GOVERNMENT OF THE PUNJAB
PLANNING & DEVELOPMENT BOARD
(URBAN DEVELOPMENT SECTION)

CONCEPT PAPER FOR PDWP

1.	**Name of project**	Establishment of flood disaster Prevention Master Plan & Construction of Storm Water Storage System in Multan City for Climate Change Adaptation in Punjab Province
2.	**Location**	Multan
3.	**Sponsoring Agency**	KOIKA (**Grant-in-Aid)**
4.	**Administrative Department**	HUD & PHE Department, Govt. of the Punjab
5.	**Executing Agency**	Water & Sanitation Agency (WASA), Multan Multan Development Authority (MDA) HUD & PHE Department, Govt. of the Punjab
6.	**Cost**	**US $10.00 million (RS. 2,786.440 Million)**
7.	**Proposed Gestation Period**	48 Months

8. DESCRIPTION OF THE PROJECT:

In the midst of the rising danger of environmental change, floods in Pakistan are occurring frequently. Pakistan Surges of 2010, flooding of the Indus Waterway in Pakistan in late July and August 2010 that prompted a philanthropic calamity viewed as one of the most terrible in Pakistan's set of experiences. The floods, which impacted around 20 million individuals, obliterated homes, harvests, and foundation and left millions powerless against unhealthiness and waterborne sickness. Evaluations of the all-out number of individuals killed went from 1,200 to 2,200, while roughly 1.6 million houses were harmed or obliterated, leaving an expected 14 million individuals without homes. Moreover, From 15 June to October 2022, floods in Pakistan killed 1,839 people, and caused Rs 3.2 trillion ($14.8 billion) of harm and Rs 3.3 trillion ($15.2 billion) of financial losses. The quick reasons for the floods were heavier than regular rains and dissolving ice sheets that followed an extreme intensity wave, the two of which are connected to environmental change.

Multan city is also prone to urban flooding due to possible unusual rain patterns and riverine flooding. City's vulnerability is greater due to inadequate infrastructure, lack of proper master planning and insufficient capacity of the institutions.

Korea has adopted different development solutions over the past several decades to overcome such challenges. Skill development programs under the supervision of Korean experts would help to strengthen resilience and adaptation capacity to climate-related flood hazards and disasters in Punjab Province, Pakistan. Further, KOICA also acknowledged the importance of a comprehensive approach to drainage that extends beyond the city limits. In this regard, keeping in view the emerging challenges of urban flooding, master planning may be expanded to some extent by keeping in view the overall budget. This will ensure a more robust and resilient infrastructure that can adapt to the dynamic needs of our growing cities.

9. PROJECT JUSTIFICATION:

For the past decade floods have persistently impacted the Sindh and Punjab regions. Many have lost their lives and homes. The Khoni Burj region is situated in an old region of Multan city with an extremely dense populace living around. The number of inhabitants in this area has increased quickly but unfortunately the sewage arrangement of this area is extremely old and cannot bear the weighty downpour in case of heavy rains, so there is generally an issue of urban flooding which brings a great deal of hardship for the residents of the area. The water stays there for a really long time in light of the fact that no legitimate seepage framework is accessible. This water likewise prompts water-borne illnesses like diarrhea, malaria, dengue, and skin issues too. This influencing the health of the existing population, particularly kids. However, the establishment of a proper drainage system and awareness of flood prevention campaigns can assume a crucial part in the improvement of this area. Through an effective master plan and construction of Storm-water Storage System will help them out with it.

The instant project aims to prevent the harm of the catastrophe by implementing several key strategies with the support KOICA. The establishment of flood disaster prevention master plan & construction of storm-water storage system showcasing innovative approaches to address the specific challenges faced by residence of district Multan. The Venture objective of establishment of flood disaster prevention master plan & construction of storm-water storage system in Multan city for climate change adaptation in Punjab province project, is to fortify flexibility and transformation ability to environment related flood risks and catastrophes in Punjab area.

10. PROJECT OBJECTIVES:

- To develop prevention master plan by Task Force Team (TFT) and advisory group.
- To conduct Flood Prevention Awareness Campaign (total 2,000 people / 20 times) for the residents of Multan City.

- To construct Storm-water Storage System in Multan City.
- Implementation of the flood management capacity building training for the govt. officials.

11. PROJECT SCOPE:

All the components of the projects will be used to establish Flood Disaster Prevention Master Plan & Construction of Storm-water Storage System in Multan City for Climate Change Adaptation in Punjab Province.

A. Establishment of Flood disaster prevention strategy in Multan City:

B. Construction of Storm water storage system in Multan City.

C. Implementation of the flood management capacity building training for the government officials.

12. PROJECT COST:

Sr. NO.	Description	Proposed Cost in USD	Proposed Cost in PKR Million Exchange Rate 1 USD = PKR 278.644
1	Design and Construction of ground water storage system	4,276,000	1,191.482
2	Experts for master plan and Top Supervision of the construction activities	4,145,163	1,155.025
3	Capacity Development Program	135,175	37.666
4	Project Management, Evaluation, Awareness Seminar and Other Expenses (Construction Phase)	1,261,842	351.605
5	Cost of equipment and materials	181,820	50.663
	Total Project Cost	**10,000,000**	**2,786.440**

13. DELIBERATIONS OF PRE-PDWP MEETING HELD ON 11.02.2025

The instant project was discussed in Pre-PDWP meeting held on 11.02.2025 under the chairmanship of Member (UD/LG), P&D Board. On a query by Sr. Chief (LG/UD), P&D Board regarding urban flooding, Deputy Director (Engg.), WASA Multan replied the urban flooding challenges are increasing day by day with the urban sprawl of Multan city, which is causing severe threats to the lives and properties, therefore, it has become need of the hour to consider urban flooding as a specific challenge and to find out the measures to mitigates its affects.

Consultant (SI), P&D Board highlighted that the project scope should include additional areas on northern and southern side of the Multan city which are mostly affected by the riverine floods. Representative of WASA Multan KOICA agreed to expand the scope of study beyond jurisdiction area of WASA/MDA specifically on northern and southern sides of the city. After deliberations it was decided to place that concept proposal before PDWP forum

for clearance. Observations of P&D and the annotated replies from Administrative Department are as under:

Sr. No.	Comments by P&D Board	Response by Administrative Department	Remarks
i.	Analysis of rainfall patterns and climate change projections should also be made part of disaster prevention strategy. Early warning system should also be incorporated under this component.	The analysis of rainfall pattern and climate change projections is already part of this project.	Noted
ii.	Ground water recharge potential should be availed.	The consultants will explore multiple options to mitigate the affects of urban flooding in the city including ground water recharge.	Noted
iii.	In the situation analysis part, general analysis of the country has been given. Specific situation analysis of Multan should be made part of the concept paper including condition of existing storm water drains, sewerage system capacity and integration with canals and rivers.	Specific situation analysis of Multan city is part of the concept paper including condition of existing storm water drains, sewerage system capacity. The same is discussed in section 2.1 at paragraph 5 7 6.	Comprehensive situation analysis will be made part of PC-I
iv.	Review of city zoning and land wise planning may also be considered in the western planning.	The city zoning is already available in WASA Master plan 2015-40. The KOICA experts will work on the same zoning and will suggest further value addition in the zoning system of the city.	Relevant stakeholders will be taken on board during PC-I formulation
v.	New techniques like reservoirs, wetland, rooftop and green infrastructures may be considered.	The consultants will explore multiple options to mitigate the effects of urban flooding in the city including New techniques like reservoirs, wetland, rooftop and green infrastructures. The construction of ground storage tank is already part of this project.	Noted
vi.	Ground water recharge arrangement should be incorporated in rain water retention tank.	Ground water recharge arrangement will also be considered in rain water retention tank including various other options as well.	Noted
vii.	The sponsors may show alignment of the instant project with Multan Master Plan.	The instant project is aligned with the WASA Master Plan 2015-40.	Relevant stakeholders will be taken on board during PC-I formulation
viii.	The sponsors may also clarify if similar interventions has already been executed by WASA Multan to avoid any duplication of work.	NO SIMILAR INTERVENTION IS in process/consideration in WASA Multan and there is no element of duplication in the project	Noted
ix.	The sponsors have not cited any latest flood monitoring / management systems such GIS mapping. AD may provide detail along with PDMA's recent and past best practices adopted in urban flood management.	The available WASA Master plan 2015-40 is GIS based. The consultants will further update the existing and proposed system on GIS.	Noted
x.	The proposal has not specified whether the project will utilize an existing government site, or if new land acquisition is required. AD may clarify along with its implications.	The proposed ground water storage tank will be constructed on the already available land of Disposal station. No land acquisition is involved in the instant project.	Noted

Sr. No.	Comments by P&D Board	Response by Administrative Department	Remarks
xi.	The concept proposal has not outlined any O&M plan upon completion after KOICA funding and involvement of local staff. AD may provide a clear roadmap.	The executing agency WASA Multan will be responsible for its operation and maintenance from its self-sources with the help of already available staff.	Noted
xii.	The concept proposal lacks monitoring and evaluation plan and risk assessment which may be provided.	A joint team appointed by the all stakeholders will monitor and evaluate the input and output activities an improvements throughout the project cycle for the achievements of the project objectives.	Compressive M&E and risk assessment plan will be made part of PC-I
xiii.	How will be project sustain after KOICA funding and project completion? AD may provide a clear plan.	The executing agency WASA Multan will be responsible for its sustainability.	Noted
xiv.	**Areas of feasibility studies:** The proposed feasibility studies and remedies suggested after these studies, should not be confined to Multan City only but these should be extended to at least 15 km in the north and 20 Km in the south west of the city to come out with some tangible solution.	KOICA has already agreed to extend the scope of study beyond the jurisdiction area of WASA/MDA for better understanding purposes.	Noted
xv.	The PC-II does not provide the funding pattern of the project i-e is it a grant-in-aid or loan.	The funding pattern is grant in aid through KOICA.	Resolved
xvi.	Fees of the experts for design, master planning & construction can be reduced by deployment of more indigenous experts and less foreign experts for these assignments.	The matter will be submitted in PC-I.	The matter will be deliberated at PC-I stage.
xvii.	Similarly the capacity development portion can be reduced by reducing the number of trainees in Korea.	Currently, no specific capacity building project is under implementation in WASA, Multan like other WASAs. This is the only capacity building opportunity available for WASA employees.	Noted
xviii.	Further the project management cost can also be reduced to a major extent as WASA Multan has got sufficient staff for construction planning & supervision. However local consultants can be appointed for quality control and supervision.	KOICA experts have started their study and details will be submitted after completion of the study through PC-I.	Noted
xix.	It is written that the project will be managed by KOICA meaning thereby the no Pakistani Organization will have any control on the project.	A project steering committee and task force team (TFT) comprising of all the stakeholders will be established for the management/ control of the project.	Noted
xx.	The cost and vehicles and equipment is too high (51 million PKR) which should be rationalized.	KOICA experts have started their study and details will be submitted after completion of the study through PC-I.	The matter will be deliberated at PC-I stage.
xxi.	The total project cost including design and construction of works is USD 4.276 million whereas remaining	KOICA experts have started their study and revised details will be	Deliberations related to cost rationalization will

Sr. No.	Comments by P&D Board	Response by Administrative Department	Remarks
	USD 5.724 million will be spent on the experts, project management, equipment, furniture, vehicles and inland and foreign training. This seems to be a very poor ratio as compared to the outcomes.	submitted after completion of the study through PC-I.	be discussed at PC-I stage
xxii.	The break-up of all the sums provided in the table at page titled as 3.3 is missing.	The details will be submitted after completion of the study by the KOICA experts through PC-I.	The matter will be deliberated at PC-I stage.

14. <u>RECOMMENDATION:</u>

Concept Paper of the project at a cost US $10.00 million (Rs. 2,786.440 million) is placed before PDWP for consideration.

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