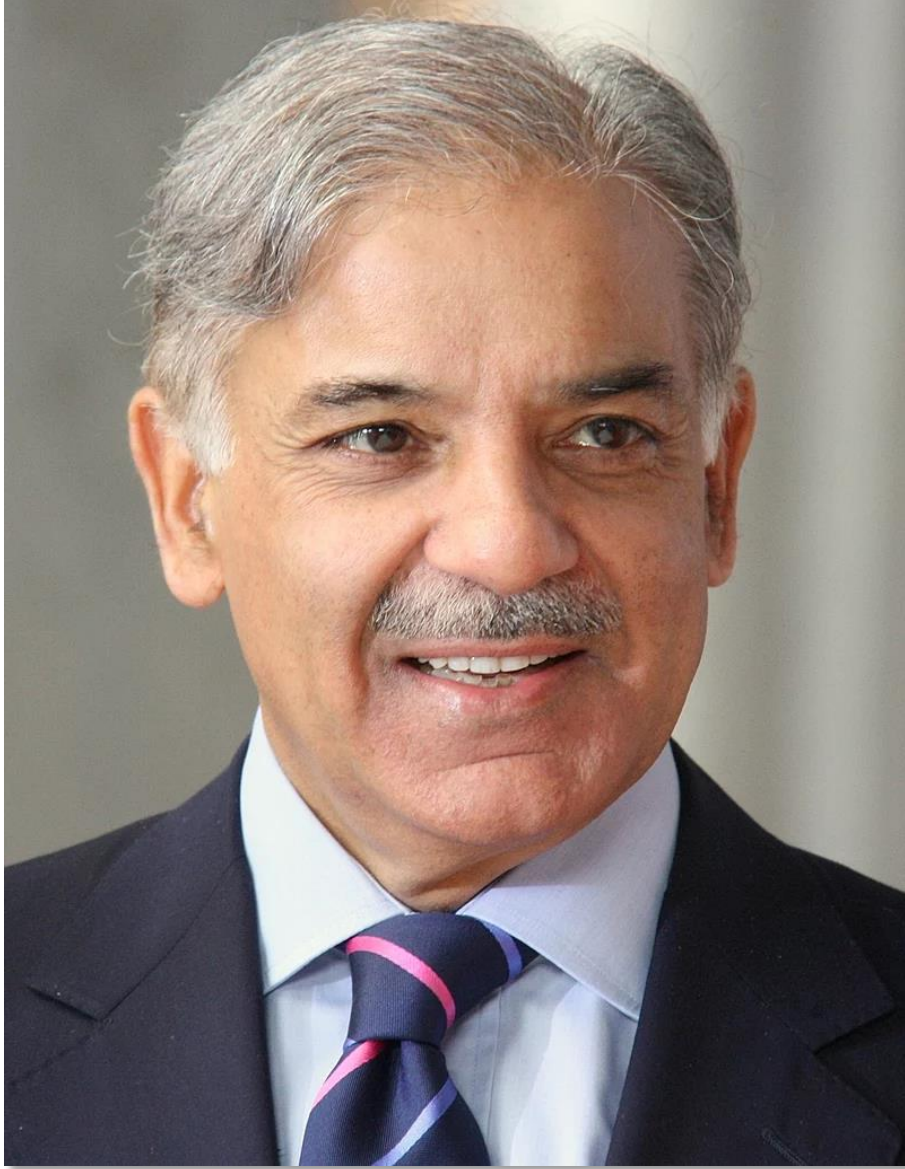




# **Year Book 2022-2023**



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



**Muhammad Shehbaz Sharif**

Prime Minister of Pakistan



**Khawaja Saad Rafique**  
Federal Minister for Aviation



**Saif Anjum**

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, organizational structure, activities and achievements of the Aviation Division and its attached departments/organizations for the financial year 2022-23. It contains information which may be of interest to the academia, researchers and relevant stakeholders.

Aviation Division became an independent Division under Cabinet Secretariat in June, 2013, and given status of Ministry on 19<sup>th</sup> April, 2022. 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.

**Saif Anjum**

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 2022-23****(in Millions)**

<b>Sr. No.</b>	<b>Grant (Demand No.)</b>	<b>Budget Allocation</b>	<b>Supplementary Grant</b>	<b>Final Allocation</b>
i)	001-Aviation Division (Main)	198.970	-	198.970
ii)	001-ICAO	23.375	-	23.375
iii)	001-PMD	2036	-	2036
iv)	002-ASF	10195.969	222.037	10330.858
v)	87-Development	2474.871	839.129	3314.000

**Public Sector Development Program (PSDP) 2022-23:**

There are total fifteen (15) projects of PSDP which are under process. Total allocation for these projects during the FY-2022-23 is **Rs. 2484.871 Million** which includes local component of **Rs.2474.871 Million** and foreign aid of **Rs. 10.000 Million**. Details of these projects are placed at **Annex-I**.

**Major Achievement of Ministry of Aviation and its Attached Departments/Organizations****Ministry of Aviation (Main):****Internal Audit Cell:**

Internal Audit Cell was established in Ministry of Aviation to perform internal audit of attached departments i.e., Airports Security Force and Pakistan Meteorological Department on 29<sup>th</sup> March, 2022

**Achievements of Internal Audit Cell during the Financial Year 2022-23:**

- Conducted 22 internal audits of attached departments of the Ministry of Aviation.
- Coordinated overall internal audit functions including planning, execution, reporting, quality assurance and follow-up.
- Verified the existence of assets and recommended proper safeguards for their protection
- Evaluated the adequacy of the system of internal controls.
- Evaluated and improved the effectiveness of governance, risk management and control process.
- Recommended improvements in internal controls.
- Assessed compliance with policies and procedures and sector's best practices.
- Assessed compliance with state and federal laws and contractual obligations.
- Reviewed operations/ programs to ascertain whether results are consistent with established objectives and whether the operations/ programs are being carried out as planned.
- Reported deficiencies to Principal Accounting Officer and updated status of each deficiency monthly.

**Constitution of Technical Support Cell (TSC) to Oversee the Outsourcing of Major International Airports.**

Aviation Division is currently involved in outsourcing of major airport operation in Pakistan. For this activity, need was felt to recruit experts from the market. A Technical Support Cell was created with four experts under MP Scale Policy 2020:

- i) Team Leader
- ii) Financial Advisor
- iii) Legal Advisor
- iv) Civil Aviation Affairs Advisor

All necessary approvals have been processed and currently recruitment process is going on.

#### **Signing of Air Services Frameworks with various countries**

Aviation Division negotiated and enhanced Air Services Frameworks with Kazakhstan and Ethiopia to improve air connectivity with Central Asia and the African continent.

#### **Permission to new foreign airlines to operate to/from Pakistan**

Azerbaijan Airlines from Azerbaijan, Jazeera Airways from Kuwait, Batik Air from Malaysia, Salam Air from Oman, Aeronomad Airlines from Kyrgyzstan, SCAT Airlines from Kazakhstan and Ethiopian Airlines from Ethiopia granted permissions to operate to/from Pakistan.

#### **Grant of Aerial Class-I License (Domestic) and Tourism Promotion & Regional Integration (TPRI) License**

M/s Skywings (Pvt) Ltd has been granted Aerial Class-I License (Domestic) and M/s Kashmir Airways has been granted Tourism Promotion & Regional Integration (TPRI) License.

#### **Review of National Aviation Policy**

In order to support Aviation and Airline Industry in Pakistan, the National Aviation Policy was critically and comprehensively reviewed and a policy draft was finalized after extensive consultation with all relevant stakeholders.

### **Pakistan Civil Aviation Authority**

#### **Achievements**

- Improved ICAO Universal Safety Oversight Audit Programme a compliance score from 92% to 94.4% whereas global average of 84%.
- Restoration of Personnel Licensing System during March 2022 after resolution of Significant Safety Concern imposed by ICAO during 2020. After restoration of the system, 2867 examinations were conducted for Flight Crew Licenses and its issuance through the UK CAA International (exam service provider).
- State Safety Program Branch of CAA Conducted 06 Safety Management System (SMS) Courses at Karachi, Lahore, and Islamabad for the aviation industry, approximately trained 140 aviation professionals.
- CATI has been declared as Professional Engineering Body (PEB) by Pakistan Engineering Council (PEC) for holding Continuing Professional Development (CPD) programs. 05 CPD programs have been held in CATI till date through which engineers not only from CAA but other organizations and in their individual capacity are gaining valuable CPD points considered mandatory for their professional growth.

- One Window facility is established at all major Airports. Monthly data is actively being submitted by Airport Management to Grievance Commission for overseas Pakistanis
- Operations of Azerbaijan Airlines facilitated for commencement and are likely to commence in the near future.
- Air Services Framework with Ethiopia enhanced for facilitation of air connectivity with African region. Consequently, Ethiopian Airlines commenced operations to/from Karachi.
- Jazeera Airways from Kuwait permitted to operate to / from Islamabad.
- Batik Air from Malaysia permitted to connect Kuala Lumpur with Karachi 03 times a week.
- Salam Air from Oman permitted to connect Muscat with Peshawar 02 times a week. Salam Air also permitted to enhance its flights to/from Karachi.
- Aeronomad Airlines from Kyrgyzstan permitted to commence operations to/from Pakistan to enhance air connectivity with Central Asian Region
- After long coordination with Pakistan Navy the vertical limits of danger area (OP/D110) Bravo has been reduced from FL - 400 to FL - 280. The reduction of subject area height helped smooth flow of international air traffic.
- New Instrument Flight Procedures were designed for 02 (two) Airports during the year 2022-23 i.e. Dalbandin & Gwadar
- Improvement in the implementation status of ICAO SAR (Search and Rescue) performance indicator i.e. 89.02%.
- Installed and extended monitoring of Navigation & Landing Aid equipment at Area Control Centers at Lahore & Karachi, through efforts of CNS Engineering Workforce to address ICAO USOAP Audit Observation, resulting in saving of more than 3 Million PKR

### **Future Initiatives**

- Operations of Azerbaijan Airlines facilitated for commencement and are likely to commence in the near future.
- A Flying school has also been planned to be established there within one year to cater for the training needs of the aspiring candidates.
- CATI is an ICAO declared regional training institute. The revamping includes giving attraction to the foreign trainees belonging to the civil aviation authorities / services from various parts of the world with an effort to attain status of a regional training hub in the not too distant future.
- Upgradation / replacement of Air traffic management (ATM) and Voice communication & control system (VCCS) at Area Control Centers of JIAP Karachi and AIIAP Lahore. Project has already been approved from CDWP at cost of Rs. 3633.920 Million including FEC of Rs. 2413.840 Million.
- Initiated Procurement of Bird Repellent System for major Airports of PCAA at an estimated cost of PKR 2.1B PKR.

## **Pakistan International Airlines Corporation Ltd.**

### **Achievements**

- Passenger yield increase from PKR 13.5 in 2021 to 15.7 in 2022.
- Seat factor increased from 66.9% in 2021 to 80.3% in 2022.
- Cargo yield increased from 63.7 in 2021 to 69.4 in 2022.
- PIA explored new avenue to retain the UK and European market by entering into strategic partnership with Turkish Airlines by adding Six (6) weekly flights to Istanbul, Four (4) from Islamabad and Two (2) from Lahore.
- Despite macro-economic instability where average fuel prices jumped from USD 70.95/barrel in 2021 to USD 98.95 barrel in 2022 coupled with abnormal increase in exchange rate, Pakistan International Airlines managed to curtail its operating losses in 2020 as compared to 2021 by 25%.
- Network optimization, capacity rationalization, yields enhancement by offering right price at the right time to the right customer and maximum capacity utilization were major benchmarks which PIA set and achieved during 2022.
- Reduced lengthy procedure of final settlement dues and introduced a good bye celebration at the last day of retiring employee, irrespective of pay group, and thanking his /her valuable and commendable services upon long association with PIA with award of souvenir.
- 100% automization of monthly attendance and leave system by successful implementation of ERP- OTL Module in 2022.
- Rationalization and digitalization of shift patterns of operational employees.
- Recruitment process has been enhanced by adopting new and updated methodologies through web-based technologies like ERP iRec Module, National Job Portal. Online interview facilities provided to those candidates who are unable to appear in-person in front of Selection Board, via video links (BlueJeans & Zoom) to boost the hiring process and save time & cost of the Company.
- Significant number of educational documents verification process from various universities/ institutional boards have been completed.
- Revenue earned of PKR 1,781 Million through it engineering services to the customers. This is the highest ever revenue earned and registered by PIA Engineering & Maintenance over the years.
- PIA Engineering Business team recovered PKR 67 million long outstanding dues from defaulting customers.
- Upgrading of Data Center
- Network Transformation with Software Defined Wide Area Network (SD-WAN)
- Increase in Data Bandwidth
- Biometric Upgradation
- Upgrading of a company channel (VHF/AM) for Flight Operations

## **Future Initiatives**

- PIA has set a landmark target of PKR 241 billion for the year 2023, which is 40% increase over the revenue achieved in 2022.
- Addition of Foreign Carrier's Handling business including M/s Thai Airways, Sri Lankan Airlines and Salam Air is in process which will increase revenue earning of PIA (E & M) by PKR 66 Million per annum.
- Curtailment of expenses on international stations.
- Implementation of Business Plan.
- Financial re-structuring of PIA's balance sheet.
- Focus on Corporation Business
- More Trainings for PIA engineering staff are planned on state of the art Boeing B787 Dreamliner, Airbus A350 & Airbus A330 Neo fleet.
- Collaboration with EASA Approved Part 147 training institute is in process to enable PIA to conduct In-house training on Airbus A330 Neo fleet.
- Mounting of new flights on productive routes
- Focus on cargo revenue
- Focus on ancillary revenue
- Conversion of Jet Hanger Into Aircraft Painting Facility
- Green Energy Conversion of Flight Kitchen – Karachi
- Up Gradation and Rehabilitation of Blocks 25 & 26 B At PIA Township
- Water Proofing of Flight Kitchen Building Prior Installation of Solar Power Plant.

## **Airports Security Force**

### **Achievements**

- Upgradation of ASF Academy Karachi.
- Training of officers/staff of ASF as well as of other Departments in Aviation Security.
- Recovery of Narcotics, Gold, Liquor and illegal currency at Airports.
- Participation of ASF female staff in UN peace keeping missions.

### **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).
- Foreign courses to enhance professional competency of ASF officials
- Inland Courses from Elite Institutes.
- Participation of ASF contingents in UN peace keeping missions.
- Modernization of Aviation Security at airports of Pakistan.

## Pakistan Meteorological Department

### Achievements

- Reverse Linkage project between Marmara Research Center (MRC), Turkey and Pakistan Meteorological Department has been implemented. Trainings of the technical/professional staff of PMD have been conducted in Pakistan and Turkey.
- Newly installed Weather Radars at Islamabad, Mardan and Karachi are functioning satisfactorily.
- Monitoring and reporting of Fog / Smog situation which is visibility-hazard for air-navigation road-transportation etc. whereas, fog is also a health-hazard.
- Pollen (a health hazard) Monitoring for Islamabad.
- Outlook for Monsoon Season 2022 and timely dissemination to all stakeholders, as well as, subsequent weather advisories / warnings / alerts for the disaster mitigation activities and awareness of general public.
- Tracking and accurate prediction for Very Severe Tropical Cyclone “Biparjoy” was done by PMD. This cyclone was formed in the Arabian Sea on 5<sup>th</sup> June and made landfall in the evening of 16<sup>th</sup> June, 2023 near Indian Gujarat.
- 8<sup>th</sup> and 9<sup>th</sup> Monsoon Forums were successfully held in Islamabad before the start of Respective Monsoon Seasons in 2022 and 2023 for strengthening of coordination mechanism to mitigate disasters. These events were organized with the support of RIMES.
- Workshops on Strengthening Last Mile Communication (SLMC), Impact-Based Forecasting (IBF) and Flash Flood Guidance System (FFGS) were successfully held by PMD with the collaboration of RIMES, ICIMOD and WMO.

### Future Initiatives

- **Modernization of Hydromet Services of PMD in Pakistan**

The Government of Pakistan has recently approved the project at a total cost of US\$ 50 Million (Rs. 14498.9 million) with the financial support of the World Bank to strengthen the Early Warning System of PMD. The main features include the following:

- New Weather Radars will be installed at Quetta, Gwadar, Lahore, D.I. Khan and Cherat.
- 300 new Automatic Weather Stations shall be installed in the country.
- Establishment of 50 new Agro-Met Stations.
- Numerical Weather Prediction facility will be enhanced to provide Weather Early warnings at finer resolution.

- **Weather Surveillance Radars at Multan and Sukkur**

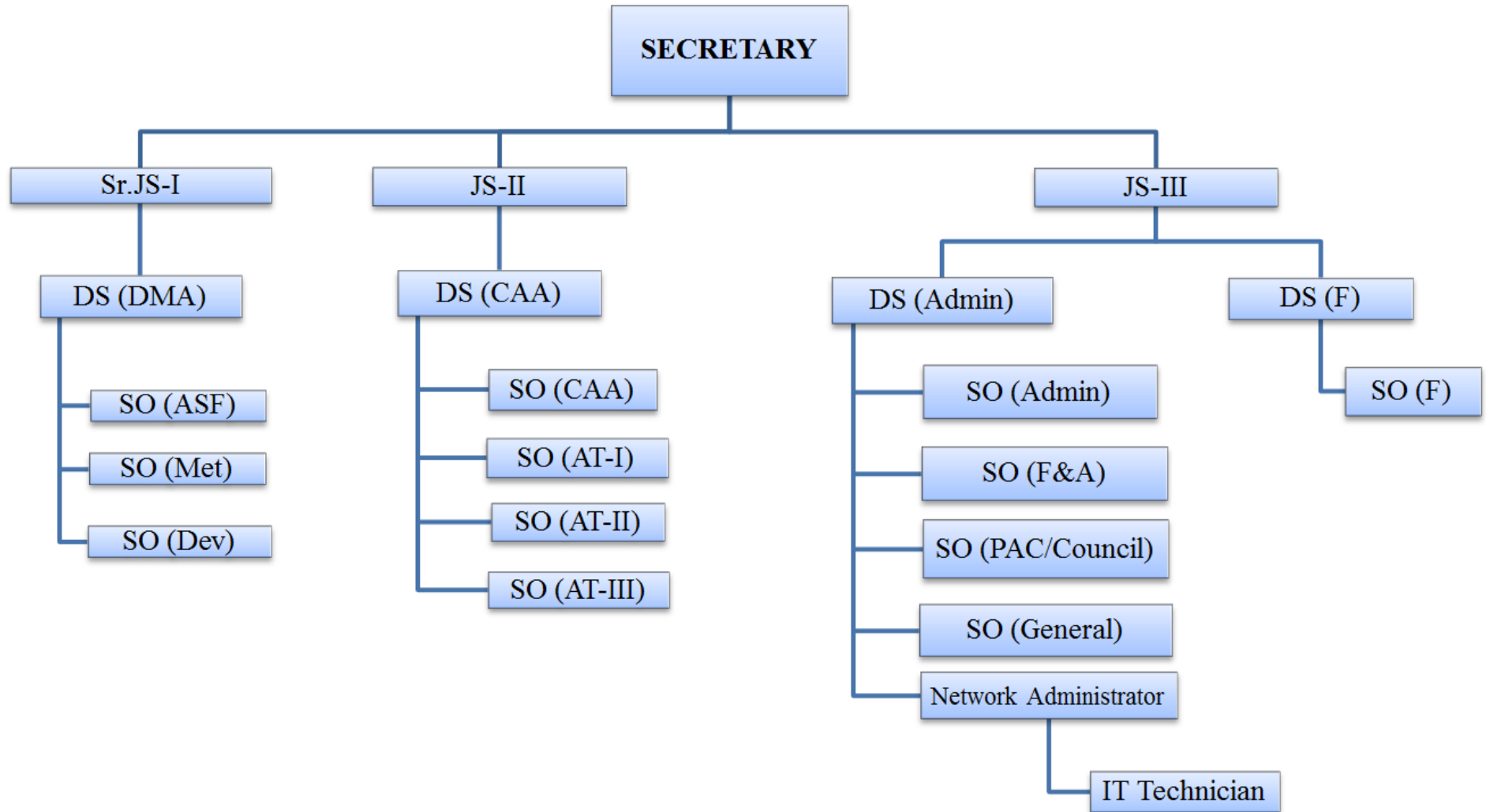
- With the support of JICA Japan, two new Weather Radars are being installed at Multan (Rs: 6.189 billion) and Sukkur (Rs: 2.845 billion) to cover the Flash floods in the areas of Kirthar and Suleiman Mountain ranges.

- **Establishment of Flood Early Warning system at Provincial capitals GB and AJK**
  - Government of Pakistan has also approved the PMD proposals of establishing Flood Early Warning System at each provincial capital, G.B and AJ&K under FFC's FPSP-III projects amounting to Rs 5.00 Billion.
- **Government initiatives under CPEC**
  - For the safety of Air Traffic, the Government of China has agreed to provide 20 lightening detection systems to PMD under Belt and Road program. One system has already been installed in Islamabad in July 2023. China has already provided two Satellite Weather (cloud, moisture monitoring) receiving stations for Lahore and Karachi under CPEC program in December, 2022.
- **Kisaan Mobile Application**
  - For timely weather information specifically for farmers, a "Kisaan Mobile Application" is being developed and would be launched on 4<sup>th</sup> August 2023 by the Honorable Minister for Aviation.
  - The application would enable farmers to know about next rain, windstorm and similar weather conditions to take timely decision about Irrigation, pesticide spray and fertilizers etc.
- **PMD Business Model initiative.**
  - To increase the revenue of PMD through new/modern technology and tools, PMD under guidance of Ministry of Aviation has initiated "outreach" approach.
  - Market oriented study is under process to engage private sector and stakeholder to increase PMD products outreach and eventually increase in revenue generation and better product delivery. For this purpose, development of producer-customer Interface (web-portal) is under process for provision of relevant data. Information and weather products, initially, revenue target is estimated about Rs.80 million.
- **Pakistan Meteorological Services Act**
  - To give the legislative support to PMD and regulate meteorological services, first time, Pakistan Meteorological Services Act" is being drafted. This act shall give legislative authority to PMD in implementing WMO guidelines. This Act shall not only upgrade PMD's services but also provide opportunities to entrepreneurs to play in weather market.



Existing Organogram of Aviation Division

ORGANOGRAM OF MINISTRY OF AVIATION





**Pakistan Civil Aviation Authority (CAA)**

## Introduction

Pakistan Civil Aviation Authority (CAA) was established on 7<sup>th</sup> 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 2022-2023

### 1. Directorates

#### i. AIR TRANSPORT & ECONOMIC REGULATIONS DIRECTORATE

Following are the achievements of the AT&ER Directorate for the year 2022-23:

- Air Services Framework with Kazakhstan negotiated and enhanced. Consequently, SCAT Airlines commenced scheduled flight operations to/from Lahore.
- Operations of Azerbaijan Airlines facilitated for commencement and are likely to commence in the near future.
- Air Services Framework with Ethiopia enhanced for facilitation of air connectivity with African region. Consequently, Ethiopian Airlines commenced operations to/from Karachi.
- Jazeera Airways from Kuwait permitted to operate to / from Islamabad.
- Batik Air from Malaysia permitted to connect Kuala Lumpur with Karachi 03 times a week.
- Salam Air from Oman permitted to connect Muscat with Peshawar 02 times a week. Salam Air also permitted to enhance its flights to/from Karachi.
- Aeronomad Airlines from Kyrgyzstan permitted to commence operations to/from Pakistan to enhance air connectivity with Central Asian Region.
- Air Service Negotiations held with Oman and Afghanistan to discuss and conclude enhanced air services frameworks for increasing air connectivity of Pakistan in the region.
- New **Aerial Class-I Licence (Domestic)** has been issued to M/s Skywings (Pvt) Ltd.
- New **Tourism Promotion & Regional Integration (TPRI) Licence** has been issued to M/s Kashmir Airways (Pvt) Ltd.
- New **Flying School Class-II Licences** have been issued to the following operators: -
  - (1) Potohar Aviation Services (Pvt) Ltd.
  - (2) Air Eagle Aviation Academy (Pvt) Ltd.
- The Air Transport & Economic Regulations Directorate approves Landing Schedules of Foreign and National Airlines on bi-annual basis i.e. for Summer and Winter Seasons via online Air Transport Flight Management System (ATFMS). In the process AT Operations

team visits Airports of Pakistan for coordination of Slots for applied schedules of 35 International and 05 Pakistani airlines. Day to day schedule changes and associated coordination is also provided by AT & ER Directorate. Similarly 92 International Schedule Airlines over-fly Pakistani airspace are also been approved during Summer 2023.

- Non schedule (NS) flight operations are also regulated by AT Ops branch that overfly and land at Pakistani Airports that accumulates to 40 NS flight permissions on daily basis.
- AT & ER Directorate participated in IATA Slot Conference which is held twice every year. It is Airlines and Aeronautical Authorities global forum to meet and discuss operational matters.
- Aviation Statistics Digest from 2017 up to June 2022 has been finalized and will be published for Industry users in terms of data related to Passenger, Airlines, Aircraft Movement, Cargo and mail and will be published in Electronic format on PCAA website.
- Upon the directive of the Competent Authority to “Critically and comprehensively review National Aviation Policy in order to support Aviation and Airline Industry in Pakistan”, the national aviation policy draft was finalized, after extensive consultation with all relevant stakeholders incorporating suggestions from stakeholders and obtaining their agreement on the draft.
- 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 2022 to June 2023.

Pakistani Airlines	:	59
Foreign Airlines	:	68
<b>TOTAL</b>	<b>:</b>	<b>127</b>

## ii. AIRWORTHINESS DIRECTORATE

Other than the routine targets Airworthiness Directorate has made great strides in the year 2022 – 23 with regard to the continued compliance of International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs), as follows:

- Improved ICAO Universal Safety Oversight Audit Programme a compliance score from 92% to 94.4% whereas global average of 84%.
- Facilitated & ensured successful onsite survey by CAA UK team in clearing up their queries regarding Airworthiness Directorate.
- Facilitated & ensured successful visit of South Asian Regional Initiative (SARI) regarding implementation of SARI Part-M (Continuing Airworthiness Requirements)
- 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.
- Multiple Air Navigation Orders (ANOs), Airworthiness Notices (AWNOTS), checklists, forms and CAAOs have been revised / updated to ensure continued compliance with ICAO SARPs.

- Oversight of PCAA has been improved in the interest of safety for aircraft operations in Pakistan.

### **iii. PERSONNEL LICENSING DIRECTORATE**

PEL Directorate has restored its Personnel Licensing System during March 2022 after resolution of Significant Safety Concern imposed by ICAO during 2020.

The major achievement during 2022-23 after restoration of system was the conduct of 2867 examinations for Flight Crew Licenses and its issuance through the exam service provider UK CAA International.

The PEL Directorate has also issued the following licenses to qualified candidates during the year 2022-23:

- 45 Airline Transport Pilot
- 59 Commercial Pilot
- 11 Private Pilot
- 37 Air traffic Controller

### **iv. STATE SAFETY PROGRAM BRANCH**

SSP Branch is a part of Regulatory Division. Following are the achievements of SSP Branch during the year 2022-23

- Preparation of documents for implementation and strengthening of Safety Management Framework of Regulatory and SMS of Service Provider Functions. These Documents include:
  - a. National Aviation Safety Plan 2022-2025
  - b. ANO-003-XXSP [STATE SAFETY PERFORMANCE MANAGEMENT]
- Development of software for Internal Auditing with respect to Management System
- Participated in the proceeding of UK SSPP in February 2023 in continuation of EASA Audit Team. The NASP of Pakistan was appreciated and marked as one of the best.
- National Aviation Safety Team Meeting conducted in February 2023. It's a high-level forum, all the Aviation industry participated in the meeting.
- Conducted 06 Safety Management System (SMS) Courses at Karachi, Lahore, and Islamabad for the aviation industry, approximately trained 140 aviation professionals.
- Establishment of SSPIA (State Safety Program Implementation Assessment) Tool being member of SARAST (South Asia Regional Aviation Safety Team) a team of Asia Pacific Region of ICAO (International Civil Aviation Organization)

### **v. CIVIL AVIATION TRAINING INSTITUTE**

- a) An aggressive plan to revitalize the Civil Aviation Training Institute (CATI) Hyderabad is under implementation. With a strong emphasis of the Government on learning and education, CATI would soon be transformed into one of the leading aviation training institutes.

- b) Complete revamping of courses, classrooms, laboratories including simulators, library, resource centre, auditorium, sports facilities and hostels is in progress and some of them are completed as per details given below:

<b>S.No.</b>	<b>NAME OF PROJECT</b>	<b>COST [Rs.]</b>	<b>STATUS</b>
01	Conversion of Community Centre into Resource centre at CATI Hyderabad	15.88 M	Completed
02	Provision of High Quality Jogging Track at CATI Hyderabad	12.8 M	Completed
03	Rehabilitation of Hostel-1 at CATI Hyderabad	24 M	Under execution. 70% Completed
04	Improvement of Dining Hall at First Floor of Hostel-2.	7.5 M	Completed
05	Improvement of class rooms of all schools	27.273 M	Under Execution. 50 % completed
06	Uplift of Medical Centre at CATI Hyderabad.	5.7 M	Under Execution. 95 % Completed
07	Improvement of mechanical workshop into multipurpose building at CATI Hyderabad.	11.50 M	Under Execution. 20% completed
08	Rehabilitation of Squash Courts at CATI Hyderabad.	15 M	Under execution
09	Rehabilitation of Officers Club at CATI Hyderabad.	7.3 M	Execution will start shortly
10	Improvement of Guest House at CATI Hyderabad	2.9 M	Under Execution. 85 % completed
11	Uplift of VIP lounge of the Auditorium at CATI Hyderabad.	2.5 M	90 % Completed
12	Rehabilitation of Expatriate Block at CATI Hyderabad	26 M	Under execution. 60% completed.
13	Improvement of Play Ground at CATI Hyderabad	4.6 M	Completed

- c) CATI has been declared as Professional Engineering Body (PEB) by Pakistan Engineering Council (PEC) for holding Continuing Professional Development (CPD) programs. 05 CPD programs have been held in CATI till date through which engineers not only from CAA but other organizations and in their individual capacity are gaining valuable CPD points considered mandatory for their professional growth.
- d) A Flying school has also been planned to be established there within one year to cater for the training needs of the aspiring candidates.
- e) Collaboration with universities / training institutes within Pakistan as well as globally is also in advanced stage.
- f) CATI is an ICAO declared regional training institute. The revamping includes giving attraction to the foreign trainees belonging to the civil aviation authorities / services

from various parts of the world with an effort to attain status of a regional training hub in the not too distant future.

#### vi. **AIRPORT SERVICES DIRECTORATE**

Following are the achievements of the APS Directorate for the year 2022-23:

i)	<p><b><u>One Window</u></b></p> <ol style="list-style-type: none"> <li>1) One Window facility is established at all major Airports</li> <li>2) The following Departments are available to resolve the instant complaints of Overseas Pakistanis; <ul style="list-style-type: none"> <li>• Overseas Pakistanis Foundation (OPF)</li> <li>• Pakistan Int'l Airlines Corporation (PIA)</li> <li>• Airport Security Force (ASF)</li> <li>• Federal Investigation Agency (FIA)</li> <li>• Civil Aviation Authority (CAA)</li> <li>• Overseas Employment Corporation (OEC)</li> <li>• National Database &amp; Registration Authority (NADRA)</li> <li>• Anti-Narcotics Force (ANF)</li> <li>• Border Health Services Pakistan</li> <li>• Bureau of Emigration &amp; Overseas Employment</li> <li>• Directorate General of Immigration &amp; Passports</li> </ul> </li> <li>3) Monthly data is actively being submitted by Airport Management to Grievance Commission for overseas Pakistanis.</li> </ol>
ii)	<p><b><u>Establishment of Joint Search Counter</u></b></p> <ol style="list-style-type: none"> <li>1) Joint Search counters established at all major Int'l airports. The joint screening of passenger baggage is being carried out by ANF, Pakistan Customs &amp; ASF.</li> <li>2) The aim of joint screening is to reduce the hassle of unpacking and packing of baggage only once during international departure.</li> </ol>
iii)	<p><b><u>Monitoring of Arrival &amp; Departure process</u></b></p> <ol style="list-style-type: none"> <li>1) To ensure smooth flow of passengers, Pakistan Civil Aviation Authority has established an international arrivals and departure monitoring system at airports.</li> <li>2) Pakistan Civil Aviation Authority has developed a monitoring mechanism wherein the data of international flights is recorded on a daily proforma. PCAA has started imposing fines on concerned Ground Handling Agencies (GHAs) for the late delivery of baggage from mid of July, 2022.</li> <li>3) Baggage clearance time is fixed as follows; <ul style="list-style-type: none"> <li>• Wide body – 50 minutes</li> <li>• Narrow body – 45 minutes</li> </ul> </li> </ol>

iv)	<p><b><u>Trolleys</u></b></p> <p>PCAA provides free of cost baggage trollies at the airports for passenger facilitation. PCAA is also acquiring additional 6,600 state-of-the-art trollies that would be provided at major international airports for passenger convenience particularly during Hajj operation. The first batch of trollies have been delivered at JIAP Karachi, AIIAP Lahore and IIAP Islamabad Airports.</p>
v)	<p><b><u>Passenger Seating</u></b></p> <p>To provide greater comfort and services to travelers as well as their meeters and greeters, PCAA is in the process of procuring additional seats to be installed in the Lounges as well as Concourse Hall of various airports.</p>
vi)	<p><b><u>Monitoring Mechanism</u></b></p> <p>PCAA has developed a mechanism for monitoring and inspection of airports which is focused on facilitation of passengers. Regular inspection of the airports shall be carried out by the Headquarters team. In addition to this, surprise inspections shall also be conducted to monitor passenger facilities and services at the airports.</p>
vii)	<p><b><u>Cleanliness of Airports</u></b></p> <p>To improve the cleanliness at airports, PCAA has revised policy for management and monitoring of janitorial and cleanliness services at the airports. Procedures and frequency for regular and deep cleaning of all facilities, surfaces, toilets, furniture, fixtures etc. as well as mechanism for regular inspection of the cleanliness of airports have been well defined. The Airport Management regularly inspects the cleanliness of all the areas of airports on 3 hourly basis and the toilets on an hourly basis.</p> <p>Further, the janitorial &amp; cleanliness services at 07 major international airports have been outsourced through Service Level Agreements to further improve the cleanliness standards at the airports.</p>

## vii. OPERATIONS DIRECTORATE

### (a) **AIR TRAFFIC SERVICE (ATS)**

- On Job Trainings (OJT) completed at different ATC units = 126
- Courses to officials from CATI Hyderabad = 26
- Abroad Meeting (In persons) = 07
- Abroad Meeting (Online) = 06
- Webinars (Online) = 06
- After long coordination with Pakistan Navy the vertical limits of danger area (OP/D110) Bravo has been reduced from FL - 400 to FL - 280. The reduction of subject area height helped smooth flow of international air traffic.



**(b) FLIGHT PROCEDURE DESIGN (FPD)**

- Instrument Flight Procedures were reviewed for 11 (eleven) Airports during the year 2022-2023 i.e. Bahawalpur, Dalbandin, Faisalabad, Gwadar, IIAP Islamabad, IIAP Karachi, Moenjodaro, Nawabshah, Panjgur, QIAP Quetta & Turbat.
- New Instrument Flight Procedures were designed for 02 (two) Airports during the year 2022-23 i.e. Dalbandin & Gwadar.
- 05 (five) ATC officers attended online (PANS-OPS) Flight Procedure Design Course-Module -3 & 06 (six) ATC officers were attended (PANS-OPS) Flight Procedure Design Course-Module-1 & Module -2 during the year 2022-2023.

**(c) SEARCH AND RESCUE (SAR)**

- To meet regulatory requirements:
  - i. Preparation of SAR Training Plan & SAR Training Programme in consultation with DAAR.
  - ii. Development of SAR Coordinator Course at CATI.
  - iii. Revision in SQMS document CAAO-013-MSXX-4.1 for integration of CERP with RCCs Plan of Operations
- Review of Basic SAR Course at CATI (in process).
- Abroad training for SAR Mission Coordinator Course is under process with HR Dte.
- Provision of Satellite phone facility in Rescue Sub-center (RSC) IIAP Islamabad.
- Conduct of full-scale Search & Rescue Exercise (SAREX) in October, 2022.
- Improvement in the implementation status of ICAO SAR performance indicator i.e. 89.02%.

**(d) AERONAUTICAL INFORMATION MANAGEMENT (AIM)**

- Electronic Terrain and Obstacle Data (eTOD) availability of Lahore and Islamabad International airports with respect to ICAO Annex 14 and 15 surfaces.
- Posting of eTOD data on PCAA website for wider distribution.
- Production of revised Type-A (obstacle limitation) and PATC charts for International Airports using GIS based application.
- Effective management of AIM products electronically and physically for effective and quickest delivery of Aeronautical Information to respective stakeholders. This particular point was also lauded by ICAO APAC secretariat and IATA representative during AAITF/18 meeting.
- Serviceability of AIM system (including all applications) and thereafter management of respective systems and database using indigenous resources.
- Effective progress on NOTAM proliferation activity in the region. No old and very old NOTAMs exist in PCAA.
- Successful revision and implementation of AIS Training Program and Training Plan as per USOAP and DAAR requirements.

- Production of 3 AIRAC AIP amendments in a year to date from digital AIM database.

(e) **COMM OPS.**

The following courses held at CATI Hyderabad.

- 01 Aeronautical Mobile Service (For Officers) = 06 Officers
- 01 Aeronautical Mobile Service (For Staff) = 08 Staff
- 02 AMHS Basic Operation (For Officers) = 16 Officers
- 11 AMHS Basic Operation (For Staff) = 88 Staff
- 02 AMHS Met/Notam Database (For Officers) = 12 Officers
- 03 AMHS Met/Notam Database (For Staff) = 24 Staff
- 01 Telephone Operation and Courtesy Course = 07 Staff
- 04 SDCPS Software (IOU) Course for Staff = 32 Staff

**Attended following online Int'l Seminars/Workshop/Webinar & Meeting**

- Seminars = 01 (Online)
- Workshop = 02 (Online)
- Webinar = 03 (Online)
- Meeting = (06 Online + 01 In-person)

**Frequencies License of the following airports have been acquired from PTA.**

- Bahawalpur Airport
- SZIAP Rahim Yar Khan Airport.
- Islamabad International Airport.
- Multan International Airport.

**viii. ENGINEERING SERVICES DIRECTORATE**

All completed works undertaken by the ES Directorate is presented below:

S. No	Location	Name of Work	Cost (Rs. In Million)
1	Bahawalpur	Enhancement of Security Infrastructure at Bahawalpur Airport	2.9
2	Gilgit	Provisioning & Installation of Security Lights on Terminal Building and Watch Towers at Gilgit Airport	8.1
3	Hyderabad	Energy Conservation & Improvement of Street Lights at CATI Hyderabad	3.8
4	Islamabad	Construction of 54 Nos. toilets with allied works at Non-Livable ASF security watch towers at IIAP, Islamabad.	11.0
5	Islamabad	Construction of Public Toilets Blocks in Main and Mini (functionary) car park area at IIAP Islamabad	13.0
6	Islamabad	Construction of Chain Link Fence and Gates from Out house to Pedestrian Check Points near Functionaries Car park at IIAP, Islamabad	16.0

<b>S. No</b>	<b>Location</b>	<b>Name of Work</b>	<b>Cost (Rs. In Million)</b>
7	Islamabad	Construction of Boundary Wall and Watch Towers around Newly Possessed CAA Land (123 Kanal) Located B/W Watch Tower No. 68 to 70 at IIAP, Islamabad	18.6
8	Karachi	Improvement of Illumination in Level-1 and Level-2 Concourse Area at JIAP	2.1
9	Karachi	Upgradation of Cargo Sub-Station Building and its Electrical Equipment at JIAP Karachi	7.0
10	Karachi	Construction of Boundary Wall to Control Encroachment near Model Colony Signal at JIAP, Karachi	7.3
11	Karachi	Major Improvement of Mosaic Flooring in International Satellite Walkways & International Satellite Lounge Approach Path & International Departure Check-in & Walkways at JTC Building JIAP Karachi	8.8
12	Karachi	Improvement of Electrical Infrastructure of Bay 72 Sub-Station at JIAP Karachi	8.8
13	Karachi	Reconstruction of Boundary Wall around Transmission Station at Ghara Station	8.9
14	Karachi	Provisioning of High Tension Cable between D-12 and Star Gate Sub-Stations at JIAP Karachi	9.7
15	Karachi	Installation of Building Management System (BMS) for Automation of Potable Water Supply Pumps and Fire Hydrant Pumps installed at Water Works Station of JIAP	9.8
16	Karachi	Providing / Installation & Replacement of 16 Ton Microprocessor Based Precision (CRAC) AC Unit I/C Allied Works at ATM Hall Radar JIAP, Karachi	9.9
17	Karachi	Replacement of Advanced Visual Docking Guidance System at Bay No. 23 & 25 of International Satellite at JIAP	13.5
18	Karachi	Providing and Installation of MRL Type Elevator No. 01 installed in Concourse Area (West) of JIAP	19.5
19	Karachi	Provision of emergency access road for 25 & 07 ends of both runways at JIAP Karachi	39.6
20	Karachi	Establishment of New Sub-Station at CAA Sports Complex JIAP	43.9
21	Karachi	Replacement of Existing Old Escalator No. 17,18,19 and 20 with New Escalators at JIAP Karachi	97.3
22	Karachi	Replacement of 4500 KW Capacity Centrifugal Chiller No. 04 at Jinnah International Airport, Karachi	132.0
23	Nawabshah	Conservation of Energy & Improvement of Car Parking / Street Lights at Nawabshah Airport	2.2

S. No	Location	Name of Work	Cost (Rs. In Million)
24	Peshawar	Improvement of Existing Airconditioning System in Lounges (Domestic Arrival, Domestic Departure & Domestic CIP Lounge) at CAA BKIAP, Peshawar	8.0
25	Peshawar	Provision of Alternate AFL circuits for THRESHOLD, PAPI & LOOP TAXIWAY LIGHTS at BKIAP Peshawar. SUB HEAD Civil Portion : Demolishing of Existing Quantity (02) Manholes & Reconstruction at Charlie Crossing of Runway	9.9
26	Quetta	Providing / Installation of Standby ACs in Passenger Terminal Building / State Lounge at QIAP	4.9

**ix. CNS ENGINEERING DIRECTORATE**

Following are the works undertaken by the CNS Directorate:

S#	NAME OF WORKS	REMARKS
1	Operational achievements:	<p>CNS Systems are operational on round the clock basis for seamless communication, navigation &amp; surveillance operations within Pakistan Airspace.</p> <p><b><u>VHF/Communication Equipment:</u></b> Networks of 90 VHF communication equipment are being maintained for Air to Ground communication between Pilot &amp; Air Traffic Controllers, at PCAA Airports, with Zero operational down time.</p> <p><b><u>Navigation &amp; Landing Aids:</u></b> PCAA maintains an infrastructure of 49 Navigation &amp; Landing Aids with more than 95 % availability of these facilities. (on average)</p> <p><b><u>Surveillance &amp; RADAR Equipment:</u></b> A total of 09 RADARs are in operation providing coverage throughout Pakistan airspace, having more than 99% operational availability.</p>
2	Projects and initiatives	<ul style="list-style-type: none"> <li>Installed and extended monitoring of Navigation &amp; Landing Aid equipment at Area Control Centers at Lahore &amp; Karachi, through efforts of CNS Engineering Workforce to address ICAO USOAP Audit Observation, resulting in saving of more than 3 Million PKR</li> <li>Upgradation / replacement of Air traffic management (ATM) and Voice communication &amp; control system (VCCS) at Area Control Centers of JIAP Karachi and AIIAP Lahore. Project has already been approved from CDWP at cost of Rs. 3633.920 Million including FEC of Rs. 2413.840 Million</li> <li>Initiated Procurement of Bird Repellent System for major Airports of PCAA at an estimate cost of PKR 2.1B PKR.</li> </ul>

		<ul style="list-style-type: none"> <li>• Due to continuous pursuance by CNS Directorate, Aeronautical Information Management System (AIMS) was restored to its original configuration through OEM without active SLA. This resulted in cost saving of SLA amount (approximately PKR 41 million / year)</li> <li>• Scanning Machines installed at IIAP, Islamabad which were being maintained through SLA with OEM authorized representative are currently being maintained through CNS IIAP team resulting in cost saving of SLA amount (approximately PKR 132 Million / year)</li> </ul>
3	Human Resources Development	<ul style="list-style-type: none"> <li>• Air Traffic Management(ATM) course was developed at CATI for officers</li> <li>• Automatic Dependent Surveillance Broadcast (ADS-B) course developed at CATI for officers.</li> <li>• ATSEP Course was developed at CATI for CNS officers / officials</li> <li>• Navigation &amp; Landing Aid Courses developed for training of CNS personnel on newly installed equipment at Airports.</li> </ul>
4	Technological advancement	<p>Inducted following advance CNS equipment to be replaced with ageing equipment and signed Contracts/SLAs for continuity of CNS equipment operations:</p> <p><b><u>Telecom &amp; Electronic Equipment:</u></b></p> <ul style="list-style-type: none"> <li>• VHF (AM) Transceiver (50 Watts) (Rs. 41.348 M)</li> <li>• 72 Channels DVLS for ECR JIAP (Rs.36.90 M)</li> <li>• Face Recognition Biometric System (Rs.5.591 M)</li> <li>• Test Equipment for Lab (Rs.2.8912 M)</li> </ul> <p><b><u>Surveillance &amp; RADAR Equipment:</u></b></p> <ul style="list-style-type: none"> <li>• The successful configuration of the modified Aerodrome Layout of Allama Iqbal International Airport (AIIAP) Lahore on Advance Surface Movement Guidance System (ASMGCS) and optimization of Multilateration (MLAT) and Surface Movement Radar (SMR) coverage. This advancement not only enhanced the operational efficiency and safety of the airport but also resulted in substantial cost savings for the national exchequer.</li> <li>• Contract signed on 2nd June, 2023 for procurement of critical spares for Qty-01 Co-Mounted PSR/ MSSR installed at IIAP Islamabad &amp; 03 MSSR (S) installed at Rojhan, Lakpass&amp;Pasni. (US \$ 651,188)</li> <li>• Contract signed on 12th August, 2022 for software Maintenance Services for 3D Aerodrome &amp; Radar Simulator installed at CATI Hyderabad. (137,708 EUR)</li> </ul> <p><b><u>Navigation &amp; Landing Aid Equipment:</u></b></p> <ul style="list-style-type: none"> <li>• Second batch of equipment comprising of three (03) ILS/TDME have been installed in FY 2022-23 at JIAP Karachi, MIAP Multan and Faisalabad Airport.</li> <li>• Project has been completed with equipment under warranty for two years.</li> </ul>

## **x. HUMAN RESOURCE DIRECTORATE**

### **1. HR PERSONNEL MANAGEMENT BRANCH**

HR (PM) Branch within CAA holds a critical role in managing and maintaining employees' personal records. This branch is primarily responsible for ensuring accurate and up-to-date documentation for each employee. The Branch oversees the maintenance of employees' personal files, which include important information such as appointment letter, educational documents, identification documents, and any relevant certifications etc.

HR (PM) Branch maintains a comprehensive record of employees' leave balances, process leave applications which includes annual leave, sick leave, and maternity or paternity leave. HR (PM) issue NOC related to study, travel outside the country (Ex-Pakistan), and other relevant matters. Additionally, HR (PM) handles background checks for employees, verifying their police records and educational documents. HR (PM) also handle investigations, conduct disciplinary hearings, and take appropriate actions based on established policies and procedures to address any misconduct or violations. Details of HR(PM)Branch achievementsfortheyearof2022-23 is here as under: -

<b>S.#</b>	<b>Disciplinary Actions During (01-07-2022 to 30-06-2023)</b>	<b>Officers</b>	<b>Staff</b>	<b>Total</b>
1	Compulsory Retirement	-	02	02
2	Reduction to next lower PG	02	04	06
3	Removal from Service	-	06	06
4	Dismissal from Service	01	03	04
5	Withholding of annual increment	03	10	13
6	Call up notice	07	09	16
7	Censure	02	35	37
8	Explanation	54	68	122
9	Letter of Advice	18	30	48
10	Letter of Displeasure	46	13	59
11	Warning	26	64	90

<b>S.#</b>	<b>Domicile Verified During (01-07-2022 to 30-06-2023)</b>	<b>Officers</b>	<b>Staff</b>	<b>Total</b>
1	Verified	83	525	608

### **2. CAREER PLANNING & REWARD AND RECOGNITION:**

CP & R/R (Career Planning & Rewards/Recognition) focuses on acknowledging and rewarding employees for their exceptional performance and dedication. Their primary responsibilities include promoting officer and staff and awarding the DGCAA Commendation Certificate and Letter of Appreciation to deserving employees who have consistently demonstrated outstanding performance in their duties. In addition, the CP & R/R

department also recognizes and honors individuals who exemplify honesty and integrity by presenting them with a certificate to acknowledge their ethical conduct.

**i. Officer Promotion:**

Considering the merit and suitability and availability of vacancy, following 204 nos. of officers were promoted during the year 2022-2023 as follows:

<b>Executive Group</b>	<b>No. of Promotions</b>
EG-01 toEG-02	153
EG-02 toEG-03	39
EG-03 toEG-04	09
EG-04 toEG-05	03
<b>Total</b>	<b>204</b>

**ii. Staff Promotion:**

Considering the merit and suitability and availability of vacancy, following 187 nos. of officials were promoted during the year 2022-2023 as follows:

<b>Service Group</b>	<b>No. of Promotions</b>
SG-10 toSG-11	01
SG-09 toSG-10	01
SG-08 toSG-09	160
SG-07 toSG-08	09
SG-06 toSG-07	190
SG-05 toSG-06	207
SG-04 toSG-05	41
SG-03 toSG-04	58
SG-02 toSG-03	433
SG-01 toSG-02	15
<b>Total</b>	<b>1115</b>

**iii. Award of DGCAA Commendation Certificate/Letter of Appreciation**

On account of performing duties efficiently with dedication, 18 officers were awarded Special DGCAA Commendation Certificate by the Competent Authority i.e DGCAA during fiscal year 2022-2023.

**iv. Award of Honesty and Integrity Certificate**

On account of performing duties diligently, honestly with responsibility for maintain the repute of the organization, 03 officials were awarded certificate of Honesty and Integrity during fiscal year 2022-2023.

### 3. HR COMPENSATION & BENEFITS BRANCH

HR (C&B) Branch focuses on ensuring fair and competitive compensation packages for CAA employees. They handle various tasks such as processing pension cases, scholarship cases for employees' children, welfare loans for staff at the SG-04 and below level, and monetary grants for employees. Additionally, the HR (C&B) department is responsible for preparing and processing employee compensation and benefits working papers, which are then presented for approval of the CAA Board. Their diligent efforts contribute to maintaining an equitable and satisfactory compensation and benefits framework for CAA personnel. Details of HR(C&B) Branch achievements for the year of 2022-23 are here under: -

S.NO.	DESCRIPTION OF CASES	NO. OF CASES
1	No of cases processed under Federal Government Family Assistance Package	35
2	No of cases finalized for Pension	320
3	No of cases processed for scholarship	332
4	No of employees given Welfare Loan	75
5	No of employees given Welfare Loan	38

### 4. HR (TRAINING & DEVELOPMENT) BRANCH

HR (Training and Development) Branch is responsible for strategizing and organizing a wide range of training programs. These include foreign trainings, inland trainings, and specialized courses at the Civil Aviation Training Institute (CATI) Hyderabad. By planning and arranging these developmental opportunities, the HR (T&D) department ensures that CAA employees have access to continuous learning and skill enhancement, ultimately contributing to the overall growth and expertise of the organization. Details of training/courses conducted between 1<sup>st</sup> July 2022 to 30<sup>th</sup> June 2023 are as follows: -

SR. NO.	TRAININGCOURSES	NO.OFTRAINEES
a)	Foreign Training	149
b)	In-Land Training	235
c)	CATI	610
Total		960

Apart from this, HR T&D Branch also collaborate with various HEC recognized private and public sector Universities/Institutes and arrange internships for student in multiple disciplines.



HR (T&D) provided internship to **695 students** during fiscal year **1<sup>st</sup> July 2022 to 30<sup>th</sup> June, 2023**.

## **5. HR (RECRUITMENT & SELECTION) BRANCH**

HR (R&S) section holds the responsibility of managing the entire recruitment and selection process. They conduct initial tests, interviews, and assessments to identify the most qualified candidates. The selected candidates must fulfill the established hiring criteria before being offered employment. Moreover, the HR (R&S) Branch also implements the Family Assistance Policy, providing employment opportunities to the children of deceased employees who passed away during their service before reaching the age of retirement. Through their diligent recruitment and selection procedures, the HR (R&S) section ensures that qualified individuals are brought on board and that support is provided to the families of CAA employees facing difficult circumstances.

The following Inductions were made during the financial year 2022-23 by the HR (R&S) Section.

<b>Group</b>	<b>Contractual</b>	<b>Deputation</b>	<b>Regular</b>	<b>Total</b>
EG-01	2			<b>2</b>
EG-04	1			<b>1</b>
EG-03		2		<b>2</b>
EG-05	5			<b>5</b>
EG-06	3			<b>3</b>
EG-07	3			<b>3</b>
EG-08		1		<b>1</b>
EG-09	1	1		<b>2</b>
EG-11		1		<b>1</b>
SG-01	9			<b>9</b>
SG-03	1			<b>1</b>
SG-05	23		19	<b>42</b>
SG-07	4			<b>4</b>
SG-09	2			<b>2</b>
SG-11	7			<b>7</b>
<b>Grand Total</b>	<b>61</b>	<b>5</b>	<b>19</b>	<b>85</b>

## **6. HR (BUSINESS SUPPORT SERVICES) BRANCH**

HR (Business Support Services) Branch within CAA plays a vital role in overseeing and managing various administrative aspects of the organization. This branch is specifically responsible for handling a range of important administrative issues, including janitorial services, discipline management, utilities management across CAA and its allied facilities including CAA Officers Mess, Huts etc., event management, planning entertainment activities, attendance tracking, and ensuring punctuality among employees. Details of HR (BSS) Branch achievements for the year of 2022-23 are here under: -

**1. CELEBRATION OF INDEPENDENCE DAY OF PAKISTAN**

Independence Day of Pakistan was celebrated on 14<sup>th</sup> August, 2022 and Flag Hoisting Ceremony held at HQ CAA. National Flag was hoisted by DG CAA and ceremony attended by Officers and staff of HQ CAA.

**2. OUTSOURCING OF FUMIGATION AND RODENT CONTROL**

The Services of Fumigation and Rodent Control has been outsourced at HQCAA and Allied Offices.

**3. DAY CARE CENTRE AT HQCAA**

A Day Care Centre has been established in HQCAA. However, furniture will be procured through Logistic (APS) in due course of time.

**4. DONATIONS**

Total Rs.1,100,000/- was also given as donation.

- (i) Institute of Behavioral, Psychology, School of Special Education.
- (ii) On the occasion of Mehfil-e-Milad-un-Nabi (PBUH) at Jamia Masjid, JIAP, Karachi and Khatem-ul-Quran on 27<sup>th</sup> Ramazan-ul-Mubarak at CAA Masjids at various locations i.e, Karachi, Lahore, Gawadar and Bahawalpur Airport etc.
- (iii) For establishment of makerspace labs in Government Schools in Gilgit-Baltistan.

**5. SPORTS ACTIVITIES AND EVENTS**

Intra CAA Cricket Tournament on the eve of 40<sup>th</sup> PCAAs anniversary was arranged on 7<sup>th</sup> December, 2022. Moreover, CAA Cricket central cricket teams of Karachi and Lahore participated in corporate cricket tournaments held during the Financial Year 2022-23.

**6. ACHIEVMENT OF OI/C RESIDENTIAL AREA JIAP,KARACHI**

**1. CLEANLINESS OF CAA RESIDENTIAL AREA**

Regular efforts are being made within the given resources to maintain the cleanliness standards in CAA residential area. This includes cleanliness of VIP road, club road, cleanliness of CAA sports complex, residential area, cleanliness of sewerage line, trimming of trees and disposal of garbage.

**2. DEMOLISHMENT OF DANGEROUS BARRACK NO. 211 CAA COLONY**

The subject barrack has been demolished being declared dangerous after proper evacuation process by PCAA. In this regards a committee was constituted for demolition as well as auction process and the same has been completed. As per proposal by the Competent Authority on the future a bachelor staff mess will be constructed in the subject place.

**3. EVICTION OF ILLEGAL OCCUPANTS BEHIND BARRACK NO. 211**

Behind Barrack No. 211 there were some very old constructions about 15 to 20 years back which were not only illegally occupied by some occupants but also had illegal constructions thereon. The same has been vacated by PCAA through eviction action.

**4. KILLING OF STRAY DOGS WITH CAA COLONY & SPORTS COMPLEX JIAP**

To destroy stray dogs within the vicinity of CAA Colony, PCAA has made some concrete steps for killing of stray dogs and carried out operations which has been completed successfully.

**5. FUMIGATION IN CAA COLONY, JIAP**

Fumigation Process which is still on-going on monthly basis in collaboration with fumigation team followed by the instructions of AddlD HR (BSS) HQCAA.

**7. HR OD BRANCH**

HR (OD) Branch within CAA plays a pivotal role in ensuring effective manpower planning, encompassing establishment review, and the preparation of comprehensive job descriptions for all Divisions and Directorates. Additionally, HR (OD) oversee the hiring of consultancy services and the strategic outsourcing of functions, supporting various locations in meeting their service level agreements. As part of our responsibilities, HR (OD) actively engage in the revision of policies, process working papers for board approval, and manage the CAAO (Civil Aviation Authority Orders) related to OD matters. The achievements of HR (OD) Branch during the financial year 2022-23 are as follows.

**i. PREPARATION OF CAAO**

Revision of CAAO designations, titles, nomenclature, and abbreviations of posts across CAA based on the nature of work and new service groups.

**ii. ESTABLISHMENT REVIEW**

Establishment review was conducted to align with operational requirements and increased work scope at different Airports/Locations, ensuring adequate manpower.

**iii. IMPROVEMENT IN SECTION DOCUMENTS**

Improvement in section documents, particularly RFP (Request for Proposal) documents for various services, enhancing the quality of work and clarity in hiring and technical criteria.

**iv. CONSULTANCY SERVICES**

Processing multiple cases for hiring consultancy services, including Actuarial Services, to cater to CAA's specific needs.

**v. OUTSOURCING OF FACILITIES**

Successful conversion of facilities such as Janitorial and Cleaning, Horticulture and Landscaping, Electrical and Mechanical services, among others, at major Airports into

service level agreements from outsourcing. This has resulted in better management and seamless provision of manpower.

vi. **JOB DESCRIPTIONS**

HR (OD) team is preparing new-format job descriptions. These descriptions are meticulously tailored after determining the required Knowledge, Skills, and Abilities (KSA) for each position. Currently, HR (OD) has successfully completed the regulatory Division, HR Directorate, and SQMS Directorate Job Descriptions, aiming to optimize workforce alignment and foster a thriving and cohesive work environment.

**8. HR LEGAL BRANCH**

HR Legal (Service Matters) Branch plays a critical role in ensuring the organization's adherence to legal requirements and providing expert guidance on various legal matters. HR Legal (Service Matters) Branch is responsible for handling all legal cases and representing the CAA in court when necessary. HR Legal (S/M) vets legal documents and agreements to safeguard the interests of the CAA. In addition, HR Legal (S/M) provide essential support to other HR sections, ensuring compliance with legal regulations and promoting a fair and transparent work environment. Details of HR Legal (S/M) Branch achievements for the year of 2022-23 is here under: -

PENDING SERVICE/HR RELATED CASES	NEW CASES FILED BY CAA	NEW CASES FILED AGAINST CAA	DECIDED CASES	DECIDED CASES AGAINST CAA	DECIDED CASES IN FAVOUR OF CAA	PERCENTAGE OF SUCCESS OF HR LEGAL BRANCH CAA
279	17	110	94	05	89	94.68

**9. HR MEDICAL SERVICES**

The following goals were achieved by this unit during year 2022-23:

- Provision of Disaster Kits at all locations as per Aircraft Service Manual.
- Upgradation of M.I. Rooms and upgradation of ambulance phase-wise
- Establishment of M.I. Room and Community Medical Centre at NGIAP (under process)

**10. INFORMATION TECHNOLOGY BRANCH:**

Following are the achievements of the IT Branch for the year 2022-23:

- Procurement and implementation of Two Factor Authentication in CAA.
- Procurement of HCI Infrastructure Solution in CAA. Implementation has started.
- Initiated Relocation / Upgradation of Primary and Secondary Data Center sites.
- Implementation of Cyber Security Infrastructure.

- v. Completion of Software Development Projects.
- vi. Completion of Infrastructure Development Projects.

## **xi. SECURITY DIRECTORATE**

### **1. Operational Achievements:**

Successful conduct of the following International Security Assessments at different airports in Pakistan:

- 02 from UK DfT
- 06 from GACA (KSA)
- 02 from Oman CAA

### **2. Human Resources:**

Coordination with Foreign agencies like UNODC, DfT-UK etc. for conduct of **11** International Trainings to **30** Officials of Security Directorate **free of Cost** at different destinations like Japan, Austria, Singapore, Belgium, UAE, Turkey etc.

### **3. Technological Advancements:**

- Provision of 02 Baggage Scanning Machines installed at Lahore & Karachi Airports from British High Commission **on Gratis Basis** worth Approx. 50 Million PKR
- Installation of 112 Facial Recognition and 44 Non Facial Recognition cameras at Karachi, Lahore, Islamabad & Multan Airports through **grant** of Japan International Corporation Agency (JICA) worth approx. 85 Million PKR

### **4. Stakeholder Arrangement:**

Conduct of **Aviation Security Inspector and Instructor Training Courses** to Aviation Stakeholders free of cost at HQCAA to raise Aviation Security Standards in the country. The participants included representatives from all national airlines i.e. PIA, Air Blue, Serene Air, Air Sial and Fly Jinnah.

## **xii. COMMERCIAL AND ESTATE DIRECTORATE**

### **1. COMMERCIAL (P&P)**

Achievements of Commercial (P&P) during FY 2022-23 are appended below: -

- i. Revised Ground Handling Policy for issuance of Ground Handling Agency License at CAA and Private Airports. The subject policy facilitates Ground Handling Agencies (GHAs) in provision of Ground Handling Services (GHS) at small / socio-economic airports with low traffic or only non-scheduled / seasonal traffic through provision of temporary permissions rather than long term licenses which makes provision of GHS at such airports financially feasible.
- ii. Devised policy for Award of Consolidated License for Handling of High Value Cargo at CAA Airports.

- iii. Issued policy guidelines for award of licenses to Ride Hailing Services for better passenger facilitation.
- iv. Policy guidelines has been devised to rationalize office space charges for cargo clearing/forwarding companies.

## **2. COMMERCIAL CARGO (OPS & DEV)**

### **CARGO THROUGHPUT CHARGES (CTC) INCOME REPORT FY (2022-23)**

<b>CTC INCOME REPORT FINANCIAL YEAR (2022-23)</b>	
<b>LOCATIONS</b>	<b>Amount</b>
JIAP, Karachi	Rs. 1,424,010,161/-
IIAP, Islamabad	Rs. 311,734,000/-
AIAP, Lahore	Rs. 1,154,649,040/-
BKIAP, Peshawar	Rs.13,905,497/-
MIAP, Multan	Rs. 173,035/-
Grand Total	Rs. 2,904,471,733/-

### **INSTALLATION OF CCTV CAMERAS IN CARGO COMPLEXES AT MAJOR AIRPORTS:**

CCTV Cameras Installed at Major Airports are providing continuous surveillance of Cargo Areas, Storage Facilities etc. It will also help in Theft Prevention and pilferage of valuable cargo. Installation of CCTV has been initiated at Cargo Complex, JIAP Karachi while tender formalities are under process at Cargo Complex, AIAP Lahore & IIAP Islamabad.

### **REVISION OF CARGO HANDLING FACILITIES CHARGES: -**

Revision of Air Cargo Handling Facilities Charges from \$10 to \$11 per ton in 2022.

### **DRY ICE & COLD STORAGE (COOL PORTS) FACILITIES AT NGIAP, GWADAR:**

The said facility is currently unavailable in the local market and factories in Gwadar. The availability of DRY ICE is essential for preserving the quality and freshness of perishable goods during transportation, especially for commodities like Fish, Fresh Dates, Live Crabs, and lobsters, which are highly sought-after in international markets, particularly in China. In this regard, a tender soon will be published through Commercial & Estates Directorate.

**ESTABLISHMENT OF AIR CARGO SETUP(S) AT QIAP QUETTA, NGIAP GWADAR & FAIP FAISALABAD:**

Initiatives to establish Air Cargo Setups at NGIAP Gwadar, QIAP Quetta & FIAP Faisalabad have been taken.

**3. COMMERCIAL (NORTH)**

**MAJOR ACHIEVEMENTS OF COMMERCIAL AT AIIAP LAHORE DURING FY 2022-2023**

- 52% increase in rent and allied charges as compared with previous year which remain **Rs. 1,669,434,946** during FY year 2022-2023
- Successful award of new Car Park collection fee contract, which was being operated by PCAA since last 2 years.
- Successful award of 05 concessions which were vacant since last few years.
- Introduction of application-based Ride Hailing Service i.e. M/s. Creemat Lahore Airport, first of its kind at any PCAA airport.
- Successful award of 02 complimentary tea counters one each at International and Domestic Departure lounges for facilitation of passengers.

**COMMERCIAL ACHIEVEMENTS AT IIAP ISLAMABAD FOR THE YEAR 2022-23**

**Award of Concessions:**

- Successful award of concession for “Management and Operations of International CIP Lounge No. 01 at Level – 04 of PTB” at a monthly license fee of Rs. 5,950,000/- (23% higher than previous license fee).
- Successful award of concession for “Establishment, Management and Operations of International CIP Lounge No. 02 at Level – 04 of PTB” at a monthly license fee of Rs. 65,00,000/- (301% higher than the previous license fee).
- Successful award of concession for “Management and Operations of Domestic CIP Lounge No. 01 at Level – 03 of PTB” at a monthly license fee of Rs. 1,900,000/-.

**Commercial Activities in process:**

- Introduction of concession for “Placement, Maintenance and Operations of Twelve (12) Vending Machines in Boarding Lounges”.

- Introduction of concession for “Establishment and Operations of Two Complimentary Tea Service Counters one each in Domestic and International Departure Lounges”.

#### **Non-aeronautical revenue at IIAP:**

- Revenue generated from commercial activities for the year 2022-23 is Rs. 1.808 billion i.e. 20% more than the previous FY year 2021-22.

#### **COMMERCIAL ACHIEVEMENTS AT FIAP FAISALABAD FOR THE YEAR 2022-23**

- With respect to the Commercial developments / activities during the Financial Year 2022-23, 14 Commercial Concessions were awarded successfully with nil outstanding dues.
- Non-Aeronautical Revenue increase in rent and allied charges of **Rs. 181 Million** FY 2022-23, as compared to previous year which remain **Rs. 121 Million** for the FY 2021-22.

#### **COMMERCIAL ACHIEVEMENTS AT MIAP MULTAN FOR THE FY 2022-23**

- Non-Aeronautical Revenue increase in rent and allied charges of **Rs.490 Million** FY 2022-23, as compared to previous year which remain **Rs. 359 Million** for the FY 2021-22.

#### **COMMERCIAL ACHIEVEMENTS AT BKIAP PESHAWAR FOR THE FY 2022-23**

- Non-Aeronautical Revenue increase in rent and allied charges of **Rs. 407 Million** FY 2022-23, as compared to previous year which remain **Rs. 255 Million** for the FY 2021-22.

### **4. ACHIEVEMENTS OF COMMERCIAL (SOUTH) DURING FY 2022-23**

Airport Management is focusing & striving to establish & introducing the outlets of the leading national / international brands at the airport to provide quality services to the travelling passengers / meter & greeters & to enhance CAA’s revenue, in this regards achievements are as under:

- a) Establishment of Branded Food Outlet (M/s. Dunkin Donuts) at IIAP, Karachi.
- b) Establishment of Bank Prestige Lounge (M/s. Dubai Islamic Bank) at IIAP, Karachi.
- c) Establishment of Branded Fresh Juice, Salads, Shake Bar, Ice-Cream and Desert Bar (M/s. GreenO Corporation) at Domestic & International Satellite of IIAP, Karachi.
- d) Establishment of Free of Charge Tea Facility for Travelling Passengers (M/s. Unilever Tea Pakistan) in Domestic & International Satellite of IIAP, Karachi.
- e) Tendering of Shopping Arcade in International Departure Lounge for multiple national / international brands is in process, with the prime objective to introduce / establish branded



outlets of the leading food chain, retail outlets etc to improve the overall ambiance & to provide quality services to the travelling passengers at the airport.

## **5. ESTATES & LAND RECORD**

### **AWARD OF LEASE FOR PROVISION OF AVIATION FUEL AT SEVEN (7) CAA AIRPORTS:**

CAA successfully awarded lease for provision of aviation fuel at 07 CAA Airports namely Karachi, Quetta, Sukkur, Nawabshah, Gwadar (old and new airports) and Skardu to Pakistan State Oil (PSO) through open competitive tendering. Previously, no oil marketing company was interested to operate at these airports (except Karachi Airport) as evidenced from multiple failed tenders over past two (2) years. With this successful award, not only will above airports have aviation fuel service available, but CAA's non-aeronautical revenues will also substantially increase since fuel throughput charges @ Rs. 2.39/- per liter with 5% annual enhancement will be recovered from fuel uplift at Karachi Airport. Expected revenue in the first year is Rs. 478 million, which is 32.5 times higher than revenue of previous year.

### **PROVISION OF AVIATION FUEL AT SKARDU INTERNATIONAL AIRPORT:**

Since designation of Skardu Airport as an international airport, one of the biggest impediments in traffic growth was non-availability of aviation fuel and no oil marketing company was interested to establish refueling facility there due to commercial constraints. However, as noted above, CAA has successfully partnered with PSO to provide aviation fuel at Skardu International Airport which will be inaugurated shortly and is expected to facilitate international and domestic flights and boost tourism and economy.

### **TRANSFER OF 474 KANALS STATE LAND IN FAVOR OF CAA AT BAHAWALPUR AIRPORT:**

CAA successfully got 474 kanals of State Land at Bahawalpur transferred in its name which was pending since past several years.

### **ACQUISITION OF LAND FOR ESTABLISHMENT OF AN AERODROME AT MURIDKE:**

CAA acquired land measuring 643 acres (480 acres of Govt. Land and 163.33 acres of Private Land) of land at Muridke for establishment of an aerodrome to shift operations from the now-closed Walton Aerodrome, Lahore.

### **EXECUTION OF TRI-PARTITE AGREEMENT BETWEEN CAA, PUNJAB GOVERNMENT AND PUNJAB CENTRAL BUSINESS DISTRICT DEVELOPMENT AUTHORITY (PCBDDA):**

CAA has signed tri-partite agreement with Punjab Government and PCBDDA for establishment of Central Business District at the site of Walton Aerodrome, Lahore with CAA having 52% profit share in the project.

## **xiii. SAFETY & QUALITY MANAGEMENT SYSTEM DIRECTORATE**

Operational achievements of SQMS Dte. are presented below:

## **1. Acquisition and re-certification of ISO Standards (QMS EMS & OHSMS) and SMS implementation:**

### **Regulatory Division:**

- 06 Dte (PEL, DAAR, AT&ER, FS, AW, & Sec) are ISO 9001:2015 certified.

### **APS / ANS Division:**

- 04 Dte & 01 Branch (Ops, CNS, APS, ES & FIU) are ISO 9001:2015 certified.

### **Corporate Function:**

- 03 Dte and 01 Institute (FIN, SQMS, HR, CATI) are ISO 9001:2015 certified.

### **Airports:**

- 07 Airports (JIAP, AIIAP, IIAP, BKIAP, MIAP, FIAP & QIAP) are ISO certified
- 03 Airports (JIAP, AIIAP & IIAP) are ISO 14001 (EMS) & 45001 (OHSMS) certified,

These above ISO certifications / recertification acquired in Oct 2022, valid till Oct 2025

### **Implementation of Safety Management System (SMS)**

SMS is implemented in all major/medium int'l Airports (JIAP, AIIAP, IIAP, BKIAP, MIAP, FIAP, QIAP etc).

## **2. Conduct of Safety Assessments (SA):**

**Qty-28** SAs were conducted in FY 2022-23 in various airports. Safety Assessment (or Management of change) is one of the important SMS regulatory requirements in case of any change on an aerodrome / ANS, equipment, infrastructures, design and operations are made.

## **3. Conduct of Safety Reviews (SR):**

**Qty-08** SRs conducted in FY 2022-23 in different major/medium airports. The objective of the safety review is to assess the safety risks associated with the ANS and APS facilities / operation by evaluating the appropriateness and effectiveness of the safety management activities annually in major international airports whereas after every two (02) years for medium airports.

## **xiv. FINANCE DIRECTORATE**

Revenue & Expenditure for the financial year 2022-23 alongwith the comparative figures of financial year 2021-22 are presented below:

(Rs. in millions)		
Description	Actual (Un Audited) 2021-22	Actual (Un Audited) 2022-23
Revenue	91,533	152,109
Expenditure	44,740	70,798
<b>Surplus before Taxation</b>	<b>46,793</b>	<b>81,311</b>
Income Tax	9,515	32,835
<b>Surplus for the Year</b>	<b>37,278</b>	<b>48,476</b>

Key aspects of financial performance of PCAA are as follows:

- i. Revenue of PCAA increased to Rs.152.109 billion in FY 2022-23 from Rs.91.533 billion in FY 2021-22 due to steep recovery of operations as the Aviation Sector witnessed a significant boom in the post COVID-19 era.
- ii. Expenditure of PCAA increased to Rs.70.798 billion in FY 2022-23 from Rs.44.740 billion in FY 2021-22 mainly due to increase in the Provision of Bad Debt Expense and an unprecedented hike in the Utility Charges.

## **xv. PLANNING AND DEVELOPMENT DIRECTORATE**

### **4. ANNUAL DEVELOPMENT PROGRAMME**

In the face of challenging circumstances during the fiscal year 2022-23, PCAA demonstrated remarkable achievements through its Annual Development Program (ADP). Despite the unfavorable / unstable economic conditions, the organization managed to utilize an impressive amount of PKR 8.8 Billion for developmental projects / schemes whereas for all other operational and R/M works separate budget was allocated.

### **5. PROJECTS**

#### **I. New Gwadar International Airport NGIA Project:**

##### **Project Overview**

- The NGIA project will be a full-fledged airport that will replace the existing airport at Gwadar. NGIA has been designed to handle wide-bodied commercial aircraft such as Airbus A-380, Boeing 747 & 777, etc operating on international and domestic routes.
- Develop a new airport facility at Gwadar to comply with domestic and international standards for operational safety and efficiency.
- Serve as an important component of the China-Pakistan Economic Corridor Program
- Cater for future air traffic growth as well as to have provision to meet changing demands in the long term.
- Integrate the new airport facility into the development scheme as per Gwadar city's Master Plan
- Enable easy access to Gwadar from other parts of Pakistan as well as other countries and consequently act as a catalyst for economic and social development of the region.
- Provide opportunities and facilities for setting up cargo village and other business establishments within the precincts of the new airport.

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

**Project Progress: an overall progress of 78% is achieved.**



*Work underway at NGIAP, Gwadar*

### **CONSTRUCTION OF GREENFIELD AERODROME FOR GENERAL AVIATION ACTIVITIES NEAR MURIDKE**

Pakistan Civil Aviation Authority has envisioned a world-class Flying Training Academy with allied facilities of Simulators, Aviation sports, Helicopter services, hostels etc. the academy will be established on international standards.

The Aerodrome is being developed for promotion of general aviation activities which shall meet requirements of ICAO Aerodrome Reference Code 3B as defined under ICAO Annex 14. After the construction on the proposed facility, it shall not only be able to handle training aircraft like Cessna but shall be fully equipped to handle all aircraft as per ICAO Reference Code 3B.

SALIENT FEATURE	
<b>Phase – 1</b> <ul style="list-style-type: none"> <li>1828 x 30 m flexible runway</li> <li>225 x 15 m alpha taxiway</li> <li>319 x 15 m bravo taxiway</li> <li>744 x 94 m rigid apron</li> <li>837 sqm admin building</li> <li>Fire Station</li> <li>Airport Road &amp; Infrastructural Roads</li> <li>6 No. aircraft hangers</li> <li>7 No. watch tower</li> <li>Boundary wall &amp; Fence</li> </ul>	<b>Phase – 2</b> <ul style="list-style-type: none"> <li>Terminal Building + ATC</li> <li>Air Field Lighting and Basic NavAids</li> <li>Over Head Tank</li> <li>Underground Tank</li> <li>Office Block</li> </ul>





***The Physical progress is at 71%.*** Main Runway including Overrun and RESA is complete. Earthwork along with non-asphaltic structure [subbase & aggregate base course] on both taxiways alpha & bravo is complete with prime coat sprayed over Bravo taxi. Earth Work on Apron is complete, with Work underway on structural pavement at different locations. Priority is given to Apron area adjoining Hanger No. 1, 2 & 3 till alpha taxi, where PQC work has commenced and in progression. Hanger No. 1, 2 & 3 are complete in all respect including flooring along with electrical fixtures. Work is underway on offices adjoining hangers, with works near completion on offices adjoining hanger 1 & 2. Earthwork on Airport Road including Loop Road B is complete along with non-asphaltic pavement structure completed over 1000 m [total 1475m] of Airport Road. Moreover, Works on Hanger Offices, Boundary Wall, Watch Towers, Admin Building, Fire Station & Hanger 4, 5 & 6 are in progression.

### **III. RE-CONSTRUCTION & UP-GRADATION OF MAIN RUNWAY (18L/36R) AT ALLAMA IQBAL INTERNATIONAL AIRPORT LAHORE**

For detailed planning, designing, documentation and supervision of construction works, services of a consultancy Firm M/s. Umar Munshi Associates – Yooshin Engineering Corporation – Mascon Association (Pvt) Ltd (JV) have been hired by PCAA.

#### **Project Particulars:**

- Contractor: CCECC-MATRACON-HABIB (JV)
- Contract Cost: PKR 6450 Million
- Project Start: 3<sup>rd</sup> September, 2020
- Completion and Operationalization of Main Runway (Phase-I): 29<sup>th</sup> July, 2022
- Completion and Operationalization of New Link Taxiway (Phase-II): 23<sup>rd</sup> May, 2023

#### **Scope of Work:**

The project scope includes:

##### **i. Phase – I Works**

- Reconstruction of Main Runway (18L/36R) including Overruns and shoulders.
- Curve improvement of the existing taxiways including:-
  - Sierra
  - Uniform
  - Delta
  - Bravo
  - Tango
  - Quebec
  - Alpha
- Construction of Rapid Exit Taxi-1 (ZULU)
- Construction of Rapid Exit Taxi-2 (VICTOR)
- Ancillary Works
- Construction of Storm Water Drainage & Siphons

- Relocation of Utilities
- Removal/Fixation of Existing and New Airfield Lights (CAT-III) as per requirement

**ii. Phase – II Works**

- Construction of New Link Taxiway (Linking Secondary Runway with Main Runway)
- Relocation of Utilities

**Achievements:**

- Main Runway including Rapid Exit Taxiways 100% completed and operationalized.
- New Link Taxiway 100% completed and operationalized.

**IV. RECONSTRUCTION OF RIGID RUNWAY (03R/21L) AT FAISALABAD INTERNATIONAL AIRPORT**

The Main Runway at Faisalabad International Airport had completed its serviceable life was in a dilapidated condition, not only hindering any further growth in aircraft movement but continuation of aircraft operations was also becoming difficult day by day due to widening surface cracks, settlement and distressing etc.

Hence the reconstruction of runway along with the Airfield Lighting System was undertaken by the PCAA.

**Project Scope:**

- Complete Reconstruction of Rigid Primary Runway (03R / 21L)
- Flexible Pavement (Overrun & Shoulders)
- Airfield Lighting System LED based CAT-I including 2 x Vault Stations
- Complete Reconstruction of 2 x Taxiway Links
- Construction of Emergency Fire Crash Roads at both ends

**Project Salient:**

<b>Project Name</b>	<b>Re-Construction of Rigid Runway (03R/21L) at Faisalabad International Airport</b>
Client	Pakistan Civil Aviation Authority (PCAA)
Consultant	Osmani and Co. Ltd. in association with RMJM-Brazil, RMJM Osmani and DD&C
Contractor	Design and Engineering Systems (DES)
Contract Cost	Rs. 3,582 Million
Revised Work Outlay / Cost	Rs. 3,782 Million
Site Handing Over Date	17 <sup>th</sup> February 2021
<b>Substantial Completion</b>	<b>31<sup>st</sup> January, 2023</b>



**Pavement Marking (03R End)**



**Vault Station-2**

## **V. UPGRADATION OF MAIN RUNWAY (13L/31R) FOR OPERATION OF AIRCRAFT UP TO CODE 4E (B777-300ER/EQUIVALENT)**

Quetta International Airport old Main Runway was constructed in 1958. It had outlived its Design life and restricted to operations of narrow body aircraft. The upgradation/reconstruction of Runway was long due for operations of narrow and wide body aircraft to allow direct flights to HAJJ / Umrah and other Intl' destinations with all-weather safe operations.

The subject project has been a peerless project in Pakistan with the first project of reconstruction of a main runway taking place with operations being carried out on the same runway in phase-wise construction with the reduced length in the first phase. The airport/airfield being of significant importance for both civilian and defence because of its geographical location catering to the domestic needs of the bulk of the population of the province as well as the PAF's Western Air defence Alert, hence, suspension of operations at the airport was not an option. Thus, due to keeping parallel operations in continuity to construction works, Project was planned in Phase wise execution and divided in three Phases. Phase-I of project, making 37% of the total has been completed and works on Phase-II&III started after shifting of operations to parallel runway and project successfully completed on 30<sup>th</sup> May 2023.

### **Salient features**

<b>Project Title</b>	<b>RECONSTRUCTION OF RIGID RUNWAY AT QUETTA INTERNATIONAL AIRPORT FOR OPERATIONS OF AIRCRAFT UPTO ICAO CODE 4E</b>
<b>Client</b>	PAKISTAN CIVIL AVIATION AUTHORITY
<b>Consultant</b>	M/S. OSMANI & COMPANY (PVT) LTD IN ASSOCIATION WITH RMJM-BRAZIL + DD&C + RMJM-OSMANI
<b>Contractor</b>	M/S. UMER JAN & CO. ENGINEERS AND CONTRACTORS
<b>Project Value</b>	RS. 6,244 Million
<b>Project Start</b>	5 <sup>TH</sup> MAY 2020
<b>Completion</b>	30 <sup>TH</sup> MAY 2023

DESCRIPTION	BEFORE UPGRADATION	AFTER UPGRADATION
RUNWAY		
Length	3645M / 11962’	3645M / 11962’
PCN	52 (Flexible)	146 (Rigid Concrete)
Shoulders	NIL	7.5M / 25’
Over Run		
13L End	319M /1046’	305M /1000’
31R End	282M / 925’	274M / 900’
TURN PAD		
13L End	127 x 88M / 417’ x 289’	190 x 91M / 623’ x 299’
		(With 7.5M / 25’ Shoulders)
31R End	146 x 88M / 479 x 289 Feet	190 x 91M / 623’ x 299’
		(With 7.5M / 25’ Shoulders)
APRON		
New Apron	164 x 96M / 538’ x 315’	164 x 149M / 538’ x 489’
TAXIWAYS		
Kilo	222 x 30M / 728’ x 100’	222 x 23M / 728’ x 75’
	(With Shoulders)	(With 7.5M / 25’ Shoulders)
New Taxiway	NILL	236 x 23M / 775’ x 75’
		(With 10.5M / 35’ Shoulders)
TAXILINK		
Alpha Taxi Link 03	189 x 15.3M / 620’ x 50’	189 x 23M (620’ x 75’ ) (With 7.5M / 25’ Shoulders)
AIRFIELD LIGHTING (AFL) SYSTEM		
Airfield Lighting System	13L Approach CAT-I 31R Approach CAT-I High Power Consumption and outlived useful life of lights	13L Approach CAT-II 31R Approach CAT-I Energy Efficient LED Lights with Latest Model
Centralized Control	Not as per ICAO Standard	ALCMS
		As per ICAO Standard
Power Back Up	Generator	No Break Diesel
	Not as Per ICAO Standard	Generators
		As Per ICAO Standard



### **Achievements**

- The main runway of Quetta International Airport has been upgraded with Concrete Runway along-with installation of the latest & modern Air-field lighting system that has enabled wide body aircraft all weather operations (day & night) including Boeing-777 & equivalent in the capital city of Balochistan.
- All weather non-restricted night landing facility has been made available with the latest state of the art LED airfield lighting systems of ICAO CAT-II first time installed at Quetta Airport.
- The Airport is now officially certified to handle wide Body aircrafts like Boing-777 as per ICAO 4E Category.
- The very long-awaited need of the province has been accomplished with the completion of said project, such that Direct Hajj Flights were started from Quetta to Jeddah. Earlier the pilgrims had to fly to other airports like Karachi and Multan etc as the runway was not capable of such flight operations.
- Socio economic opportunities
- Increased level of service
- Cargo handling wide body aircrafts
- Creation of jobs

\*\*\*\*



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

## Introduction

PIACL was formed in 1955 under the PIAC Act of 1956. Later, PIAC was converted into 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 into 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 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. The financial results for the year 2022 are as under:

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

	(Rs. in Millions) Jan-Dec 2022*
Revenue	172,038
Fuel & Oil	(79,691)
Others	(96,480)
Gross Profit/(Loss)	<b>(4,133)</b>
Other Operating Expense	(13,459)
Other Income	6,276
Loss from Operations	<b>(11,316)</b>
Exchange Loss	(25,230)
Loss before Interest & tax	<b>(36,546)</b>
Interest	(49,971)
Loss before tax	<b>(86,517)</b>

It is worth mentioning that despite facing difficulties, PIACL has been able to improve upon its performance by increasing revenue. Furthermore, PIA's passenger 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 affects still persist in the 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. Marketing**

The national flag carrier registered revenue of PKR 172 billion in 2022, the highest ever annual revenue in the history of PIA, 100% growth over 2021. Passenger yield increased from PKR 13.5 in 2021 to 14.7 in 2022, seat factor increased from 66.9% in 2021 to 80.3% in 2022. Similarly, Cargo yield increased from 63.7 in 2021 to 69.4 in 2022.

In 2022, EASA ban remained a big challenge for PIA with suspension of flights to UK and Europe. However, PIA explored new avenue to retain the UK and European market by entering into strategic partnership with Turkish Airlines by adding Six (6) weekly flights to Istanbul, Four (4) from Islamabad and Two (2) from Lahore. The landmark agreement with Turkish Airlines has provided PIA access to UK, Europe and US markets with convenient connections through Istanbul. Despite macro-economic instability where average fuel prices jumped from USD 70.95 / barrel in 2021 to USD 98.95 barrel in 2022 coupled with abnormal increase in exchange rate, Pakistan International Airlines managed to curtail its operating losses in 2022 as compared to 2021 by 25%.

Network optimization, capacity rationalization, yield enhancement by offering right price at the right time to the right customer and maximum capacity utilization were major benchmarks which PIA set and achieved during 2022.

PIA has set a landmark target of PKR 241 billion for the year 2023, which is 40% increase over the revenue achieved in 2022.

### **2. Human Resource**

- Centralized all HR personnel activities after inception of specialized HR units in order to have good HR industry practices, resulted in reducing lead time, prompt retrieval of information under one umbrella with accuracy for analysis and appropriate decision making.
- Reduced lengthy procedure of final settlement dues and introduced a good bye celebration at the last day of retiring employee, irrespective of pay group, and thanking

his / her valuable and commendable services upon long association with PIA with award of souvenir.

- 100% atomization of monthly attendance and leave system by successful implementation of ERP- OTL Module in 2022.
- Rationalization and digitalization of shift patterns of operational employees.
- Complete redesigning, simplification and digitalization of employee passage facility.
- Significant number of educational documents verification process from various universities / institutions / boards have been completed.
- In order to ensure transparency and justice, Performance Management System (PMS) has been digitalized instead of manual processing.
- By inception of the Specialized Division of Administration & Discipline, centralized all records of Investigations and Inquiries and all indiscipline cases are processed from start till its finalization, in addition to response to FIA and NAB cases. As such, during 2022-2023, 268 cases were dealt, out of which 168 cases have been finalized and remaining are under process.
- HR Outsourcing Unit developed a web-based **portal PIAAOT.ELECTOMOTIVE.COM** for transparent hiring processes of outsourced worker through third party and disbursement of their wages.
- Recruitment process has been enhanced by adopting new and updated methodologies through web-based technologies like ERP iRec Module, National Job Portal. Online interview facilities provided to those candidates who are unable to appear in-person in front of Selection Board, via video links (BlueJeans & Zoom) to boost the hiring process and save time & cost of the Company.
- Recruitment Unit attended and participated in various seminars and job fairs during 2022-2023.
- Mandatory trainings within PIACL were imparted to approximately 1600 employees at major stations through in-person and online facility and various workshops were managed and conducted on FREE of cost basis.
- CHRP (Certified Human Resource Program) at NUST were done in order to enhance professionalism & improve interpersonal skills of HR employees.

### 3. PIA Engineering & Maintenance

The year 2022 witnessed promising recovery after the trenching impact of Covid-19 in preceding years. This satisfying development is however being challenged by rigorous enforcement of safety standards after COVID-19 which ultimately has affected the demographics of aviation and safe travel completely. Recent stringent changes in these regulatory standards have also curtailed PIA Engineering & Maintenance (E&M) scope of services and approvals as well which impacts its capabilities as well. A boiling issue of lack of skilled workforce has also confronted PIA (E & M) which is currently a worldwide aviation industry problem.

Despite of these stymies, PIA (E & M) has held its ground and ensured deliverance of Quality Maintenance services and ensured Safety levels are also maintained at the same time. Moreover, focus has also remained initiation of viable steps to curtail in-house working expenses and explore avenues of foreign exchange revenue.

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.

**Achievements:**

- i. The department earned revenue of ***PKR 1,781 Million*** through its engineering services to the customers. This is the highest ever revenue earned and registered by PIA Engineering & Maintenance over the years. (44.41% increase as compared to previous year 2022 revenue of PKR 1,234 million)
- ii. PIA Engineering Business team recovered ***PKR 67 Million*** long outstanding dues from defaulting customers.

**Future Initiatives:**

- i. Addition of Foreign Carrier's Handling business including M/s Thai Airways, Sri Lankan Airlines and Salam Air is in process which will increase revenue earning of PIA (E & M) by ***PKR 66 Million per annum***.
- ii. More Trainings for PIA Engineering staff are planned on state of the art Boeing B787 Dreamliner, Airbus A350 & Airbus A320 Neo fleet.
- iii. Collaboration with EASA Approved Part 147 training institute is in process to enable PIA to conduct In-house training on Airbus A330 & A320 Neo fleet.

#### **4. FACILITIES MANAGEMENT**

**i. Installation of A320 Simulator Cost: PKR. 23.31 Million**

The A-320 simulator was procured by PIA for training of pilots as well as to provide training facility to third party as a revenue generating source for PIA. Old and outdated facility has also been transformed into a modern and state of the art facility as per International Standards.

- **Project Started:** June - 2021
- **Project Completed:** Sep - 2022

**ii. Annex Building–Islamabad Airport Cost: PKR 35.63 Million**

The hangar was built only for parking of ATR aircraft, which are used for northern areas operation, but at later stage it was decided to convert this facility as full fledged maintenance facility which required to equip the facility with allied support i.e. tool stores, tyre shops, engineer lounges and other necessary shops.

- **Project Started:** June - 2021
- **Project Completed:** August - 2022

iii. **Renovation Of Existing Wheel Bay Shop and Structure Repair Shop at Engineering Area – KHI Cost: PKR. 2.16 Million**

PIA KHI Engineering setup had no proper Wheel Bay Shop where appropriate segregation of obsolete / reusable and new tyres can be placed in an organized and secure manner.

Therefore, the existing facility was completely renovated and handed over to engineering which has also been approved by CAA as per their standards.

- **Project Started:** June – 2022
- **Project Completed:** August - 2022

iv. **Replacement of Broken M-S Angle, Drain Plates & Repair Epoxy Coating of Floor at Line Maintenance (Bay-I, Fokker Hangar) Engineering Area – KAP Cost: PKR. 2.72 Million**

PIA Hangars and Engineering Shops were outlived their operational life and the existing condition was not compatible to achieve International Certification. As directed by higher management, it was decided to revamp the existing Engineering infrastructure in phases so that safety certifications may be obtained.

In first phase, LM-2 Bay-I Hangar was restored which is being used for daily maintenance of A320 fleet.

- **Project Started:** July 2022
- **Project Completed:** Oct 2022

v. **Upgradation of PIA Medical Center at MT – Head Office – Karachi Cost: PKR. 1.28 Million**

PIA Medical Facility was fully developed near PIA Head Office and is completely operational.

The Medical Center for Crew and Staff Facility includes:

- Crew OPD      ● Staff OPD      ● Emergency Ward
- Dental Unit      ● Pharmacy      ● Diagnostic Lab and X-Ray unit
- Waiting Area

Medical Administration & Offices

- **Project Started:** Sep 2022
- **Project Completed:** Oct 2022

vi. **PIA Smart Offices - Hyderabad and D. I. Khan - Cost: PKR. 1.45 Million**

Two PIA Smart Offices established at Hyderabad and D. I. Khan.

- **Project Started:** Oct 2022
- **Project Completed:** Nov 2022

**vii. Upgradation of PIA International Business Lounge at Lahore Airport Cost: PKR. 11.25 Million**

The project was envisaged by PIA Management and funds were allocated for the renovation of the lounge.

- **Project Started:** Sep-2022
- **Project Completed:** 20-Nov-2022
- **Area of the Lounge:** 2,533 Sq. ft
- **Seating Capacity:** 44 Passengers

**viii. Upgradation of PIA Domestic lounge at Karachi Airport Cost: PKR.11.65 Million**

PIA Domestic Business Lounge at Karachi Airport was also not in good condition. The project was envisaged by PIA Management and funds were allocated for the renovation of the lounge.

- **Project Started:** Sep-2022
- **Project Completed:** 20-Nov-2022
- **Area of the Lounge:** 1,329 Sq. ft
- **Seating Capacity:** 36 - Passengers

**ix. Upgradation of PIA International Business Lounge at Karachi Airport Cost: HBL Co-Branding**

With the support of Brand Management, the facility was developed with PIA's Brand Partner - HBL.

- **Project Started:** Sep-2022
- **Project Completed:** Nov-2022
- **Area of the Lounge:** 1,527 Sq. ft
- **Seating Capacity:** 60 Passengers

**x. Quetta Airport Building Upgradation Cost: PKR. 6.0 Million**

PIA Quetta Airport Office was constructed some 30 - years back. Due to the severe rain and snow in the region, the building was in shambles, giving very bad image to PIA customers and building was uplifted for the convenience of the customers.

- **Project Started:** Sep 2022
- **Project Completed:** Dec 2022



**xi. Renovation of B-33 House Cost: PKR. 15.73 Million**

The property was in bad and deteriorating condition. The renovation of the house was completed in Feb-2023 and was rented out through Tender advertisement process as per PPRA rules to M/s **Aga Khan University** at PKR 600,000/- per month effective from 01-Mar-2023.

- **Project Started:** Nov - 2022
- **Project Completed:** Feb - 2023

**xiii. PIA Smart Ticketing Facility, Head Office – Karachi Cost: PKR. 1.0 Million**

Old Ticketing Facility inside Head Office was shifted to the vacant Day Care Center, just outside the premises of Head Office.

- **Project Started:** Nov - 2022
- **Project Completed:** Jan - 2023

**5. INFORMATION & COMMUNICATION TECHNOLOGY**

**i. Hybrid Security Operation Center**

Cyber security issues are becoming a day-to-day struggle for businesses. Current cyber security statistics reveal a huge increase in hacked and breached data. The Poor cyber security practices in place make it more vulnerable to cyber-attacks that could result in data loss, denial of- IT Services, disputation, audit non-compliance, etc. A solid cyber security strategy is crucial to every organization.

To improve PIA's cyber security posture IT department implemented a Hybrid Security Operation Center (SOC) that will be responsible for monitoring PIA's cyber security posture with the goal of detecting, analyzing, and responding to cyber security incidents using a combination of technology solutions and a strong set of processes.

Establishment of a Hybrid Security Operation Center (SOC) that monitors an organization's entire IT infrastructure, 24/7, to detect cyber security incidents in real time and address them as quickly and effectively as possible to strengthen cyber security posture.

**ii. Campus Wi-Fi for PIA Engineering & Maintenance areas (APRON)**

Set up WIFI (Wireless Services) facility for PIA Engineering & Maintenance areas, at Karachi, Lahore, and Islamabad. WIFI provides accessibility and

connectivity for e-Tech log support in MRO / M&E solutions. Further, it also allows Aircraft Maintenance personnel to access maintenance data & technical records for aircraft maintenance. The implemented WIFI solution at Engineering and Ramp areas will provide online accessibility to maintenance and technical data. This will improve performance and reduce noticeable support time.

**iii. Upgradation of Data Center**

The PIA Data Center was built in the 80s and was best to suit the computing environment of that time. Over the last 40 years, there have been no major modifications and upgradation has been made to cater to the needs of ever-changing technology.

The ICT has adopted server virtualization technology that considerably reduces the requirement of physical servers in the data center thus cutting energy consumption and air-conditioning needs. Moreover, outdated Network core equipment has also been replaced with power-efficient equipment.

The up-gradation of the Data Center provided a standardized facility enabling PIA to house its critical IT Infrastructure equipment and further reduced energy consumption and improved overall equipment performance, safety, and efficiency.

**iv. Disaster Recovery (DR) Site**

ICT has successfully implemented the disaster recovery site of PIA at Rawalpindi to protect critical data and systems. Disaster Recovery Site is part of business continuity planning, ensuring that businesses can continue to operate even in the event of a disaster. It will help to minimize downtime and to meet compliance requirements.

**v. Network Transformation with Software Defined Wide Area Networking (SD-WAN)**

Software-defined wide area networking (SD-WAN) is a new approach to networking that uses software to control and manage wide area networks (WANs). SD-WAN offers a number of advantages over traditional WANs, including cost savings, improved performance, and enhanced security.

Application-based QOS (quality of services) and application-based routing are now possible at domestic stations. Bandwidth preference is given to operational applications like HITIT, MRO, ERP, Email, etc. Cloud-based applications traffic is diverted automatically directly to the Internet like Hitit, MRO, Cargo,

Office 365, etc., and local applications like Email, ERP, TMS, Aims, etc., which are hosted in Data Center, their traffic is forwarded to MPLS (private) link. It has improved the performance of applications and improved visibility by providing real-time monitoring and reporting. It has also simplified the management of the WAN.

**vi. Increase in Data Bandwidth**

Overall, data bandwidth is an important factor that can affect the quality of your online experience. ICT has increased bandwidth for WAN from **1151 Mbps** at the cost of **16,350 PKR, Mb/year** to **2571 Mbps** at the cost of **8,185 PKR, Mb/year**. The speed has increased more than double with the price getting a doubled less.

**vii. Equipment Standardization and Upgradation**

Equipment standardization is the process of using the same or similar equipment across an organization. The benefits of computer standardization and upgradation outweigh the challenges. By standardizing and upgrading computers, organizations can improve their efficiency, security, and performance besides reducing the cost.

**viii. Biometric Upgradation**

ICT has upgraded the existing biometric systems (Hand Punch machines) to newer face recognition machines, which are more secure, and efficient. The new biometric has improved security, increased convenience, reduced fraud, and provides contactless attendance, and access control.

The main advantages of technology upgradation are cost saving, providing a safe and healthy environment with contactless attendance, and access control. PIA will also no longer need expensive mi-fare id cards for employees and may use regular id cards to save cost.

**ix. Upgradation of a company channel (VHF/AM) for Flight Operations**

VHF/AM (Very High Frequency/Amplitude Modulation) is a type of radio communication that is used for flight operations. VHF/AM channels are important for flight operations because they provide a reliable and efficient way to communicate between aircraft and ground control.

VHF/AM channels are used for a variety of flight operations tasks, including Air traffic control, Ground communications, and emergency communication. In addition to being reliable and efficient, VHF/AM channels are also relatively

inexpensive to operate. This makes them a cost-effective option for flight operations.

Overall, VHF/AM channels are an important part of flight operations. They provide a reliable and efficient way to communicate between aircraft and ground control, which helps to ensure the safety and efficiency of flight operations.

Following are some additional benefits of using VHF/AM channels for flight operations:

- They have a long-range, which allows for communication over long distances.
- They are relatively immune to interference from other radio signals.
- They are relatively easy to install and maintain.

As a result of these benefits, VHF/AM channels are the most common type of radio communication used for flight operations.

The ICT department has successfully upgraded the company channel (VHF/AM) equipment for Karachi, Lahore, and Peshawar flight operations. This new technology provides us with **improved communication and connectivity, and increased efficiency and productivity**. Now, this new IP-based technology allows us to get control remotely (even from different cities) with enhanced security.

x. **Upgradation of a VHF/FM base sets for walkie-talkie**

PIA ICT department has successfully upgraded 20 out of 90 legacy VHF/FM base sets for a walkie-talkie to an IP-based system, which can offer several benefits, including:

- Improved range and coverage: IP-based walkie-talkies can use the internet to communicate, which means that they are not limited by the range of traditional radio signals. This can be a major advantage for businesses with large or dispersed offices.
- Enhanced security: IP-based walkie-talkies can use encryption to protect your communications, which can help to prevent eavesdropping.
- Added features: IP-based walkie-talkies often come with a number of features that are not available on legacy systems, such as the ability to send text messages, and share files.
- Simplified management: IP-based walkie-talkies can be managed and configured remotely, which can save you time and effort.

xi. **Installation of new Telephone Exchange at Lahore**

A new telephone exchange has been installed at Lahore station.



## **Airports Security Force (ASF)**

## GENERAL

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 Aviation Division since June 2013.

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
	<b>Total</b>	=	<b>42</b>

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.

### 1. Aviation Security Challenges

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.

## **2. Vision**

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

## **3. Core Values**

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*)

## **4. Mission**

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

## **5. Main Functions**

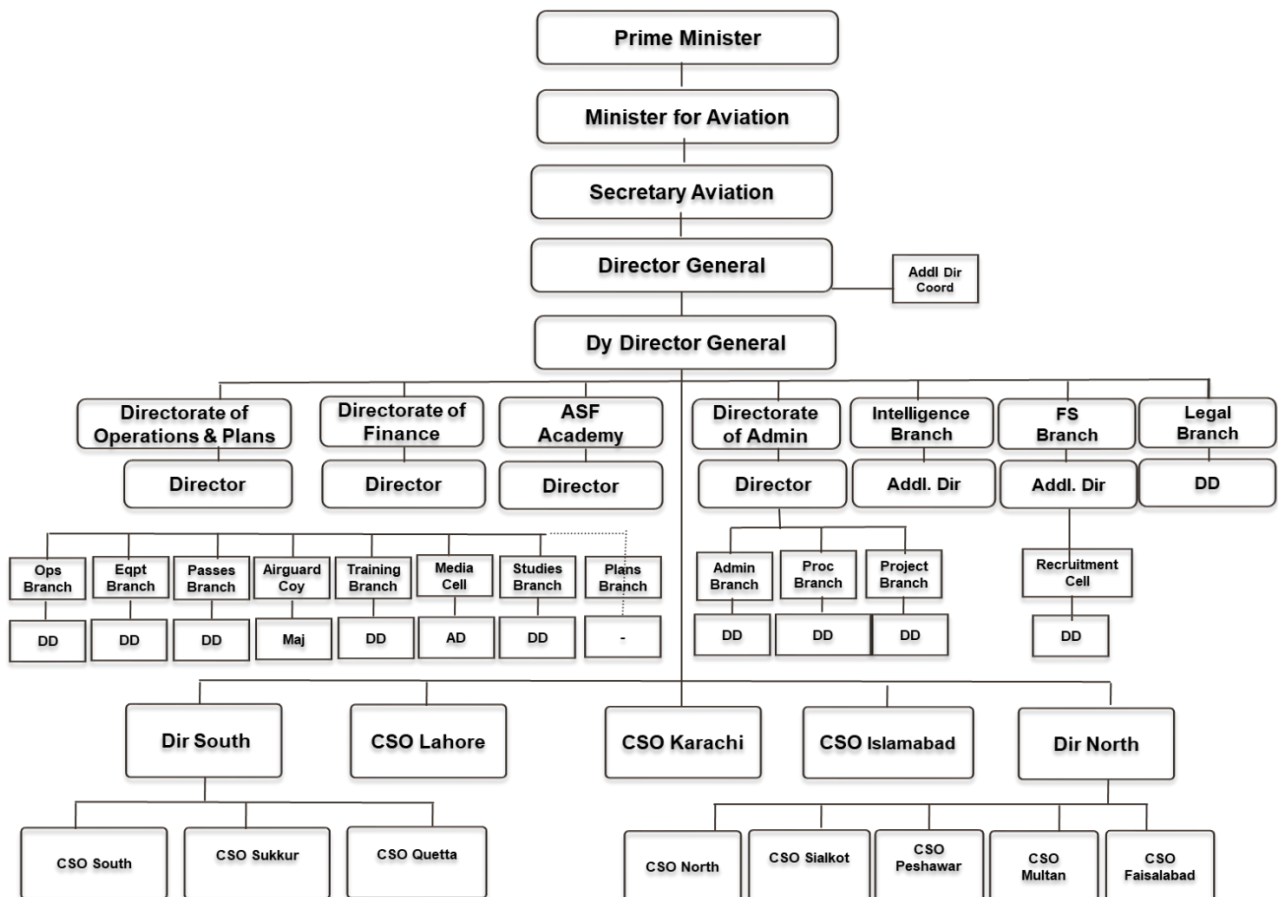
In accordance with the provisions of the ASF Act 1975, the Force is responsible for:

- 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.

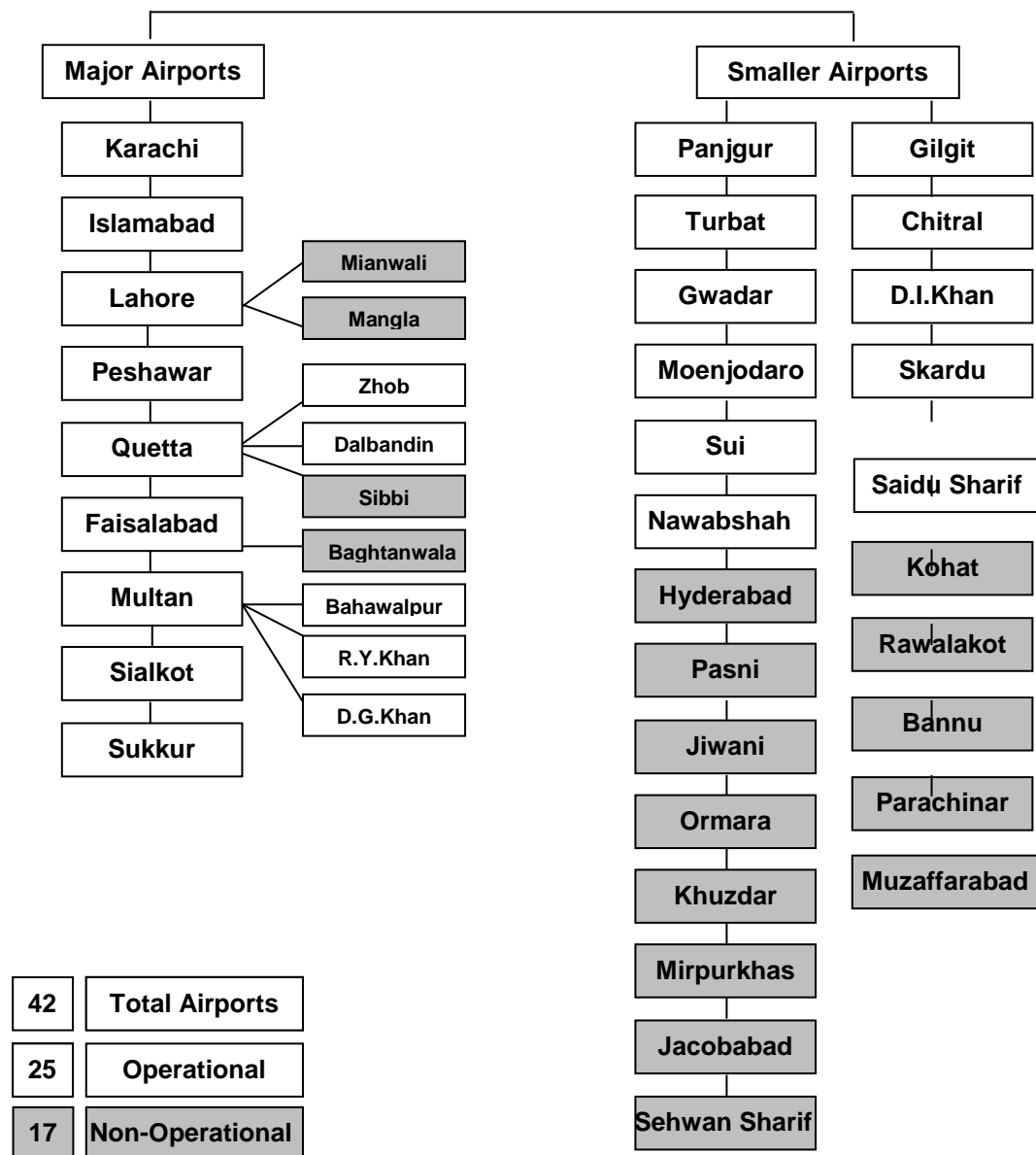
## 6. Organization

ASF is headed by Director General who articulates his command from ASF Headquarters located at Karachi. The organization of ASF is as under :





## AIRPORTS



**7.**

**Manpower**

**a. State of Manpower**

<b>Detail</b>	<b>Authorized</b>	<b>Held</b>	<b>Deficient</b>
Uniformed staff	14692	13740	952
Ministerial staff	873	791	82
<b>Total</b>	<b>15565</b>	<b>14531</b>	<b>1034</b>

**b. Detail of Activities, Achievements and Progress – 2022-23.**

Detail of Promotion of officers / officials is as under:

<b>Rank</b>	<b>Year-2022</b>	<b>Year-2023</b>	<b>Total</b>
Director	02	-	<b>02</b>
Addl Director	08	04	<b>12</b>
Deputy Director	23	15	<b>38</b>
Assistant Director	56	14	<b>70</b>
Inspector	209	52	<b>261</b>
Sub Inspector	446	90	<b>536</b>
Assistant Sub Inspector	539	83	<b>622</b>
Sergeant	711	105	<b>816</b>
Admin Officer	01	01	<b>02</b>
Superintendent	08	03	<b>11</b>
Assistant	06	01	<b>07</b>
Assistant Private Secretary	-	01	<b>01</b>
UDC	08	01	<b>09</b>
LDC	02	01	<b>03</b>

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

<b>Rank</b>	<b>Year-2022</b>	<b>Year-2023</b>	<b>Total</b>
Assistant Director	-	48	<b>48</b>
Inspector	04	05	<b>09</b>
Assistant Sub Inspector	46	157	<b>203</b>
Corporal	486	975	<b>1461</b>
Corporal Driver	11	14	<b>25</b>

Khateeb	-	01	<b>01</b>
Steno Typist	01	-	<b>01</b>
Draftsman	01	-	<b>01</b>
UDC	02	-	<b>02</b>
Moazan	-	01	<b>01</b>
Medical Attendant	-	01	<b>01</b>
MT Driver	11	01	<b>12</b>
Lab Attendant	-	01	<b>01</b>
Veh Mechanic	-	01	<b>01</b>
Electrician	02	-	<b>02</b>
Assistant	01	-	<b>01</b>
LDC	09	-	<b>09</b>
Cook	20	17	<b>37</b>
Sweeper	07	12	<b>19</b>
Welder	-	01	<b>01</b>
Plumber	-	01	<b>01</b>
Tailor	-	01	<b>01</b>
Waiter	-	11	<b>11</b>
Mason	-	01	<b>01</b>
Mali	-	04	<b>04</b>
Carpenter	-	01	<b>01</b>
Cobbler	-	01	<b>01</b>
Naib Qasid	02	03	<b>05</b>
Nursing Assistant	-	02	<b>02</b>

**Program of Activities and Targets – 2022-23.** Imparting of Basic & specialized Aviation Security Training (Short Courses) for Manpower Quality Enhancement of Human Resources in Aviation Security has been scheduled/ targeted during 2022-23 for strengthening and reinforcement of security at all airports to counter the prevalent threats to Aviation Industry.

## **8. Performance Statistics**

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 2022-23 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	12
		Unlicensed	13
2	Revolver / Pistol	Licensed	227
		Unlicensed	157
3	Ammunition (Rounds)	Licensed	4519
		Unlicensed	5410
4	Magazine	Licensed	353
		Unlicensed	264

- c. **Recovery of Narcotics.** ASF staff during performance of their duties at various airports recovered **84.686** KGs Heroin, **16.278** KGs Hashish/Charas, **111.14** KGs Ice Heroin, Liquid Heroin in liter **6.25** liters during the financial year 2022-23. 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 **305040330** Pak Rupees, **797107** US \$, **757806** UAE Dirham, **2544271** Saudi Riyal, **71535** British Pound, **31531** Euros, **13000** Austrian Dollar, **198300** Canadian Dollar, **45200** Qatri Riyal, **32900** Hong Kong Dollar, **3950000** Indian Rupees, **94000** Swedish Krona, **4200** Taiwan Dollar, **40100** Irani Riyal, **6000** Malaysian Ring, **9670000** South Korean Won, **116000** Philippine Peso, **72590** South African Rand, **7600000** Afghan Afghani, **20000** Chinese Yuan, **80000000** Indonesian Rupiah **4000** Turkish Lira at recover during the financial year 2022-23. 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 **115.165** KGs Gold during the financial year 2022-23. 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 **301** bottles of liquor during the financial year 2022-23. The accused passengers alongwith recovered liquor were handed over to Pakistan Customs for legal action.

- g. **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.

## 9. **Airguards Operations**

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.

## 10. **Role of Women in ASF**

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.
- f. Participation in UN Peace Keeping Mission.

## 11. **Training**

- a. **Training at ASF Academy & Airports.** ASF Academy Karachi & airports cater for all types of training of ASF personnel. 3331 all ranks were imparted training during financial year 2022-23 as under:-

Course Detail	Year-2022-23
MCMC Course (Domain Specific)	8
Platoon Commander Course	30
Promotion Cadre Courses	443
Advance Screener Course	248

QRF Training Course	196
Risk Management Course	16
Intelligence Course	51
BASC-51	1244
OBSAC-31	55
Training Cycle	944
Refresher	57
Preparatory Screener Course	39
<b>Total</b>	<b>3331</b>

- 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:-

<b><u>Departments</u></b>	<b><u>Intakes</u></b>
(1) Shaheen Airport Services	- 21
(2) Royal Airport Services	- 18
(3) Gerry's Dnata	- 34
(4) Pakistan Air Force	- 08
(5) Pakistan Coast Guard	- 06
(6) HQ Compcep	- 03
(7) ANF	- 15
(8) FBR	- 10
(9) TCS	- 02
(10) DHL	- 08
<b>Total</b>	<b>- <u>125</u></b>

- c. **Local Courses.** 405 x ASF staff attended different courses in various training institutions in Pakistan.

## 12. **Procurement**

**Uniform & Protective Clothing.** By virtue of its deployment at airports which are certainly very important public places, it is imperative that Airports Security Force personnel should wear an elegant uniform with unique and more secure look. In this regard, budget for

**Uniform and Protective Clothing** in FY 2022-23 amounting to **Rs.209,522,000/-** has been consumed for the procurement of under mentioned quantity of uniform items:

<b>S.No.</b>	<b>Name of Items</b>	<b>Qty Mtrs / Nos. / Pairs</b>
1.	Winter Jacket	6000
2.	Female Shoes	1297
3.	Web Belt	4547
4.	Force Sign	15000
5.	Socks Cotton	4000
6.	Quilt	10749
7.	Shirting Cloth	26500
8.	Shalwar Cloth	4900
9.	T. Shirt Half Sleeves	23900
10.	T. Shirt Full Sleeves	8667
11.	Stitched Camo Uniform	6500
12.	Jersey Male	3500
13.	Jersey Female	300
14.	Trouser Cloth	26500
15.	Ladies Hand Bag	1291
16.	LP items	-
17.	Weapon Closet	62
18.	Ballistic Shield	05
19.	Bullet Proof Jacket	220
20.	Boot DMS	90
21.	Oxford Shoes	1440

**2. Hardware.**

ASF endeavors to remain in step with the technological developments in the field of Aviation Security. Some of the equipment at airports need replacement as it is becoming old, obsolete and outdated. Budget of **Rs.9,350,000/-** has been consumed during FY 2022-22 for the procurement of Hardware to enhance the security standards:

<b>S. No.</b>	<b>Name of Items</b>	<b>Qty Nos. / Mtrs</b>
1.	Computer Core i5	25
2.	Laptop Core i5	12
3.	Laser Printer Medium duty	10
4.	Color Printer Spray Jet	5
5.	Document Scanner	3
6.	Misc items	1
7.	Misc items	1

**13. Arms / Ammunition.**

Budget of **Rs.77,884,885/-** has been consumed during FY 2020-21 for the procurement of under mentioned quantity of ammunition:

<b>S. No.</b>	<b>Type of Arms / Ammo</b>	<b>Qty Nos.</b>
1.	Ammo 9 x 19mm (Pistol)	200000
2.	Ammo 7.62 x 39mm (SMG)	602000
3.	Ammo 7.62 x 51 mm (Sniper)	15457
4.	Ammo 7.62 x 51 mm (G3A3)	42000



#### 14. **Equipment**

Details of procurement during FY 2022-23:

S No	Items	Qty
1.	<b><u>Procurement of 28x Baggage Screening Machines Through CAA</u></b>	
	After due process contract has been awarded to M/s Karsaz Pvt Ltd and delivery is expected in last quarter of this year.	28 Machines
2.	<b><u>Storage Capacity Enhancement of X-Ray Baggage Machines</u></b>	
	Increase the storage capacity upto 90x days (international hold / hand counters) at 8x Major Airports (JIAP, AIIAP, IIAP, BKIA, QIAP, FIAP, MIAP & SIAL)	8 x Major Airports
3.	<b><u>Audio / Video Recording System at ASF Control Room</u></b>	
	Installation of Audio / Video Recording sys at ASF Control Room for recording to monitor the conduct of staff with public at 8x Major Airports (JIAP, AIIAP, IIAP, BKIA, QIAP, FIAP, MIAP & SIAL)	8 x Major Airports
4.	<b><u>Audio / Video Recording at International Hold Baggage Search Counter - JIAP</u></b>	
	Audio / video recording system has been installed at International hold baggage search counter of JIAP Karachi.	JIAP Karachi
5.	<b><u>Phase Wise CCTV Up-gradation at JIAP Karachi</u></b>	
	Up-gradation / Replacement of 23x Cameras (22x Fix & 1x PTZ Cameras) installed at International Veranda / Hold Baggage / Briefing Area with IP based cameras due to blur / poor image.	23 x Cameras
6.	<b><u>CCTV live feed at HQ ASF</u></b>	
	CCTV live feed of Airports has been provided in Director General Office	Major Airports
7	<b><u>Installation of Solar System at Officer Mess Multan Airport</u></b>	
	Installation of solar system 5KVA at Officer Mess Multan Airport.	Multan Airport
8.	<b><u>Procurement of IT Hardware Equipment - FY 2022-23</u></b>	
	a. Computer	25
	b. Laptop	12
	c. HP Laser Jet Printer	10
	d. Spray Jet Color Printer	05
	e. Document Scanner	03

## 15. Finance

### Budget Allocation

Grant/Demand No	Original Budget	Supplementary Grant	Surrender	Final Budget Allocation
002	10195.969 M	222.037 M	87.148 M	10330.858 M

## 16. Admin

**Assistance Package.** The following cases of ASF deceased employees have been finalized for the Financial Year 2022-2023

- Cash Amount in Lieu of Plot.** Rs 50,000,000 have been disbursed among the families of ASF Deceased.
- Lump Sum Grant.** Rs 20,000,000 have been disbursed among the families of ASF Deceased.
- Marriage Grant.** Rs 5,600,000 have been disbursed among the families of ASF Deceased.
- Education.** Rs 4,500,000 have been disbursed among the families of ASF deceased.
- House Rent.** Rs. 4,500,000 have been disbursed among the families of ASF Deceased.

Massive tree plantation drive was carried out at all airports and about 5926 trees were planted.

## 17. Project

### a. **Completed PSDP Projects:**

S#	Name of Project	Estimated Cost (M)	Status
1	Construction of Double Story Ladies Hostel/Barrack With Provision of Third Story Alongwith Mess, Recreation Hall And Allied Facilities <b>at AIIAP Lahore (53 x Ladies Staff)</b>	86.923 (M)	Completed
2	Construction of Triple Storey Living Accommodation for ASF Personnel At <b>Lahore Airport (192 Persons)</b>	146.272 (M)	Completed
3	Construction of Barrack Accommodation along with Mess & Allied Facilities, Ladies Rest Room, MT, Store, Kote Magazine, Quarter Guard And OC Accommodation at <b>Skardu Airport.</b>	134.871 (M)	Completed
4	Construction Of Barrack Accommodation Along With Mess And Allied Facilities, MT, Store, Visitors Room, Ladies Rest Room, Kote Magazine, Quarter Guard and OC Accommodation at <b>Chitral Airport.</b>	61.534 (M)	Completed
5	Construction Of Double Story Barrack at <b>Faisalabad Airport.</b>	93.285 (M)	Completed

**18. Conclusion.**

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 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.

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## 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. 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. In addition, there are some dedicated/specialized units/centres like National Weather Forecasting Center (NWFC), Flood Forecasting Division (FFD), Tropical Cyclone Warning Center (TCWC), National Drought Monitoring Centre (NDMC), National Agrometeorological Centre (NAMC), Research & Development (R&D) Division, National Seismic Monitoring & Tsunami Early Warning Center (NSM&TEWC) etc., NAMC at Islamabad is supported by five Regional Agrometeorological Centres (RAMC's), located at Rawalpindi, Faisalabad, Tandojam, Quetta and Usta Muhammad. Similarly, 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 & tsunami etc;
  - (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), Glacier Lake Outburst Flood (GLOF) monitoring, Drought assessment, Wind Power Potential survey, 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 Services:**

The services being rendered by PMD to support government functionaries, ministries /departments etc. 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) Severe Weather Early Warnings and earthquake monitoring (NDMA / PDMAs and emergency relief agencies)
- (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 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)

## **Achievements (2022-23)**

- Reverse Linkage Project between Marmara Research Centre (MRC), Turkey and Pakistan Meteorological Department has been completed. However, training session of PMD technical staff is underway.
- Installation of new Weather Surveillance Radar at Multan is in progress.
- Installation of new Weather Surveillance Radar at Sukkur is in progress.
- Establishment of New Meteorological Observatory at Naran and Hostel for Operational Staff and Balakot.

### **A. Detail of PMD Projects during Year 2022-2023**

<b>S.No.</b>	<b>Name of the Project</b>	<b>Capital Cost of the Project (Rs.in Million)</b>	<b>Allocation for 2022-23 (Rs.in million) after economy-cut by GoP</b>	<b>Activities done</b>
1.	Installation of Weather Surveillance Radar at Multan in the Islamic Republic of Pakistan.	Rs.6188.756	Rs. 5.37	Rs.2.867 million was forwarded to Pak PWD for construction of residential building and Rs.1.685 million was paid to MEPCO for installation of transformer. The remaining amount was utilized for day-to-day expenditure towards POL, stationary, postage and telegraph etc.
2.	Installation of Weather Surveillance Radar at Sukkur in the Islamic Republic of Pakistan	Rs.2522.000	Rs.1.00	The expenditure was made for recurring charges in lieu of Spectrum charges of frequency allocation for radar, Hardware/Software, POL, Stationary, etc.
3.	Establishment of 1 <sup>st</sup> Class Observatory at Naran / Kaghan.	Rs.265.500	Rs. 20.0	The amount was handed over to Pak PWD to start the construction work of the project.

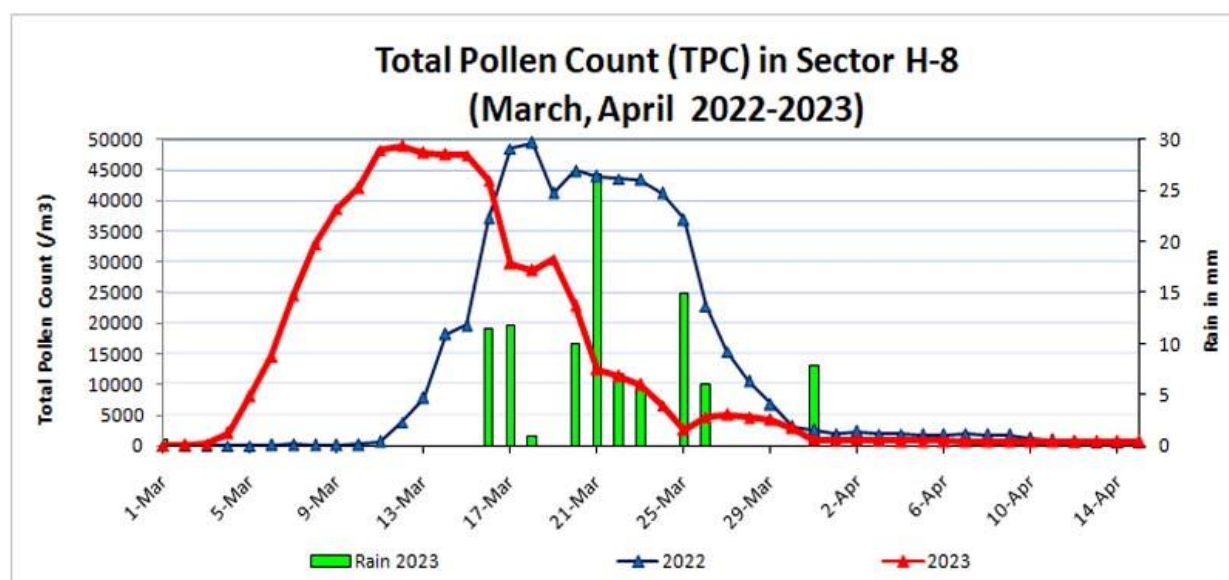
## B. Major Activities Performed during F.Y 2022-2023

### • 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.

### • 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. Pollen counts for the period 1<sup>st</sup> March to 14h April, 2023 for Islamabad (Sector H-8) is given below:



Pollens are hazardous for sensitive people suffering from respiratory diseases and 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](http://www.pmd.gov.pk) and through email [pollen@pmd.gov.pk](mailto:pollen@pmd.gov.pk) users can approach PMD for their queries regarding pollen count.



- **Monsoon Outlook and Flood Forecasting**

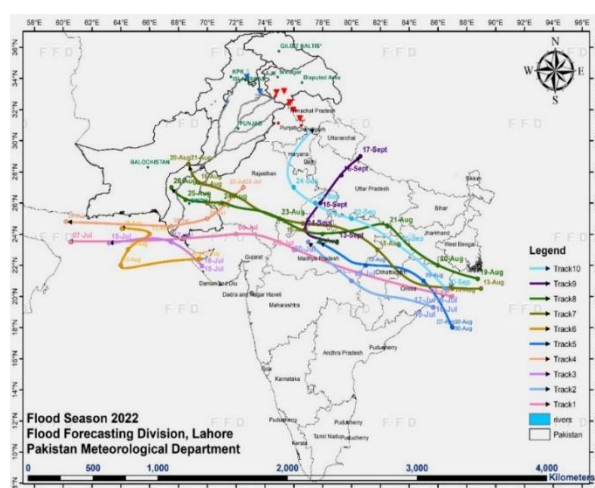
Each year, PMD issue Monsoon Outlook during the month of June before the start of monsoon season and shared with all concerned stakeholders like NDMA, FFC, GHQ, Ministry of Water & Power. PMD's Flood Forecasting Division (FFD), Lahore issued Flood Forecast Bulletin (A&B) / Advisories / Alerts on daily-basis from 15 June to 15 October to all concerned stakeholders during monsoon season 2022. Further, PMD also issues tehsil level forecast to the stakeholders.

- **Monsoon Season 2022 (1<sup>st</sup> July to 30 September, 2022):**

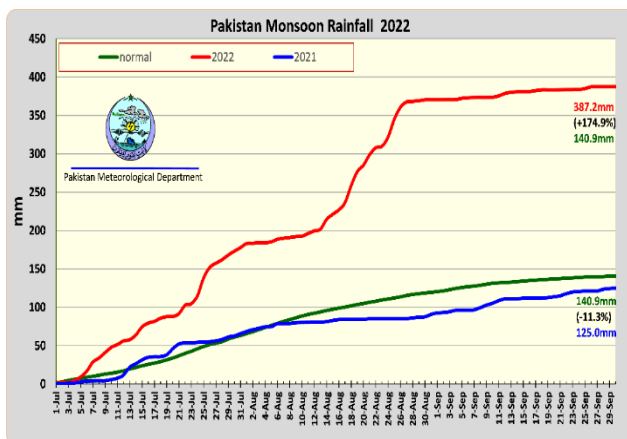
Monsoon Season 2022 was unprecedented and exceptional due to exceptional rainfall and flooding events. The following regional and global atmospheric conditions and indicators were observed:

- Persistent triple-dip La Nina, previously such situation was seen during 2010-2012 which were incidentally excessive monsoon years
- Negative IOD (Indian Ocean Dipole)
- Deepened Heat/seasonal-low pressure area, resulted by abnormally high temperatures during Apr-Jun, over south Pakistan which caused vigorous monsoon currents pull towards the heat-low center.
- Monsoon axis remained tilted in south (Lat. 22-24°N) compared to its normal/average position (Lat. 28°N or above).
- Three Low-pressure areas (LPAs) & four Depressions formed over Bay of Bengal moved towards Sindh-Balochistan (Fig) due to northeast-southwest oriented Tibetan / Sub-tropical High-pressure area.
- Climate change is causing more frequent extreme events like floods, drought, heatwaves, cyclones, sea-level rise & Glacier melting (GLOF) - This year 16 GLOF events in GB & KP have been witnessed against normal 5/6 events yearly.

This year monsoon season set on 30th June 2022 over Pakistan, a day earlier of its normal date (1<sup>st</sup> July) and withdrew during third week of September 2022. However, significant continuous rainfall occurred from 4th July onwards. Pakistan rainfall, for the country as a whole, during the period remained extremely above average (+175%). On regional scale, the rainfall during the period has also been excessively above average over Sindh (+426%) & Balochistan (+450%), largely above average over Punjab (+70%) & GB (+104%), above average over KP (+33%) and near average over AJK. A comparative cumulative rainfall of the years 2022 & 2021 versus 'normal' is shown in Fig. 2. The torrential rain caused massive devastating flash floods in eastern & southern Balochistan, Sindh, southwest Punjab and Khyber



Pakhtunkhwa (KP) inflicting over 1700 deaths, 0.5 million livestock, huge loss of crops and properties.

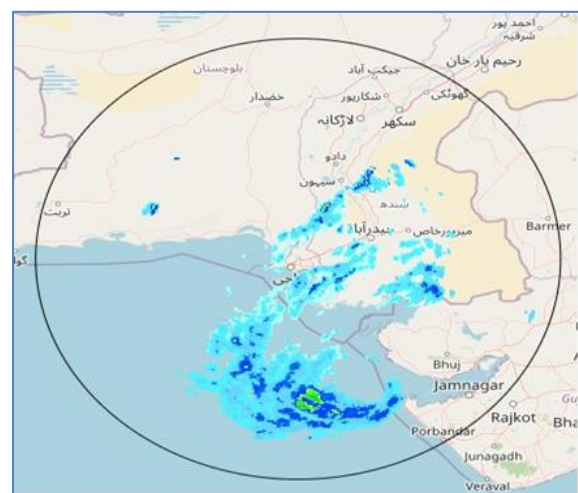
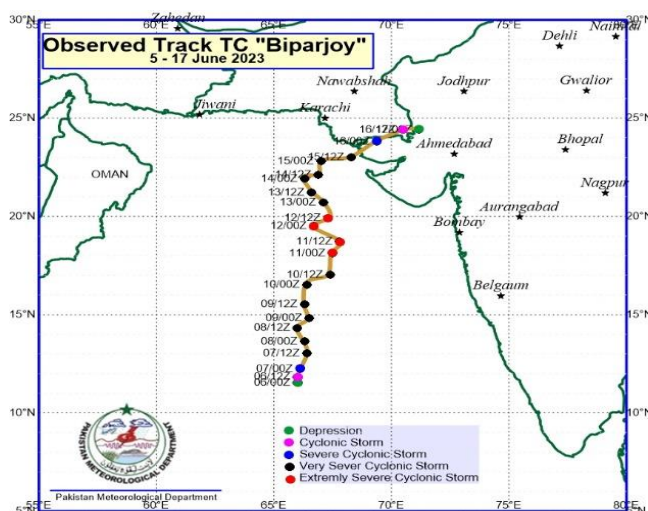
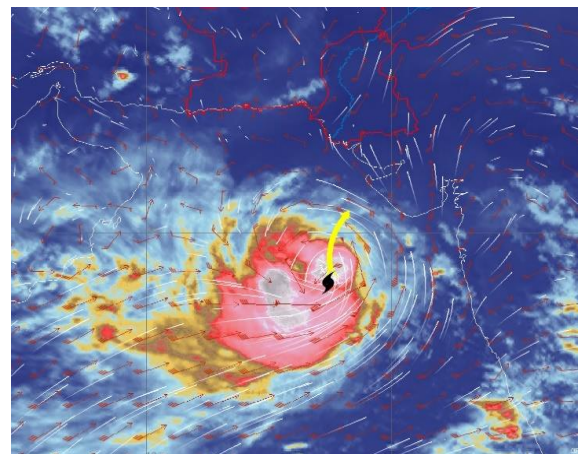


MONSOON 2022 RAINFALL UPDATE				
	Rainfall (% Deviation)			
	Jul	Aug	Sep	Jul to Sep
Pakistan	181	243	-21	175
Azad J&K	-7	-3	16	-2
Balochistan	450	590	-59	450
Gilgit-B	32	233	-19	104
Khyber-PK	30	58	-16	33
Punjab	116	52	-21	70
Sindh	307	726	-22	426

PMD issued regular weather advisories/alerts and played a proactive role. PMD's weather forecasts/flood forecasts earned appreciation at national and international level (by WMO).

- Very Severe Cyclonic Storm (VSCS) "Biparjoy"**

The formation of Very Severe Cyclonic Storm "Biparjoy" was the significant synoptic over the North Arabian Sea. Initially, a low-pressure area formed on 5<sup>th</sup> June, 2023 which turned into a depression next morning and further strengthened into a Cyclonic Storm (CS) on 7<sup>th</sup> June. Moving North with mean overall direction towards North-East it intensified into a Severe Cyclonic Storm (SCS) on 8<sup>th</sup> June, into a Very Severe Cyclonic Storm (VSCS) on 11<sup>th</sup> June and further into an Extremely Severe Cyclone storm (ESCS) on 13<sup>th</sup> June with maximum sustained winds of 180km/hour. The Very Severe Cyclonic Storm "Biparjoy" kept meandering along north-northwest course until 14<sup>th</sup> June; thereafter, it recurved



towards northeast and weakened into VSCS on June 15. Moving further northeast ward, it made landfall at Indian Port, Jakhau, between Ketī Bandar, Sindh and Gujarat (India) on evening of 16th June as a VSCS with maximum sustained winds of 120 Km/h and consequently converted into a SCS first and then into a CS. Track of the cyclone is given in the figure.

Moving further northeastward as a CS it kept its strength intact and stationed over Nagarparker (Tharparker) and adjoining Indian Rann of Kutch for the whole day before changing into deep depression over west Rajasthan, India. It caused severe heatwave conditions over Karachi and

other districts of lower Sindh for 4-days, 9<sup>th</sup> – 12<sup>th</sup> June, culminating into a dust-thunderstorms and widespread heavy rains in Southeast Sindh with light/moderate rainfall in Karachi during 13<sup>th</sup> to 17<sup>th</sup> June 2023.

PMD's Tropical Cyclone Warning Center, Karachi continuously monitored the cyclogenesis conditions over the North Arabian Sea, development of VSCS "Biparjoy" and propagation till landfall. The center issued advisories and warnings/alerts for all national stakeholders as well as for information of general public. PMD's timely information helped NDMA to make mitigation arrangements. NDMA in cooperation with the Sindh government have done commendable job of shifting of nearly one-lac peoples from vulnerable areas like Badin, Thatta, Ketī-Bandar etc. to the safe areas.

#### **9<sup>th</sup> Monsoon Forum and Climate Application (15 June, 2023, Islamabad)**

The 9<sup>th</sup> Monsoon Forum was jointly organized by the Pakistan Meteorological Department (PMD) and Regional Multi-hazard Early Warning System (RIMES), an institute for Asia and Africa. The forum was attended by more than 100 Participants from stakeholder organizations.

The main objective was to abreast users about the meteorological products, advisories and alerts as well as their interpretations in context of the socio-economic activity. Pertinent experts and scientists were also invited to share their expertise and experiences with suggestions for swift actions at both ends. To achieve the objectives of the forum, latest tools, techniques and ideas were elaborated through technical



presentations and discussions for early actions and timely responses. Experts from RIMES and ICIMOD provided guidelines to further refine products and actions. Experts from Pakistan Meteorological Department, Federal Flood Commission, rescue & relief organizations, academia etc. shared their views and comments.



## **Pakistan-Afghanistan Regional Flash Flood Guidance System (PARFFGS) Training and Steering Committee Meeting at Islamabad from 09-13 May, 2023**

Pakistan Meteorological Department (PMD) with the collaboration of World Meteorological Organization (WMO) organized Step-4 and Step-5 Training of Pakistan-Afghanistan Regional Flash Flood Guidance System (PARFFGS) (9-11 May) and Steering Committee Meeting (12-13 May) in Islamabad, Pakistan.



Flash Flood Guidance System (FFGS) has been designed by HRC (a US-based Agency) has been tailored and implemented at the regional center in Pakistan for operational use (known as PARFFGS) to provide guidance to forecasters for flash flood occurrence. The PARFFGS is an essential tool used by the PMD and Afghanistan Meteorological Department (AMD) to estimate potential flash flood conditions based on various data sources. To further enhancing the capacity of both-sides in flash flood monitoring, WMO has arranged these trainings and invited trainees from both countries. 12 Trainees from each side attended the training sessions. Main focus of trainings was to educate the trainees for more efficiently utilize FFGS products. Experts of hydrology from WMO and HRC imparted the trainings. After the training sessions, identified gaps and further enhancements in the FFGS products were discussed.

## **Orientation for Local Media Professionals on Early Warning System and Impact Based Forecasting, Chitral City on 27 February 2023**

Pakistan Meteorological Department (PMD) joined hands with RIMES, for organizing a one-day orientation program for media professionals on 27 February, 2023 at Chitral City. Main focus of the orientation was to help media professionals of the district to understand their roles and responsibilities with reference to the key components of EWS, enabling them to provide critical and reliable early warning information to at-risk communities by coordinating with the local authorities, PMD and other relevant stakeholder, to build lasting resilience. Trained media practitioners are better to act as intermediaries between experts, implementing agencies and local users in effectively communicating risk and responses.

## **Workshop on Impact-based Forecasting (IBF) and Anticipatory Action Planning at Ramada Hotel, Islamabad on 31<sup>st</sup> January, 2023**

Pakistan Meteorological Department (PMD) in collaboration of Regional Integrated Multi-Hazard Early Warning Systems for Asia and Africa (RIMES), and Food and Agriculture Organization (FAO) of the United Nations, organized a Workshop on “Impact-based Forecasting (IBF) and Anticipatory Action Planning on 31<sup>st</sup> January, 2023” at Ramada Hotel, Islamabad.

The Impact Based Forecast and Warning approach is a priority area for PMD and RIMES for ensuring enhanced resilience in vulnerable. Similarly, anticipatory action planning remains a key priority area for FAO which is pioneering the approach in Pakistan for drought preparedness and Early Warning System (EWS) development, utilizing scientifically measurable and agreed indicators to “trigger” anticipatory response actions, with government and communities. The workshop aimed to inform and build the understanding of IBF and how it can result in saving lives and protecting livelihoods from adverse impacts of disasters through informed and timely action planning. About 50 Participants from stakeholders organizations like NDAM & PDMAs, PCRWR, FFC, Provincial agriculture department of KP, SUPARCO, NUST, FAO, WFP, ICIMOD, CESVI, NDRMF, UNOCHA, Action Against Hunger, German Red Crescent etc. attended the workshop.

## **Inaugural Ceremony of “Rainwater Harvesting for Groundwater Recharge in Islamabad” site at PMD premises H-8/2, Islamabad**

Inauguration ceremony for the project of “Rainwater Harvesting for Groundwater Recharge in Islamabad” was held at PMD premises, Islamabad on 10 January, 2023. Honorable Chief Guest, Captain (Retd.) Muhammad Usman Younas, Chief Commission/Chairman Capital Development Authority (CDA), Islamabad was the Chief Guest. Dr Muhammad Ashraf, Chairman, Pakistan Council of Research in Water Resources (PCRWR), and Sardar Khan Zimri, Deputy Director General, Water Management, CDA, Islamabad were among the distinguished guests.

The honourable guests were welcomed by Mr. Sahibzad Khan, Director General, PMD along with the senior officers of PMD. Director General, PMD appreciated the project and emphasized that such a project should be launched in the rest of the urban cities of Pakistan to cope with the challenges of climate change on groundwater depletion/recharge. The chairman, PCRWR briefed about the importance and design of the project. The Deputy Director General, Water



Management (CDA), briefed about the other rainwater harvesting sites and installation challenges in Islamabad. The Chief Guest appreciated the efforts made by CDA and PCRWR. Later on, the rainwater harvesting site for groundwater recharge was inaugurated by the Chief Guest.

### **PMD-RIMES Workshop unstrengthening Last-Mile Communication for Efficient Early Warning, Islamabad on 3<sup>rd</sup> November, 2022**

Pakistan Meteorological Department (PMD) in collaboration of Regional Integrated Multi-Hazard Early Warning System (RIMES) based in Thailand organized a “Workshop on Strengthening Last-Mile Communication for Efficient Early Warning” at Ramada Hotel, Islamabad on 3<sup>rd</sup> November, 2022. RIMES has been collaborating with PMD in strengthening meteorological services through technical assistance, particularly for building their end-to-end multi-hazard forecast and EW capacities. For improved disaster preparedness, risk mitigation and response, RIMES has envisaged to enhance climate resilience through effective and timely dissemination of EW information among the last-mile users. To achieve this, RIMES is currently implementing “Strengthening Last-mile Communications (SLMC)” initiative in Pakistan as a test-pilot. This initiative is funded by the United States Agency for International Development (USAID) through the University Corporation for Atmospheric Research (UCAR). Participants from stakeholder organizations and sectoral representatives attended the workshop and shared their experiences and lesson learnt.

### **British High Commissioner to Pakistan, Dr. Christian Turner CMG, visited PMD Headquarters, Islamabad**

The honorable British High Commissioner to Pakistan, Dr. Christian Turner CMG, visited Pakistan Meteorological Department (PMD), Headquarters Office Islamabad, on 2<sup>nd</sup> November, 2022. The honorable guest was welcomed by the Director General, PMD, Mahr Sahibzad Khan along with the senior officers of PMD.



The distinguished delegates visited the Weather Surveillance Radar. Honorable High Commissioner showed keen interest in the operation of the Weather Radar. The delegation also visited National Weather Forecasting Centre (NWFC) and Seismic Monitoring Center. They were briefed on the operations of these centers, installations of Flash Flood Early Warning Center for Nullah Lai Basin. Honorable High Commissioner appreciated the efforts of PMD in provision of weather information and early warning. He thanked the PMD on warm welcome



and briefing on PMD services. Later on, the honorable guest planted a memorial tree in the premises of PMD.

### **Japanese Vice Minister for Foreign Affair visited PMD Headquarters, Islamabad**

The Japanese delegation headed by Honorable Parliamentary Vice Minister of Foreign Affair, Japan Mr. Taro Honda visited Pakistan Meteorological Department, Headquarters Office, Islamabad on 3<sup>rd</sup> August, 2022. The honorable guests were welcomed by the Mr. Sahibzad Khan, Director General, PMD along with the senior officers of PMD.

Vice Minister of Japan Mr. Taro Honda and Director General, PMD along with his team visited the newly completed “Specialized Medium Range Weather Forecasting Centre (SMRFC)” at Islamabad and observed its operationalization for Weather Forecasting of Pakistan. The delegation also visited Weather Surveillance Radar & Wind Profiler, National Weather Forecasting Centre (NWFC) and HPC facility. They were briefed about the functioning of Early Warning System for Nullah Lai (Islamabad-Rawalpindi). The Japanese delegation took keen interest in the working of PMD in general and appreciated the efforts being made in provision of information and early warning services. Director General, PMD expressed his gratitude for visiting PMD and thanked to the Government of Japan for extending cooperation to Pakistan in strengthening of Early Warning System of Pakistan for hydro-meteorological natural disasters.



### **Knowledge Sharing Workshop on Socioeconomic Benefits of Weather and Climate Services in Pakistan at Islamabad on 2<sup>nd</sup> August, 2022 and 4<sup>th</sup> August at Multan**

Pakistan Meteorological Department in collaboration with the International Centre for Integrated Mountain Development (ICIMOD) and their partners University of Leeds UK and Met Office UK organized a Knowledge Sharing Workshop on Socioeconomic Benefits of Weather and Climate Services in Pakistan at Ramada Hotel Islamabad on 2<sup>nd</sup> August 2022. Director General, PMD, Mahr Sahibzad Khan welcomed the distinguished delegates and briefly highlighted on the meteorological services being rendered and socio-economic benefits being obtained by the wide variety of socio-economic sectors. He stressed on the best and efficient utilization of Met. services specifically in agriculture sector.

Dr. Mandira Shrestha from ICIMOD also briefed on the key points of the study and efforts being made recommendations on further coordinated actions and planning practices for maximum yield and minimizing the losses due to the harsh weather and climate in general. Participants from sectoral organizations like agriculture, academia and scientists and researcher participated the event and shared their experiences and expertise for the improvement and efficient services delivery processes.



The second part of the workshop was organized in Multan on 4<sup>th</sup> August, 2022 which was mainly focused on the climate services for agricultural communities. PMD experts briefed the participants and tried to fill the gaps in understanding the PMD products for obtaining maximum benefits of information.

- **Capacity Building of PMD in Earthquake Monitoring:**

Under the Reverse Linkage (RL) Project between PMD & MRC, Turkey on Seismological Research, following two trainings were held for the capacity building of seismic experts and technicians. Installations of the necessary seismic equipment have already completed.

**2<sup>nd</sup> Training under Phase-I of the Project at PMD, Islamabad (29 August – 09 September 2022):**

Experts of MRC, Turkey visited PMD from 29 August to 09 September, 2022 to impart training for the PMD professional and carried out following activities:



- Training on computational seismology, development related to earthquake monitoring and research using study on local and regional earthquakes in and around Pakistan.



- Study on characteristics of active faults was carried out having seismogenic potential for various strong earthquakes between 2021 -2022.
- Provided Guidance on Site Classification equipment including seismic recorder, geophones etc. Sample-data collected, processed and analyzed.
- GPS training activity was based on PMD newly purchased Trimble GNSS equipment with configuration of real-time GPS stations, developed instrument serial number files for receiver-antenna pairs, antenna heights and corresponding reference points for the PMD-operated GNSS stations at Gwadar, Pasni, Ormara and Karachi.

• **1<sup>st</sup> Training under Phase-II of the Project at MRC, Turkey (21 May – 10 June, 2023)**

Twelve PMD professional visited MRC, Turkey during 21 May-10 June, 2023, for further training for the newly installed seismic equipment. Trainees were distributed in three groups for different component of training.

- PMD Seismology Team worked on newly obtained earthquake catalog and bulletin based on PMD seismic network for the period 2022–2023 compiled under SeisComP-Pro and SEISAN software for earthquakes occurred in and around Pakistan.
- Shallow and deep crustal structure studies using Receiver Function, Joint Surface waves Dispersion Analysis was done based on PMD seismic Network at MRC Turkey. This will further help in seismic hazard and risk assessment for Pakistan region.
- GPS training was focussed on PMD data recorded by 04 GNSS stations at Gwadar, Pasni, Ormara and Karachi. It will help in future crustal deformation study, plate tectonic movement and earthquake prediction.
- PMD Site Classification team has worked on synthetic data and software's provided by MRC Turkey and applied the techniques of surface waves and micro-tremor analysis. PMD team collected site survey data using newly procured site-selection equipment around Islamabad and surrounding areas for more than 20 sites, analyzed and results have been further analyzed by Turkish experts for Vs-30 measurement. This data will be further applied in construction of high rise buildings and building codes.



• **8<sup>th</sup> National Monsoon Forum at Islamabad on 6<sup>th</sup> July, 2022**

The 8<sup>th</sup> National Monsoon Forum was inaugurated by Mr. Mir Hassan Naqvi, Senior Joint Secretary, Aviation Division, in Islamabad on 6<sup>th</sup> July 2022. PMD convenes monsoon forum annually in collaboration of RIMES to abreast about the projections of seasonal outlook prepared by regional centers, and PMD's outlook for monsoon season from July to September. In the inauguration note, Mr. Mir Hassan Naqvi acknowledged the support provided by RIMES and other key partners to the Pakistan Meteorological



department (PMD) in strengthening the forecast and early warning for greater preparedness and response in all sectors.

Mahr Sahibzad Khan, Director General PMD, warmly welcomed and thanked Regional Multi-hazard Early Warning System (RIMES) for their support to organize this forum. He briefly highlighted on various aspects of monsoon and emphasized on the importance of sharing timely information, especially, in the current scenario of drastic and far-reaching impacts caused by climate change.

Mr. Ahmed Kamal, Chairman Federal Flood Commission (FFC), in his opening remarks, expressed his gratitude towards the PMD for their relentlessness and their current monsoon preparedness efforts which he acknowledged as being very efficient. He shared the FFC's progress for flood mitigation. In his welcome note, Brig. Waseem Uddin, Member (Operations) of the NDMA appreciated PMD on timely forecasts as well as efforts of FFC in flood management. He stressed on the early actions for monsoon preparedness. He shared the significance of NDMA's National Simulation Exercise 2022 (SIMEX).



The presentations and discussions focused on assessment of previous year's forecast and actions undertaken, forecast for the current season, planning and implementation of forecast-based anticipatory management strategies by user sectors. In conclusion, key stakeholders also made recommendations for enhancing forecast generation and application, ensuring robust coordination among the relevant stakeholders, informed and timely decision making and identification of priority interventions based on various scenarios. The forum was attended by More than 100 participants which included senior representatives of National Disaster Management Authority (NDMA), provincial Disaster Management Authorities (PDMAs), the Federal Flood Commission (FFC), relevant ministries, UN agencies, Emergency Response Agencies, development sector partners and academia.

- **Miscellaneous Foreign trainings:**

In various technical trainings, 20 PMD officers/officials visited institutions in Italy, Thailand, Norway, China, Japan, Nepal etc. for participation in the workshops, trainings, meetings related to various aspects of meteorology and their capacity building. Through Online distance trainings programs, workshops and technical meetings PMD officers/officials also participated in various



trainings / meetings organized by international organizations like WMO, RIMES, CMA, JICA, ICIMOD, ICAO etc.

- **Climate related Publication:**

- i. PMD's Climate Data Processing Center (CDPC) published Pakistan's Monthly Climate Summaries for each month during 2022-23 period, as well as, published "State of Pakistan Climate for 2022".
- ii. PMD's National Agromet Centre issued Monthly, Decadal and Weekly Agromet Bulletins. Comprehensive advisories/outlooks for farmers; including general forecast for the upcoming week in national language, talk-shows produced by PMD experts in local languages etc. These bulletins are very useful for scheduling of field activities like ploughing, sowing, watering, spraying of pesticides, use of fertilizers, harvesting etc.
- iii. 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.
- iv. All above publications/bulletins are uploaded on PMD Website <www.pmd.gov.pk> for facilitation of end-users'.

- **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. PMD accommodated numbers of internees from educational institutions to support national internship programme.

### **C. PMD Budget for F.Y. 2022-2023**

a)	Non-Development Budget allocation	=	Rs. 2266.000 million
	After economy-cut budget became	=	Rs. 2036.000 million
b).	Development Budget (PSDP) allocation		
		Local =	Rs.30.000 million
	+	<u>Foreign =</u>	<u>Rs.10.000 million</u>
		Total =	Rs.40.000 million
	After economic-cut, PSDP allocation became:		
		Local =	Rs.26.370 million
	+	<u>Foreign=</u>	<u>nil</u>
		Total =	Rs.26.370 million

## List of Abbreviations/Acronyms

<b><u>Abbreviation</u></b>	<b><u>Expanded Form</u></b>
ADP	Annual Development Programme
AGM	Annual General Meeting
AIAP	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



**Annex-I**

PSDP 2022-23 (Rupees in Millions)						
S. No	Name of Project	Total Cost	Actual Expenditure upto 30th June, 2022	Allocation 2022-23		
				Original Rupees allocation	Foreign Aid	Total
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)	86.92	86.92	0.000	0.000	0.000
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	167.58	167.58	0.000	0.000	0.000
3	Construction of Airport Security Force Camp at Islamabad International Airport	2,586.86	2,403.81	66.630	0.000	66.630
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.	134.87	105.00	29.871	0.000	29.871



PSDP 2022-23 (Rupees in Millions)						
S. No	Name of Project	Total Cost	Actual Expenditure upto 30th June, 2022	Allocation 2022-23		
				Original Rupees allocation	Foreign Aid	Total
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.	61.53	57.53	4.000	0.000	4.000
6	Construction of Double Storey Barracks for ASF at Faisalabad Airport.	93.29	88.29	5.000	0.000	5.000
7	Construction of Double Storey Director South Secretariat Offices ASF alongwith allied Facilities adjacent to HQs ASF Karachi	39.63	39.63	0.000	0.000	0.000
8	Construction of Rain Water Harvesting Kasana Dam at Islamabad International Airport.	2,629.42	1,624.31	0.000	0.000	0.000
9	Construction of triple storey Living Accommodation for ASF Personnel at Lahore Airport (192 Persons)	146.27	146.27	0.000	0.000	0.000
10	Construction of triple storey living Barrack for 192x ASF Personnel alongwith Mess, Recreation Hall at Multan Airport	144.56	144.56	0.000	0.000	0.000

PSDP 2022-23 (Rupees in Millions)						
S. No	Name of Project	Total Cost	Actual Expenditure upto 30th June, 2022	Allocation 2022-23		
				Original Rupees allocation	Foreign Aid	Total
11	Developing Reverse Linkage between Marmara Research Centre (MRC), Turkey and Pakistan Meteorological Department Islamabad	168.31	59.20	0.000	0.000	0.000
12	Installation of Weather Surveillance Radar at Karachi in the Islamic Republic of Pakistan	1,580.00	1,210.11	0.000	0.000	0.000
13	Installation of Weather Surveillance Radar at Multan in the Islamic Republic of Pakistan. Multan.	1,848.65	43.82	5.370	5.000	10.370
14	Installation of Weather Surveillance Radar at Sukkur in the Islamic Republic of Pakistan, Sukkur.	2,522.00	22.93	1.000	5.000	6.000
15	New Gwadar International Airport NGIA	51,298.17	1,868.08	3,081.129	0.000	3,081.129
16	Up-gradation of ASF Academy, Karachi	1,737.53	388.83	95.000	0.000	95.000
17	Up-gradation of ASF Academy, Karachi. (PC-II)	50.00	25.00	3.000	0.000	3.000
18	Construction of ASF Accommodation at Turbat Airport	241.48	0.000	3.000	0.000	3.000
19	Construction of Kote Quarter Guard & Magazine at Panjgur Airport	34.928	0.000	0.000	0.000	0.000
20	Construction/ Establishment of Airport at Mansehra	1,600.000	0.000	0.000	0.000	0.000

PSDP 2022-23 (Rupees in Millions)						
S. No	Name of Project	Total Cost	Actual Expenditure upto 30th June, 2022	Allocation 2022-23		
				Original Rupees allocation	Foreign Aid	Total
21	Establishment of new Meteorological Observatory at Naran and Hostel for operational staff at Balakot	265.500	0.000	20.000	0.000	20.000
22	Extension / Upgradation of Bannu Airport (Land Acquisition )	675.980	0.000	0.000	0.000	0.000
	<b>Total</b>			<b>3,314.000</b>	<b>10.000</b>	<b>3,324.000</b>