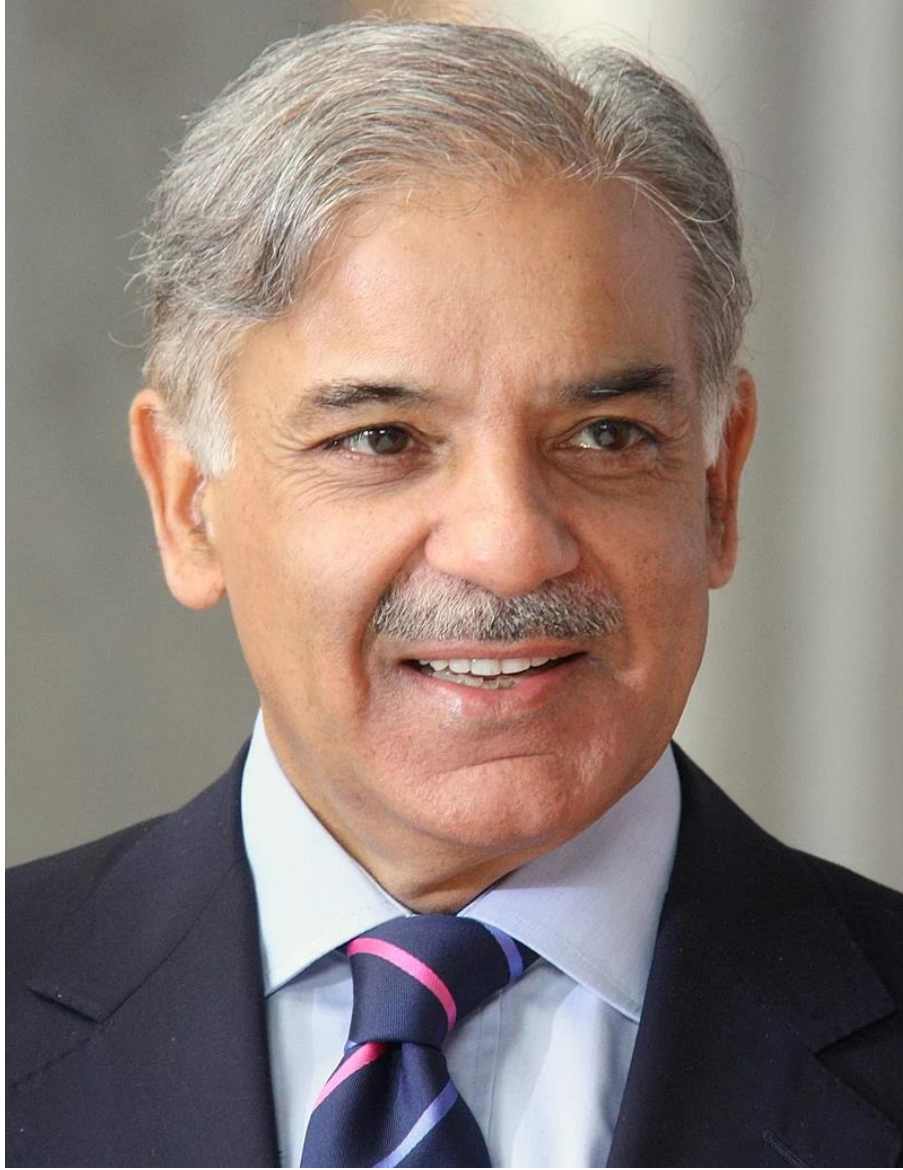




Year Book 2021-2022



**GOVERNMENT OF PAKISTAN
MINISTRY OF AVIATION
AVIATION DIVISION
ISLAMABAD**

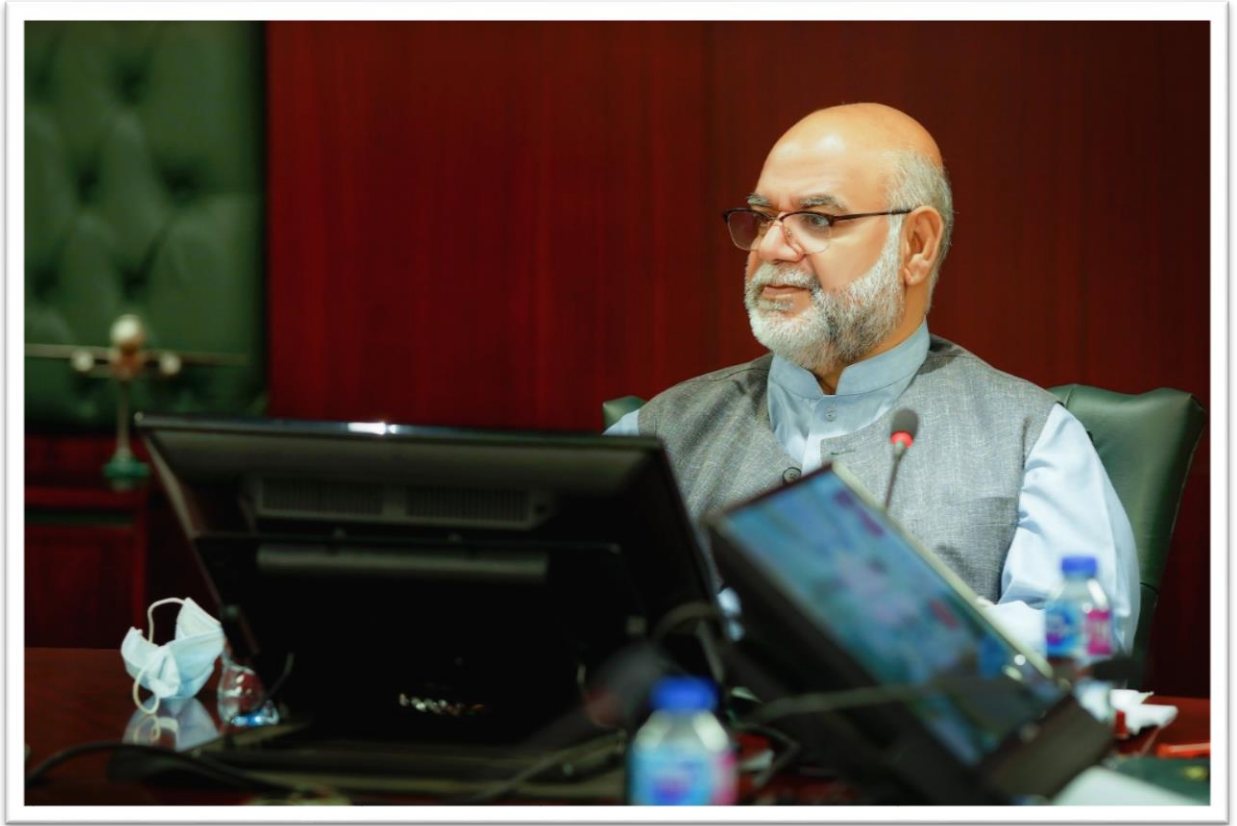


Muhammad Shehbaz Sharif

Prime Minister of Pakistan



Khawaja Saad Rafique
Federal Minister for Aviation



Shoukat Ali

Federal Secretary, Aviation Division

Foreword

The Year-Book of the Aviation Division has been prepared in pursuance of Rule 25(2) of the Rules of Business, 1973. This book contains vision and detail of functions, organization, activities and achievements of the Aviation Division and its attached departments/organizations for the financial year 2021-22. It contains information which may be of interest to the academia, researchers and relevant stakeholders.

The Ministry of Aviation was constituted comprising Aviation Division on 4th April, 2022. Aviation Division was established in June 2013 as a part of the Cabinet Secretariat. It had earlier been a wing under the Ministry of Defence. In a short span of time, Division has focused on safety, security and quality standards of aviation industry. Besides bilateral and multilateral liberalization; lowering taxes; stimulating economy through tourism, trade, etc.; public private partnership and infrastructural development are the areas under emphasis.

I hope that this book will prove beneficial for all concerned.

Shoukat Ali

Secretary

Aviation Division

Government of Pakistan

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Introduction

The Ministry of Aviation spearheads strategy, policy and oversight of all matters related to aviation sector. It has the primary focus on matters concerning aviation business by virtue of its structural and human-resource oriented acumen. A developed civil air transport system is vital to economic development. Important economic centers like trade, tourism and agriculture rely on functioning of air transport system. This Ministry's activities hence are geared directly towards aviation and indirectly corroborating existing national economic growth plans. Aviation sector must thrive to some reasonable degree on its own terms. An entrepreneurial spirit and 'can-do' attitude among many other business values is encouraged.

Vision

Safe, secure & efficient air transport and highest standards of weather forecasting.

Mission

To maintain the highest standards of safety, security and service by promoting air connectivity in the aviation industry. To ensure precision and accuracy in meteorological services

Functions

Ministry of Aviation has been allocated following functions: -

- i. Aircraft and air navigation; administration of the Civil Aviation Ordinance 1960 (XXXII 1960).
- ii. Development of civil aviation in Pakistan.
- iii. Provision of aerodromes.
- iv. Regulation, organization and safety of air traffic and of aerodromes – and administration of Airports Security Force.
- v. Pakistan International Airlines Corporation Limited (PIACL).
- vi. Air Service Agreements with other countries; liaison with International Civil Aviation Organization and other international agencies concerned with aviation business.
- vii. Federal Meteorological Organizations and Meteorological observatories; World Meteorological Organizations.

Departments/Organizations

The following departments/organizations are working within the purview of Ministry of Aviation:

1. Pakistan Civil Aviation Authority (PCAA)
2. Pakistan International Airlines Corporation Limited (PIACL)
3. Airports Security Force (ASF)
4. Pakistan Meteorological Department (PMD)

Budget 2021-22

| Sr. No. | Grant (Demand No.) | Budget Allocation | Supplementary Grant | Final Allocation |
|----------------|-----------------------------|--------------------------|----------------------------|-------------------------|
| i) | 13-Aviation Division (Main) | 118.910 | 20.500 | 131.410 |
| ii) | 13-ICAO | 13.090 | 8.630 | 21.720 |
| iii) | 14-ASF | 8078.00 | 2000 | 1078.00 |
| iv) | 13-PMD | 1449.347 | 1621.425 | 3070.772 |
| v) | 87-Development | 3558.200 | -- | 3558.200 |

Public Sector Development Program (PSDP) 2021-22:

There are total 17 projects of PSDP which are under process. Total allocation for these projects during the FY-2021-22 is **Rs.3558.200 Million** which includes local component of **Rs.1872.092 Million** and foreign aid of **Rs.1686.108 Million**. Details of these projects are placed at **Annex-I**.

Achievements of Attached Departments/Organizations**Pakistan Civil Aviation Authority****Achievements**

- Successful Completion of International Civil Aviation Organization (ICAO) audit by Airworthiness Directorate and Flight Standard Directorate in December, 2021.
- Completion of work on Safety Data Collection and Processing Systems (SDCPS), all operators in the aviation industry are uploading their data on SDCPS.
- Introduction of e-Billing Portal, which will facilitate Airlines/Agents to download their current and historic billing information.
- Successful preparation and conduct of International Civil Aviation Organization (ICAO) Universal Security Audit Programme – Continuous Monitoring Approach (USAP – CMA) e-audit with a compliance rate of 81.26%.
- Preparation of Operational SOPs for countering SAMs (MANPADS category) / Surface to air fire (SAFIRE) systems and countering Unmanned Aerial Systems (UAS), for implementation at airports based on ICAO & DfT-UK Requirements (November 2021)
- Ranked No. 1 in the Asia Pacific region with respect to NOTAM proliferation activity.
- Upgradation of main runway at Quetta international airport, for operation of aircraft operations upto ICAO standards.
- Re-Construction & Up-gradation of main Runway at Allama Iqbal International Airport, Lahore.
- Construction of Aerodrome for General Aviation Activities at Muridke – Greenfield Project (shifting of Walton Aerodrome).

Future Initiatives

- Feasibility Study on Design & Implementation of RNP-AR Instrument Flight Procedures for Airports at Gilgit, Skardu & Chitral
- Expansion and Renovation of BNB Sukkur Airport, Sukkur
- Multi-story office building at Blue Area, Islamabad
- Expansion of Allama Iqbal International Airport, Lahore
- New ATC Tower and Fire Station at Jinnah International Airport, Karachi
- Completion of Gawadar International Airport

Pakistan International Airlines Corporation Ltd.

Achievements

- Passenger yield improved to PKR 13.5 in 2021 vs PKR 12.1 in 2020
- Cargo yield improved to PKR 63.7 in 2021 vs PKR 48.3 in 2020
- Flight Operations to Northern Area increased from new destinations to Skardu from Karachi, Lahore, Multan, and Sialkot in 2021
- After the fall of Kabul, PIA offered its services to individuals on both side of borders. Even during the high-risk associated with such operations, PIA extended services to individuals, press reporters, international organizations (World Bank, Asian Development Bank, etc), governmental/diplomats, students who were stuck in Kabul and transported them to Pakistan.
- In year 2021, a total of 10 leased aircraft (8 A320s and 2 B777s) were to be returned to Lessor. Out of 8A320s, PIA acquired Hulls of 6 aircraft from Aergo as per Redelivery Buyout plan whereas 2 A320s are at MRO in Kuala Lumpur undergoing redelivery checks thus accruing substantial financial saving.
- Same as above, PIA acquired Hulls of both B777s from Lessor as per Redelivery Buyout plan.
- Rehabilitation work of PEC complex has been done due to Fire incident in 2016
- PIA reduced its workforce by nearly 40% from 14,500 regular employees to 8,156 now, bringing per aircraft ratio from 550 to 250 and will come down to 230 by the end of the year.

Future Initiatives

- In the year 2022, four (4) A320s are planned to be inducted, out of which one has arrived in April whereas 2nd has also been delivered on 6th May, awaiting customs clearance.
- Development of in-house simulator facility for meeting the training requirement of its A320 pilots and also provide training to other airlines in Pakistan.
- MRO IT, an ERP solution for organizing aircraft maintenance activities, has gone live and will be fully functional in year 2022.
- Re-vamping of web business portal and offering special package for airline users.

- Curtailment of expenses on international stations.
- Implementation of Business Plan.
- Financial re-structuring of PIA's balance sheet.
- Focus on Corporate Business.
- Mounting of new flights on productive routes.
- Focus on cargo revenue.
- Focus on ancillary revenue.

Airports Security Force

Achievements

- Upgradation of ASF Academy Karachi.
- Establishment of Joint CCTV Control Rooms at International Airports to counter money laundering issues.
- Training officers/staff of ASF as well as of other Departments in Aviation Security.
- Recovery of Narcotics, Gold, Liquor and illegal currency at Airports.

Future Initiatives

- Review of policy governing issuance of Airport Entry Passes to include digitization of Airport Entry Passes through use of modern technology.
- Digitization of official correspondence.
- Introduction of additional screening layer using Explosive Detection Dogs (EDD).
- Taking over security screening control of cargo.
- Foreign courses to enhance professional competency of ASF officials
- Inland Courses from Elite Institutes.

Pakistan Meteorological Department

Achievements

- Reverse Linkage between Marmara Research Centre (MRC), Turkey and Pakistan Meteorological Department.
- Installation of Weather Surveillance Radar at Karachi.
- Installation of Weather Surveillance Radar at Multan.
- Installation of Weather Surveillance Radar at Sukkur
- Monsoon outlook and Flood Forecasting during season 2021.
- Monitoring of Savior Cyclonic storm Shaheen over north east Arabian Sea
- Pollen, (Health Hazard) monitoring for Islamabad.

Future Initiatives

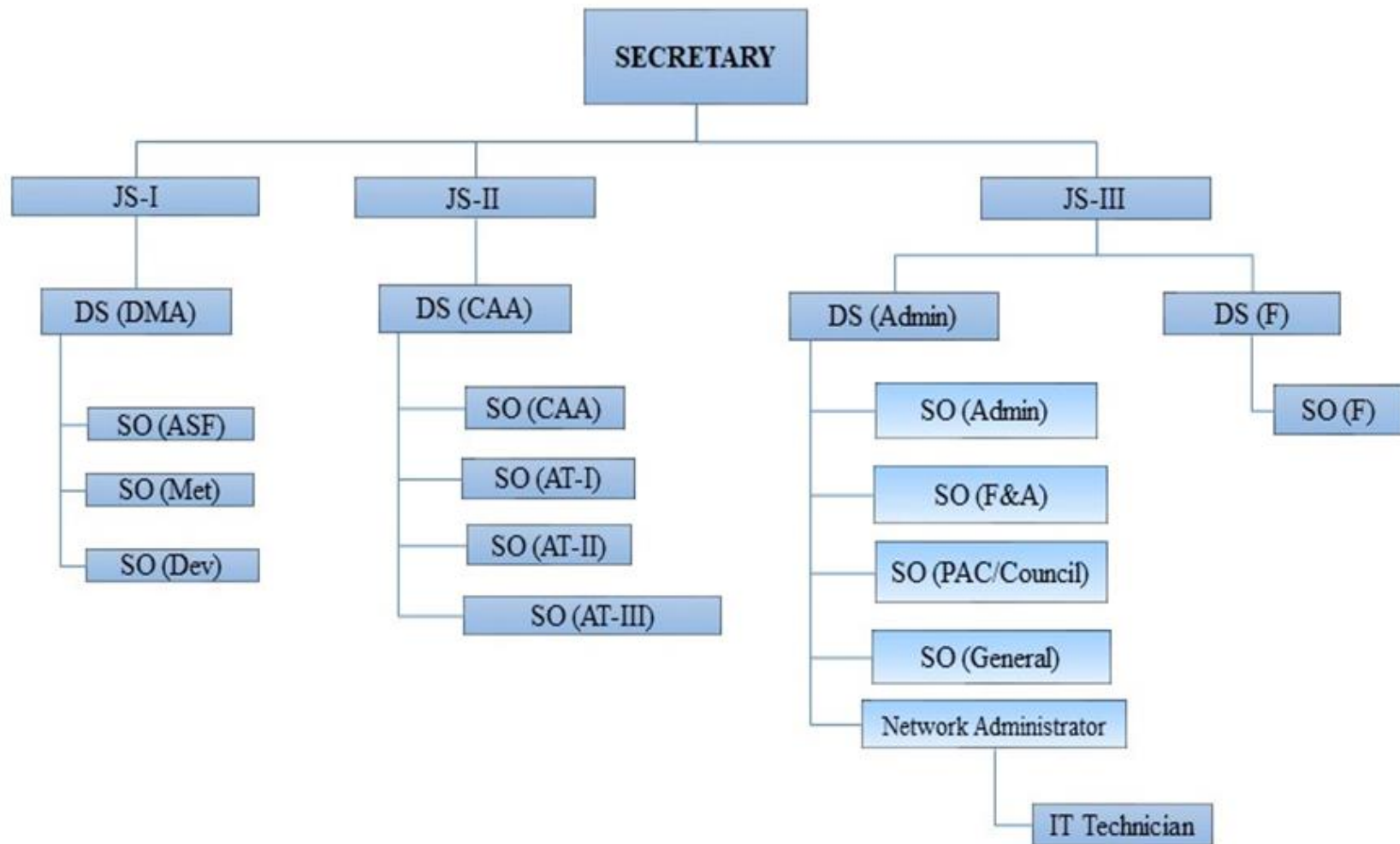
Flood Protection Sector Project-III (FPSP-III) (under process with FFC)

- Tentative funding = Rs 4.5 billion by ADB
- PC-1 being submitted to Federal Flood Commission:
- Establishment of six (06) Regional Flood Early Warning Centers
Quetta, Gilgit, Karachi, Peshawar, Multan and Muzaffarabad
- Installation of Eight (08) Radars
Lahore, Mangla, Khuzdar, Zhob, Gilgit, Dalbadin, Swat and Muzaffarabad
- Establishment of Extreme Weather Early Warning System at Islamabad
- Establishment of 252 Automatic Weather Stations
- Establishment of Urban/Flash flood warning centers in major cities

Further initiatives for up-coming years:

- Installation of Weather Surveillance Radar at Lahore (CCP approved CDWP) (JICA)
- Up gradation of Pak-China Seismic Network of Pakistan. (Phase-II) 100% CEA funding
- Up-gradation and Modernization of the Flood Forecasting & Warning System for Lai-Nullah Basin in Islamabad-Rawalpindi (CCP approved by CDWP) JICA
- Establishment of Weather Modification Division in PMD (by CMA)
- Development of Mechanism for Collaborative Research with Academia and their Involvement in Feasibility

Existing Organogram of Aviation Division





Pakistan Civil Aviation Authority (CAA)

Introduction

Pakistan Civil Aviation Authority (CAA) was established on 7th December 1982 through Pakistan Civil Aviation Authority ordinance 1982. The purpose of establishing CAA is to provide for the promotion and regulations of Civil Aviation activities and to develop an infrastructure for safe, efficient, adequate, economical and properly coordinated Civil Air Transport Service in Pakistan. CAA is controlled by the Government of Pakistan through Ministry of Aviation.

| | |
|---------------------|---|
| Vision: | "Be a world-class service provider in the Aviation Industry." |
| Mission: | "Provide safe, secure and efficient best-in-class aviation services to the stakeholders." |
| Core Values: | Commitment, Professional Excellence, Customer Focus, Safety and Security, and Integrity. |

Achievements 2021-2022

1. Directorates

i. Airworthiness Directorate

Other than the routine targets Airworthiness Directorate has made great strides in the year 2021 – 22 with regard to the continued compliance of International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs), as follows:

- Multiple Air Navigation Orders (ANOs), Airworthiness Notices (AWNOTS), checklists, forms and CAAOs have been revised / updated to ensure continued compliance with ICAO SARPs.
- PCAA was audited by ICAO auditors under the Universal Safety Oversight Audit Programme in November – December 2021. Airworthiness Directorate performed very well with a compliance score of 92% during the audit; which is above the global average of 84%.
- Multiple Standard Operating Procedures (SOPs) have been reviewed and updated to make the processes more streamlined and less time consuming, while being in compliance with ICAO SARPs.
- Oversight of PCAA has been improved in the interest of safety for aircraft operations in Pakistan.

ii. Flight Standards Directorate

- Flight Standards Directorate was able to clear the ICAO Audit held in December 2021 by accomplishing the oversight requirements in aviation industry of Pakistan as per the Standards and Recommended Practices (SARPs) by ICAO.
- The FS Directorate also fulfilled the non-compliance of the Monitoring Agency for Asia Region (MAAR) by submitting the outstanding snap shorts.
- In collaboration with SQMS Directorate, the directorate accomplished works on Safety Data Collection and Processing Systems (SDCPS), all operators in the aviation industry are uploading their data on SDCPS.

iii. Air Transport & Economic Regulations Directorate

Following are the AT&ER Directorate's highlights for the year 2021-22:

- Regular Public Transport Licences issued to Fly Jinnah and Q Airways.
- Charter Class-II Licence (International & Domestic) Issued to Air Sial Ltd.
- Tourism Promotion & Regional Integration (TPRI) Licences issued to North Air and Alvir Airways, whereas TPRI to Kashmir Airways has been approved.
- Flying School Class-II License has been issued to Potohar Aviation Services, whereas Flying School Class-II License to Air Eagle Academy is in due process for approval.
- Many interested potential licensees of TPRI have been given guidance and facilitation to apply and sail through the process.
- Authorized Flight Permission Agent Certificates issued to Pakistan Industrial Corporation (Pvt) Ltd and Fast Aviation Services authorized to obtain flight permissions on behalf of Schedule / Non-Schedule Airline Operators.
- Negotiations on air services held with 13 States at ICAO Air Services Negotiation Event (ICAN 2-21) in Bogota, Colombia.
- Cham Wing Airlines of Syria has started its operations to Karachi
- Airblue has started its domestic operations at Skardu Int'l Airport
- The Air Transport & Economic Regulations Directorate operations team visited each airport i.e. Karachi, Lahore, Islamabad, Peshawar, Sialkot, Faisalabad, and Multan for coordination of slots during Summer 2022 schedules for 32 international and 04 Pakistani airlines.
- 96 international airlines over-flights over the airspace of Pakistan have been approved for Summer 2022.
- 150th IATA Slot Conference held at Seattle, USA had participation of Air Transport & ER Dte.
- Certificates were issued as Authorized Freight Forwarder/Shipper to M/s DHL Pakistan (Pvt) Ltd. For Karachi, Lahore & Islamabad stations to handle dangerous goods by air.
- Certificate was issued at Authorized Freight Forwarder/Shipper to M/s M.R Logistics (Pvt) Ltd. For Karachi station to handle dangerous goods by air.
- On the instructions of the Aviation Division, invited comments/suggestions from all the stakeholders of the Aviation Sector of Pakistan for improvement of the National Aviation Policy.
- Prepared draft National Aviation Policy in light of the comments for the consideration of the Competent Authority.
- Number of consumer complaints handled against various Airlines during the period July 2021 to June 2022.

| | | |
|--------------------|----------|------------|
| Pakistani Airlines | : | 109 |
| Foreign Airlines | : | 105 |
| TOTAL | : | 214 |

iv. Commercial & Estates Directorate

Commercial & LD (North) Section

- Successfully started operations of New Car Park of AIIAP Lahore through self-handling w.e.f July, 2021. Currently survey of the commercial concessions at the new car park is in progress in coordination for exploitation of revenue streams and passenger facilities through its commercialization.
- A branded restaurant facility at AIIAP Lahore was tendered which is now fully operational along with other new retail and food outlets at AIIAP Lahore and MIAP Multan. These facilities have added to passenger facilitation and revenue streams at respective airports.
- Revenue from commercial concessions at AIIAP Lahore has been increased by approximately Rs. 293 Million, increased by Rs. 547 Million from IIAP Islamabad and increased by Rs. 152 Million from MIAP Multan as compared to revenue for the year 2020-21.

Commercial & LD (South) Section

- With effective tendering of concessions and utilization of vacant spaces at JIAP Karachi, considerable value additions has been achieved at JIAP Karachi and brands like Gloria Jeans, Dunkin Donuts, Mr. Cod, Coffee Planet and Bread & Co. have established their setups while contributing to passenger facilitation and non-aeronautical revenue.
- Revenue from commercial concessions at JIAP Karachi has been increased by approximately Rs. 685 Million and increased by 19 Million from QIAP Quetta as compared to revenue for the year 2020-21.
- Planning for commercialization of under construction New Gawadar International Airport is in progress which can considerably add to non-aeronautical revenue of PCAA.

Estate and LR Section

- Removal of Encroachment & Retrieval of Land at JIAP Karachi:
CAA land measuring 10 acres (approx. value of above Rs. 10 Billion) retrieved from encroachment made by land mafia.
- Removal of Encroachment & Retrieval of land at IIAP Islamabad:
With the guidance and support of worthy DGCAA, Estates Branch retrieved the land measuring 123 Kanal 16 Marla (approx value of above Rs. 1 Billion) at IIAP from illegal occupants.
- Restoration of Mutation at AIIAP Lahore:
The mutation of CAA land measuring 62 Kanal 11 Marla (acquired in 1998) was canceled by AC Cantt Lahore in January 2014. The mutation of said land was restored by Estate Branch through Revenue Court of Lahore Cantt without engaging any Legal Counsel.
- Acquisition of Land at Muridke for Construction of Greenfield Aerodrome:
Estate Branch has completed the acquisition of 163.33 Acres of residential land at Muridke under Land Acquisition Act-1894 in the record time of one year.
- Utilization of CAA Land at Walton in CBD Project on Profit Sharing basis:
Consequent to directives of the Federal Cabinet for shifting of General Aviation Activities from Walton to Muridke, CAA's land has been incorporated in the CBD Project on profit sharing basis.

Cargo Operations and Development Section:

- Revenue from Cargo Throughput Charges (CTC):

Pakistan Civil Aviation Authority has changed the methodology of assessment of Cargo Throughput Charges (CTC) on chargeable weight basis at all major Airports as per the decision of PCAA Board / Executive Committee in its 179th and 302nd meetings respectively. Subsequently, PCAA had taken over the import concession from the outsourced contractors and started collection of Cargo Throughput Charges (CTC) on import cargo through in-house resources. Hence the CAA's total revenue of Cargo via new methodology of Cargo Throughput Charges (CTC) has been increased considerably, comparison is appended below:

| Sr.No. | Location | Amount paid by the contractors in millions | Average monthly amount received through in house arrangement |
|--------|----------|--|--|
| 1 | JIAP | 67.641 Millions. | 153.700 Millions (Approx) |
| 2 | AIAP | 60.797 Millions. | 130.695 Millions (Approx) |
| 3 | IIAP | 13.31 Millions. | 32.714 Millions (Approx) |
| 4 | BKIAP | 0.765 Millions. | 1.125 Millions (Approx) |

- Prevention of pilferage at export cargo JIAP Karachi:

Major loop hole of pilferages were identified and measures were initiated to refrain from such activities. Currently it has been informed with cheers by cargo agents and by representatives of GHA's that pilferage has been restricted to 8-10% only, which is expected to further reduce by time.

v. Human Resource Directorate

CAREER PLANNING & REWARD AND RECOGNITION

StaffPromotion:

Considering the merit and suitability and availability of vacancies, the following 320 nos. of staff were promoted during the year 2020:

| ServiceGroup | No.of Promotions |
|----------------|------------------|
| SG-10toSW11 | 00 |
| SG-09 to SG-10 | 01 |
| SG-08 to SG-09 | 72 |
| SG-07 to SG-08 | 08 |
| SG-06 to SG-07 | 100 |
| SG-05 to SG-06 | 130 |
| SG-04 to SG-05 | 09 |
| Total | 320 |

TradeAllotment

For future career promotion in CAA, Supporting Staff of SG-01, SG-04 and SG-05 were adjusted in mainstream employees by allotting trades to them, in lieu of their experience, on the recommendation of Trade Allowance Committee. A total of 36 officials were given trades, as follows

| ServiceGroup | No.ofStaff |
|--------------|------------|
| SG-05 | 02 |
| SG-04 | 04 |
| SG-01 | 30 |
| Total | 36 |

Award of DGCAA Commendation Certificate / Letter of Appreciation

On account of performing duties efficiently with dedication, 19 officers and 03 officials were awarded a Special DGCAA Commendation Certificate by the Competent Authority, i.e., DGCAA.

Training & Development

Details of training/courses conducted between July 2021 to June 2022 are follows:

| Sr.No. | TrainingCourses | No. ofTrainees |
|--------------|-----------------|----------------|
| 1 | ForeignTraining | 73 |
| 2 | In-LandTraining | 405 |
| 3 | CATI | 1017 |
| Total | | 1495 |

Moreover, Internships opportunity was provided to 695 students from various HEC recognized Universities/Institutes in multiple disciplines between July 2021 to June 2022.

Inductions

A total of 98 Inductions were made at HQs and various locations by PCAA during the financial year 2021-2022.

vi. CNS Engg Directorate

The achievements of CNS Engineering Directorate for the year 2021-22 include execution of the following works:

| S# | NAME OF WORKS | REMARKS |
|--|---|--|
| <u>TELECOM & ELECTRONICS BRANCH</u> | | |
| PROCUREMENT OF EQUIPMENT: | | |
| 1 | Upgradation of AMHS equipment. | Procurement of Computers and Printers in lieu of Up-gradation of AMHS System to provide new AMHS Terminals at PCAA airports / location. (TOTAL COST: Rs.1.700 million) |
| 2 | Provision CCTV Systems at CAA airports/airports | Procurement of CCTV System to be installed at CAA airports/locations for Security Measures (TOTAL COST : Rs.14.110 million) |
| 3 | Provision LED TV and Dish Antenna System | Procurement of LED TV and Dish Antenna System for CAA airports and locations (TOTAL COST: Rs.3.85 million) |
| 4 | Provision UPSs / AVRs | Procurement of UPSs and AVRs for CAA airports and locations. |

| | | |
|---------------------------------------|---|--|
| | | (TOTAL COST: Rs.1.144 million) |
| 5 | Up-gradation of Skardu Airports | Procurement of Telecom Items for up-gradation of PTB Skardu airport (TOTAL COST: Rs.0.469 million) |
| 6 | Provision of Automatic Fire Detection System | Procurement of AFDS Equipment for Office Block / Area Terminal Building at FIAP, Faisalabad. (TOTAL COST: Rs.2.082 million) |
| 7 | Provision of Biometric System | Procurement of Face Recognition Biometric System to be installed at HQCAA and CATI Hyderabad (TOTAL COST: Rs.5.668 million) |
| 8 | Provision of Test Equipment | Procurement of GPS and Laser Range Finder for AAIB, Islamabad. (TOTAL COST: Rs.0.650 million) |
| 9 | Provision of Servers P/o D-ATIS System | Procurement of Servers Generation 10 Model No. PROLLIANT DL380 or Equivalent. (TOTAL COST: Rs.3.147 million) |
| 10 | Provision / Replacement of Office Equipment. | Procurement of office equipment (Photocopier machines, Multimedia Projector, Digital Voice Recorder) (TOTAL COST: Rs.8.331 million) |
| PROCUREMENT OF SPARES: | | |
| 11 | Provision of Spares P/o FIDS and Check-in-Counter | Procurement of CPUs and LED Monitors P/o FIDS and Check-in-Counter (TOTAL COST: Rs.0.722 million) |
| SERVICE LEVEL AGREEMENT (SLA): | | |
| 12 | SLA BHS | Annual Payment of SLA BHS In-Line Scanner & Security Check Equipment installed at IIAP Islamabad (TOTAL COST: Rs.65.00 million) |
| 13 | Maintenance Contract | Maintenance / Service Contract of AFDS System (TOTAL COST: Rs.0.738 million) |
| 14 | Maintenance Contract | Maintenance / Service Contract for Qty.-107 Photocopier Machines (TOTAL COST: Rs.0.370 million) |
| 15 | Maintenance Contract | Maintenance / Service Contract for Qty.-239 UPSs (TOTAL COST: Rs.1.519 million) |
| <u>RADAR BRANCH</u> | | |
| 1 | Procurement Of Qty-05 ADS-B Complete systems along with Its Installation, Testing & Commissioning At Karachi, Lahore, Dalbandin, Laram Top and Zhob On Turnkey "FOR" Basis. | <ul style="list-style-type: none"> • Installation of QTY-5 ADS-B system at Dalbandin, Laram Top, Zhob, Karachi & Lahore has been completed and its safety assessment is being carried out at Karachi, Lahore and Islamabad ACCs to strengthen the surveillance capability over Pakistan Airspace. • The data of ADS-B would provide redundancy to the existing surveillance Radar system and would also serve as gap filler in the identified grey areas. (Rs. 165.2 Million) |
| 2 | Procurement of critical spares for co-mounted primary & Secondary surveillance Radars (PSRs/MSSRs) installed at | The spares of Indra PSR/ MSSR has been procured and distributed to Karachi & Lahore accordingly. (US\$ 1.034Million) |

| | | |
|------------------------|---|--|
| | JIAP Karachi and AIIAP Lahore | |
| NETWORKS BRANCH | | |
| 1 | Procurement of telecom office equipment for PCAA airports/locations | Procurement of Qty:01 New IP-EPABX System of Capacity (04 CO Trunk + 04 SIP Ext. + 64 Analog Ext.) with installation & Commissioning for Bahawalpur International Airport. (Date: 21 Dec 2021) (Cost: Rs.643,508/-) |
| 2 | Procurement of Satellite Phone for SAR for AIIAP Lahore | Procurement of Qty-01 Sattelite phone for AIIAP Lahore (Date: 30-09-2021) (Cost: Rs.105000/-) |
| NAVAIDS BRANCH | | |
| 1 | Procurement of Qty 06 ILS/TDME Provision, Installation, commissioning and Testing of Instrument Landing System(ILS) and Terminal Distance Measuring Equipment (TDME) at PCAA Airports/Location on FOB Turnkey Basis | <ul style="list-style-type: none"> Contract No. HQCAA/1992/027/XXLN has been signed in between PCAA and M/S Selex E.S USA (OEM) dated 24th June 2019 at the cost amounting to USD (\$)2.588M. First batch of equipment comprising of three (03) ILS/TDME have been installed at EED Karachi CATI Hyderabad and AIIAP Lahore (36L) Second batch of equipment comprising of three (03) ILS/TDME have been received and will be installed in FY 2022-23 at JIAP Karachi, Multan and Faisalabad Airport. |
| 2 | Procurement of Qty 11 DVOR/DME Provision, Installation, commissioning and Testing of Doppler VHF Omni Range (DVOR) and Distance Measuring Equipment (DME) at PCAA Airports/Location on FOB Turnkey Basis | <ul style="list-style-type: none"> Contract No. HQCAA/1992/029/XXLN has been signed in between PCAA and M/S Selex E.S USA (OEM) dated 24th June 2019 at the cost amounting to USD (\$)4.60M. First batch of equipment comprising of four (04) DVOR/DME systems and accessories have been installed at EED Karachi CATI Hyderabad, Panjgur and AIIAP Lahore Equipment has been received for installation at Nawabshah, RY Khan, Faisalabad and Multan Airport and will be installed in FY 2022-23. |

vii. Engineering Services Directorate

The ES Directorate successfully completed the following works:

| Name of Work | Cost (M) |
|--|--------------|
| Allama Iqbal International Airport, Lahore | 6.556 |
| Improvement in Electrical Power Network of Critical Operational Facilities at Airside of AIIAP | 2.050 |
| Provision of Kitchen Cabinet, Wardrobe, Wooden Doors and Miscellaneous Works in Senior Officer's Mess at AIIAP | 1.255 |
| Construction of Toilets for ASF Near PIA and Project Gates at AIIAP | 1.173 |
| Provision of Water Supply System at Newly Established Green Field of New Car Parking at AIIAP | 1.023 |
| Geographical Coordinates of Two Points on Airside at AIIAP | 0.50 |
| Establishment of Govt. Health Department Booth and Renovation of First Aid Post in Lounges at AIIAP | 0.368 |
| Construction of Gun Man Post for ASF at North Gate at AIIAP | 0.187 |

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| Bahawalpur Airport | 2.911 |
| Enhancement of Security Infrastructure at Bahawalpur Airport | 2.864 |
| Provision of PCAA and National Flag along with Poles (02 Nos) on the Landside of PTB at Bahawalpur Airport | 0.047 |
| Bacha Khan International Airport, Peshawar | 35.459 |
| Improvement of Over-runs at 35 End of Runway at BKIAP, Peshawar | 13.529 |
| Provision of Alternate AFL circuits for THRESHOLD, PAPI & LOOP TAXIWAY LIGHTS at BKIAP | 9.885 |
| Improvement of Existing Airconditioning System in Lounges (Domestic Arrival, Domestic Departure & Domestic CIP Lounge) at CAA BKIAP | 8.015 |
| Provisioning of Alternate Standby Power Supply for AFL System Installed at CAA BKIAP | 3.743 |
| Repainting of VHF Station (External and Internal) Sides at VHF Station Laram Top | 0.287 |
| Civil Aviation Training Institute, Hyderabad | 40.304 |
| Construction of Mockup Simulator Aircraft and Allied Works | 19.252 |
| Replacement of Split Type Air-Conditioning Units in Hostel # 2 at CATI, Hyderabad | 5.139 |
| Replacement of Old Vintage Air-Conditioning Units & Allied Works in Engineering Services School and Works Offices at CATI Hyderabad | 3.851 |
| Energy Conservation & Improvement of Street Lights at CATI Hyderabad | 3.793 |
| Construction of Boundary wall around ES office at CATI Hyderabad | 2.491 |
| Provisioning of Energy Conserving LED Flood Lights & Restoration of Old Substation and Garden Lights in Sports Ground at CATI Hyderabad | 2.455 |
| Termite Proofing and Closure of Old Chiller Duct Plant at ATS School CATI Hyderabad | 2.213 |
| Development of Model Class Room at CATI, Hyderabad | 0.750 |
| Electro Resistivity Survey at CATI Hyderabad for Exploration of Ground Water Aquifers as part of Water Conservancy Measures | 0.360 |
| Dera Ismail Khan Airport | 0.981 |
| Installation / Laying of Existing Available 35 sqmm 4-core Cable at D.I. Khan Airport | 0.981 |
| Faisalabad International Airport | 47.032 |
| Construction of ATC Tower on Top of Terminal Bldg. at Faisalabad Airport. | 36.963 |
| Replacement of Boundary Wall into ICAO Standard Fence in Funnel Area at Faisalabad International Airport | 2.936 |
| Proposed Access Path for Newly Constructed ATC Tower at FIAP | 2.397 |
| Painting of Apron Marking and Joint Filling at Faisalabad International Airport | 1.495 |
| Miscellaneous Works for Shifting of Existing Fire Vehicles Steel Shed at FIAP | 1.053 |
| Construction of Watch Tower at Faisalabad International Airport | 0.933 |
| Providing and Fixing of Fiber Glass Shed at Existing Chiller Plants at Top of Terminal Building at Faisalabad International Airport | 0.697 |
| Installation of Security Gate at 2nd Entry Point at Faisalabad Airport | 0.444 |
| Construction of Security Towers (02 Nos) at Roof Top of Terminal Building at FIAP Faisalabad | 0.115 |
| Gilgit Airport | 5.90 |
| Provision of razor wire on existing boundary wall barbed wire fence at Gilgit airport | 2.893 |
| Replacement of existing sewerage line of old terminal building (CAA staff mess, MET department, Air movement) at Gilgit airport | 1.211 |
| Construction of UVIS and UVSS on Main Car Parking Entrance at Gilgit Airport | 0.878 |
| Demolishing of Existing 2 Nos. Watch Tower Runway 25/07 and Repainting of Threshold Markings and Touch Down Marking at Gilgit Airport | 0.876 |

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| Provision of Ladies Search Cabin in Arrival Lounge at Gilgit Airport | 0.042 |
| Headquarters Civil Aviation Authority, Karachi | 39.124 |
| Rehabilitation of HVAC System at Electronic Engineering Depot (EED) JIAP, Karachi | 3.899 |
| Provision of Wooden and Glazed Partition and Allied Works at Electronics Engineering Depot HQCAA, JIAP Karachi | 1.547 |
| Provision of Car Parking Sheds at EED, Logistics Center and Licensing Branch and DAAR at HQCAA JIAP, Karachi | 9.413 |
| Providing & Installation of 20 KVA Diesel Generator Set at DGCAA House | 2.755 |
| P/I Replacement of Vintage AC Units at Offices of CFO, Director Commercial, Director Operation, T.M VVIP / VIP, AdID SSP, AANS Directorate, Internal Audit, Civil Architecture HQCAA, Sr. AdID Office & Branch Sogea Building JIAP | 2.422 |
| P/I, Replacement of Vintage AC Units in IT Branch HQCAA, VVIP Toilet, HFRT ACC Radar JIAP, Karachi | 2.348 |
| Providing / Installation of Old Vintage Split Type AC units with Inverter Technology Split AC Units at Different Locations of HQCAA, Terminal-1 Karachi | 2.236 |
| P/I Replacement of Vintage Split Type AC Units in PEL Directorate Karachi | 2.134 |
| External Weather Shield Paint of B-6 & Miscellaneous Works at Design & Standard Branch Office in Karsaz at Karachi | 2.128 |
| P/I Replacement of Vintage Split AC Units in Airworthiness Directorate Karachi | 1.488 |
| Provision of Blinds & Allied Works at PEL Directorate | 1.346 |
| Construction of Vehicles Parking Shed at Additional DG House at JIAP Karachi | 0.575 |
| Construction of Semi Underground Pump Room, Provision and Installation of Non-Clogging Centrifugal Sewerage Pumps near Officer Club at JIAP Karachi | 6.834 |
| Islamabad International Airport, Islamabad | 248.214 |
| Construction of Pedestrian Ramps 2,3 & 4 at IIAP | 143.873 |
| Remedial Action to Control Rain Water Ingress through Mesh installed at Level-I (North & East side) of PTB at IIAP | 35.446 |
| Construction of additional toilets block (Prefabricated) at Level-I concourse hall PTB IIAP | 18.770 |
| Partitioning of available Hall for establishment of offices and record centres in PTB at IIAP | 5.285 |
| Provision of double Gate System with Allied Works at North and East piers Ends to meet VVIP requirement at IIAP | 4.828 |
| Development of Room No.1167 and Allied Civil Works | 3.869 |
| Construction of Boundary Wall between Watch tower no. 14 & 15 at IIAP | 3.501 |
| Construction of Canine Kennels in Cargo Complex | 3.034 |
| Consruction of addtional watch towers (04 nos.) at IIAP | 2.676 |
| Water Proofing of Valve Chambers around Sand Filter Located at Water Works IIAP | 2.339 |
| Protection Works Against Storm Water Nallah to Protect Newly Acquired CAA Land at Eastern Side of IIAP | 2.264 |
| Uplifting of AAIB Offices located at Lehtrar Road Rawalpindi | 2.245 |
| Provision of Two Sheds for Green House at CAA Nursery IIAP | 2.064 |
| Development of Room 4003 and Upgradation of State Lounge Lobby at PTB IIAP | 1.998 |
| Provision and Application of Water Proofing System at Gangways ACP Roof at IIAP | 1.980 |
| Construction of Boundary Wall around CAA Plot Located at Rawal Mess Rawalpindi | 1.917 |
| Improvement of E/M Workshop at South Pier and Allied Civil Works in IT & Communication Offices at Different Locations of Level-1 PTB IIAP | 1.576 |

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| Providing / Installation of Lighting Protection System for two Vault Rooms, Fire Crash & Rescue Building (FCR) and PTB at IIAP | 1.465 |
| Providing / Fixing Additional Fence Inside Existing Boundary Wall near Watch Tower Nos. 28, 29, 30 & 31 at IIAP | 1.411 |
| P/I of 20 HP Motor Turbine Jockey Pump Set along with all Fittings at Fire Pump Room Water Works IIAP | 1.387 |
| Dust Proofing of IT Equipment Rooms and Heat Protection of Security Scanning Machines at Level-3 Departure at PTB IIAP | 1.252 |
| Widening of Patrolling Track to reduce Accidents / Collisions at IIAP | 1.198 |
| Improvement of Main Masjid Court Yard's Floor at IIAP | 0.571 |
| Provision of Work Zone Safety Posts with Plastic Chain for Glide Path & Localizer (28L, 28R & 10R) at IIAP | 0.558 |
| Development of Baby Day Care Center in Visitors' Gallery Level-2 at IIAP | 0.464 |
| Soil Investigation for Construction of Staff Mess at IIAP | 0.394 |
| Remedial Measures Against Rain Water Ingress at Main Mosque IIAP | 0.369 |
| Provision of Guard Room at Rawal Road Plot Rawalpindi | 0.337 |
| Soil Investigation for Construction of Officer Mess at IIAP | 0.312 |
| Uplifting of CAA Guest Rooms at Rawal Mess, Rawalpindi | 0.309 |
| Misc. Civil Works at Different CAA Offices at IIAP | 0.287 |
| Establishment of External Stakeholders Offices at PTB IIAP | 0.234 |
| Jinnah International Airport, Karachi | 457.762 |
| Replacement of 4500 KW Capacity Centrifugal Chiller No. 04 at JIAP | 132.020 |
| Construction of Pavilion at Cricket ground CAA Sports Complex, JIAP | 49.595 |
| Construction of Bachelor officers Accommodation at JIAP (Balanced work) | 48.014 |
| Establishment of New Sub-Station at CAA Sports Complex JIAP | 43.875 |
| Construction of Football Pavilion at CAA Sports Complex JIAP | 34.446 |
| Providing and Installation of MRL Type Elevator No. 01 installed in Concourse Area (West) of JIAP | 19.50 |
| Replacement & Installation of 08 Ton Capacity Floor Standing Type AC Unit Installed at Lounge Area Satellite West JTC, JIAP | 9.882 |
| Providing / Installation & Replacement of 16 Ton Microprocessor Based Precision (CRAC) AC Unit I/C Allied Works at ATM Hall Radar JIAP | 9.870 |
| Provisioning of High Tension Cable between D-12 and Star Gate Sub-Stations at JIAP | 9.683 |
| Improvement of Electrical Infrastructure of Bay 72 Sub-Station at JIAP | 8.799 |
| Improvement of Low Tension Overhead Distribution in CAA Resenditil Colony at JIAP Karachi (F-Type, Metro Compound, H-Type, G-Type and C-Type Areas) | 7.293 |
| External Development Works near Main Gate of Sports Complex at JIAP | 6.597 |
| Provision of Car Parking Sheds for ACC Radar Building at JIAP | 5.367 |
| Provisioning and Installation of Non-Clogging Centrifugal Sewerage Pumps of Sewerage Water Lifting Station at Jinnah International Airport | 4.334 |
| P/I, Replacement of Vintage AC Units in SSP Offices, DAAR Directorate and Sogea Building JIAP | 4.246 |
| Provisioning and Installation of Constant Current Regulator (CCR) 20 kVA for Runway 25L-07R at Vault Station JIAP | 4.195 |
| Construction of Boundary Wall and Allied Works at Booster Pump JIAP | 3.780 |
| Up-gradation of Passengers Guidance / Awareness Boards at Entry & Exit Points and Parking Area at JIAP | 2.447 |
| Up gradation of Floor Tiles behind the Water Fountain area of International Departure at JTC JIAP | 2.432 |

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| Providing and Laying of Aerial Bundled Conductor in D Type Bungalows at CAA Residential Colony JIAP | 2.429 |
| Rehabilitation of Elevator No. 01 Installed in Aviation Dynamics Building at JIAP | 2.426 |
| Provisioning & Replacement of Damaged / Deteriorated Flood Light Towers with All Supports & Accessories for Bay N0. 63A to 66A at JIAP | 2.422 |
| Provisioning & Replacement of Old Vintage Fan Coil Units of Level No. 03 & 04 Lift & Toilets Lobby at JTC JIAP | 2.351 |
| Replacement of Fan Coil Units installed at Concourse Area of Level-1 & Level-2 JTC JIAP | 2.344 |
| Construction of Store at Works Division Civil-II JIAP, Karachi | 2.289 |
| Provisioning of Alternate Power Supply Arrangement for Block-A and B of CA Club at JIAP | 2.281 |
| Replacement of Existing Conventional Flood Light Fixtures with New LED Fixtures at U-Flood Light Tower of Bay-23 & 24 JTC JIAP | 2.256 |
| Re-Routing of Low Voltage Cables of Terminal-I on backside of 750 kVA Power House at Terminal-I JIAP | 2.224 |
| Uplifting of Bunglow No. B-07 at CAA Colony JIAP | 2.190 |
| Improvement of Illumination in Level-1 and Level-2 Concourse Area at JIAP | 2.075 |
| Provisioning of External Illumination Arrangement in CA Sports Complex at JIAP, | 2.064 |
| Installation of 04 Tons Capacity Ducted Split Type AC Units installed at CCR & Vault Room of JTC, JIAP | 1.985 |
| Improvement of Power Supply and Illumination in & around VVIP Car Gate at Terminal-1 JIAP | 1.849 |
| Provisioning of New Earth Pits and Rehabilitation of Existing Earth Pits at ACC Radar JIAP | 1.579 |
| Replacement of Existing Conventional Light Fixtures with New LED Fixtures at Fire Station JTC JIAP | 1.575 |
| Improvement of Illumination in General Aviation Area at JIAP | 1.434 |
| Provisioning of Aviation Obstruction Lights at Various Towers, etc, at JIAP | 1.379 |
| Up gradation of CIP Fitting Fixture and Sanitary Ware of (10x Toilet Block) Ladies and Gents at FIA & Belt Area International Arrival Lounge and International Departure Check-in area & Masjid and Transit Lounge JTC JIAP | 1.233 |
| Shifting of Low Voltage Panel, Transformers and Re-Routing of Cables at 820 kVA Sub-Station at Terminal-III JIAP | 1.192 |
| Segregation of Essential & Non-Essential Loads of Tank No. 03 at JIAP, Karachi | 1.162 |
| Provisioning of Street Lighting on Road between CAA School # 03 and Ramada Hotel JIAP | 1.145 |
| Improvement of Illumination in CAA Graveyard at JIAP | 0.910 |
| Electrification Works for Newly Established Com Ops Offices at Level-3 Room No. 3051-A JTC, JIAP | 0.811 |
| Improvement of Illumination in Car Parking Area of Terminal-1 at JIAP | 0.750 |
| Up-gradation of Gents Toilet near DFO Counter of Domestic Satellite at JTC JIAP | 0.745 |
| Provision of RCC Road Blockers near Escort Guard Room and Cargo Complex at JIAP | 0.733 |
| Provisioning of Air Freight Unit (AFU) Flood Lights and Miscellaneous Electrical Works at ICG Pan Mandi JIAP | 0.720 |
| Providing and Laying of Additional Circuit for Guidance Sign Boards at JIAP Karachi | 0.70 |
| Improvement of Illumination in Children's Park at CAA Residential Colony JIAP Karachi | 0.570 |

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| Providing & Installation of Flood Light Fixture on Back Side of CAA Jamia Masjid at JIAP | 0.495 |
| Provision of CC Flower Pots at Various Locations of JIAP Karachi | 0.493 |
| Providing and Installation of Power Analyzers on UB-1, UB-2, Substation East, Substation West and Terminal-1 Feeders at JIAP Karachi | 0.482 |
| Provision of Security M.S Gates & Grills in Both Tunnels of Zero Level at JIAP | 0.415 |
| Improvement of Electrical Distribution and Lighting System in Internal Audit Branch Terminal-1, JIAP Karachi | 0.414 |
| Establishment of new machine voltage room and renovation of existing room at Bay-73 S/S at JIAP Karachi | 0.380 |
| Provision of Entrance Canopy Shed and Allied Works at Officers Mess Block-C & D at JIAP Karachi | 0.320 |
| Providing / Installation New VOR Check Point Display Signboard at JIAP | 0.320 |
| Upgradation of AC System at (Outer Marker) Dumloty NAV-AID JIAP | 0.246 |
| Moenjodaro Airport | 10.731 |
| Reconstruction of Boundary Wall on front of Residential Area at Moen Jo Daro Airport | 5.763 |
| Construction of Double Gate for Airside Entry at Moen Jo Daro Airport | 2.971 |
| Replacement of old Vintage Air-Conditioning Units & Allied Works in Office Areas at Moenjodaro Airport | 1.997 |
| Multan International Airport | 7.421 |
| Provision of parking sheds for CAA Employees at MIAP Multan | 6.130 |
| Laying/Installation of (Given) Telecom Cable at Various Remote Locations of Multan Airport | 0.964 |
| Provision of Server and Monitoring Room for Installation of Face Recognition System in Terminal Building at MIAP, Multan | 0.326 |
| Nawabshah Airport | 5.843 |
| Provisioning / Laying of Control Cable for AFL Desk at ATC Tower & Interlinking of 150/250 kVA Diesel Generator Sets at Nawabshah | 3.647 |
| Conservation of Energy & Improvement of Car Parking / Street Lights at Nawabshah Airport | 2.196 |
| Panjgur Airport | 0.449 |
| Provision of New Earth / Grounding for DVOR / DME Equipment at Panjgur Airport | 0.449 |
| Pasni Airport | 7.10 |
| Providing / Installation of Qty-02 x 50 KVA Diesel Generator Sets at New Radar Pasni Airport | 7.10 |
| Rawalakot Airport | 0.518 |
| Provision of Signologies at Rawalakot Airport | 0.261 |
| Provision of Water Bore and Water Supply Connection at Rawalakot Airport | 0.257 |
| Skardu Airport | 46.903 |
| Extension of Passenger Terminal Building for International Flight Operations at Skardu Airport | 38.511 |
| External Construction Work required at Car Park Skardu Airport | 2.434 |
| Provision of Main Entrance Gate with Allied Works at Skardu Airport | 1.932 |
| Review of Runway Slopes at Skardu Airport (OPSD) Aerodrome | 1.671 |
| Construction of Irrigation Channel at Skardu Airport | 1.249 |
| Provision of Boring Tube Well (02 Nos.) at Skardu Airport | 1.106 |
| Begum Nusrat Bhutto Airport, Sukkur | 1.833 |
| Provision of M.I. Room near Canteen at BNB Sukkur | 1.833 |

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|---|---------------|
| Quetta International Airport | 3.205 |
| Providing & Installation of Electric Geysers & Air Curtains along with Allied Works at QIAP | 1.739 |
| Provision of shed for parking QRF vehicles at Quetta Int'l Airport | 0.788 |
| Up-Gradation / Improvement of SSR/EVHF Station Lakpass Feeder at the Site of Transmission Line Crossing RCD Highway | 0.678 |
| Walton Aerodrome | 12.316 |
| Reconstruction of CAA Office (C-1 House) at Walton Aerodrome | 12.316 |
| Zhob Airport | 0.627 |
| Providing and Installation of Split AC Unit at Zhob Airport | 0.627 |

viii. Information Technology Branch

Along with continuous improvement/upgradation and maintenance of Software and Hardware infrastructure, IT Branch's achievement includes the following:

- Introduction of e-Billing Portal, which will facilitate Airlines/Agents to download their current and historic billing information.
- Development, implementation, and integration of Safety Data Collection and Processing System (Mobile App/Portal/Dashboard).
- Continuous improvement/customization and development of ERP Forms and Reports to meet user requirement.
- Feasibility study prepared for the upgradation of ERP e-Business Suite.
- Implementation of Firewall to enhance the security of network infrastructure.

ix. Finance Directorate

Revenue and Expenditure for the current Financial Year 2021-22 along with comparative figures of 2020-21 is presented below:

| “Rs. in Million” | | |
|-------------------------|-----------------------------------|-----------------------------------|
| Description | Actual (Un-Audited) FY 2020-21 | Actual (Un-Audited) FY 2021-22 |
| Revenue | 52,089 | 91,156 |
| Expenditure | 49,521 | 57,605 |
| Surplus Before Taxation | 2,568 | 33,551 |
| Income Tax | 2,200 | (12,620) |
| Surplus For the Year | 4,768 | 20,931 |

Key aspects of the Financial Performance of PCAA are as follows:

- PCAA has earned Revenue of Rs. 91 Billion in FY-2021-22 as compared to Rs. 52 Billion in FY-2020-21 posting an increase of 75% (YoY). This Significant increase is due to the restoration of Flight Operations and Passenger Movement after relaxation in restrictions of the COVID-19 pandemic.

- PCAA has incurred an Expenditure of Rs. 57.6 Billion in FY-2021-22 as compared to Rs. 49.5 Billion in FY-2020-21. Increase in expenditure is mainly due to Provision For Doubtful Debts and Depreciation expense in FY-2021-22.

x. Security Directorate

Summary of Achievements of Security Directorate for the year 2021-22 includes the following:

- Successful preparation and conduct of International Civil Aviation Organization (ICAO) Universal Security Audit Programme – Continuous Monitoring Approach (USAP – CMA) e-audit with a compliance rate of 81.26%. (September 2020 – March 2021)
- Submission of Corrective Action Plan to ICAO and its successful acceptance by ICAO (May 2021)
- Preparation of Operational SOPs for countering SAMs (MANPADS category) / Surface to air fire (SAFIRE) systems and countering Unmanned Aerial Systems (UAS), for implementation at airports based on ICAO & DfT-UK Requirements (November 2021)
- Successful conduct of DfT - UK Assessments at IIAP & AIIAP (November – December 2021)
- Successful conduct of PCAA YOSC Campaign in 5 phases (at HQCAA and international airports), for raising security awareness and promoting an effective and sustainable security culture within the Aviation Industry of the country, in consonance with ICAO requirements (August – December 2021)
- Successful conduct of National Civil Aviation Security Committee Meeting (December 2021)
- Conducted enhanced simulated joint contingency exercises at 13 airports

xi. Operations Directorate

The branch wise detail of Ops. Directorate achievements is appended below:

a) Air Traffic Service (ATS)

- Tajik Route (T-400) Phase-1, operationalized on a 24H basis since 14th July 2022.
- On Job Training (OJT) completed at different ATC units during 2021-22 = 93
- Courses to officers from CATI Hyderabad = 45
- Abroad Meetings (online) = 17
- Courses (online) = 03
- Webinars (online) = 10 queried.

b) Aeronautical Information Management (AIM)

- Electronic Terrain and Obstacle Data (eTOD) availability of Karachi airport with respect to ICAO Annex 14 and 15 surfaces;
- Production of revised Type-A (obstacle limitation) charts for International Airports using GIS based application;
- Successful conduct of USOAP Audit related activity in AIM BRANCH as one of the core area of Audit;
- Ranked No. 1 in the Asia Pacific region with respect to NOTAM proliferation activity as conveyed by ICAO in AAITF/17 meeting dated June 2022;

- Revision of AIS cost after a period of 14 years;
- Successful implementation of Quality Management System in AIM with respect to AIS to Aim transition;
- Production of quantity 3 AIRAC AIP amendments in a year.

c) Flight Procedure Design (FPD)

- Instrument Approach Flight Procedures were reviewed for 10 (ten) Airports during the year 2021-2022 i.e. Karachi, Multan, D.G Khan, Peshawar, Rahim yar Khan, Turbat, Panjgur, Nawabshah, Lahore & Sukkur Airports;
- New Instrument Departure Flight Procedures were designed for 04 (Four) Airports i.e. Sukkur, Moenjodaro, D.G Khan & Dalbandin Airports;
- During the year 2021-2022, five (05) ATC officers attended online Basic PANS-OPS Procedure Design Course during the Year 2021-2022.

d) Search & Rescue (SAR)

- Development and implementation of SAR Operations Plan;
- Review of Operations Plan of RCC Karachi and RCC Lahore;
- Preparation, Approval and implementation of Karachi RCC and Lahore RCC Familiarization program;
- Up gradation of both RCC's infrastructure:
 - i. Addition of Voice Communication and Coordination System (VCCS) in Karachi RCC;
 - ii. Provision of Satellite phone facility to Lahore RCC;
 - iii. Provision of Satellite phone facility to Islamabad Rescue sub-center (in process);
- SAR Training Course No. 13 was conducted at JIAP Karachi from 16 to 20 May 2022;
- Integration of SAR aspect in APS Full Scale Emergency Exercises in coordination with APS Directorate;
- Improvement in the implementation status of SAR performance indicator scored 87.6%;
- Successful USOAP Audit.

e) COM. OPS.

- New IDS-ATS Message Handling System upgraded/commissioned on 07-10-2021;
- On-site Training for AMHS up-gradation provided.

| | | |
|---------------------------------|----|------------------|
| • CRONOS operational training = | 11 | Com Ops officers |
| • AMHS operational training = | 11 | ---do--- |
| • AMHS operational OJT = | 11 | ---do--- |
| • CRONOS operational OJT = | 11 | ---do--- |
- More than 14 Comm. Ops officers got training on GRF and 18 officers/staff were trained on SDCPS;
- More than 10 Comm. Ops officers attended webinar/video conferences.

2. CAA Annual Development Program (ADP):

CAA Annual Development Program (ADP) for the year 2021-22 envisaged an overall allocation of Rs.20,017 million, of which major provisions of Rs.17,387 million were made for Construction / up-gradation of airport projects/runways/radar/nav-aids, security / technical equipment and Rs.2,630 million for other misc. development requirements of CAA. Total 75% of funds committed/utilized against ADP 2021-22 for Rs.20,017 million till 30th June 2022.

3. Development Projects

i. Gwadar International Airport Project

44.95% of physical progress has been achieved by the Chinese side of the project and key achievements of the Pakistani side are represented below:

Project was approved by CDWP and ECNEC and Authorization Letter & Admin Approval was issued on 15th and 23rd December 2021 respectively.

Package-I (Intrusion Detection System, Watch Towers and Power Supply along the Fence) has been awarded to M/s Qavi Engineers and Mobilization will be completed by 20th July 2022 for commencement of work.

Package-II (CAA Residential Complex, Cargo Building and External Infrastructure Works) Financial bid evaluation is in process by M/s Nespak. Bidding applications are invited for

Package-III. (ASF Camp) In tender Action. Technical Bids to open on 4th August 2022.

Package-IV. (External Telecommunications Work)

- Work awarded to M/s PTCL. 50% amount of the total work has also been Main Dual access road and secondary dual carriage road constructed by GDA for NGIA Project.
- PC-1 Revision II including all the directions of CDWP submitted to M/o PD&SI through Aviation Division for ECNEC approval.

ii. Reconstruction of Rigid Runway at Faisalabad International Airport (FIAP)

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|---|---|
| Consultant Osmani & Company (Pvt) Ltd - DD&C – RMJM Brazil | |
| Contractor | Design & Engineering Systems Pvt. Ltd. |
| Project Cost (In Million) | Rs. 3,582 |
| Timeline | Start date: May 2020 Site Handed-over consequent to issuance of NOC by PAF: 17 th February 2021 Expected Completion date: 31 st December 2022 |
| Project Scope: | <ul style="list-style-type: none">▪ Reconstruction of Main Runway (Rigid type)▪ Installation of Airfield Lighting System▪ Construction of Storm Water Drainage System |
| Project Status | <ul style="list-style-type: none">▪ Physical Progress Achieved: 82% |

iii. Upgradation Main Runway (31r/13l) At Quetta International Airport, Quetta for Operation Of Aircraft Operations Upto ICAO Code 4E

| | |
|--|---|
| Consultant Osmani& Company (Pvt) Ltd - DD&C – RMJM Brazil | |
| Contractor | Umer Jan & Company – Engineers & Contractor |
| Project Cost (In Million) | Rs. 4,938 |
| Timeline | Start date: May 2020 Phase-I (Completed) 4 th November 2021 Phase-II & III Expected Completion date: 31 st January 2023 |
| Project Scope: | <ul style="list-style-type: none"> Up-gradation of Runway for operation of 4E Category aircraft (Rigid Pavement) Up-gradation of Airfield Lighting System to CAT II (Complete LED) Construction of new taxiway and widening of apron Construction of rainwater storm drains |
| Project Status | Physical Progress Achieved: 75.5% |

iv. Re-Construction & Up-Gradation of Main Runway (18l/36r) at Allama Iqbal International Airport, Lahore

| | |
|--|--|
| Yooshin Engineering Corporation – Umar Munshi Associates – Mascon | |
| Contractor | China Civil Engineering Construction Corporation – Matracon Pakistan (Pvt) Ltd & Habib Construction Services (JV) |
| Project Cost (in Million) | Rs. 6,450 |
| Timeline | Start date: Sep 2020 Completion date: May 2022 |
| Project Scope | <ul style="list-style-type: none"> Up-gradation of Main Runway for 4F Category aircraft operations. (Rigid pavement) Provision of CAT-III Airfield Lighting (complete LED) Construction of (02) Rapid Exit Taxiways and (01) Link Taxiway Construction of rainwater storm drain system |



View of the newly reconstructed Runway at AllIP, Lahore

v. Construction Of Aerodrome For General Aviation Activities at Muridke – Greenfield Project (Shifting Of Walton Aerodrome)

| | |
|----------------------------------|---|
| Consultant | Osmani& Company Private Limited |
| Contractor | Shaanxi Construction Engineering Group Cooperation Limited – Umer Jan & Company Engineers & Contractors (JV) |
| Project Cost (In Million) | Rs. 1, 784 |
| Timeline | Start date: January 2022 Expected Completion date: January 2023 |
| Project Scope | <ul style="list-style-type: none"> • 6000 It length - Category 3B Runway (100 ft width) • 2x Taxiways • Rigid Apron • 6x Hangers • Perimeter Fencing & Boundary wall • Administrative Building • Fire Station (Phase II) Terminal Building & ATC Tower (Phase II) • 223 Acres of Land for Special Economic Zone (SEZ) - (Phase II) • Basic AFL & Nav-Aids (Phase II) |



**Pakistan International Airlines Corporation
Limited (PIACL)**

Introduction

PIACL was formed in 1955 under the PIAC Act of 1956. Later, PIAC was converted a public limited company in 2016 under the Companies Ordinance, 1984 (XLVII of 1984). It has a long meritorious legacy of being among the best airlines in the world and setting new trends and world records in the commercial aviation arena. PIA helped UAE to establish Emirates Airlines in 1980. PIA also supported Saudi Arabian Airlines, Air Malta for their establishment besides providing technical support to various airlines in their set up. PIA has many firsts to its name including **world records for longest and fastest flight** with east to west connectivity. Out of which few are:

- The first non-communist airline to fly to the **People's Republic of China**, and to operate a service between Asia and Europe via Moscow. Also first Asian airline to fly to the US in 1961.
- An **IBM 1401**, the first computer in Pakistan, was installed in PIA.
- The first airline in Asia to induct Boeing **707, 737-300** & first in the world to get **B777** aircraft.
- **The Ispahani Hangar** - aircraft maintenance hangar for wide body and narrow body aircraft with a supporting airframe overhaul shop was completed and commissioned in 1968.

Since 2004, it is in persistent losses which has caused serious cash flow and liquidity concerns for the airline, hampering its growth and profitability.

The present government is very keen to make state owned entities self-reliant and financially sound with minimal government intervention. PIAC is no exception and is moving fast towards administrative and financial autonomy.

PIACL is passing through dire financial state, mostly due to recurrent losses and loss financing on both organization's own assets and sale proceeds, or through sovereign guarantees. This has resulted in amassing of huge liabilities on PIA's balance sheets adversely affecting its liquidity, financial viability and product improvement initiatives. Efforts are underway by the present government to improve the financial health of the airline by reducing its losses through various means and modes. The government has also put in place a professional management with mandate to bring in discipline in the organization, curtail revenue leakages and create new revenue streams for the airline as a prerequisite for any serious reforms to be undertaken in the airline. Despite the fact that the revival initiative was seriously hampered by the COVID-19 outbreak and resultant travel restrictions that has affected the global aviation industry. PIA's results for the year show signs of improvement and reduction in losses. The financial results for the year 2021 are as under:

| (Rs. in Millions) Jan-Dec 2021 | |
|---------------------------------------|-----------------|
| Revenue | 86,185 |
| Fuel & Oil | (22,857) |
| Others | (71,791) |
| Gross Profit/(Loss) | (8,463) |
| Other Operating Expense | (13,113) |
| Other Income | 6,549 |
| Loss from Operations | (15,027) |
| Exchange Loss | (7,346) |
| Loss before Interest & tax | (22,373) |
| Interest | (27,390) |
| Loss before tax | (49,764) |

*PIA financial year is based on calendar year i.e. January to December

It is worth mentioning that despite facing difficulties, PIACL has been able to improve upon its performance with reduction in losses. Furthermore, PIA's Seat Factor and Yields have also improved in comparison to previous years showing that it has taken serious steps towards improving its utilization and revenue streams despite the fact that Covid-19 pandemic badly hampered the aviation industry.

Vision: To be a world class profitable Airline meeting customer expectation through excellent services.

Mission: Offering quality customer services and innovative products, using state of the art technology, ensuring cost effective measures in procurement & operations and developing safety culture.

Achievements

1. Services to the Nation

i. PIA's effort in repatriation/transportation of Pakistanis during COVID-19.

PIA transported approximately 120,000 Pakistanis from abroad to Pakistan and from Pakistan to a number of countries in the world in almost all continents. Large scale operations were carried out in UAE & Gulf region, Kingdom of Saudi Arabia, North America (Canada and USA), Europe (France, Germany, Holland, Denmark, Sweden), Australia, Africa, and China. Despite challenges, PIA as an effective arm of the State extended all its support to our institutions and general public when all the logistics were constrained due to COVID-19 pandemic.

ii. **Vaccination Transportation from China:** PIA operated a number of flights to China for bringing vaccines in coordination with NDMA, Ministry of Health, and NCOC. In short, PIA's efforts are cardinal to winning the battle against COVID-19 pandemic and maintaining an effective vaccine regime in the country by keeping supply/logistical lines open.

iii. **Students Repatriation:** A large number of Pakistani students are studying in Central Asian Republics especially Bishkek, Kyrgyzstan and China. During 2020 and 2021, approximately 15,000 students were transported to Pakistan who were stuck there due to closure of universities during COVID-19 pandemic.

iv. **Kabul Operations:** The fall of Kabul in August 2021 emerged as a major logistical challenge for both Pakistan and Afghanistan and expat workers in Afghanistan. After the fall of Kabul, PIA offered its services to individuals on both side of borders. Even during the high risk associated with such operations, PIA extended services to individuals, press reporters, international organizations (World Bank, Asian Development Bank, etc), governmental/diplomats, students who were stuck in Kabul and transported them to Pakistan. All these operations were carried out from Islamabad station, whereby PIA Islamabad office was available 24/7 to help in case of any exigencies.

v. **Starting Of Domestic Tourism During The Covid Recovery Phase:** After easing out of restrictions relating to COVID-19 pandemic, the domestic tourism recovered with a monumental rate. It was PIA which helped support the tourism industry by offering flights and connecting them to all parts of the country. The Northern Areas of Pakistan were connected to rest of country with multiple frequencies to all major cities i.e. Karachi, Lahore which has now been extended to Multan, Sialkot, and Faisalabad.

2. Fleet Expansion

PIA fleet comprises of 29 aircraft which includes B-777 300ER, B-777 200LR, B-777 240 LR, A320, ATR-72 and ATR-42.

To facilitate its valued passengers and add more destinations on regional network, PIA planned to **induct narrow body aircraft into the fleet on dry lease basis. After completion of all formalities**, agreements were signed with two leasing companies for induction of six A320 aircraft, out of which four aircrafts have been added during the period from October 2021 to June 2022 whereas two aircrafts will join the fleet in the months of July and August 2022. After the induction of six aircraft, PIA's A320 fleet will increase to fourteen aircraft.

PIA management decided to develop in-house simulator facility for meeting the training requirement of its A320 pilots and also provide training to other airlines in Pakistan. After completion of procurement related formalities, the purchase agreement was signed in December 2021 with M/s L3Harris, which is one of the most renowned Simulator manufacturer in the world, for the acquisition of their latest model Reality7 A320 Full Flight Simulator. The equipment was delivered to PIA in first week of June 2022 and currently is in process of installation at PIA Training Centre, Karachi. This state of the art simulator will be ready for training by first week of October 2022.

3. PIA Engineering & Maintenance (2021-22)

The Year 2020-21 was badly affected by Covid-19 pandemic and EU restrictions on Pakistani Aviation. In 2021-22, PIA Engineering actively played its role in recovery efforts of the national flag carrier.

PIA Engineering concentrated on improving PIA's safety record, thereby working towards fulfillment of requirements pertaining to lifting of EU restrictions. The Department also continued to put its share in revenue earning efforts of the National Flag Carrier.

Quality and Safety Standards

PIA Engineering worked hard in improving overall quality and safety standards, which will help in winning confidence of international airworthiness authorities, e.g. ICAO, EASA and FAA.

1. MRO IT, an ERP solution for organizing aircraft maintenance activities, has gone live and will be fully functional in year 2022.
2. PIA Engineering, through internal ramp inspections, strived hard in improving and maintaining National Carrier's Safety and Airworthiness status. PIA's EU Ramp Inspections Index was at 1.84 in 2019, which has improved a lot and it is 0.27 currently. The same is significantly ahead of industry average index of 1.0.
3. The department participated actively in recent IATA Operational Safety Audit (IOSA) Recertification Audit, where compliance level of around 98.6 % was achieved for all applicable clauses.

Revenue Earning/Saving

PIA Engineering successfully negotiated with Lessors to transfer ownership of 08 aircraft to PIA on FOC basis, thereby saving approx. **USD 20 Million** as redelivery cost.

1. The department earned revenue of **PKR 1,234 Million** through its engineering services to the customers.
2. PIA Engineering Business team recovered **PKR 187 Million** long outstanding dues from defaulting customers.
3. PIA Engineering's capability was enhanced by training more engineers on state of the art modern fleet including Boeing 787 Dreamliner and Airbus A350.

4. Facilities Management

i. Solar Installation Project at PIA Training Centre (Green Power Project) Cost: PKR 30.2 Million:

PIA has installed 350 KW Solar system at PIA Training Centre as a pilot project , which resulted uninterrupted power supply even in present days of serious load shedding. Furthermore we are also saving Rs. 1.0 million (approx.) per month.

Feasibility

Total Project cost: PKR 30.2 Million

Yearly saving: 12 Million

Payback period: 2.6 years

System Life: 25 years

ii. Skardu Booking Office Building Cost: PKR 14 Million

New building at Skardu constructed at PIA owned plot near Airport which played vital role in major Skardu operation started from this year, subsequently our own sales office in city which was underutilized has been rented out at a cost of Rs.4 million per year.

iii. Precision Engineering Complex Cost : PKR 144 Million

Rehabilitation work of PEC complex has been done due to Fire incident in 2016, all payments for this work has been arranged from insurance claim and auction of old scrap.

iv. Emergency Response Centre

An emergency response centre was established at Islamabad International Airport, to command and control for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level during an emergency.

5. Information & Communication Technology:

- Instructions issued to make use of technological assistance like video calls, conference calls etc.
- Increase in global distribution and sales network by brining Sabre, Travel port and Amadeus on board without exclusivity.

6. Uplifting of PIA Image

- Special emphasis is being given to uplift PIA image in media. Services of qualified professional will be obtained to revamp PIA's media strategy and plan.
- PIA will embark upon an awareness program in media regarding any initiative taken or announcement concerning public interest etc. will be the main features.
- PIA which went through severe image crisis after the events of 2020, has started steadily rebuilding its image through extensive use of social media and PR initiatives.
- PIA has also started to professionally run its social media / digital handles working in completely synergy for creating of a positive perception of the airline by focusing on alternative narrative, highlighting PIA's role in national crisis. The efforts of PIA in the largest repatriation operations consequent to COVID-19 outbreak and the uplifting of more than 100 million vaccines from China to Pakistan to strengthen the efforts of NCOC and NDMA were also highlighted to the nation.

7. Rationalization of HR

- Ghost employees and employees with fake degrees were terminated in accordance with decision and direction of the Supreme Court of Pakistan.
- A detailed study was carried out which revealed that HR ratio is higher than available aircraft in the fleet.

- PIA reduced its workforce by nearly 40% from 14,500 regular employees to 8,156 now, bringing per aircraft ratio from 550 to 250 now and will come down to 230 by the end of the year.

8. Peculiarities of PIA

- National Flag Carrier operates **socio-economic routes** connecting from Turbat and Gwadar to Gilgit and Chitral.
- First to engage in international and national commitments **from operating to war zone (Kabul / Ukraine / Syria)**
- Repatriated nearly half a million countrymen back **to their home land during Covid.**
- Played a key logistical role during COVID by **carrying 135 Million vaccines.**
- **Supports nearly 40,000 households** without any burden on national exchequer.
-

9. Revenue Enhancement

- Rationalization Network
- Expansion of Code Share Network
- Mounting of new flights on productive routes
- Ancillary revenues through sale of bulk head and aisle seats
- Charter operation

10. Cost Reduction

- Contracts for Food, Motor Transport, Medical, Utilities and crew hotels have been revised leading to marked savings.
- Curtailment of expenses on international stations.



Airports Security Force (ASF)

Introduction

1. ASF was established in 1976 under the ASF Act LXXVII of 1975 initially as the tenth Directorate of the Department of Civil Aviation. After the hijacking of PIA airplane in March 1981, sensing the contradictory requirements of security and facilitation, ASF was separated and in December 1983, was placed under the folds of Ministry of Defence. In 1984, ASF was subjected to Pakistan Army Act. Now, ASF is functioning under Aviation Division since June 2013.

2. ASF started its journey by managing security of 7 major airports with a limited manpower of 2870 all ranks. Now, ASF is assigned security of 42 airports (9 major & 33 smaller airports) with a total authorized strength of 15565 all ranks. The summary of airports spread over various parts of Pakistan is given below:-

| | | |
|--------------------|---|-----------|
| a. Operational | = | 25 |
| b. Non Operational | = | 17 |
| Total | = | 42 |

3. Since 9/11 incident and particularly terrorists attack at Old Terminal, Karachi Airport on 08 June 2014, Aviation Security has shot into prominence as airports and commercial aircrafts are considered iconic targets by terrorists. As Aviation Security is the state responsibility, and Government is investing heavily in this field to mitigate threats to Aviation Industry as it has serious political and economic implications.

Aviation Security Challenges

4. Some of the major challenges to Aviation Security are:-

- a. Asymmetric Warfare.
- b. Variable Terrorist Threats.
- c. Increasing Criminal Activities.
- d. Structural Security Weaknesses.
- e. Technological Shortcomings.
- f. System Vulnerabilities.
- g. Shortage of Manpower
- h. Shortage of Latest Weapon / Equipment.

Vision

5. Keeping abreast with latest trends in Global Aviation Security and adopting new technologies, developing a highly trained, well equipped and motivated Airports Security Force in order to meet international standards of Aviation Security and to counter growing terrorism and crime against Aviation Industry in Pakistan, reliability is key to Aviation Security and must be developed in following priority:-

- a. Human Reliability
- b. Technical Reliability
- c. Systems Reliability

Core Values

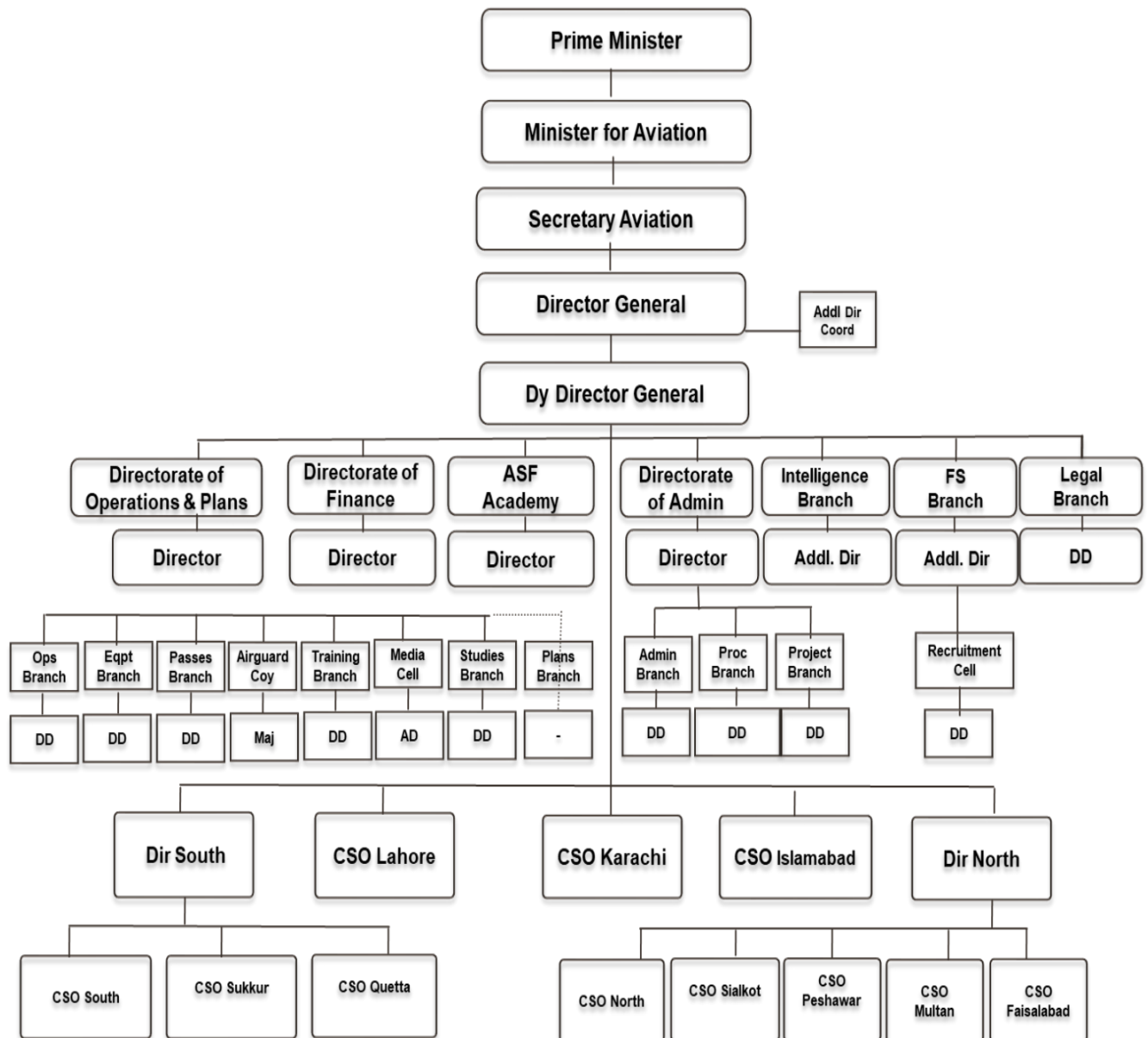
- 6. Core values to be inculcated in ASF are:-
 - a. Operational Readiness (*Proactive Approach*)
 - b. Zero Tolerance (*High Standard of Discipline*)
 - c. Integrity (*No Corruption*)
 - d. Firmness and Courtesy (*Good Public Image*)
 - e. Continuous Improvement (*Quest for Excellence*)

Mission

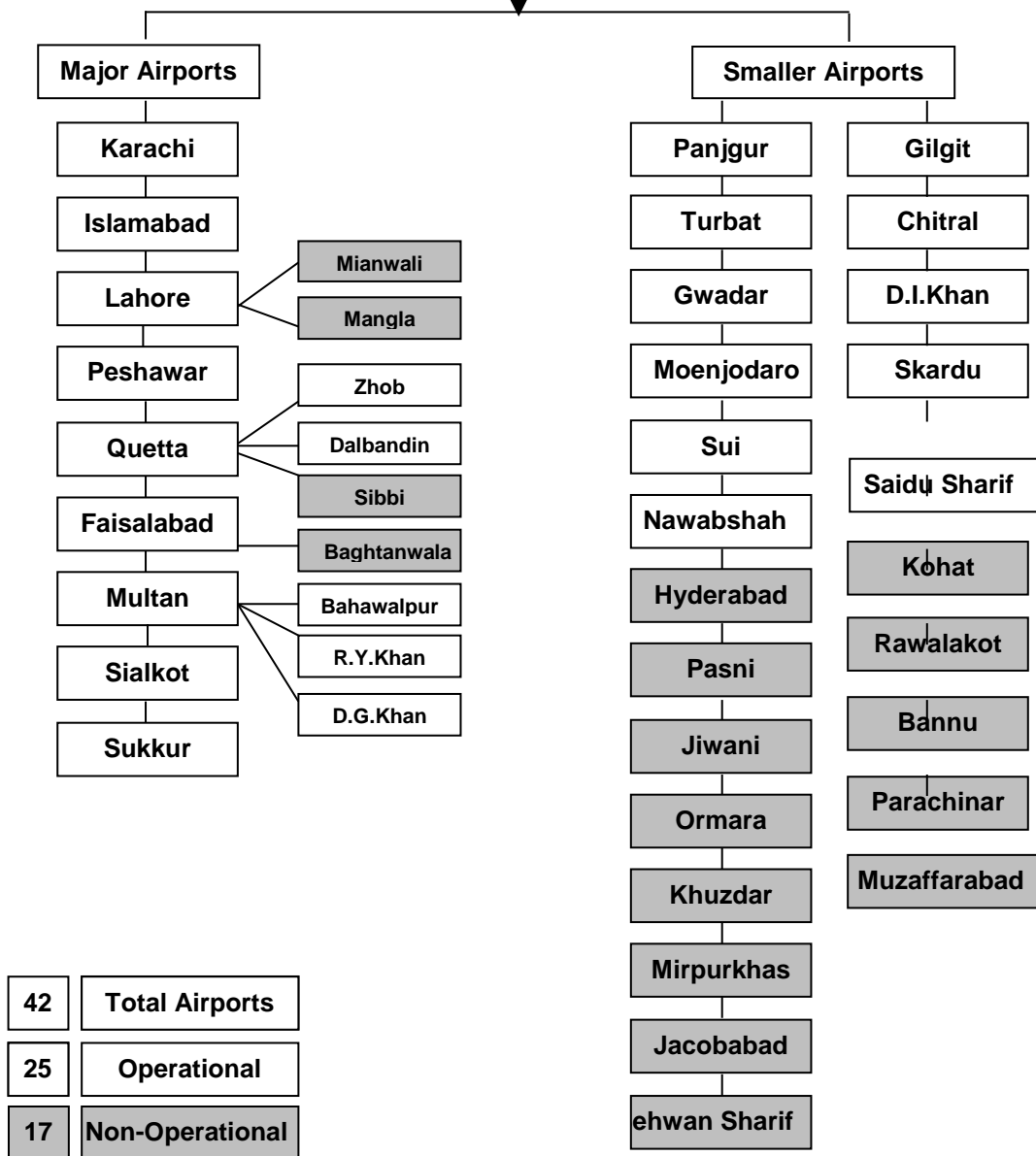
- 7. Safeguard Civil Aviation Industry against acts of unlawful interference and ensure security and protection of life and material within the premises of airports.

Main Functions

- 8. In accordance with the provisions of the ASF Act 1975, the Force is responsible for:-
 - a. Ensuring security of all airports, aerodromes and civil aviation installations within the limits of airports & aerodromes and for safeguarding Civil Aviation against acts of unlawful interference or threats of interference.
 - b. Ensuring security of all structures, equipment, material and installations belonging to operators and other Government or non-Government organizations within the limits of airports and aerodromes.
 - c. Ensuring security of aircrafts, passengers, baggage cargo and mail within the limits of airports and aerodromes.
 - d. General maintenance of law & order within the limits of airports in conjunction with the Police and taking cognizance of all offences committed at the airports and aerodromes under any law for the time being in force.



AIRPORTS



Manpower

10.

a. **State of Manpower**

| Detail | Authorized | Held | Deficient |
|-------------------|--------------|--------------|-------------|
| Uniformed staff | 14692 | 12654 | 2038 |
| Ministerial staff | 873 | 719 | 154 |
| Total | 15565 | 13373 | 2192 |

b. **Detail of Activities, Achievements and Progress – 2021-22.**

Detail of Promotion of officers / officials is as under:

| Rank | Year-2021 | Year-2022 | Total |
|-------------------------|------------|------------|-------------|
| Director | 05 | - | 05 |
| Addl Director | 11 | 08 | 19 |
| Deputy Director | 23 | 23 | 46 |
| Assistant Director | 14 | 29 | 43 |
| Inspector | 85 | 100 | 185 |
| Sub Inspector | 212 | 275 | 487 |
| Assistant Sub Inspector | 188 | 386 | 574 |
| Sergeant | 213 | 538 | 751 |
| Superintendent | 3 | 5 | 8 |
| Assistant | 2 | 4 | 6 |
| UDC | 4 | 5 | 9 |
| LDC | 2 | 2 | 4 |
| Total | 685 | 761 | 1446 |

c. **Detail of Recruitment is as under:**

| Rank | Year-2021 | Year-2022 | Total |
|-------------------------|-----------|-----------|------------|
| Assistant Director | 16 | 02 | 18 |
| Inspector | 02 | 55 | 57 |
| Assistant Sub Inspector | 111 | 96 | 207 |
| Corporal | 444 | 485 | 929 |
| Corporal Driver | 13 | 10 | 23 |
| Steno Typist | 3 | 1 | 4 |
| Draftsman | 1 | 1 | 2 |
| UDC | 5 | 2 | 7 |
| Technical Assistant | 1 | - | 1 |
| Religious Teacher | 1 | - | 1 |
| Medical Attendant | 1 | - | 1 |
| MT Driver | 2 | 11 | 13 |
| Veh Mechanic | - | 1 | 1 |
| Electrician | - | 2 | 2 |
| Assistant | 3 | 1 | 4 |

| | | | |
|-------------------|---|----|-----------|
| LDC | 5 | 9 | 14 |
| Cook | - | 20 | 20 |
| Sweeper | - | 7 | 7 |
| Naib Qasid | 6 | 5 | 11 |

d. Program of Activities and Targets – 2021-22.

Imparting of Basic & specialized Aviation Security Training (Short Courses) for Manpower Quality Enhancement of Human Resources in Aviation Security has been scheduled/targeted during 2022 for strengthening and reinforcement of security at all airports to counter the prevalent threats to Aviation Industry.

| <u>Basic Courses</u> | | <u>Schedule</u> |
|-----------------------------------|--|--------------------------|
| (1) | Basic Aviation Security Course 49 | 04-06-2021 to 27-11-2021 |
| (2) | Officer Basic Aviation Security Courses 27 | 23-06-2021 to 10-11-2021 |
| (3) | Officer Basic Aviation Security Courses 28 | 30-11-2022 to 20-05-2022 |
| <u>Specialized Courses</u> | | <u>Schedule</u> |
| (1) | Sniper Course | 13-12-2021 to 31-12-2021 |
| (2) | Company Commander Course | 20-12-2021 to 25-12-2021 |
| (3) | Platoon Commander | 20-12-2021 to 25-12-2021 |
| (4) | Advance Screener Course | 20-12-2021 to 21-01-2022 |

Performance Statistics

11. In-spite of numerous constraints and limitations under which ASF is working, its performance is a matter of pride and satisfaction for everyone. Following states of recoveries made by ASF during the financial year 2021-22 reflect the state of alertness and vigilance of ASF at airports:-

- a. **Recovery of Arms/Ammunition.** ASF staff has recovered following arms/ammunition during course of their duties at various airports:-

| S. No | ITEMS | LICENSED / UNLICENSED | QTY |
|--------------|---------------------|------------------------------|------------|
| 1 | Gun / Rifle | Licensed | 0 |
| | | Unlicensed | 11 |
| 2 | Revolver / Pistol | Licensed | 14 |
| | | Unlicensed | 76 |
| 3 | Ammunition (Rounds) | Licensed | 433 |
| | | Unlicensed | 3697 |
| 4 | Magazine | Licensed | 28 |
| | | Unlicensed | 199 |

- c. **Recovery of Narcotics.** ASF staff during performance of their duties at various airports recovered **47.884** KGs Heroin, **42.334** KGs Hashish/Charas, **95.325** KGs Ice

Heroin during the financial year 2021-22. The accused passengers alongwith recovered narcotics were handed over to Anti-Narcotics Force for legal action.

- d. **Recovery of Currency.** ASF staff during performance of their duties at various airports recovered **37715710** Pak Rupees, **87700** US \$, **992630** UAE Dirham, **899220** Saudi Riyal, **278701** British Pound, **780200** Euros, **197120** Austrian Dollar, **27500** Canadian Dollar, **174169** Qatari Riyal, **32900** Turkish Lira, **1200** Omani Riyal, **2000000** Japanese Yen, **8000** Malaysia Ringgit, **5000** Irani Riyal, **94000** Swedish Corona recover during the financial year 2021-22. The accused passengers alongwith recovered Currency were handed over to Pakistan Customs for legal action.
- e. **Recovery of Gold.** ASF staff during performance of their duties at various airports recovered **61.0322** KGs Gold during the financial year 2021-22. The accused passengers alongwith recovered Gold were handed over to Pakistan Customs for legal action.
- f. **Recovery of Liquor.** ASF staff during performance of their duties at various airports recovered **484** bottles of liquor during the financial year 2021-22. The accused passengers alongwith recovered liquor were handed over to Pakistan Customs for legal action.
- f. **Passenger Valuables.** A large number of passengers valuables like cash, credit cards, Jewelry etc were found by ASF at various airports and were handed over to their owners who appreciated honesty of ASF staff.

Airguards Operations

12. ASF has an Elite Force comprising specially trained and robust men & women for ensuring in-flight security besides augmenting the on-ground security measures to foil any attempt of hijackers / terrorists to ensure smooth functioning of aviation industry.

Role of Women in ASF

13. Besides general security duties, the ASF female staff has been imparted training in the various fields i.e. Unarmed Combat, Martial Arts, Close Quarter Battle (CQB), Intelligence, Screeners, CCTV Operators and Administrative duties etc to provide them equal opportunity of employment in every department of ASF like male staff. The services of female ASF personnel have also been utilized as:-

- a. Airguards, to provide in-flight security.
- b. Instructors, to train other female staff besides the mandatory security duties.
- c. Screeners, to operate the baggage screening machine.
- d. Intelligence duties, to provide pre-hand threat information.
- e. Computer operators.

Training

14.

- a. **Training at ASF Academy & Airports.** ASF Academy Karachi & airports cater for all types of training of ASF personnel. 1268 all ranks were imparted training during financial year 2021-22 as under:-

| Course Detail | Year-2021 | Year-2022 | Total |
|-------------------------------|-----------|-----------|-------|
| SMC | 02 | 07 | 09 |
| MCMC Course (Domain Specific) | 06 | 08 | 14 |
| Coy Commander Course | 24 | - | 24 |
| Platoon Commander Course | 23 | - | 23 |
| Promotion Cadre Courses | 460 | 516 | 976 |
| Advance Screener Course | 55 | 70 | 125 |
| Female Instructor Course | 25 | - | 25 |
| QRF Training Course | 100 | 200 | 300 |
| Sniper Course | 30 | - | 30 |
| Risk Management Course | - | 16 | 16 |
| Intelligence Course | - | 45 | 45 |

- b. **Training Provided by ASF to Other Organizations / Departments.** Training for Advance Screener/Refresher Screener Courses were organized for the officers/staff of other departments at ASF Academy Karachi. Summary of the staff of other departments attended Advance / Refresher Screener courses is appended below:-

| | <u>Departments</u> | <u>Intakes</u> |
|-----|--------------------------|----------------|
| (1) | Shaheen Airport Services | - 18 |
| (2) | Royal Airport Services | - 18 |
| (3) | Gerry's Dnata | - 35 |
| (4) | Pakistan Air Force | - 25 |
| (5) | Pakistan Coast Guard | - 18 |
| (6) | HQ Compcep | - 03 |
| (7) | ACAS | - 01 |
| (8) | PIFFERs | - 03 |
| | Total | - 121 |

- c. **Local Courses.** 389 x ASF staff attended different courses in various training institutions in Pakistan.

Procurement

15. **Uniform & Protective Clothing.** Budget for Uniform and Protective Clothing for Financial Year 2021-22 of **Rs.161,400,000/-** has been consumed for the procurement of under mentioned quantity of uniform items:

| S/ No. | Name of Items | Qty Mtrs / Nos. / Pairs |
|--------|--------------------------------|----------------------------|
| 1. | Shirting Cloth | 45000 |
| 2. | Trouser Cloth | 24500 |
| 3. | Stitched Camouflage Uniform | 12500 |
| 4. | Shalwar Cloth | 4400 |
| 5. | Oxford Shoes | 8000 |
| 6. | Boot DMS | 6346 |
| 7. | Female Shoes | 1034 |
| 8. | Web Belt | 6980 |
| 9. | Jersey Pullover | 5200 |
| 10. | Jersey Female | 1300 |
| 11. | Winter Jacket | 3500 |
| 12. | T. Shirt Half Sleeves (Summer) | 15000 |
| 13. | T. Shirt Full Sleeves (Winter) | 9092/- |
| 14. | Pak Flag Metallic | 12600 |
| 15. | Force Sign | 24000 |
| 16. | Hand Bag Ladies | 700 |
| 17. | Jersey Hi Neck | 975 |
| 18. | Bullet Proof Jacket | 82 |
| 19. | Pak Flag Camo | 13000 |
| 20. | Chevron for Sergeant | 1398 |
| 21. | Chevron for Corporal | 5381 |
| 22. | Crown Hilal | 92 |
| 23. | Title Shoulder | 2000 |
| 24. | Beret Cap Badge | 2000 |
| 25. | Star Senior | 321 |
| 26. | Female Coat | 100 |
| 27. | Joggers | 259 |
| 28. | Hand Gloves | 906 |
| 29. | Cap Comforter | 770 |
| 30. | Net Mosquito | 782 |

Transport.

16. ASF needs to maintain operational mobility at all times to cater for its security needs at airports. A large number of vehicles are old vintage and need replacement. In order to enhance the operational

/ administrative mobility, budget of **Rs.80,000,000/-** has been consumed during FY 2021-22 for the procurement of under mentioned quantity of vehicles:

| S. No. | Type of Vehicle | Qty Nos. |
|--------|---|----------|
| 1. | Toyota Hilux (4 x 4) Double Cabin New Revo G A/T 2800cc Diesel Model 2022 | 05 |
| 2. | Toyota Hilux 4 x 2 Single Cabin Standard 2500cc Model 2022 | 03 |
| 3. | Suzuki Van (Bolan VX Euro II 800 cc) Model 2022 | 09 |
| 4. | Suzuki Pickup (Ravi VX Euro II 800 cc) Model 2022 | 01 |
| 5. | Isuzu Mini Bus / Coaster 120 HP NPR 29+1-Seater with AC & Diesel Model 2022 | 02 |

Plant and Mach / Hardware / Software.

17. ASF endeavors to remain in step with the technological developments in the field of Aviation Security and has acquired some of latest security equipment, communication systems, CCTV System accessories and firefighting equipment etc. All major airports have been provided with technical coverage. However, still some of the equipment at all airports need replacement as it is becoming old, obsolete and outdated. Budget of **Rs.42,100,000/-** has been consumed during FY 2021-22 for the procurement of under mentioned quantity of Plant and Mach to enhance the security standards:

| S.No | Name of Items | Qty Nos. / Mtrs |
|------|---|-----------------|
| 1. | Solar Panels | 72 |
| 2. | Batteries & Chargers for Walkie Talkie Sets Hytera | 300/100 |
| 3. | Batteries, Chargers & Headphones for Walkie Talkie Set Vertex | 200/100/200 |
| 4. | Batteries 12V 150Ah | 60 |
| 5. | Batteries 12V 100Ah | 60 |
| 6. | Batteries 12V 7Ah | 200 |
| 7. | NVR 16 Channels | 10 |
| 8. | Optic Fiber to Ethernet Convertor | 50 |
| 9. | Optic Fiber Cable | 1500 |
| 10. | Power Cable | 2000 |
| 11. | Multi Core 30 Pair Cable for Telephone | 600 |
| 12. | Hub Switch | 50 |
| 13. | Adopter for Fix Camera | 100 |
| 14. | Telephone Sets | 100 |
| 15. | Cat-6 Cable | 12000 |
| 16. | NVR 32 Channels | 10 |
| 17. | Hard Disk 6TB | 100 |
| 18. | PoE Switch 08 Port | 50 |
| 19. | PoE Switch 04 Port | 50 |
| 20. | IP Camera Tester | 05 |

| | | |
|-----|--------------------------|----|
| 21. | Portable Hard Disk | 10 |
| 22. | Hand Scanner | 50 |
| 23. | Fax Machine | 05 |
| 24. | Multimedia Projector | 02 |
| 25. | Computer Core i7 (Gen-8) | 28 |
| 26. | Laptop i7 (Gen-8) | 02 |
| 27. | Document Scanner | 03 |
| 28. | RFID Software | 02 |

18. **Arms / Ammunition**

- a. Budget of **Rs.77,884,885/-** has been consumed during FY 2021-22 for the procurement of under mentioned quantity of arms ammunition:

| S.No. | Type of Arms / Ammo | Qty Nos. |
|-------|--------------------------|----------|
| 1. | Pistol 9mm POF X | 16 |
| 2. | Ammo 9 x 19mm (Pistol) | 212000 |
| 3. | Ammo 7.62 x 39mm (SMG) | 499000 |
| 4. | Ammo 7.62 x 51 mm (G3A3) | 35000 |

- b. Budget of **Rs.540,304,665/-** has been consumed during FY 2021-22 for the procurement of following arms and ammunition of New Gwadar International Airport which is going to be operational soon.

| S. No. | Type of Arms / Ammo | Qty Nos. |
|--------|---------------------------------|----------|
| 1. | Pistol 9mm SAR 9 Turkey | 324 |
| 2. | SMG 7.62 x 39mm, SAR 306 Turkey | 1593 |
| 3. | Rifle 5.56 x 45mm SAR 56 Turkey | 30 |
| 4. | Sniper Rifle 7.62 x 51mm USA | 08 |
| 5. | LMG | 02 |
| 6. | Ammo 9 x 19mm | 77815 |
| 7. | Ammo 7.62 x 39mm | 435420 |
| 8. | Ammo 7.62 x 51mm | 12720 |
| 9. | Ammo MG1A3 | 9600 |
| 10. | Ammo 5.56 x 45mm | 16200 |

19. Equipment

- a. **Procurement by HQ ASF During FY-2021-22.** Details of activities, achievements and progress:

| S No | Items | Qty |
|------|--|-------------|
| 1. | <u>Installation of New CCTV System at North Office Islamabad</u> | |
| | New CCTV System Installed at ASF Camp Islamabad. | 34 Cameras |
| 2. | <u>DSLR Cameras received from DFT</u> | |
| | 64 Cameras received from DFT and dispatched to units / Airports. | 64 Cameras |
| 3. | <u>FRS (JICS) PROJECT</u> | |
| | FRS installation work at following airports is completed: (1) JIAP Karachi - 90 Cameras (2) AIIAP Lahore - 28 Cameras (3) IIAP Islamabad- 28 Cameras | 146 Cameras |
| 4. | <u>Installation of FRS / Bio Matric Device</u> | |
| | Installation of FRS / Bio Matric Device (for ladies hostel) at 2 JIAP, 2 AIIAP and 2 IIAP completed. | 06 Devices |
| 5. | <u>Solar System</u> | |
| | Solar System provided at Southern Airports: (1) Gwadar (2) Turbat (3) Panjgur (4) Moenjo-Daro (5) Zhob (6) Nawabshah (7) Dalbandin | 72 Panels |
| 6. | <u>Solar Lights</u> | |
| | Solar Lights provided at Southern Airports: (1) Gwadar - 06 Nos. (2) Turbat - 06 Nos. (3) Panjgur - 06 Nos. (4) Moenjo-Daro - 06 Nos. (5) Nawabshah - 06 Nos. | 30 Nos. |
| 7. | <u>Hand Scanner</u> | |
| | Hand Held Metal Detector dispatched to various airports: (1) IIAP Islamabad - 15 Nos. (2) JIAP Karachi - 10 Nos. (3) AIIAP Lahore - 10 Nos. (4) Faisalabad - 05 Nos. (5) Peshawar - 04 Nos. (6) Sukkur - 05 Nos. (7) Multan - 05 Nos. | 67 Nos. |

| | | |
|----|--|----------|
| | (8) Bahawalpur - 02 Nos. (9) DG Khan - 02 Nos. (10) Gilgit - 04 Nos. (11) North Islamabad - 05 Nos. | |
| 8. | <u>Communication Equipment</u> | |
| | Batteries and Chargers for Walkie Talkie Sets dispatched to various airports: <u>Distribution of Batteries for Walkie Talkie Sets</u> (1) JIAP Karachi - 200 Nos. (2) Gwadar - 40 Nos. (3) Turbat - 40 Nos. (4) Panjgur - 30 Nos. (5) Nawabshah - 20 Nos. (6) Moenjodaro - 30 Nos. (7) Sui - 05 Nos. (8) Pasni - 05 Nos. (9) Dalbandin - 20 Nos. (10) Zhob - 20 Nos. (11) Quetta - 40 Nos. (12) Chitral - 25 Nos. (13) Gilgit - 30 Nos. (14) Skardu - 25 Nos. (15) DI Khan - 25 Nos. (16) Sukkur - 20 Nos. (17) Multan - 119 Nos. (18) Faisalabad - 40 Nos. (19) R.Y.Khan - 10 Nos. (20) Bahawalpur - 10 Nos. (21) DG Khan - 10 Nos. (22) Lahore - 150 Nos. | 914 Nos. |
| | <u>Distribution of Chargers for Walkie Talkie Sets</u> (1) Karachi - 50 Nos. (2) Multan - 30 Nos. (3) Lahore - 60 Nos. (4) Gwadar - 35 Nos. (5) Turbat - 30 Nos. (6) Panjgur - 15 Nos. (7) Nawabshah - 10 Nos. (8) Moenjodaro - 20 Nos. (9) Sui - 05 Nos. (10) Pasni - 05 Nos. (11) Dalbandin - 05 Nos. (12) Zhob - 05 Nos. (13) Quetta - 10 Nos. (14) Chitral - 10 Nos. (15) Gilgit - 25 Nos. (16) Skardu - 10 Nos. (17) DI Khan - 10 Nos. (18) Sukkur - 20 Nos. | 435 Nos. |

| | | |
|-----|--|--------|
| | (19) Multan - 40 Nos. | |
| | (20) Faisalabad - 10 Nos. | |
| | (21) A/G Cell - 15 Nos. | |
| | (22) North Office - 05 Nos. | |
| 9. | <u>Procurement by HQs ASF during FY-2021-22</u> | |
| a. | Batteries for Walkie Talkie Sets Vertex | 200 |
| | Charger for Walkie Talkie Sets Vertex | 100 |
| | Headphone for Walkie Talkie Sets Vertex | 200 |
| b. | Batteries for Walkie Talkie Sets Hytera | 300 |
| | Charger for Walkie Talkie Sets Hytera | 100 |
| c. | Solar panels with Stand | 72 |
| | Solar invertors 5 KVA | 6 |
| | Solar Batteries 200 Ah | 20 |
| | Batteries Rack | 5 |
| | Cable for solar | 500 |
| d. | Batteries 12 V150Ah | 60 |
| e. | Batteries 12 V100Ah | 60 |
| f. | Cat-6 Cable | 12,000 |
| g. | NVR 32 Chanel | 10 |
| h. | NVR 16 Chanel | 10 |
| i. | Hard Disk 6TB | 100 |
| j. | Optic Fiber to Ethernet convertor | 50 |
| k. | PoE Switch 08 Port | 50 |
| l. | Hand Scanner | 50 |
| m. | FRS RFID Device | 15 |
| n. | Telephone sets | 100 |
| o. | Battery 12V - 7AH | 200 |
| p. | IP Camera tester | 5 |
| q. | Optic Fiber Cable | 1,500 |
| r. | Power Cable | 2,000 |
| s. | Multi Core 30 Pair Cable for Telephone | 600 |
| t. | PoE Switch 04 Port | 50 |
| u. | Hub Switch | 50 |
| v. | Portable Hard Disk | 10 |
| w. | Adopter for Fix Camera | 100 |
| x. | Fax Machine | 5 |
| y. | Multimedia Projector | 4 |
| z. | Bio Matric | 3 |
| aa. | X Ray Generators for Hi Scan 6040i | 5 |
| bb. | Solar Light | 30 |
| cc. | Fix IP Camera (For Gwadar) | 11 |
| dd. | Laptop (for CSO South Office) | 1 |
| ee. | Electric Generator Accessories – Multan | 1 |
| ff. | Electric Generator Accessories - A/G | 1 |
| gg. | HP Laser Jet Printers | 5 |
| hh. | Batteries 9V DC for Hand Scanner | 200 |
| ii. | Fix IP Camera | 32 |
| jj. | Misc. Items for Islamabad Camp. | 1 |
| kk. | Steno Telephone Set for DG IIAP Camp | 2 |
| ll. | Telephone Set for DG IIAP Camp | 4 |

| | | |
|-----|------------------------------------|----|
| mm. | FRS / Bio Matric Device | 6 |
| nn. | Panasonic PABX Exchange for Quetta | 1 |
| oo. | Hard Disk 3TB | 5 |
| pp. | Procurement of IT Eqpt | 1 |
| qq. | 16 Channel DVR | 2 |
| rr. | Computer Core i7 | 28 |
| ss. | Laptop Core i7 | 2 |
| tt. | Document Scanner | 3 |
| uu. | Color Printer Spray Jet | 1 |

Finance

20. Budget Allocation

| Grant/Demand No | Original Budget | Supplementary Grant | Surrender | Final Budget Allocation |
|-----------------|-----------------|---------------------|-----------|-------------------------|
| 14 | 8078.000 M | 2000.000 M | 160.419 M | 9917.581 M |

Admin

21. **Assistance Package.** The following cases of ASF deceased employees have been finalized for the Financial Year 2021-2022

- a. **Cash Amount in Lieu of Plot.** Rs 28,52,00,000 have been disbursed among the families of ASF Deceased.
 - b. **Lump Sump Grant.** Rs 5,01,00,000 have been disbursed among the families of ASF Deceased.
 - c. **Marriage Grant.** Rs 1,20,00,000 have been disbursed among the families of ASF Deceased.
 - d. **Education.** Rs 3,000,000 have been disbursed among the families of ASF deceased.
 - e. **House Rent.** Rs 3,000,000 have been disbursed among the families of ASF Deceased.
22. COVID-19 vaccination/booster dose to ASF personnel carried out at all airports.
23. Massive tree plantation drive is in progress at all airports.

Project

24. **PSDP ASF Projects**

(Rs in Million)

| S# | Name, Location & Status of scheme (Approval status with forum/date) | Approval/ Status Forum & Date | Date of AA with Execution Period as Per Approved PC-I | Capital Cost Rs. | PSDP Rs Allocation 2021-22 | Physical Progress of the Project | Remarks |
|----|--|-------------------------------------|---|---------------------|----------------------------------|--|--|
| 1 | Construction of Double Storey ladies Hostel/Barrack with provision of third Storey alongwith Mess, Recreation Hall and Allied Facilities at AIIAP Lahore (53x Ladies Staff) | DDWP 21-01-20 | 17-02-20 (24 M) | 86.923 | 11.077 | 100% | Project has completed |
| 2 | Construction of 2x Double Storey Barrack with provision of third storey for Corporal to Inspectors and Assistant Director alongwith separate Mess, and allied facilities Recreation Hall at Quetta Airport | DDWP 21-01-20 | 17-02-20 (36 M) | 167.581 | 37.581 | 100% | -do- |
| 3 | Construction of barrack accommodation for 64x ASF personnel alongwith Mess and allied facilities, Ladies rest room, MT, Store, Kote Magazine, Quarterguard, and OC Accommodation / Room at Skardu Airport | DDWP 21-01-20 | 17-02-20 (24 M) | 134.871 | 50.000 | 65% | Work is slow due to harsh weather. Expected to be completed in June 2023 |
| 4 | Construction of barrack accommodation for 64x ASF personnel alongwith Mess and allied facilities, MT, Store, Visitor's Room, Ladies Rest Room, Kote Magazine, Quarterguard, and OC Accommodation / Room at Chitral Airport | DDWP 03-06-20 | 08-06-20 (24 M) | 61.534 | 39.534 | 70% | Work is in progress |
| 5 | Construction of Double Storey Barracks for ASF at Faisalabad Airport | DDWP 21-01-20 | 17-02-20 (24 M) | 93.285 | 21.285 | 98% | Project is in final stage |

Rs in Million)

| S# | Name, Location & Status of scheme (Approval status with forum/date) | Approval/ Status Forum & Date | Date of AA with Execution Period as Per Approved PC-I | Capital Cost Rs. | PSDP Rs Allocation 2021-22 | Physical Progress of the Project | Remarks |
|----|--|-------------------------------------|---|---------------------|----------------------------------|--|------------------------------|
| 6 | Construction of Double Storey Director South Secretariat Offices ASF alongwith allied Facilities adjacent to HQs ASF Karachi | DDWP 21-01-20 | 17-02-20 (12 M) | 37.493 | 6.213 | 100% | Project has completed |
| 7 | Construction of triple Storey Living Accommodation for ASF Personnel at Lahore Airport (192 Persons) | DDWP 21-01-20 | 17-02-20 (24 M) | 146.272 | 57.719 | 100% | Project has completed |
| 8 | Construction of triple Storey living Barrack for 192x ASF Personnel alongwith Mess, Recreation Hall at Multan Airport | DDWP 21-01-20 | 17-02-20 (24 M) | 127.34 | 3.952 | 100% | Project has completed |
| 9 | Upgradation of ASF Academy, Karachi | DDWP 05-10-20 | 18-1-21 (36 M) | 1737.527 | 350.000 | 30% | Work is in progress |
| 10 | Upgradation of ASF Academy, Karachi (PC-II) | DDWP 10-10-19 | 21-10-19 (12 M) | 64.680 | 30.000 | 30% | -do- |
| | Total | | | 2657.506 | 607.361 | | |

Conclusion.

25. Considering the sensitivity of Aviation Industry in Pakistan and threats of terrorism, there is a need to enhance security measures at the airports. The Aviation Security in Pakistan due to its unique geo political situation and multiple / diversified threats perception has its own significance. The security at airports has been intensified and the capability of Aviation Security Personnel enhanced to pre-empt and counter any terrorist attack. In order to maintain International Aviation Security Standards according to International Civil Aviation Organization (ICAO) recommendations, budget for procurement of Security Equipment, Arms, Ammunition and Transport needs to be increased substantially. Similarly, long outstanding accommodation problem of ASF needs to be addressed through increase in PSDP allocation by the Planning Commission of Pakistan.



Pakistan Meteorological Department (PMD)

Introduction

Pakistan Meteorological Department (PMD) is an attached department of the Ministry of Aviation (Aviation Division). It is a scientific and technical organization engaged in the collection of real time diversified meteorological, climatologically, hydrological, agro-meteorological and seismological data for undertaking multifarious activities mainly in the field of Meteorology, Hydrology and Seismology in the fulfillment of its objectives and obligations. In addition to having various specialized units and centres (like Flood Forecasting Division, Drought Monitoring Centre, National Agrometeorological Centre, Research & Development Division etc.), PMD has a network of about 113 observing stations and about 102 Automatic Weather Observing Stations (AWSs) which function under the technical and administrative control of PMD's various Directorates including Regional Directorates established at Lahore, Karachi, Peshawar, Quetta and Gilgit. Further, for the provision of Agrometeorological Services, PMD's specialized National Agrometeorological Centre (NAMC) at Met Complex, Islamabad is supported by 05 Regional Agrometeorological Centres (RAMC's), located at Rawalpindi, Faisalabad, Tandojam, Quetta and Usta Muhammad. Furthermore, National Drought Monitoring (NDMC), Islamabad is another specialized unit of PMD responsible for monitoring of drought situation in the country and issues drought bulletins / advisories / alerts to the concerned stakeholders. The center is supported by four Regional Drought Monitoring Centers (RDMC's) based at Lahore, Karachi, Peshawar and Quetta.

Mission Statement

“Provision of authentic Climatological, Hydro-meteorological and Geophysical Services for improved protection of life, property and environment, increased safety on land, at sea, and in air, and sustainable economic growth”

Task:

- (a) To ensure timely issue of different types of weather / flood forecasts, warnings and advisories, earthquake monitoring / tsunami reports to concerned government functionaries/organizations, print and electronic media:
 - (i) the safety of civil aviation operations, marine navigation and other related activities;
 - (ii) mitigation of disasters due to meteorological, hydrological and geophysical phenomena such as tropical cyclones, heavy rains, floods and earthquakes & tsunamietc;
 - (iii) Socio-economic development of the country based on climatic and agro-climatic information to augment potential of different areas.
 - (iv) Boosting up agricultural productivity of the country by providing agrometeorological services to the farming community.
- (b) To investigate behaviour of the atmosphere and exploiting this knowledge for short, medium and long-term weather predictions.
- (c) To undertake research and development activities in various disciplines like Numerical Weather Prediction, Climate Change, Climate Modeling, Flood Modeling (hydrological Model, Flood

Routing Model), Drought Monitoring, Weather Modifications, Wind Power Potential survey of various regions of Pakistan, Seismology and Earthquake Hazard Assessment etc.

PMD has a total strength of 2430 personnel comprising 347 officers (BS-16 & above) and 2083 staff members.

Main Functions

The services being rendered by PMD to different Ministries / Organizations as follows:

- (a) Aviation Meteorological Services (Aviation Division)
- (b) Strategic Weather Services to Armed Forces (Defence Division)
- (c) Flood & Rivers Stream Flow Forecasting (Ministry of Water and Power, National and Provincial Disaster Management Authority (NDMA / PDMAs), Federal Flood Commission (FFC), WAPDA and irrigation department)
- (d) Agrometeorological/Weather Service for Farmers (Ministry of National Food Security and Research)
- (e) Environment, Ozone, Climate Change &, Global Warming Monitoring (Climate Change Division, Planning & Development Division/ Planning Commission),
- (f) Seismic Monitoring & Severe Weather Early Warnings (Disaster Relief Cell of Cabinet Division, NDMA / PDMAs)
- (g) Scientific Studies in Atmospheric Sciences (Ministry of Science & Technology)
- (h) Astronomical Information, Moon sighting (Ministry of Religious Affairs and Inter-faith Harmony / Ruet-e-Hilal Committee)
- (i) Harnessing Wind Power Potential of different regions of Pakistan (Ministry of Science & Technology)
- (j) Drought/Environment Monitoring & Early Warning (Planning & Development Division, Planning Commission / Agriculture and other concerned departments)
- (k) Climate Change, impact assessment and adaptation strategies (Climate Change Division, Planning Commission)
- (l) Glacial melting-monitoring and research (Ministry of Water & Power, Climate Change Division)
- (m) Marine Meteorological Services for METAREA-IX (Arabian Sea, Persian Gulf rim-countries) i.e. tracking of tropical cyclones, storm surges, tsunami, state of the sea etc. (Port Authorities, Fisheries, Pakistan Navy, neighbouring countries)
- (n) Training on Meteorology and Earth Sciences (PAF, Pakistan Navy / Army and other friendly countries)

Detail of PMD Projects during Year2021-2022

| S# | Name of the Project | Capital Cost of the Project (Rs.in Million) | Allocation 2021-22 (Rs.in Million) | Activities fixed for 2021-22 |
|----|---|---|--|--|
| 1 | Developing Reverse Linkage Between Marmara Research Centre (MRC), Turkey and Pakistan Meteorological Department (IDB) | 168.308 | Local= 10.000 <u>F.Aid= 86.108</u> Total= 96.108 | The first batch of 12 PMD trainees underwent training at MRC Turkey from 14 March-1 April 2022. An amount of Rs. 25.543 million was spent by MRC Turkey for this training. The project has not been included in PSDP FY 2022-23. The remaining training, of the 2 nd batch would be held in Pakistan w.e.f. 15 August,2022 for 7 to10 days (tentative). |
| 2 | Installation of Weather Surveillance Radar at Karachi in the Islamic Republic of Pakistan | 1580.000 | Local= 4.736 <u>F.Aid= 235.000</u> Total= 239.736 | Project is completed and handed over to PMD. The project was Inaugurated on 09-03-2022. PC-IV would be submitted shortly. The JICA has spent an amount of JPY 166 million in kind assistance. |
| 3 | Installation of Weather Surveillance Radar at Multan in the Islamic Republic of Pakistan | 1848.650 | Local= 65.000 <u>F.Aid=515.000</u> Total= 580.000 | PMD paid Rs. 26.211 million to PPWD for construction of Residential accommodation at WSR Multan and an amount of Rs.1.261 million has been paid to MEPCO for installation of Transformer. JICA could not finalize the WSR tender due to back out of the potential vendor in wake of Russia-Ukraine war and non-availability of semi-conductor material supply. |
| 4 | Installation of Weather Surveillance Radar at Sukkur in the Islamic Republic of Pakistan | 2522.000 | Local= 20.000 <u>F.Aid= 350.000</u> Total= 370.000 | Five AWS along with accessories have been procured under the project. JICA has spent an amount of Rs.7.88 million J.Y for consultancy in the shape of assistance and it is expected that it will issue PQ notice for Radar in September, 2022. |

Major Activities Performed during F.Y 2021-2022

i. Monsoon Outlook and Flood Forecasting

Each year, PMD issue Monsoon Outlook during the month of June before the start of monsoon season and shared with all concerned stakeholders like NDMA, FFC, GHQ, Ministry of Water & Power. PMD's Flood Forecasting Division (FFD), Lahore issued Flood Forecast Bulletin (A&B) / Advisories / Alerts on daily-basis from 15 June to 15 October to all concerned stakeholders during monsoon season 2021. Further, PMD also issues tehsil level forecast to the stakeholders.

ii. Fog Forecast for Major Airports/Cities

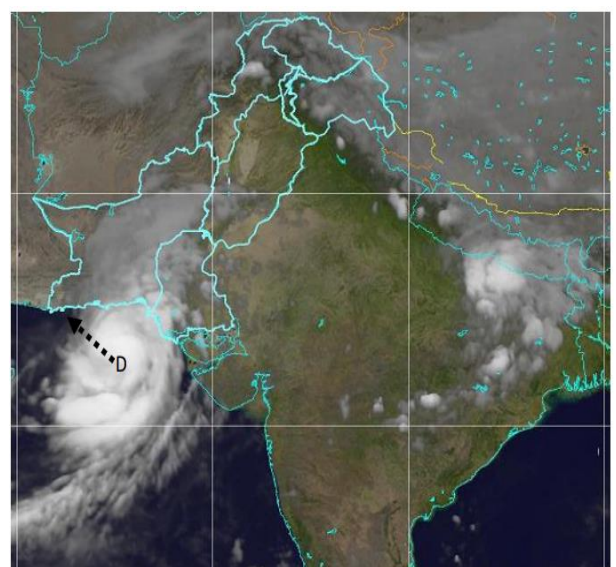
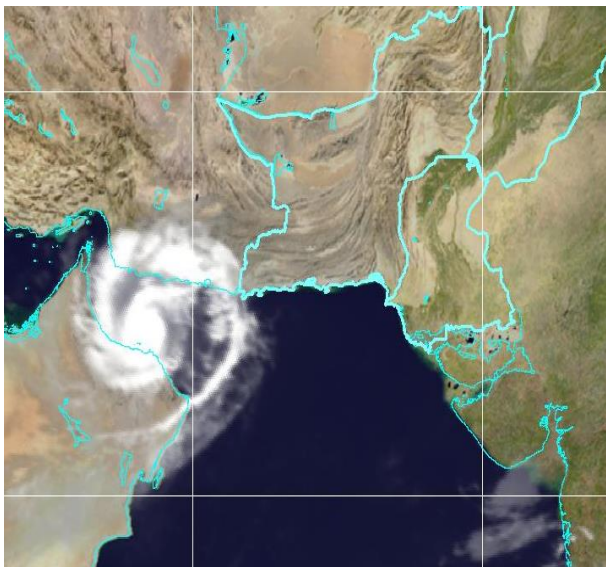
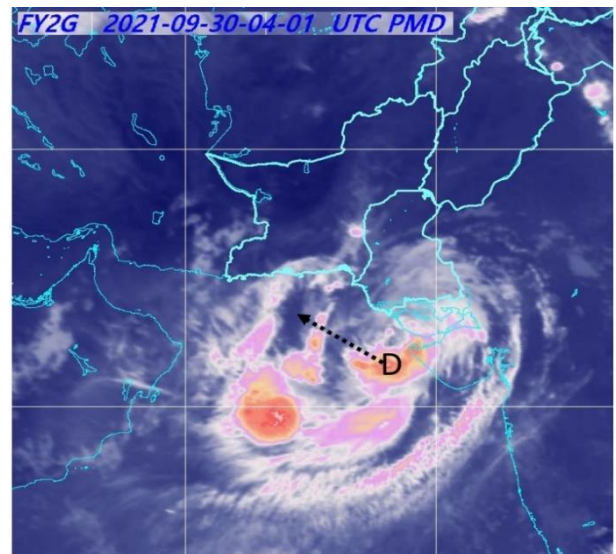
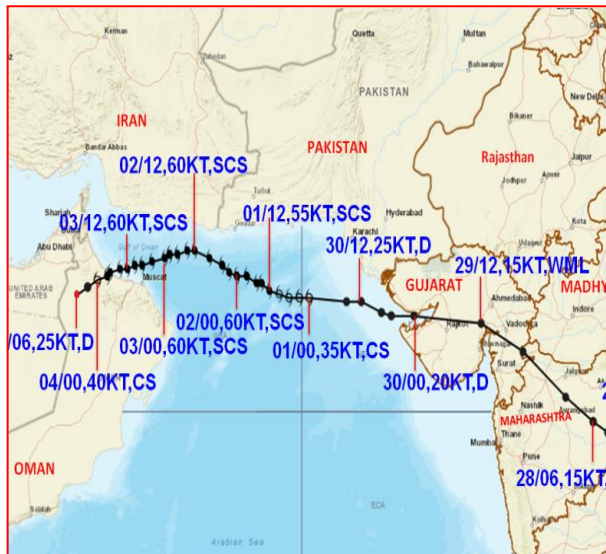
During every winter season, fog events hamper the routine activities of the various sectors. PMD extended services to the Aviation Division regarding fog forecast for facilitation of flight operations at major airports, Motorway & Highway Police for the safety and awareness of travelling persons by road, and to the general public.

iii. Pollen (an health hazard) Monitoring for Islamabad

Pakistan Meteorological Department (PMD) has been monitoring the airborne pollen in Islamabad throughout the year. Pollen monitoring unit of PMD has installed pollen monitoring devices in different sectors of Islamabad (H-8, E-8, F-10 and G-6). The pollen concentration increases gradually with the onset of spring season and attains its peak around full blossom. The most abundant pollen types in Islamabad are from 08 plant species (i. e. Paper Mulberry, Acacia, Eucalyptus, Pines, Grasses, Cannabis, Dandelion and Alternaria). Out of all these plants Paper Mulberry shares about 97% of the total pollen and its concentration touches the extreme limits of about 40,000 per cubic meter of air at the peak of the blossom season. Pollen concentration starts in first week of March in Islamabad and attain its peak during second fortnight of March 2022. Less rain and above normal day temperature are favourable conditions for blooming of pollens. Pollen season ends by the mid-April. People suffering from Asthma and respiratory diseases experience serious consequences due to sharp increase in pollen concentrations. PMD continuously monitor and publish pollen concentration data throughout the pollen season on upload on website and disseminates through print/electronic media on daily basis. Pollen data information are available at PMD website www.pmd.gov.pk and through email pollen@pmd.gov.pk users can approach PMD for their queries regarding pollen count.

iv. Severe Cyclonic Storm “Shaheen” over northeast Arabian Sea (30th September to 4th October, 2021)

PMD’s Tropical Cyclone Warning Centre (TCWC), Karachi monitored the formation of low-pressure over northeast Arabian Sea on 28th September, 2021 which was the remnant of Cyclonic Storm “Gulab” (formed over Bay of Bengal from 24-28 September, 2021). Analysis of NWP products depicted that there was high probability that this low-pressure area will convert into the cyclonic storm. TCWC immediately started issuing of Tropical Cyclone Alerts from 29th September, 2021 for the awareness of general public, national stakeholders and mitigation organizations. The low-pressure further intensified into a deep depression. Throughout the cyclogenesis process and intensification into cyclonic storm “Shaheen” in the morning of 1st October, 2021 (0500 PST) and then its development into Severe Cyclone Storm “Shaheen” on 2nd October, 2021, PMD very effectively tracked and issued various alerts upto 03rd October, 2021 at 1800 PST while its location was over Gulf of Oman. The Severe Cyclonic Storm “Shaheen” made a landfall in Oman with heavy rainfall and causing some damage due to strong winds and leaving areas with flooded water. Observed track of the system during 30th September-4th October 2021 is presented below:



v. Significant Weather Events effectively monitored by PMD

- An event of heavy snow was observed in Murree where about 16.5 inches of snowfall was recorded from 7th to 8th January, 2022. Pakistan Meteorological Department (PMD) issued weather Alert on 31st December, 2021 which was updated further on 5th January, 2022 regarding heavy snowfall in Murree and surroundings with special emphasis on road closures in Murree. This weather forecast was published and broadcasted through print and electronic media. During the severe snowfall at Murree, 22 tourists lost their precious lives by stranding in road closures.



- **GLOF events of Shishper Glacier:**

The Karakoram Mountain range is dominated by surging glaciers. Glacier Monitoring Group at R&D Division of PMD have been monitoring glacier surge dynamics and the frequent lake formation with remote sensing and Geographical Information System (GIS) techniques. Presently, GLOF Early Warning System is working in three valleys in Chitral (Bindogal and Golain) and Bagrot in Gilgit.



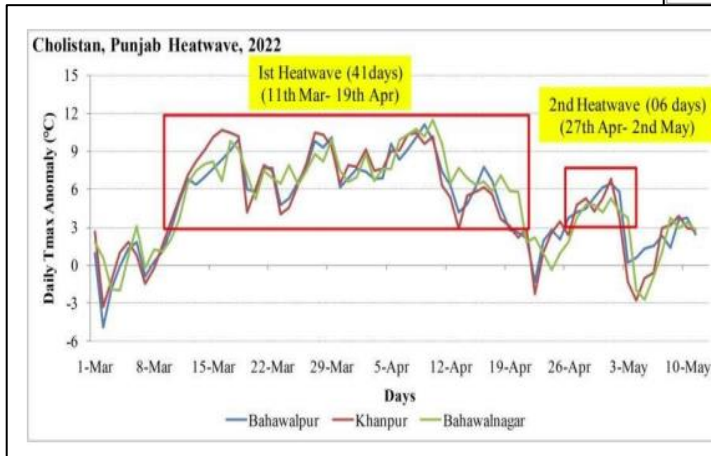
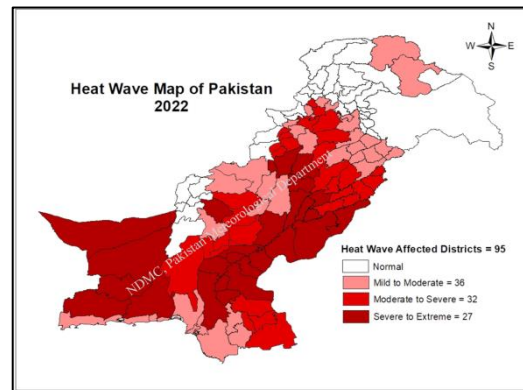
In December 2021, Shishper GLOF event occurred and formed “Shishper Lake” there. Temperature in Gilgit-Baltistan and KP remained 5-7°C above normal during the last week of April, 2022 and 7-9°C above normal in first half of May, 2022 resulting in heatwave type situation in glaciated region of GB and KP. It enhanced the probability of GLOF event / flash flood in vulnerable areas of G.B and K.P. PMD in lead-time, issued GLOF Alerts on 27th April, 2022 and 7th May, 2022 and disseminated to National Disaster Management Authority (NDMA), GB-DMA, PDMA (KP) as well as other government functionaries/department for necessary measures, recuse and relief operations.

Another major GLOF event of Shishper glacier was triggered on 7th May 2022 and damaged Hassanabad Bridge cutting-off areas of upper Hunza from the lower parts for few days. PMD issued GLOF Alerts for Shishperlake using data from Automatic Weather Station, manual gauges & water quality samples collected from lake and stream originating from Shishper and Muchuhur glaciers. PMD warned the concerned disaster management authorities in lead-time for taking precautionary measures.



- **Heatwave:**

Pakistan experienced unusually hot spring and summer in 2022. In March, the mean maximum (day) temperature at country-level was 30.89 °C, being 5.01°C warmer than average of 25.88 °C. It was the 2nd warmest month, after 2004 (31.09°C) in past 62-years. The hottest days (27th& 28th March 2022) of the month were at Shaheed Benazirabad (Sindh) when a temperature of 45.5°C was recorded. March 2022 was the ever

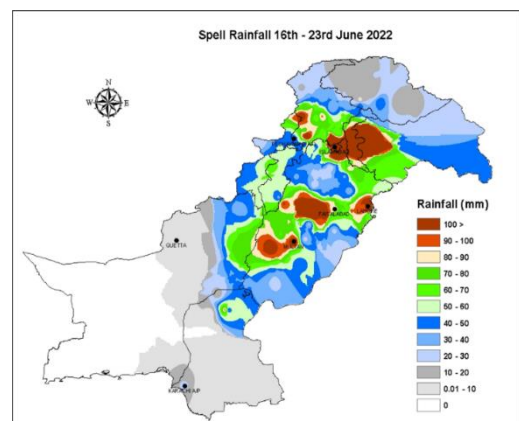


- **LEGENDS FOR MAP**

- **Peak period:**
10th April to 20th June ± 10 days
- **Heat Wave Intensity**
 - **Mild to Moderate**
(Daily Tmax exceeds 3°C till 5°C for 3 to 5 days).
 - **Moderate to Severe**
(Daily Tmax exceeds 5°C till 7°C for 5 to 7 days).
 - **Severe to Extreme**
(Daily Tmax exceeds 7°C or more for 7 days or more).

warmest month since 1961 with 4.26 °C warmer than monthly-average. In April, the mean maximum (day) temperature at country-level was 36.82°C, being 5.02°C warmer than average of 31.79°C. It was the ever-warmest maximum temperature in April during past 62-years with 4.05 °C warmer than monthly-average. The previous record was 35.31°C in 2010. The hottest day of the month was at Jacobabad (Sindh) when it recorded 49.0 °C temperature on 30th April 2022. May 2022 ranks the fifth warmest mean temperature since 1961 with 2.17 °C warmer than monthly-average. PMD issued lead-time Heatwave Alerts for the country on 14th March, 30th March, 25th April & 6th May 2022 to all concerned stakeholders.

- Pre-monsoon rainfalls in Pakistan started from 15th June. The spatial distribution of rainfall is shown in figure. PMD issued two weather advisories/press releases regarding the pre-monsoon rainfalls 14th and 19th June respectively. Overall, in June 2022, 67% above normal rainfall were reported from the country. Seasonal Outlook for Monsoon Season 2022 was issued prepared during second half of June, 2022 for the information of stakeholder organizations and disaster management organizations.



Spatial distribution of rainfall (16th to 23rd June 2022)

vi. MoU Signing Ceremony between Pakistan Meteorological Department (PMD) and Islamia University, Bahawalpur (IUB):

A Memorandum of Understanding (MoU) was signed between PMD and Islamia University, Bahawalpur (IUB), on 29th June 2022 at PMD-Islamabad by the Mr. Sahibzad Khan, Director General, PMD and Engr. Prof. Dr. Athar Mahboob (TI), Vice Chancellor, Islamia University, Bahawalpur. MoU is aimed at collaborating with each other to build prosperous Pakistan by using efficient use of climatic and meteorological information in the development of the agriculture sector, forests, and water resources in a spirit of United Nation's Sustainable Development Goals (SDGs).



- **Hungarian Experts visit PMD Headquarters, Islamabad**

A four-member Technical Expert Group/Delegation from Hungary visited Pakistan Meteorological Department, Headquarters Office, Islamabad on 17th May, 2022. The honorable guests were warmly welcomed by the Director General, PMD Mr. Sahibzad Khan along with the senior officers of PMD. Director General, PMD gave a detailed presentation on PMD's flood forecasting and early warning systems and highlighted on features of newly installed weather surveillance radar in Islamabad. The Hungarian delegation appreciated the efforts being made in provision of information and early warnings for hydrometeorological and geophysical disasters. The delegation was also briefed on working of National Weather Forecasting Center and other quarters of PMD by the respective Directors.

- **Inauguration Ceremony of Weather Surveillance Radar, Karachi**

The inauguration ceremony of Weather Surveillance Radar Karachi was held at Met Complex, Karachi on 10 March 2022. The federal Minister of Aviation Mr. Ghulam Sarwar Khan, was the Chief Guest on the occasion. A new state of the art S-Band Doppler weather Radar became operational with the generous support of Government of Japan. Karachi Radar would be helpful for PMD in monitoring & tracking the Tropical Cyclone in the Arabian Sea, heavy rain-thunderstorms within 450 km radius and maximum winds within 200km through its Doppler feature and hence to prepare effective early warnings.

Mr. Toshikazu ISOMURA, the Consul General Govt of Japan, Mr. Shigeki FURUTA, Chief Representative JICA Office Pakistan, Mr. Mir Hassan Naqvi, Sr. Joint Secretary, Aviation Division, Mr. Sahibzad Khan, DG-PMD, DG Civil Aviation Authority (CAA), DG PDMA, Sindh, Representatives Red Crescent Sindh, Hands & other stakeholders also attended the ceremony.

DG- PMD thanked the Government of Japan for their gracious cooperation and support for installation of such latest technology Radar in Pakistan which will be helpful to determine the development of tropical storms and identifying their potential.

Mr. Toshikazu ISOMURA, the Consul General Govt of Japan in his speech said that the Government of Japan had previously provided Radar in early 90's. He further said considering that Pakistan constantly is facing floods, cyclones and other natural hazards, the Govt of Japan decided to support Pakistan with latest Radar technology to effectively & efficiently deal with increasing natural disasters. He appreciated the efforts of PMD Engineers for keeping old Radars operational for over 30 years. The Chief Meteorologist and Project Director, WSR, presented the souvenirs to the Chief Guest Consul General of Japan and Chief Representative of JICA.



- **Chairman, National Disaster Management Authority (NDMA) Visited Flood Forecasting Division (FFD), Lahore and PMD Headquarters, Islamabad**

Chairman NDMA Lieutenant General Akhtar Nawaz (Hilal-e-Imtiaz Military) visited Flood Forecasting Division (FFD) of PMD on 15th February, 2022. Mr. Sahibzad Khan, Director General, PMD along with senior management of FFD welcomed the honorable guest and briefed on the operational work of Flood Forecasting Division and their preparedness for the upcoming monsoon season. Chairman NDMA planted a tree in the premises of FFD. He express his satisfaction on the working of FFD and appreciated the expertise of FFD in flood forecasting and warning services.



Chairman NDMA also visited PMD Headquarters Islamabad on 3rd March, 2022. The honorable guest was warmly welcomed by the Mr. Sahibzad Khan, Director General, PMD along with the senior management of PMD. Chairman, NDMA visited the key units of PMD Headquarter Islamabad. Director, National Seismic Monitoring Center and Deputy Director, R & D Division gave comprehensive briefing on the activities of their centers and role in the disaster mitigation at national level. Chairman, NDMA took keen interest in the working of PMD in general and specifically tsunami early warning system. He appreciated the efforts being made in provision of information and early warnings for hydrometeorological and geophysical disasters as well as tsunami early warning. hairman, NDMA assured their continued support in further strengthening of the hydromet and seismic early warning systems of PMD. Later on, the honorable guest planted a tree in the premises of PMD to the support the national spring plantation drive.

- **Stakeholders Workshop on Implementation of Impact-based Forecasting for Pakistan (23-25 February, 2022 at Islamabad)**

UK Met Office under the Asia Regional Resilience to a Changing Climate (ARRCC) is implementing a programme which aims to strengthen weather forecasting systems across Asia. ARRCC programme is supporting Pakistan as it is one of the most vulnerable countries in the South Asia region, and is working with PMD and other key organizations, including the International Centre for Integrated Mountain Development (ICIMOD), to help improve the capability in forecasting and warning for severe weather events. UK Met Office in



collaboration of ICIMOD and PMD organized a Stakeholder Training Workshop on the Implementation of Impact-based Forecasting (IBF) in Pakistan from 23rd to 25th February, 2022 at the Avari Xpress Hotel, Islamabad.

IBF provided the information needed to act before disasters occur to minimize the socio-economic costs of weather and climate hazards. Stakeholder organizations and individuals were invited for discussion regarding critical decisions to ensure that resources and supplies are in place to take early action and to respond. For the purpose, a pilot IBF service planned for Pakistan, which will focus, initially, on weather hazards affecting rain-fed crops, primarily lack of rainfall and temperatures, through the Kharif Season, specifically within the districts of Attock and Chakwal. Participants from agriculture extension department of Attock & Chakwal, local farmers, representative of FAO, NDMA, researchers from Agri-universities other stakeholder organizations attended the workshop and shared their valuable views and comments.

- **Media Awareness Workshop on Hydromet Hazards-Tsunami, Cyclones & Heavy rains (Karachi on 29 December 2021)**

National Seismic Monitoring and Tsunami Early Warning Centre, Karachi held a media awareness workshop on hydromet hazards (Tsunami, Cyclones & Heavy rains) on 29th December, 2021 at Avari Towers, Karachi for print & electronic media personnel. The workshop was attended by over 50 media men, both from print and electronic.

The inaugural session was Chaired by the Additional Commissioner, Karachi, Director General, PMD and UNDP representative. Dr. Sarfaraz, Chief Meteorologist, Karachi welcomed the participants and briefed about the workshop purpose highlighting that no early

warning/ advisory of any hazard can meet its ultimate objectives of mitigating the potential losses if it's not timely & effectively communicated to the vulnerable end-users and responded effectively by all the stakeholders. Director General, PMD emphasized on creating awareness, issuing & disseminating early warning information and responding effectively is a key element of response to natural disasters. He emphasized that electronic & print media greatly expedite the process of dissemination and enable prevention messages to reach an expanded audience. He pointed out that this workshop would help a great deal in conveying the Tsunami, Cyclone & other early warning messages to vulnerable communities through media in effective & efficient way so that prompt response is made by all stakeholders. The UNDP representative, Mr. Adnan Iqbal also spoke on the occasion and briefed about the support provided by UNDP for strengthening the Tsunami early warning system of PMD.

The chief guest, Additional Commissioner, Karachi Mr. Syed Jawad Muzaffar highlighting the importance of the theme appreciated the PMD for holding such an important workshop for Karachi media and elaborated that this exercise would not only help the media to understand the hydromet hazards but also would prove beneficial for disasters dealing administration and in turn for the end-users. He pointedly described that with constant global temperature rise there's now more risk of heatwaves, sea-level rise and glaciers melting which can pose serious impediments to national socio-economic development. He highlighted that Pakistan coastal shelf is also endangered by Tsunamigenic earthquake due to junction of 3 tectonic plates at a distance not too far away from Makran coast. During Technical session, PMD experts delivered presentations "Forecast mechanism for general weather and cyclones", "Pakistan climate data construction" and "Tsunami & Earthquake EWS".

- **Hands-on Training on Community-based Flood Early Warning System (9-12 November, 2021, Islamabad)**

Hindu Kush Himalayan (HKH) region, already prone to natural hazards is vulnerable to climate-related natural hazards such as floods and flash floods, which threatens the lives and livelihoods of the downstream communities. To address flood hazards and improve the resilience of vulnerable communities, ICIMOD piloted the Community Based Flood Early Warning System (CBFEWS) in different river tributaries in Afghanistan, India, Nepal, and Pakistan. ICIMOD in collaboration with WWF-Pakistan and Pakistan Meteorological Department (PMD) organized this national-level, four-day hands-on training on CBFEWS at Hillview Hotel, Islamabad from 9-12 November, 2021, Pakistan. AKAH, GBDMA, and Buraq Integrated Solutions (BIS) will also be providing support for the training. Participants from Federal Flood Commission, NDMA/PDMA (K.P and AJK), FAO, UNDP, WWF, World Bank, NDRMF, Water Aid, PCRWR, NARC etc. participated in the event.

- **Stakeholders workshop on Mitigating Tsunami Risk (Moven Pick Hotel Karachi on 14 October, 2021):**

A stakeholder's workshop on mitigating Tsunami risk was organized by National Seismic Monitoring & Tsunami Early Warning Centre (NSM&TEWC) Karachi of PMD at Moven Pick Hotel Karachi on 14th October 2021 under UNDP Tsunami Project. The meeting was attended by the representatives of response agencies i.e., NDMA, PDMA Sindh, Civil

Defense, Local Administration, Pakistan Coast Guard, Pakistan Navy, Army, media and other relevant organization. The purpose of this workshop was to develop a mechanism / strategy for timely information dissemination to the vulnerable communities for effective response. Mr. Muhammad Riaz, DG PMD told that the communities in Pakistan are facing multiple Hazards. PMD is taking lead in providing early warning services of multi hazard. The Makran Subduction Zone is the vulnerable area for producing earthquake and Tsunamis. A very small lead time is available to feel its impacts. Many collaborating agencies are working to help and create awareness amongst vulnerable communities. This workshop was to develop workable SOP's regarding the course of action in case of occurrence of Tsunami.

Mr. Salman Shah DG PDMA informed that in continuation to this project, they are also installing 14 additional Tsunami Warning Posts along the coast in Karachi. He further added that PDMA in collaboration with PMD is taking keen interest for training of the communities and capacity building of the response agencies. The Project Coordinator DRR UNDP, Mr. Naeem Iqbal briefed the audience about the project objectives and informed that soon after 2005 earthquake UNDP started investment in developing the capacity of PMD, NDMA, PDMA's and other agencies in technology upgradation and sketching SOP's. UNDP in collaboration to PMD have installed 5 Tsunami Warning Posts in Karachi and Gwadar, 4 earthquake monitoring systems and provided inundation software at TEWC Karachi.

- **Inauguration of Establishment of Automatic Weather Station (AWS) at LandiKotal, District Khyber, Khyber Pakhtunkhwa**

The inauguration ceremony of Automatic Weather Station (AWS) established at LandiKotal, District Khyber, Khyber Pakhtunkhwa was held at Assistant Commissioner office compound, LandiKotal on 5th October, 2021. This inauguration was carried out by Mr. Muhammad Riaz, Director General, PMD and Muhammad Bakhtiar Khan, Director General, SDU, P&D Department, Khyber Pakhtunkhwa. The installed AWS is a part of the observational meteorological network which is being established with the help of FWRDP in the newly merged districts of Khyber, Bajur and Mohmand. This is going to be the source of real time weather information for the region and broaden the network of meteorological observatories in far-flung areas of the country thus strengthening the existing network of early warning system of PMD.

- **MoU Signing Ceremony between Pakistan Meteorological Department (PMD) and Shah Abdul Latif University, Khairpur**

A Memorandum of Understanding was signed between PMD and Shah Abdul Latif University (SALU), Khairpur at PMD Headquarters, Islamabad on 24 September 2021. Mr. Muhammad Riaz, Director General, PMD and Prof. Dr. Khalil Ahmed Ibopoto, Vice Chancellor, Shah Abdul Latif University, Khairpur, Sindh signed the MoU. Under this agreement, PMD will help SALU to establish meteorological observatory at the campus. This meteorological observatory will provide meteorological and agrometeorological data. The

agreement is a source for enhancement of the research activities among two institutions. This will further strengthen the ties between PMD and the academia.

- **Publication of Climate Normals of Pakistan (1991-2020) and others**

The Climatological Standard Normals are calculated for a uniform 30-year period and consist of annual and monthly averages and statistics of temperature, precipitation, and other climatological variables. PMD's Climate Data Processing Centre, Karachi has published "Climate Normals of Pakistan (1991-2020)". These data sets are vitally important for the studying of climate of the Pakistan, to support the agriculture and irrigation planning, development and planning of national infrastructure, and provides baseline for future climate scenario generation. Further, CDPC also published Pakistan's Monthly Climate Summaries for each month during 2021-22 period, as well as, published "State of Pakistan Climate in 2021".

PMD's National Agromet Centre also issued Monthly, Decadal and Weekly Agromet Bulletins. Comprehensive advisories for farmers are included including general forecast for the coming week along with crop specific as well as animal care suggestions/actions, in national language. These bulletins are useful to schedule their field activities (like ploughing, sowing, watering, spraying of pesticides, use of fertilizers, harvesting etc.)

PMD's National Drought Monitoring Centre, prepare and issued monthly drought bulletins & moisture stresses in different regions of country based on various indices. Advising government agencies on drought related matters including drought declaration. Conduct research in drought related issues and develop statistical models for improved drought prediction.

All above publications/bulletins are uploaded on PMD Website <pmd.gov.pk> for facilitation of end users.

- **Capacity Building through Foreign Trainings**

- (i) Two officers proceeded to Japan for M.S. under JICA while one Ph.D scholar joined-back to PMD from China after completing Ph.D study program under WMO scholarship programme.
- (ii) In various technical trainings, 12 PMD officers/officials visited Turkey for trainings in seismology (instrument, installation and operations) while 03 officers visited Nepal for training/workshop in climate data and its utilization.
- (iii) Through Online distance trainings programs, workshops and technical meetings more than 100 PMD officials participated in various Online / virtual trainings / meetings organized by international organizations like WMO, RIMES, CMA, JICA, ICIMOD, ICAO etc.

- **Visits of Students from Educational Institutions, Internships etc.**

In order to enhance the awareness of meteorological information and guidance of students of various educational institutions from junior to graduate level programmes are welcomed. PMD

scientists provides technical assistance in accomplishments of researches, thesis work as well as conducting internship programme for various universities in meteorological sciences and allied disciplines. During the period, about 30 students were accommodated for their internship programme.

PMD Budget for F.Y. 2021-2022

| | | | |
|-----|------------------------|----------------|------------------------------|
| a) | Non-Development Budget | = | Rs.1359.611 million |
| | Supplementary grant | = | <u>Rs. 521.425 million</u> |
| | Total | = | Rs.1880.425 million |
| b). | Development Budget | | |
| | | Local | = Rs.89.736 million |
| | + | <u>Foreign</u> | = <u>Rs.1100.000 million</u> |
| | | Total | = Rs.1189.736 million |

List of Abbreviations/Acronyms

| <u>Abbreviation</u> | <u>Expanded Form</u> |
|----------------------------|---|
| ADP | Annual Development Programme |
| AGM | Annual General Meeting |
| AIIP | Allama Iqbal International Airport |
| AJK | Azad Jammu Kashmir |
| ANF | Anti-Narcotics Force |
| AOC | Air Operating Certificate |
| ASF | Airports Security Force |
| ATC | Air Traffic Controller |
| AWS | Weather Observation Systems |
| BAH | Bahawalpur |
| BCAA | Bahrain Civil Aviation Affairs |
| BKIAP | Bacha Khan International Airport |
| BNBAP | Benazir Bhutto Airport |
| CAA | Civil Aviation Authority |
| CAASL | Civil Aviation Authority of Sri Lanka |
| CDWP | Central Development Working Party |
| CEA | China Eastern Air |
| CQB | Close Quarter Battle |
| DBD | Dalbandin |
| DD&C | Directorate of Design & Consultancy |
| DFT | Department for Transport |
| DG | Director General |
| DGK | Dera Ghazi Khan |
| DME | Distance Measuring Equipment |
| DS | Deputy Secretary |
| DVOR | Doppler VHF Omni Range |
| E&M | Electrical & Mechanical |
| EASA | European Union Aviation Safety Agency |
| ECNEC | Executive Committee of National Economic Council |
| EG | Executive Group |
| ERP | Enterprise Resource Planning |
| F.E.C. | Foreign Exchange Component |
| FDTL | Flight Duty Time Limitation |
| FFC | Frontier Corps |
| FIAP | Faisalabad International Airport |
| FOB | Free On Board |
| FSB | Faisalabad |
| FY | Financial Year |
| GACA | General Authority of Civil Aviation of Saudi Arabia |
| GLT | Gilgit |
| GWD | Gawadar |

| | |
|-------|--|
| HF | High Frequency |
| HITIT | High Tech Information Technology |
| HR | Human Resource |
| ICAO | International Civil Aviation Organization |
| IDB | Islamic Development Bank |
| IIAP | Islamabad International Airport |
| ILS | Instrument Landing System |
| JIAP | Jinnah International Airport |
| JICS | Japan International Cooperation System |
| JICS | Japan International Cooperation System |
| JS | Joint Secretary |
| LED | Light Emitting Diode |
| LHE | IATA Airport Code for Allama Iqbal International Airport, Lahore |
| MCMC | Mid-Career Management Course |
| MRC | Marmara Research Centre |
| MRO | Maintenance, Repair and Operations |
| MUL | Multan |
| NAMC | National Agrometeorological Centre |
| NAP | National Aviation Policy |
| NCOC | National Command and Operation Center |
| NDMA | National Disaster Management Authority |
| NDMC | National Drought Monitoring Center |
| NGIA | New Gawadar International Airport |
| NOC | No Objection Certificate |
| NWB | Nawabshah |
| OEM | Original Equipment Manufacturer |
| PACA | Public Authority for Civil Aviation |
| PAF | Pakistan Air Force |
| PCAA | Pakistan Civil Aviation Authority |
| PHS | Passenger Handling Services |
| PIACL | Pakistan International Airlines Corporation Limited |
| PMD | Pakistan Meteorological Department |
| PNJ | Panjgur |
| PSDP | Public Sector Development Program |
| PSN | Pasni |
| QCAA | Qatar Civil Aviation Authority |
| QIAP | Quetta International Airport |
| QRF | Quick Reaction Force |
| RAMC | Regional Agrometeorological Centres |
| RDMs | Regional Drought Monitoring Centers |
| RPT | Regular Public Transport |
| SARPs | Standards & Recommended Practices |
| SECP | Securities and Exchange Commission of Pakistan |
| SG | Staff Group |

| | |
|-------|---|
| SKD | Skardu |
| SLA | Service Level Agreement |
| SMRFC | Specialized Medium Range Forecasting Centre |
| SO | Section Officer |
| SRS | Structure Repair Services |
| SUK | Sukkur |
| TBT | Turbat |
| TDME | Terminal Distance Measuring Equipment |
| TPRI | Tourism Promotion and Regional Integration |
| TSA | Transportation Security Administration |
| UHF | Ultra-High Frequency |
| VHF | Very High Frequency |
| WAPDA | Water and Power Development Authority |
| WSR | Weather Surveillance Radar |
| WTM | World Tracer Management |

| PSDP 2021-22 Sl.No. | Name of the Project | Total Cost | Actual Expenditure upto 30th June, 2021 | Allocation 2021-22 | | |
|---------------------------|--|---------------|--|---------------------------------|----------------|--------|
| | | | | Original Rupee allocation | Foreign Aid | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Construction of Double storey ladies Hostel/Barrack with provision of third storey alongwith Mess, Recreation hall and Allied Facilities at AIIAP Lahore (53x Ladies Staff) | 86.923 | 75.846 | 11.077 | 0.000 | 11.077 |
| 2 | Construction of 2x Double Storey Barrack with provision of third storey for Corporal to Inspectors and Assistant Director alongwith separate Mess, and allied facilities Recreation Hall at Quetta Airport | 167.581 | 130.000 | 37.581 | 0.000 | 37.581 |
| 3 | Construction of Airport Security Force Camp at Islamabad International Airport | 2,586.86 | 2,344.09 | 20.00 | 0.000 | 20.00 |

| | | | | | | |
|---|---|----------|----------|--------|-------|---------|
| 4 | Construction of barrack accommodation for 64x ASF personnel alongwith Mess and allied facilities, Ladies rest room, MT, Store, Kote Magazine, Quarterguard, and OC Accommodation / Room at Skardu Airport. | 134.871 | 55.000 | 50.000 | 0.000 | 50.000 |
| 5 | Construction of barrack accommodation for 64x ASF personnel alongwith mess and allied facilities, MT, Store, Visitor's Room, Ladies Reset Room, Kote Magazine, Quarterguard and OC accommodation / Room at Chitral airport. | 61.534 | 18.000 | 39.534 | 0.000 | 39.534 |
| 6 | Construction of Double Storey Barracks for ASF at Faisalabad Airport. | 93.285 | 67.000 | 21.285 | 0.000 | 21.285 |
| 7 | Construction of Double Storey Director South Secretariat Offices ASF alongwith allied Facilities adjacent to HQs ASF Karachi | 39.634 | 31.280 | 6.213 | 0.000 | 6.213 |
| 8 | Construction of Rain Water Harvesting Kasana Dam at Islamabad International Airport | 2,629.42 | 1,624.31 | 500.00 | 0.000 | 500.000 |

| | | | | | | |
|----|---|-----------|----------|---------|---------|----------|
| 9 | Construction of triple storey Living Accommodation for ASF Personnel at Lahore Airport (192 Persons) | 146.272 | 88.553 | 57.719 | 0.000 | 57.719 |
| 10 | Construction of triple storey living Barrack for 192x ASF Personnel alongwith Mess, Recreation Hall at Multan Airport | 144.562 | 123.388 | 3.952 | 0.000 | 3.95 |
| 11 | Developing Reverse Linkage between Marmara Research Centre (MRC), Turkey and Pakistan Meteorological Department Islamabad | 168.308 | 55.196 | 10.000 | 86.108 | 96.108 |
| 12 | Installation of Weather Surveillance Radar at Karachi in the Islamic Republic of Pakistan | 1580.000 | 1206.371 | 4.736 | 235.000 | 239.736 |
| 13 | Installation of Weather Surveillance Radar at Multan in the Islamic Republic of Pakistan. Multan. | 1848.650 | 15.615 | 65.000 | 515.000 | 580.000 |
| 14 | Installation of Weather Surveillance Radar at Sukkur in the Islamic Republic of Pakistan. Sukkur. | 2522.000 | 11.932 | 20.000 | 350.000 | 370.000 |
| 15 | New Gwadar International Airport NGIA | 51298.174 | 1452.143 | 644.995 | 500.000 | 1144.995 |
| 16 | Up-gradation of ASF Academy, Karachi | 1737.527 | 38.830 | 350.000 | 0.000 | 350.000 |

| | | | | | | |
|----------------------|---|--------|--------|-----------------|-----------------|-----------------|
| 17 | Up-gradation of ASF Academy, Karachi. (PC-II) | 50.000 | 10.000 | 30.000 | 0.000 | 30.000 |
| Grand Total = | | | | 1872.092 | 1686.108 | 3558.200 |