



100 Years of Excellence
1922-2022

ARL NEWSLETTER

PIONEERS

in Petroleum Refining

JAN-JUN 2024

Volume VI, No. I



COMPANY EVENTS

REWARDS & RECOGNITION

TRAINING & DEVELOPMENT GREENS PLANS

SOCIAL RESPONSIVENESS

EMPLOYEES AFFAIRS

CREATIVITY CORNER

PATRON-IN-CHIEF



M. Adil Khattak
Chief Executive Officer

PATRON



Nadeem Nazir
HOD (HR & Admin.)

EDITOR



Saba Sarfraz
HR & Admin.

EDITORIAL TEAM MEMBERS



Salman Sheikh
Operations



Kamran Shahzad
HR & Admin.



Muhammad Ahmed
HR & Admin.

Departmental Coordinators for Newsletter

- | | |
|--|----------------------|
| 1. Operations | Mr. Salman Sheikh |
| 2. Maintenance | Mr. Hammad Tahir |
| 3. Technical Services, P&D | Mr. Saleem Hasrat |
| 4. Human Resources & Administration | Ms. Saba Sarfraz |
| 5. Commercial & Materials Management | Mr. Mohsin Ali Sadiq |
| 6. Finance & Corporate Affairs | Mr. Amin Kahoot |
| 7. Business Review and Assurance | Mr. Nek Akhtar |
| 8. Health, Safety, Environment & Quality | Mr. Muhammad Arshad |
| 9. Engineering | Mr. Muhammad Qasim |

Editorial Note



Dear Readers!

The Editorial Board is once again at work and is pleased to unveil this edition of Pioneers.

In this edition, life at ARL has been covered from Jan-Jun, 2024 under the segments of company events, rewards & recognition, green plans, social responsiveness, training & development, employees affairs and their contributions.

You are welcome to share your feedback at newsletter@arl.com.pk

Happy Reading!

SAFETY WEEK – 2024

Attock Refinery Limited celebrated Safety Week from April 22nd to 26th, 2024, in alignment with the International Labor Organization's World Day for Occupational Health and Safety at Work, which falls on April 28th. The theme for this year, according to the ILO is "Impacts of Climate Change on Occupational Safety and Health." Throughout the Safety Week, safety talks were organized to engage shop floor-level employees and gather their feedback on hazards associated with climate change, including excessive heat, extreme weather events, and air pollution. Moreover, classroom sessions were conducted on topics such as Behavior Based Safety, Operational Safety, Digital Technologies in Plant Safety, and Contractor's Safety, aimed at enhancing the safety culture within the refinery. A safety walk was also conducted by refinery employees.

Moreover, ARL collaborated with National Highway & Motorway Police and Rescue 1122 to facilitate an interactive session on Road Safety and Role of Emergency Services in the community.



World Environment Day – 2024

ARL celebrated World Environment Day to reaffirm its commitment to the betterment of the environment, focusing on this year's theme of "Land Restoration, Desertification, and Drought Resilience". Awareness sessions were conducted in nearby schools and inside the Refinery. These sessions are aimed to educate about concerns related to environmental protection, the impacts of climate change, their repercussions and the necessary actions that need to be taken.



HAJJ FAREWELL PARTY- 2024

The Hajj farewell party was held on May 3, 2024 at ARL Diner. Mr. Salman Tariq, HOD (Maintenance), was the chief guest on the occasion. The function was attended by departmental heads and CBA members. This year, four Hajj nominees along with their dependents performed the Hajj on company expense while six employees have performed the Hajj on their own expense. All Hujjaj were garlanded and presented gifts by the chief guest.



LABOUR DAY - 2024

ARL organized an event for Labour Day on 1st May at Elliott Club. Mr. Raja Qamar ul Islam, Member of National Assembly, Mr. Chaudhary Imran Ilyas, Member of Provincial Assembly and Zahoor Awan, General Secretary of the Pakistan Workers' Federation attended this event. ARL top management, CBA representatives and a large number of workers joined this event.



ATTOCK INSTITUTE OF HORTICULTURE (AIH) & SPRING TREE PLANTATION

In order to encourage tree plantation among the community, Horticulture section launched spring tree plantation campaign in collaboration with Environmental Protection Department (EPD) Rawalpindi at ARL Nature Reserve. Horticulture section also conducted tree plantation activity in community areas.

A visit of students from PMAS Arid Agriculture University was arranged at AIH and three students were also provided internship opportunities from the same institution.



AIH BAGHBAAN SHOP

Attock Institute of Horticulture (AIH) launched Baghbaan Shop. This will provide different solutions for the issues of garden, to the employees of the Attock group of companies and local communities at their doorsteps against nominal charges. Baghbaan Shop will also provide consultancy services, maintenance services and materials for the garden.

Keeping in view the health issues related to the availability of quality food products, AIH is striving to increase the production and availability of fresh and healthy organic fruits and vegetables to company employees as well as local communities against subsidized costs.



Another milestone was achieved by AIH by the launch of in-house produced extra virgin olive oil this year. Purpose of introducing high quality products is to facilitate the company's employees against subsidized prices. Acacia honey is also produced organically at AIH and is offered to ARL employees.



ASF TREE PLANTATION DRIVE

ASF started a tree plantation drive with saplings plantation in the lawn of Attock Sahara Foundation on March 29, 2024. Mr. Nadeem Nazir, Vice President of Attock Sahara Foundation & HOD (HR&A) of Attock Refinery Limited graced the occasion as the chief guest. Mr. Obaidullah, Secretary General ASF, Mr. Amir Shah, an officer of the Social Welfare Department, members from the ASF executive body & ASF staff were also present at the event.



GREEN PAKISTAN WALK

Attock Refinery Limited, in collaboration with the Islamabad Wildlife Management Board and Margalla Hills National Park, organized the Green Pakistan Walk at Trail 5, Islamabad. After a briefing session by the representative of Islamabad Wildlife Management Board at the visitor's information center on Trail 5, participants started a walk and they also collected waste during the walk. Tree plantation activity was carried out at the end point.



75TH MORGAH CLUB FLOWER SHOW

75th Annual Flower Show was organized at Morgah Club on April 23, 2024. This was a family event of Attock Group of Companies where gardeners and families of employees competed among different flower competition categories and winners were awarded prizes.

Sr.#	Category	Winner
1	Extra-large Bungalow	Mr. Shuaib A. Malik
2	Large Bungalow	Mr. Iftikhar Yousaf
3	Medium Bungalow	Mr. Abdur Rahim
4	Small Bungalow	Mr. Asif Jamil
5	Large Office	ARL General Office
6	Small Office	Morgah Club
7	Large Park	Morgah Biodiversity Park
8	Small Park	Miller Park
9	Road Side	Refinery Chowk to Barrier No.3



19TH ELLIOTT CLUB FLOWER SHOW

19th Annual Flower Show was organized by Elliott Club on April 24, 2024. Non-Management and Junior Management Staff participated in this flower show and presented their gardens for competition and won prizes.

Sr.#	Occupant 's Name	Designation	Position
1	Mr. M. Asim	Senior Officer (ERO)	1 st
2	Mr. Sarfaraz Akmal	Senior Officer (CRO)	2 nd
3	Mr. Shakeel Ahmed	Senior Officer (Maintenance)	3 rd

4th MAN OF THE QUARTER (MOQ) AWARDS - 2023

4th MOQ - 2023 awards ceremony was held at ARL Diner on March 7, 2024. Safety awards and performance awards were distributed among employees. A special performance award was given to Mr. Abdul Rauf and a special safety award was given to Mr. Muhammad Haleem. In the 4th quarter of 2023, the Quarterly Safe Man-Hours Trophy was won by the DHDS unit.



ABDUL RAUF
C&MM



MUHAMMAD HALEEM
HR & ADMIN

**SPECIAL
PERFORMANCE AWARD****SPECIAL
SAFETY AWARDS****PERFORMANCE AWARDS**

MUHAMMAD SIDDIQUE
OPERATIONS



MUHAMMAD ARIF
OPERATIONS



MUHAMMAD IRSHAD
OPERATIONS



NASIR HUSSAIN
OPERATIONS



WAQAS JAVED
OPERATIONS



SHAHID IQBAL
MAINTENANCE



MUHAMMAD IQBAL
MAINTENANCE



ANSAR MEHMOOD
MAINTENANCE



MUHAMMAD USMAN
MAINTENANCE



MUHAMMAD SHABBIR
MAINTENANCE



SHAHBAZ KHAN
HR & ADMIN



MUHAMMAD IBRAR
HR & ADMIN



RASHID HUSSAIN KHAN
HR & ADMIN



ASIF MEHMOOD
HR & ADMIN



ZAKIR IQBAL
HR & ADMIN



AHMED ANSAR
HSEQ



QAMAR AYUB
HSEQ



MUHAMMAD AMIR
C&MM



ASIF IQBAL
F & CA



MUKHTAR MASIH
AHL



KHALIL AHMED
HR & ADMIN



MUHAMMAD QADEER
HR & ADMIN



VICTOR MASIH
HR & ADMIN



SUNAIL SHOUKAT
HR & ADMIN

SAFETY AWARDS

ZAHEER AHMED
HR & ADMIN



AMIR PERVAIZ
OPERATIONS



KHURRAM SHAHZAD
MAINTENANCE



MUHAMMAD RAFIQUE
MAINTENANCE

1st MAN OF THE QUARTER (MOQ) AWARDS - 2024

1st MOQ - 2024 awards ceremony was held at ARL Diner on April 30, 2024. A special performance award was given to Mr. Hameed Khan Jadoon. Other employees were also awarded with performance awards and safety awards. In the 1st quarter of 2024, the quarterly Safe Man-Hours trophy was won by the Technical Services Department.



HAMEED KHAN
MAINTENANCE

**SPECIAL
PERFORMANCE AWARD****PERFORMANCE AWARDS**

ABDUL QAYYUM
OPERATIONS



NAZIR AKHTAR
OPERATIONS



SHAHBAZ BASHIR
OPERATIONS



YASIR PAZEER
OPERATIONS



NAVEED WAQAS
OPERATIONS



DALEEP KUMAR
MAINTENANCE



UMER KHATAB
MAINTENANCE



SHARYAR ALLAH DITTA
MAINTENANCE



M. ALAM KHAN
MAINTENANCE



MUHAMMAD ALI
MAINTENANCE



RIFFAT ZAMAN
HR & ADMIN



MUHAMMAD HAROON
HR & ADMIN



SABIR HUSSAIN
HR & ADMIN



SAJID HUSSAIN SHAH
HR & ADMIN



MUHAMMAD SHOUKAT
HR & ADMIN



HABIB UR REHMAN
HSEQ



YASIR AYUB
HSEQ



SAEED AHMED
C&MM



MUHAMMAD YOUNAS
F & CA



TAQWEEM BIBI
AHL



BASHIR HUSSAIN SHAH
HR & ADMIN



JAMES JOHN
HR & ADMIN



RAFAIL DAVID
HR & ADMIN



WAQAS MALIK
HR & ADMIN

SAFETY AWARDS

ZEESHAN NAWAZ
MAINTENANCE



KHURRAM SHAHZAD
MAINTENANCE



MUHAMMAD EJAZ
OPERATIONS



NOOR UL ISLAM
OPERATIONS

TRAININGS

ARL organized a two-day signature program on “Seven Habits of Highly Effective People” through M/s Franklin Covey Pakistan. The training was conducted by Ms. Andleeb Abbas.



ARL arranged a one-day in-house training workshop on “Interpersonal Communication Skills.” Mr. Sajid Hussain, In-charge (T&D), was the lead trainer of this workshop.



Mr. Asad Awan, Management Consultant, M/s Consult Us, Islamabad, conducted a two-day training workshop on “Working in Winning Team” at ARL.



TRAININGS

▶ ARL organized a two-day training workshop on developing the personal and interpersonal effectiveness of its management staff titled “Reinvent Yourself.” Mr. Usman Gulzari from M/s Missing P, Islamabad was the trainer for this workshop.



▶ ARL arranged a half-day training session on “ARL Emergency Response Plan.” The training was conducted by Mr. Mehmood Sultan, Fire Master (HSEQ department).



ALTAF ULLAH FAROOQ
ENGINEERING

ACHIEVEMENT

Mr. Altaf Ullah Farooq, Assistant Manager (Design), Engineering department, has passed internationally acclaimed API-510 Pressure Vessel Certification. The test was conducted by the American Petroleum Institute.

OUR GREAT ASSET

The entire team of ARL is thrilled to welcome you on board. We hope you'll do some amazing work here!

Sr. No.	EMPLOYEE NAME	DESIGNATION	DEPARTMENT	JOINING DATE
1	Mr. Faizan Rasheed	Engineer	Maintenance	January 01,2024
2	Mr. Muhammad Bilal Khan	Engineer	Maintenance	January 01,2024
3	Mr. Said Rehman	Senior Officer	Maintenance	January 01,2024
4	Mr. Muhammad Saad	Field Operator	Operations	January 01,2024
5	Mr. Misbah Ud Din	Field Operator	Operations	January 01,2024
6	Mr. Mohsin Mehmood	Field Operator	Operations	January 01,2024
7	Mr. Muhammad Adnan Arif	Field Operator	Operations	January 01,2024
8	Mr. Naseem Hassan	Senior Officer	Operations	January 01,2024
9	Mr. Muhammad Ali Mohsin	Field Operator	Operations	January 01,2024
10	Mr. Muhammad Bilal	Field Operator	Operations	January 01,2024
11	Mr. Husnul Maab	Field Operator	Operations	January 01,2024
12	Mr. Umar Farooq Khan	Field Operator	Operations	January 01,2024
13	Mr. Muhammad Umair Shahzad	Field Operator	Operations	January 01,2024
14	Mr. Ehtisham Shamas	Field Operator	Operations	January 01,2024
15	Mr. Muhammad Luqman	Field Operator	Operations	January 01,2024
16	Mr. Muhammad Sanwal	Field Operator	Operations	January 01,2024
17	Mr. Adil Khan	Junior Officer	C&MM	January 01,2024
18	Mr. Fahd Zamir Raja	Executive	C&MM	January 26,2024
19	Mr. Junaid Johnson	Engineer	Operations	February 01,2024
20	Mr. Nadeem Nazir	Senior Manager	HR & Admin	February 06,2024
21	Mr. Sufyan Talib	Junior Officer	HR & Admin	March 11,2024
22	Mr. Muhammad Asif	Junior Officer	HR & Admin	March 11,2024
23	Mr. Muhammad Umer Farooq	Senior Officer	Operations	March 12,2024
24	Mr. Noman Amjad	Senior Officer	Operations	March 12,2024
25	Mr. Sami Ullah	Senior Officer	Operations	March 12,2024
26	Mr. Usman Ajmal	Senior Officer	Operations	March 12,2024
27	Mr. Imran Khan	Junior Officer	Operations	March 12,2024
28	Mr. Syed Adil Hussain	Junior Officer	Operations	March 12,2024
29	Mr. Muhammad Irfan	Junior Officer	Operations	March 12,2024
30	Mr. Mukhtiar Hussain	Junior Officer	Operations	March 12,2024
31	Mr. Hilal Ahmad	Senior Officer	Operations	March 13,2024
32	Mr. Adil Ahmad	Senior Officer	Operations	March 13,2024
33	Mr. Usama Ishtiaq	Senior Officer	Operations	March 13,2024

OUR GREAT ASSET

Sr. No.	EMPLOYEE NAME	DESIGNATION	DEPARTMENT	JOINING DATE
34	Mr. Muhammad Touqeer	Senior Officer	Operations	March 13,2024
35	Mr. Sami Ul Husnain	Senior Officer	Operations	March 13,2024
36	Mr. Sohrab Khan	Senior Officer	Operations	March 13,2024
37	Mr. Muhammad Zeeshan	Senior Officer	Operations	March 13,2024
38	Mr. Saad Hassan	Senior Officer	Operations	March 15,2024
39	Mr. Mustafa Khan	Senior Officer	Operations	March 15,2024
40	Mr. Ali Umair	Senior Officer	Operations	March 15,2024
41	Mr. Tabish Tahir	Senior Officer	Operations	March 15,2024
42	Mr. Kaleem Ullah	Engineer	Technical Services	April 02, 2024
43	Mr. Afaq Waheed	Engineer	Operations	April 08, 2024
44	Mr. Zahid Iqbal Aqib	Junior Officer	HR & Admin	April 16, 2024
45	Mr. Muhammad Rehan Saleem	Senior Engineer	Engineering	April 29, 2024
46	Mr. Shahid Arif	Junior Officer	HSEQ	May 17, 2024
47	Mr. Armaghan Ahmad	Senior Officer	F&CA	May 23, 2024



NFEH CSR Awards 2024

ARL won the 16th National Forum for Environment & Health (NFEH) corporate social responsibility award in the oil and gas category.

INDUSTRIAL / EDUCATIONAL VISITS AT ARL

The following industrial & educational visits were arranged at ARL:



Group photo of the students of Government Gordon College Rawalpindi.



Group photo of the students from Pak - Austria Fachhochschule, Haripur.



Delegation of the National Institute of Fire and Technology, Islamabad.



A group photo of the students from Government College of Technology, Taxila, who visited ARL.

FUELTERNSHIP – 2024

ARL initiates its annual summer internship program with the name of “Fuelternship” for students for the duration of 4-6 weeks. The purpose of this program is to provide professional and industrial exposure to the students who belong to different reputed institutions across the country. The students are also given formal orientation sessions in the batches.



ASF ANNUAL FEMALE SPORTS - 2024

ASF conducted Female Sports from 22nd to 29th May 2024 at Elliott Club. Government Girls High School (ARL) Nai Abadi, Govt. Girls Higher Secondary School (AOC) Morgah and Workers Welfare Girls School participated in this event. Around 100 girls participated in different games. Table Tennis (Single, Double), Badminton (Single, Double), Volleyball, Basketball, Tug of War and Races were organized.



World Earth Day - 2024

ARL, in collaboration with the National Cleaner Production Center (NCPC) and the Environmental Protection Agency (EPA) Rawalpindi, celebrated Earth Day at ARL's Morgah



Biodiversity Park. The awareness session, awareness walk and plantation were organized which were attended by local school children, university volunteers, and representatives from Murree Brewery Co. Ltd. The primary objective of this celebration was to raise awareness about this year's Earth Day theme, "Planet Versus Plastics," and to underscore the urgent need to combat plastic pollution.

ASF MEENA BAZAR - 2024

ASF Annual Meena Bazaar was organized at ARL Cricket Ground on March 09, 2024. Various NGOs, companies and banks set up their stalls. In addition, stalls for food, handicrafts, garments and jewelry remained the main attraction for families visiting the Meena Bazaar.



A HIKING TRIP TO MANSHI TOP



Nadeem Nazir
HOD (HR & Admin.)

24th May 2024 was a routine Saturday and I leisurely made a WhatsApp call to my hiking partner Dr. Zahid in Faisalabad and the subject was to recall the good memories of the same day last summer when we summited the Makra Peak (13000 FASL) together, which

was indeed a difficult adventure for both of us.

As usual, this discussion led us to plan another one and we shortlisted two destinations: either to go for Ansoo Lake (14000 FASL) from Naran, which we both agreed to be more demanding in terms of stamina as well as time or the second one was a relatively easy hike of Manshi Top from Sharan Forest. Keeping in view the routine challenges of the office, we postponed the Ansoo Lake trip and finalized a quick hike to Manshi Top over the coming weekend.

As decided, Dr. Zahid started early from Faisalabad on his vehicle and picked me up at a given time right on the Motorway at a predesignated spot on Friday, 31st May 2024. This time I also invited one of my previous colleagues, Mr. Imran Riaz, so all three of us started from Islamabad at about 1300 hrs, offered Jumma prayer at the next service area and headed towards Sharan.

Our first stop was Balakot; we had a cup of tea with snacks along the river Kunhar and resumed our journey towards Paras, a village between Balakot and Kaghan. We reached Paras in the afternoon and parked our vehicle at designated paid parking. From Paras, we hired a jeep, and our 45-minute hitch-hock jeepable journey ended at Chinar Resort. We reached well before sunset and we enjoyed the cool breeze of the evening at Chinar Resort and captured few photographs.

As planned, next morning after breakfast we started our hike from resort at about 0800 hrs and reached Pod Site (a site chosen for camping where KPK Government has installed Pods too) by 0930 hrs. This place was cool and serene, far away from the scorching heat of Punjab.

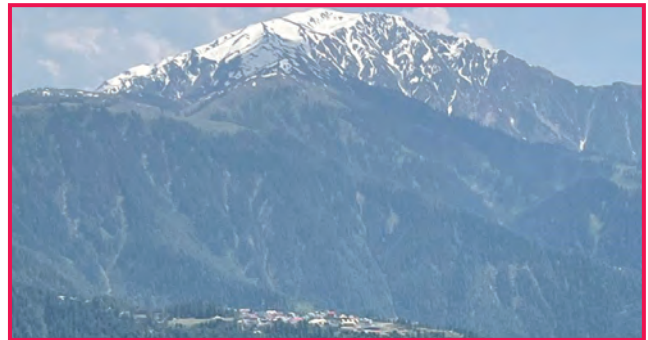
After a break of 15 minutes, we resumed towards the top. I was extremely satisfied to see the nature intact and the jungle in its real beauty. It was a pleasure hiking amidst flora and breathing unpolluted fresh air with a unique fragrance of pine trees.

The trail was so beautiful and covered with thick vegetation so largely that on a few occasions it

was difficult to recognize the track despite the fact



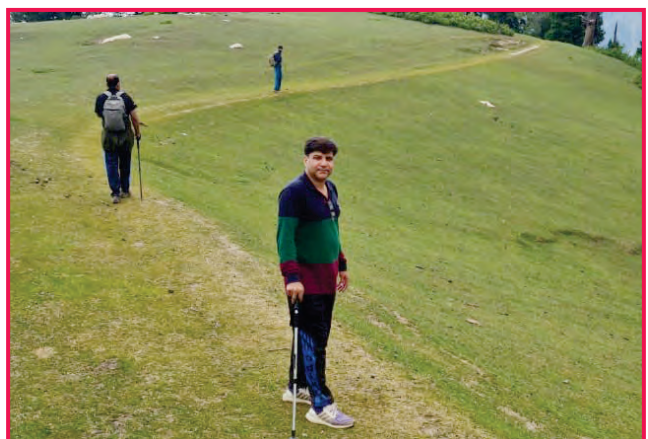
that we've been repeatedly here. As I said, this side of Manshi Top was not a difficult hike, so with few stops to enjoy the nature, we reached Manshi Top by 1300 hrs in the afternoon.



(View of Makra Peak from Manshi Top)

Enjoyed the view of Makra Peak at one side and Musa Ka Mussala (MKM @ 13700 FASL) on the other, had some snacks there, which we carried along, and did some drone shots and photographs. While we were offering Zuhar Prayer there, we heard a typical cloud thunder on mountains, which was a caution to go back. As during rainfall, downhill becomes dangerous, so we packed up and started back through the beautiful meadows of Sharan Forest.

At 1830 hrs, we reached back at Chinar Resort. We were tired and hungry, had our dinner and went to sleep right after Namaz. Next morning we came back to our hometowns on the same route while carrying a lot of unforgettable memories and a commitment for the next trip.



LUBRICITY ISSUE IN ULTRA LOW SULFUR DIESEL



Salman A. Sheikh
OPERATIONS

Generally speaking, Sulfur is an undesirable component in High Speed Diesel (HSD). Over the years, specifications for Sulfur content in HSD have been gradually reduced to protect the metallurgy of vehicles and reduce

environmental pollution. Ultra-low-sulfur diesel (ULSD) is a term used to describe diesel fuel with substantially lowered sulfur content. As of 2006, almost all of the petroleum-based diesel fuel available in Europe and North America is of ULSD type. Over the years, they adopted Euro-II (500 ppm Sulfur), Euro-IV (50 ppm Sulfur) and Euro-V (10 ppm Sulfur) specifications and are endeavoring to further reduce Sulfur contents in all products including Diesel. But there is one important property called **Lubricity**, which is affected by reducing Sulfur content in HSD and it certainly needs to be addressed.

Lubricity is defined as the ability of a lubricant (in this case HSD) to minimize friction between and damage to surfaces in relative motion under load. Sulfur is not a lubricant itself, but it can combine with the nickel content in many metal alloys to form a low melting point eutectic alloy that can increase lubricity. In addition to lubricity, excessive Sulfur removal also reduces the aromatic content and density of the fuel, resulting in a minor decrease in the energy content of about 1%. This decrease in energy content may result in slightly reduced peak power and fuel economy.

Importance of lubricity:

The lubricating properties of diesel fuel are important for rotary and distributor-type fuel injection pumps. In these pumps, moving parts are lubricated by the fuel itself as it moves through the pump—not by the engine oil. Other diesel fuel systems, which include unit injectors, injectors, unit pumps, and in-line pumps are partially fuel lubricated. In these systems, the mechanism typically consists of a plunger or needle operating in a sleeve or bore, where the fuel is used to lubricate the walls between the reciprocating piece and its container. The lubricity of the fuel is an indication of the amount of wear or scarring that occurs between two metal parts covered with the fuel as they come in contact with each other. Low lubricity fuel may cause high wear and scarring, and high lubricity fuel may provide reduced wear and longer component life.

For many years, the lubricity of diesel fuel was sufficient to provide the protection needed to maintain adequate performance. A Sharp reduction in Sulfur content in HSD has inadvertently caused the removal of some of the compounds that provide lubricity to the fuel. Lack of lubricity in HSD has caused premature equipment breakdowns, even catastrophic failures. This phenomenon is of concern to engine and fuel injection equipment manufacturers.

Measurement of lubricity:

Lubricity of Diesel fuel is measured by performing friction test between two surfaces, with Diesel in-between, as lubricant. Two standard methods being used worldwide are:

1. High Frequency Reciprocating Rig (HFRR). It conforms to EN 590 specifications. Test method is ASTM D6079 or IP 450 or BS ISO 12156-1
 2. Scuffing Load Ball-on-Cylinder Lubricity Evaluator (SLBOCLE) Test method is D6078
- No absolute correlation has been developed between the two test methods. High Frequency Reciprocating Rig (HFRR) method is more popular, and is commonly used in most refineries in advanced countries.

The SLBOCLE is used to evaluate the lubricity of fuels but does a poor job of characterizing the lubricity of fuels containing lubricity additives, while the HFRR is commonly used for both the neat fuels and with fuels containing small amounts of lubricity enhancing additives. The Fuel Injection Equipment (FIE) manufacturers have adopted the use of the HFRR (ISO 12156-2:1998).

How to regain Lubricity after Sulfur removal?

Lubricity lost by removing Sulfur can be easily compensated by the following two methods:

1. Addition of Biodiesel in small quantities (1-2% by volume)
2. By addition of Lubricity improver chemicals

Idemitsu and Negishi refineries in Japan are using Lubricity improver chemicals owing to non-feasibility of Biodiesel. As ARL is also working towards installing Diesel Hydro Desulfurization (DHDS) unit for reducing sulfur contents in HSD up to 10 ppm (Euro V) from the present limit of 350 ppm (Euro III), it is suggested that reduction in lubricity may be considered and remedial measures devised beforehand.

Option of Biodiesel addition as Lubricity improver:

The addition of biodiesel, even in very small quantities, provides an increase in fuel lubricity using a variety of bench-scale test methods. Inclusion of biodiesel at the rate of 1-2% by volume into conventional diesel fuel will be sufficient to address low lubricity issue. Inclusion of biodiesel is recommended for two reasons:

First, it would eliminate the inherent variability associated with the use of other additives and determine whether sufficient additive was used to make the fuel fully lubricious. Second, biodiesel is considered as a fuel or fuel component—not an additive. Thus, if more biodiesel is added than required to increase lubricity, there will be no adverse consequences that might be seen if other lubricity additives are dosed at a too high rate.

TURNING CHALLENGES INTO OPPORTUNITIES: PARALLEL OPERATION OF ISOM & DHDS ON SINGLE SOURCE OF HYDROGEN FROM PLATFORMER UNIT



Imran Tahir
OPERATIONS

Refiners are struggling worldwide due to poor refining margins and finding ways for sustainable refinery operations through various strategies including refinery process optimization.

Refining units need

sustainable and continued operation to ensure productivity and profitability.

Isomerization and DHDS plants are both consumers of Hydrogen gas. Hydrogen gas is primarily supplied from Hydrogen Plant (HYU). The Balance requirement is met from the Reformer unit where it is produced by virtue of the reforming process. HYU, installed in 2016, is designed in such a way as to ensure optimized operation of both DHDS and ISOM plants even when Reformer Plant is shutdown. However, during any shutdown at HYU unit, either DHDS or ISOM unit had to shut down due to limited Hydrogen availability from Reformer plant. This created a critical operational constraint each time HYU was shut down while the remaining refinery was in operation and it impacted throughputs and product availability schedules. An earlier attempt to operate both ISOM and DHDS on Reformer Hydrogen was not successful.

During Integrated Turnaround (ITA) 2024, a new catalyst was loaded in the Reformer Unit and was anticipated to give a better overall performance as compared to the previous catalyst.

Based on actual field results, an initiative was taken to attempt parallel operation of ISOM and

DHDS plants at minimum throughputs. It could be successful with balancing and optimization of Hydrogen utilization on both the units through adjustments of parameters under new conditions and lessons learned from the earlier attempt.

Key contributing factors in this successful parallel run are:

- Improved Hydrogen gas purity was achieved due to the new catalyst at Reformer unit, contributed to both Start-of-Run conditions and the inherent quality of new catalyst: a key factor.
- A more optimized operation of an earlier modification on Reformer Unit on import mode (Scrubber off gases modification) which enabled plant staff to operate the reformer furnaces on maximum import gas flow. Resultantly, maximum Hydrogen gas could be spared for ISOM and DHDS operation.
- High Isomerate Circulation in the Penex reactors, in consultation with Licensor (UOP), to optimize Hydrogen gas requirement at ISOM.
- Optimized Operation of DHDS and ISOM unit in terms of Hydrogen consumption, which included feed optimization of DHDS unit (reduced Sulfur in feed).

The above changes helped to utilize the Hydrogen gas from Reformer unit in refinery processes thereby achieving a parallel run of both ISOM and DHDS providing significant operational flexibility. Savings may also be accrued by reduction in blending costs due to continuous Isomerate production.

The success is attributed to the initiative of the relevant staff and teamwork of different departments who turned the challenge into an opportunity by taking unified actions at various plants/sections to achieve the overall objective.

WHY NATIONS FAIL



Sajid Hussain
HR & Admin

Introduction of Book:

The book "Why Nations Fail" was co-written by Harvard political scientist James A. Robinson and MIT economist Daron Acemoglu, and it is the fruit of fifteen years of intensive research and work. This book covers the grand history of nations and their ups and

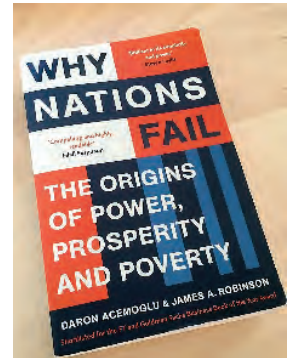
downs. Readers with varying academic backgrounds will find enjoyment in this book due to its broad coverage of topics and historical examples. Geography, History, Politics, Culture, and Economics are some of these subjects. The authors collected historical data from the Mayan city state, the Soviet Union, the Roman Empire, the United States, Europe, Latin America, and Africa in order to develop a new theory of political economy.

circumstances?

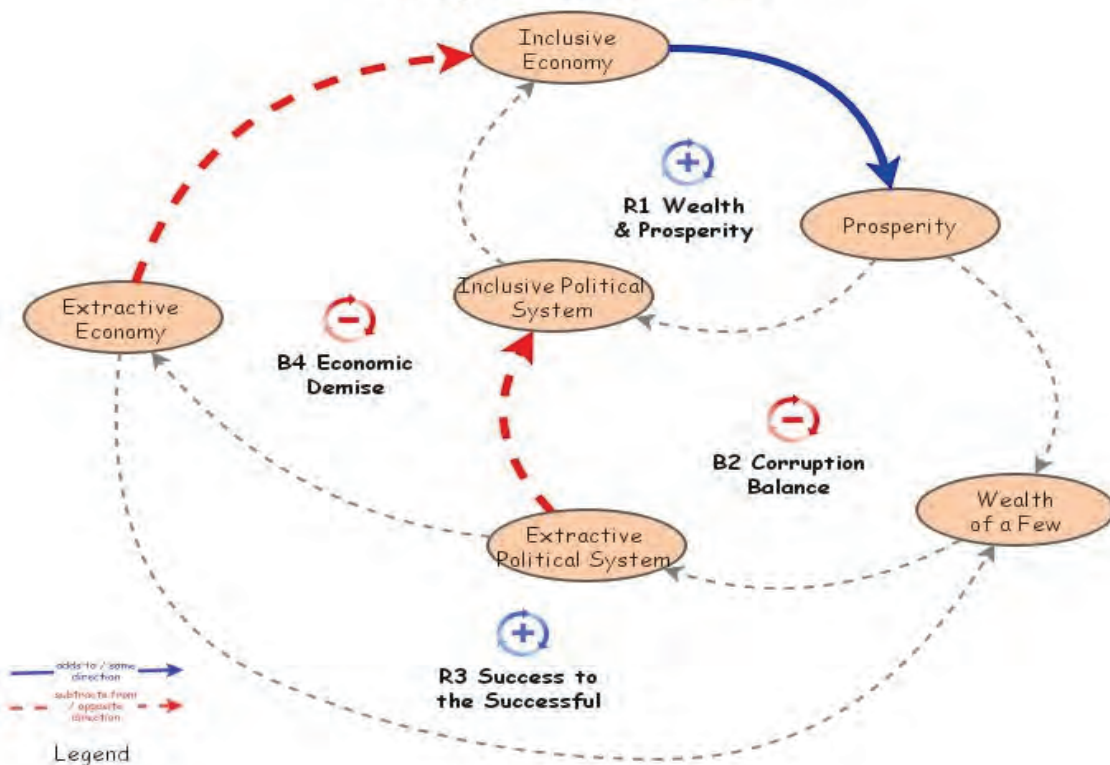
The authors have identified the following to establish their propositions:

Extractive and inclusive economic institutions:

According to authors, countries have different levels of success and economic growth because their institutions are different. Rules and incentives affect the workings of the economy, and also influence the thinking and performance of individuals. We take an example from Korea: teenagers in North Korea grow up in poverty, a low level of education that is pure propaganda for ruling, few books and alone computers, no skilled programs, and no incentives for entrepreneurs. Everyone has to serve in the army for ten years after finishing their schooling. Teenagers in North Korea had accepted their misery that they were not able to



Why Nations Fail



Central idea of Book:

The primary goal of writers is to discover the reasons behind the world's division into two groups: those who have and those who do not, and why do they not prosper equally? While some countries suffer from poverty, starvation, and disease, others are wealthy, have an abundance of hygienic food, and are in good health. Are geography, weather, and culture responsible for these situations or is a lack of knowledge about appropriate policies to blame for these

own property and begin new businesses. They would not prosper and enjoy human rights. In these situations, economic development is not possible.

On the other side, teenagers in South Korea are getting good facilities for education and health. Here individuals are free to set up their own business, purchase property, and receive higher services from other people. They can invest in any business with surety that they will enjoy the fruit of their effort in the future. The government of South

Korea supports and funds economic activity. Foreign companies can enter into business partnerships with South companies. It is also possible for individuals to obtain mortgages to buy houses. In South Korea, you are completely free to open any business you like. The different rules and regulations in North and South Korea are under different institutions.

South Korea is following Inclusive economic institutions that encourage participation of the public in economic affairs that make best use of their talents and skills and that enable individuals to make their own choices. To be inclusive, economic institutions must feature secure private property, an unbiased system of law, and public services that provide a level playing field in which people can exchange and contract. They have permission to enter new businesses, and people are allowed to choose their careers. Inclusive economic institutions are favorable for economic growth, prosperity and productivity.

Extractive and Inclusive Political institutions:

Economic institutions are created by political institutions. In North Korea, people were imposed by communists, who took over the country in the 1940s, and in Latin America, people were forced to serve by Spanish rulers. In South Korea, institutions were different, and people with different objectives, interests, and skills made decisions about organizing society. Simply, the South had different politics.

Politics is a way that leads society to choose the rules that govern it. The public feels much better under inclusive political institutions because they give equal rights of participation in every field of life.

Communists in North Korea and Spanish sugar planters in Barbados were much better with institutions that were extractive. Under extractive institutions, only a small group of people prosper, not the whole society.

Special case:

The authors also share the special case by

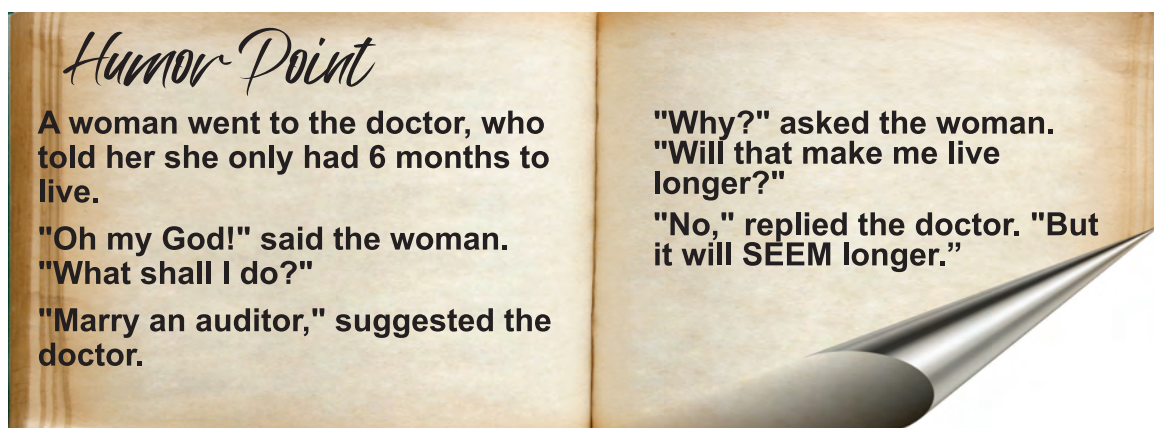
referring to China and Germany, as both countries have experienced growth and prosperity under extractiveness. Both have authoritarian rulers. In Germany, Nazi was the most extractive institution; under the supervision of Nazi Germany, Germany prospered, became innovative, and also became the leader of the industrial revolution. The Nazis introduced compulsory education, social insurance, and the most efficient bureaucracy. They are dominant in the chemical industry, and Germany was the first nation to make guided missiles and aircraft jets. Germany has done well under the regimes of two dictators, "Hitler and Bismarck."

The same situation is for China, which achieves a high growth rate under dictatorship but with inclusive economic institutions. Chinese entrepreneurs get technological-based growth rather than innovations; all signals are in favor of extractive political institutions in which growth remains unsustainable, but China overcame it and reached sustainable growth. This entire scenario is what compelled us to think; may be institutions do not matter. It is correct that not only institutions but also the interests of dictators matter. If a dictator is a patriot like Adolf Hitler and Mao Zedong, they seem to be strict, and people feel their self-restricted, but their decisions are only for the welfare of their nation. On the other hand, if a dictator prefers his incentives, then an example of North Korea is present.

Conclusion:

The authors of the book "Why Nations Fail" view that culture, geography, and ignorance are not hurdles in the failure of nations; only extractive institutions are. The book discusses only endogenous problems of nations, and it is true; institutions matter.

In a nutshell, we can say that nations fail due to a lack of political, economic, and individual freedom. These are failed due to the absence of civil rights and deficiency of government responsibility and accountability.



ATTOCK REFINERY UPGRADATION (ARU 2024)



Naveed Ahmed
TS, P & D

ARL Upgradation Project:

In order to remain competitive and achieve higher product standards (Euro V specifications) for Premium Motor Gasoline (PMG) and High-Speed Diesel (HSD), ARL intends to

execute an upgradation project which includes a new Continuous Catalyst Regeneration Reformer (CCR) unit, its allied facilities and revamp of existing Fixed Bed Reformer Unit, Isomerization Unit, Diesel Hydro-treating (DHT) Unit and Auxiliary Units.

Project overview:

The project comprises installation of new process plants, the revamp of existing units and the installation of utility, auxiliary and offsite units. This includes:

i) CCR Complex which will consist of a Naphtha Hydro-treating Unit, a CCR Unit, an existing Semi Regen Reformer Unit revamping to Parlsom Unit, and an existing Penex Unit revamping to Penex Plus Unit (collectively "CCR Complex"), resulting in a high-octane

PMG pool, meeting Euro-V specifications. The Basic Engineering Design Package (BEDP) of CCR Complex is prepared by Honeywell UOP, USA.

ii) The existing Diesel Hydro-treater Unit (DHDS) is a 12,500 BPSD unit designed to produce 500 ppm sulfur HSD. DHDS will be revamped to produce HSD with a maximum Sulfur content of 10 ppm at 110% of the current design capacity. BEDP of DHT Revamp is prepared by Honeywell UOP, USA.

iii) A new Kerosene Hydrotreater for production of Kerosene having 10 ppm max Sulphur.

iv) Offsites and Utilities upgradation as per new requirement.

Project Update:

a) Basic Engineering Design Package for CCR Complex (including new and revamped units) as well as DHDS Revamp is complete.

b) Tender document for FEED and PMC work was sent to the pre-qualified companies for their bids. Bids have been received and are being evaluated.

c) Government has approved petroleum policy providing the framework for execution of refinery upgradation projects. In this regard, an Upgradation Agreement under this policy is being negotiated /finalized.

THE IMPORTANCE OF EXPERTISE-BASED BID EVALUATION FOR CONTRACTOR SELECTION



Shams u Zaman
Engineering

It is commonly observed that the evaluation criteria in the low-bid approach ensure that every contractor has an equal chance of winning the contract, promoting transparency and fairness in contractor selection. However,

from the company's perspective, selecting a contractor is a critical process with a significant impact on the project's cost and quality. Choosing the wrong contractor can lead to delays, increased costs, poor quality, and potential disputes. This risk is particularly serious when a bid is significantly lower than competitors' and the company's estimates (i.e. based on current market + previous relevant contracts etc.) suggest potential issues such as lack of competence, inability to meet standards, or non-compliance with the invitation to bid (ITB) terms & conditions.

In practice, due to procedural constraints, general rules, compliance requirements, and cost-saving considerations, contracts are often

awarded to the lowest bidder based solely on price, without a thorough analysis. Subsequently, this approach can lead to various risks and failures during the contract's execution, including project delays, poor quality work, inexperienced or inadequate manpower deployment, and attempts to generate additional work for extra revenue. This results in loss of time, quality, and money for the company, in addition to project delays. Therefore, it is recommended that the company seek clarifications from bidders to make an informed decision on the justification and realism of the submitted price for fulfilling the contractual obligations. By seeking clarification and conducting a thorough analysis, the company can reject the bid if it presents performance or compliance risks, accept the bid with increased performance security, or determine that the abnormally low bid price is justified and can be accepted by both the company and contractor.

In conclusion, expertise-based bid evaluation is crucial for contractor selection to ensure that the chosen contractor can deliver the project successfully, on time, and within budget, while maintaining the expected quality standards.

FUNDAMENTAL RIGHTS UNDER THE CONSTITUTION OF ISLAMIC REPUBLIC OF PAKISTAN



Farooq Malik
HR & Admin

The Constitution of the Islamic Republic of Pakistan guarantees the protection of the rights of the citizen and workers at the workplace and beyond. It provides a framework for policy formulation and labour legislation. The following Articles of the Constitution specifically relate to the labour/citizen

rights:

- 1.Article 3** prohibits any form of exploitation.
- 2.Article 4** states the right to enjoy the protection of law and be treated in accordance with law and is the inalienable right of every citizen.
- 3.Article 11** prohibits slavery and all forms of forced labour and trafficking in human beings, including child labour.
- 4.Article 17** deals with freedom of association and provides that every citizen shall have the right to form associations or unions, subject to any reasonable restrictions imposed by law in the interest of morality or public order.
- 5.Article 18** prescribes the right of its citizens to

enter upon any lawful profession or occupation, and to conduct any lawful trade or business.

6.Article 25 lays down the right to equality before the law and prohibition of discrimination on the grounds of sex alone.

7.Article 37(e) makes provision for secure and humane conditions of work, ensuring that children and women are not employed in vocations unsuited to their age or sex, and provides maternity benefits for women in employment.

8.Article 38(b) provides for all citizens, within the available resources of the country, facilities for work and an adequate livelihood with reasonable rest and leisure.

9.Article 38(c) provides for all persons employed in the service of Pakistan or otherwise, social security by compulsory social insurance or other means.

10.Article 38(d) mandates to provide basic necessities of life, such as food, clothing, housing, education, and medical relief, for all such citizens, irrespective of sex, caste, creed or race, as are permanently or temporarily unable to earn their livelihood on account of infirmity, sickness or unemployment.

THE IMPORTANCE OF A POSITIVE SAFETY CULTURE IN A WORKPLACE



M. Saeed Khan
HSEQ

A positive safety culture is crucial for any organization, embedding safety into every aspect of work life. This article explores the significance of fostering such a culture, highlighting its benefits for employees, the organization, and society.

Enhancing Employee Well-being:

The primary aim of a positive safety culture is to protect employees from harm, reducing work-related injuries and illnesses. Prioritizing safety creates a secure and supportive environment where employees feel valued, fostering trust, loyalty, and higher job satisfaction. Open communication about safety concerns is encouraged, allowing employees to report hazards without fear. This proactive approach not only prevents accidents but also empowers employees to take ownership of their safety and that of their colleagues.

Improving Organizational Performance:

A strong safety culture directly enhances organizational performance. Fewer accidents lead to reduced downtime and lower costs associated with workplace incidents. This can result in substantial financial savings, as well as improvements in productivity and quality. Employees in a safe environment are more focused, leading to fewer errors and better work

outcomes. Additionally, a commitment to safety enhances the organization's reputation, making it more attractive to clients, partners, and potential employees.

Legal and Ethical Responsibilities: Organizations have legal and ethical obligations to provide a safe working environment. A positive safety culture ensures compliance with health and safety regulations, reducing the risk of legal penalties and reputational damage. Ethically, it reflects the organization's commitment to valuing human life and protecting its employees. This commitment can build trust with stakeholders and strengthen the organization's standing in the community.

Promoting Continuous Improvement:

A positive safety culture requires continuous improvement and adaptation to new challenges. Organizations that prioritize safety invest in ongoing training, education, and safety programs. This commitment ensures that safety practices evolve with changing circumstances, helping to identify and address emerging risks. This proactive approach not only protects employees but also supports the organization's long-term success.

In conclusion, a positive safety culture is essential for employee well-being, organizational performance, and compliance with legal and ethical standards. It fosters a shared responsibility for safety, leading to fewer accidents, increased productivity, and a stronger reputation. Ultimately, prioritizing safety drives organizational success and sustainability.

GARDENING: A CHRONICLE FROM SEEDS TO BLOSSOM



Iftikhar Yousaf
Maintenance

Gardening is like having a special connection with nature. It doesn't matter if you have a big garden or just a small space like a balcony, you can still create your own garden. It's a really fun and satisfying activity that brings happiness and a sense

of meaning to your life. In this article, I shall talk about gardening and why it's so great.

پھول لینے پھول آیا ، پھول کر میں نے کہا
پھول لے کر کیا کرو گے ، تم تو خود ہی پھول ہو

Gardening is not only about making your surroundings look pretty but also about feeling happy and peaceful. It teaches us patience, resilience, and helps us to connect with nature. My love for gardening began when I was 10 years old. I have fond memories of watering plants with my late mother. I usually accompany her while she used to go to the nursery, selecting beautiful plants and flower pots. During my school days, when I joined the Gardening Club, we used to receive plants and seeds from our Head of the Hobbies club, to plant them in dedicated land for the students who were associated with gardening. The experience of watching plants grow from tiny seeds to vibrant blooms and lush vegetables is incredibly fulfilling.

The Art of Seed Collection: One of the most satisfying aspects of gardening is collecting seeds. It's a sustainable practice that ensures I can continue growing my favorite plants year after year. Here's how I do it. In the month, starting from May till June, I start collecting seeds from the dried flowers and vegetables.

1.Flowers: After the blooms fade, I allow the seed heads to dry on the plant. Once dry, I carefully collect the seeds and store them in labeled envelopes.

2.Vegetables: For vegetables like tomatoes and peppers, I scoop out the seeds, rinse them, and let them dry thoroughly before storing them. For root vegetables like carrots, I let a few plant flowers and collect the seeds once they dry.

Tips for sowing seeds: I usually start sowing the collected seeds of flowers and vegetables in the month of October to prepare for a strong garden in the following spring. Sowing in October takes advantage of cooler temperatures and allows plants to establish before the extreme cold of winter.

•Prepare the Soil: Ensure the soil is well-prepared with compost and is free from weeds.

•Manure: After ploughing the soil, put an adequate quantity of manure for healthy plants.

•Watering: Use a fountain to shower on the seeds daily in the morning.

•Mulching: Consider mulching to protect seeds from harsh weather, especially in the months of December and January.

•Frost Protection: In areas where frost is a concern, consider using plastic covers to protect seedlings.

The Joy of Flowers: One of the most delightful aspects of gardening is growing flowers. Each bloom adds a splash of color and a touch of elegance to my garden. Here are some of my favorite flowers:

•Roses: The classic beauty of roses never fails to captivate. With varieties like the deep red, pink and light yellow, my garden is always filled with their fresh fragrances.

•Pansy: These cheerful giants are the favorite in my garden. Their bright yellow petals and towering height bring a sunny disposition to any space.

•Lily: These symbolize the purity and are perfect for creating a relaxing garden ambiance.

•Marigolds: Known for their vibrant orange and yellow colors, marigolds are easy to grow and help to repel pests naturally.

•Petunias: About 20 species; these are bright and lively, bloom from spring until frost, and scent the air with lovely fragrance. Best of all, petunias are amazingly easy to grow, both in the garden and in containers.

•Dahlias: With their intricate petals and wide range of colors, dahlias are a stunning addition to any flower bed.

•Antirrhinum: Commonly known as dragon flowers or snapdragons because of the flowers' fancied resemblance to the face of a dragon that opens and closes its mouth when laterally squeezed. It comes in different sizes like dwarf, medium and large size and variety of colors including yellow, white, purple, maroon, orange and different shades.

•Daisy: They also symbolize innocence and purity. Its fresh, crisp appearance has come to symbolize new beginnings, and its bright, spirit-lifting colors are known to spread happiness like wildfire.

•Ranunculus: They are very beautiful and delicate flowers that need special care; they have luscious layers of petals and texture. The

most popular colors include red, pink, yellow, gold, white and orange.

•**Godetia:** These are strong bee attractors and boast bright colors that stand out when growing among grasses. The popular colors are pink, purple, white, orange and red.

Bountiful Vegetables: Growing vegetables is not only rewarding but also provides fresh produce for my kitchen. Here are some of the vegetables that I enjoy cultivating:

•**Tomatoes:** These versatile vegetables are a staple in my garden and have been useful for inflammation in the body. It boosts the immune system, lowers cholesterol levels, and keeps blood from clotting.

•**Carrots:** These root vegetables are easy to grow and come in various colors, including orange and red.

•**Bell Peppers:** With their sweet taste and crunchy texture, bell peppers are the favorite in my garden and come in various colors including green, yellow and red.

•**Spinach:** It is known as a blood flow booster due to its nutrients. It is a great addition to salads and smoothies.

•**Spring onions:** Spring onions contain a compound called allicin, which has been shown to boost metabolism and promote fat burning.

•**Radish:** These root vegetables are easy to grow; contain antioxidants, calcium, and potassium. It is a good addition to salads.

•**Coriander:** It is a source of vitamin C, calcium, magnesium, potassium, and iron. It has a very nice fragrance and is mostly used to garnish the dishes.

•**Mint:** It is a popular herb; easy to grow, most refreshing, helps digestion, reduce allergic symptoms, and soothes common cold symptoms.

In the end, a special tribute to my late mother and the late Mr. Hugh Catchpole (Senior Teacher of English Department and Head of Hobbies Club) for blessing me with the gift of this beautiful art.

FISHING AS A HOBBY: SIMPLE JOYS OF A TIMELESS ACTIVITY



Hammad Tahir
Maintenance

Fishing is a popular and enjoyable hobby that many people around the world love. It's not just about catching fish; it's about relaxing, spending time outdoors, and having fun. Here's why fishing can be a great hobby for you.

Why People Love Fishing:

1.Relaxation: Fishing is a peaceful activity. You can sit by a lake, river, or sea, and enjoy the calm surroundings. It helps you forget about your busy day and relax.

2.Connecting to Nature: When you fish, you spend time in beautiful outdoor places. It's a chance to enjoy nature, see wildlife, and breathe in the fresh air.

3.Sense of Achievement: There is something special about catching a fish. It feels good to master fishing techniques and reel in a catch.

Getting Started with Fishing:

If you are new to fishing, here is how you can start:

1.Choose Your Spot: You can fish in many places, like lakes, rivers, or the sea. People living in twin cities may easily manage to go to Rawal Lake in Islamabad.

2.Get the Basic Gear: You will need a fishing rod, reel, and some bait. There are shops in Raja Bazar and Sadar. An inexpensive fishing gear would be great for beginners.

3.Learn the Basics: Find out how to cast your

line, use bait, and reel in fish. You can watch videos online or ask someone who knows how to fish for help. In this region people mostly prefer Atta (Flour) with some added fragrance (Vanilla essence, Kewra essence, etc.) to attract the fish. You will be able to catch mostly at early morning or during dusk. Therefore, time is an important factor to consider.

4.Follow the Rules: Make sure to check the local fishing rules. This helps protect fish and their homes, so everyone can enjoy fishing.

Fishing with Others:

Fishing can be a fun way to spend time with family and friends. Many people enjoy going on fishing trips together and sharing the experience. You can also join fishing clubs or groups to meet other people who like fishing.

Health Benefits:

Fishing is good for your health too:

1.Physical Exercise: Fishing involves walking, casting, and sometimes hiking, which is good for your body.

2.Stress Relief: Being outdoors and focusing on fishing helps to reduce stress and makes you feel relaxed.

Conclusion:

Fishing is a simple and enjoyable hobby that offers relaxation, connection with nature, and a sense of achievement. Whether you're new to fishing or have been doing it for years, it's a great way to have fun and enjoy the outdoors. So grab a rod, find a good spot, and start your fishing adventure!

SAVING ELECTRICITY FOR ENVIRONMENT AND ECONOMY



Ateeq-ur-Rehman
OPERATIONS

Saving electricity is beneficial for both the environment and your wallet. Here are some effective tips to help you reduce your electricity consumption:

Home Appliances and Electronics:

1. Use Energy-Efficient

Appliances: Choose appliances with ENERGY STAR label, as they use less electricity than standard models. Energy efficiency decreases from Top to Bottom in below Energy labels diagram:



1. Unplug Devices:

Unplug chargers, appliances, and electronics when not in use, as many continue to draw power even when turned off (known as phantom load).

1. Smart Power Strips:

Use smart power strips that automatically cut off power to devices that are not in use.

Lighting

1. Switch to LED Bulbs: LED bulbs use significantly less electricity than incandescent bulbs, fluorescent tube lights and Energy Saver lights and last much longer.

2. Turn Off Lights: Turn off lights when you leave a room, and consider using motion sensors or timers to automate this.

Heating and Cooling:

1. Programmable Thermostats: Use programmable thermostats to optimize heating and cooling schedules based on your needs.

2. Maintain HVAC Systems: Regular maintenance of heating and cooling systems ensures they operate efficiently.

3. Insulation and Weatherproofing: Properly insulate your home and seal windows and doors to keep the desired temperature in and reduce the workload on your HVAC system.

4. Lower Water Heater Temperature: Set your water heater to 120°F (49°C) to save energy and prevent scaling.

Renewable Energy:

1. Solar Panels: Consider installing solar panels to generate your own electricity.

1. Solar Water Heaters: Use solar energy to heat water for your home.

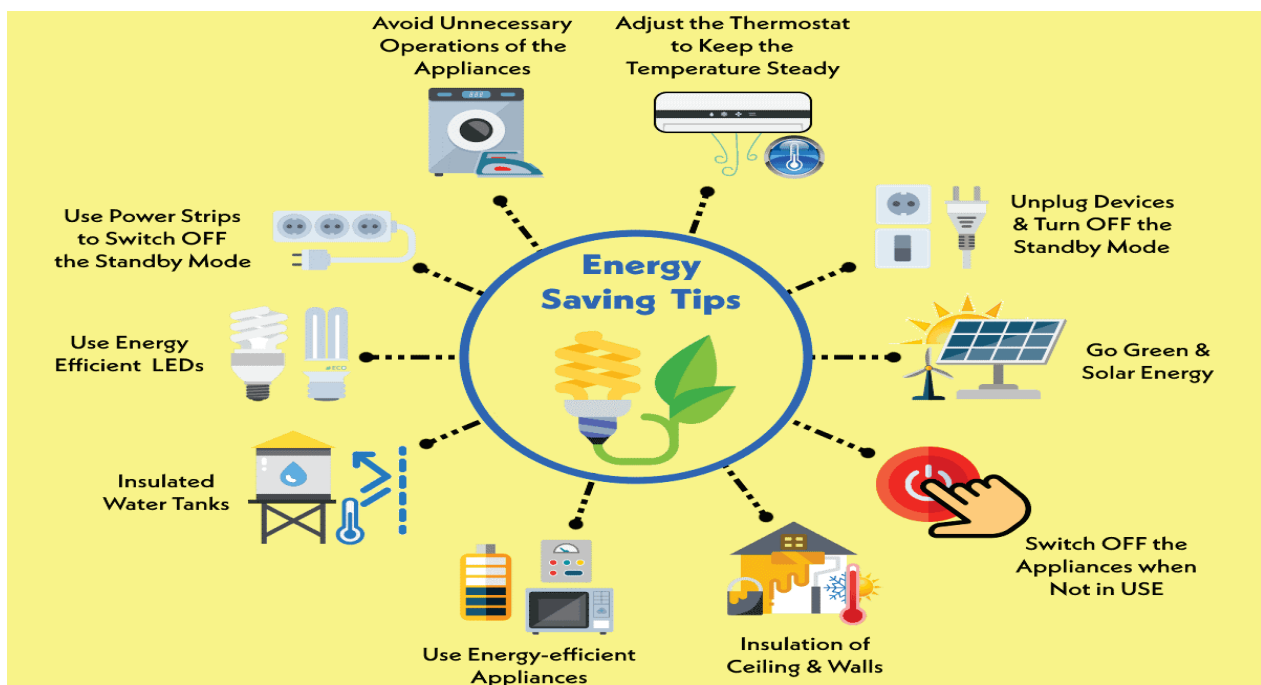
Behavioral Changes:

1. Energy Audit: Conduct an energy audit to identify areas where you can improve efficiency.

2. Use Natural Light: Take advantage of natural light during the day to reduce the need for artificial lighting.

3. Energy-Efficient Practices: Develop habits such as turning off appliances and lights when not needed and using energy-efficient settings on appliances.

Implementing these tips can help you save electricity, reduce your energy bills, and contribute to a more sustainable environment.



غزل

عرق کشید کیا، جس نے رگ رگ سے
ٹکرا وہ سکے گا پھر، اس جگ سے

بے فیض پھرے ہیں کیوں، مرے سے یہ لوگ
بچ کیا یہ ہیں، کہف والوں کے سگ سے؟

ناموس گر گروی ہو، اغیار کے ہاتھوں میں
ذلت نہ چھپے گی پھر، کسی شملہ اور پگ سے

ہاتھ پہ ہاتھ دھرے یہ لوگ، کس قبیل سے ہیں
من چاہی کو جو ڈھونڈیں، پتھر کے نگ سے

بہر وپ نگر والوں سے، گر میل رکھنا ہے ساجد
زانوے تلمذ کر پھر، کسی بنارس ٹھگ سے

نظم

کچھ لوگ آگئے یہاں گھر بار بیچ کر
پیسے بٹرتے ہیں کچھ، معیار بیچ کر
مجبور ہیں وقت کے ہاتھوں بھرے دربار
وہ روز کر رہے ہیں ”ہاں“ انکار بیچ کر

غربت سے پریشاں میری بستی کا معتبر
بچوں کو پالتا رہا اخبار بیچ کر
آپا تمہارے فکر مند، روح جواں کے تھے
غفلت میں تم ہو سو رہے افکار بیچ کر

حق کے لیے بلند تھی شمشیر مسلمان
باطل کو بیٹھ اب گئے تلوار بیچ کر
اب اٹھ پڑو، کرو بلند آواز حق وعدل
ڈرڈر کے جی رہے ہو کیا اظہار بیچ کر

چنگاری دل کو زرا دم بھر ہوا تو دے
بدم ہے تو کیا کر رہا ہے چنگار بیچ کر؟
اڑ جائیں روئے فقر سے مغرب کی دھجیاں
اٹھ جاؤ، نہ پڑے رہو کردار بیچ کر

زین پشت تری زیر زمین جلد لگے گی!
کب تک کھڑے رہو گے وفادار بیچ کر؟



Zain Hassan
HSEQ



Sajid Hussain
HR & Admin

نظم

میری بے بسی میری جستجو
میری ہر نظر تیری منتظر
تو ہی ساری مشکلیں آساں کرے
تیری بندگی میرا حوصلہ

تیرا ذکر میری گفتگو

یہ جو بحر و بر میں زوال ہے

تیرے فیصلوں کی مثال ہے

جو بعید ہے وہ قریب ہے

ہر شے تیرے رُوبرُو

ترے آگے ہی گردن جھکائیں ہم

تیرے بندے ہیں تجھ کو بلائیں ہم

کبھی رو کے تجھ کو منائیں ہم

کبھی تنہائی میں میرے خدا تو ہی رہتا میرے چار سو

کبھی پُر خطر ہوں جو منزلیں تیری راہبری میرا راستہ



Ghulam Ullah
Maintenance

میرا ہر قدم تیری آرزو
تیری ہر نظر میری آبرو
تیری تعریف ہر اک زباں کرے
تیرا عشق میرا فیصلہ

تیرا ذکر میری گفتگو

یہ جو تنگدستی میں سوال ہے

تیرے فیصلوں کی مثال ہے

تری نظر ایسی عریض ہے کہ ہر شے سے تو باخبر

ہر شے تیرے رُوبرُو

ترے آگے ہی گردن جھکائیں ہم

تیرے بندے ہیں تجھ کو بلائیں ہم

کبھی رو کے تجھ کو منائیں ہم

کبھی تنہائی میں میرے خدا تو ہی رہتا میرے چار سو

کبھی پُر خطر ہوں جو منزلیں تیری راہبری میرا راستہ



Attock Refinery Limited
P.O. Morgah, Rawalpindi



92-51-5487041
Fax: 92-51-5487254

<http://www.arl.com.pk>
Linkedin: Attock Refinery Limited