

Adaptation Fund Project

Enhance community, local & national-level urban
climate change resilience to water scarcity, caused
by floods and droughts
in Rawalpindi & Nowshera, Pakistan

INCEPTION WORKSHOP REPORT

2020

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ADAPTATION FUND

UN HABITAT
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INCEPTION WORKSHOP REPORT

22 December 2020

United Nations Human Settlements Programme

Pakistan

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List of Abbreviations

GHG	Greenhouse Gas
IOM	International Organization for Migration
MOCC	Ministry of Climate Change
NDMA	National Disaster Management Authority
NDRMF	National Disaster Risk Management Fund
PCRWR	Pakistan Council for Research on Water Resources
PSC	Project Steering Committee
ROAP	Regional Office for Asia and the Pacific
SUPARCO	Space and Upper Atmosphere Research Commission
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UN Habitat	United Nations Human Settlements Programme
WASA	Water and Sanitation Agency
WHO	World Health Organization

1. Background of the Project and Brief Situation Analysis

Pakistan is located at the crossroads of the ancient trade routes and borders with Afghanistan, Iran, China and India. Pakistan is the sixth largest nation of the world with a population of 207 million, of which 36.4 percent lives in urban areas. Rapid economic development in recent years has not consistently translated into improvements in the lives of the urban poor. The situation is worsened due to lack of access to basic needs such as education, health, clean drinking water, proper sanitation and energy. Only around 65 per cent of Pakistan's population is thought to have access safe drinking water and the future sustainability of the existing drinking water supply systems is also under extreme stress arising from over-extraction of ground water and changes in the hydrometeorological cycle relating to climate change.

Pakistan is the seventh most vulnerable country to impacts of climate change¹. Given the projected economic growth trajectory, greenhouse gas emissions in Pakistan are expected to increase from 405 metric tons of carbon dioxide to more than 1,603 metric tons of CO₂ in the next 15 years. The most serious and visible impact of climate change in Pakistan includes floods, droughts, cyclones and heat waves. In the past 40 years, nine of the ten most severe natural disasters in Pakistan were climate related which clearly points to the magnitude of the challenge. Considering the high vulnerability to climate change, the Government of Pakistan has made adapting to present and projected future climate change one of its top policy priorities.

In practice, these adaptation priorities in Pakistan equate to reducing the impact of flooding and droughts. However, despite the severity of flood and drought impacts in urban areas, a national approach to address this situation does not yet exist in Pakistan. Recurring floods damage the lives of individuals, destroy infrastructure and render much drinking water infrastructure unusable in affected areas. In addition, unplanned urban sprawl has led to encroachment on riverbanks and other flood-prone areas. On the River Kabul in Nowshera, in Khyber Pakhtunkhwa Province and the Nullah Lai River in Rawalpindi, Punjab Province, floods

¹ [Global Climate Risk Index 2020 \(germanwatch.org\)](https://www.germanwatch.org/en/global-climate-risk-index-2020/)

exacerbated by poor drainage and settlement encroachment repeatedly affect the poorest and most vulnerable people. Tube wells get submerged and access to potable, safe water becomes difficult.

As the majority of people depend on water from these sources for drinking, cooking and domestic use, floods have very serious effects – counterintuitively leaving hundreds of thousands of people without access to safe, clean water. Recurrent floods have been known to contaminate groundwater down to a level of 100 feet (30.5 metres) and thus affect people who depend on pumped ground water. Further water contamination occurs because of improper solid waste disposal, which clogs drainage channels. The urban poor are then the most affected as they can't afford deeper boreholes (which may not be effective anyway). This leads to serious outbreaks of disease during flood periods, which particularly affects women, children, the elderly and those with underlying medical conditions. In Rawalpindi, for example, a recent study showed that the majority of water sources had indicator microorganisms beyond World Health Organization (WHO) permissible limits.

The project, which was developed by UN-Habitat in collaboration with the Government of Pakistan and other stakeholders, and funded by the adaptation fund, aims to enhance resilience to water scarcity, caused by floods and droughts at community level, district / city and national / provincial level in Rawalpindi and Nowshera Cities. The project was approved by the Adaptation Fund Board at its 35th meeting which took place on April 2nd 2020 with deliberations (including project approvals continuing online for some time after, given the extraordinary circumstances relating the 2020/2021 COVID-19 pandemic (Board Decision B.30/24).The project partners are the Ministry of Climate Change (MOCC), National Disaster Management Authority (NDMA), Pakistan Council for Research on Water Resources (PCRWR), Water and Sanitation Authority (WASA), Shehersaaz and Tehsil Municipal Administration, Nowshera.

Water harvesting initiatives and facilities are very limited in Pakistan. The limited facilities in existence rely on techniques that are not well developed, and their ability to reduce flood impacts or adapt to climate change more generally has not been established. Therefore, the approach of this project is necessary as well as cost-effective in the urban context in Pakistan. To scale-up the project's approach, a national urban strategy will be developed, focusing on climate change impacts, particularly floods and water scarcity (and resulting public health problems), while also employing a spatial planning approach.

At the district, city and community levels, a comprehensive approach will be adopted to address water scarcity issues in a flood-resilient manner using innovative techniques. These community plans and city level spatial planning strategies will contribute to reducing climate change risks and impacts beyond city boundaries across multiple sectors.

The project will achieve the following outcomes:

- Outcome 1.1: Increased adaptive capacity within the water sector at community level with 38,885 people benefitting directly from rainwater harvesting facilities (7 people per household) and around 200,000 indirectly
- Outcome 1.2: Strengthened awareness of flood and water risks and impacts and how to address these at community level and ownership of rainwater facilities built
- Outcome 2.1: Increased adaptive capacity within the water sector at district / city level by identifying water management structures recommended on other critical interlinked structures through spatial planning.
- Outcome 2.2: Strengthened urban level government capacity to reduce climate change related flood and drought risks, also beyond city boundaries.
- Outcome 3.1: Strengthened national level government capacity to reduce climate change related risks and impacts in urban areas.
- Outcome 3.2: Policies and plans improved to respond to urban climate change risks and impacts.

2. Inception Workshop



Figure 1 - Socially Distanced Group Photo

2.1. Introduction

The Adaptation Fund Project ‘Enhance community, local & national-level urban climate change resilience to water scarcity, caused by floods and droughts in Rawalpindi & Nowshera, Pakistan’ developed by UN-Habitat in collaboration with the Government of Pakistan and other stakeholders. It was formally launched at an inception workshop on 22nd December 2020 in Islamabad, Pakistan. The workshop was held to brief stakeholders on the outcomes, outputs and key activities of the project as well as to elicit feedback from the participants on how to achieve objectives of the projects efficiently.

In light of the COVID19 pandemic and to comply with public health guidelines and protocols in place in Pakistan, it had been planned to keep the physical participation to a limited number hence, arrangement for virtual participation through Zoom had also been made for the inception workshop. The Workshop was attended by 37 relevant members from the local, provincial and federal government ministries and line agencies of Pakistan. 18 participants attended workshop in person while 19 participants attended virtually. List of participants is presented in Annex-I.

Workshop Agenda

10:00m-10:50am	Registration
10:50am-11:00am	Guest to be seated
11:00-11:05am	Recitation
11:05am-11:20am	Welcome Address by Mr. Jawed Ali Khan, Habitat Programme Manager, UN-Habitat Pakistan
11:20am- 11:30am	Remarks by Mr. Laxman Perera, Human Settlements Officer, UN Habitat, Regional Office for Asia and the Pacific (ROAP)
11:30am-11:40am	Address by Mr. Irfan Tariq, Director General, Ministry of Climate Change
11:40am-11:50 am	Remarks by Ms. Mio Sato, IOM, Acting Resident Coordinator, United Nations
11:50am-12:10pm	Presentation by Mr. Jawed Ali Khan, HPM, UN Habitat on 'Enhance community, local and national-level urban climate change resilience to water scarcity, caused by floods and droughts in Rawalpindi and Nowshera, Pakistan'
12:10pm-12:40pm	Question / Answer Session
12:40pm- 1:00pm	Concluding Remarks by Mr. Laxman Perera, Human Settlements Officer, UN Habitat, Regional Office for Asia and the Pacific (ROAP)
1pm	Lunch

Venue: Serena Hotel, Islamabad, with remote connection facilities available.

2.2. Welcome Address by Mr. Jawed Ali Khan, Habitat Programme Manager, Pakistan

The welcome address was delivered by Mr. Jawed Ali Khan, Habitat Programme Manager, Pakistan. He welcomed the delegates on behalf of UN-Habitat. He highlighted that this occasion marks the launch of the urban flooding and drought management intervention in Pakistan which poses a serious threat to our economic growth and development as well as lives and livelihood of the people living in the urban areas of the country.



Mr. Ali Khan highlighted that the Project will address the climate change adaptation challenges in line with Pakistan National Water Policy; National Flood Protection Plan; and National Disaster Management Plan. The project implementation will enable the government to develop a national approach for sustainable urban flood management in Pakistan. The Project's scope

aims to strengthen household and community level flood resilient water harvesting facilities; and enhance their capacity to develop and operate such technologies. At the city, district and national levels, the capacity to guide and direct urban development in consideration to climate change and flood / drought risks impacts will be improved; besides, implementing and effectively operating the up-stream water harvesting facilities.

Mr. Ali Khan stated his hope that this workshop is the beginning of a project that will pave the way for a sustainable flood and drought management at the city, provincial and national level, and create a model for climate resilient urban development and management in Pakistan.

2.3. Remarks by Mr. Laxman Perera, Human Settlements Officer, UN-Habitat, Regional Office for Asia and the Pacific

Mr. Laxman Perera thanked all participants of Inception Workshop for their time. He began by informing the participants that the projected impacts of climate change in Pakistan are likely to combine with a “rapidly growing urban population”, to cause severe water shortages in the future. In order to enable people living in disaster-prone areas of Pakistan to adapt to the impacts of climate change, the Project will “enhance community, local and national-level urban climate change resilience to water scarcity, caused by floods and droughts in two cities of Pakistan”.

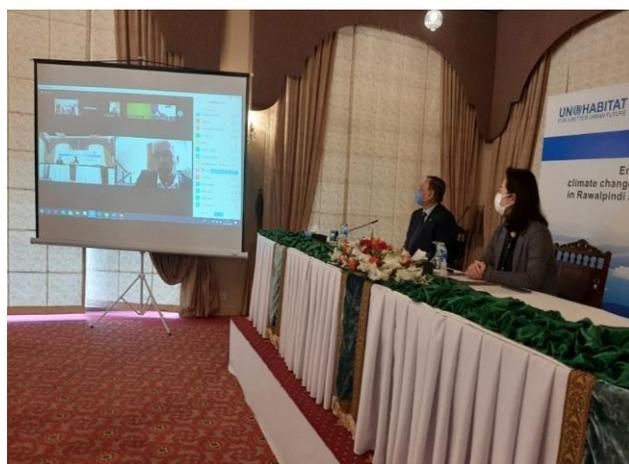


Figure 3 - Laxman Perera's presentation

It is hoped that the Project will implement the horizontally and vertically interrelated activities and interventions, focused on reducing urban flood and water scarcity risks and impacts at city and community level, in-line with the national policy and regulatory framework for adaptation action. While the practice of rainwater harvesting is limited in

Pakistan, UN-Habitat has good experience of it both in Pakistan and elsewhere, for example as a response to the 2005 Kashmir Earthquake. Among the keys to success in Habitat's experience is the need to train local people in the operation and maintenance of the systems, which increases ownership and keeps operating costs down.

Pakistan has placed great emphasis on climate change policy, planning and implementation, closely aligned with its strategies for achieving the sustainable development goals and objectives of the United Nations Framework Convention on Climate Change (UNFCCC). This project supports the Government of Pakistan implement it policy priorities on climate change and disaster risk reduction, while also supporting Pakistan to meet its commitments under the UNFCCC.

Mr. Perera remarked that this Adaptation Fund project will be the benchmark not only for Pakistan, but for the wider Asia-Pacific region on how climate change issues are addressed to enhance the capacity at national, provincial, district and community level. Mr. Perera reiterated that the components are aligned with national policies as well as UN-Habitat global flagship programmes to promote climate resilience.

2.4. Address by Mr. Irfan Tariq, Director General, Ministry of Climate Change, Government of Pakistan

Mr. Irfan Tariq, Director General, Ministry of Climate Change, began his introductory remarks by noting his appreciation for the efforts of the experts in developing an excellent project. He thanked the participants for attending the workshop and highlighted that Pakistan has placed great emphasis on climate change adaptation and mitigation planning action. The present Adaptation Fund Project is closely aligned with the Government's strategies for sustainable development. In this context this project is important and would be curtain raiser for adaptation activities and will be instrumental in building climate change-related resilience in Rawalpindi and Nowshera districts.



Figure 4 - Mr. Irfan Tariq's remarks were made via video call

Mr. Tariq highlighted that the climate change related works included in the Project are directly related to the environment protection and up-grading measures, as recommended in the National Policies of:

- (i) Town Planning and City Management;
- (ii) Climate Change; and
- (iii) Disaster Risk Reduction.

Further, the project will produce co-benefits in terms of water-related-livelihood protection, improved quality of human life, community capacity-building and empowerment, and reduction of environmental degradation. He informed the workshop that the Ministry of Climate Change had already been collaborated in finalizing this Project and assured that the Ministry will continue to work very closely with UN-Habitat. Mr. Irfan reaffirmed the commitment of local authorities to provide support for a successful implementation.

2.5. Address by Ms. Mio Sato, Chief of Mission, International Organization for Migration and Acting Resident Coordinator, United Nations

Ms. Mio Sato spoke on the importance of UN engagement in tackling climate change in Pakistan. She acknowledged the efforts of Ministry of Climate Change and UN-Habitat for launching this project and explained that Climate Change and Environmental Sustainability has been one of the priorities of United Nations.

She acknowledged the role of UN-Habitat in supporting the countries towards achieving the Environment Sustainability through implementing Climate Change Emergency-Responsive Mitigation-Measures world over, including Pakistan. She informed the meeting that the Adaptation Fund Project has been developed through the consultations and institutional knowledge of UN-Habitat, by virtue of its long presence in Pakistan; as well as the UN assistance in implementing many projects and programmes relating to the achievement of the Sustainable Development Goals, as well as contributing to national disaster rehabilitation and climate change adaptation.

This is in addition to a long history of UN-Habitat assistance to National and Provincial Governments in Pakistan to undertake urban infrastructure and management projects. Ms. Sato noted her appreciation on behalf of the United Nations (UN) Country Team that the Government of Pakistan has placed great emphasis on climate change policy, planning and implementation. Also, the Government response has been closely aligned with UN-Habitat strategies for sustainable development, environmental protection, and achieving the sustainable development goals. She assured the participants that the UN System in general, and the UN-Habitat in particular is committed to the successful implementation of the AF Project.

Ms. Sato emphasized the UN common approach mainstreaming in projects and programming to pave the way for a sustainable flood and drought management at all levels and create a model for climate resilient urban development and management in Pakistan.



Figure 5 - Ms. Mio Sato's remarks as acting UN Resident Coordinator

2.6. Presentation by Mr. Jawed Ali Khan, Mr. Jawed Ali Khan, Habitat Programme Manager, Pakistan

After the introductory remarks, Mr. Jawed Ali Khan, Habitat Programme Manager for Pakistan, gave an overview of the project, the key points of which are summarized hereunder.

Rationale of Project

- Pakistan is highly vulnerable to climate change as is evident from the increased frequency of climate-related hazards- floods, torrential rains, droughts / water scarcity, heat waves, and GLOF.
- Extreme climate events have resulted in an average annual economic loss of almost US\$ 4 billion. The devastating impacts of the floods alone during 2010-2014 caused monetary losses of over US\$ 18 billion.
- Even though flood impacts are often severe in urban areas, a national approach to address this situation in cities doesn't exist yet in Pakistan.
- This is critical, considering that 36.4% of Pakistan's population lives in urban areas. Existing approaches to deal with flood and drought impacts are not comprehensive and rainwater harvesting techniques are rarely used.
- Recurring floods damage the lives of individuals, destroy infrastructure and render much drinking water infrastructure unusable in affected areas.
- On the River Kabul in Nowshera in Khyber Pakhtunkhwa Province and the Nullah Lai River in Rawalpindi, Punjab Province, floods exacerbated by poor drainage and settlement encroachment are repeatedly affected the poorest and most vulnerable people.
- Reducing the impact of flooding and droughts is becoming one of the top priorities of the government of Pakistan.
- As a result of the above, there is an urgent need approaches, strategies and replicable models for urban resilience involving urban flood management and water scarcity issues in a comprehensive manner.



Figure 6 - Socially Distanced Participants

Target Areas of Project

- The project targets two cities; Rawalpindi, (and in particular Union Council 1,2,4,5,6,12,37) in Punjab Province, and Nowshera, (particularly Dagi Khel, Allah Yar Khel, Nawan Kali, Shahmeer Gari, Bara Khel, Behram Khan Khel, Mana Khel, Kabul River Tehsils) in Khyber Pakhtunkhwa (KP) Province.
- The target cities are heavily and increasingly affected by floods. Floods, in turn, affect water availability and quality because boreholes (on which the poorest households depend) get flooded by water that is polluted by waste in drainage channels. This contaminates the groundwater, which becomes undrinkable, leading to water scarcity, even during the rainy season.
- At the same time, droughts are increasing in the dry season and fresh water from glaciers is reducing due to increased temperatures.
- To reduce vulnerabilities related to water scarcity and water borne diseases at the household level, rainwater harvesting, and cleaning systems will be installed at households above flood water levels, allowing households to access clean water directly.

Project Objectives

The project's objective is to enhance community, local and national-level government capacities to address climate change-related urban flood and water scarcity issues. This objective will be met at three levels:

- **At Community Level:**
To enhance community- and household-level flood resilient water harvesting facilities and strengthen capacities to plan, construct, operate, maintain and duplicate these.
- **At City / District Level:**
To enhance city and district-level up-stream water harvesting facilities (that also reduce flood impacts down-stream) and strengthen government capacities to plan, construct, operate, maintain and duplicate these in areas suitable for tackling flood and drought issues at the same time.
- **At National Level:**
To strengthen national-level capacity to guide / direct city-level development for climate change & disaster risks & impacts, especially floods & droughts.

Project Components & Outputs

Mr. Ali Khan presented the project's components and outputs, as presented in the Table below:

Project Components	Expected Concrete Outputs	Expected Concrete Outcomes
<p>Component 1</p> <p>Community level activities:</p> <p>Enhance community- and household-level flood resilient water harvesting facilities (using innovative techniques) and to strengthen capacities to plan, construct, operate, maintain and replicate these.</p>	<p>Output 1.1. (concrete)</p> <p>5000 community / household level flood resilient (i.e. elevated to not be affected by flood water) rainwater harvesting facilities constructed, using innovative techniques</p>	<p>Outcome 1.1.</p> <p>Increased adaptive capacity within the water sector at community level – 38,885 people benefitting directly from rainwater harvesting facilities (7 people per household) and around 200,000 indirectly</p>
	<p>Output 1.2.</p> <p>15 union / neighbourhood council-level community plans developed (7 in Rawalpindi & 8 in Nowshera), community members (especially women and youth) trained and practical guide developed to plan, construct, operate, maintain and replicate water harvesting at community level, and to reduce waste in drainage channels through awareness raising campaigns</p>	<p>Outcome 1.2.</p> <p>Strengthened awareness of flood and water risks and impacts and how to address these at community level and ownership of rainwater facilities built.</p>
	<p>Output 1.3</p> <p>Awareness campaigns in all target communities to reduce dumping of solid waste in drainage channels</p>	
<p>Component 2</p> <p>District / city level activities:</p> <p>Enhance city and district-level</p>	<p>Output 2.1. (concrete)</p> <p>50 district / city-level water harvesting facilities in public buildings and on water storages in public gardens constructed</p>	<p>Outcome 2.1.</p> <p>Increased adaptive capacity within the water sector at district / city level by identifying water management structures</p>

<p>water harvesting facilities in public buildings and on water storages in public gardens, develop district / city level spatial strategies as tool to assess climate change related floods, droughts and water scarcity to plan for and manage climate change risks and to strengthen capacities to plan, construct, operate, maintain and replicate water harvesting facilities in public buildings and gardens.</p>		<p>recommended on other critical interlinked structures through spatial planning</p>
	<p>Output 2.2.</p> <p>Two district / city-level spatial planning strategies developed considering climate change risks and impacts, especially floods and droughts, and including comprehensive water harvesting plans. These strategies are decision-making tools for cities to assess climate change related floods, droughts and water scarcity to plan for and manage climate change-related risks and impact in and beyond city boundaries, taking into consideration multiple sectors</p>	<p>Outcome 2.2.</p> <p>Strengthened urban level government capacity to reduce climate change related flood and drought risks, also beyond city boundaries</p>
	<p>Output 2.3.</p> <p>50 government officials trained and guidelines developed to plan, construct, operate, maintain and replicate flood resilient water harvesting facilities and to enhance capacity in developing spatial plans</p>	
<p>Component 3</p> <p>National level activities:</p> <p>Strengthen national-level capacity to guide / direct city-level development considering climate change and disaster risks and impacts, especially water scarcity caused by floods and droughts.</p>	<p>Output 3.1.</p> <p>100 government officials (women / men) trained to guide / direct urban development considering climate change and disaster risks and impacts, using especially spatial planning guidelines and tools.</p>	<p>Outcome 3.1.</p> <p>Strengthened national level government capacity to reduce climate change related risks and impacts in urban areas</p>
	<p>Output 3.2.</p> <p>One National urban strategy focused on climate change / disaster risk reduction developed</p>	<p>Outcome 3.2.</p> <p>Policies and plans improved to respond to urban climate change risks and impacts</p>

One set of National guidelines for spatial planning considering climate change / disaster risks developed

Mr. Ali Khan reminded the participants of the amounts budgeted for each component, as follows:

- Component 1) US\$2.8 million
- Component 2) US\$1.8 million
- Component 3) US 483,000

Anticipated Project Impacts & Benefits

Mr. Ali Khan used his presentation to stress that the project has a number of vital economic benefits. These include:

- Reduction in loss of household assets incurred by poor and vulnerable households as a result of recurrent floods.
- Greater availability of and more affordable water for poor households, thus saving them money, time and energy, which they can invest in more productive economic activities.
- Improvement in health status of poor households thus saving them money (both in cash and in the opportunity cost of lost labour), which also has a co-benefit for women, in their role as primary care givers.
- With better city level development and disaster risk reduction plans and strategies in hand, the urban economies of target cities will improve and there will be reduction in their economic losses due to disaster events.
- Government budget and resources for disaster relief activities during and after a potential disaster will be reduced and can be productively invested elsewhere, benefitting other people in greater need.



Figure 7 - During Mr. Ali Khan's presentation

Social co-benefits

The project also brings a number of social and environmental benefits, which Mr. Ali Khan went on to spell out:

- Improved health of poor households will contribute to their overall well-being.
- Inclusion of women and other vulnerable groups in project planning, designing and execution at community level will contribute to their empowerment and hence overall social status.



Figure 8 Participants during Mr. Ali Khan's presentation

- Communities will be better mobilized and organized to actively participate in the development of their areas by working with local government institutions and civil society groups.
- With their sensitivity to gender aspects and needs of vulnerable groups, the city level spatial plans and strategies will contribute to a broad-based and inclusive development that empowers the poor and vulnerable groups.
- With their sensitivity to gender aspects and needs and vulnerabilities of the poor, the national level climate risk sensitive urban policy, plan and strategies will contribute to a more empowering and inclusive urban development in Pakistan.

Environmental co-benefits

- Improved water use efficiency at household and community level due to innovative water harvesting technologies.
- Better adaptation to climate risks and improved urban resilience in Pakistan due to introduction and adoption of climate sensitive urban development policies, plans and strategies.

2.7. Question & Answer Session

A question and answer session followed Mr. Ali Khan's presentation. This session is summarized below:

1. **District Health Officer, Nowshera:** *Appreciated that the project is very timely and necessary and inquired about the project's implementation timeframe and what is the role of the District Health Office in the project?*

The chair Mr. Jawed Ali Khan replied that the first step is this inception workshop is to establish linkages with you and the local administration and community. UN-Habitat will encourage its executing partners to reach out to you, the local administration and local community to develop more understanding of local challenges and to find ways to move forward together as the project is now ready to move forward and with your support to achieve our common goals is greatly appreciated.

2. **Mr. Shafi Agha, National Disaster Management Authority (NDMA):**
Encroachment is the main issue of urban flooding. Is there any component in the project to remove encroachment?

Mr. Jawed replied that this project is not designed to remove encroachments. It is designed to address natural hazards. The project will create enabling environment to address the challenges of urban flooding and drought and cannot take the responsibility to remove encroachments. The project is aware that this is a difficult issue, but this is an issue that other agencies will work on.

3. **Dr. Hooriya, Health Department, Rawalpindi Municipality**
Have project sites been identified or not and will the planning be done for construction of rainwater harvesting units or not? What level of coordination has been made with the administration and community?

We have identified the area during the project development stage in consultation with the local administrations and communities. We had a series of meetings with the Ministry of Climate Change, the Chairman NDMA, WASA Rawalpindi, Rawalpindi Municipal Corporation, TMA Nowshera, Pakistan Council for Research on Water Resources (PCRWR), Sheharsaz and Provincial disaster management authorities etc. We have tried our best and I am sure we can deliver together with our partner agencies.

4. **Muhammad Shakoore, Technical Advisor, Shersaaz:** Mr. Shakoore highlighted Sheharsaz's contribution to the development of the project proposal. He pointed out that while urban-related projects are not new in Pakistan, projects that take a strategic view of urban climate change vulnerability and adaptation are.

The crux of the project is to address water abundance and water scarcity due to flooding and droughts. This project represents an opportunity to showcase new ways of managing and using water resources, which are increasingly scarce. This project will give the opportunity to showcase new way of managing and using water resources which is one of the precious resource. PCRWR has written a series of reports on water quality in urban areas, which came up with the shocking finding that 80 percent of drinking water samples are not safe for drinking.

Urban poor households then have to invest more resources in both sourcing clean water and taking care of sick people who have been exposed to contaminated water. Therefore, the project is an opportunity to show how a simple technology – rainwater harvesting – in private households and public buildings can be used for better management of water. In sum, there are strong health co-benefits to accompany the adaptation benefits

Mr. Shakoor also reflected on NDMA's point that encroachment has contributed to urban flooding. This is an urban planning issue. One important component of the project is to prepare city-level urban resilience plans, with a strong focus on climate change adaptation. These can then be an entry point to highlight issues of encroachment and help relevant institutions develop mechanisms, frameworks and guidelines so that encroachment can be prevented in the future.

5. Mr. Munir Ahmed Advocacy, Communication and Outreach Consultant:

Mr. Munir explained that the first research on the Nullah Lai was done in 1997. Mr. Munir highlighted his long history of working on flood-related issues in the area since the 1980s. He highlighted that overlapping mandates and a lack of clarity regarding the roles and responsibilities of city and provincial authorities has contributed to the flooding issues witnessed today.

Mr. Munir proposed the formulation of a Nullah Lai Development Authority to bring the various stakeholder organizations on board. However, he warned that even this would bring the potential for disagreement over who would head the authority; the Federal Government or Government of Punjab Province. Unclear mandates mean that, despite spending 'millions' the issue of pollution in the Nullah Lai has not been addressed.

Mr. Munir then raised a question how would this project contribute to addressing the issues and challenges and hazards that are contributing to the loss of livelihood to the people living around.

Mr. Ali Khan replied that our project has different tiers of intervention i) community level interventions ii) City Level (Development of urban strategies (City level)

Mr. Ali Khan noted that in his experience we need to integrate the solution within the government system. If this fits into the system, then certainly it can help to achieve objectives.

Mr. Ali Khan asked the questioner to share his proposal with UN-Habitat so it could be given further consideration and raised with the government in an appropriate way.

6. Mr. Sher Azim Khan, Director, Planning and Development Department, Government of Khyber Pakhtunkhwa:

What physical activities will be executed in Nowshera? What type of structures will be constructed in the project to stop urban flooding from Kabul River?



Figure 9 - Sher Azim Kham asking a question during the inception workshop

Mr. Ali Khan replied that this project took bottom-up approach. If the question is referring to macro scale interventions, then unfortunately project is not designed to look into macro level intervention to stop urban flooding, but rather it is designed to adapt to urban flooding and drought at micro level.

Mr. Ali Khan recognized that people want to see real, tangible change. To ensure this, Mr. Ali Khan called for the continued support and cooperation of the Planning and Development Department.

7. Ms. Riffat Sardar, Secretary, Women's Department Khyber Pakhtunkhwa:

Ms. Riffat appreciated that this is a wonderful workshop and is honoured to participate.

She said that general concerns toward gender equality have been addressed in this project. Ms Riffat instead wanted to ask a question regarding the Tehsil Municipal Administration, Nowshera, the project's main executing partner in Nowshera.

The Women's Development Department has been advised to work with the District Controller. Therefore, will you also work with the District Controller, and what role could they have?

Finally, will you use 'home-grown' technology, made in Pakistan?

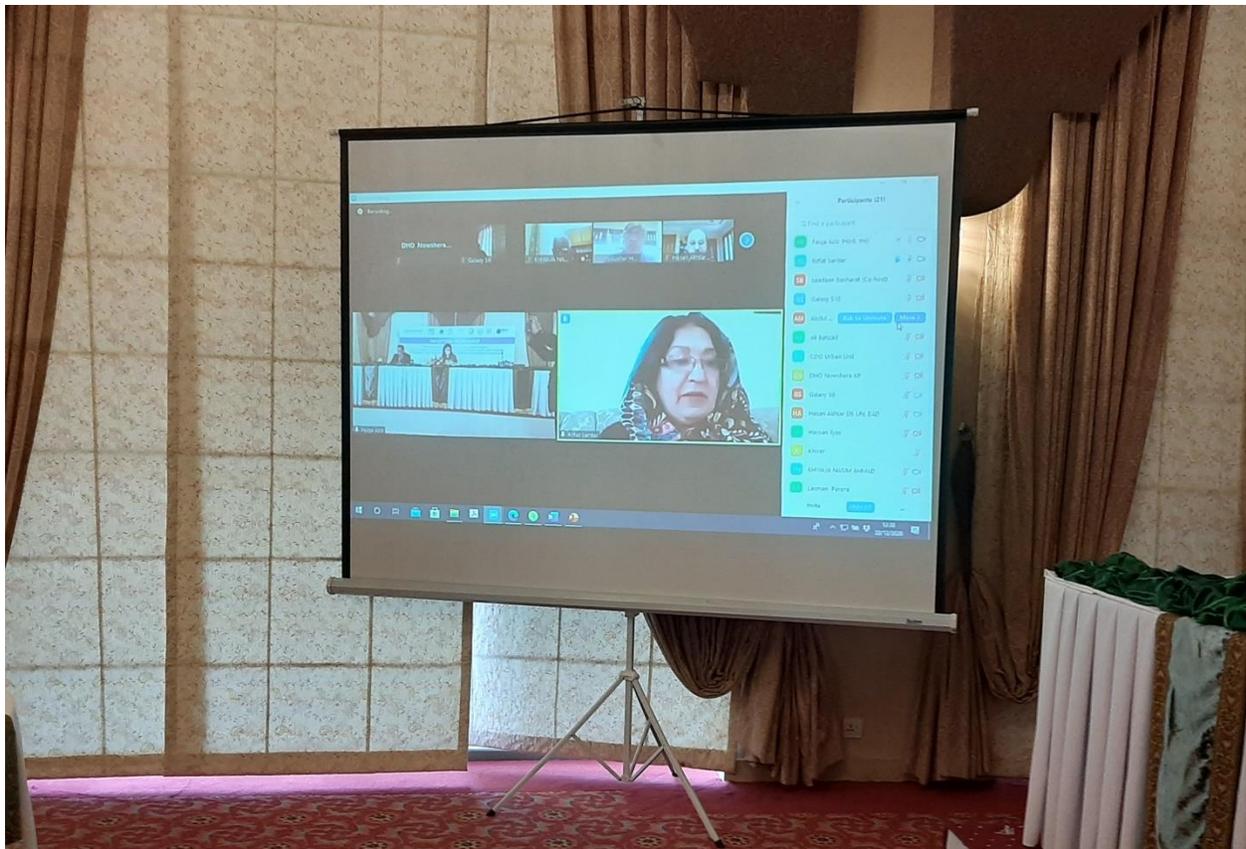


Figure 10 - Ms. Riffat Sardar asks a question through Zoom

Mr. Ali Khan replied that these are very pertinent questions. The Steering Committee has the authority to induct members in the committee. Through this process, the project can learn from the experience of working with the District Controller in Nowshera experience.

Mr. Ali Khan also used his answer to highlight that the citizens committee could be an option for the questioner as this doesn't require any regulatory status or approval. In this regard, UN-Habitat can work informally with the Women's Department.

Regarding technology, UN-Habitat works with PCRWR on this issue and they are using local technologies that are low-cost.

8. Mr. Khizer Omer, Consultant

Mr. Khizer made some suggestions regarding spatial plan for cities that in the plan; it probably would be useful to include hydraulic and flood modelling as part of the spatial plan

development. This will give not only the scenario of what is happening in terms of floods and rain but also give planners the option of projecting alternate scenarios in the next 4-5 years regarding to climate change impacts and how it will affect water availability. Moreover, it will be useful to develop business models of how it will be implemented financially and sustainability to bring investment from the private sector into the delivery of service.

Mr. Ali Khan thanked Mr. Khizer for the very programmatic and innovative suggestions. UN-Habitat and its executing partners would certainly like to take the course mentioned and further discussions should take place. One thing to bear in mind is that UN-Habitat hopes that this funding can leverage further investments.

The suggestion to include hydraulic and flood modelling in the spatial plan is a good key lesson learnt from the inception workshop. In fact, all the suggestions received today are valuable. This is actually the purpose of the workshop which is to brainstorm together.

9. Mr. Mubushar Hussain, Manager, National Disaster Risk Management Fund (NDRMF):

Mr. Mubushar thanked UN-Habitat and its partners for this wonderful initiative, and the Adaptation Fund for providing funding. This project is aligned with NDRMF's mandate as well. NDRMF is working for mitigation of flood, drought and other natural hazards. NDRMF has initiated a project titled Natural Catastrophic Modelling for whole country which is in pipeline and Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) has been hired as consultant. This hydrological modelling will be available publicly and data will be managed by NDRMF and NDMA jointly.

The Chair thanked Mr. Mubushar for sharing great information.

2.8. Concluding Remarks by Mr. Laxman Perera, Human Settlements Officer, UN-Habitat, Regional Office for Asia and the Pacific

Mr. Perera began his concluding remarks by saying that that he is indeed very honoured to be in the workshop and to listen all the comments and questions. It demonstrates a high level of interest among the participants and an urgency in responding to climate change impacts in Pakistan. The suggestions received from the participants will be very useful for preparation of inception workshop report.

Mr. Perera reiterated the inputs from Mr. Ali Khan and Mr. Irfan Tariq that explained how best the project can be linked to other projects creating synergies and formulating more

collaborations and also new partnerships in order to have a broader more programmatic approach to climate change adaptation and also to empower the target communities to be more resilient.

From UN-Habitat, ROAP and on behalf of UN Habitat Pakistan Office, UN-Habitat will take all comments into consideration during the project implementation. On behalf of UN Habitat, Mr. Perera expressed his sincere thanks to Mr. Irfan Tariq, Director General, MOCC and also his staff in Ministry of Climate Change for joining the workshop and supporting the project through the valuable contributions they have made to the project since the concept note was under development.

Mr. Perera thanked the participants who joined the workshop virtually and physically and specially who joined us from different regions specially from Nowshera and Rawalpindi where the project will be implemented.

He thanked Ms. Mio Sato, Head of IOM and Acting Resident Coordinator for spending the whole time with us. Mr. Perera assumed Ms. Sato that the project will coordinate with the UN system in Pakistan in the future.

Mr. Perera also thanked colleagues in Pakistan who have supported the workshop and ensured that it has been a success, while also stressing gratitude for the support received from other UN Colleagues, the Ministry of Climate Change, Shehersaaz and other partners.

3. Project Steering Committee

The Ministry of Climate Change is establishing Project Steering Committee (PSC) as per the project document to oversee and guide project implementation progress, progress against the workplan and to oversee compliance with the Environmental and Social and Gender Policy Compliance Plan. Partner agencies have been contacted by UN-Habitat as the Member Secretariat of the PSC (as per the project document) to take nominations for members PSC. The official government memo regarding the formulation of the PSC is presented in Annex 4. The PSC will:

- Approve annual work plans and review key project periodical reports.
- Review and approve the contractual agreements, including workplans, with a particular emphasis on environmental and social safeguards, budgets and payment schedules.
- Review any deviations and consider amendments to workplans to achieve the project's targets.
- Ensure that work plan and implementation of project activities are in line with approved project document and the principles and policies of the Adaptation Fund, UN-Habitat and national government laws, guidelines and procedures.
- The PSC will meet during the project's inception phase and then at least once per year throughout the project implementation and whenever needed to fulfil the above functions. The PSC will have the power to convene ad hoc meetings if serious risks or potential for risks to Environmental and Social and / or Gender policy compliance occurs.

The nominations received from the partner organizations for Project Steering Committee is shown below:

1	Mr. Irfan Tariq, Director General, Ministry of Climate Change	Chair
2	Representative of National Disaster Risk Management Authority (NDMA)	Member
3	Mr. Noor Rabbani, Assistant Director (Engineering) of Water and Sanitation Agency (WASA), Rawalpindi	Member
4	Representative of Federal Flood Commission	Member

5	Representative of Rawalpindi Municipal Corporation	Member
6	Mr. Sharafat Khan, Tehsil Officer (I&S),of Tehsil Municipal Administration, Nowshera	Member
7	Ms. Almas Saleem, Executive Director, Shehersaaz	Observer Member
8	Mr. Faizan UI Hassan, Director (Water Management), Pakistan Center for Research on Water Resources (PCRWR)	Member
9	Representative of Ministry of Climate Change representative	Member
10	Representative of Women's Department of Punjab	Member
11	Dr. Riffat Sardar, Chairperson, Khyber Pakhtunkhwa Commission on the status of women	Member
12	UN Habitat, Pakistan	Member Secretary

ANNEXES

Annex I List of Participants at the Inception Workshop

No.	Name	Organization	Title / Position	Virtual / In Person
1	Ms. Mio Sato	Chief of IOM and Acting Resident Coordinator	Country Head / Acting Resident Coordinator	In Person
2	Yasmin Jawed		Consultant, Environment and Climate Change	In Person
3	Jawed Ali Khan	UN-Habitat	Habitat Programme Manager	In Person
4	Abdul Qayyum	Engineer	Planning and Development Department	In Person
5	Islam ul Haq	Eco Stop	Director General	In Person
6	Faiqa Aziz	UN-Habitat	Communication Associate	In Person
7	Sheraz Ali	UN-Habitat	Engineer	In Person
8	Saeed Akthar	UN-Habitat	Administration and Accounts Officer	In Person
9	Basharat Hussain	UN-Habitat	IT / M&E Officer	In Person
10	Almas Shakoor	Shehrsaaz	Executive Director	In Person
11	Abdul Shukoor	Shehrsaaz	Technical Advisor	In Person
12	Dr Hussain Mendhi	Health Department, Rawalpindi	District Health Officer	In Person
13	Sher Afzal	Federal Flood Commission	Engineer	In Person
14	Mr. Shafi Agha	National Disaster Management Authority	Assistant Director, Disaster Risk Reduction	In Person

15	Mr. Ather Hameed	CEA Office	Engineer	In Person
16	Mr. Mir Ahmed	Economic Affairs Division (EAD)		In Person
17	Sher Azim Khan	Planning and Development Department KP	Director	In Person
18	Dr.Hooriya	Health Department Rawalpindi	Medical Officer	In Person
19	Hassan Akthar	Economic Affairs Division (EAD)	Deputy Secretary, UN	Virtual
20	Mr. Laxman Perera	UN Habitat, Regional Office for Asia and Pacific	Human Settlements Officer	Virtual
21	Noriko Goto	UN Habitat, Regional Office for Asia and Pacific	Project Assistant	Virtual
22	Muhammad Irfan Tariq	Ministry of Climate Change	Director General	Virtual
23	Hassan Ilyas	Urban Unit Lahore	Senior Research Analyst-Environment	Virtual
24	Khizer Farooq Omer		Consultant	Virtual
25	Khawaja Nasim Ahmed	Meteorological Department	Former Director General	Virtual
26	DHO Nowshera	Health Department, Nowshera	District Health Officer	Virtual
27	Riffat Sardar	Secretary	Women department KP	Virtual
28	Sharafat Khan			Virtual
29	Umar Younis	Ministry of Foreign Affairs	Assistant Director (UN)	Virtual
30	Noor Rabbani	WASA,Rawapindi		Virtual
31	Mubasher Hassan	National Disaster Risk Management Fund (NDRMF)	Manager	Virtual

32	Abdul Moiz Qazi	Urban Unit Govt. of Punjab	Sr. Research Analyst	Virtual
33	Abid Hussaini	Urban Unit,P & D Punjab	Chief Operating Officer	Virtual
34	Ali Bahzad	Pakistan Council for Research on Water Resources	Director	Virtual
35	Mr. Qasir Khan	NDMA	Project Assistant	In Person
36	Mr. Zia Ul Ghani	Pakistan Television		In Person
37	Mr. Shakeel Abbassi	UN Habitat	Support Staff	In Person

Annex II Web Stories of the Inception Workshop

1. Web link: UN-Habitat launched project to adapt to climate change impacts for vulnerable communities in Pakistan| Information / News | UN-HABITAT Regional Office for Asia and the Pacific (Fukuoka)



22 December 2020, Islamabad, Pakistan

Reducing the impact of flooding and droughts is becoming one of the top priorities of the Government of Pakistan. The flood and drought impacts are often severe in urban areas, a national approach to address this situation in cities doesn't exist in Pakistan. This is critical, considering that 36.4% of Pakistan's population lives in urban areas.

The project developed by UN-Habitat in collaboration with the Government of Pakistan and other stakeholders funded by the adaptation fund was formally launched on 22 December 2020 in Islamabad, Pakistan with an Inception Workshop attended by 37 relevant members from the local, provincial and federal government ministries and line agencies of Pakistan. The Adaptation Fund of USD 6.094 million project aims to enhance resilience to water scarcity, caused by floods and droughts at community level, district / city and national / provincial level in Rawalpindi and Nowshera cities.

The project will install rainwater harvesting units both at household level and public buildings to demonstrate cost-effective solution to adapt to both floods and droughts. To scale the project's

approach, a national urban strategy will be developed, focusing on climate change impacts, particularly floods and water scarcity (and resulting public health problems), while also employing a spatial planning approach. The project will be implemented by UN-Habitat, Ministry of Climate Change (MOCC), National Disaster Management Authority, Pakistan Council for Research on Water Resources, Sheharsaaz and communities. In light of the current Covid-19 crisis, the rainwater harvesting units are extremely relevant as these interventions will improve the hygienic conditions of the local communities. The needs of the most vulnerable will be considered at all stages of the process.

At the Inception Workshop, Mr. Jawed Ali Khan, Habitat Programme Manager, UN-Habitat Pakistan, after welcoming the acting Acting Resident Coordinator UN, Director General (DG) of MOCC, Human Settlements Officer of UN-Habitat Regional Office for Asia and the Pacific (ROAP), and delegates, highlighted that today's event marks the launch of the urban flooding and drought management intervention in Pakistan that poses a serious threat to our economic growth and development as well as lives and livelihood of the people living in the urban areas of the country.

Ms. Mio Sato, Acting Resident Coordinator UN appreciated the efforts of MOCC and UN-Habitat for launching the climate change adaptation project. Climate Change and Environmental Sustainability has been one of the priorities of United Nations. She emphasized UN common approach mainstreaming in projects and programming to pave the way for a sustainable flood and drought management at all levels and create a model for climate resilient urban development and management in Pakistan.

Mr. Irfan Tariq, DG, MOCC, explained that Pakistan is one of the severely climate change impacted country although its greenhouse gas (GHG) emissions are low. Climate Change adaptation is the priority of Government of Pakistan. In this context this project is important and would be curtain raiser for adaptation activities and will be instrumental in building climate change-related resilience in Rawalpindi and Nowshera. districts. He reaffirmed the commitment of local authorities to provide support for a successful implementation.

Mr. Laxman Perera, Human Settlements Officer , ROAP while thanking the participants remarked that the launched adaptation fund project will be the benchmark in the region of how climate change issues are addressed to enhance the capacity at national, provincial, district and community level. The components are aligned with national policies as well as UN-Habitat global flagship programmes to promote climate resilience.

2. UN-Habitat launches urban flooding project (tribune.com.pk)



The barely-there drainage of the metropolis gets overwhelmed during heavy rain spells and inundates low-lying areas and roads. PHOTO: EXPRESS

ISLAMABAD:

To reduce the impact of flooding and droughts, especially in urban areas, the United Nations (UN) Habitat, in collaboration with the federal government and other stakeholders, launched an urban flooding and drought management intervention project.

Funded by the \$6.094 million Adaptation Fund, it was formally launched with an inception workshop for 37 relevant members from the local, provincial and federal government ministries and line agencies of the country.

The fund project aims to enhance resilience to water scarcity caused by floods and droughts at the community, district and city level and the national and provincial levels in Rawalpindi and Nowshera.

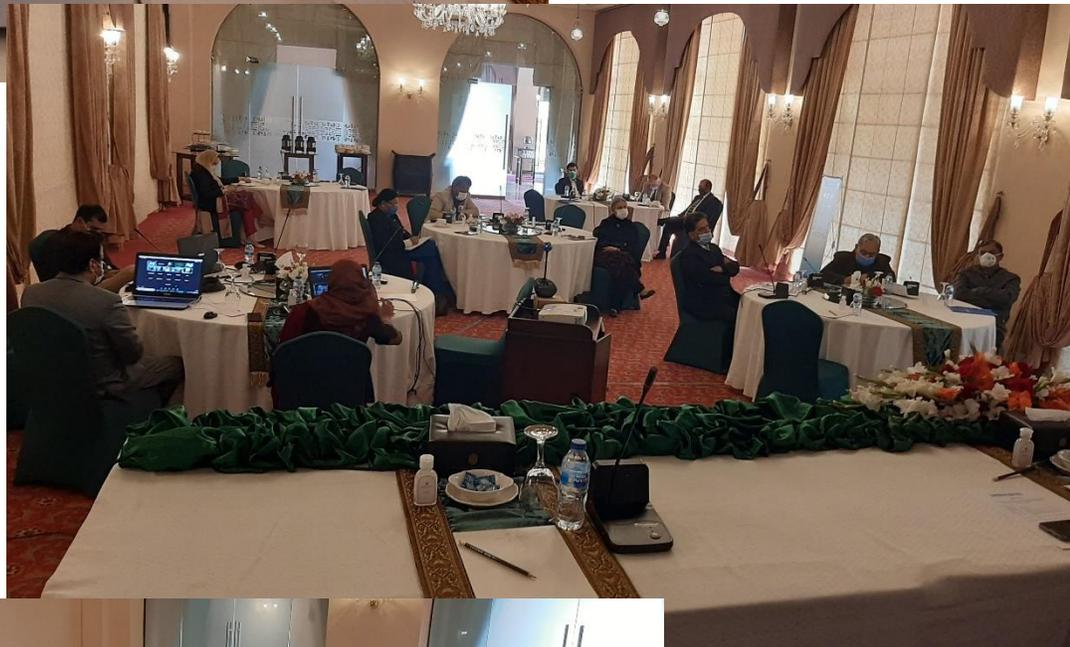
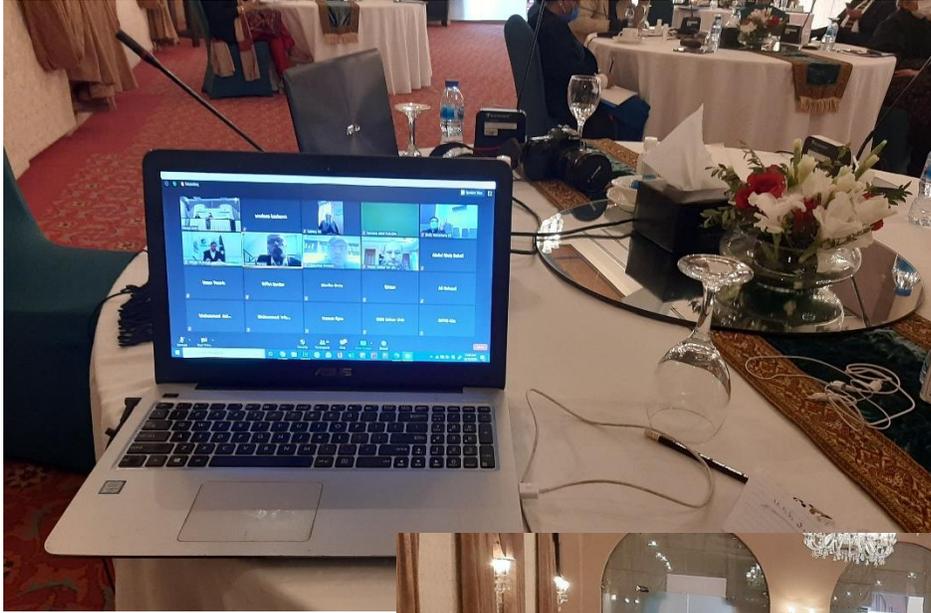
Under the project, rainwater harvesting units will be installed both at the household level and public buildings to demonstrate a cost-effective solution to adapt both floods and droughts. It will be implemented by UN-Habitat, Ministry of Climate Change (MoCC), National Disaster Management Authority, Pakistan Council for Research on Water Resources, Sheharsaaz and communities.

At the inception workshop, UN-Habitat Programme Manager Jawed Ali Khan highlighted that urban flooding and drought poses a serious threat to our economic growth and development as well as lives and livelihood.

Mio Sato, the acting resident coordinator of UN, appreciated the efforts of the MoCC and UN-Habitat for launching the climate change adaptation project.

Annex III Photos of the Workshop





(4) Ensure that work plan and implementation of project activities are in line with approved project and principles of Adaptation Fund and UN-Habitat and government guidelines

The PSC will meet at least once per year throughout the project implementation and whenever needed to fulfil the above functions. The PSC will have the power to convene ad hoc meetings that serious risks or potential for risks to Environmental and Social and/or Gender policy compliance occurs.

The governance structure of the project is shown below

<u>1</u>	Ministry of Climate Change	Chair
<u>2</u>	Representative of National Disaster Risk Management Authority (NDMA)	Member
<u>3</u>	Representative of Water and Sanitation Agency (WASA), Rawalpindi	Member
<u>4</u>	Representative of Federal Flood Commission	Member
<u>5</u>	Representative of Rawalpindi Municipal Corporation	Member
<u>6</u>	Representative of Tehsil Municipal Administration, Nowshera	Member
<u>7</u>	Representative of Shehersaaz	Member
<u>8</u>	Representative of Pakistan Center for Research on Water Resources (PCRWR)	Member
<u>9</u>	Representative of Ministry of Climate Change representative	Member
<u>10</u>	Representative of Women's Department of Punjab	Member
<u>11</u>	Representative of Khyber Pakhtunkhwa Commission on the status of women	Member
<u>12</u>	<u>UN Habitat, Pakistan</u>	Member Secretary

