas that required more attention.

He termed three stages important in making a difference in the field of artificial intelligence, including concept and innovation, translating it into the product, and effective marketing.

He emphasized on developing human resources that could contribute to software making and thus excel in digital technology.

President Alvi said the COMSTECH could play an effective role in the promotion of science and technology in Islamic countries and expressed confidence that the exhibit would provide academics and industries a platform to jointly pave the way towards the journey of technological development.

Minister for Science and Technology

Chaudhry Fawad Hussain said 'Think Future' and 'Made in Pakistan' was the two-pronged approach of his ministry to translate research into products.

He said the country, which was importing equipment after detection of its first coronavirus case in February had achieved the capability of exporting PPEs (Personal Protective Equipment) within a few months.

He said precision agriculture, chemical replacement, and electronics were the next focus areas of the Ministry of Science and Technology.

Chaudhry Fawad stressed the need for bidding farewell to the 'culture of banning' of tech applications, journals, and books, and said focusing on counter-narrative would be more effective instead of trying to build narratives.

Coordinator General COMSTECH Prof. Dr. Iqbal Choudhary apprised the audience about the scope of the exhibition within the country and abroad.

Developers of artificial intelligence, academic policymakers, data analysts, and experts attended the event. ■

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# Pakistan to get 38 more agricultural drones from China



**The Chinese government will provide around 38 more agricultural drones to Pakistan in a few months to fight desert locust.**

The Chinese Ministry of Agriculture and Rural Affairs had donated the drones for the prevention of desert locust to the Ministry of National Food Security and Research of Pakistan last month.

According to a report of the China Economic Net (CEN), a leading Chinese company expressed willingness to set up an industrial unit in Pakistan to manufacture drones that can be used to protect crops

and control locust. "From factory construction, production, assembly, after-sales to personnel training, we can provide a full set of technical support to help Pakistan develop the drone manufacturing industry to quickly respond to various types of disasters," said Du Jixiang, Chief Engineer, Beijing Andun Equipment Co. Ltd.

The government is negotiating with a mission of the Chinese aviation industry for the supply of aircraft to carry out aerial spray in the locust-affected areas.

An official of Pakistan's Ministry of National Food Security and Research said that Pakistan wanted to lease six aircrafts

from the Chinese Ministry of Civil Aviation to conduct aerial spray into locust affected areas.

Although Pakistan is yet to deploy these drones to stop desert locusts, a wave of joy has been felt among Pakistani farmers. "It is indeed a piece of great news. China has provided drones to fight locust. It means we will be able to save our crops from locust soon. Ajmal Bhutta, a noted agriculturist based in Multan said over the telephone.

Desert locust is an international trans-boundary concern with major economic, social, and environmental implications.

As per the estimate of officials of the

department of agriculture of Pakistan's provinces of Sindh and Balochistan, the locust attack has damaged crops cultivated on 80,000 hectares of land besides causing serious damage to grazing fields and forest areas.

In February this year, Pakistan declared a national emergency to eliminate the attacking swarms of the desert locust.

"The farmers are very worried as they have seen their crops being destroyed in front of their eyes. These farmers should be compensated," said Zahid Bhurguri, general secretary of the Sindh Chamber of Agriculture.

"Almost all crops and non-crop plants are vulnerable and the insects are one of the biggest threats to food security," he added. ■

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- Christopher Reeve

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### آوازِ اقبال

اقبال کا ترانہ بانگِ درا ہے گویا ہوتا ہے یادہ بیا بچر کارواں ہمارا

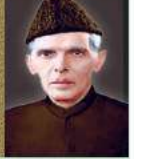
مطلع اول لکھ جس کا ہو وہ دیواں ہے تو سوئے غلوت گاہ دل دامن سخن انساں ہے تو برف نے بانگی ہے دستارِ فعالیت تیرے سر خندہ زن ہے جو گلاہ مہر عالم تاب پر

اے حالہ! اے فصیل کشور ہندوستان چومتا ہے تیری پیشانی کو جبکہ کر آسماں تجھ میں کچھ پیدا نہیں دیرینہ روزی کے نشاں تو جواں ہے گردشِ شام دسحر کے درمیاں ایک جلوہ تھا کلیم طور سینا کے لئے تو تجلی ہے سراپا چشمِ پینا کے لئے امتحان دیدہ ظاہر میں کوہستاں ہے تو پاساں اپنا ہے تو دیوار ہندوستان ہے تو

گاہ وہ جہوریت جو ستر بھولا بھائی ڈیہائی کے ذہن میں ہے ہلاک ہو چکی ہے۔ ہم تعداد میں کم ہو سکتے ہیں کم ہیں مگر یہ کہنے کی جرات کرتا ہوں کہ ہم مسلمان اگر چاہیں اور ارادہ کریں ہم کا گریں کو سو گنا زیادہ تکلیف دے سکتے ہیں۔ آپ اس حقیقت سے بے خبر ہوں تو ہوں، مگر میں بخوبی آگاہ ہوں۔ میں یہ بات دہمکی کے لئے نہیں محض آپ کی آگاہی کے لئے کہی۔  
(مرکزی اسمبلی 19 نومبر 1940ء)

### فرمانِ قائد اعظم

ایمان، اتحاد، تنظیم



پاکستان..... منزل مقصود ہم نے قلمی طور پر اور ہمیشہ کے لئے پاکستان کو اپنی منزل مقصود بنا لیا ہے اور ہم اس کے لئے لڑنے کو تیار ہیں۔ اس کے متعلق کسی قسم کی غلط فہمی کو دل میں جگہ نہ دیجیے

## یکساں نظامِ تعلیم کا چیلنج

مہم نے نصاب کی تیاری کے لیے جتنے تجربات کیے شیاء حکومت کے ایک ہتھوڑے سے علمی روایات اور تعلیمی تقدس کے کئی مینارز میں یوں ہوئے، تعلیم کو اسلامیانے کی کوشش میں تاریخ سے کھلاؤ شروع ہوا، لفظ کی حرمت مجروح ہوئی، حکومت یکساں نظامِ تعلیم ضرور لائے مگر اس حقیقت کو فراموش نہ کرے کہ لارڈ میکالے کے ذہنی غلاموں نے ابھی آزادی کی شفاف جمہوری فضا میں سانس لینے کی فطری صلاحیت پیدا نہیں کی، ہماری پیور وکریسی کو فکری غلامی سے آزاد کرنا ایک شرط ہے، اس ملک میں ابھی تک اردو زبان سرکاری سطح پر نافذ نہیں ہو سکی، انگریزی زبان سے تعصب کی کوئی بات نہیں، انگریزی زبان دنیا سے رابطے کا موثر وسیلہ ہے لیکن مادری زبانوں اور علاقائی زبانوں نے کیا تصور کیا ہے؟ تو یہ سچیتگی کے لیے نظامِ تعلیم کی یکسانیت ایک اہم قدم ہے۔

واضح رہے وفاقی وزیر تعلیم نے 8 جولائی کو بین الصوبائی وزیرانے تعلیم کانفرنس میں اسکول، کالج اور جامعات کو ستمبر کے پہلے ہفتے میں کھولنے پر اتفاق کیا تھا۔ کانفرنس میں فیصلہ کیا گیا کہ تعلیمی ادارے کھولنے سے قبل کوویڈ 19 کی صورتحال کا جائزہ لیا جائے گا۔ اجلاس میں فیصلہ کیا گیا کہ ستمبر سے پہلے 2 بار بین الصوبائی وزیرانے تعلیم کانفرنس بلائی جائے گی جس میں اس حوالے سے مزید تفصیلات طے کی جائیں گی۔ کورونا کی شدت کے تناظر میں تاریخوں میں ردوبدل کیا جاسکتا ہے۔ صوبوں سے مشاورت کے بعد توجہ و ترقی رابطہ کمیٹی کو بھیجوا جائیں گی۔

کورونا وائرس کے باعث تعلیمی اداروں کی بندش سے ہزاروں اساتذہ اور عملے بے روزگار ہو گیا ہے۔ بلاشبہ حکومت کے لیے یکساں نظامِ تعلیم کے ساتھ ہی تعلیمی اداروں کو کھولنا بھی ایک چیلنج ہے، حکومت ڈیجیٹلائزیشن اور آن لائن ایجوکیشن کا پروگرام بھی رکھتی ہے، اس پر عمل بھی ہو رہا ہے، لیکن ملک میں لوڈ شیڈنگ ہو رہی ہے، کراچی کو شدید لوڈ شیڈنگ کا سامنا ہے، انٹرنیٹ تک ملک کے متعدد دریاں قنات و علاقوں کی رسائی حاصل نہیں، آن لائن اسکولنگ کیلئے بجلی کی بلا تعلق فراہمی ناگزیر ہے، صوبائی حکومتوں کو ادراک ہے کہ تعلیمی نظام کو کورونا نے شدید متاثر کیا ہے، تدریس ایک مستقل فکری اور ذہنی عمل ہے، اسکول بند ہونے سے بچوں کی تعلیم کا جو حشر نشر ہوا ہے اس نے متوسط طبقوں کو زیادہ متاثر کیا ہے، اس کا ازالہ بھی ہونا ہے۔ کورونا کے بارے میں ماہرین اور مسیحاؤں کا کہنا ہے کہ ماسک نے انسانی چہرہ کی شناخت ختم کر دی ہے، بچوں کے لیے ماسک پہننا خوشگوار تجربہ نہیں بلکہ ایک مشکل اور اذیت ناک مشق ہے لیکن گھر کے اندر بچوں کی تدریس کا عمل جس بڑے پیمانہ پر منتشر ہوا ہے اس کی از سر نو ترمیم بھی ضروری ہے۔

حکومت اسکول اور کالجز جامعات کی تدریس کے لیے منظم حکمت عملی وضع کرے، اسکولز دور لہیے کی جنگ سے جتنی جلد نجات حاصل کر لیں اتنا ہی بہتر ہوگا، کورونا کے بارے میں کچھ نہیں کیا جاسکتا مگر یہ بات حکومت کے لیے صائب ہے کہ وہ اگست، ستمبر کی تاریخوں پر اپنا ذہن صاف کرے اور کورونا کے تسلسل کو غیر ملکی امداد و دیگر مالیاتی مفادات کی خواہش سے الگ کرنا ہی نسل کے بہترین مفاد میں ہوگا۔ وفاقی وزیر تعلیم نے یکساں نظامِ تعلیم کا جو بیگ بجایا ہے وہ طبقاتی تعلیم کے خاتمہ کا طبل جنگ ہے، ملک ایک تعلیمی پیش قدمی کی طرف بڑھ رہا ہے، اس میں ثابت قدمی ناگزیر ہے، مشکلات ہیں، حکومت اپنے انداز کار سے ماوراء تکمیل تعلیمی پیش رفت کو یقینی بنائے، اسکول جب بھی کھلیں تو م کو یہ یقین ہو کہ حکومت اس پر کوئی یوٹرن نہیں لے گی۔

وفاقی وزیر تعلیم شفقت محمود نے کہا ہے کہ حکومت ملک میں یکساں نصابِ تعلیم بنیادی سہولتوں اور تعلیم کے خلا کو پر کرنے کے ساتھ ساتھ جدید ٹیکنالوجی کو تعلیم سے مشروط کرنے کی پالیسی پر یقین رکھتی ہے اور اس کام کے لیے منجیدہ کوششیں کی جارہی ہیں، یہ بات انھوں نے 2020 گلوبل ایجوکیشن مانیٹرنگ رپورٹ کے اجراء کے موقع پر اپنے خطاب میں کی، ماہرین نے پاکستان کی نسل کی تعلیمی عمل میں شمولیت اور دیگر تعلیمی امور پر تفصیلی بحث کی ہے، ملک میں تعلیمی عدم مساوات، نصابی ضروریوں اور معیارِ تعلیم کے زوال سمیت اہم پہلوؤں کو اجاگر کیا ہے اور اس بات کی ضرورت محسوس کی ہے کہ معیاری تعلیم تک رسائی ہر پاکستانی کے لیے یقینی بنائی جائے، رپورٹ میں اس نکتہ کو تعلیم کی بنیاد قرار دیا گیا۔ رپورٹ کی تیاری میں شامل ماہرین کا کہنا تھا کہ بچوں کی تعلیم پر مکمل توجہ دی جانی چاہے، اس میں بلا تفریق رنگ نسل، زبان، عقیدہ اور صلاحیت کسی کے پس منظر کو پیش نظر نہ رکھا جائے۔ رپورٹ میں کہا گیا کہ ہشکل کوئی دیہی عورت اور اسکول میں زیر تعلیم لڑکی ثانوی تعلیم مکمل کرتی ہے اگرچہ 2030 کے تعلیمی مقاصد کی لازمی تکمیل ایک عالمگیر ٹارگٹ کے طور پر تسلیم کی گئی ہے، تاہم اس حقیقت کی طرف بھی اشارہ کیا گیا کہ لڑکوں کو بالعموم گھروں کی طرف سے لڑکیوں کے مقابلہ میں زیادہ سہولتیں دستیاب ہوتی ہیں۔

رپورٹ کے مطابق دس فیصد ملکوں میں تعلیمی عمل میں شمولیت کو یقینی بنانے کے قوانین رائج ہیں اور تعلیم حاصل کرنے سے گریز پر سخت قوانین بھی موجود ہیں۔ بہر کیف رپورٹ ایک منجیدہ کوشش ہے جو ماضی میں تعلیمی پالیسی رپورٹوں کے انبار میں ایک اور رپورٹ کا اضافہ ثابت نہ ہو بلکہ اس پر عملدرآمد کے لیے حکومت ایک معنی نیز بریک تھرو کرے تو قوم پر احسان ہوگا۔ ریاستی اور حکومتی ادارے اپنی سمت درست نہیں کر سکتے، حکومت بہت سے چیلنجوں سے نکلنے میں مصروف ہے، خطے کی صورتحال پر خطر ہے، کورونا نے صحت انفراسٹرکچر کو بے نقاب کر دیا ہے، قوم شکر ہے کہ حکومت کوئی ٹھوس تبدیلی پروگرام لے آئے تاکہ عوام جدید دور کی سہولتوں سے فائدہ اٹھائیں۔ لیکن اس کے لیے وزیر اعظم عمران خان کو ان تمام محاذوں سے تبدیلی اور انقلاب کی ایک لہر درکار ہے جو ان کی حکومت نے خود اٹھائی ہے، قوم سے انھوں نے بڑے وعدے کیے ہیں۔ انھیں پورا بھی کرنا ہے۔ تاہم وقت کی بڑی تبدیلی کے بغیر گزارنا جا رہا ہے۔ کسی نے خوب کہا ہے کہ

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وزیر تعلیم شفقت محمود نے اعتراف کیا کہ کورونا وائرس کے باعث اسکولوں، کالجوں، جامعات اور مدرسہ سمیت دیگر تعلیمی اداروں کی بندش سے تعلیم کا ناقابلِ حلانی نقصان ہوا تاہم ان کا کہنا تھا کہ اس قومی نقصان کے پیش نظر حکومت کو تعلیم سے متعلق ڈیجیٹل ٹیکنالوجی پر توجہ مرکوز کرنے کا موقع ملا ہے، انھوں نے یقین ظاہر کیا کہ مذکورہ رپورٹ مفید ثابت ہوگی اور قومی تعلیمی پالیسی کی تکمیل میں اس سے بھرپور استفادہ کیا جائے گا۔ لیکن سچی بات تو یہ ہے کہ حکومت نے ملک بھر میں یکساں نصابِ تعلیم کا بیڑا اٹھایا، طبقاتی تعلیم کے تابوت میں آخری کیل ٹھونکنے کے سنگ میل کو عبور کرنے کا عندیہ دیا ہے، یہ غیر معمولی مشن ہے، حکومت کو اندازہ ہے کہ نظامِ تعلیم منوعہ شجر رہا ہے، کسی حکومت نے تعلیم کو اہمیت نہیں دی، پرائمری سے لے کر اعلیٰ تعلیم تک کا جنازہ نکل گیا ہے، ڈگریوں کی بے توقیری ہو چکی، امتحانات کی شفافیت نے دم توڑ دیا، کرپشن کے ناسور نے نظامِ تعلیم کو بھی نہیں بخشا، ماہرین

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# سرکلر ریلوے ٹریک پر آزمائشی ٹرین چلانے کا فیصلہ

سٹی سے اورنگی تک کا ٹریک 2 ماہ میں مکمل ہوگا، ٹریک پر آزمائشی ٹرین چلائی جائیگی، 14 کلومیٹر روٹ پر 6 کلومیٹر ٹریک تیار، 8 کلومیٹر ٹریک کی مرمت و تہدیلی جاری

کراچی سرکلر ریلوے کی بحالی کیلئے منصوبہ بندی کیساتھ کام کیا جا رہا ہے، کمشنر افتخار شاہ ہوانی، ڈویژنل سپرنٹنڈنٹ ریلوے نے سی آر عملدرآمد منصوبے پر بریفنگ دی

ریلوے افسر مہر علی داؤد پور نے ڈی آئی جی سکپورٹی منصور احمد محمد منصور ہندی سندھ، سندھ سائبر سیکورٹی ایجنٹ پورڈ، ضلعی بلدیات اور اوروں، سندھ بلڈنگ کنٹرول اتھارٹی، بلدیہ عظمیٰ کراچی اور ضلع جنوبی، شرقی اور غربی کے ایڈیشنل ڈپٹی کمشنرز اور سینئر پولیس افسران نے شرکت کی، اجلاس میں فیصلہ کیا گیا کہ کراچی سٹی سے اورنگی تک کا آزمائشی ٹریک 12 ماہ میں مکمل ہوگا۔

پاکستان ریلوے نے ٹریک پر آزمائشی ٹرین چلانے کی تیاری شروع کر دی ہے 14 کلومیٹر تک اس روٹ پر 6 کلومیٹر ٹریک تیار کر لیا گیا ہے، 8 کلومیٹر ٹریک کی مرمت اور تہدیلی کا کام جاری ہے اس ٹریک پر ڈیزل پمپشن، بلدیہ شاہ عبداللطیف، سائبر سیکورٹی اور جی بی بیٹک اور اورنگی ٹاؤن کے ایجنٹس قائم ہیں اور 5 ریلوے کراسنگ بھی واقع ہیں، کمشنر کراچی نے کہا کہ کراچی سرکلر ریلوے کی بحالی کے لیے منصوبہ بندی کے ساتھ کام کیا جا رہا ہے۔

جلد از جلد ٹکاسی آپ کی لائن کی تہدیلی پر کام شروع کرنے کی یقین دہانی کرائی، اجلاس کو یہ بھی بتایا گیا کہ سی آر کے 44 کلومیٹر روٹ پر ٹریک کی منصوبہ بندی کر لی گئی ہے سینئر ڈپٹی سٹیٹنگ آفیسر نے سٹیٹنگ آفیسر کی طرف سے طلبہ کو سٹیٹنگ آفیسر کی اگلی ہفتے ٹریک کی منصوبہ بندی کا کام شروع کر دیا جائے گا۔ اجلاس میں ڈویژنل سپرنٹنڈنٹ ریلوے ارشد اسلام خٹک، ادارہ فراہمی و ٹکاسی آپ کے ایم ڈی اسد اللہ خان، چیف انجینئر پاکستان

کے حوالے سے ضروری فیصلے کیے گئے ڈویژنل سپرنٹنڈنٹ پاکستان ریلوے کراچی ارشد اسلام خٹک نے کمشنر کراچی سرکلر ریلوے منصوبے پر عملدرآمد کے اقدامات کے بارے میں تفصیلی بریفنگ دی، اجلاس میں اردو بازار اسٹیشن سے ڈیپو تک ٹکاسی آپ (سیورسج لائن) کی منصوبہ بندی اور تہدیلی کا فیصلہ کیا گیا، ادارہ فراہمی و ٹکاسی آپ کراچی کے چیف ڈائریکٹر اسد اللہ خان نے اجلاس کو

کراچی سرکلر ریلوے کو بحال کرنے کے اقدامات تیزی سے جاری ہیں، پاکستان ریلوے نے کراچی سرکلر ریلوے کے تیار ہونے والے ٹریک پر آزمائشی طور پر ٹرین چلانے کا فیصلہ کر لیا ہے، کراچی سٹی اسٹیشن سے اورنگی ٹاؤن تک ٹریک 2 ماہ میں مکمل ہو جائے گا، پاکستان ریلوے نے ٹریک تیار ہونے کے بعد آزمائشی ٹرین چلانے کی تیاری شروع کر دی، 14 کلومیٹر روٹ پر 6 کلومیٹر ٹریک تیار کر لیا گیا ہے، 8 کلومیٹر ٹریک کی مرمت اور تہدیلی کا کام جاری ہے، سپرنٹنڈنٹ نے جلد از جلد کراچی سرکلر ریلوے کی بحال کا حکم دیا تھا۔

تفصیلات کے مطابق سپرنٹنڈنٹ کے احکام کی روشنی میں کراچی سرکلر ریلوے کو بحال کرنے کے لیے کراچی انتظامیہ کی کوششیں جاری ہیں اس سلسلے میں کمشنر کراچی افتخار شاہ ہوانی کی زیر صدارت ان کے دفتر میں اجلاس ہوا جس میں سی آر منصوبے پر عملدرآمد کے لیے کی جانے والی کوششوں اور اقدامات اور سی آر منصوبے میں ماحول رکاوٹیں دور کرنے کا جائزہ لیا گیا، اعلیٰ سطح کے اجلاس میں سی آر منصوبے کی بحالی



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## ذی الحجہ کا چاند اور نواز چوہدری

تحریر: ڈاکٹر محمد شاہد قریشی

میرے پیارے نبی محمد صلی اللہ علیہ وسلم نے اس بات کی بہت تاکید کی ہے کہ چاند کو ٹوٹا اور چمکدار دیکھ کر کسی ناکو کہ یہ تو دو یا تین تاریخ کا کیلنڈر ہے اور اس دن چاند ہوا گھٹنے آسمان پر ہے گا پھر بھی کیلنڈر بنانے والوں نے اسے کبھی کا چاند مانا ہے۔ جب میں ان لوگوں کو نیم حکیم بنا کر علم یا تجربہ کار کہتا ہوں تو اس کی وجہ یہی ہے کہ یہ نہیں جانتے ان کے ہی کیلنڈر میں اگلے ہی ماہ اسی طرح کا ایک 30 کا چاند (ان کے کیلنڈر کے مطابق) آنے والا ہے جو اس ماہ کے 30 کے چاند کے ساتھ ہی ہے۔

یہ کوئی اتنا کام نہیں ہے۔ سائنس اس بات سے قاصر ہے کہ چاند کے ہارے میں وضاحت سے چمکنی کر سکتے اور یہی وجہ ہے کہ پہلے سے ایسا قمری کیلنڈر نہیں بنا یا جاسکتا۔ اکثر ایسا بھی ہوتا ہے کہ جہاں ہلال کے آسانی سے نظر آنے کے امکانات ہوتے ہیں وہاں سے بھی ہلال دکھائی نہیں دیتا۔ لہذا جس قسم کے ماڈلز کا ہمارے کرسچنوں کے تجربہ کار لوگوں نے کیلنڈر رادار پر لکھیں بنا کر دی ہے اور اسی "فلسفی سائنس" مان کر اس پر ایمان لے آئے ہیں وہ دراصل معاشرے کے "پڑھے لکھے" طبقے کو شہ پر غلطی میں جتلا کر رہے ہیں اور یہ تو سائنس کے مطابق درست ہے اور ناسی شریعت کے مطابق۔

میرے پیارے نبی محمد صلی اللہ علیہ وسلم اور رب تعالیٰ کے علم میں خامی ہوئی نہیں سکتی۔ دوسری جانب راقم نے 20 برس تک کیلنڈر کے اس میدان میں علمی کام کیا ہے۔ جب 29 کی شام کو ہلال نظر نہیں آتا تو 30 کی شام کو ہلال غروب آفتاب سے پہلے تلاش کرنا شروع کر دیتے تھے اور اکثر ہلال ہمیں

نبی کی ایک رپورٹ سے علم ہوا کہ میرے معاشرے کے بڑے بڑے سیاست دانوں اور بہت سے دوسرے سائنس دانوں نے 30 کا چاند "دیکھا جس کی وجہ سے ان کو شدید مخالفت ہو رہی ہے یہ "جلی تاریخ" کا نہیں بلکہ "دوسری تاریخ" کا چاند ہے۔ نواز چوہدری صاحب تو اس لئے سچ بولتے ہیں کہ "ایک مرتبہ ہمارے ناکام ہو گیا ہے۔"

یاد رہے کہ میں بار بار یہ کہتا رہا ہوں کہ "بہری قمری کیلنڈر" بنانا ناممکن ہے کیونکہ ہر ماہ ہلال دنیا کے کچھ علاقوں میں ایسی حالت میں ہوتا ہے کہ اس کا نظر آنا بہت مشکل (ناممکن نہیں) ہوتا ہے، جبکہ کچھ علاقوں سے آسانی سے نظر آسکتا ہے اور بہت سے نظر آنا ناممکن ہوتا ہے۔ جبکہ دوسری جانب SUPARCO کے جن سائنس دانوں نے انہیں کیلنڈر بنا کر دیا ہے وہ "علم ہلال" یا SCIENCE OF CRESCENT SIGHTING سے قطعاً ناواقف ہیں۔ جب ہلال 29 کی شام کو نظر نہیں آتا تو اگلی شام یعنی 30 کی شام ہلال ہونا بھی ہوتا ہے۔ مزید چمکدار بھی ہوتا ہے اور اکثر ایک سے ڈیڑھ گھنٹے تک دکھائی دیتا رہتا ہے۔ نبی کی اس رپورٹ میں نواز چوہدری صاحب سمیت جن جن لوگوں کو 30 کا چاند "دوسری" کا محسوس ہوا ہے یہ صرف اور صرف ان تمام لوگوں کی علم کی اور تجربہ کاری ہے۔ یہاں سب سے اہم بات تو یہ ہے کہ