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# A Study on the Digital Appraisal System

## Incorporating Climate Resilience and Gender Criteria into the Project Life Cycle of Pakistan

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On behalf of the
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# Foreword

The Government of Pakistan is at a pivotal moment in its climate action journey, as it prepares to submit the first Biennial Transparency Report (BTR) and National Inventory Report (NIR) to the United Nations Framework Convention on Climate Change (UNFCCC) by December 31, 2024. These reports are essential components of Pakistan's commitment to transparency in climate action, and they must align with the Modalities, Procedures, and Guidelines (MPGs) outlined by the UNFCCC. In addition, Pakistan's updated Nationally Determined Contributions (NDC) 3.0, due for submission in 2025, will further solidify the country's role in global climate efforts.

The Ministry of Climate Change and Environmental Coordination's think tank, the Global Climate-Change Impact Studies Centre (GCSIC), plays a critical role in overseeing the national and international reporting on greenhouse gas (GHG) inventories and climate actions. As Pakistan works to align its climate reporting with global standards, the study highlighted here provides invaluable insights and recommendations to strengthen the Monitoring, Reporting, and Verification (MRV) system, which is crucial for accurate and transparent climate reporting.

A key recommendation of the study is the establishment of a "National Task Force on Enhanced Transparency System," aimed at ensuring effective coordination between national and provincial levels. This will help streamline the MRV process and enhance the quality of climate data, enabling Pakistan to better meet its international obligations. Additionally, the study stresses the importance of aligning Pakistan's 2017 Technology Need Assessment (TNA) with the updated NDC 2021 and the National Adaptation Plan (NAP) 2023. It also calls for the development of a comprehensive technological roadmap to guide climate actions in the country.

The study further underscores the need for a robust IT infrastructure to support the RISQ Transparency Platform. This includes hardware and software upgrades, server enhancements, and improved cloud system performance, all of which are essential for the ongoing maintenance and growth of Pakistan's climate data management systems. With the granularity of climate risk data increasing, the study emphasises the need for stronger Climate Risks Assessments (CRAs) and the expansion of climate-related data for key sectors such as agriculture, water, health, biodiversity, and urban settlements.

A critical element of this effort is the creation of a centralised platform for sharing climate data, which would allow for seamless collaboration with key climate data agencies. This centralised system will not only facilitate better decision-making but also ensure that the MRV system is fully aligned with both federal and provincial monitoring and evaluation (M&E) institutions.

I congratulate Shakeel Imtiaz, GIZ Pakistan's Team Lead for Climate Governance, and the author of this comprehensive study, on preparing a report with practical implementation strategies to strengthen the Enhanced Transparency System in Pakistan.

**Muhammad Arif Goheer**

**Executive Director**
**Global Change Impact Studies Centre (GCISC)**

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Finally, the author is grateful for the unwavering support extended by the NAP team (Nicolai Dellmann, Dorje Lama, Mahrukh Saleem, Vaaniya Iftikhar) in finalising this study.

# List of Abbreviations

| | |
|---|---|
| ADB | Asian Development Bank |
| ADP | Annual Development Program |
| BAU | Business-as-Usual |
| BTR | Biennial Transparency Report |
| CCDE | Climate Change Data Ecosystem |
| CCGAP | Climate Change Gender Action Plan of the Government of Pakistan |
| CCIT | Climate Change Investment Tracker |
| CCM | Climatic Check Method |
| CDP | Central Digital Platform |
| CRAs | Climate Risks Assessments |
| DDWP | Departmental Development Working Party |
| DDWP | Divisional Development Working Party |
| DRR | Disaster Risk Reduction |
| DWP | Development Working Party |
| ECNEC | Executive Committee of the National Economic Council |
| ETF | Enhanced Transparency Framework |
| FABS | Financial Accounting & Budgeting System |
| GCSIC | Global Climate-Change Impact Studies Centre |
| GIS | Geographic Information Systems |
| GST | Global Stocktake |
| iPAS | Intelligent Project Automation System |
| KP | Khyber Pakhtunkhwa |
| KPITB | Khyber Pakhtunkhwa Information Technology Board |
| LT-LEDS | Long-Term Low Emissions Development Strategies |
| M&E | Monitoring and Reporting |
| MoCC&EC | Ministry of Climate Change and Environmental Coordination |
| MoDMR | Ministry of Disaster Management and Relief |
| MoEFCC | Bangladesh's Ministry of Environment, Forest and Climate Change |
| MoPD&SI | Ministry of Planning, Development and Special Initiatives |
| MOITT | Ministry of Information Technology and Telecommunication |
| MTDF | Medium-Term Development Framework |
| MPGs | Modalities, Procedures, and Guidelines |
| MRV | Monitoring, Reporting, and Verification |
| NAM | New Accounting Model |
| NDC | Nationally Determined Contributions |
| NEC | National Economic Council |
| NIR | National Inventory Report |
| PACT | Punjab Adaptation to Climate Tool |
| P&M | Policies & Measures |
| PARC | Pakistan Agriculture Research Centre |
| PARC | Pakistan Agriculture Research Centre |
| PBCRGs | Performance-based climate resilience grants |
| PBS | Pakistan Bureau of Statistics |
| PCFMS | Planning Commission Forms Management System |
| PCN | Project Concept Note |
| PDWP | Provincial Development Working Party |
| PECA | Prevention of Electronic Crimes Act |
| PIFRA | Project to Improve Financial Reporting and Auditing |

| | |
|---|---|
| PIM | Public Investment Management |
| PIMA | Public Investment Management Assessment |
| PITB | Punjab Information Technology Board |
| PLIS | Planning Information System |
| PMD | Pakistan Meteorological Department |
| PMES | Project Monitoring and Evaluation System |
| PSDP | Public Sector Development Program |
| SMDP | Smart Monitoring of Development Projects |
| SP&GM | Social Protection and Gender Mainstreaming |
| TNA | Technology Need Assessment |
| UNRCO | United Nations Resident Coordinator's Office |
| VNR | Voluntary National Reviews |
| WDD | Women Development Department |
| WEF | World Economic Forum |

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# Executive Summary

The 'Digital Appraisal System" study report presents insightful outcomes of an in-depth literature review and consultations with the political partners of the National Adaptation Plan project. The study analysed the existing digital appraisal systems of the Planning Commission and the Planning and Development authorities of the provinces of Punjab and Khyber Pakhtunkhwa with regards to integrating climate resilience and gender criteria into their digital project appraisal systems. It also identified capacity needs and further recommended targeted actions for strengthening these digital appraisal systems.

To access green climate financing and address Pakistan's climate vulnerabilities, the Planning Commission under the Public Finance Management Act 2019[1] notified the "Handbook on Climate Risk Screening for development Projects" on 5th July 2024. It provides guidance to the development practitioners regarding climate risk assessment in the project lifecycle. The Planning Commission's "Manual for Development Projects 2024" is also updated, and climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation. This updated Manual provides climate sensitive framework for planning with integration of climate resilience considerations into medium- to long-term (5 or more than 5 years), medium-term plans (3-5 years) and annual or medium-term plans.

Furthermore, the project proformas have also been climate proofed (PC-I to PC-V 2024) with integration of climate risk assessment, resilience, adaptation and mitigation climate actions into the project design and development planning. The integration of the revised project Proformas (PC-I) 2024 and the PC-II, in case of feasibility, in the existing digital appraisal system such as "Intelligent Project Automated System" (iPAS) and provincial digital appraisal systems requires a substantial effort and support. Based on consultations with the planning authorities, the study underscores the need for a phase-wise integration of climate risk screening assessment into the digital appraisal system at both the Federal and Provincial levels. In Phase-I, the study recommends integration of climate resilience PC proformas into the Planning Commission's Intelligent Project Automation System (iPAS)[2] and the Federal ministries. In Phase-II, the study recommends extending the integration of climate resilience PC proformas into the provincial authorities' digital appraisal system. Further to this, the Planning

[1] This handbook is notified under the Chapter III (Development Projects and Maintenance and use of Public Assets) of the Public Finance Management Act 2019. Please see details of the Chapter III at https://www.finance.gov.pk/PublicFinanceManagementAct_2019.pdf

[2] With iPAS, project managers and Federal Ministry Officials receive support that provides them with tools to enhance project operations, financial management, monitoring, and task execution. Spatial Decision Support System is a part of the iPAS. https://www.app.com.pk/business/planning-ministry-to-undergo-digital-transformation-in-next-6-months-ahsan-iqbal/

Manuals for Development Projects of the provinces will be updated, and climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation.

However, the existing institutional environment (human and technical resources) and IT infrastructure (hardware and software) of the planning authorities is inadequate for climate data collection, data analysis, data monitoring and reporting on the risk informed planning. Furthermore, comprehensive support will also be required for the climate data integration (National Adaptation Plan 2023 indicators) into the iPAS and provincial digital appraisal system along with technical support to address any issues or challenges data users may encounter.

Given the granularity of climate data, there is no centralised climate data management system. Interoperability remains a significant challenge for the Federal and Provincial digital appraisal systems. Distributed data infrastructure which is available in small clusters is difficult to manage. Estimating and planning for the future expansion in a fragmented infrastructure is a challenging task. There is a significant need to have a consolidated infrastructure for the digital appraisal system.

Every project will undertake a Climate and Hazard Initial Risk Assessment (CHIRA) screening to assess the level of risk to the project and its activities at the Project Concept Note and PC-I stages to proceed further. There is a substantial need to train the planning and technical experts in the ministries and the provincial governments on the climate risk management cycle and on scoring methodology for climate and disaster risk screening.

The different checklists—carbon credit, Disaster Risk Reduction, gender, financial checklist, and climate risk checklist—provide an opportunity to align the planning cycle with the necessary standards and requirements. Likewise, the Monitoring, Reporting, and Verification (MRV) system is not integrated into the existing digital appraisal system at both federal and provincial levels.

The study provides insightful recommendations for strengthening the digital appraisal systems. These include institutional capacity enhancement at the federal and provincial levels with the provision of human resources and IT infrastructure (software and hardware), substantial data integration support for updating the iPAS and digital appraisal system, strengthening cloud technologies, strengthening coordination mechanisms for the digital appraisal system, among others. It also suggests capacity development of planning and technical officers on climate risk assessment for risk informed planning and reporting. Finally, it suggests enhancing development planning processes at the sub-national levels through the integration of climate change methodologies for climate risk assessment, resilience adaptation and mitigation into the legal and regulatory framework as well as planning and development guidelines.

The study also provides a case study of Bangladesh's successful integration of climate resilience criteria into its Planning Commission. Bangladesh has developed a user-friendly, web-based Geographic Information System (GIS)-based Planning Information System (PLIS) and Climatic Check Method (CCM). This has helped the Bangladesh Planning Commission to use climate risk information effectively during national and local development planning and project appraisal processes to strengthen the climate resilience of public investment.

The second pillar of this study focuses on the "Enhanced Transparency Framework (ETF)". The Government of Pakistan is required to submit to the UNFCCC the first Biennial Transparency Report (BTR) and National Inventory Report (NIR), if submitted as a stand-alone report, in accordance with the Modalities, Procedures, and Guidelines (MPGs), and Nationally Determined Contributions (NDC) 3.0 as per timelines agreed in negotiations.

The Global Climate-Change Impact Studies Centre (GCISC), the intellectual arm of the Ministry of Climate Change and Environmental Coordination, spearheads the oversight of national and international reporting on greenhouse gas (GHG) inventories and climate actions, with ongoing initiatives to ensure alignment with international benchmarks and protocols. To strengthen a country wide MRV system, the study recommends setting up a "National Task Force on Enhanced Transparency System" for effective coordination at the national and provincial levels. It also stresses to align the Pakistan 2017 Technology Need Assessment (TNA) with the updated NDCs and National Adaptation Plan (NAP) 2023 and to further develop a technological road map on climate actions. Furthermore, there is a significant need to develop a full IT infrastructure (hardware and software, server upgrades, strengthening the performance of cloud systems) for the RISQ Transparency Platform enhancement and maintenance.

Given the granularity of MRV data, the study strongly recommends strengthening Climate Risks assessments (CRAs) data, meta-data and other associated climate related data for the prioritised sectors such as Agriculture, water, health, biodiversity, urban settlement, among others. It further recommends updating the knowledge management portals under the Central Digital Platform (CDP).

There is a further requirement to establish a centralised repository and platform for sharing climate information and data in close collaboration with key climate data agencies (Pakistan Meteorological Department, National Disaster Management Authority, Pakistan Agriculture Research Centre) and other data systems in Pakistan. Furthermore, it is recommended to align the MRV system with the Federal Government's and Provincial Governments' M&E institutions and Directorates.

## Cross Cutting Areas

The study strongly recommends development of a comprehensive "Action for Climate Empowerment (ACE) Strategy" with an action plan for implementation in the six ACE elements- climate change education and public awareness, training, public participation, public access to information, and international cooperation on these issues.

It also highlights the importance of gender, youth and social inclusion in climate technologies and recommends undertaking a comprehensive study on gender, youth, and social inclusion analysis in the identification and prioritisation of technologies.

In summary, the study concludes that suitable and clear organisational mandates along with a robust financial framework guarantee the availability of experts, the flow of data, efficient systems and tools, and sufficient stakeholder engagement to deliver useful insights to decision makers and fulfil regular national reporting obligations under the Convention and the Paris Agreement. It also underscores the need for a bottom-up approach ensuring data sharing from the sectors for an evidence-based reporting on climate actions. Finally, it suggests enhancing climate modelling capacity of the prioritised sectors and local governments in the provinces.

# Chapter 1: Introduction

## 1.1 Context

The Government of Pakistan is improving its "Public Investment Management" (PIM) to support economic growth, planning and budgeting processes, data governance, service delivery and to make public infrastructure more sustainable and resilient to climate change.

The climate agenda is a high priority for the Government of Pakistan. The recently approved[3] "Handbook on Climate Risk Screening in Policy Planning" by the Planning Commission, in July 2024, is a significant step by the Government towards reducing Pakistan's climate vulnerabilities. This handbook provides guidelines[4] for climate change screening, adaptation, and mitigation assessments into the project life cycle. Additionally, the "Manual for Development Projects 2024"[5] has been also approved[6], updated and climate proofed by the Planning Commission.

All projects (both new and revised) shall be uploaded on Planning Commission's web-based Intelligent Project Automation System (iPAS) on revised PC-I 2024 proforma and on PC-II proforma, in case of feasibility study. This integration into the iPAS and in the existing digital appraisal systems of planning authorities of Punjab and Khyber Pakhtunkhwa will require a substantial support for setting up a robust climate data governance system. It further necessitates training of the planning and technical Officers, who are responsible for the preparation of the Project Concept Note and PC-I, on the Climate and Hazard Initial Risk Assessment (CHIRA) screening. This training is vital to assess the level of risk to a project and its activities.

The Nationally Determined Contributions (NDC) 3.0 will be submitted to UNFCCC in 2025. It will be aligned with the goals of the Paris Agreement and respond to the outcomes of the first Global Stocktake (GST). Addressing this, implementation and finance gaps identified in first GST requires a coordinated effort in putting forward robust, implementable commitments in the NDCs 3.0 and Long-Term Low Emissions Development Strategies (LT-LEDS) in line with the Paris Agreement. In this regard, GIZ Pakistan is supporting the Ministry of Climate Change and Environmental Coordination's

[3] See notification of this Handbook in Annex-I.
[4] The integration of these three assessments as well as a monitoring and evaluation (M&E) framework, into the existing digital appraisal system at the national, regional and local authorities of Pakistan is central to the implementation and sustainability of climate-resilient sectoral planning.
[5] The updated Manual for Development Projects 2024 is all inclusive document with comprehensive guidance to improve understanding, efficiency and efficacy of project management including identification, preparation, appraisal, approval, funding, implementation, and monitoring and evaluation, among others. This Manual comprises of four volumes: (1) Manual of Development Projects 2024 (2) Compendium of Annexures (3) Instructions for Techno-economic Feasibility Studies and (4) Handbook for Climate Screening for Policy Planning.
[6] See notification of the updated Manual in Annex-II.

think tank, the Global Climate-Change Impact Studies Centre (GCSIC), in developing a robust climate transparency framework and had established a web-based RISQ Transparency Platform.

## 1.2 Objectives

The objectives of this study include:

a. To analyse the existing digital appraisal system at the Federal and Sub-National levels (Punjab and Khyber Pakhtunkhwa) incorporating climate resilience and gender criteria.

b. To highlight major needs and gaps in the existing digital appraisal system on climate change (mitigation and adaptation actions), with a specific focus on gender aspects.

c. To suggest lessons learned from best practices regarding the incorporation of climate and gender criteria into the digital appraisal system and climate transparency system for replication.

d. To provide viable recommendations with robust roadmaps on the digital appraisal system and the climate transparency system for implementation.

## 1.3 Methodology

This study methodology comprises principally five processes, which are as follows:

### Secondary Source of Data Collection

In the preparation of this study, a thorough relevant literature review of national and international of climate actions was carried out, including the National Climate Change Policy 2021, updated Nationally Determined Contributions (NDC) 2021, and the updated Manual of Development Projects 2024, climate transparency documents (reports on the RISQ Transparency Platform), digital policies, digital appraisal system being used locally internationally, cloud policies, among others.

### Primary Data Collection

Primary data was collected through Key Informant Interviews (KII) and consultations with the Planning Commission, MoCC&EC, GCSIC, and from the Planning and Development Authorities of Punjab and Khyber Pakhtunkhwa. Additionally, development partners such as the Asian Development Bank and Sub-National Governance Program-II were also consulted.

### Instruments of Data Collection

A questionnaire[7] with a combination of both closed and open questions was designed to obtain written information from officers in the ministries and planning authorities in KP and Punjab. GIZ Technical

[7] See Annex-III

Advisors in the provinces of Punjab and KP supported the collection and assessment of data by supplying relevant information and data.

#### Data Analysis

Questionnaires were collected, and data was compiled and analysed qualitatively. Inputs received during KIIs from the relevant officers and experts are descriptively explained in this study.

#### Recommendations and Roadmaps

This study provides coherent recommendations with Road Maps for the political partners to establish and implement an effective digital appraisal system and climate transparency system at the national level and in the provinces of Punjab and Khyber Pakhtunkhwa.

## 1.4 Scope of the Study

The scope of this study is as follows:

a. To analyse the different appraisal tools currently used—or under development—by the national institutions at the Federal and Sub-National levels incorporating climate resilience and gender criteria in charge of planning and reporting, and by their partners (donors).
b. To highlight key needs and gaps for improving the system in place to better align with planning and reporting needs on climate change (mitigation and adaptation actions), with a specific focus on gender aspects.
c. To provide policy recommendations with road maps on the digital appraisal system and the climate transparency system for implementation.

The geographical focus of this study is limited to the provinces of Punjab and Khyber Pakhtunkhwa only.

## 1.5 Problem Statement

### *1.5.1 Digital Appraisal System*

Development planning in Pakistan aspires to improve the quality of life of people through various policies, programs, and projects in the areas of social sector development, infrastructure and connectivity, economic competitiveness, and climate change. Under the updated Manual for Development Projects 2024, the climate sensitive framework for planning provides climate resilience

considerations for medium-to long-term (5 or more than 5 years), medium-term plans (3-5 years) and annual[8] or medium-term plans.

Every project needs to undertake climate and hazard initial risk assessment screening to assess the level of risk to project and its activities at Project Concept Note and PC-I stage to proceed further. Considering the granularity of climate data, the current human resource is inadequate for integrating climate resilience projects into the digital appraisal system. This necessitates the need to create new positions both technical and IT for review of climate projects, data management, and reporting on climate actions.

Furthermore, this integration into the existing Planning Commission's (PC) web-based Intelligent Project Automation System (iPAS), Punjab Smart Monitoring of Development Projects (SMDP) and Khyber Pakhtunkhwa (KP)'s Planning Commission Forms Management System (PCFMS) will also require enhanced capacity development regime. Assessment of these system will also be required to find the potential for integration of climate Risk and gender criteria along with the technology stack used for these solutions. The in-depth understanding of climate risk assessment and its scoring mechanism among planning experts, technical experts are currently lacking.

The existing IT infrastructure (hardware and software) is also insufficient to meet the demands for this integration into these existing digital appraisal systems. Furthermore, the distributed infrastructure which is available in small clusters is difficult to manage. Estimating and planning for the future expansion in a fragmented infrastructure is a challenging task. For strengthening climate data governance and its management at the Planning Commission and in the provinces of KP and Punjab, there exists an opportunity to strengthen interoperability between the Provincial as well a federal datacentre, cloud-based IT system, data security, server upgradation for housing additional apps, software development and upgradation to latest versions, among others.

Integration of Monitoring, Reporting and Verification (MRV), climate change check lists (carbon credit, gender, Disaster Risk Reduction (DRR), climate finance, climate risk assessment), and indicators of NAP 2023 provides an opportunity to align the planning cycle with the necessary standards and requirements in the digital appraisal system.

At the regional level, the climate resilience sectoral guidelines have not been developed for climate actions for the climate and hazard initial risk assessment and climate adaptation and resilience

[8] The formulation and approval processes of the Annual Plan and the annual PSDP, provincial Annual Development Program (ADP), the Medium-Term Development Framework (MTDF) will be updated and climate proofed.

assessment. In the sectoral departments, planning and technical officers require enhanced capacity development regime for incorporating climate resilience criteria into project sectoral planning, implementation, and monitoring and evaluation stages.

At the local level, the legal and regulatory framework requires integration of climate resilience guidelines. Moreover, the local government officers have also not been oriented on climate risk management cycle and integration into the development planning processes both in KP and Punjab.

Moreover, the sectors devolved at the local level lack integration of climate resilience criteria for effective development planning processes. For example, Under the Khyber Pakhtunkhwa Local Government (Amendment) Act 2019[9], following offices have been devolved to the Tehsil Local Government:

a. Municipal Services (Regulations, Finance/Accounts, Infrastructure/Services, Municipal Services including water and sanitation)

b. Social Services: Primary and Secondary Education, Social Welfare, Sports and Youth Affairs, Agriculture (Extension, Livestock, Soil Conservations, Fisheries and On Farm Water Management), population welfare, rural development and public health engineering.

Succinctly, the Local Government Planning and Development Guidelines are also required to be updated and climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation.

### *1.5.2 Climate Transparency System*

In the face of escalating climate change impacts, the demand for robust climate data has surged among various stakeholders, including financial institutions, market participants, and regulators. These data are critical for conducting comprehensive climate risk assessments, enhancing reporting and disclosure quality, and underpinning effective climate mitigation and adaptation strategies[10]. The United Nations Framework Convention on Climate Change (UNFCCC) acknowledges the role of technology in combating climate change through mitigation and adaptation.

The current Pakistan's Technology Needs Assessment (TNA) 2017 is not aligned with the updated 2021 NDC. Pakistan's NDC 3.0 will be submitted to the UNFCCC in 2025, and there is a pressing need to update the existing TNA in accordance with the updated NDCs. Furthermore, a climate technology

[9] Please refer to sections 21, 22 and 23 of the KP Local Government Amendment Act 2019: https://lgkp.gov.pk/wp-content/uploads/2019/06/The-KP-Local-Government-Amendmen-Act-2019.pdf

[10] The Climate Data Challenge: The Critical Role of Open-Source and Neutral Data Platforms Technical Supplement to the 2024 Climate Risk Landscape Report, May 2024. Please see: https://www.unepfi.org/wordpress/wp-content/uploads/2024/05/Dataland-Final-Report-The-Climate-Data-Challenge-1.pdf

roadmap is also lacking, which would encompass areas such as technology needs; comprehensive financing mechanisms; specific technologies to be deployed; technology innovation and research and development; policy, regulatory, and legal aspects; and support to be provided for technology development and transfer.

Institutionalisation of climate reporting is under implementation. Although there have been considerable efforts to report information and progress on the climate actions, a clear and robust Monitoring, Reporting and Verification (MRV) and adaptation monitoring and evaluation system has not been established at this stage[11].

Furthermore, the existing technological and institutional infrastructure relating to climate transparency system in inadequate requiring a development of the full IT infrastructure for the RISQ Transparency Platform and climate change knowledge management portal among others. There are also hardware and software upgrade requirements such as server enhancements to accommodate additional applications and improvements, strengthening performance and security of the cloud-based system, among others.

Significant to the strengthening of MRV system is setting up robust financial technology and capacity support. The Global Climate-Change Impact Studies Centre of the MoCC&EC is working to meet these challenges. The support in this area is essentially required to meet the challenges of national and international reporting requirements for the Biennial Transparency Report (BTR)[12] and National Inventory Report (NIR), NDC 3.0 among others.

Similarly, the MRV system is not integrated into the existing digital appraisal systems at both federal and provincial levels. This integration is essential for ensuring that data on climate actions (such as emissions reductions, adaptation measures, etc.) are accurately monitored, reported, and verified in a cohesive manner.

There is a need to develop a holistic climate change data ecosystem on the climate actions in Pakistan. At the federal level, each Ministry has its own system for collecting and using data and information, mostly supported by the attached research institutions. For example, the Ministry of Food Security and Research generates and collects data from Pakistan Agriculture Research Centre (PARC). Among

[11] Pakistan Climate Transparency: Methodological guidelines on the assessment of GHG impact of mitigation actions, November 2023. The report is prepared by implementing partner CITEPA of the GIZ Strengthening Climate Adaptation and Resilience (SAR) program. Please see for details: https://www.giz.de/en/downloads/giz2022-en-climate-adaption-resilience.pdf

[12] Biennial Transparency Report include information on national inventory reports (NIR), progress towards NDCs, policies and measures, climate change impacts and adaptation, levels of financial, technology development and transfer and capacity-building support, capacity-building needs and areas of improvement. For further details, please refer to Biennial Transparency Reports at: https://unfccc.int/biennial-transparency-reports

ministries and sectors, coordination, communication, and information sharing on climate actions remain weak.

There is a significant need to strengthen the climate risk data modelling on a national scale for an informed policy development and resource allocation for climate adaptation strategies. It can also help policymakers prioritise sectors and regions that face the highest risks, enabling targeted investments in infrastructure resilience, early warning systems, and risk-informed land-use planning. For sectors, climate risk assessment can guide the development of sector-specific adaptation plans. In agriculture, it can inform the selection of climate-resilient crops, irrigation practices, and risk reduction strategies. In infrastructure, it can guide the design of buildings, roads, and bridges to withstand extreme weather events. At the local level, climate risk modelling can empower communities to make informed decisions about their livelihoods and disaster preparedness. It can help local governments prioritise risk reduction measures, develop evacuation plans, and raise awareness among communities about potential hazards. It can also serve to perform data forecasting and prediction analysis.

At the regional level, a robust M&E Framework that aligns with the updated NDCs, NAP 2023 and the MRV framework in the provinces is currently lacking. This necessitates the alignment of the MRV system with the Federal Government's and Provincial Governments' M&E institutions and Directorates, Punjab Performance Management and Reforms Unit and its Divisions/District Performance Management Unit, KP Performance Management & Reforms Unit (PMRU) and its online District Performance Monitoring Framework, among others.

Following measures and data will be required for establishing a robust RISQ platform to track adaptation and mitigation actions.

a. Scale of action (international, national, provincial), Planning framework (NCCP, NAP, NDC, donor project), climate physical impacts, stakeholder engagement, capacity building requirements, technology transfer requirements, climate change projections, climate change scenarios, among others.

b. Type of action (policy, measure, project or program, feasibility study, research program, description, objectives), classification of climate change relevance (highly, medium, low, marginally), institutional entity (sponsoring, execution including M&E,),

c. Adaptation and resilience objectives, gender objectives, mitigation objective, barriers encountered for reporting information on mitigation measures, contribution to NAP, contribution to NDC objectives, contribution to SDG-13, among others.

d. Mode of financing (private, public, public private partnership), type of expected financial instrument (grant, insurance, concessional loan, non- concessional loan, equity, guarantee),

status of financial instrument (committed, received), budget execution per year, expected results (details, number of beneficiaries).

At the local level, there is an absence of a statistical data framework for bottom-up data sharing for evidence-based planning and reporting on climate actions. The existing legal, regulatory and planning and development guidelines of the Local Government Departments require incorporation of climate resilience considerations.

In summary, there is a lack of holistic climate data architecture, including the creation of data centre clusters at essential sites at the Federal, regional and local levels.

## 1.6 Limitations of the Study

This study primarily identifies the initial scope and potential of a climate digital appraisal system and climate transparency actions at the national level and for the Punjab and Khyber Pakhtunkhwa provinces only. This necessitates that data limitations regarding the IT infrastructure development, human resources, among others may be taken up in subsequent stages of implementation. Furthermore, the ethical implications of data collection and privacy may not have been thoroughly explored.

# Chapter 2: Digital Appraisal System at the National and Provincial Levels (Punjab and Khyber Pakhtunkhwa Provinces)

## 2.1 Intelligent Project Automation System (iPAS)[13]

A joint effort by the Ministry of Planning, Development and Special Initiatives and Punjab Information Technology Board (PITB), the iPAS was launched in 2019 to digitise the PSDP processes of Planning Commission. The system is web-based and widely accessible. Administered by the Planning Commission, the Intelligent Project Automation System (iPAS) became operational for the 2021-22 fiscal year. It tracks the submission, review, and approval at all stages for the PC-I[14] and PC-II forms, and allocation of funding among technically approved projects in the PSDP Provinces use the system for projects included in the PSDP and provincial projects of national importance approved by the NEC. All proformas can be submitted digitally.

In July 2024, the Ministry of Planning, Development and Special Initiatives launched the PC-III module under the Intelligent Project Automation System (iPAS), replacing the previous Project Monitoring and Evaluation System (PMES). The PC-III module is now functional as of 1st July 2024. All Focal Persons and Project Directors of respective ministries and divisions will upload their project progress/data on the new PC-III module under iPAS, which covered "Project Profiles from PC-I, PC-III-A (Cash Plan and Work Plan) and PC-III (B) Progress Report (Physical Progress)[15].

New projects/schemes can be initiated on the system, and it enables updating of on-going projects. A separate tab is created for Public Private Partnership (PPP) projects as well. The system shows the total allocations to projects divided into different categories such as local, foreign, new, on-going and PPPs. Further, it shows the list of projects along with their ministry/division, sector, approval status, cost, expenditure up to date, fand the province. The system enables the user to select the project (schemes) from the list of available schemes along with project type (new or on-going). Finally, it efficiently categorises the sectors, sub-sectors, relevant departments, and executing/sponsoring agency for the project. It also shows the total number of projects and projects under each category.

[13] https://ipas.pc.gov.pk/

[14] How to Create Original PC-I in iPAS: https://www.youtube.com/watch?v=_F67zn7WJ50&t=29s. This video is created by PITB (IPAS) Team. The purpose of this video is to guide briefly about "PC-I Formulation" and steps needed to be followed while forwarding the PC-I to the concerned officer, for approval forum.

[15] This development builds on the Planning Commission's earlier success in launching automated PSDP Formulation, PC-I, and PC-II under the iPAS project three years ago. The introduction of the PC-III module is expected to further enhance the efficiency and transparency of project monitoring and evaluation. https://www.app.com.pk/business/planning-ministry-launches-pc-iii-module-under-ipas-for-projects-monitoring/

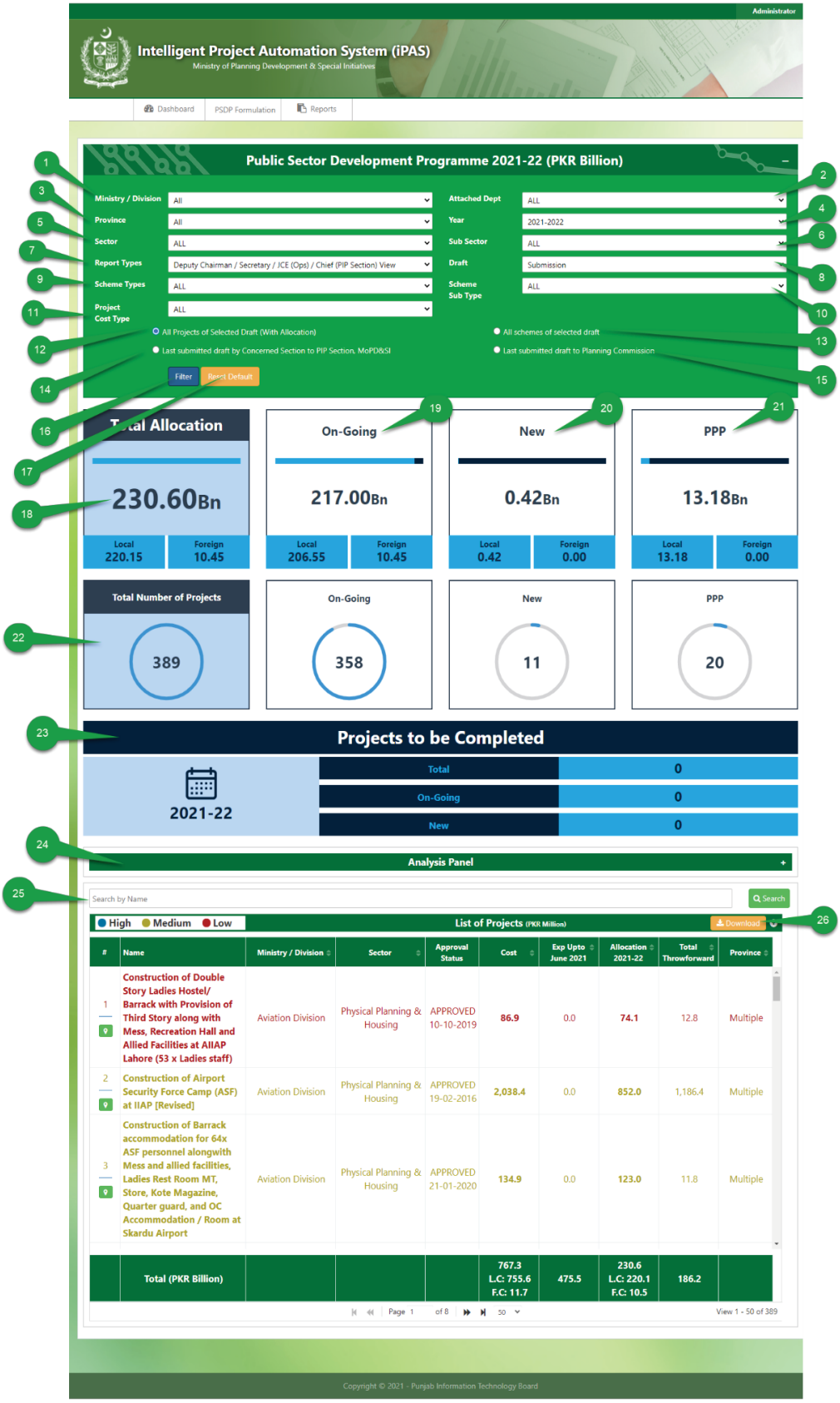



*Figure-1: Key features of the Intelligent Project Automation System*

*"iPAS is not currently used to track projects relating to climate change. The MoPD&SI approved "Handbook on Climate Risk Screening in Policy Planning" guidelines outline three levels of climate change screening, adaptation, and mitigation assessments: Climate and Hazard Initial Assessment, Climate Adaptation and Resilience Assessment, and Climate Mitigation Assessment. However, these guidelines have not yet been integrated into the iPAS".*

It helps project managers make smarter choices with the help of geospatial technology. The Spatial Decision Support System is a part of iPAS. By mixing different kinds of information using GIS, #SDSS gives decision-makers a complete picture. It gathers information from different places like demographics, economics, and the environment. Furthermore, with iPAS, project managers and Ministry officials get a helping hand. It gives them tools to improve: (a) project operations (b) financial management and (c) monitoring and execution.

## 2.2 Financial Accounting & Budgeting System (FABS)[16]

FABS is a comprehensive financial management system in Pakistan. Administered by the Controller General, FABS comprises the New Accounting Model (NAM) and an SAP (Enterprise Resource Planning- ERP) based IT platform, serving government entities and processing various financial transactions. It aims to produce accurate financial reports, improve budget management, and enhance financial control. It is used for federal, provincial, and district level budgeting, expenditure control and payments, and financial reporting. Relating to key issues pertaining to the PSDP, FABS is used to record releases, re-appropriations, supplementary grants, and surrenders.

## 2.3 PSDP portal of the Ministry of Planning Development and Special Initiatives[17]

The PSDP Portal, developed by the Governance Innovation Lab in partnership with SUPARCO, provides a panoramic view of development projects across Pakistan for the first time in its history. The unprecedented open access to PSDP data aims to foster informed citizen engagement and strengthen the country's public accountability of development spending. The Portal makes all PSDP data, including allocations, releases, progress, and PC-1s of PSDP projects, readily accessible to the public in web and mobile responsive digital format. It provides a responsive platform where researchers, analysts, and the public can learn about PSDP projects, enabling them to understand and analyse the budget allocation and project progress.

The interface of the PSDP Portal also visualises the geographical spread of the projects, enhancing public awareness and understanding of the initiatives in their areas. The Portal provides various tools

[16] https://fabs.gov.pk/
[17] Public Sector Development Program Portal (sgs-suparco.gov.pk)

to filter the information and generate required reports. The interactive map comprises a heat map of Pakistan with PSDP projects plotted on it and colour-coded on a sectoral basis. Project photos, drone footage & satellite images will also be shared where possible.

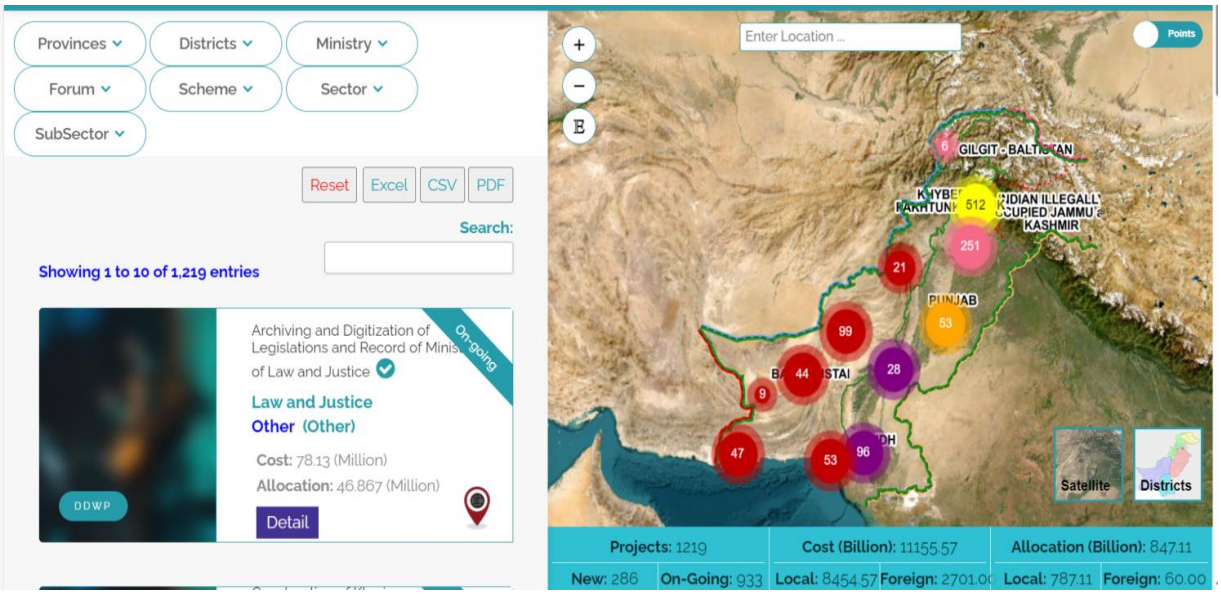



*Figure-2: Public sector development program portal*

## 2.4 Digital Appraisal System in the Provinces

### *2.4.1 Province of Punjab*

In 2015, the Lahore High Court issued a judgement directing all departments of the Government of Punjab to plan for climate change adaptation in their areas of work. Following this, some departments-initiated actions to comply with the judgment, such as creating new positions or units, yet there remained a lack of capacity on climate change adaptation. Furthermore, the Planning & Development Board has introduced a mechanism for development and submission of online PC-Is through Smart Monitoring of Development Projects (SMDP) / Planning portal. Since, 1st January 2019 only online submitted PC-Is are being entertained for process and consideration by PDWP[18]. (see Figure-3). The Departments must ensure that their ADP is aligned with the following strategic/relevant documents which are briefly discussed in (see Annex-IV).

a. Revised Punjab Growth Strategy, 2023.
b. Punjab Spatial Strategy, 2047.
c. Sustainable Development Goals (SDGs) 2030.
d. Punjab Local Government Act 2022
e. Respective Sector Plans (Sectoral guidelines are given in Annex-V)

[18] See Punjab ADB Guidelines 2024-2025

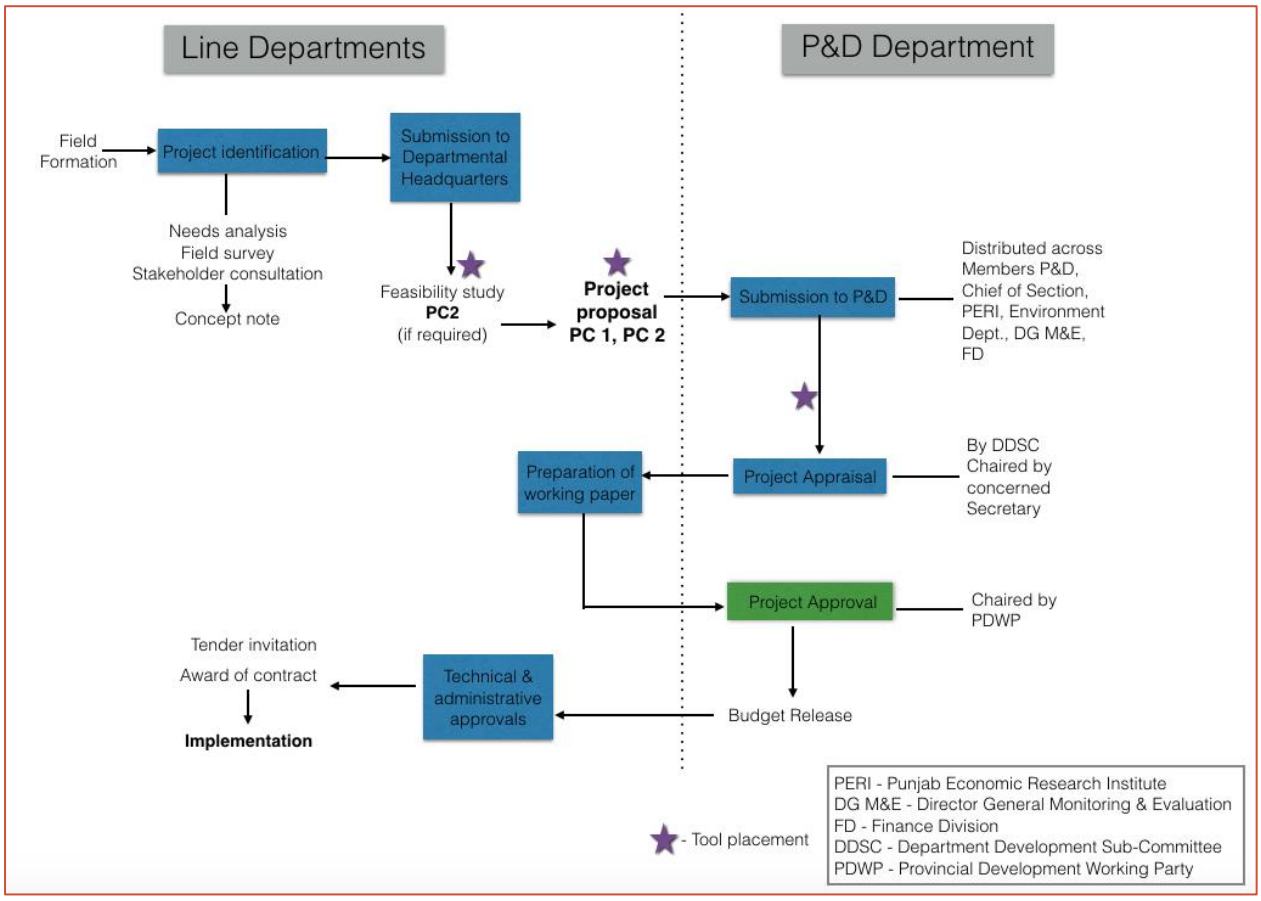



*Figure-3: Project development and approval process in Punjab*

### 2.4.2 *Punjab Adaptation to Climate Tool (PACT) Framework*

The Punjab Adaptation to Climate Tool (PACT) was designed to help departments identify and integrate climate considerations into project design, ultimately making their investments more sustainable and resilient to a changing climate (see Figure-4). Hosted by the Punjab Planning and Development Board, it was used by 3 departments: agriculture, irrigation and energy[19].

[19] https://www.preventionweb.net/news/pakistan-punjabs-pact-climate-resilience#:~:text=The%20Punjab%20Adaptation%20to%20Climate,resilient%20to%20a%20changing%20climate

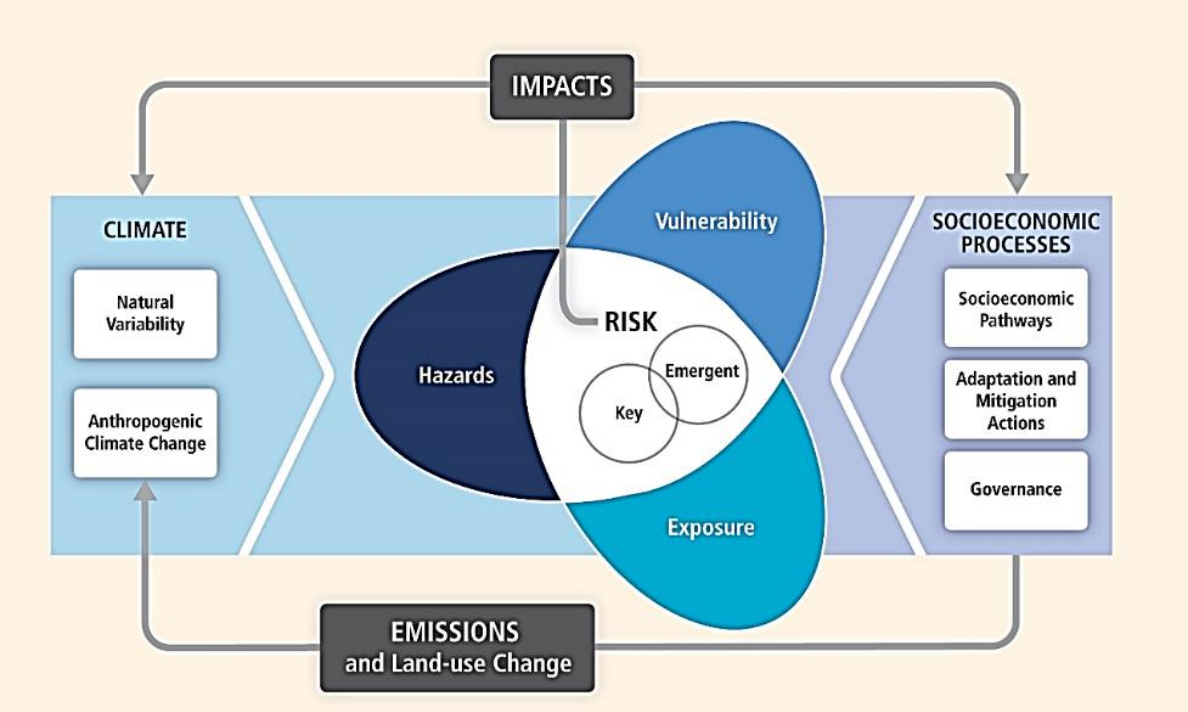



*Figure-4: PACT concept of risk: Illustration of the core concepts of the IPCC's Working Group II in the Fifth Assessment Report (AR5). The risk of climate-related impacts results from the interaction of climate-related hazards (including hazardous events and trends) with the vulnerability and exposure of human and natural systems*

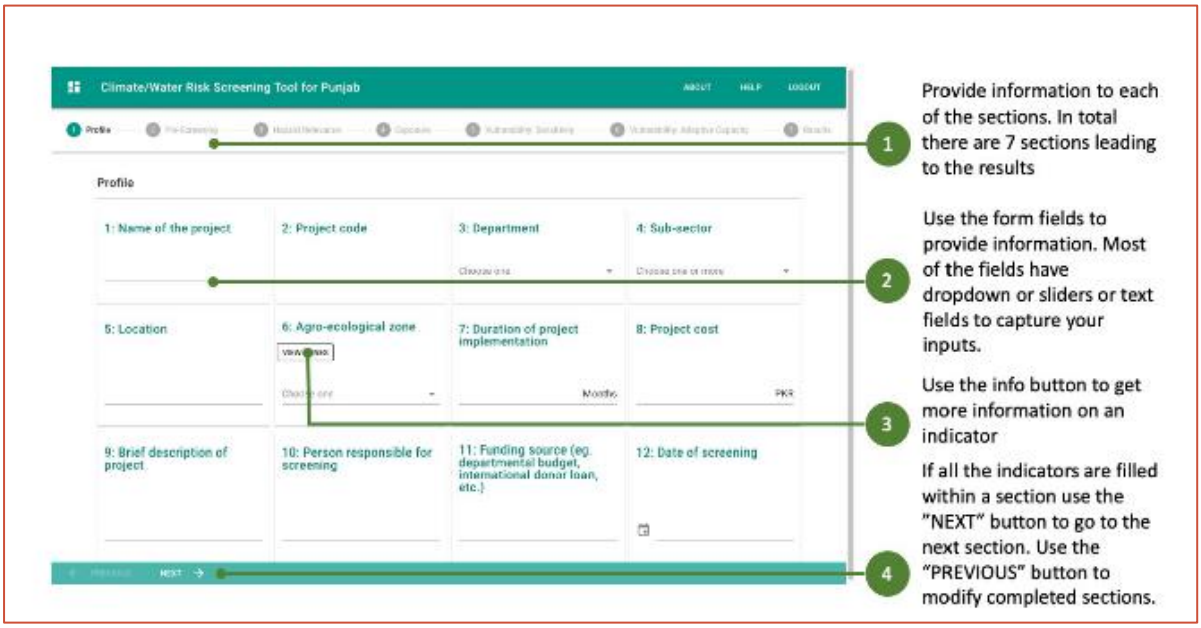



*Figure-5: Key Features of the PACT Tool*

### Institutional Placement of the PACT Tool[20]

The tool was designed to fit within departments' existing institutional processes, to facilitate the integration of climate risk into decision making. Departments are given the option to choose where the tool is used in the project development process. Tool placement options within different stages of the project development and approval process included in project identification, project concept (PC-1) preparation and submission to P&D, PC-2 (feasibility study – if required), PC-1 appraisal and project approval.

### Challenges in Development and Launching of the PACT Tool

The PACT initiative ended up with multiple iterations with several rounds of P&D Board. Additionally, due to paucity of data enhance input based on experience and knowledge was not available. Resultantly, PACT is not functional, and more support is required to make it operational.

*(The PACT webpage on the website of the Planning and Development Board in not functional: **http://58.29.203.230:88/pact**)*

## *2.4.3 Smart Monitoring of Development Projects (SMDP), Planning & Development Board*

The Punjab Information Technology Board (PITB), in collaboration with Punjab Planning and Development Department, has designed and developed an SMDP online system for monitoring of development spending. The Punjab Development Budget for 2017-18 was formulated online for the first time in the history of Pakistan through this system. The system offers comprehensive dashboards for smart monitoring. In addition, it enables the Planning and Development Department to monitor the progress of individual development projects monthly. Since 2016, all stakeholders have been submitting monthly progress reports through this system[21].

To digitise the process of PC-I preparation, Monthly Progress Report, funds allocation, release, re-appropriation, physical and financial monitoring of new/ongoing schemes it was envisaged in PC-I. P&DB sponsored this project "Smart Monitoring for Development Projects across Punjab" whereas "Punjab Information Technology Board (PITB)" was executing agency.

SMDP portal provides a dashboard to higher management regarding proposed schemes, approved, rejected, fund allocation and through forward. The Foreign Funded Projects dashboard has multiple data analysis based on funding type and project type. Moreover, foreign funded dashboard is

[20] PACT Tool was developed with the support of FCDO's funded Sub-National Governance Program.
[21] https://pitb.gov.pk/smdp

integrated with PIFRA for real-time financial monitoring, sectoral analysis, district-wise analysis and foreign funded agency type analysis[22].

*"SMDP is not currently used to track projects relating to climate change on three levels of climate change screening, adaptation, and mitigation assessments: Climate and Hazard Initial Assessment, Climate Adaptation and Resilience Assessment, and Climate Mitigation Assessment".*

### Interview Results

During the consultation with the Punjab P&D Board, a request was made to support the revision of the Punjab Planning Manual for Development Projects to include climate resilience criteria under the Planning Commission's screening handbook for policy planning. Once manual is updated, the P&D Board will integrate the SMDP portal with the newly developed climate resilience criteria. Planning and technical experts will then require training on the use of the revised PC proformas that incorporate climate resilience criteria. In addition, there are 24 ongoing ADP schemes which are climate related.[23]


*Figure-6: Pictorial image of the SMDP*

[22] https://dgme.punjab.gov.pk/system/files?file=EVL-850%20Updated%20Evaluation%20Report%20On%20Smart%20Monitoring%20Of%20Development%20Project%20Across%20Punjab.pdf

[22] Please see Annex-VI

New project can be added in the SMDP portal online[24].

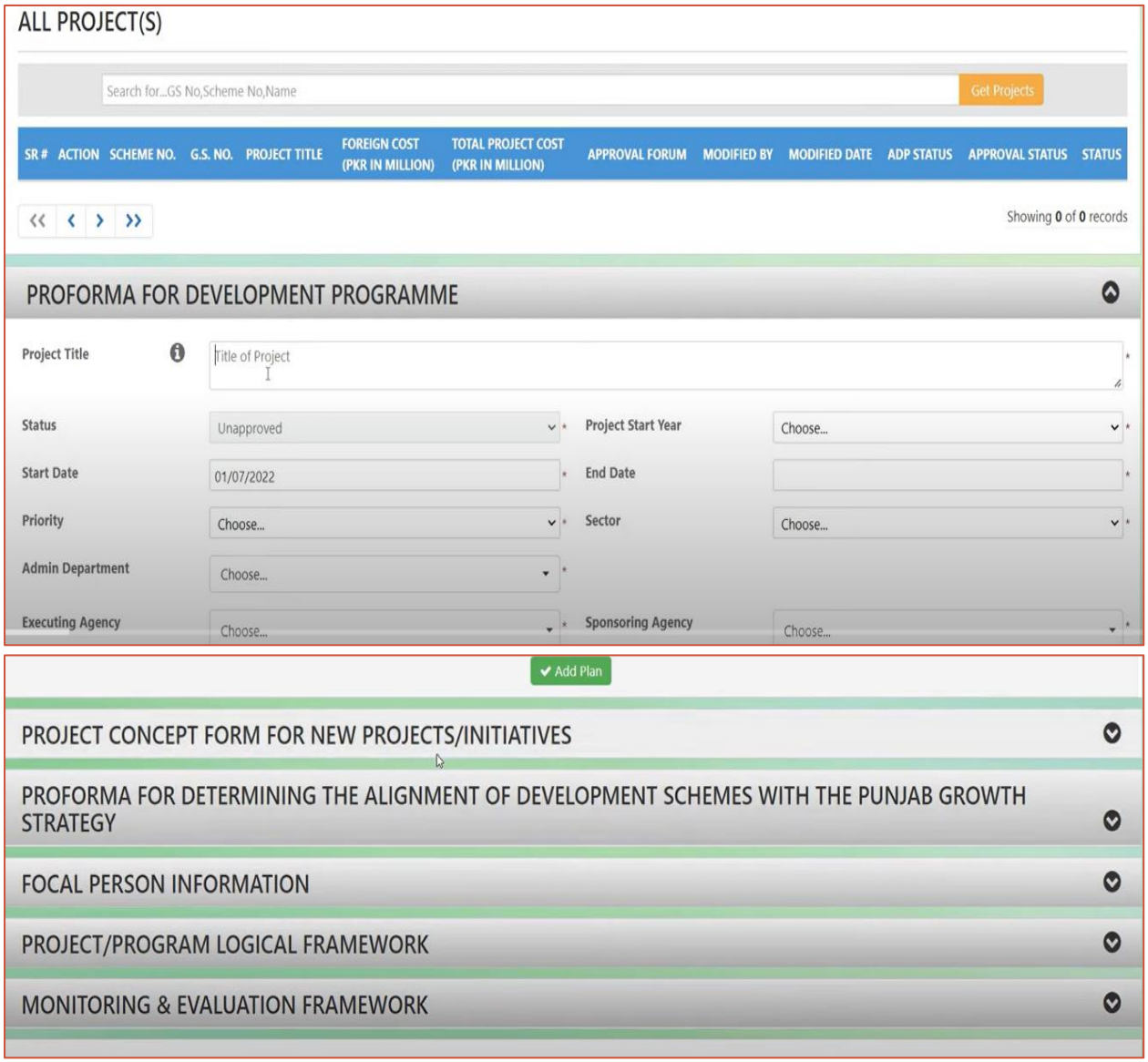



*Figure-7: Key features of the SMDP portal*

## Punjab Performance Management and Reforms Unit and Divisions/District Performance Management[25]

PMRU is a dedicated unit established under Chief Secretary's Office to implement the province's reform agenda in line with the vision of the Government. Performance management of the Districts, Divisions and the Provincial Departments are core area of focus for which a comprehensive

[24] Please see the online tutorial for adding a new scheme or project in the SMDP at this link

[25] https://pmru.punjab.gov.pk/#banner4-wrap

performance management framework[26] has been evolved. Priority areas have been identified under which measurable and comparable KPIs have been identified and are being implemented.

## 2.5 Province of Khyber Pakhtunkhwa

### *2.5.1 Planning Commission Forms Management System (PCFMS)*

The Line Departments are required to feed the proposed ADP/AIP in the software called the Planning Commission Forms Management System (PCFMS) and also provide in hard form to the Planning & Development Department in accordance with the schedule for preparation of ADP 2024-25 contained in these guidelines. All the PC-Is/ PC-IIs and Concept Papers are required to be fed through the PCFMS together with the hard copies.

In addition, the Line Departments are required to upload their PC-Is for consideration of the Provincial Development Working Party (PDWP) and Departmental Development Working Party (DDWP) on PCFMS. No PC-l of any scheme will be considered by the PDWP or DDWP without uploading it on the PCFMS *(See Figure-8)*. This is also a requirement of the Planning Commission of Pakistan[27].

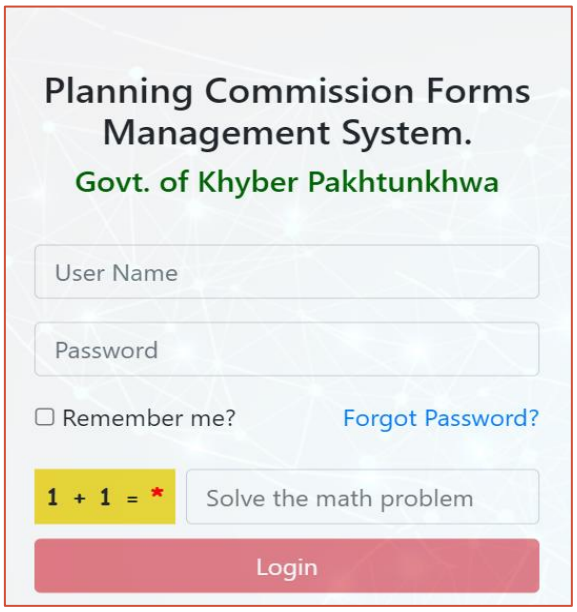



*Figure-8: Planning Commission Forms Management System Portal*

[26] Punjab Government is focusing on adoption of eGovernment solutions - main among them being Public Sector HR Management System and Monitoring of Development Projects. One of the key elements of reforms is transparency, accessibility and open government for which Government-to-Citizens and Citizens-to-Government Interfaces are being provided through technology driven interventions, PITB is providing key support in this regard.

[27] Guidelines for preparation of Annual Development Program (KP/MASADP) (2024-25), Planning and Development Department, Government of Khyber Pakhtunkhwa, (March 2024).

*"PCFMS is not currently used to track projects relating to climate change on three levels of climate change screening, adaptation, and mitigation assessments: Climate and Hazard Initial Assessment, Climate Adaptation and Resilience Assessment, and Climate Mitigation Assessment. Detailed climate resilience guidelines approved by the Ministry of Planning and Special Initiatives will be integrated into the PCFMS once officially notified." (See Figure-9).*

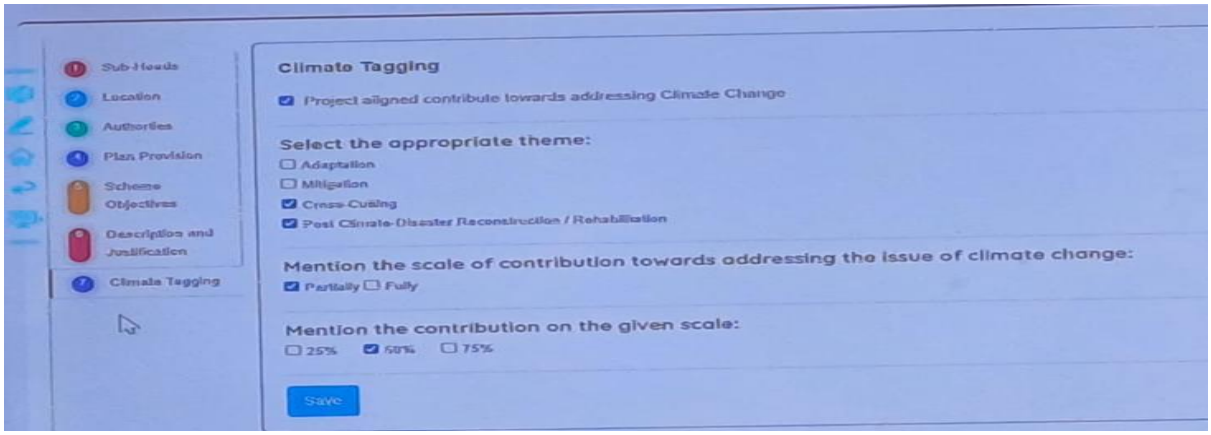



*Figure-9: Climate tagging in the PCFMS*

### Resource Centre KP

The Resource Centre[28], led by the Chief Economist, of the KP Planning and Development Department (See-Figure-10) plays a pivotal role in coordinating data compilation, ensuring system functionality, preparing presentations, facilitating meetings, and conducting progress reviews. The centre comprises one Deputy Director, four Assistant Directors, two Computer Operators, and one GIS Analyst (See Figure-11). For the ADP, the Resource Centre's main functions include coordination with sections for ADP data compilation, ensuring PCFMS functionality, facilitating high-level officials with ADP reports, and preparation of ADP-based presentations.

Another critical function is coordination for the preparation of digital briefs for PDWP/DDWP meetings and uploading PC-1 forms on PCFMS for PDWP/DDWP: ensuring all project proposals are uploaded before meetings for comprehensive review and approval.

[28] The Resource Centre collaborates with relevant sections to collect and compile data on quarterly progress related to various projects and initiatives. This involves gathering updates on project status, expenditures, milestones achieved, and any issues or challenges encountered. Based on the compiled quarterly progress data, the Resource Centre prepares presentations that highlight overall project progress, analyse performance against targets, and identify areas needing attention or improvement.

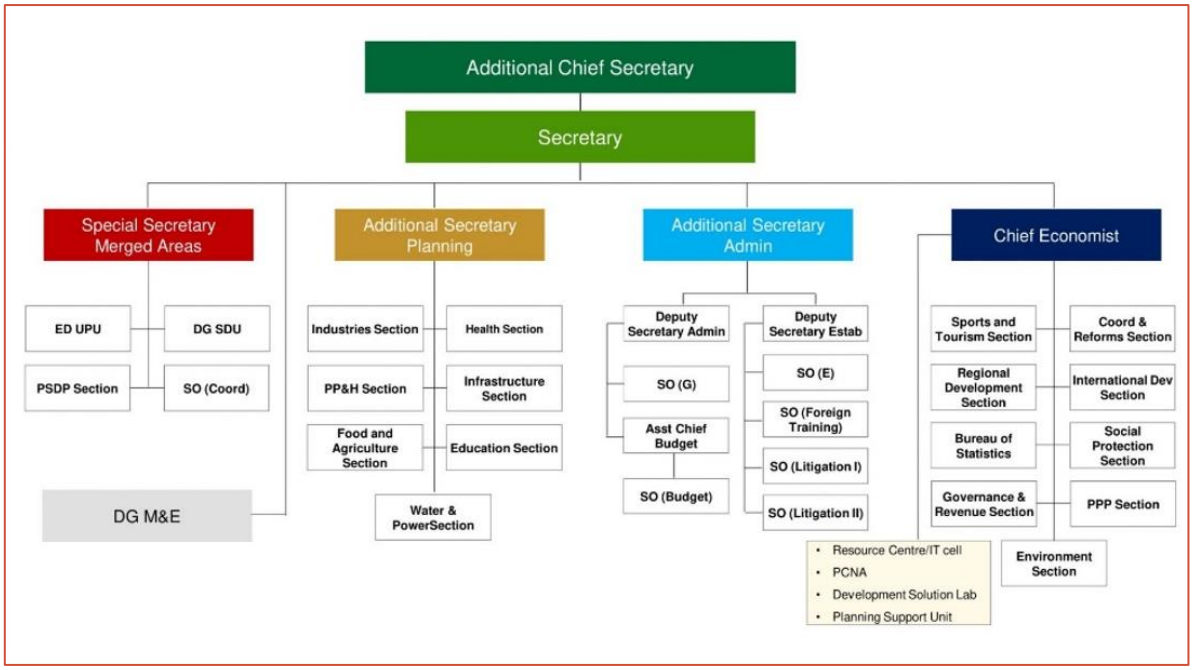



*Figure-10: Organogram of the KP Planning and Development Department*

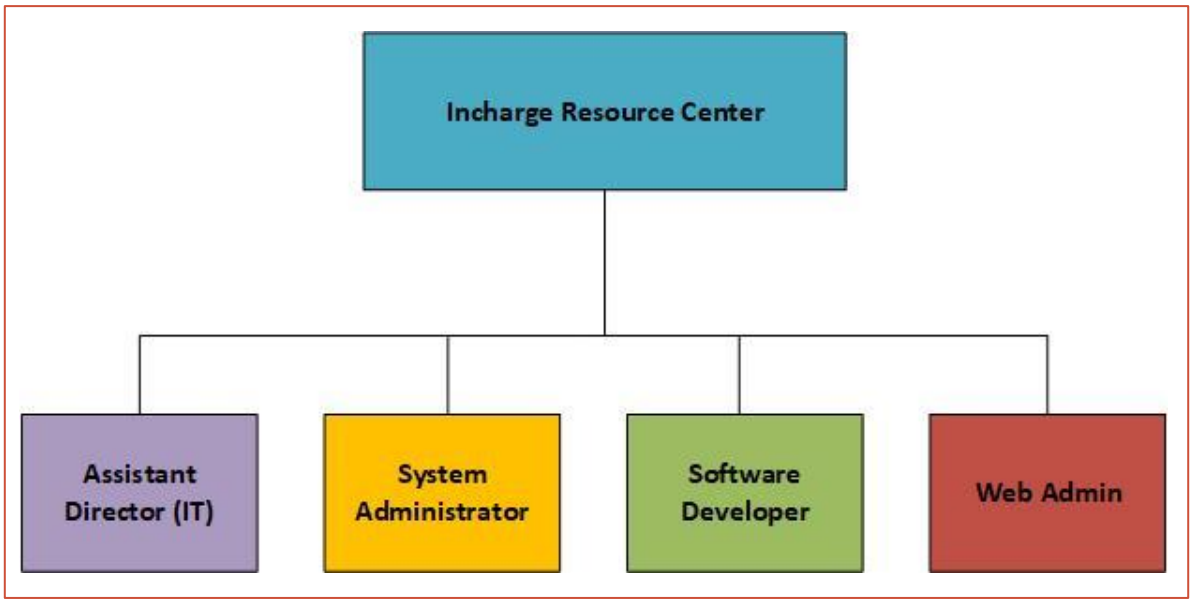



*Figure-11: Organogram of the Resource Centre*

The existing staff of the Resource Centre (see Figure 11) and the IT infrastructure[29] is inadequate for the integration of the climate screening integration, data analysis and data reporting.

[29] See annex-VII for the IT needs of the Resource Centre.

## Administrative Procedure for Changes (Software/Hardware)

All approvals for software and hardware lie with the Chief Economist. Chiefs of sections and relevant officers must inform the DD IT Resource Centre of any proposed changes to documents on PCFMS, providing the file, minutes, etc., to explain the rationale for the changes. A letter requesting approval must be forwarded to the Chief Economist before implementing any changes. Once approved, changes are implemented either internally by system engineers or through external consultants, depending on specific requirements. The approval process may follow a top-down or bottom-up approach, subject to final approval from the Chief Economist. Formal communication channels are maintained through the exchange of formal letters and notifications.

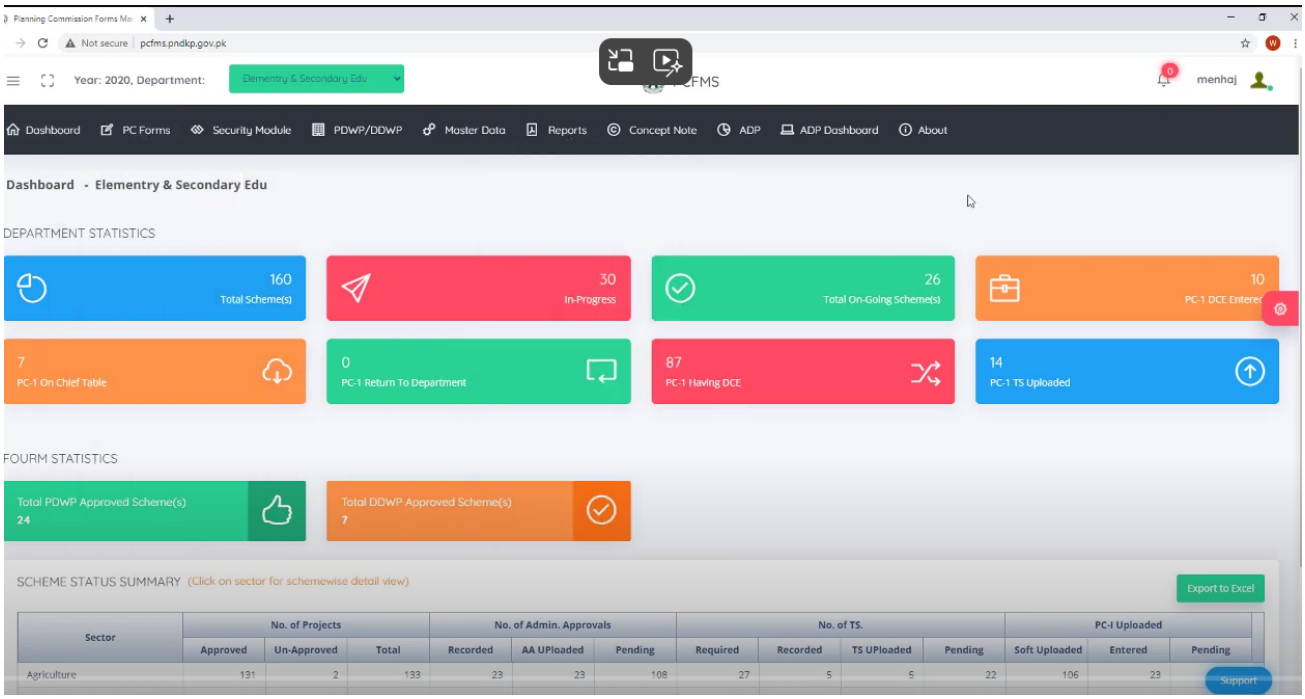



*Figure- 12: Key elements of the PCFMS*[30]

[30] https://www.youtube.com/watch?v=Kxx4G-d9PcY

# Chapter 3: Transparency of Climate Action and Support

## 3.1 Context

Aiming to strengthen the global response to the threat of climate change, Parties adopted the Paris Agreement in 2015. In aiming to enhance the implementation of the Convention, one of the primary goals of the Paris Agreement, as set out in its article 2, is to hold the global average temperature increase to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels to significantly reduce the risks of climate change.

The goals embedded in the Paris Agreement also aim to increase countries' abilities to adapt to the adverse impacts of climate change and foster low GHG emission development pathways, making financial flows consistent with such pathways (see Figure-13).

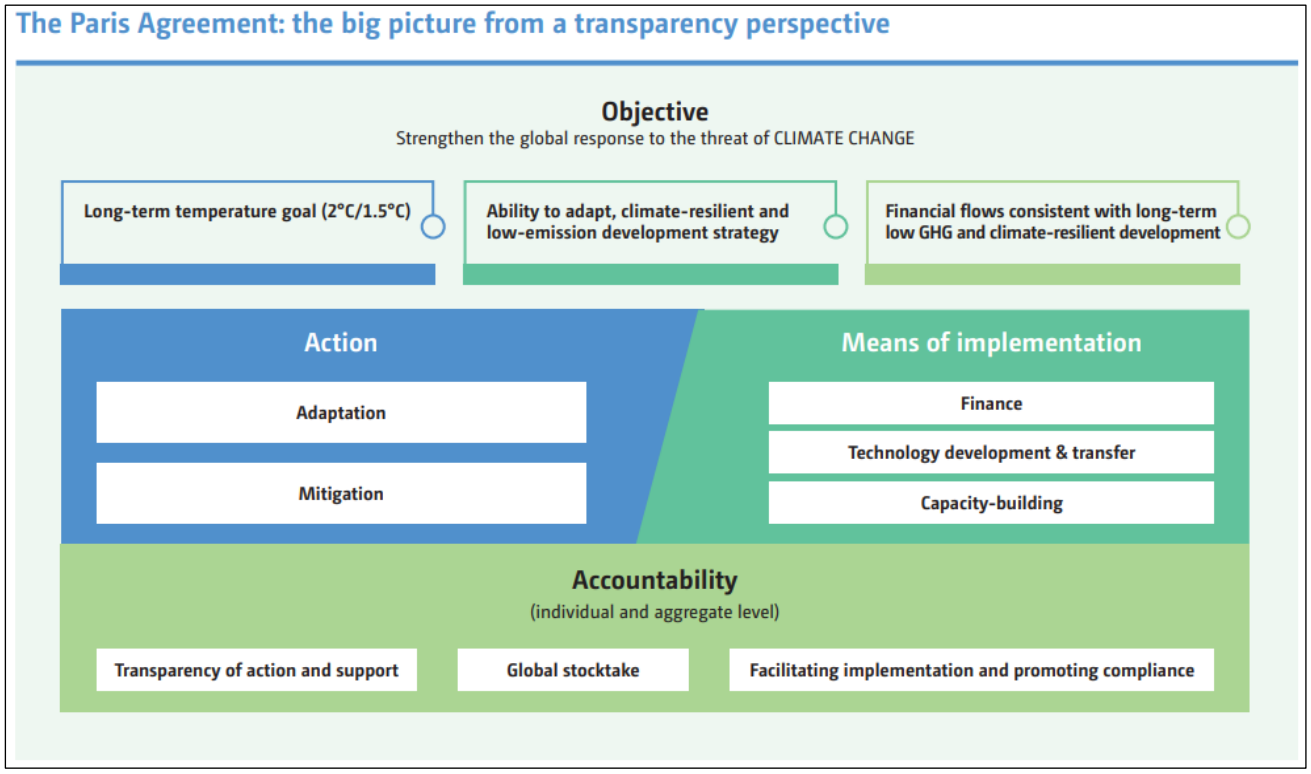



*Figure-13: Key elements of the Paris Agreement (source: 2020 UNFCCC)*

Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. It is also required that Parties communicate their NDCs every five years and present the information necessary for clarity, transparency and understanding.

To better frame the efforts towards the long-term goal, the Paris Agreement also invites countries to formulate and submit long-term low greenhouse gas emission development strategies (LT-LEDS). The

Paris Agreement establishes, through its article 13, an enhanced transparency framework (ETF) for action and support designed to build trust and confidence and to promote effective implementation.

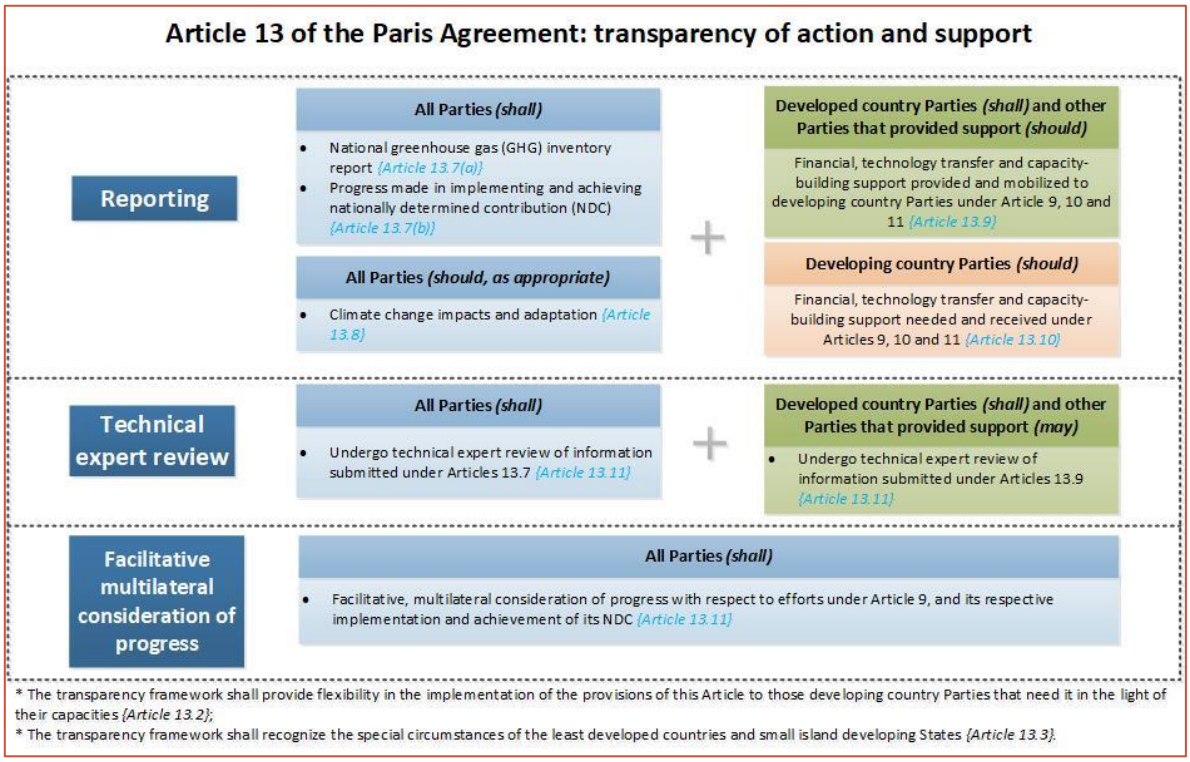



*Figure-14: Enhanced transparency framework for action and support established by Article 13 of the Paris Agreement (source: 2020 UNFCCC.)*

The information gathered through the ETF feeds into the Global stocktake which assesses the collective progress towards the long-term climate goals. This will lead to recommendations for countries to set more ambitious plans in the next round of NDC 3.0 in 2025.

### *Enhanced Transparency Framework World MAP*[31]

The ETF World Map provides a comprehensive view of emissions trading systems (ETSs) around the globe. It tracks ETSs currently in force, under development, and under consideration:

a. 36 ETSs are currently in operation.

b. 14 additional ETSs are expected to launch in the coming years.

c. 8 jurisdictions are exploring the potential of ETSs for their climate strategies.

[31] See details at: https://icapcarbonaction.com/en/ets


*Figure-15: Enhanced Transparency Framework World MAP*

The map utilises a colour scheme to indicate the status of ETS implementation: - Blue: Jurisdictions with an ETS in force - Blue with a green border: Jurisdictions with an ETS in force and another under development.

## 3.2 GIZ Support in the Development of Climate Transparency Framework in Pakistan

In Pakistan, the Ministry of Climate Change and Environmental Coordination, with its Global Climate-Change Impact Studies Centre (GCISC), is working to meet these requirements. The GCISC oversees national and international reporting on greenhouse gas (GHG) inventories and climate actions, with efforts underway to align with global standards.

Pakistan's Climate Transparency Project, supported by the GIZ[32], aims to enhance monitoring and evaluation capacities. This includes a web-based tracking and reporting platform to address data management challenges and improve tracking of climate actions. (see Figure-16).

[32] Advancing Climate Transparency in Pakistan: A Path Towards Effective Action - giz.de

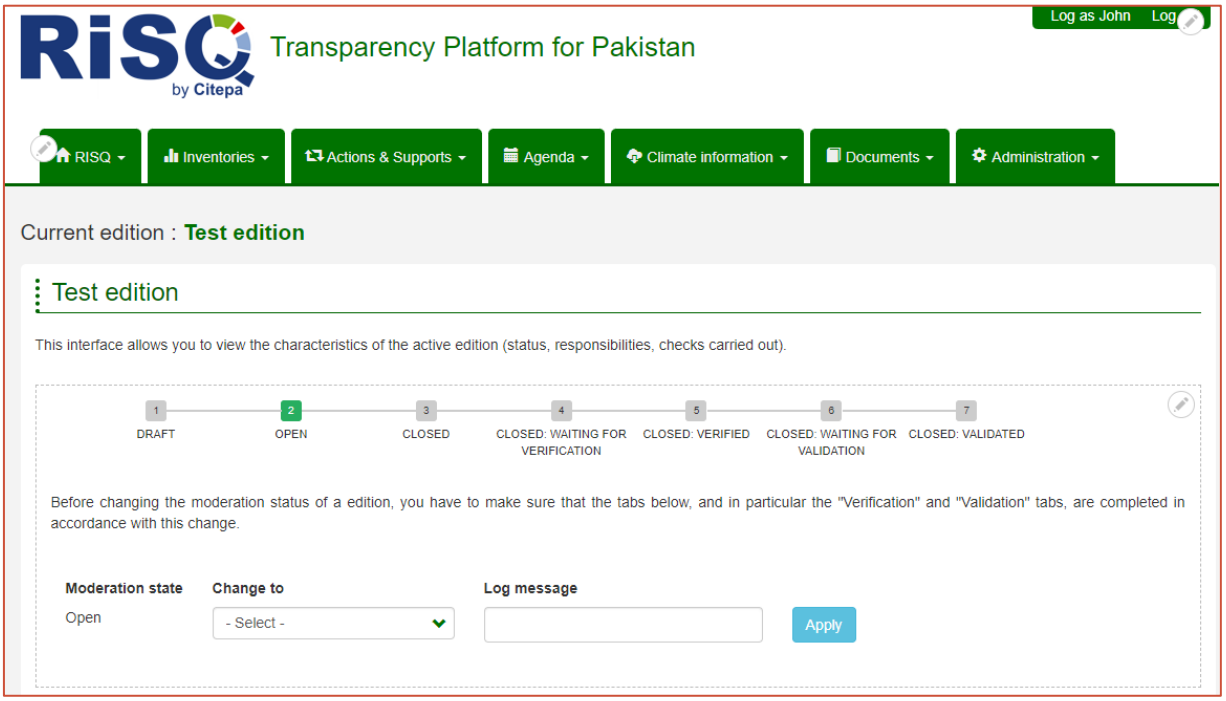



*Figure-16: Elements of the RISQ Transparency Platform for Pakistan*

**Box-1: RiSQ contributes to Pakistan meeting its emission reduction targets[33]:**

Pakistan is institutionalising MRV mechanisms to ensure informed decision-making and accountability. The GCISC oversees national and international reporting on greenhouse gas (GHG) inventories and climate actions, with efforts underway to align with global standards. The Mitigation Policies and Measures module allows policymakers to assess the effectiveness of existing and planned strategies aimed at curbing emissions.

- **Mitigation:** Inventory module within RiSQ facilitates the collection and organisation of data on GHG emissions from various sectors in Pakistan. NDC tracking and identifying areas requiring the most significant emission reductions.
- **Adaptation:** Indicators for sectors Agriculture and water developed. The indicators for health, biodiversity, eco system and urban human settlements indicators sectors are currently being developed.
- **Focus on Potent Greenhouse Gases:** The HFC Calculator, a specialised tool within RiSQ, specifically targets hydrofluorocarbons (HFCs), a potent class of greenhouse gases. By managing HFC emissions effectively, Pakistan can significantly contribute to achieving its overall emission reduction goals.
- **Financial technology and capacity support:** The work is currently in progress in this aspect and data challenges are being addressed.

The RiSQ platform is currently handed over to GCISC and is being populated with data.

[33] The French Interprofessional Technical Centre for Studies on Air Pollution (CITEPA) supported Pakistan monitor and evaluate its climate adaptation efforts. The project aims to establish a national adaptation monitoring and evaluation (M&E) system integrating data from various agencies, aligning Pakistan's reporting with the ETF.

## Strengthening Adaptation Monitoring and Evaluation

Building GCISC's capacity to lead an IT-based adaptation M&E system is a key focus. This involves updating software and platforms to collect and analyse sectoral data, preparing Pakistan to submit its first biennial transparency report under the ETF.

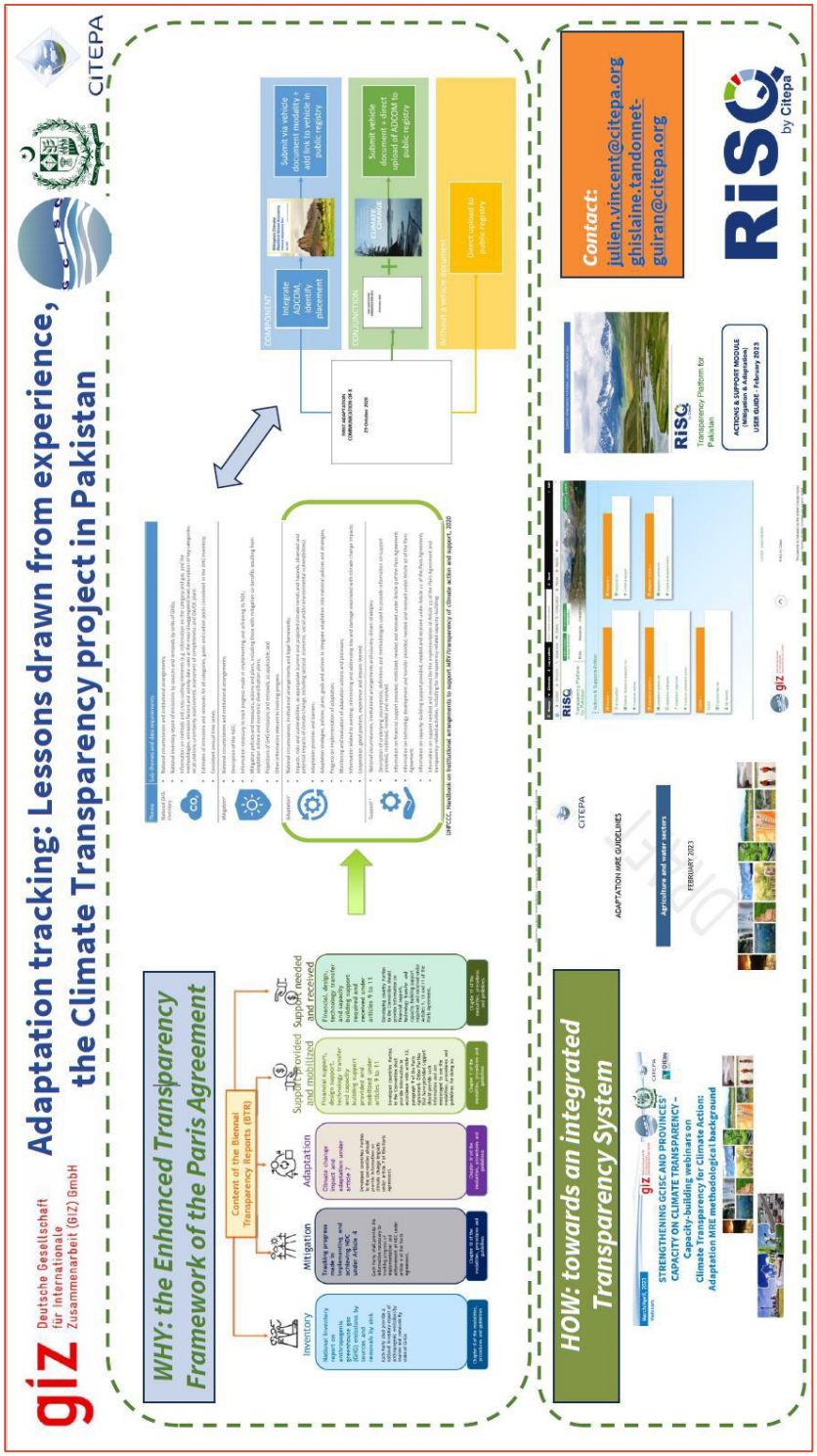



*Figure-17: Overview of the modalities, procedures and guidelines*

### Transverse Features

For the national wide MRV implementation[34], a clear structure is required for the management and support of the RISQ Transparency. This will also guarantee the confidentiality of the climate data. See Figure-18.

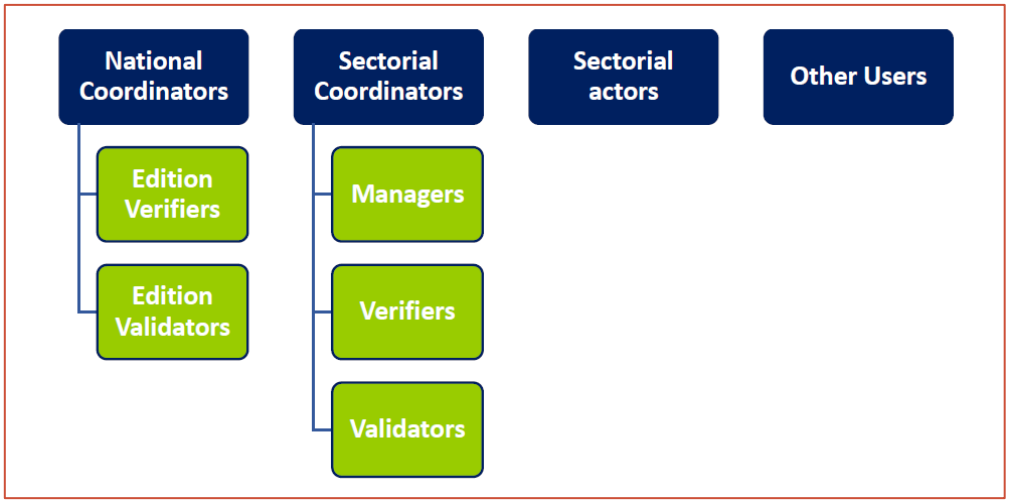



*Figure-18: Data Management Team at different levels*

## 3.3 A Case Study: Monitoring, Reporting and Verification (MRV) System of Turkey

Turkey signed the Paris Agreement in 2016 and ratified it in 2021, approving the goal to reach net-zero emissions by 2053. Turkey updated its nationally determined contribution (NDC) in 2022, aiming to reduce its greenhouse gas (GHG) emissions by 41 percent by 2030 compared to the business-as-usual (BAU) scenario. Its updated first NDC is economy-wide and includes comprehensive mitigation and adaptation actions as well as consideration of the means of implementation.

In pursuit of these goals, Turkey has introduced a monitoring, reporting and verification (MRV) system that provides a reliable and robust source of data for identifying greenhouse gas emissions. It will serve as a solid foundation for the implementation of an emission trading system (ETS) based on grandparenting with measures for capacity development.

The MRV capacity development project[35] advises the Turkish Ministry of Environment, Urbanisation and Climate Change and supports the establishment of the necessary infrastructure for monitoring,

[34] To ensure the transfer of skills, learning and innovation process on the MRV integrated platform, a user manual and an administration manual have been elaborated.
[35] The MRV project is commission by the Federal Ministry for Economic Affairs and Climate Action of Germany (BMWK). The duration of the project is from 2013 to 2024. Please see details: https://www.giz.de/en/worldwide/128147.html

reporting and verification of greenhouse gas (GHG) emissions. The data obtained through the system will feed into the Turkish ETS. (See Figure-19).

Within the project framework, a tailor-made online MRV data management system has been developed which allows flexibility in the design and is being adapted to actors' needs and learning experiences.

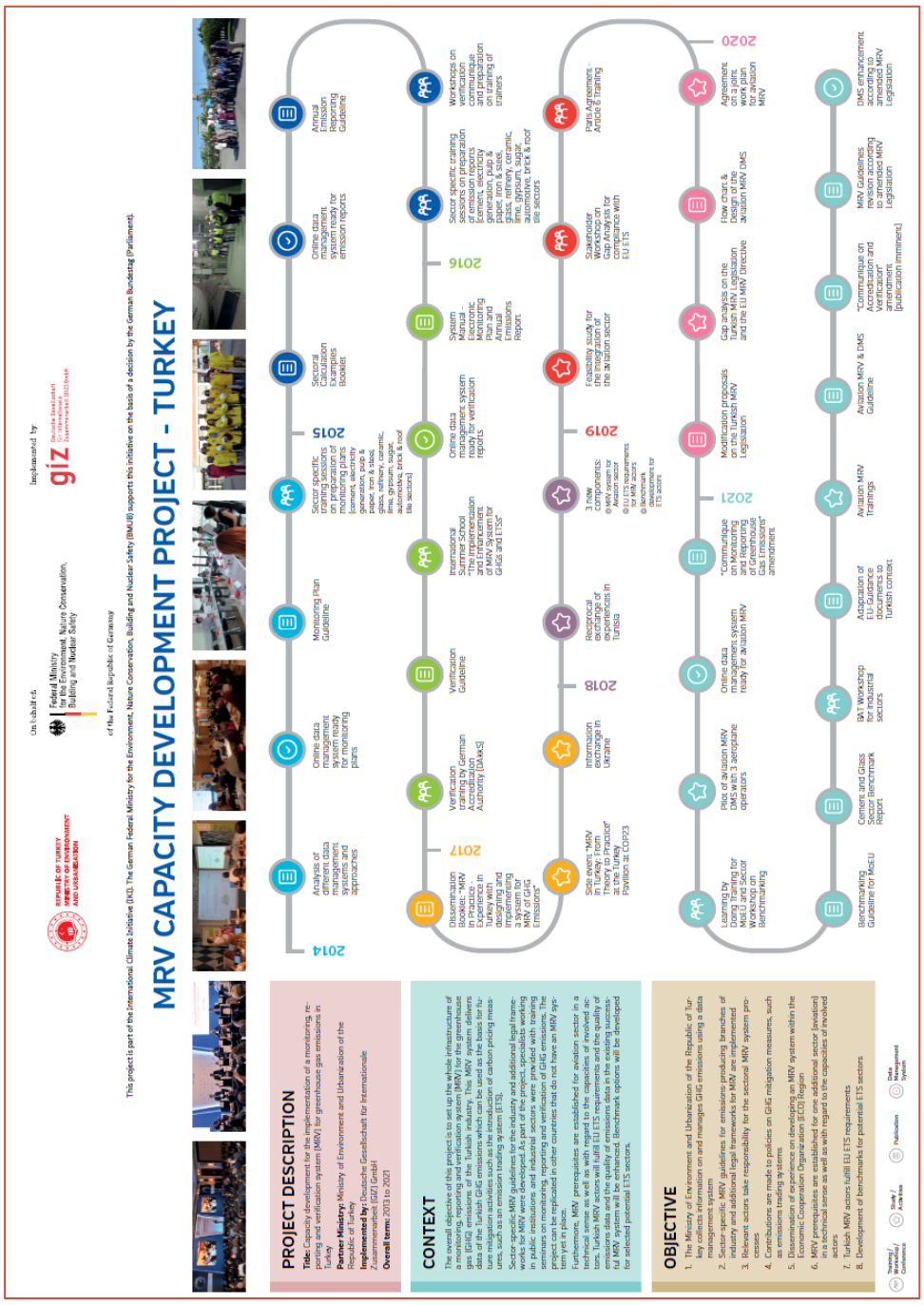


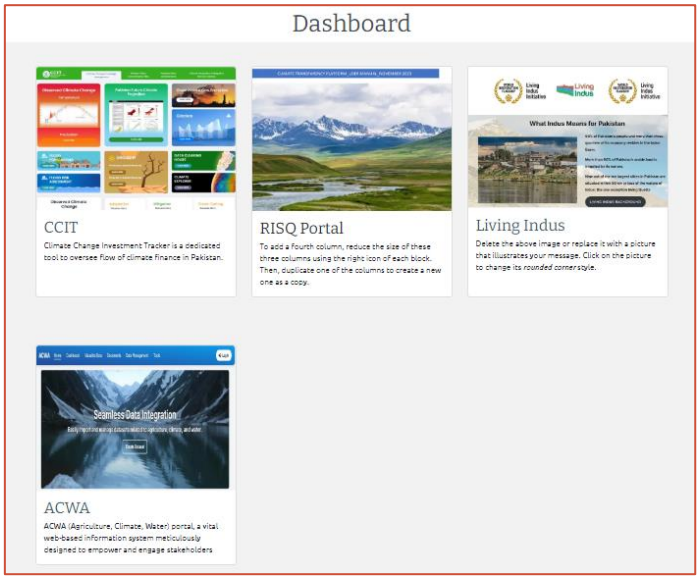

*Figure-19 Turkey MRV Capacity Development Project Cycle*[36]

[36] Please see details of this project activities in the Annex-VIII

## 3.4 Knowledge sharing information system from transparency initiatives (MRV, BUR, NC, GHG inventory)

### Pakistan Climate Information Portal

The Pakistan Climate Information Portal (www.pakcip.com) serves as a centralised hub for climate data, tools, and courses, supporting informed decision-making by policymakers and stakeholders. It enhances public awareness, empowering communities in climate adaptation efforts, and strengthens Pakistan's capacity for sustainable climate resilience through improved risk assessment and resource planning.



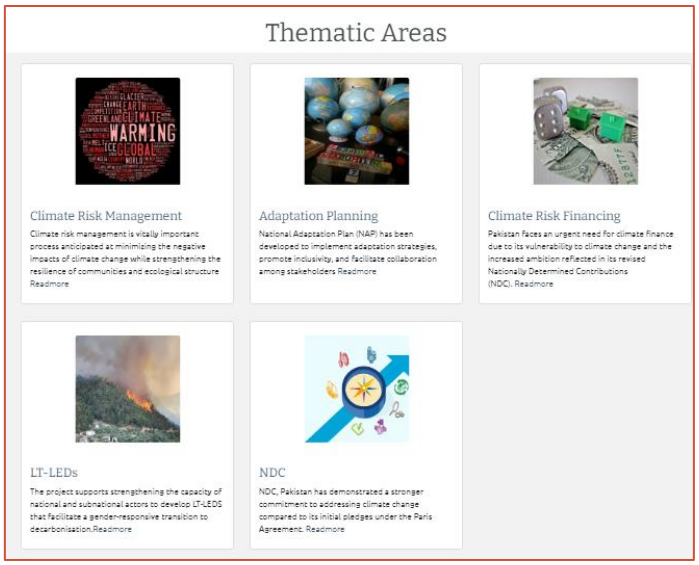




*Figure 20: PAKCIP portal*[37]

[37] Home | pakcip

# Chapter 4: A Case Study of Bangladesh – Climate Action with a Focus on the Planning Information System and Bangladesh INFORM Sub-National Risk Index 2022

## 4.1 Context

According to geographical location, Bangladesh is one of the most climate vulnerable countries of the world. Climate change is both an environmental and developmental issue and it permeates all the sectors including development endeavours. Climate change-induced natural disasters plague Bangladesh due to its geographic location and flat, low-lying topography. High population density, poverty and reliance on climate-sensitive sectors for water and food security, particularly water resources, agriculture, fisheries and livestock, increase its vulnerability to climate change. Climate-induced disasters such as tropical cyclones and storm surges, monsoon floods, flash floods, droughts, sea-level rise, salinity intrusion, ocean acidification, etc. are exacerbating stresses on the country's otherwise tremendous development trajectory, impeding socioeconomic progress and human well-being.

Bangladesh has been proactive and adept in climate change adaptation, mandated by the Constitution in its 15th amendment, Article 18A[38] on the protection and improvement of the environment and biodiversity. Over the decades, Bangladesh has advanced substantially in building adaptive capacity and resilience through formulation and subsequent implementation of required policies and regulatory frameworks for enabling climate resilient sustainable development.

Landmark achievements such as formulation of National Adaptation Program of Action 2005, Bangladesh Climate Change Strategy and Action Plan 2009, Bangladesh Delta Plan 2100, Mujib Climate Prosperity Plan, climate inclusive updated National Environment Policy (2018), updated Standing Order on Disaster (2019) etc. have paved the way for effective climate change adaptation and has propelled Bangladesh as a pioneer in the global arena. The Parliamentary Standing Committee on Ministry of Environment, Forest and Climate Change (MoEFCC) has separate resolution for active involvement for climate actions. It joined the global declaration on 'Planetary Emergency' to counter climate adversities.

[38] The Constitution of the People's Republic of Bangladesh' (Act No. of 1972), Article 18A: The State shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forests and wildlife for the present and future citizens.

## 4.2 Overview of the National Adaptation Plan of Bangladesh (2023-2050)

In 2022, the Government of Bangladesh formulated the National Adaptation Plan of Bangladesh (2023-2050) after undergoing a rigorous process of iterative consultations with the relevant stakeholders across the country at the local, district and national levels.

The NAP primarily encompasses eight distinct sectors: water resources; disaster, social safety and security; agriculture; fisheries, aquaculture and livestock; urban areas; ecosystems, wetlands and biodiversity; policies and institutions; and capacity development, research and innovation. Infrastructure, water and sanitation, health, gender, youth, the elderly, persons with disabilities, ethnic communities and other socially disadvantaged groups, and the private sector are cross-cutting issues and part of identifying appropriate strategies aligned with national aspirations. The NAP considered 11 climate stress areas in devising 113 interventions based on developed adaptation pathways and sectoral adaptation requirements.

## 4.3 Core Problem

Bangladesh is in the delta of three major rivers: Padma, Jamuna-Brahmaputra and Meghna. It has more than 170 million inhabitants. It is one of the 12 most densely populated countries in the world and one of the country's most vulnerable to climate change (ranked 160 out of 181 in the ND-GAIN vulnerability index, June 2023). Sea levels in the Bay of Bengal are expected to rise by 30 to 45 centimetres by 2050. This would lead to a loss of more than one-tenth of Bangladesh's land area and the internal displacement of 10 to 30 million people. Climate change is both an environmental and developmental issue that permeates all sectors.

In Bangladesh, development projects were appraised without:

a. suitability of location
b. Information related to the existing infrastructures and major installations of that locality
c. Spatial plan of the concerned authority
d. Demographic and environmental information
e. Geomorphic information
f. information on climate change projections
g. Other option beside the proposal

One highly relevant sector is infrastructure. Currently, there is limited consideration of climate risks in the planning of infrastructure projects by the Government of Bangladesh. This poses significant challenges to the country's development and sustainability[39].

## 4.4 Planning Information System (PLIS)

To address the problem, GIZ supported the Government of Bangladesh in the development of a user-friendly web-based Geographic Information System (GIS)-based Planning Information System (PLIS) that incorporates the Climatic Check Method (CCM) and provides government officials with a digitalised tool to appraise climate-resilient projects. The Planning Information System (PLIS) provides the chance to obtain possible project summary information with a single click and to search project location into a Geodatabase, providing a more realistic image of any project throughout the approval process.

PLIS facilitate different officials from different Wings under Sector Divisions of Bangladesh Planning Commission to use climate risk information more increasingly and effectively during national and local development planning and project appraisal processes to strengthen the climate resilience of public investment. The PLIS website is a powerful tool that allows users to explore, analyse, and visualise geographic data in an intuitive and interactive manner.[40]

### *4.4.1 Functionality of PLIS*

PLIS is a server-based computer system consisting of:

a. Database of the project proposals

b. Proposal documents

c. Identifying data (name, project type, ministry, agencies, wing etc.)

d. Expenditure, duration and location data

e. Donor agencies

f. Summary background, objectives, activities

g. Data is required for PEC/MoP/NEC/ECNEC report

[39] https://www.datatopolicy.org/use-case/bangladesh#where-do-we-go-from-here
[40] GIZ: Planning Information System (PLIS) USER MANUAL: Adaptation to Climate Change into the National and Local Development Planning (ACCNLDP) II, Dhaka, Bangladesh, June 2023.

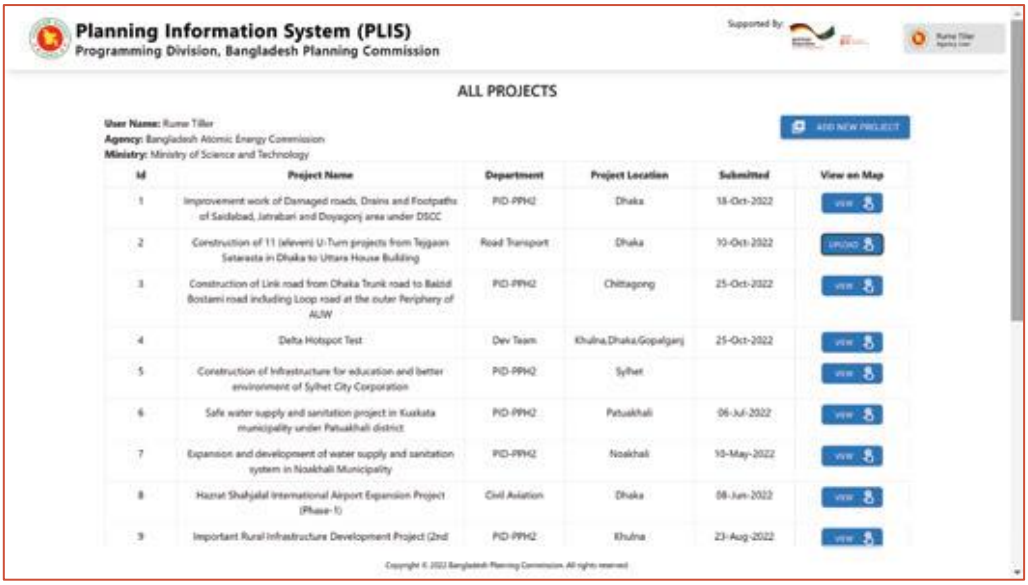
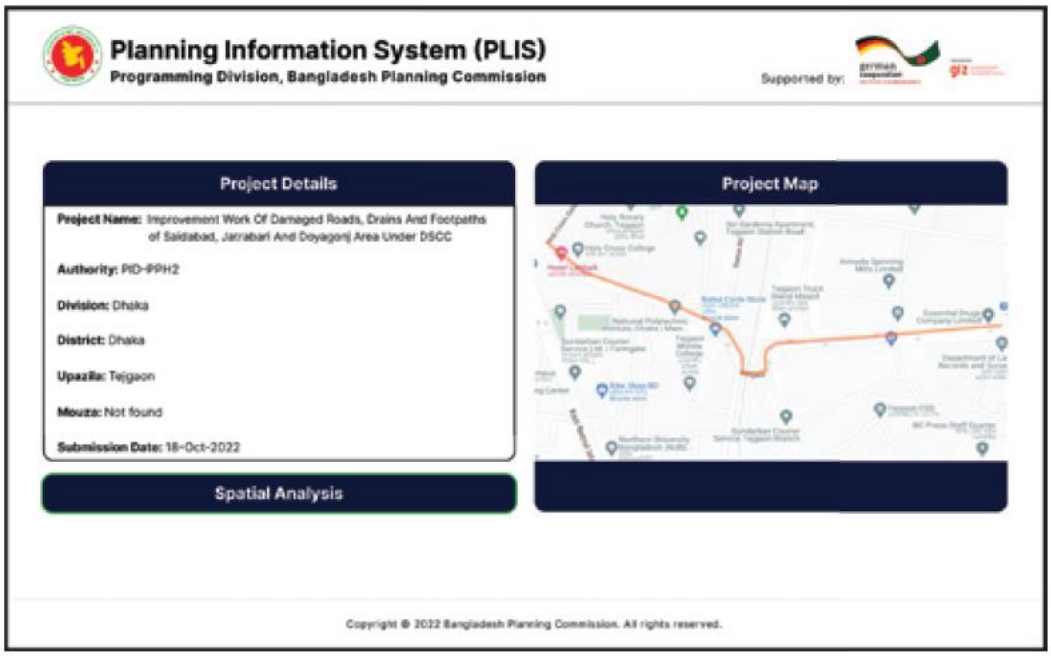



*Figure-21: PLIS Key Features: https://www.giz.de/en/downloads/giz-2023-en-planning-information-system-manual.pdf*

### 4.4.2 *Geographical Information System (GIS)*

GIS contains positional data of the proposals, type of project (road, water, building etc.), maps of partner organisations (e.g. Local Government Department, Roads & Highways, Railways etc.), development plans from partner organisations and general maps (Districts, Upazilas etc.)



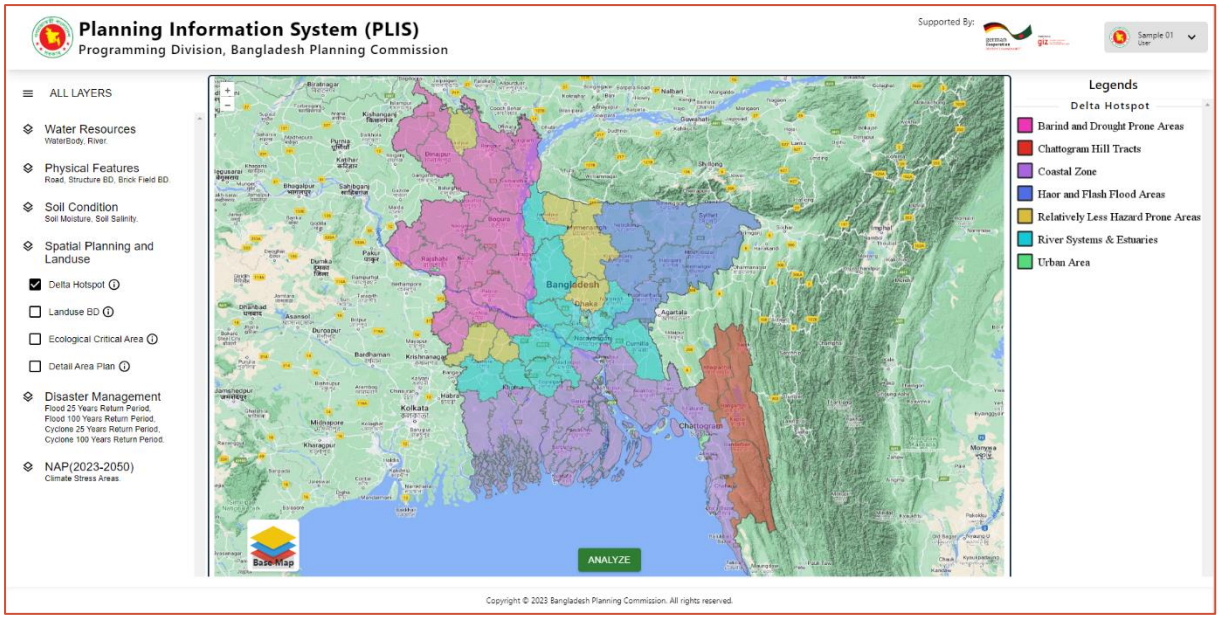



*Figure-22: GIS Key Features: https://www.giz.de/en/downloads/giz-2023-en-planning-information-system-manual.pdf*

### 4.4.3 *Climate Check Method (CCM)*

The CCM is designed to help identify and develop appropriate adaptation measures that are specific to a particular location or region in Bangladesh. The CCM is a framework that has been created by drawing upon the Climate Check Questions. These questions have been formulated by analysing various plans, reports, guidelines, laws and policies of the Bangladesh government. After analysing the selected relevant climate information and answering the CCM questions a pdf that summarises the findings will be generated.

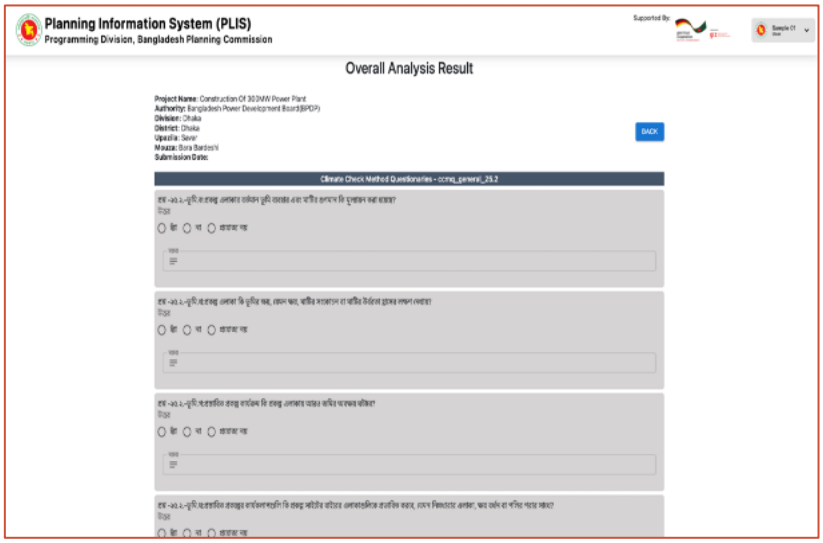



*Figure-23: Climate Check Questions: https://www.giz.de/en/downloads/giz-2023-en-planning-information-system-manual.pdf*

## 4.5 PLIS Data Contributes to Better Policy Formulation

By integrating climate data into policy formulation, policymakers can identify vulnerable areas, assess potential risks and develop targeted strategies for adaptation and mitigation. This data-driven approach promotes evidence-based policymaking, enhances resilience planning and ensures that policies align with the long-term goal of sustainable development in the face of climate change challenges.

The software is interoperable with the Planning Commission's in-house software allowing the tool to be anchored within the move to digitalise the complete public investment project appraisal process. PLIS and CCM can potentially also be used during the planning of new government projects, allowing climate risks information to be incorporated from the very beginning.

Moreover, Officials from the Bangladesh Planning Commission can employ PLIS when appraising project proposals by overlaying the relevant area with data layers such as water resources, physical features, soil conditions, land use plans, disaster risk information and climate change projections. This integrated analysis allows for a comprehensive evaluation of relevant aspects of the project, enabling evidence-based decisions which enhance the project's resilience to climate change effects.

## 4.6 INFORM Sub-National Risk Index 2022

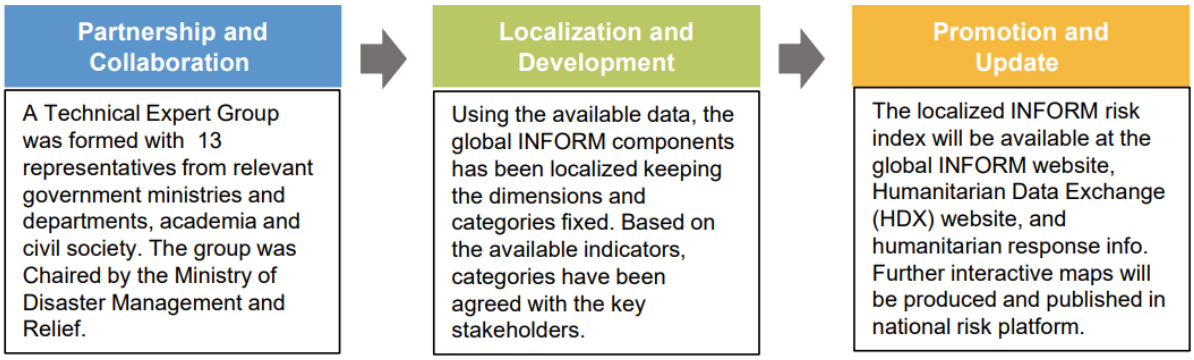
To provide a solid baseline for risk monitoring in Bangladesh, a localised, sub-national Index for Risk Management (INFORM)[41] was developed by the United Nations Resident Coordinator's Office (UNRCO) in collaboration with the Ministry of Disaster Management and Relief (MoDMR) with technical support from the Network for Information, Response and Preparedness Activities on Disaster (NIRAPAD) and the Bangladesh Bureau of Statistics.

By relying on shared risk analysis, government, donors, humanitarian and development actors can align actions and funding decisions towards risk reduction and management. INFORM helps integrate disaster risk management into ongoing work in Disaster Risk Reduction (DRR), Anticipatory Actions, and in humanitarian planning processes. This monitoring also identifies clear areas of improvement in areas such as the National Disaster Statistics gathering, further supporting efforts such as the Sendai Framework Monitoring.

[41] See Annex-IX for the details on the INFORM Risk Index Assessment Model.

### 4.6.1 *INFORM Localised Approach*

The subnational INFORM risk index 2022 for Bangladesh gathered data from 64 Districts and 553 Upazilas and/or Thanas across the country. A total of 89 indicators have been collected and indexed by following the INFORM sub-national risk index guideline. The process of development in collaboration with the Ministry of Disaster Management and Relief and the Bangladesh Bureau of Statistics. The following three steps are used to produce the INFORM Risk Index.




### 4.6.2 *Use of INFORM Risk Index*

The sub-national INFORM risk index development process can help the government entities, humanitarian and development organisations and donors for a shared analysis of disaster risk to ensure their collective actions are better aligned to reduce and manage risk.

The INFORM sub-national risk index can be used to analyse and compare risk and its components across the Districts and Upazilas in Bangladesh. This can help to identify at risk areas and determine the major driving factors of risk, which can help to decide how to manage it.

The INFORM sub-national risk index contributes to the national government or intergovernmental risk assessment and development planning process by integrating disaster risk information into existing prevention, preparedness, anticipatory action, response and recovery interventions.

The INFORM sub-national risk index provides quantitative analysis that can support the Common Country Assessment, United Nations Development Assistance Framework, Humanitarian Program Cycle, implementation of the Sendai Framework for Disaster Risk Reduction, Strategic Preparedness and Response for Resilience to Disaster (SPEED) etc.

### *4.6.3 Data Reliability*

The INFORM risk index calculates a lack of reliability index, which is composed of three indicators: the number of missing and imputed datasets, the recentness of the data, and the degree of subnational data that was included (national values were used when subnational data was missing – a less desired practice). The lack of reliability index scores data on a 0 to 10 scale, where 10 is the least reliable. The lack of reliability index shows that results for Districts are more reliable than the Upazila.

# Chapter 5: Cross Cutting Areas: Gender and Agenda 2030 for the Climate Actions

## 5.1 Technology and Gender[42]

Technologies are not gender neutral and tackling climate change demands that everyone's experience and skills are utilised. Therefore, climate technology action needs to ensure that women and men are both engaged in decision-making processes, development and use of technologies, and benefit from their outcomes.

### Advancing Gender-Responsive in the COP 29

The COP29 produced several key outcomes related to gender-responsive climate action, including:

a. **Gender Action Plan**: The Gender Action Plan will be updated in 2025 to include clear targets and financing goals.

b. **Enhanced Lima Work Program**: The 10-year extension of the Enhanced Lima Work Program will help integrate gender equality into climate action.

c. **New Collective Quantified Goal**: The new climate finance goal will benefit women and other marginalised groups.

d. **Gender-Responsive Just Transitions**: Governments committed to reporting progress on gender-responsive just transitions and climate action.

e. **Gender Data and Reporting**: Governments committed to supporting gender data and reporting on gender commitments.

## 5.2 The Government of Pakistan National Gender Policy Framework of the Government of Pakistan 2022

Pakistan stands at 142 out of 146 countries accordingly to the Global Gender Gap 2023[43]. In the southern Asia, Pakistan is at 7th place with regards to Gender Gap Index ranking. The National Gender Policy Framework of the Government of Pakistan 2022 addresses six key pillars for policy prioritisation. These include Governance, quality and quality in education, employment and economic empowerment, agency, political participation and meaningful engagement, safety and security and health and wellbeing.

[42] https://www.ctc-n.org/technology-sectors/gender
[43] https://www3.weforum.org/docs/WEF_GGGR_2023.pdf

With regards to climate change, the Gender Policy Framework recommends:

| | | |
|---|---|---|
| Ensure women's vulnerability are addressed in climate policies and programs | Build awareness of the interlinkages between climate degradation and women's deteriorating plight. | MoCC<br>NCSW |
| | Develop climate specific data sets and strengthen analytic capacities to review female vulnerability and resilience in tandem with climate degradation | MoCC<br>NCSW |

*Source: National Gender Policy Framework of Pakistan, 2022, MoPD&SI*

### Gender Planning and Monitoring:

**Objective 1 Governance |** Establish gender-transformative governance structures, lead gender-equal institutional transformation, and ensure gender equality's reflection among government priorities and action plans

| Sub- Objective | Strategic Priorities | Lead Implementer | Provincial Stakeholders | Collaborating UN Partner | Key Performance Indicators | Timeframe 2022 | 2023 | 2026 |
|---|---|---|---|---|---|---|---|---|
| **Promote gender-responsive data analysis, planning, programming, budgeting, and monitoring across all programs and all ministries** | Notify **Sub Advisory Committee on Gender** at the Planning Commission with TORs in alighment with the Gender Roadmap | | | | Committee notified | x | | |
| | Introduce **gender responsive PC-1 checklist** to ensure cross-ministerial gender integration in PSDP/ADPs in all new public sector programs and projects | | | | PC-1 checklist introduced and approved | x | | |
| | Build institutional capacities for **gender-responsive budgeting** and financing systems, linked to financial management, reporting and PSDP progress reviews | | | | | | | |
| | Stimulate all ministries/sectors to **mainstream gender equality** in wider sector strategies and their PSDP portfolios with session hosted at the PC and in every ministry to guide sectoral interventions and objectives to be gender-transformative | | | | Gender mainstreaming training workshops orgnanized | x | x | |
| | **Develop gender-responsive M&E frameworks** listing agreed key performance indicators to be monitored at the highest policy level for every public sector program and project | | | | M&E framework in place | x | | |

*Source: https://www.pc.gov.pk/uploads/report/NGPF.pdf*

## 5.3 The Gender Action Plan 2024-2026

Supported by the UN Women Pakistan, the Gender Action Plan 2024-2026 focuses on:

a. Increasing women's workforce participation

b. Promoting digital & financial inclusion for women

c. Strengthening gender-responsive policies, inclusive workplaces, anti-harassment frameworks and leadership for women

d. Enhancing women's access to health, education, sustainable energy solutions, and entrepreneurial opportunities

e. Breaking cultural barriers for women

## 5.4 Climate Change Gender Action Plan of the Government of Pakistan (ccGAP) (2022)[44]

Developed by the MOCC&EC and the International Union for Conservation of Nature, this ccGAP is the first document of its kind that not only recognises the role of gender in the development of climate solutions but also sets out a series of practical steps to make this a reality. This Climate Change Gender Action Plan (ccGAP) provides a framework for integrated gender responsive climate action in Pakistan in six priority sectors that are particularly important for building resilience and where women are likely to be most severely affected: these include (a) Disaster risk reduction, (b) Agriculture and food security, (c) Forests and biodiversity (d) Integrated coastal management (e) Water and sanitation (f) Energy and transport.

## 5.5 Gender Integration into Development Planning

Common features of a gender-mainstreaming process are as follows:

a. Systematic collection and analysis of sex disaggregated data to understand if and how any issue affects women and men differently and/or unequally.

b. Systematic gender analysis to explore and explain gender differences and inequalities.

c. Efforts to understand women's and men's experiences, concerns and priorities, through consultation with women and men, and engagement with advocacy groups.

d. Gender appraisal of intervention options to consider implications and likely differential impacts for women and men.

e. Action (backed up with budgets and indicators) to promote gender equality and uphold women's rights

f. Ensuring that women and men get a fair share of services, opportunities, resources and influence in all programs and projects (e.g. an equal and fair share of businesses development support, training and credit in a small business development program)

g. Targeted initiatives and program components to promote specific needs of different groups (e.g. a targeted support program for female police, recognising and addressing their specific needs, constraints and risks)

h. Systematic monitoring and evaluation of results – examining intended and unintended impact on women's and men's lives, including impact on gender equality and women's rights.

[44] https://wedo.org/wp-content/uploads/2023/04/Climate-Change-Gender-Action-Plan-1.pdf

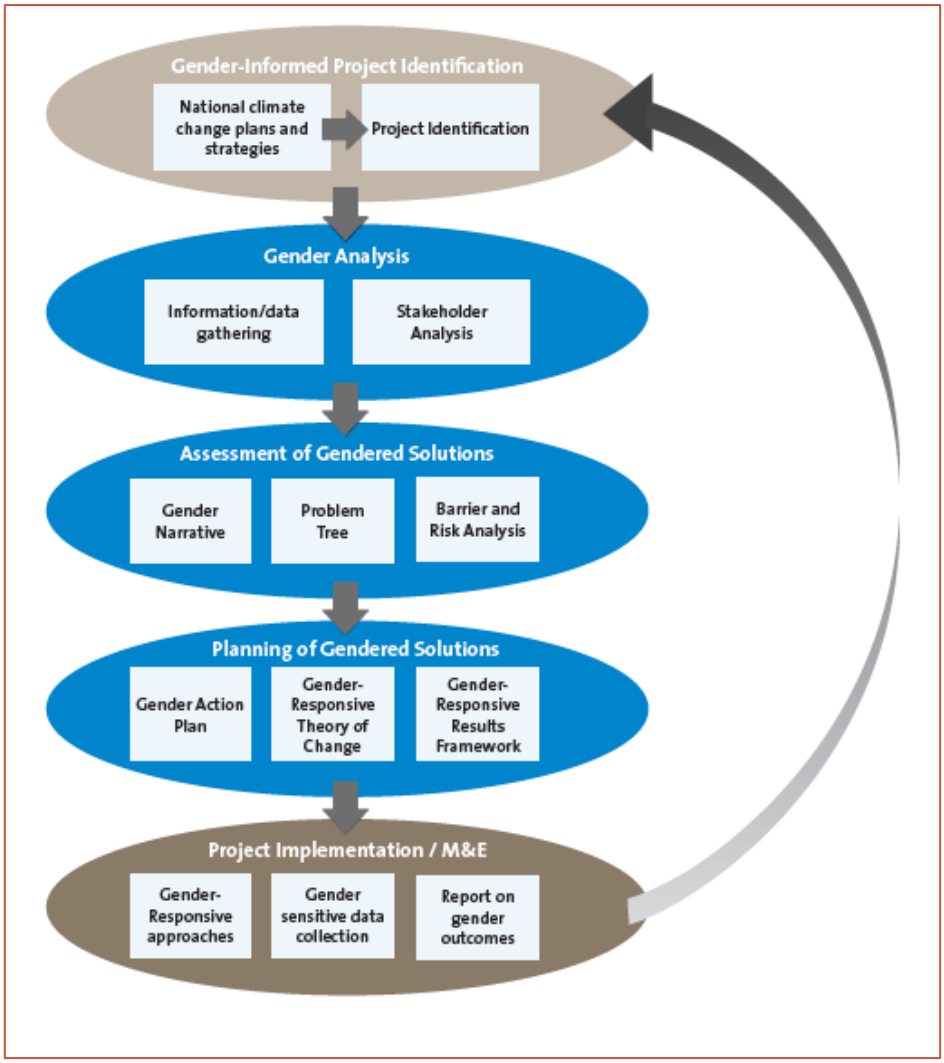



*Figure-24: Process of gender integration into development planning*[45]

## 5.6 Gender Unit of the Ministry of Planning, Development, and Special Initiatives (MoPD&SI):

The aim of the Gender Unit is to drive change and catalyse progress in closing the national gender by facilitating the Planning Commission in stimulating, planning, coordinating, and monitoring high-impact reform interventions that create a more equitable society.

[45] NAP Global Network & UNFCCC, Toolkit for a gender-responsive process to formulate and implement National Adaptation Plans (NAPs), 2019. https://unfccc.int/sites/default/files/resource/NAP_Gender_Toolkit.pdf

## 5.7 Social Protection and Gender Mainstreaming (SP&GM) Section of the Planning and Development Department Khyber Pakhtunkhwa

The Social Protection and Gender Mainstreaming (SP&GM) Section of the Planning and Development Department Khyber Pakhtunkhwa was established in May 2020. The SP&GM has been mandated to provide a centralised coordination platform at provincial level for information, planning and strategic allocation of resources to gender mainstreaming, women's empowerment and social protection of the vulnerable segments of society including women and girls.

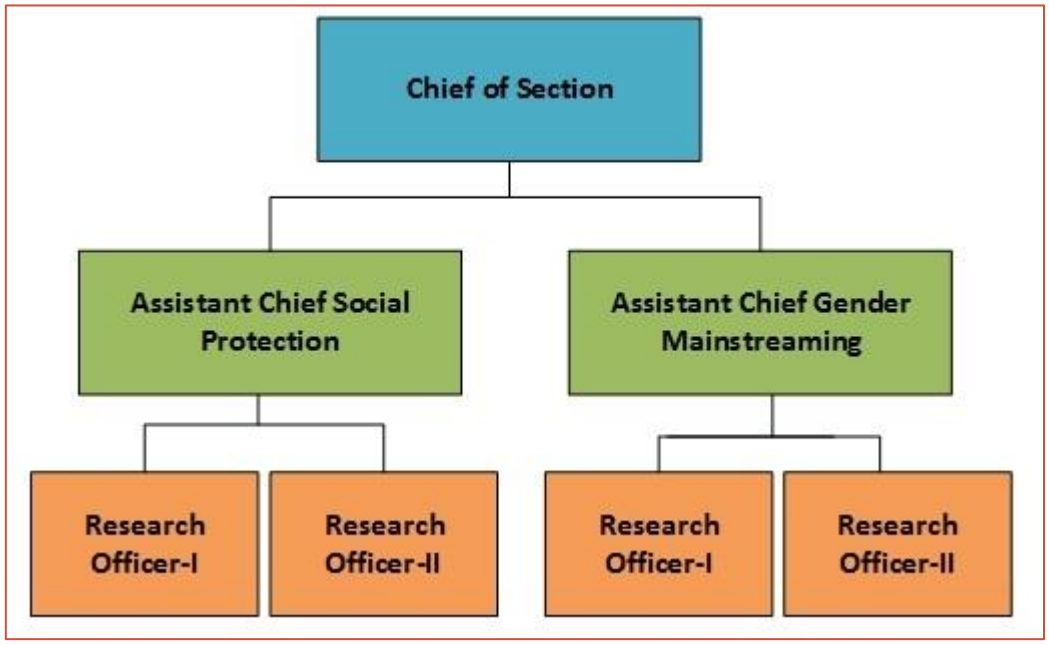



*Figure-25: Organogram of the Social Protection Unit*[46]

### Government of Khyber Pakhtunkhwa Gender Equality Marker: A Guidance and Assessment Tool

The Gender Equality Marker: A Guidance and Assessment Tool document is an adaptation of the Gender Equality Markers, an internationally used qualitative statistical tool, applied to measure the degree to which the results that use program budgets contribute to the advancement of gender equality and women's empowerment. The objective is to ensure public sector projects contribute to gender mainstreaming and women's empowerment. A Gender Equality Markers has codes (i.e. 0, 1, 2, 3) which denote the type and/or degree to which a unit of analysis – usually an output or project – addresses gender equality and women's empowerment.

[46] https://pndkp.gov.pk/social-protection-gender-mainstreaming/

**Box-2: Use of Gender Equality Marker**

- At the initial stages of proposal/program development to mainstream gender strategically into the project design from the very beginning
- To provide recommendations (e.g. checklists of what should be included) to strengthen a proposal's gender mainstreaming approach
- To review a proposal before it is signed off to ensure it meets essential standards of gender mainstreaming and equality

### The PC-1 and the Integration of the Customised Gender Equality Markers

The PC-I is the document for the conceiving, phasing and implementation of a project in the government sector. A simple glance at the PC-I suggests that the aspect of Gender Equality is missing from the public development sector. Therefore, a checklist may be added to PC-1 to ensure public sector projects contribute to gender equality and women's empowerment.

### Sustainability of the Gender Markers in the Planning Process

While the Gender Equality Markers have been established, the SP&GM section envisages to incorporate the practice through an automated system to ensure gender equality throughout the planning process.

### Social Protection and Gender Mainstreaming (SP&GM) Section Strategic Plan (2021-2025)

The Strategic plan provides a broad framework that can be regularly updated based on changing environment and the consultative process and is to be adopted by the concerned authorities for preparation of the Provincial Gender and Social Protection specific program and budget.

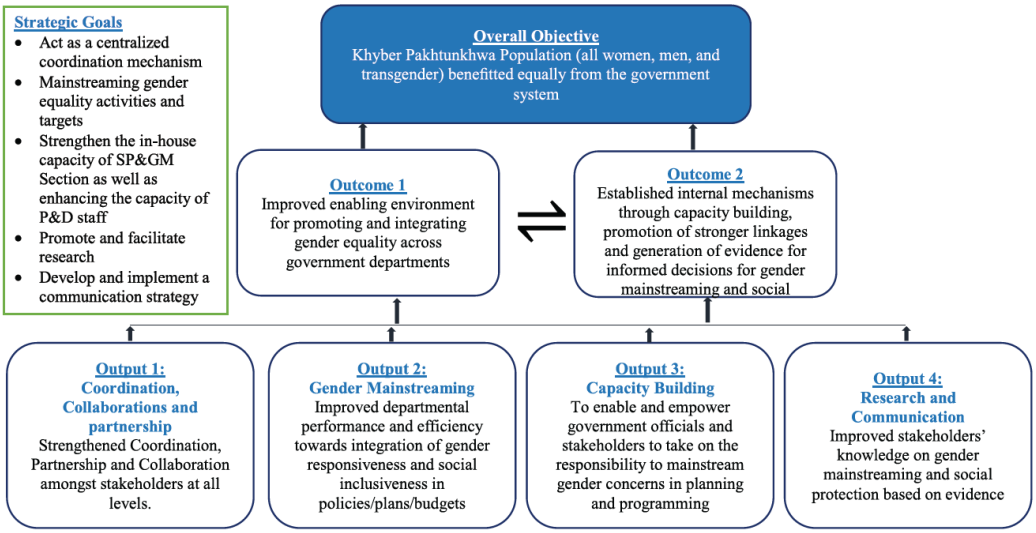



*Figure-26: Strategic Plan of the Social Protection and Gender Mainstreaming section of the KP P&D*

## 5.8 Government of the Punjab Women Development Policy 2018[47]

### Policy Objective

To enhance gender responsiveness of climate change, environment and natural resources management strategies in the province especially through climate change adaptation and disaster risk reduction initiatives.

### Climate Action Policy Strategies

a. Stock take and gender audit of provincial climate change and natural resources management policies and strategies to identify policy and implementation gaps for enhancing participation and benefit sharing for women *(Environment Department, Forestry & Wildlife Department, Women Development Department (WDD).*

b. Undertake and institutionalise knowledge development and research for collecting gender disaggregated data and gender profiling to inform planning and development processes. This will facilitate the design and implementation of interventions of climate change

c. resilience for vulnerable sections of society including women *(Planning & Development Board, Environment Department, Forestry and Wildlife Department, WDD, Provincial Commission on Status of Women).*

d. Capacity building of government organisations, civil society, NGOs and media for ensuring gender main streaming across all provincial level climate change policies, programs and interventions *(Environment Department, P&D Board, WDD).*

e. Ensure National Climate Change Policies and reporting systems fully incorporate and cater to gender concerns in Punjab with reference to international climate change related treaties and protocols to which Pakistan is a signatory *(Environment Department, P&D Board, WDD).*

f. Ensure maximum participation of vulnerable communities without gender discrimination for equitable benefit sharing from sustainable development and natural resource management interventions and opportunities *(P&D Board, WDD).*

g. Enhancing equitable resilience of women and men living in vulnerable ecosystems against climate change-induced disasters through employment of gender responsive disaster risk reduction and resilience mechanisms (*Provincial Disaster Management Authority, P&D Board, WDD).*

[47] https://pcsw.punjab.gov.pk/system/files/RM%20Final%20Punjab%20Women%20Dev%20Policy%20%20%202018%20submitted%20to%20CM%20dated%2029.8.2017.pdf

### Punjab Women Development Policy Implementation Framework: (2020-2024)[48]

This implementation framework provides a road map for the six policy areas. These include (a) Women's Political Empowerment and Rights-based Governance (b) Women and Education/ Skills Development (c) Women and Health (d) Women, Poverty Reduction and Economic Empowerment (e) Women and Climate Change and (f) Women and ICT.

### Gender Key Performance Indicators (KPIs) in Project Appraisal in Punjab

Development of key performance indicators (KPIs) in project appraisal should consider following parameters.

**Box-3: Gender KPIs Parameters for the Project Appraisal System in Punjab**

- **Disaggregated Data Collection:** Ensure data is collected and analysed by gender to understand project impacts on different groups of women (e.g., by age, socioeconomic status, location).
- **Gender Equality Budget Analysis:** Analyse the project budget to see how resources are allocated in ADP schemes to address women's needs and promote gender equality.
- **Sustainability of Gender Impacts:** Consider how project benefits for women will be sustained after project completion at PC-4 level

### Project Design and Planning

| |
|---|
| Percentage of women involved in project design and planning processes. |
| A few women's organisations (Community Organisation/Village Organisation/ Local Support Organisations) consulted during project development. |
| Integration of gender-specific needs and priorities into the project design. |

### Participation and Access

| |
|---|
| Percentage of female project beneficiaries compared to males. |
| Proportion of women participating in project activities (e.g., training, decision-making). |
| Level of access for women to project resources (e.g., land ownership, financial resources). |

### Economic Empowerment

| |
|---|
| Increase in women's income or economic opportunities because of the project. |
| Number of women gaining access to financial services or credit through the project. |
| Percentage of women owning or managing businesses established or supported by the project. |

[48] https://pakistan.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Docs/Publications/2021/01/FINAL%20WDP%20Punjab%20Implementation%20Framework%20Sep%202020.pdf

### Social Empowerment

Improvement in women's decision-making power within households or communities.
Increased participation of women in leadership roles or community governance.
Reduction in gender-based violence or discriminatory practices.

### Knowledge and Skills

Number of women receiving training or capacity building opportunities through the project.
Improvement in women's knowledge and skills relevant to project activities or livelihood opportunities.
Increased awareness of women's rights and gender equality issues.

## 5.9 Gender Responsive Budgeting (FY2024-25)[49]

Gender budgeting is a regular feature of the Budget Call Circular. Ministries/Divisions are required to fill in the relevant form specifying gender-wise planned expenditure/spending during FY2024-25. Any activity, program or project having an impact on men, women, children or transgenders for which expenditure is planned to be incurred during FY2024-25, shall be mentioned along with specific cost centre/object head. Similarly, planned expenditure under the development budget shall be filled in along with cost centres/object heads.

**Gender Responsive Budgeting**

Ministry/Division/Department:_____

Name/ Designation of Principal Accounting Officer: _____

(Rs/Million)

| Description | B.E 2024-25 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Budget Estimate | Men's | | Budget Estimate | Women | | Budget Estimate | Transgender | | Budget Estimate | Children | |
| | | Men related Budget | %age | | Women related Budget | %age | | Transgender related Budget | %age | | Children related Budget | %age |
| Demand Name & No. | | | | | | | | | | | | |
| Development * | | | | | | | | | | | | |
| Current Budget * | | | | | | | | | | | | |

*List of projects, activities, programs, initiatives along with cost centers to be attached

**Last date of submission: 14th June, 2024**

Prepared by:_____

Chief Finance & Accounts Officer/Head of Finance

Verified by: _____
Principal Accounting Officer

*Source: BCC_2024_25_07022024.pdf*

[49] https://www.finance.gov.pk/budget/BCC_2024_25_07022024.pdf

## 5.10 Pakistan's Implementation of the 2030 Agenda for Sustainable Development: Voluntary-National Review

Pakistan's progress towards meeting the SDGs was documented in its first and second Voluntary National Reviews (VNR) of, respectively, 2019 and 2022. The 2019 VNR noted that Pakistan integrated the SDGs into its national development agenda in February 2016 and launched a National SDGs Framework in 2018. The latter consisted of a national vision, plan, and strategy to optimise, prioritise, and localise the full potential of SDGs in Pakistan. Moreover, Pakistan established task forces in the National and Provincial Parliaments to review progress and facilitate legislative support for implementation, and it instituted SDGs Support Units at the Federal and Provincial Government levels to facilitate vertical and horizontal coordination among stakeholders.

The Pakistan 2023 SDG Insights Report showed the country to be on track to achieve only 35 out of 169 SDG targets[50]. As per the Sustainable Development Report 2024[51], Pakistan ranks 137 out of 167 countries.

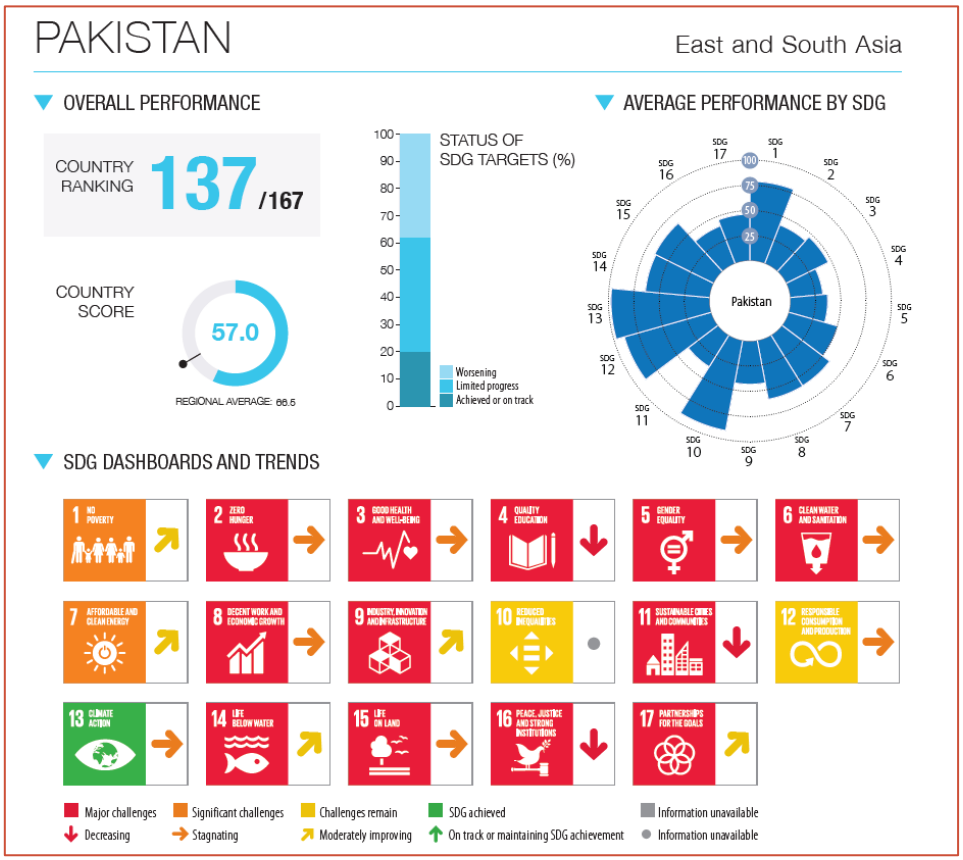



*Figure-27: Overall SDGs performance of Pakistan*

[50] https://www.undp.org/sites/g/files/zskgke326/files/2024-04/dap_-_volume_11_issue_1_-_data_for_development_web-only.pdf

[51] The *Sustainable Development Report* (SDR) reviews progress made each year on the SDGs since their adoption by the 193 UN member states in 2015. For details, please see: https://dashboards.sdgindex.org/

### 5.10.1 *Strengthening Data for Punjab Regional Development*

Punjab has now become the first province to develop its SDGs Data Dashboard, an online web-based dashboard to present data on SDG indicators pertaining to Punjab in a user-friendly manner. The online dashboard supports the provincial Bureau of Statistics and provincial line departments to report SDG-related data. The online dashboard allows users to download datasheets and present them graphically.[52]

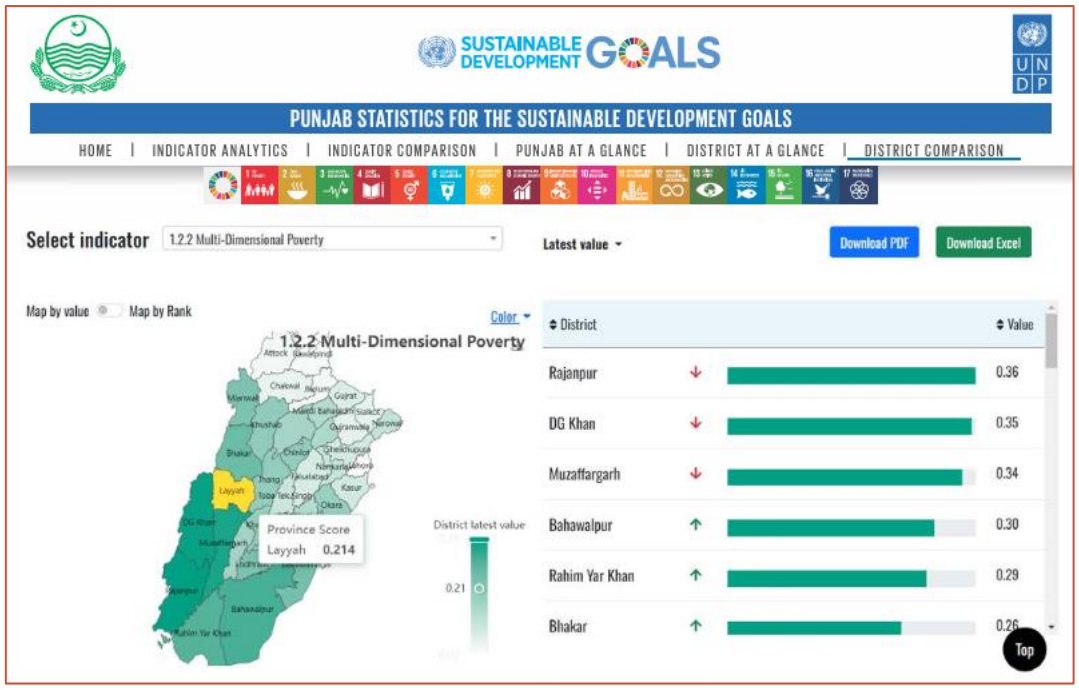



*Figure-28: Punjab SDGs Data Dashboard*

### 5.10.2 *Bridging Khyber Pakhtunkhwa's Data Gap*[53]

The Khyber Pakhtunkhwa SDG Unit has helped prepare District SDG Scorecards, ranking all districts across 33 SDG indicators, and helping inform policy decisions regarding district-based allocation of resources. In KP, there are two key management information systems at the provincial level, including the Planning Commission Forms Management System (PCFMS), managed by the P&D Department for development budgets, and the SAP system, managed by the Finance Department, mainly for current budgets.

[52] Data for Development: UNDP Pakistan: Development Advocate: Volume 11 / Issue 1 | March - April 2024. Javeria Khalid, M&E Analyst, Punjab SDGs Unit, UNDP, Pakistan: https://www.undp.org/sites/g/files/zskgke326/files/2024-04/dap_-_volume_11_issue_1_-_data_for_development_web-only.pdf

[53] Data for Development: UNDP Pakistan: Development Advocate: Volume 11 / Issue 1 | March - April 2024. Syed Sabir Hussain Shah, Project Manager, Khyber Pakhtunkhwa SDG Unit UNDP, Pakistan: https://www.undp.org/sites/g/files/zskgke326/files/2024-04/dap_-_volume_11_issue_1_-_data_for_development_web-only.pdf

With the approval of the Provincial SDGs Framework by the provincial government, SDG Unit embedded all the goals - 111 provincially relevant targets duly bifurcated as high, medium, and low priority, and the associated 171 indicators, into PCFMS, wherein every development intervention can be linked with relevant SDGs, targets, and indicators. Likewise, in the SAP system, around 13,000 cost centres have been mapped with SDGs, prioritised targets, and indicators.

# Chapter 6: Findings and Recommendations of the Study

## 6.1 Findings of the Study

The study identifies significant needs and opportunities to set up a holistic, robust and coherent climate change data ecosystem that manages climate data for the digital appraisal system, MRV (Measurement, Reporting, and Verification), among others.

### *6.1.1 Digital Appraisal System*

#### Institutional Resources

All projects (both new and revised) shall be uploaded on Planning Commission's web-based Intelligent Project Automation System (iPAS) on revised PC-I 2024 proforma and on PC-II proforma, in case of feasibility study. This underscores the need to deploy human, technical and financial resources for the climate data collection and data analysis, data monitoring and data reporting in the planning system and policy making.

#### IT Infrastructure

The existing IT infrastructure (hardware and software) is insufficient in the PC, and Provincial Planning Authorities to integrate revised climate resilience project cycle into their digital appraisal system. Climate data integration requirements would need a complete set of data configuration actions in the digital appraisal system.

#### Interoperability

Given the granularity of climate data, there is no centralised climate data management system for the digital planning appraisal systems (iPAS, SMDP, PCFMS) with the RISQ Transparency Portal as well as other digital systems in Pakistan.

#### Capacity Development of Planning and Technical Officers

Every project will undertake Climate and Hazard Initial Risk Assessment (CHIRA) screening to assess the level of risk to the project and its activities at the PCN and PC-I stages to proceed further. This necessities training of planning and technical experts in the Ministries and the provincial governments on the climate risk management cycle.

#### Climate Change Checklists

The different checklists carbon credit, gender, DRR, climate finance checklist, climate change risk checklist provides an opportunity to align the planning cycle with the necessary standards and requirements.

### MRV System Integration

The MRV system is not integrated into the existing digital appraisal system at both federal and provincial levels. This integration is essential for ensuring that data on climate actions (such as emissions reductions, adaptation measures, etc.) are accurately monitored, reported, and verified in a cohesive manner.

### Data Availability in Small Clusters

Distributed infrastructure which is available in small clusters is difficult to manage. Estimating and planning for the future expansion in a fragmented infrastructure is a challenging task. There is a significant need to have a consolidated infrastructure for the digital appraisal system. Currently, the utilisation of cloud services is low, and most of the data centres cater for the need of a single organisation only. There is a need to holistically implement the Pakistan's First Cloud Policy and Provincial Cloud Policies.

### Data Training

Increased demand for cloud technologies, skills, training and development of relevant quality human resources is critical. There is a need for the training and up-skilling of the relevant officials on accelerated cloud adoption.

### District and Local Government Planning System

For the climate risk informed planning from the bottom-up approach, there is a greater need and opportunity to enhance understanding of the district and local government officers on the climate risk management cycle, climate change adaptation and mitigation, including situation analysis, technical and financial planning, and monitoring and reporting procedures.

Moreover, the Planning and Development guidelines are required to be updated and climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation. This will result in improving the process of climate resilience sectoral planning and its policies, development of local adaptation plans, and finally provincial adaptation plans under the NAP 2023.

## *6.1.2 Climate Transparency Framework of Pakistan*

### Technology Transfer

The Pakistan 2017 Technology Need Assessment (TNA) lacks coherence with the updated NDCS and NAP 2023. Given the rapidly changing nature of Climatic Actions, fresh TNAs are needed.

### Taskforce on Climate Transparency System

The study identifies the opportunity to develop a "National Task Force on Enhanced Transparency System" for an effective coordination between at the national and provincial levels.[54] (See Annex-X).

### Domestic MRV and Adaptation M&E System Lacks Enabling Environment

The existing IT environment (IT infrastructure and human resource) is inadequate to manage the country-wide MRV and Adaptation M&E system. For the functionality of this system, there is a significant need to develop a full IT infrastructure (hardware and software), server upgrades for the RISQ Transparency Platform, PCFMS on climate transparency actions, among others.

### The Interoperability of the RISQ Transparency Platform with Other Platforms

There is a significant need to develop a centralised repository and platform for sharing climate information and data in close collaboration with key data agencies (PMD, PARC, NDMA) and other data system in Pakistan.

### National GHG Inventory

To fulfil international reporting obligations, the study underscores the need to complete the time-series for the compilation of the inventory based on national statistics. Furthermore, there is an opportunity to develop a specific sectoral tool to estimate emissions from emission categories not yet covered in the inventory such as F-gases.

### Sectoral Data Management

There is a need to populate the RISQ transparency portal which is designed to gather the data on the sectoral initiatives, targets, achievements, budgetary allocations, expenditure and planned activities pertaining to the adaptation and mitigation of climate change, under the umbrella of the climate change policy, NDC and NAP.

### Financing for Climate Action on Pakistan's Climate Technological Advancement

The study identifies an opportunity to develop a comprehensive "Financing for climate action on Pakistan's technological advancement" strategy such as development of a financial mobilisation plan (business models, etc.) and market creation strategy.

[54] See Annex-X for the proposed composition and roles and responsibilities of this taskforce.

### Capacity Assessment and Needs

The need for capacity-building exists at policy, operational, as well as reform levels at national and sub-national tiers alike. In Pakistan, the provincial governments are responsible for provincial policies, operational plans, and provincial-level governance reforms. No systematic tracking is in place regarding capacity building received (mostly conducted through projects). There is a need to undertake a diagnostic study of the governance architecture related to climate change, aligning it with national, regional, and international best practices.

### Scientific/Technical Capacities

While Pakistan has significantly augmented its climate modelling capacity and has established a robust National greenhouse gas (GHG) Inventory Management System since the NDC in 2016, the capacity needs to be also developed for agricultural, water, health and economic costing purposes at national and provincial levels, as well as at selected universities and at technical research institutions. Additionally, there is a need to augment data collection, usage and reporting systems as well as the decision-support system at the planning and sectoral ministries under the NDC 3.0.

### Knowledge Sharing Information System from Transparency Initiatives

The developed knowledge management platforms (PAKCIP) provide an opportunity to integrate knowledge products and relevant climate information in the information system for public access. These platforms are not updated yet.

### Learning Exchange on the Enhanced Transparency Framework

There is an opportunity to learn from the countries which have established MRV/ETF system such a Turkey. This learning exchange will benefit the policy makers and implementers to strengthen the ETS in Pakistan.

### Policies & Measures (P&M) as well as Support Needed and Received

The study identifies an opportunity to develop a module to the RISQ platform to collect, centralise and report information necessary to track progress made in implementing and achieving NDC under Article 4 of the Paris Agreement with a focus on long-term low greenhouse gas emission development strategies.

### Integration of the MRV System into the Planning Authorities' M&E Sections

There is also a significant need to integrate the Climate and Monitoring Indicators and MRV system with the M&E sections and Directorates of both Federal and Provincial Planning authorities.

### 6.1.3 *Cross Cutting Areas*

#### Gender, Youth, and Social Inclusion

The study identifies that inclusion of gender, youth, and social inclusion is critically important for the climate transparency system. This gap underscores the need to develop gender, youth and social inclusion analysis for effective integration climate technologies in the prioritised sectors of NDC (Nationally Determined Contributions) and NAP (National Adaptation Plans).

#### Action for Climate Empowerment Strategy (ACE)

The study highlights need to develop ACE strategy along with an action plan for Pakistan in the areas of climate change education and public awareness, training, public participation, public access to information, and international cooperation.

#### Donor Coordination on the Digital Appraisal System and Climate Transparency System

There exists an opportunity for the donors to coordinate and support the MoCC&EC, GCSIC and MoPD&SI and Provincial Planning and Development Boards/departments in the areas of a) the prioritised technologies to be deployed, b) technology innovation and research and development required, c) policy, regulatory and legal aspects, d) financing and e) Capacity building and f) provision of IT infrastructure both hardware and software e) support in the development of third national communication, biennial report and the NDC 3.0.

## 6.2 Recommendations of the Study

The study provides insightful recommendations for establishing and managing a Climate Change Data Ecosystem at the Federal, Provincial, and Local levels in Pakistan.

### 6.2.1 *Setting up a Climate Change Data Ecosystem (CCDE)*

The study strongly recommends strengthening the Climate Change Data Ecosystem (CCDE) for the digital appraisal system and climate transparency system. Institutional arrangements can be organised around five separate components[55]. These include (a) Organisational mandates (b) Expertise (c) Data flows (d) Systems and tools and (d) Stakeholder engagement.

[55] These components span a range of organisations, from government ministries and agencies to academic and research institutions, to private entities. Further, developing these components is a process of continual, gradual improvement tracked through a well-developed improvement plan.

### *6.2.2 Digital Appraisal System*

#### Systemic Integration of the Climate Screening Guidelines into the Digital Appraisal System

The study recommends a phased plan for integrating climate screening processes into the existing digital appraisal system at the federal and provincial levels. This will allow for a systemic integration into the iPAS, with challenges and lessons from this integration effectively managed at the provincial level in their digital appraisal systems in the next stage.

The study further recommends a comprehensive and detailed consultation with the iPAS team to identify the relevant institutional support required for the technical and infrastructure IT support, both software and hardware, among others. It also suggests creating smart monitoring dashboards for Federal government to track adaptation and mitigation initiatives.

#### Institutional Capacity Enhancement at Federal and Provincial Levels

Since all projects will be climate-proofed, this necessitates developing a human resource plan tailored to the needs of the Environment and Climate Change wing of the Planning Commission (PC), Ministry of Climate Change and Environment (MoCC&EC), GCSIC and the Provincial Planning and Development Departments/Boards. This includes creating new positions for technical review of climate projects, data management, and reporting on climate actions at both federal and provincial levels.

To make iPAS and provincial digital appraisal system climate proofed, support will be required in the areas of, for example, API Integration, data Import/export, user-friendly interface, data security and privacy, performance metrics, scalability. In addition to that, training and support will also be required for the data users: and technical support to address any issues or challenges users may encounter, among others. Furthermore, support in strengthening performance and security of the cloud-based system will also be needed.

#### Strengthening Coordination Mechanism on the Digital Appraisal System

The study strongly recommends establishing a centralised and integrated system[56] for the climate data management processes. It also recommends development of an interface of the updated digital appraisal system with the other climate portal (RISQ Transparency portal).

[56] Such a system would require user Interface Design, Backend Infrastructure, data Security, data Integration, data storage and its processing, User Experience (feedback mechanism and error handling), compliance with regulations, testing and quality assurance and development of user Documentation and Technical Documentation for developers and maintainers.

#### Capacity Development of Planning and Technical Officers

The study recommends developing and implementing a training plan for all planning and technical officers in ministries and provinces focusing on climate change cycle management, with a specific emphasis on Climate and Hazard Initial Assessment. It is further suggested to update and climate proof online tutorials on the iPAS and provincial digital appraisal system.

It is further recommended that the training curricula offered by the Federal and Provincial Training Institutes on the topic of "Project Management in the Public Sector" be updated in accordance with the updated Manual for Development Projects 2024.

At the District level, the local participation in climate planning is limited, and the District Administration is often constrained by the same issues in terms of human, financial and logistical resources. It is essentially vital to enhance the planning and technical team of the District Administration on the "Climate Risk Management Cycle" in the planning processes.

### *6.2.3 Enhancing Local Development and Financial Planning through Integration of Climate Change Objectives*

#### Legal and Regulatory Framework

The study strongly recommends updating the existing Local Government legal and regulatory framework with the climate risk assessment criteria. In accordance with the Manual for Development Projects 2024, the district and tehsil development plans guidelines are required to be updated and climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation.

#### Integration of Climate Risk and Vulnerability Assessments into Local Development Planning

The study recommends supporting local governments in conducting comprehensive climate risk and vulnerability assessments by mainstreaming adaptation measures into local development planning processes. The Planning Commission's approved climate screening guidelines will serve as the basis for climate-resilience local development planning.

#### Enhancement of Climate Statistical Data Systems

There is also a need to establish climate statistical data systems at local levels by development of an online planning tool. This will ensure reliable and localised data essential for sector-specific climate change mitigation and adaptation strategies.

### Development of Local Adaptation Plans

The study recommends development of Local Government at different levels (Tehsil, Union, Village). This will ensure bottom-up evidence based sectoral data collection on climate actions for reporting nationally and internationally.

### Addressing Financial Resource Constraints

The study strongly recommends advocating for the Local Government Finance Commission to highlight resource constraints faced by local governments in implementing climate change initiatives. It further suggests proposing revisions to financial formulas to allocate sufficient resources for climate adaptation and mitigation measures at the local level.

### Capacity Building for Local Governments

Providing targeted capacity building programs for local government officials on climate risk management cycle is critically important for local development planning. There is a significant need to develop a training plan focusing on technical and financial planning for climate change adaptation and mitigation at the local level.

### Learning from Bangladesh's Digital Appraisal System

The study recommends facilitating a learning exchange program to the Bangladesh Planning Commission to gain insights into their successful implementation of GIS-based PLIS and CCM tools and to learn the INFORM risk assessment process at the sub-national levels.

## *6.2.4 Strengthening the Climate Transparency System in Pakistan*

The study provides major policy recommendations for advancing climate transparency system in Pakistan.

### Updating the Technology Needs Assessment (TNA) under the Revised NDCs

The study strongly recommends updating the 2017 Technology Needs assessment in line with the updated NDCs. It further recommends developing a Technology Roadmap for NDC implementation, which includes a) the prioritised technologies to be deployed, b) technology innovation and research and development required, c) policy, regulatory, and legal aspects, and d) financing, enabling environments, and stakeholder engagement and coordination for effective implementation of the roadmap.

It further strongly recommends developing technologies for intervention in high impact sectors based on preliminary evaluation of mitigation and/or adaptation potential, selection of sectors (maximum of 2 mitigation sectors and 2 adaptation sectors) based on the NDCs as well as challenges and needs.

### Governance and Planning

For an effective coordination between the national and provincial levels, the study recommends setting up a "National Task Force on Enhanced Transparency System". For country wide MRV system, the study recommends development of the full IT infrastructure for the RISQ Transparency Platform, PAKCIP portal among others. This will ensure operationalisation of the platforms and secure the maintenance. Hardware and software need such as software upgradation, server enhancements to accommodate additional applications and improvements is essentially requited for the full operationalisation. It further recommends:

a. Improvement of the National GHG Inventory through completion of the time-series for the compilation of the inventory based on national statistics.

b. Estimation of emissions from emission categories not yet covered in the inventory: this is the case for F-gases for which a specific sectoral tool could be developed.

c. Improvement in methodologies for most of the categories: this work will necessitate measures, new statistics, discussions with experts. Road transport, Agriculture, Forestry, and Other Land Use and Waste are good examples.

d. Strengthen the Adaptation M&E guidelines for priority sectors agriculture, water (definition of values for the indicators).

e. Support in adaptation M&E mainstreaming in the national planning and reporting system.

f. Development of a module to the RISQ platform to collect, centralise and report information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4[57] of the Paris Agreement.

g. Under the UNFCCC's Artificial Intelligence (AI) for Climate Action (2024–2027), develop Pakistan's climate actions AI plan and implementation mechanism to strengthen the transparency system.

[57] Each Party's successive nationally determined contribution (NDC) must show progression beyond its current NDC and reflect its highest possible ambition, considering common but differentiated responsibilities and respective capabilities in light of different national circumstances. For details, please see: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

The study strongly recommends development of RISQ Transparency portal interface with the iPAS, PSDP portal, SMDP, PCFMS, SDGs portal, provincial digital systems and other relevant portals to ensure integrated data governance framework on climate change.

The study recommends strengthening the MoCC&EC's existing Central Digital Platform (CDP), implemented by GCSIC. It requires a holistic approach for the information and knowledge products sharing in the existing knowledge management portals, implementation of Climate Risk Assessments (CRA) data, metadata, and other associated climate-related data in the agriculture, health, and water sectors, among others. This CDP system also provides for creation of an ecosystem in the form of a Climate Innovation Hub, digitisation of climate finance instruments, and Climate Change Labs and Enterprise Management System (EMS) for GCISC.

A knowledge management system on transparency initiatives (MRV, BUR, NC, GHG inventory) is further required to be mainstreamed. The process requires:

a. Gathering available knowledge products and including in the existing information systems (PAKCIP portal) and update them with a robust database to support enhanced functionalities

b. Implementing the knowledge sharing information system and establishing means of updating and improving it based on stakeholders' feedback.

c. Conducting comprehensive testing across all features to ensure functionality, security, and user experience meet the project standards.

d. Deploying the fully developed and tested knowledge management portal and provide thorough training to administrators and end-users for effective utilisation.

e. Integrating knowledge products and relevant climate information in the information system for public access.

### Resource Mobilisation and Capacity Development

The study recommends development of a financial mobilisation plan (business models, etc.) and market creation strategy for the technological advancement for climate action. It is also critically important to train the relevant officers of the provincial government on the topics of Climate System Modelling- Economics of Climate Adaptation and CLIMADA Tool, General Circulation Models (GCMs); provincial GHG inventory capacities; early warning and forecasting systems for health (pandemics), flooding, weather, as well as attributive extreme events; and economic and non-economic costing of climate Loss & Damage.

In this area, the study also recommends development of a comprehensive capacity development plan for all the M&E units of the federal and provincial public sector entities focusing on the reporting on climate actions. It also suggests practical training on the RISQ transparency platform for climate data providers and users.

### Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF to facilitate access to environmentally sound technologies that address climate change and its effects, through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA[58]. The study recommends developing a proposal for the CTCN to support the advancement of climate technologies in Pakistan.

### Tools and Methodologies

The study recommends development of One-stop Shop for Climate Transparency in Pakistan on the similar lines as developed by the UK Climate Change Statistics Portal that provides an overview dashboard visualising six statistical indicators: climate and weather; emissions of greenhouse gases; drivers contributing to climate change; impacts on nature and society, mitigation measures to limit the scale of climate change; and adaptation metrics to track effective actions and sustainability.

At the provincial level, there is also a need to set up a Climate Smart Monitoring Data Portal Framework to gather data on climate sector initiatives, targets, achievements, budgetary allocations, expenditure, and planned activities related to climate change adaptation and mitigation, under the umbrella of the climate change policy, NDCs, and NAP.

At the local level, the study recommended development of a statistical tool for risk informed planning and evidence-based reporting on climate actions and suggesting the centralised dashboard for the local governments.

### Enhancing Data Protection for Climate Actions

The study recommends aligning climate data protection with international practices, such as those outlined in the GDPR (General Data Protection Regulation) of the European Union. It further recommends strengthening performance of cloud computing (storage solutions, data security, networking, management and monitoring, disaster recovery and backup, among others) at the GCSIC.

[58] The CTCN is implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA. Please see: https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

This would ensure: (a) Efficient governance, (b) Information security, (c) Data privacy, (d) Innovation in public sector delivery, (e) Resource optimisation, (f) Environmental benefits.

### Cross Cutting Areas

Major study recommendations in this area include:

a. To undertake a comprehensive study gender, youth, and social inclusion analysis in the identification and prioritisation of technologies.

b. To develop a training module on gender and climate change, providing methodologies or tools for conducting gender analysis and mainstreaming gender equality considerations when identifying and assessing impacts of mitigation and adaptation measures.

c. The study strongly recommends strengthening GCSIC's R&D efforts, policy analysis, information dissemination, and assistance to national planners and policymakers on issues related to past and projected future climatic changes in the country. This includes their likely impacts on key socio-economic sectors such as water, food, agriculture, energy, forestry, health, and ecology, and appropriate adaptation and mitigation measures.

d. Development of a training module on the gender digital appraisal system in Pakistan.

e. Development of user manuals, online short orientation videos, and IEC material for the updated digital appraisal system and climate transparency system.

### Learning Exchange to Study the Turkey ETS System

The study strongly recommends a learning exchange to Turkey to gain in-depth understanding of their MRV system and the process of data integration into the ETS system.

### Action for Climate Empowerment (ACE)

For the development and implementation of ACE's six elements[59], the study strongly recommends supporting the MoCC&EC, MoPD&SI, GCSIC, Planning and Development authorities, Provincial Environment and Climate Change Departments, among others, in the development of a comprehensive ACE strategy and action plan for implementation.

### Developing Effective Donor Coordination Mechanism on the Climate Digital Appraisal System and Climate Technological Advancement

It is critically important to support technological advancement in climate actions through the establishment of a donor coordination mechanism under the MoCC&EC, thereby avoiding overlap and duplication of efforts and resources.

[59] Climate change education and public awareness, training, public participation, public access to information, and international cooperation.

## Conclusion

The study strongly emphasises the importance of using evidence-based data for the risk informed planning and results oriented decision-making to address Pakistan's climate challenges. It further highlights the need for effective data governance, improving data infrastructure, strengthening institutional capacity, improving interoperability, coordination on data sharing, climate data skills enhancement so that dataflows are aligned to the national planning and reporting systems to ensure accuracy and reliability.

Establishing robust financial technological support framework for the digital appraisal system and the climate system transparency requires a clear strategy, coherent action plan with implementation framework. This study identifies this aspect as critical for the sustainability of the digital appraisal system and the MRV system in Pakistan. A major initiative recommended by this study is enhancing the capacities of the provinces and local governments in the collection and sharing of evidence-based data for reporting on climate actions. This can only be effectuated once the requisite sectoral policies, Provincial Local Government Acts and planning guidelines are updated, climate proofed including methodologies for climate risk assessment, resilience adaptation and mitigation. This bottom-up approach of risk informed planning and evidence-based reporting through climate risk data modelling will ensure the implementation of the principle “Leave No One Behind”.

# Road Map for Pakistan's Digital Appraisal System on Climate Actions (2025-2028)

## Impact

The institutionalisation of a digital appraisal system by National, Provincial, and Local Planning Authorities, which incorporates climate resilience criteria, Monitoring, Reporting and Verification (MRV), and gender criteria, will lead to more inclusive and effective planning processes, policy formulation and evidence-based reporting nationally and internationally.

## Outcome

The National, Provincial, and Local planning authorities have institutionalised a digital appraisal system that incorporates climate resilience, Monitoring, Reporting and Verification (MRV), and gender criteria.

| Outputs | Activities | Products | Priority | Timeframe |
|---|---|---|---|---|
| **1. Climate change data ecosystem for the digital appraisal system in Pakistan is improved.** | 1.1. Development of a project concept for the Phase wise Integration of climate screening processes into the existing digital appraisal system at the Federal and Provincial levels<br><br>1.2: Detailed consultation with the iPAS Project Team to identify support required for the technical and IT infrastructure.<br><br>1.3: Development of Climate Change Risk checklist for the iPAS, SMDP, and PCFMS.<br><br>1.4: Integration of gender checklists and other climate change checklists in the digital appraisal system at the Federal and Provincial levels.<br><br>1.5: Establish a coordination mechanism on climate digital appraisal system in Pakistan between the PC, MoCC&EC, GCSIC and the Ministries in the phase-I.<br><br>1.6: Support the Planning authorities with technical and IT infrastructure (hardware and software). | • Project Concept Note<br>• Outcome Workshop Report<br>• Climate Change Risk Check Lists<br>• Coordination plan on the digital appraisal system<br>• Detailed Plan regarding (technical and IT infrastructure hardware, server upgrades, installing new software systems etc.) | High | 2025 |

| | | | | |
|---|---|---|---|---|
| **2. Integration of the climate resilience guidelines into the digital appraisal system of the Planning Commission and Planning Authorities in KP and Punjab is strengthened.** | 2.1. Support climate screening guidelines integration into the Provincial Planning Commission Manuals.<br><br>2.2: Define synergies with the ADB to provide technical assistance to the iPAS .<br><br>2.3: Support Provincial digital appraisal system of KP (PCFMS) and Punjab (SMDP) with integration of climate resilience and gender criteria. | • Updated Planning Manuals of the Provinces<br>• Detailed work plan between the ADB and GIZ developed<br>• iPAS, SMDP and PCFMS system upgrade with integration of climate resilience, MRV and gender criteria. | Medium | 2025-2026 |
| **3. MRV framework for the digital appraisal system for the NDC and NAP is improved.** | 3.1. Support in the development and integration of the MRV framework in the iPAS, PCFMS and SMDP and linking with the RISQ Transparency platform of the MoCC&EC.<br><br>3.2: Develop MRV guidelines for data users and data producers for integration into iPAS, PCFMS and SMDP. | • MRV framework developed<br>• System upgrade: Interface with the RISQ Transparency platform<br>• MRV-Guidelines for reporting | Medium | 2025-2026 |
| **4. Interoperability of the Planning Commission and Provincial authority's digital appraisal system with MoCC&EC's RISQ Transparency platform and other digital systems in Pakistan is improved.** | 4.1. Development of the full interface system between the (PC IPAs, SMDP in Punjab, PCFMS in KP and the RISQ Transparency portal.<br><br>4.2: Testing and quality assurance and development of user<br><br>4.3: Support in creation of a one-stop shop framework for the Climate digital appraisal system at the Planning Commission. | • User Interface (UI) Design<br>• Backend Infrastructure<br>• Data Security, data Integration, data storage and its processing<br>• User Experience (feedback mechanism and error handling<br>• User documentation and technical documentation. | High | 2025-2026 |

| | | | | |
|---|---|---|---|---|
| **5. Capacity building through country-specific training and regional peer exchanges is developed.** | 5.1: Development of user manuals, online short orientation videos and training modules for the capacity building of climate data producers and users.<br><br>5.2: Training of focal points in the ministries, provincial departments, district administration on the climate risk assessment and its scoring mechanism.<br><br>5.3: Peer learning with regional countries which has established the digital appraisal system<br><br>5.4: Development of a training module on gender digital appraisal system in Pakistan | • IEC material on the climate integrated digital appraisal system<br>• Training material on the climate risk assessment and its scoring mechanism for the appraisal system.<br>• Study tour plan and outcome document.<br>• Training module on gender digital appraisal system. | Long | 2025-2028 |
| **6. The performance-based climate resilience grants are established and strengthened at the local level.** | 6.1: Review of legal and regulatory framework of the KP Local Government system with the climate lens<br><br>6.2: Capacity building of the local government officers on the climate risk informed planning processes.<br><br>6.5: Planning and development guidelines are updated and climate proofed. | • Revised legal and regulatory framework of the KP Local Government system.<br>• Capacity building plan and training material for the local government officers in KP.<br>• Updated Planning and development guidelines. | High | 2025-2027 |

## Road Map for Pakistan's Enhanced Transparency System (2025-2028)

The implementation of this road map will strengthen national capacities, both institutional and technical as well as adopting or improving methodologies and tools to enhance transparency under the Article 13[60] of the Paris Agreement.

### Impact

Strengthened institutional and technical capacities for climate transparency will lead to evidence-based reporting of greenhouse gas emissions, improved implementation of climate policies and contribute to more effective climate action and progress towards meeting national and global climate goals.

### Outcome

The institutional and technical capacities to enhance climate transparency within the framework of the Paris Agreement in Pakistan have been strengthened.

| Outputs | Activities | Products | Priority | Timeframe |
|---|---|---|---|---|
| **1. Technology Needs Assessment (2017) is aligned with Pakistan's updated NDCs.** | 1.1. Support in setting up a National Taskforce on the Climate Transparency system<br>1.2: Define roles and responsibilities of members, the modality and term for the establishment of the task force on climate transparency system.<br>1.3. Support in establishing a coordination mechanism between GCSIC, Ministries and the Provincial Government on the climate transparency actions.<br>1.4 Development of updated Pakistan's TNA in accordance with the updated NDCs and NAP 2023.<br>1.5: Assessment of Climate impact analysis of identified technologies.<br>1.6.: Development of actionable Technology Roadmap for the implementation of validated sectors and technologies.<br>1.7: Conduct of technology needs assessment of the water and agriculture sectors.<br>1.8: Development of Technology action plan for water and agriculture sectors under the updated NDCs and NAP 2023. | • The updated Technology Needs Assessment.<br>• Climate Impact Analysis assessment document<br>• Updated Technology Roadmap<br>• TNA for the water and agriculture sectors<br>• Technology action plan for water and agriculture sectors | Short term | 2025 |

[60] Article 13 of the Paris Agreement established an enhanced transparency framework for action and support, with built-in flexibility which considers Parties' different capacities and builds upon collective experience. Please see: https://unfccc.int/topics/climate-finance/workstreams/transparency-of-support-ex-post/transparency-of-support-under-the-paris-agreement

| | | | | |
|---|---|---|---|---|
| **2. Domestic MRV system including Adaptation M&E system with IT infrastructure is improved.** | 2.1: Analyse climate technological human resource needs of the Ministries, GCSIC and the Provincial Departments.<br>2.2: Development of the full IT infrastructure (hardware and software needs) for the RISQ Transparency Platform, PCFMS and SMDP on climate transparency actions.<br>2.3: Operationalise the RISQ Transparency platform and secure the maintenance.<br>2.4: Support in strengthening performance (cloud computing resources, management and monitoring, disaster recovery and backup) and security of the cloud-based system at the GCSIC.<br>2.5. Interoperability: Development of the monitoring and reporting work through the interconnection of platforms at the Federal level: iPAS, PMES, SDGs<br>2.6: Support in strengthening the M&E guidelines for agriculture (definition of values for the indicators)<br>2.7: Development of indicators for the M&E system to other priority sectors (health, biodiversity, infrastructure)<br>2.8: Support adaptation M&E mainstreaming in the national planning and reporting system. | • Human resource Plan<br>• IT infrastructure plan<br>• Cloud system (Software as a Service (SaaS)[61]<br>• M&E guidelines for agriculture and other priority sectors<br>• RISQ portal populated with adaptation M&E data<br>• Climate Smart Monitoring Data Portal Framework | Medium Term | 2025-2026 |
| **3. National GHG inventory is strengthened** | 3.1: Support in completing the time-series for the compilation of the inventory based on national statistics.<br>3.2: Estimate emissions from emission categories not yet covered in the inventory: this is the case for F-gases for which a specific sectoral tool could be developed.<br>3.3: Support in improving methodologies for most of the categories including new statistics, Road transport, AFOLU and Waste. | • Tools and methodologies for the GHG inventory. | Long term | 2025-2028 |

[61] Cloud computing is available in three different service models. Each of these service models fulfils a unique set of business requirements. These three service models of cloud computing include: 1. Software as a Service (SaaS): This type of service model is the preferred model. It maximises the benefits offered by the cloud. 2- Platform as a Service (PaaS) This type of service model is preferred when SaaS is not available or is not feasible. 3- Infrastructure as a Service (IaaS). This type of service model is preferred when SaaS and PaaS are not available or are not feasible.

| | | | | |
|---|---|---|---|---|
| **4. Financing framework for climate action on Pakistan's climate technological advancement is developed.** | 4.1: Development of a financial mobilisation plan (business models, etc.) and market creation strategy.<br>4.2: Development of a request proposal for the CTCN on "Coherent Technological Advancement on Climate Actions in Pakistan". | • A financial mobilisation plan<br>• Market creation strategy<br>• Proposal requesting support from the CTCN | Short term | 2025 |
| **5. Knowledge sharing information system from transparency initiatives (MRV, BUR, NC, GHG inventory) implemented and integrated into policy and decision making.** | 5.1: Gather available knowledge products to include in the existing information systems (PAKCIP portal).<br>5.2: Implement the knowledge sharing information system and establish means of updating and improving it based on stakeholders' feedback.<br>5.3 Conduct comprehensive testing across all features to ensure functionality, security, and user experience meet the project standards.<br>5.4. Deploy the fully developed and tested knowledge management portal and provide thorough training to administrators and end-users for effective utilisation<br>5.5. Integrate knowledge products and relevant climate information in the information system for public access. | • The updated PAKCIP portal | Medium term | 2025-2026 |

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|---|---|---|---|---|
| **6. Capacity development from country specific training and regional learning exchanges** | 6.1: Development of user manuals and training modules for the capacity building of climate data producers and users.<br><br>6.2: Learning exchange with regional countries having established the Enhanced Transparency Framework for technology transfer exchange<br><br>6.3: Develop a module to the RISQ platform to collect, centralise and report information on financial, technology development and transfer and capacity-building support provided and mobilised, as well as support needed and received, under Articles 9–11 of the Paris Agreement.<br><br>6.4: Development of a training module on gender and climate change, providing methodologies or tools to conduct gender analysis and mainstream gender equality considerations when identifying and assessing impacts of mitigation and adaptation measures.<br><br>6.5: Training of data providers and users at the Federal and Provincial levels. (Practical training on the RISQ platform)<br><br>6.6. Training of relevant experts on cloud technologies<br><br>6.7: Training of provincial planning and technical experts on the Climate System Modelling- Economics of Climate Adaptation and CLIMADA Tool. | • User manual for data producers and users<br>• Training manuals<br>• module to the RISQ platform to collect, centralise and report information on financial, technology development and transfer and capacity-building support<br>• a training module on gender and climate change, providing methodologies or tools to conduct gender analysis and mainstream gender equality | Medium term | 2025-2027 |
| **7. Monitoring and Evaluation framework on climate actions in the provinces strengthened** | 7.1: Develop a module to the RISQ platform to collect, centralise and report information necessary to track progress made in implementing and achieving NDC under Article 4 of the Paris Agreement<br><br>7.2: Creation of a Provincial Climate Smart Monitoring Data Portal Framework to gather data and tracking of NDC targets under the M&E Framework.<br><br>7.3: Creating a coordination mechanism on the implementation of M&E framework with the Performance Management & Reforms Units of Punjab and KP and its districts constituent units<br><br>7.4: Setting up a digital system for sharing of climate statistical data at the local government level | • Module to the RISQ platform to collect, centralise and report information necessary to track progress<br>• Provincial Climate Smart Monitoring Data Portal | Long term | 2025-2028 |

| | | | | |
|---|---|---|---|---|
| **8. Action for Climate (ACE)[62] Empowerment: Gender, youth and social inclusion strategies on climate technologies developed.** | 8.1: Development of a comprehensive ACE strategy and action plan for implementation for Pakistan.<br>8.2: Development of gender, youth and social inclusion analysis for effective integration climate technologies.<br>8.3: Development of user manuals, online short orientation videos, and IEC material.<br>8.4: Communication strategy and, outreach and awareness activities plan on the climate actions implemented.<br>8.5: Study tour to Turkey for a learning exchange on the institutionalisation of the MRV system in Turkey | • ACE strategy and action plan<br>• gender, youth and social inclusion analysis document<br>• IEC material<br>• Communication strategy and outreach plan<br>• Outcome report of the study tour | Long term | 2025-2028 |
| **9. AI Climate Action for Pakistan is developed.** | 9.1: Development of AI for Climate Action for Pakistan under the "Workplan for the Technology Mechanism Initiative on AI for Climate Action (2024-2027).<br>9.2: Capacity-building of NDEs and data producers and data users on AI for climate action. | • AI Climate Action Plan<br>• Training material on the AI | Medium term | 2025-2027 |
| **10. Donor coordination group on the climate Technological advancement is established.** | 10.1: Support MoCC&EC in setting up donor coordination mechanism, concept development of ToRs, setting up the modality and term and forum on climate Technological advancement. | • Donor Coordination Mechanism | Short term | 2025 |

[62] Action for Climate Empowerment (ACE) is a term adopted by the UN Framework Convention on Climate Change to denote work under **Article 6** of the Convention and **Article 12** of the Paris Agreement. The over-arching goal of ACE is to empower all members of society to engage in climate action, through the six ACE elements - climate change education and public awareness, training, public participation, public access to information, and international cooperation on these issues. For further information on ACE, please see details at: https://unfccc.int/topics/education-and-youth/big-picture/ACE

[62] **Article 6** of the Convention is a useful resource for governments, civil society and many others. It encourages people to take the lead and cooperate in creative climate change education and training. They can include practical action in formal and informal education and training. These initiatives may cut across different types of learning, from preschooler classes and seminar rooms of universities to vocational training and lifelong learning.

[62] **Article 12** encourages parties to the Paris Agreement to cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognising the importance of these steps with respect to enhancing actions under this Agreement

The following measures and data will be required for establishing a robust RISQ platform to track adaptation and mitigation actions:

a. Scale of action (international, national, provincial), Planning framework (NCCP, NAP, NDC, donor project), climate physical impacts, stakeholder engagement, capacity building requirements, technology transfer requirements, climate change projections, climate change scenarios, among others.

b. Type of action (policy, measure, project or program, feasibility study, research program, description, objectives), classification of climate change relevance (highly, medium, low, marginally), institutional entity (sponsoring, execution including M&E,),

c. Adaptation and resilience objectives, gender objectives, mitigation objective, barriers encountered for reporting information on mitigation measures, contribution to NAP, contribution to NDC objectives, contribution to SDG-13, among others.

d. Mode of financing (private, public, public private partnership), type of expected financial instrument (grant, insurance, concessional loan, non- concessional loan, equity, guarantee), status of financial instrument (committed, received), budget execution per year, expected results (details, number of beneficiaries).

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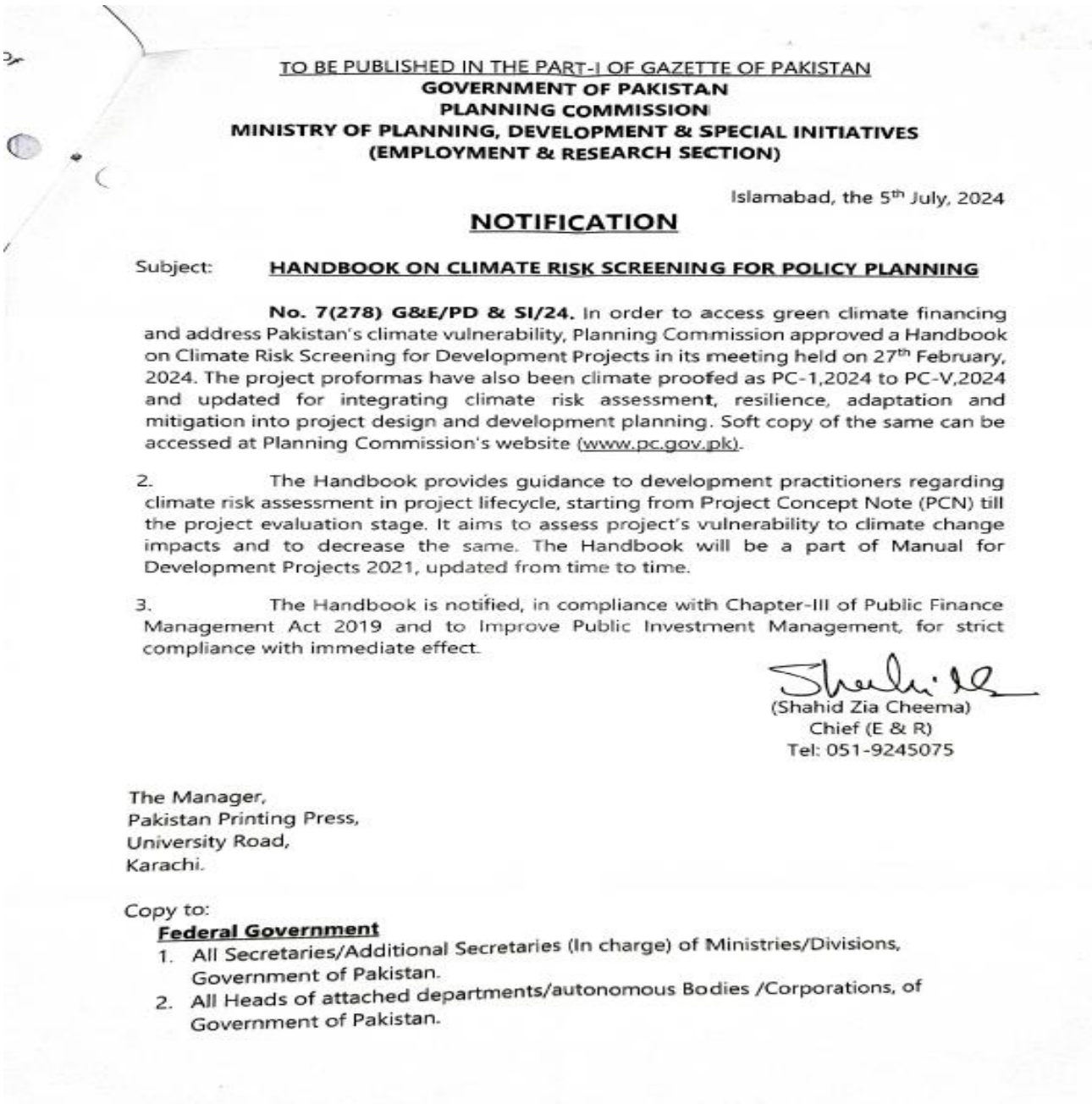
# Annexure-I

## Notification of the "Handbook on Climate Risk Screening for Policy Planning



TO BE PUBLISHED IN THE PART-I OF GAZETTE OF PAKISTAN
**GOVERNMENT OF PAKISTAN**
**PLANNING COMMISSION**
**MINISTRY OF PLANNING, DEVELOPMENT & SPECIAL INITIATIVES**
**(EMPLOYMENT & RESEARCH SECTION)**

Islamabad, the 5th July, 2024

**NOTIFICATION**

Subject: **HANDBOOK ON CLIMATE RISK SCREENING FOR POLICY PLANNING**

**No. 7(278) G&E/PD & SI/24.** In order to access green climate financing and address Pakistan's climate vulnerability, Planning Commission approved a Handbook on Climate Risk Screening for Development Projects in its meeting held on 27th February, 2024. The project proformas have also been climate proofed as PC-1,2024 to PC-V,2024 and updated for integrating climate risk assessment, resilience, adaptation and mitigation into project design and development planning. Soft copy of the same can be accessed at Planning Commission's website (www.pc.gov.pk).

2. The Handbook provides guidance to development practitioners regarding climate risk assessment in project lifecycle, starting from Project Concept Note (PCN) till the project evaluation stage. It aims to assess project's vulnerability to climate change impacts and to decrease the same. The Handbook will be a part of Manual for Development Projects 2021, updated from time to time.

3. The Handbook is notified, in compliance with Chapter-III of Public Finance Management Act 2019 and to Improve Public Investment Management, for strict compliance with immediate effect.

(Shahid Zia Cheema)
Chief (E & R)
Tel: 051-9245075

The Manager,
Pakistan Printing Press,
University Road,
Karachi.

Copy to:

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2. All Heads of attached departments/autonomous Bodies /Corporations, of Government of Pakistan.

3. Auditor General of Pakistan, Islamabad
4. Accountant General of Pakistan Revenue, Islamabad
5. Controller General of Accounts of Pakistan, Islamabad

**Provincial Governments**

1. Chairman, Planning & Development Board, Government of the Punjab, Lahore.
2. Chairman, Planning & Development Board, Government of Sindh, Karachi.
3. Additional Chief Secretary (Dev), Planning & Development Department, Government of Balochistan, Quetta.
4. Additional Chief Secretary (Dev), Planning & Development Department, Government of Khyber Pakhtunkhwa, Peshawar.
5. Additional Chief Secretary (Dev), Planning & Development Department, Government of AJ&K, Muzaffarabad.
6. Secretary, Planning & Development Department, Government of Gilgit-Baltistan, Gilgit.

(Shahid Zia Cheema)
Chief (Employment & Research)
Tel: 051-9245075

Copy also to:

1. Minister, PD & SI, Islamabad.
2. Deputy Chairman, Planning Commission, Islamabad.
3. Secretary to the President, President Secretariat (Public), Islamabad
4. Principle Secretary to Prime Minister, Prime Minister's Office, Islamabad.
5. Secretary, M/o PD & SI, Islamabad.
6. Chief Economist, Planning Commission, Islamabad
7. All Members of Planning Commission, Islamabad
8. Additional Secretaries A&O, Additional Secretaries Dev. M/o PD & SI, Islamabad.
9. Additional Secretary (External Finance), Finance Division, Islamabad
10. JCE (EP), JCE Operation, Sr. Chief (Tech/PP&H), Planning Commission, Islamabad.
11. All Sr. Joint Secretaries, M/o PD & SI, Islamabad.
12. All Joint Secretaries, M/o PD & SI, Islamabad.
13. All Chiefs/Deputy Chief (In-charge) / Head of Technical & Economic Sections, Planning Commission, Islamabad.

# Annexure-II

## Notification of the "Updated Manual for Development Projects 2024"

TO BE PUBLISHED IN THE PART-I OF GAZETTE OF PAKISTAN

**GOVERNMENT OF PAKISTAN**
**PLANNING COMMISSION**
**MINISTRY OF PLANNING, DEVELOPMENT & SPECIAL INITIATIVES**
**(EMPLOYMENT & RESEARCH SECTION)**

Islamabad, the 5th July, 2024

**NOTIFICATION**

Subject: **UPDATED MANUAL FOR DEVELOPMENT PROJECTS**

**No. 7(239) E&R/PD & SI/21.** In continuation of notification of even number dated 29.12.2021 and in accordance with chapter-III of Public Finance Management Act 2019, the Planning Commission in its meeting held on 27.02.2024 approved updated Manual for Development projects, 2024. Instructions/guidelines have been incorporated in the Manual to make it climate proofed, including methodologies for climate risk assessment, resilience, adaptation and mitigation. Further, all new notifications/instructions as issued from time to time have been included, sanctioned powers of DDWP and CDWP updated and climate proofed PC-1, 2024 to PC-V, 2024 have replaced old version of PC proformas.

2. The Manual for Development Projects is an all-inclusive document with comprehensive directions to help improve understanding, efficiency and efficacy of project management including identification, preparation, appraisal, approval, funding, implementation and monitoring & evaluation etc. It consists of four volumes as follows:-

a. Manual for Development Projects, 2024,
b. Compendium of Annexures,
c. Instructions for Techno-economic Feasibility Studies
d. Handbook on Climate Screening for Policy Planning

3. The updated Manual for Development Projects is notified for strict compliance. All projects (both new and revised) shall be uploaded on iPAS on revised PC-I, 2024 proforma and on PC-II, 2024 proforma, in case of feasibility study. Soft copy has been placed at the website of Planning Commission (www.pc.gov.pk) for easy and ready access.

(Shahid Zia Cheema)
Chief (Employment & Research)
Tel: 051-9245075

The Manager,
Pakistan Printing Press,
University Road, Karachi.

Copy to:

**Federal Government**

1. All Secretaries/Additional Secretaries (In charge) of Ministries/Divisions, Government of Pakistan.

3. Auditor General of Pakistan, Islamabad
4. Accountant General of Pakistan Revenue, Islamabad
5. Controller General of Accounts of Pakistan, Islamabad

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2. Chairman, Planning & Development Board, Government of Sindh, Karachi.
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6. Secretary, Planning & Development Department, Government of Gilgit-Baltistan, Gilgit.

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Copy also to:

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2. Deputy Chairman, Planning Commission, Islamabad.
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9. Additional Secretary (External Finance), Finance Division, Islamabad
10. JCE (EP), JCE Operation, Sr. Chief (Tech/PP&H), Planning Commission, Islamabad.
11. All Sr. Joint Secretaries, M/o PD & SI, Islamabad.
12. All Joint Secretaries, M/o PD & SI, Islamabad.
13. All Chiefs/Deputy Chief (In-charge) / Head of Technical & Economic Sections, Planning Commission, Islamabad.

# Annexure-III

## The Study Questionnaire

1. What is the existing digital appraisal system for the planning cycle (PC-1 to PC-V) in the KP and Punjab provinces?

2. Are there any climate change criteria and gender criteria developed for the integration in the planning cycle (PC-1 to PC-V)?

3. Highlight key needs and gaps for improving the digital appraisal system in place in order to better align with planning and reporting needs on climate change (mitigation and adaptation actions) – with specific focus on gender aspects.

4. Gather input and needs for improvement in the existing project appraisal system (a) existing project appraisal system in general (PC cycle) and (b) current status for integration of gender and climate change criteria (mitigation and adaptation)

5. Identify the capacity needs of the public actors to incorporate gender and climate criteria into project planning and implementation stages (mitigation and adaptation)

6. Who is custodian of the digital portal being used. If we want to make changes, what will be the formal way forward.

7. What protocols on the policy, legal and institutional frameworks, are necessary for the development and implementation of the digital appraisal system?

8. Conduct consultations with key stakeholders, including representatives from relevant government departments involved in the project cycle at different stages, to gather input and needs for improvement in the existing project appraisal system. Planning officer (department level, P&D sector level, P&E environment & CC, Gender). Who has access to the portal being used by the authorities?

9. What are the existing technical and digital capacities and existing gaps among the relevant public authorities to implement digital approaches on the appraisal system.

10. Do you have any access to the user manual, and can it be shared with the GIZ?

# Annexure-IV

## Introduction to Provincial Strategies and priorities

### Revised Punjab Growth Strategy 2023

The government of the Punjab has launched Punjab Growth Strategy (PGS), 2023 to set the development agenda for 5 years. The Departments are required to align their development program with the new priority areas highlighted in each sector in the PGS. The Departments are also encouraged to assess their overall alignment with the growth strategy and highlight the contributions this has made to the provincial development. Based on these assessments the Departments are recommended to suggest revisions and changes in line with the Growth Strategy. Following key challenges and pillars have been highlighted under the revised PGS, 2023:

### Key Pillars

- Enhancing the focus on sectors in which Punjab has comparative advantage in the National context and harness their potential.
- Creating an enabling environment for private sector led investment and growth.
- Investing more in quality formation of Human Capital and its Utilisation.
- Making public investment and ADP sectoral priorities to maximise the impact on growth.
- Advocating and coordinating with the federal government on managing key macroeconomic policy variables that have a significant impact on Punjab's Economy.

### Punjab Spatial Strategy 2047:

In 2019 the provincial cabinet approved the Punjab Spatial Strategy (PSS), 2047. PSS supports the Punjab Growth Strategy, 2023 and is a core document providing not only a basis for the economic and local development framework, but also regional and local level policy initiatives. Institutional framework for the strategy consists of Punjab Spatial Commission with a secretariat in P&D Board and Spatial Strategy Cells in 9 Divisions of the Punjab supported by key Departments like LG&CD, C&W, Industries, HUD & PHE, etc. The strategy provides a roadmap to structurally transform Punjab into an economically developed and sustainable region through public investments in different sectors over the next thirty years.

ADP 2024-25 must ensure compliance with PSS so that the resources are optimally used, leading to effective reduction of intra and inter-regional disparities and ensuring equitable access to economic

opportunities. It is mandatory that all projects included in ADP 2024-25 especially infrastructure and industrial estates projects must be aligned with PSS 2047.

### Sustainable Development Goals (SDGs)

The Government of Punjab has therefore taken lead on SDGs and has established a dedicated SDGs Support Unit under P&D Board that provides technical assistance to government Departments for achieving SDGs. As a part of localisation efforts, UNDP Pakistan is also supporting the Government of the Punjab in the formulation of district localisation plans for poorest districts of Punjab by adopting a bottom-up approach for identification of SDGs related priorities.

### Punjab Local Government Act 2022

The Punjab Local Government Act has been promulgated in the province. All the Departments are required to tailor their Departmental ADP in view of the provisions of The Punjab Local Government Act.

### Gender Empowerment

The Gender Report produced by the Commission on Status of Women suggests that economic and political empowerment of women is still low in the Punjab. Whilst developing the ADP 2024-25 Departments must make full efforts to include existing gender disparities and introduce initiatives to address disparities. The Departments are also encouraged to bring about policy changes that are required to address gender issues.

### Bridging Regional Disparities & Gaps

Regional disparity is a core problem that hinders equitable economic growth. The current government focuses on bridging this gap by allocating resources based on parameters like population, poverty etc. to improve public service delivery in line with this policy the government of Punjab has been allocating 35% development budget to the Southern Districts of Punjab and this policy will continue during next year. The establishment of a separate administrative secretariat for South Punjab shows present governments resolve to provide basic amenities and equitable distribution of resources to poorest of the poor. The Departments are strongly encouraged to develop schemes that address key issues such as education, health, WASH, basic infrastructure and private sector development in the deprived districts as that will create wealth and reduce the poverty gap between impoverished and better-off districts.

### Private Sector Development

The Punjab PPP Act 2019 has laid foundations of a conducive environment to attract private sector investment in physical and social infrastructure projects leading to improved service delivery. Under this Act, new institutional arrangement has been provided for PPPs in Punjab, which includes PPP Policy and Monitoring Board (PPP P&M Board) and Punjab PPP Authority; whilst roles of PPP Cell and Risk Management Unit, which were existent already, have been redefined with clear allocation/ segregation of duties. PPP P&M Board will monitor, coordinate, facilitate, promote and approve PPP projects. Punjab PPP Authority / Government Departments are responsible to identify and conceptualise potential projects PPP project. Punjab PPP Authority will also ensure that Projects are prepared using criteria such as supply and demand gaps, social and economic benefits, financial attractiveness, value for money analysis, optimal risk allocation, project bankability, and uncertainties involved. Furthermore, PPP Authority is to select a private party for each project through competitive public tendering as per the Act. Role of the PPP Cell is to act as Secretariat of PPP P&M Board. Further, PPP Cell and RMU must appraise the proposals submitted by the PPP Authority, prior to their placement before the Board for approval.

Punjab PPP Authority/Government Departments are encouraged to identify schemes that are more commercially viable for the private sector and can be successfully implemented through PPPs. The new ADP must therefore be developed with a view to fully capture the potentials of private sector for development of economy.

# Annexure-V

## Punjab Sectoral Snapshots

The new sectoral development portfolio should be based on Punjab Growth Strategy 2023, with a special focus on Punjab Spatial Strategy (PSS), 2047. The formulation process of sectoral development plan will be based on the local community and regional demographic needs. This practice will redirect public investments into the sectors under the new spatial preferences as highlighted in the PSS.

Punjab Growth Strategy (PGS), 2023 and Punjab Spatial Strategy (PSS), 2047 are the overarching document that lay down the contours of economic and social development in the province. All the Departments are required to ensure that 80% of their relevant schemes are aligned with the PSS.

# Annexure-VI

## Potential List of Climate Projects Identified from ADP

| Project Title | Cost |
|---|---|
| **Agriculture** | **PKR** |
| 1. Command Area Development (CAD) Component of Greater Thal Canal (GTC) Project (Phase-II) (2021-22 to 2026-27) 01982106130 / 06-07-2021 / Bhakkar, Khushab, Layyah | 17,088.190 |
| 2. Piloting Precision Agriculture Technologies in the Selected Agroecological Zones of Punjab (Smart DLI 11) (2022-23 to 2024-25) 01982206294 / 18-08-2022 / Faisalabad | 295.820 |
| 3. Development of Culturable Waste Land in Riverine Areas through Development Irrigation Conveyance Network (Smart DLI 11) (2022-23 to 2025-26) 01992206441 / 07-10-2022 / Punjab | 2,000.000 |
| 4. National Program for Improvement of Watercourses in Pakistan Phase II (2019-20 to 2023-24) 01991904799 / 29-08-2019 / Punjab | 18,333.054 |
| 5. National Oil Seed Enhancement Program (2019-20 to 2023-24) 01991905381 / 29-08-2019 / Punjab | 3,116.817 |
| 6. National Program for Enhancing Command Area in Barani Areas of Pakistan (2019-20 to 2024-25) 01981904936 / 26-03-2020 / Attock, Bhakkar, Chakwal, Dera Ghazi Khan, Gujrat, Jhelum, Khushab, Layyah, Mianwali, Narowal, Rajanpur, Rawalpindi, Sialkot | 1,592.926 |
| 7. Water Productivity Enhancement through Regenerative Climate Smart Agriculture (WP-RCA) (2022- 23 to 2024-25) 01982206443 / 30-08-2022 / Okara | 51.590 |
| 8. Punjab Resilient and Inclusive Agriculture Transformation (PRIAT) (2022-23 to 2026-27) 01982206445 / 18-11-2021 | 54,935.560 |
| 9. Transforming the Indus Basin with Climate Resilient Agriculture and Climate-Smart Water Management 01982005400 / 26-10-2021 / Dera Ghazi Khan, Khanewal, Lodhran, Multan, Muzaffargarh | 1,392.000 |
| 10. Promotion of Gram Cultivation through Climate Smart Technologies in Thal Areas of the Punjab (2022-23 to 2024-25) 01982206446 / 13-09-2022 / Bhakkar, Jhang, Khushab, Mianwali | 1,050.000 |
| **Irrigation** | **PKR** |
| 1. Reclamation of waterlogged agriculture land of Border Area along Hakra Canal 01981812220 / 20-02-2018 / Bahawalnagar | 1,581.744 |
| 2. Mitigation of Water Logging in District R.Y.Khan 01981707426 / 20-02-2018 / Rahim Yar Khan | 1,604.316 |
| 3. Construction of Flood bund from Hairo Flood Bund to Raikh Baghwala Flood Bund on Right Side of River Indus (to protect head regulator of Kadra Creek and adjoining Abadie's) 01982105435 / 28-01-2022 / Rajanpur | 1,525.834 |
| 4. Restoration of waterlogged area in District Faisalabad 01982105432 / 30-09-2021 / Faisalabad | 800.684 |
| 5. Improvement of Irrigation Water Supply at Tail Reaches of Irrigation Channels of Minors in Selected Area of Punjab 01991710942 / 11-08-2017 / Punjab | 6,000.000 |
| 6. Construction of Ponds in Districts Dera Ghazi Khan and Rajanpur, Punjab. | 26132.00 |
| 7. Improving Conveyance System and Command Area Development of Small Dams in Potohar Region. | 51153.00 |
| 8. Greater Cholistan Water Resource Development Project. | 38446.00 |

| **Energy** | **PKR** |
|---|---|
| 1. Setting up Solar Tubewells in Waterlogged Areas of Punjab | 200 |
| 2. Energy Efficiency & Conservation Program (PGDP, DLI-5) | 3746.98 |
| 3. Converting three Cities of Punjab into Solar Smart Cities | 300 |
| 4. Improvement of Energy Efficiency in WASA Systems | 676.03 |
| 5. Renewable Energy Development Sector Investment Program (REDSIP) | 250 |
| **Transport** | **PKR** |
| 1. Induction of Eco-Friendly Buses in Cities of Punjab (DLI-6 PGDP) | 3241.919 |

# Annexure-VII

## IT Infrastructure (software and hardware) needs of the Resource Centre of the KP Planning and Development Department.

### Software

- Server upgradation for housing additional apps and upgradation in the PCFMS systems.
- Software Development and upgradation to latest versions
- Development of Mobile Application
- Security Tools
- Anti Viruses

| Resource Centre Demand for Equipment | | | | |
|---|---|---|---|---|
| **S#** | **Item** | **Specification** | **Quantity** | **Specs Justification** |
| 1 | Desktop | Processor: Core i9 13th Gen<br>Ram: 64 GB<br>GPU: RTX 4080<br>SSD: 2TB<br>Secondary SSD: 2TB<br>Windows: 11 Pro | 10 | These high-end desktops are needed to cover the needs of Resource Centre. These desktops act like a mini server in case there is any problem occur in P&D Server Room to keep the PCFMS running and accessible. Apart from its support to P&D Server room, these desktops will be utilized on daily basis by the staff of Resource Centre for routine work as well. |
| | | MAC Mini - M2 Pro,<br>32GB Memory,<br>2TB SSD | 8 | 5 For RC AD's, 1 For RC DD, 1 For C.E., 1 Reserved for Backup purpose |
| 2 | LED | 32" Curved 4K LED Display | 10 | For Desktop Computers |
| 3 | Laptop | Processor: Core i9 13th Gen<br>Ram: 32 GB<br>GPU: RTX 4080<br>SSD: 2TB<br>Secondary SSD: 2TB<br>Windows: 11 Pro | 10 | Same as S#1 but for mobility and remote accessibility |
| 4 | Printer | 1. HP Laser Jet Black DN (2x)<br>2. HP Color Laser Jet DN (2x)<br>3. Epson L1800 A3 Photo Ink Tank Printer (2x) | 6 (2 each) | The already available printers have completed its life span. |
| 5 | Photocopier | Konica Minolta Konica Minolta bizhub C550I/C658 or any other model with Multipurpose Black & Color Network Photocopier | 2 | For RC |
| 6 | Scanner | HP ScanJet Enterprise Flow N7000 snw1 | 2 | For RC |

| | | | | |
|---|---|---|---|---|
| 7 | External Data Storage | USB 64GB | 50 | For RC & to be provided to highups on needs basis |
| | | 2 TB Pocket SSD | 10 | For RC staff |
| 8 | Visualisation Tabs | iPad Pro M4 11" & 13" (4 Each) with Magic Keyboard and Apple PENCIL Pro, Processor M4. | 8 | For RC and to be provided to highups on need basis |
| | | Surface Pro 10 with Magnetic Keyboard and Stylus, 1 TB SSD, 16GB OR 32 GB RAM | 8 | For RC and to be provided to highups on need basis |
| 9 | Advanced 4k Multimedia | Portable HDMI and 4K<br>High brightness of 1,500 Lumens<br>Motionflow provides smooth motion for 4K & HD | 2 | For ADP Formulation and Review Meetings within RC Main Hall as well as to manage trainings on PCFMS with in RC. |
| 10 | UPS | 5KW Lithium Back Up UPS for Desktop Computers | 2 | For RC |
| 11 | Chairs | Officer Chairs for Resource Center (18) and<br>Sofa Set for RC Hall and DD-IT Room | 18 | For RC |
| 12 | File Server | N/A | 2 | A Computer system responsible for sharing content with respective computers on the same network |
| 13 | Surveillance System | 8x Color VU PTZ Cams, NVR, 1TB SSD, AND POE Switch | | For RC |
| 14 | Electric Kettle | N/A | 2 | For RC |
| 15 | Water Dispenser | N/A | 3 | 2 For RC and 1 for IT Cell |
| 16 | Microwave Oven 4 in 1 | Baking, Cooking and Air Frier Supported | 3 | 2 For RC and 1 for IT Cell |
| 17 | RC Side Room/Guest Room | Refurbishment and Paneling | | |
| 18 | Ubiquity US-8-150W Switch | Ubiquity US-8-150W Switch | 8 | IT Cell P&D |
| 19 | Unifi U6-IW Access Point | Unifi U6-IW Access Point | 4 | IT Cell P&D |
| 20 | Unifi U6-Pro Access Point | Unifi U6-Pro Access Point | 16 | IT Cell P&D |
| 21 | Cabel Schneider/Actassi | ACT4P6SCM3RBBU<br>FTP CAT6 4 PAIR CABLE CM RATED BLUE 23AWG 305MTR (1000 FT ROLL) WODDEN REEL | 2 | IT Cell P&D |
| 22 | Unifi Gateway Pro | Unifi Gateway Pro | 1 | IT Cell P&D |

# Annexure- VIII

## MRV Capacity Development Project- Turkey[63]

Brief explanations regarding completed, ongoing and planned activities within the framework of the overarching project goal "the provision of the necessary prerequisites for monitoring, reporting and verification (MRV) of greenhouse gas emissions in Türkiye" based on harmonisation to international standards and successful implementation of National Greenhouse Gas Emissions Regulation are listed below:

### Development of an Installation Based "Online Data Management System"

An installation based online data management system has been developed within the scope of the MRV legislation. Greenhouse gas emissions are being monitored via Environmental Information System. Within this context installations can manage their monitoring plans and reports electronically, and the system facilitates MoEUCC's evaluation process. Also work on technical infrastructure and capacity development for the system's efficient operation within MoEUCC is being conducted.

### Preparation of Guidelines and Templates

All required documents such as monitoring template, annual emission report template, monitoring guideline, reporting guideline, sector examples, uncertainty guideline have been prepared for stakeholders so that they can conduct their work standardised and smoothly. You can reach these documents via the menu given on the right side.

### Training and Capacity Development of Stakeholders

One of the main components of the Project is to enable involved actors to implement GHG emission monitoring, reporting and verification processes. Within this framework capacity development is aimed for MoEUCC staff, installation operators responsible of monitoring and reporting, verifiers and other stakeholders, and training events are organised for each sector and stakeholder. Also training events by German experts for MoEUCC staff and other stakeholders on requested topics such as reporting, and verification are being conducted. Workshops are being organised for regular information exchange.

Work towards establishment of a "Training Centre" has started within the framework of the project. The target is that this Training Centre, which will continue providing service after the project, will respond to any training and information requests from the sectors regarding GHG emissions. Thus, it

[63] https://carbon-turkey.org/en/project-activities

is aimed that training and technical support for the sector and consultant companies will gain a sustainable structure through this Training Centre also after the Project.

### Study on Further Legislative Requirements

Necessary analyses on policy development, and identification of additional legislative requirements are conducted continuously.

### Dissemination of Experience on Developing an MRV System to Other Countries

An International Summer School on "The Implementation and Enhancement of MRV System for GHGs and ETS" which hosted experts from public institutions and organisations who work on greenhouse gas emissions and relevant topics from Afghanistan, Azerbaijan, Tajikistan, Morocco, South Africa, Iran, Turkish Republic Northern Cyprus, Pakistan, Tunisia and Ukraine has been realised in İzmir between 26th of September and 1st of October 2016.The Summer School aimed to link the domestic work of MRV practitioners with international experts and allow representatives from developing and developed countries to exchange experiences and elaborate on their own approaches.

### MRV Pre-Requisites are Established for one Additional Sector (AVIATION)

The aviation sector has been integrated into the existing successful MRV system. Experience exchange on MRV in the aviation sector has been initiated in a study tour to Berlin in April 2019 with relevant actors, such as the German Emissions Trading Authority (DEHSt). Capacities of all actors involved have been enhanced, as well as the Data Management System (DMS) to feature the new sector.

### Turkish MRV Actors fulfil EU ETS Requirements

The quality of emissions data has been enhanced. For this purpose, a gap analysis has been conducted. Experience exchange has been initiated with other relevant countries and the topic was also part of the study tour to Berlin in April 2019.

### Development of Benchmarks for Potential ETS Sectors

Benchmarking allows installations to compare their GHG emissions with those of other installations to improve their own performance. Benchmark suggestions for two sectors have been established by MoEUCC.

### Expansion of the MRV System for the Implementation of an ETS Based on Grandfathering with Measures for Capacity Development

This new component supports the implementation of the EU ETS by adapting the data management system, considering European experiences. The technical infrastructure of the data management

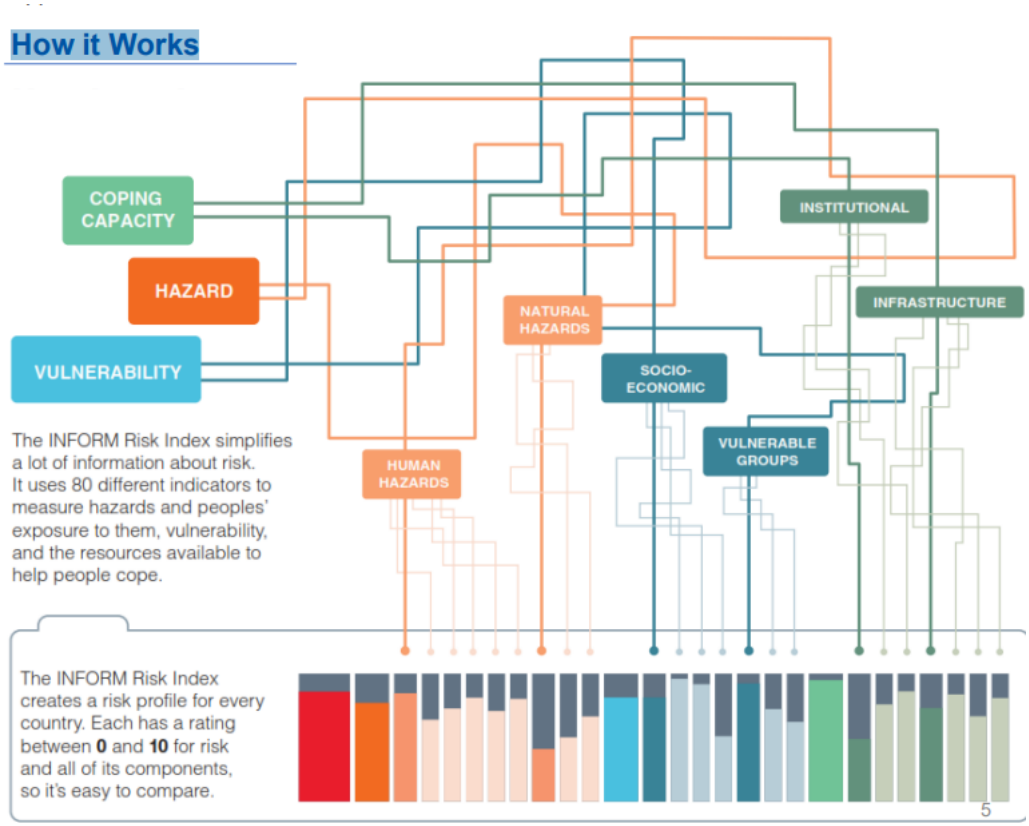
system will be updated to accommodate historical emissions data provided by the data management system established under the project (grandfathering approach). The work will be supported by the capacity development measures for the MoEUCC regarding the application of grandfathering and the operation of the data management system with historical emissions data collected with the existing version of the data management system.

# Annexure-IX

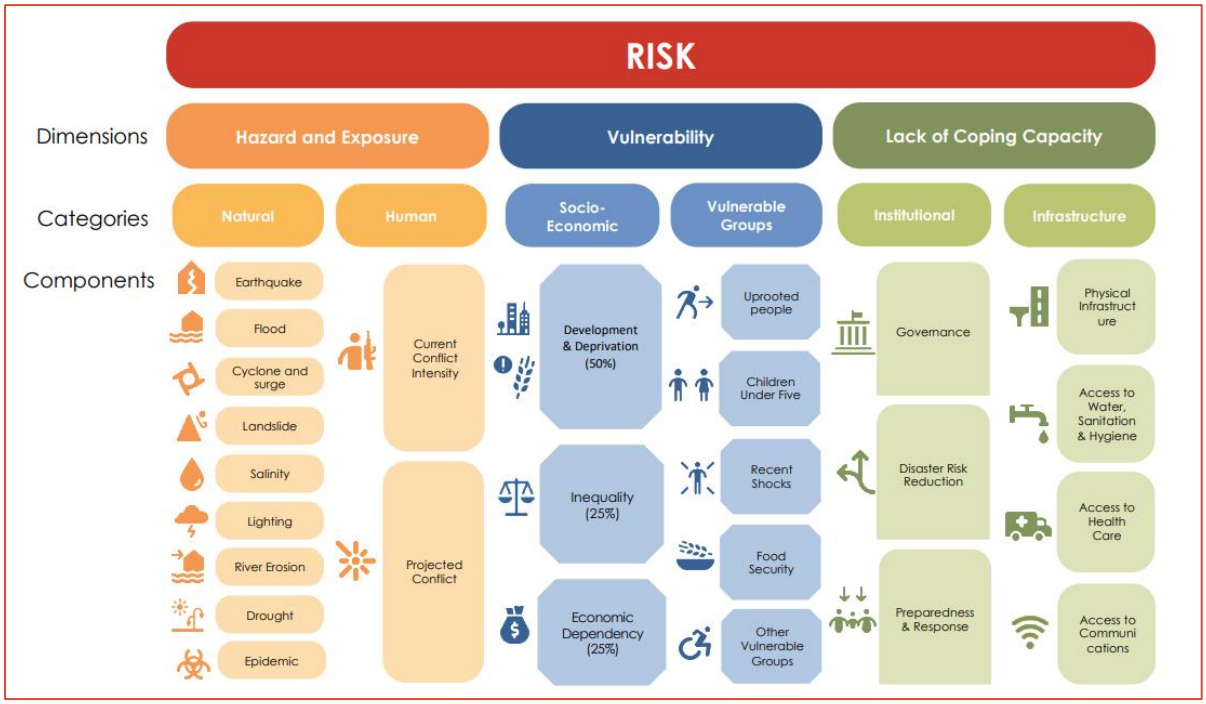
## INFORM Sub-National Risk Index[64]

INFORM is an open-source risk assessment methodology for humanitarian crises and disasters. An INFORM Subnational risk index shows a detailed picture of risk and its components that is comparable across a single region or country. It can be used by decision-makers to analyse and visualise risk. The model can support decisions on crisis and disaster response, preparedness, and resilience, as well as sustainable development.

The model is measured in three risk dimensions: hazard and exposure, vulnerability, and lack of coping capacity. Each dimension consists of several risk categories, e.g. natural hazards, vulnerable groups, or infrastructure capacity. Categories comprise a few components. Components are carefully chosen sets of indicators that capture a specific topic, e.g. earthquake, inequality, or access to health care. Indicators are the individual datasets that make up INFORM, e.g. the physical exposure to earthquakes of a certain magnitude, gender inequality index, or density of nurses.




[64] Please see details at PowerPoint Presentation (undrr.org)




## Indicators Overview

**Hazard and Exposure**

**31** Indicators

**Hazard and Exposure** comprise 09 major components of natural hazards and exposures along with 02 human-made hazard components. In absence of localized earthquake exposure information and human hazard-related data, national-level data has been used from the global INFORM index.

**Vulnerability**

**32** Indicators

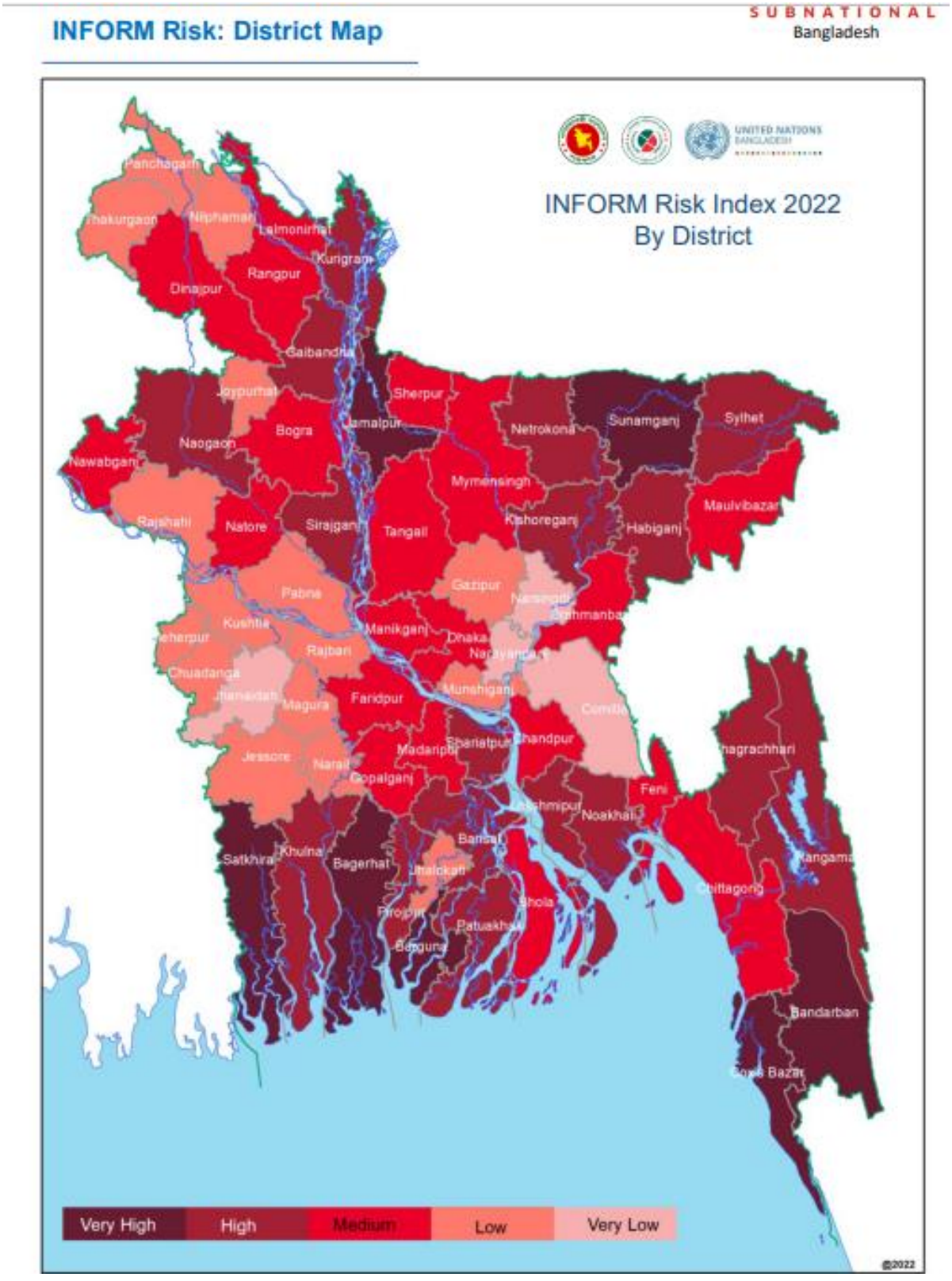
**Vulnerability** dimensions are built up on the 03 components of socio-economic categories and 05 components of vulnerable groups. In absence of localized economic dependency-related specific indicator data, national-level indicators data has been used from the global INFORM index.

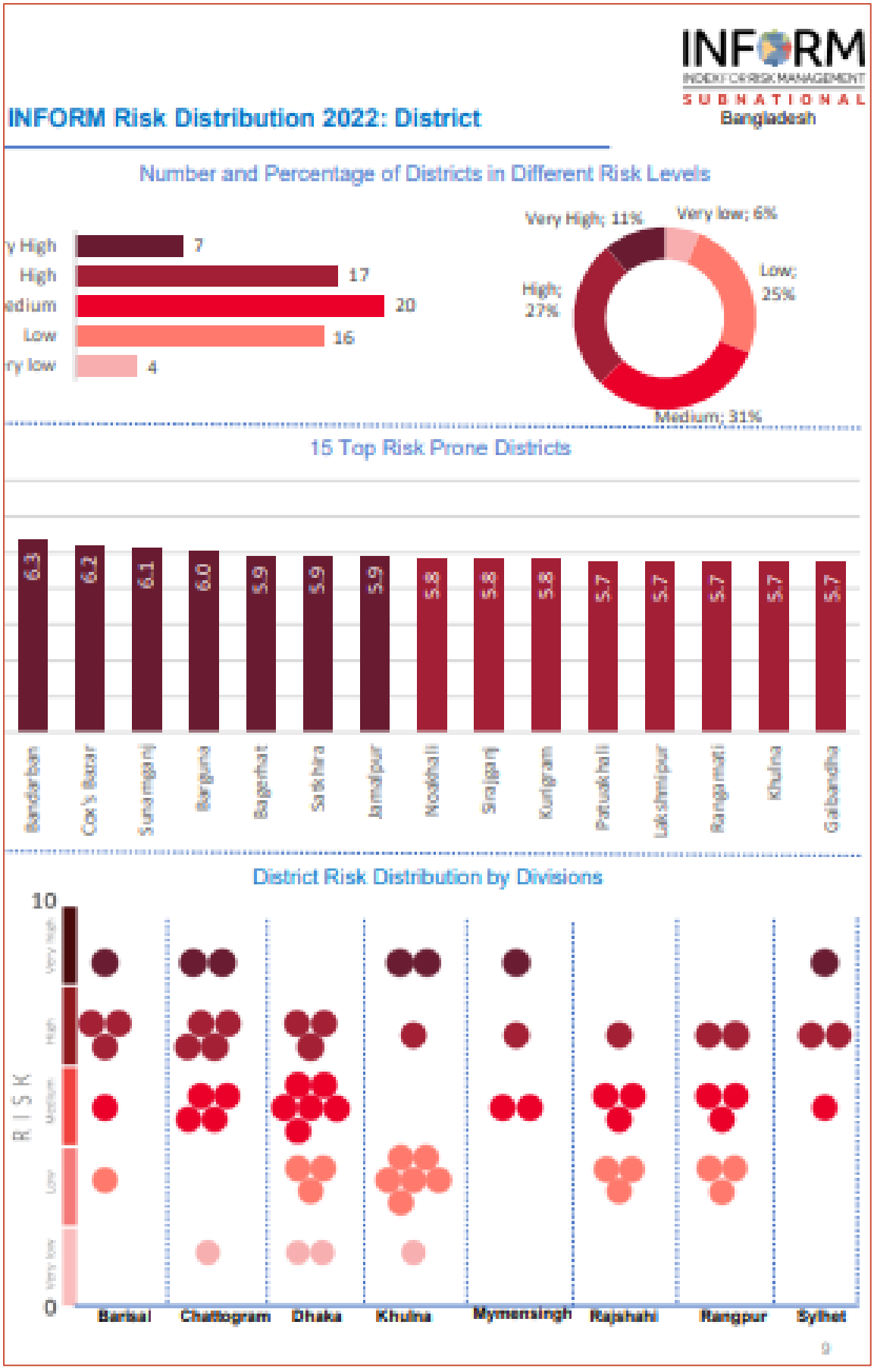
**Lack of Coping Capacity**

**26** Indicators

**Lack of Coping Capacity** dimensions built up on the 03 components of Institutional categories and 04 components of Infrastructure categories. In absence of localized governance-related indicators data, national-level indicators data has been used from the global INFORM index.

**03 Common Indicator has been used for analyzing and constructing the INFORM Sub-National Index**


INFORM Risk: District Map
SUBNATIONAL
Bangladesh
UNITED NATIONS BANGLADESH
INFORM Risk Index 2022
By District
Panchagarh
Thakurgaon
Nilphamari
Lalmonirhat
Kurigram
Rangpur
Dinajpur
Gaibandha
Joypurhat
Sherpur
Bogra
Jamalpur
Netrokona
Sunamganj
Sylhet
Naogaon
Nawabganj
Mymensingh
Maulvibazar
Rajshahi
Natore
Sirajganj
Tangail
Kishoreganj
Habiganj
Pabna
Gazipur
Kushtia
Manikganj
Dhaka
Rajbari
Chuadanga
Munshiganj
Faridpur
Magura
Jessore
Madaripur
Shariatpur
Chandpur
Narail
Gopalganj
Feni
Noakhali
Barisal
Satkhira
Khulna
Bagerhat
Jhalokati
Chittagong
Bhola
Patuakhali
Bandarban
Very High
High
Medium
Low
Very Low
©2022


INFORM
INDEX FOR RISK MANAGEMENT
SUBNATIONAL
Bangladesh
INFORM Risk Distribution 2022: District
Number and Percentage of Districts in Different Risk Levels
y High 7
High 17
edium 20
Low 16
ry low 4
Very High; 11%
Very low; 6%
Low; 25%
High; 27%
Medium; 31%
15 Top Risk Prone Districts
6.3
6.2
6.1
6.0
5.9
5.9
5.9
5.8
5.8
5.8
5.7
5.7
5.7
5.7
5.7
Bandarban
Cox's Bazar
Sunamganj
Barguna
Bagerhat
Satkhira
Jamalpur
Noakhali
Sirajganj
Kurigram
Patuakhali
Lakshmipur
Rangamati
Khulna
Gaibandha
District Risk Distribution by Divisions
10
0
R I S K
Very high
High
Medium
Low
Very low
Barisal
Chattogram
Dhaka
Khulna
Mymensingh
Rajshahi
Rangpur
Sylhet

# Annexure-X

## National Task Force on Enhanced Transparency System in Pakistan

### Objective

To ensure effective coordination and implementation of the Enhanced Transparency Framework (ETF) under the Paris Agreement, fostering collaboration between national and provincial levels for accurate and comprehensive reporting on climate action.

### Proposed Composition of the Task Force

- Ministry of Climate Change and Environmental Coordination (Chair)
- Climate Change Authority (Member)
- Ministry of Planning Development and Special Initiatives (Member)
- Ministry of Information Technology and Telecommunication (Member)
- Ministry of Finance (Member)
- Ministry of IT(Member)
- NDMA (Member)
- Line ministries (Agriculture, Energy, Industries, etc.) (Member)
- Pakistan Bureau of Statistics (Member)
- Planning and Development Department/Boards (Member)
- Provincial Environmental Protection Agencies (Member)
- Research Institutions and Universities (Ex-officio Member)
- Technical experts (Ex-officio Member)

### Key Roles and Responsibilities of the National Task Force

#### *1. Policy and Strategy Development*

- Provide technical input and recommendations to inform the development of national climate change policies and strategies, ensuring alignment with the ETF requirements.
- Support the integration of transparency considerations into national planning processes and sectoral policies.

#### *2. Inter-Agency Coordination*

- Serve as a central coordinating body, bringing together representatives from relevant ministries (Climate Change, Planning, Finance, Agriculture, Environment, etc.), provincial governments, research institutions, and civil society organisations.
- Facilitate information sharing, data exchange, and joint planning between national and provincial entities to ensure consistency and coherence in data collection and reporting.

### *3. Data Management and Reporting*

- Develop and implement standardised methodologies for data collection, analysis, and management related to greenhouse gas emissions, mitigation actions, adaptation measures, and support received.
- Establish a national online platform or database to centralise climate-related data from various sources, ensuring accessibility and transparency.
- Oversee the preparation and submission of national reports to the UNFCCC, including Biennial Transparency Reports (BTRs) and National Inventory Reports.

### *4. Capacity Building and Training*

- Identify capacity gaps at national and provincial levels in areas such as data collection, emissions estimation, and reporting.
- Develop and implement training programs and workshops to enhance the technical skills of relevant personnel in government agencies and other stakeholders.
- Promote knowledge sharing and best practices on transparency and reporting through workshops, conferences, and online resources.

### *5. Stakeholder Engagement and Communication*

- Engage with a wide range of stakeholders, including civil society organisations, academia, the private sector, and local communities, to ensure their participation in the transparency process.
- Develop communication strategies to disseminate information on climate action and transparency initiatives to the public and other stakeholders.

### *6. Monitoring and Evaluation*

- Develop a monitoring and evaluation framework to track the effectiveness of the national transparency system and identify areas for improvement.
- Conduct periodic reviews and assessments of the system to ensure its robustness and compliance with the ETF requirements.

By effectively fulfilling these roles and responsibilities, the National Task Force on Enhanced Transparency System can play a vital role in strengthening Pakistan's capacity to track progress on climate action, enhance accountability, and promote sustainable development.

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Supporting the Implementation of the National
Adaptation Plan (NAP) in Pakistan

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