



CLIMATE UPSTREAM ASSESSMENT- BROWNBAG SESSION

Case study: Khyber Pakhtunkhwa Cities
Improvement Project (KPCIP)

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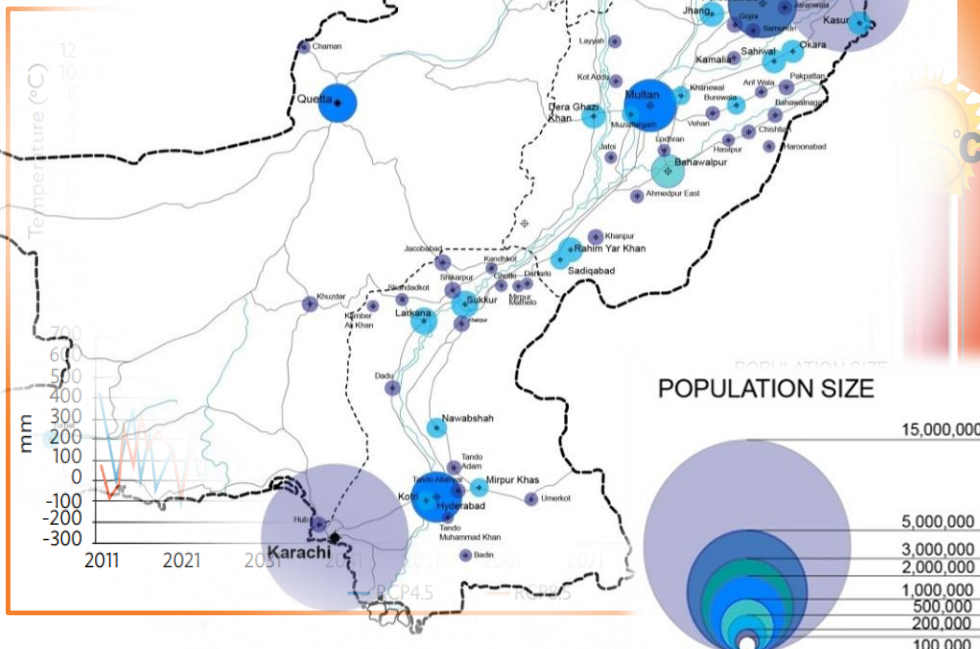




Pakistan faces significant risks from negative impacts of climate change



Annual temperature rise, and increase in sea level rise



Pakistan vulnerable to climatic changes

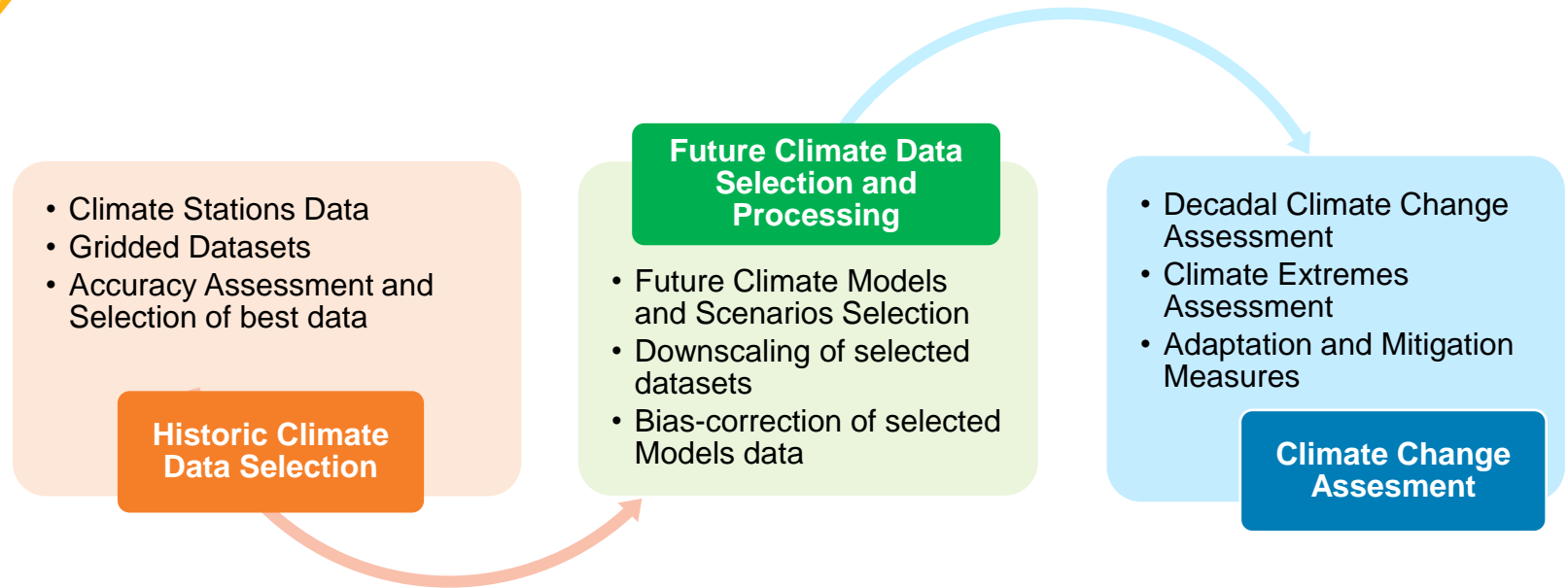
- Globally ranked 50th (out of 180) by Notre Dame Global Adaptation Index
- Vulnerabilities:
 - Social - income level, high Population
 - Economic - Businesses disruption, water storage etc
 - Structural – infrastructure/assets
- Strong commitment on adaptation NDCs

Pakistan Population is 50% urban and the size of our Urban space/economy/population is bigger than all the remaining 9 countries of CWRD





Climate Risk Screening Tool's/Procedure



- **Detail CRVA's using CMIP-5 & CMIP 6 data** under SSP245 & SSP585 for climate change assessment.
- **Secondary data** of hazards, exposure and vulnerability along with **primary data** acquired through communities engagement for risk and vulnerability analysis.
- **Out of 31 GCMs assessed, the 7 models used** that capturing the annual variations and absolute deviations in precipitation, better than others.
- **Climate change impacts** on the project area were assessed,
- **Their impacts on all subcomponents** of the project were evaluated and
- **Adaptation measures** were incorporated in the design of respective subprojects



Climate Adaptation Finance



- ▶ Upto 10% increase in water demand - sources of water, treatment plants and networks designs are capable of meeting these incremental requirements.
- ▶ Upto 25% allowance above highest flood-level - drainage system and flood protection structure are resilient increased flooding due to climate change.
- ▶ Sensitivity of biological process, plant species and materials assessed for 1.5 degree centigrade rise in minimum and maximum temperatures (variation between cities). The impact on biological processes managed through the controlled operational environment and selecting resilient plants.
- ▶ Selection/specification of construction material and machinery resilient against temperature increases.
- ▶ Cost of incremental measures for adaptation against climate change impacts is **6.4%** of the project investment components (**\$25.70 million ADB share**).

[Link to the details of Adaptation finance and Justification.](#)



Climate Mitigation Finance



- ▶ The IPCC (1996 and 2006) standard guidelines used to estimate GHG emissions – with and without project scenario - base-year 2025, when some activities will complete.
- ▶ GHG reduction mainly due to proposed ISWM operations compared to current practices, reduction in groundwater abstraction (conversion to surface sources), solarization of water and sanitation system, and lighting in green spaces
- ▶ Open dumping and burning contributes 95% GHG emissions for all cities. Total emissions without project are estimated to be **426,430 CO₂ eq Ton/year** by 2025 and with project **176,540 CO₂ eq Ton/year** there after (GHG reductions 249,890 tons per annum)
- ▶ The overall cost of mitigation finance is about **22.4 %** of the project investment components and ADB share is **\$81.13 million**.



[Link to the details of Mitigation finance and Justification.](#)



Other Completed and Pipeline Initiatives on CC



Completed

- Climate Change Profile of Pakistan 2017 and 2021
- CRVA's of 3 Cities and 2 Regions
- MHVRAs of 20 Districts in Punjab with special reference to Climate Change Scenarios

Ongoing

- NatCat Modeling for the country with special focus on CC and associated Hydrometeorological Disasters
- CRVA for the Power Distribution project
- Pitching innovative **Climate Finance Idea's inline to the Management Commitment to boost climate Finance** – Recent CTO Mission highly encouraged the RM and Govt counterpart
- Development of the Climate Investment Tracker and visualization
- Preparation and visualization of PRM ICPM pipeline and ongoing portfolio to highlight Climate Finance
- Air quality framework and City action plans
- National Urban Climate Assessment Study





Lesson Learned



MAINSTREAMING CC IN
DEVELOPMENT PROJECTS
THROUGH UPSTREAM
ASSESSMENT – SECTORAL
PLANS

INSTITUTIONAL ANCHORAGE
OF TOOLS AND ASSESSMENTS
RESULTS

ACKNOWLEDGE
MANAGEMENT USING
CENTRALIZE LIBRARY FOR
DATA/ INFORMATION

CAPACITY BUILDING OF LINE
AGENCIES AND RELEVANT
MINISTRIES

ALIGNMENT OF NATIONAL
COMMITMENTS (NDCS) WITH
ADB AND INTERNATIONAL
COMMITMENTS
STRATEGY/POLICY

CONCESSIONALLY AND ACCESS TO
UPFRONT GRANT & TA FINANCING
– UCCRTF CASE STUDY IS A GOOD
EXAMPLE



Thank you.

