REQUEST FOR PROJECT/PROGRAMME FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat 1818 H Street NW
MSN N7-700
Washington, D.C., 20433 U.S.A
Fax: +1 (202) 522-3240/5
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ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular
Country/ies:	Mongolia
Title of Project/Programme:	Ger Community Resilience Project (GCRP)
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	United Nations Human Settlements Programme
Executing Entity/ies:	World Vision Mongolia, the Asia Foundation (tbc)
Amount of Financing Requested:	US$**7,965,889** (in U.S Dollars Equivalent)

Project / Programme Background and Context:

The Problem

Mongolia is a landlocked, lower middle-income country in North-east Asia, bordering Russia to the North and China to the south and situated between 41°35'-52°06'N latitude and 87°47-119°57'E longitude. The country's geography is characterized by high mountains in its north, west and central areas, with numerous peaks over 4,000m above mean sea level, and a high steppe, giving the country an average altitude above mean sea level of around 1,500m.

Mongolia's capital, Ulaanbaatar, is also the country's primary population centre and its economic engine. Mongolia had a population of 3,409,939 in 20211, while Ulaanbaatar's population was 1,639,172. Its population growth projection is estimated at 3.67 per cent per year, meaning that another million people will be added to the city by 2035.2

Ulaanbaatar, accounts for two-thirds of Mongolia's urban population and 48% of the nation's population. Ulaanbaatar's population more than doubled from 773,000 in 2000, representing an annual average increase of 3.1%. This growth was due to large in-migration from rural areas, due to:

(i) a series of climate change related extreme events, including harsh winter storms (which are known as "dzuds"), which have occurred more frequently in recent years and have decimated entire herds of animals and forced livestock herders to move.
(ii) the transition to a market economy, which means economic opportunities are developing much more rapidly in the cities than in rural areas, and
(iii) the right of Mongolian citizens to decide where to live that was reinforced first in 1992 in the Mongolian Law, and then in the Land Law of 2002, securing land rights and social benefits. In Ulaanbaatar, these laws ensured each resident a plot of land of 700 m2 on average.

These factors have reshaped the geography of the capital city and generated vast, sprawling peri-urban areas known as 'Gers' covering an area of about 350 square kilometres where 60% of Ulaanbaatar's population and 30% of the country's population – around 774,000 people – live.

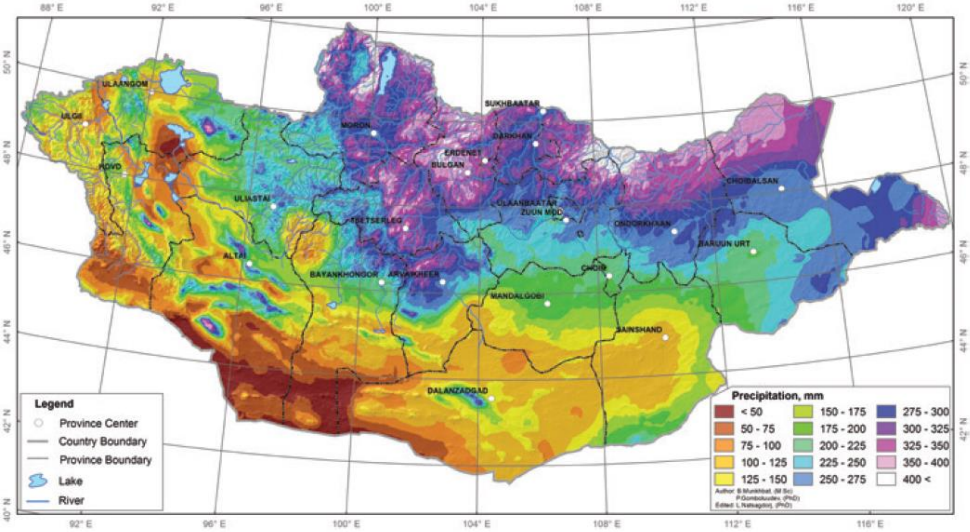
Given Mongolia's location at the centre of the Eurasian continent, its mountainous and high steppe topography and its northerly latitude, it has a cold and harsh climate. Ulaanbaatar and much of central and northern Mongolia are classified as having a monsoon influenced sub-arctic climate. This is characterized by a long winter with extremely cold temperatures.

[1] National Statistical Office of Mongolia
[2] National Statistical Office of Mongolia (2017), Renewed 2015-2045 Population Projection, p.100

Daily minimum temperature in Ulaanbaatar in winter is typically between -25 and -30°C. The short summer, in July and August, can see daily maximum temperatures of around 20°C. The annual average temperature in Ulaanbaatar is -2.9°C.

Precipitation levels are generally low, with most areas of the country receiving between 150 and 350 millimeters of precipitation per year.

Figure 1 - Spatial Distribution of Precipitation[3]



While almost 50 percent of Mongolia's population lives in Ulaanbaatar, much of the remaining rural population are pastoralists and livestock herders. These people are severely affected by Dzuds. Dzuds are harsh winter storms followed by a severe freeze which prevents animals from being able to graze. A Dzud in 2008, for example, killed 200,000 livestock, as well as 52 people.4

Economic Context

The effects of the Covid-19 pandemic notwithstanding, Mongolia has seen rapid periods of economic growth; following an economic boom in the period 2010-2013, growth fell slightly, but the economy still grew by 5.6%, 7.7% and 5.6% in 2017, 2018 and 2019, respectively.5 Like many countries, Mongolia suffered the effects of the Covid-19 pandemic. Officially, the country recorded 921,000 cases of Covid-19, meaning that at least one quarter of the population was infected with Covid-19, while there were 2,179 officially recorded deaths.6

The economy contracted by 4.4 per cent in 2020 and showed modest economic growth of 1.4 per cent in 2021. Projections show a modest recovery continuing in 2022, with growth forecast at 2.5 per cent.7 The country faces other economic headwinds, including very high inflation (14.4 per cent in March 2022), and numerous external challenges, including continued border closures with China, the fallout from the Russia-Ukraine conflict and global high commodity and oil prices.8 The impact of these challenges on urban poor settlements in Ulaanbaatar, the type that will be targeted by this project, are as yet unclear.

Irrespective of present macroeconomic challenges, Ulaanbaatar is the engine of Mongolia's growth, combined with few livelihood opportunities in the rural areas, the impact of droughts and Dzuds, rural-urban migration levels have been persistently high, and have been driving the population growth of Ulaanbaatar described above. Given that Mongolia's 2nd largest city, Erdenet, had a population of just 104,612 in 2021, the primacy of Ulaanbaatar means that other Mongolian cities are not attracting rural-urban migrants in the way that Ulaanbaatar is.

Ulaanbaatar was originally planned as a city for as few as 500,000 people, and has therefore reached a population level up to 3 times what it was designed for. The consequence of this is that recent migrants, the poor and vulnerable tend to live in

[3] Ministry of Environment and Tourism (2018), Third National Communication of Mongolia, p.57
[4] https://web.archive.org/web/20121202050714/http://www.channelnewsasia.com/stories/ afp_asiapacific/view/351407/1/.html
[5] World Bank Data. Accessible here: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=MN&start=1982&view=chart
[6] John's Hopkins CSSE COVID-19 dataset
[7] World Bank - https://www.worldbank.org/en/news/press-release/2022/04/19/mongolia-reforms-crucial-to-navigate-stronger-headwinds#:~:text=Following%20a%20contraction%20of%204.4,of%20the%20war%20in%20Ukraine.
[8] Ibid.

Gers; informal or semi-formal areas at the edge of the city. Ger areas are characterized by higher levels of poverty, social issues, a lack of infrastructure, fewer economic opportunities, and, increasingly, vulnerability to climate change.

Ulaanbaatar is divided into local administration units known as districts and 'Khoroos', roughly equivalent to a ward. Re-districting exercises have been undertaken by the Municipality of Ulaanbaatar city time to time to improve people's access to the essential public services and amenities in response to the population growth. After a re-districting exercise in April 2022, there are 9 districts and 203 Khoroos in Ulaanbaatar. This project primarily works in six Khoroos of two districts, though its activities will directly impact several others (this is explained further in Part II, Section A of this concept note).

Social Context

Successive waves of rural-migration and the construction of Ger tented areas combined with (i) little upgrading or extension of basic urban services; and (ii) government policy, since 2003, to grant each citizen about 700 square meters of land have reshaped the city's geography.

The Ger areas mean that Ulaanbaatar is characterized by a large area of low-density urban sprawl and although people have been given plots, the areas are largely unplanned. These sprawling Ger areas are almost entirely low-income areas, lacking basic infrastructure such as roads and reliable water and electricity. Other social problems, including alcoholism, crime and violence are more prevalent in the Ger areas, and tend to correlate with higher levels of poverty and fewer social and economic opportunities.

The Urban Poverty Profile – generated as part of the Citywide Pro-poor "Ger Upgrading Strategy and Investment Plan" (GUSIP) programme by Cities Alliance and UN-Habitat in collaboration with the Government provides a snapshot of Urban Poverty in Ger Areas of Ulaanbaatar City in 2005, which remains relevant today (Figure 2); Figure 3 shows the poverty headcount in 2014, based on a study conducted by the World Bank – this shows little change in the distribution of poverty compared to the 2005 study, despite the increase in Ulaanbaatar's population and economic growth over this time period.

Female-headed households make up roughly 25% of homes in Mongolia. Data from Participatory Living Standards Assessment of the National Statistics Office (NSO) have identified that a disproportionate number of women-headed households are living in poverty and that the proportion is growing. Women are limited in their opportunity to engage in livelihood or employment opportunities because of the tasks at home. Those employed or engaged in small enterprises, need to work longer hours than men do to manage tasks both at home and at work. An Initial Gender Assessment that further explores the socio-economic and political status of women and their differentiated vulnerability to climate change has been included in Annex 1 of this Concept Note.

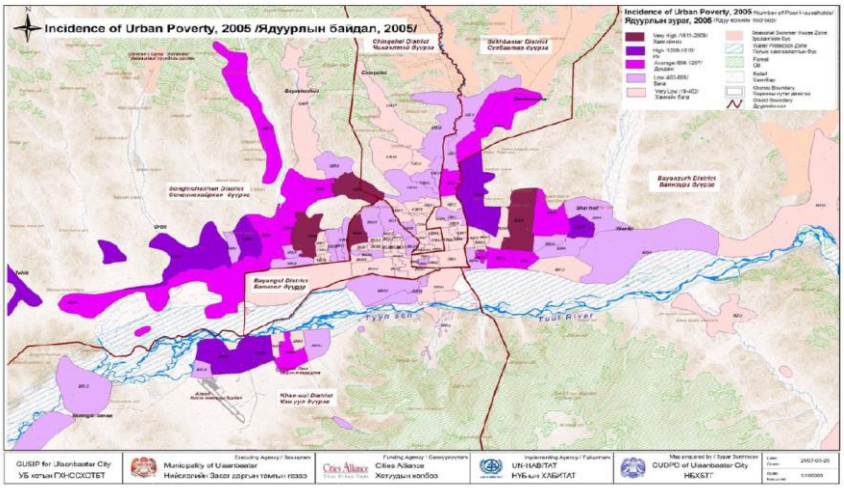


Figure 2 - 2005 Urban Poverty Profile of Ulaanbaatar

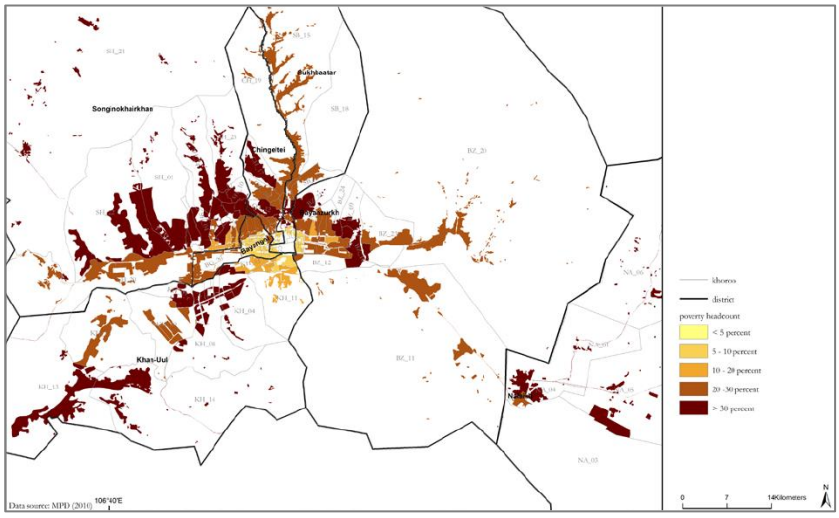


Figure 3 - Poverty Map, World Bank Study in 2014

The social and economic problems highlighted above have arisen – at least in part – from a lack of long-term planning, infrastructure investment and effective land use regulation and the resultant haphazard development. People living in Ger areas are therefore poorly connected to the city core, more vulnerable to shocks including the impacts of climate change. Moreover, the absence of the necessary planning and governance pre-conditions for inclusive, effective and sustainable urban development means that Ulaanbaatar's problems – and especially problems in the Ger areas are likely to worsen – even before the impacts of climate change are considered.

While various government and development partner initiatives have significantly improved living conditions in Ger areas, approaches have generally focused on specific sectors such as health or education, failing to design a sustainable vision and provide integrated solutions for the problems vulnerable people living in peri-urban areas.

Environmental Context and specific climate change-related issues in the target area

While Mongolia's topography is varied, there a rough north-south divide, with the north characterized by rugged mountains and a sub-arctic climate and much of the south characterized by the Gobi Desert. The most mountainous area is the north-west with peaks of over 4,000 meters. Ulaanbaatar sits in a bowl-shaped valley in the north central part of the country, just inside the area classified as having a sub-arctic climate.

Mongolia is rich in mineral resources such as gold, silver, coal, precious stones, and gravel. Its mining sector is among the driving economic forces in the country; however, these industrial activities are a major cause of parts of rivers becoming heavily polluted. Rivers, such as the Tuul River for example, are not only utilized for industrial purposes, but also for household and drinking water consumption. The Tuul River is among the most polluted fresh water sources in the country. It flows through the centre of Mongolia as well as Ulaanbaatar, including some of the peri-urban Ger areas targeted by this project.

Other environmental issues affecting Ulaanbaatar but not directly relating to climate change include air pollution, stress on water resources, urban sprawl that affects adjacent natural areas and rapidly worsening traffic problems. Heating homes during the winter is a constant challenge in Mongolia, considering the extremely cold temperatures. The government recently banned burning raw coal, which had been the primary source of heat. This action has had a significant impact on air quality. Nevertheless, the city still suffers from substantial air pollution.

People living in Ger areas, such as those to be targeted by this project often experience the worst of Ulaanbaatar's environmental issues. Ger areas are characterized by flooding, water scarcity, extreme cold, and, in recent years, bursting water springs. Floods often occur due to degradation of the land water retention capacity and urbanization in the hilly, steep sloped areas. These floods and other climate change related environmental problems should be seen as interactive with and exacerbators of the socio-economic problems highlighted above.

There is a network of 50-60 natural water springs running at a depth of 1.5-2.5 meters below Ulaanbaatar. These are fed by water sources in the hills to the north of the city and run roughly in a north-south direction. These springs are becoming increasingly susceptible to a phenomenon where differences between the surface and underground temperatures means the springs can burst unexpectedly and cause localized flooding. Because this phenomenon primarily happens in winter, the flood waters turn immediately to ice and then damage homes, property and infrastructure. This problem, referred to as bursting springs in this concept note, is a major focus of this proposed project and is shown below in Figure 4 and in more detail in Figure 15.

Figure 4 – Spring that has emerged and re-frozen during winter, with flowing water to the surface

Climate Change Issues

According to Mongolia's Third National Communication (3NC), the near surface temperature increased by 2.24°C in the period 1940-2015. This is shown by the black line in Figure 5, below. The warmest 10 years in the dataset all occurred since 2000, as shown by the red bars in Figure 5.[9] Projections for the period 2016-2035 show a temperature increase of between 2°C and 2.3°C, depending which emissions scenarios are used, but could increase by as much as 6.3°C by 2100 under the high emissions RCP8.5 scenario[10]. Downscaled projections for Ulaanbaatar specifically show a temperature increase between 1.7°C and 3.2°C depending on the model used.

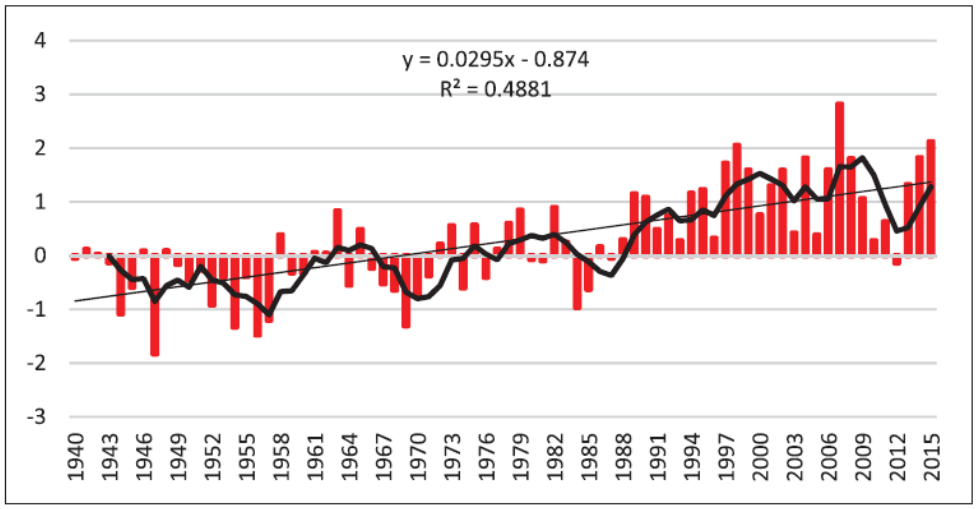


Figure 5 - Annual mean temperature deviation 1961-1990, relative to the baseline[11]

In line with these temperature increases, frost days have decreased by around 15 per year, while warm summer days have increased by about 19 per year (as shown in Figure 6, where the size of the triangle represents the number of warm days

[9] Third National Communication (2018), p.33
[10] Ibid.
[11] Third National Communication, (2018), p.122

– the larger the triangle, the greater the number of warm days). Ulaanbaatar (along with the far western region) has seen some of the most significant increases in unusually warm days. Dzuds – extreme winter storms and freezes – are taking place more frequently, and the most serious events in recent years occurred in 1999-2000, 2001-2002, and 2009-2010. As described above, Dzuds cause devasting impacts to livestock and herding/pastoral communities and are directly linked to waves of rural-urban migration.

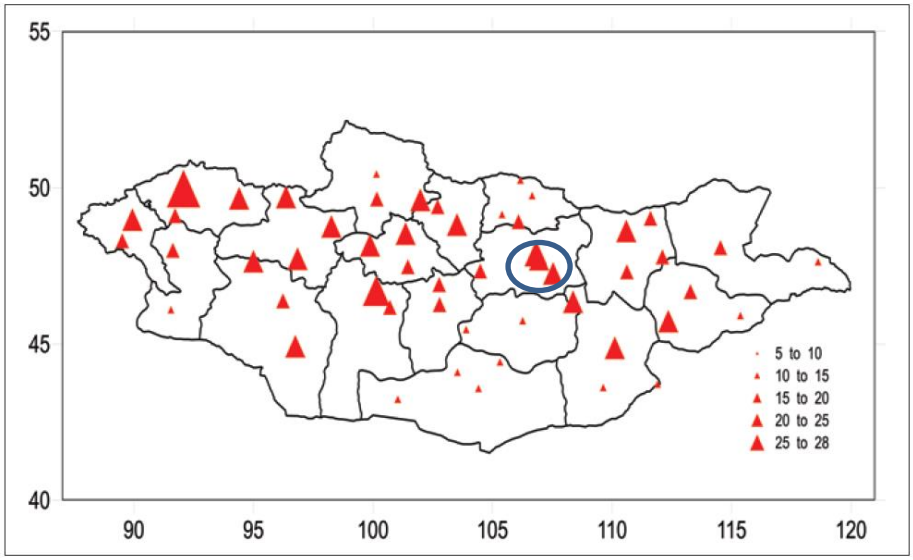


Figure 6 - Changes in warm days, Ulaanbaatar circled[12]

The 3NC highlights that there has been little discernable change in precipitation, with a 7 per cent decrease in rainfall over the 1940-2015 period, nationwide, with no statistically significant change observed in Ulaanbaatar. However, there has been a substantial increase in winter snow – 22 per cent increase between 1940 and 1960 and a further 40 per cent increase in the period 1961-2015. The 3NC points out that this increase is very likely to be climate change related.[13]

The vulnerability assessment undertaken for the 3NC showed a moderate climate change risk for water resources and a substantially increasing risk for melting permafrost (See Figure 7). This is significant as melting permafrost is understood to be a major driver of the flooding that is affecting this proposed project's target areas. This assessment also correlates with the observations of the communities that bursting springs are an increasingly common issue in the Ger areas on the periphery of Ulaanbaatar.

According to the climate change simulation that was conducted under the ongoing Adaptation Fund-funded Flood resilience in Ulaanbaatar Ger Areas project, the seasonal air temperature in Ulaanbaatar is projected to be increased by 1-1.5oC in 2016-2035 (2030), 1.3-3.1oC in 2046-2065 (2050), 1.2-5.6oC in 2081-2100 (2080) under different GHG scenarios with the respective precipitation increase by 2.8-12.1%, 6.2-30.7% and 5.1-52.4%.

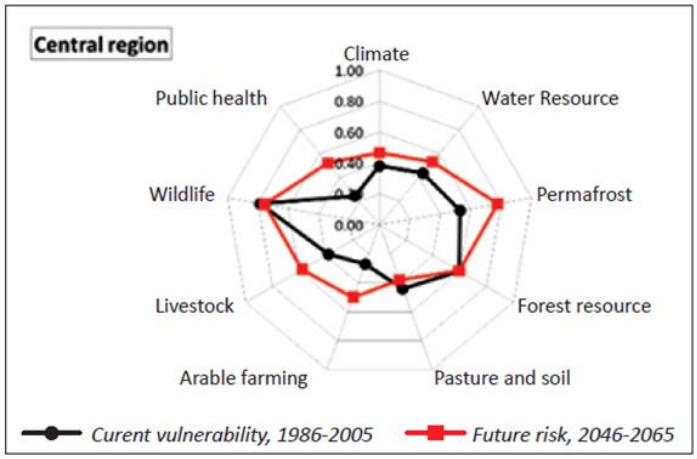


Figure 7 - Vulnerability in different sectors in the Central Region of Mongolia. Note that Water Resources and Permafrost are both drivers of flooding in broader vulnerability in Ulaanbaatar's peri-urban Ger areas.

Consequently, the daily maximum rainfall amount is expected to increase by 26% in 2030, 41% in 2050 and 53% in 2080.

[12] Third National Communication, p.126, circle added by proposal authors
[13] ibid

Based on the above results of the simulation model, the maximum flood discharge of the streams and rivers and spatial distribution of maximum flood runoff in Ulaanbaatar Ger areas and the target areas were calculated, and the mapping of current inundation and future flood risks was done. Please refer to Figure 11 for current inundation patterns and Figures 12-14 for projected future inundation in 2030, 2050 and 2080 respectively. Ulaanbaatar city experienced its most disastrous flooding in 1966, which is considered a 100-year flood event. Climate variables from that flooding were used as a peak scenario for the flood simulation under presented in Figures 12-14.

The simulation results show that approximately 24.9 square kilometres of the Northern Ger areas of Ulaanbaatar are currently at risk of inundation and the areas at risk of flooding will further increase by 12.5% in 2030, 20.8% by 2050 and 28.7% by 2080 due to further increases of temperature and daily maximum rainfall amounts. Overall, according to the simulation, depending on geomorphological condition of the floodplain and urbanization the areas with flood risk are expected to increase by 9.5-21.4% in 2030-2080.

Based on data from Buyant-Ukhaa meteorological station located 22 km south-west of downtown of Ulaanbaatar, which has longest available observation time series for Ulaanbaatar, the annual mean temperature in Ulaanbaatar increased by 2.6^{o}C over the last 75 years (0.4^{o}C greater than the average for Mongolia as a whole) and precipitation decreased by 5% over the same time period. In terms of seasonal change, winter temperatures increased by 3.7^{o}C, while the spring and autumn temperatures increased by 2.5^{o}C and 2.2^{o}C respectively. Precipitation increased by 38% in winter and 57% in spring, while it decreased by 13% in summer and 9% in autumn. This data is presented in Table 1. This indicates that the general warming trend intensity is greater in the cold winter season. These increases in winter temperatures are likely to be drivers of melting permafrost and the bursting springs phenomenon that is affecting the areas targeted by this project. The data indicates that precipitation is increasing in the cold season and decreasing in the warmer season.

Table 1. Present change of seasonal climate in Ulaanbaatar city, 1940-2015

Season	Temperature,^{o}C		Precipitation, mm	
	1961-1990 baseline average	Change	1961-1990 baseline average	Change
Winter	-22.5	3.7	5.2	2.0 (38%)
Spring	-0.2	2.5	24.0	13.6 (57%)
Summer	15.3	2.2	184.0	-24.1 (-13%)
Autumn	-2.4	2.2	35.6	-3.1 (-9%)
Annual	-2.5	2.6	248.7	-11.7 (-5%)

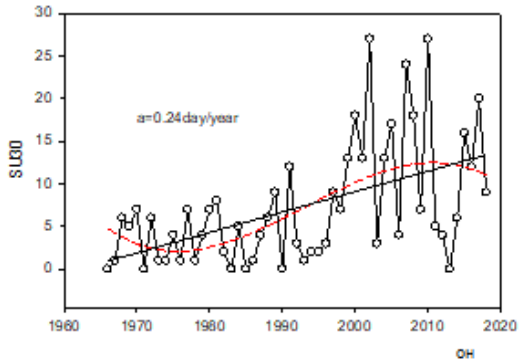
As result of the warming, the number of hot days with a daily maximum temperature exceeding 30^{o}C, has increased significantly since 1995 and increased by 12 days per year over the period of 1966-2018. This is shown in Figure 8. In terms of daily rainfall, the number of heavy rainfall days, with occurrences of over 30-35 and 40-45mm rainfall have also increased significantly. This is shown in Figure 9, where the light green bars represent the baseline period (1967-1992) and the dark green bars represent the present period (1993-2018). Figure 9 shows that the number of rainy days with 10mm or less of rain have decreased but the number of rainy days with between 20-50mm of rain have significantly increased.

Climate extreme indices and future projections were also developed under the same study for the period 2016-2100. Projections for temperature and precipitation are presented in Table 2, below.

Table 2. Future projection of climate extreme indices in Ulaanbaatar

Variable	Name indices (unit)	Multi-year average	Projection of change in 2016-2100
Air temperature	Below freezing day, (days)	240 days	-46.3*[14]
	Growing season length, (day)	151 days	40.4
	Annual maximum of maximum temperature, (^{o}C)	34°C	4.9*
	Annual minimum of minimum, (^{o}C)	-25°C	5.4*
	Duration of heat wave, (day)	33 days	71.7
	Cold wave duration, (day)	21.1 days	-3.9*
Precipitation	Simple daily precipitation (mm)	5.9mm	0.3*
	Maximum 5 days precipitation, (mm)	42.2mm	3.5*
	Maximum number of consecutive wet days, (day)	3.8 days	1.3

[14] * Means that data has a statistical significance



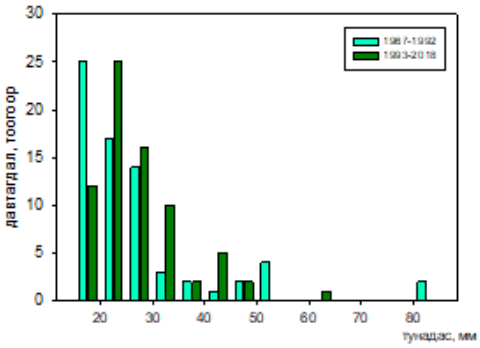
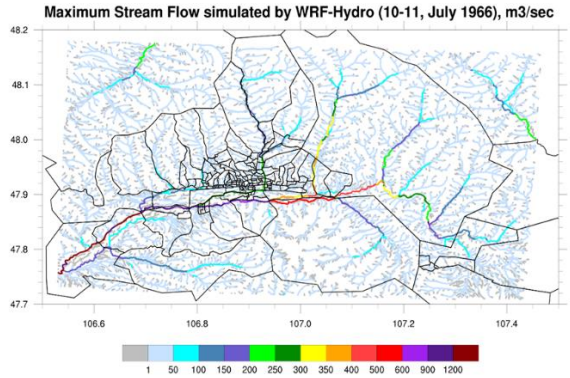


Figure 8 - Change in number of days, which has daily maximum temperature exceeding 30°C in Ulaanbaatar (left)

Figure 9 – Frequency of daily precipitation with different amount[15] (right)

The spatial distribution of flood risk was calculated from the numerical value of the maximum runoff during the 1966 flooding, as shown in Figure 10. The estimated flood peak discharge was 50-100 m^3/sec in the upstream area of the Selbe River and 100-200 m^3/sec 200-250 m^3/sec in mid and lower sections of the Selbe River, respectively. Similarly in the case of the Uliastai River, the estimated flood peak discharge was 50-200 m^3/sec, 200-350 m^3/sec and 300-400 m^3/sec, in the upstream, mid and lower downstream sections of the river, respectively. Figures 11-13 model the maximum stream flow in 2030, 2050, and 2080 respectively under a high emissions scenario and find that maximum stream flows in all streams in the northern Ger areas of Ulaanbaatar are likely to significantly increase, indicating that flooding will significantly worsen unless adaptation measures are taken.



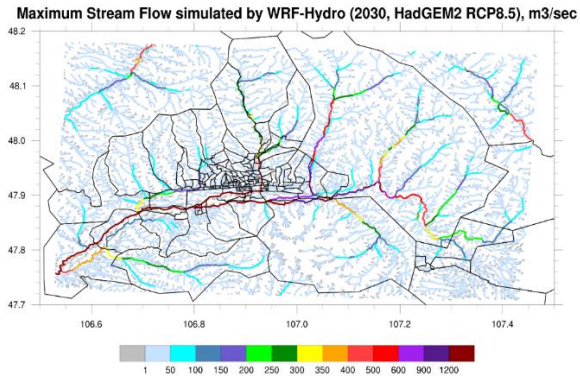
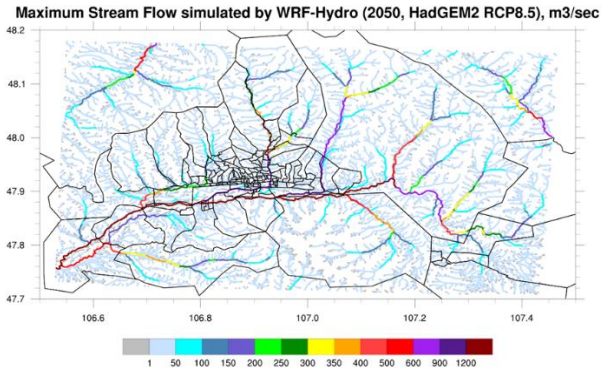


Figure 10. Simulated current maximum flood peak discharge (left)

Figure 11. Simulated spatial distribution of maximum flood discharge around Ulaanbaatar, m3/sec for 2030 (right)



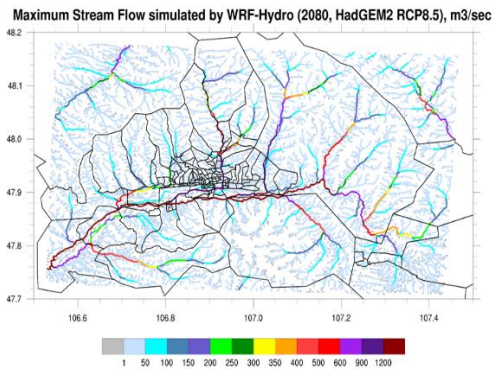


Figure 12. Simulated spatial distribution of maximum flood discharge around Ulaanbaatar, m3/sec for 2050 (left)

[15] Note that the horizontal axis shows the amount of precipitation in millimeters. The vertical axis shows the frequency of the precipitation

Figure 13. Simulated spatial distribution of maximum flood discharge around Ulaanbaatar, m3/sec for 2080 (right)

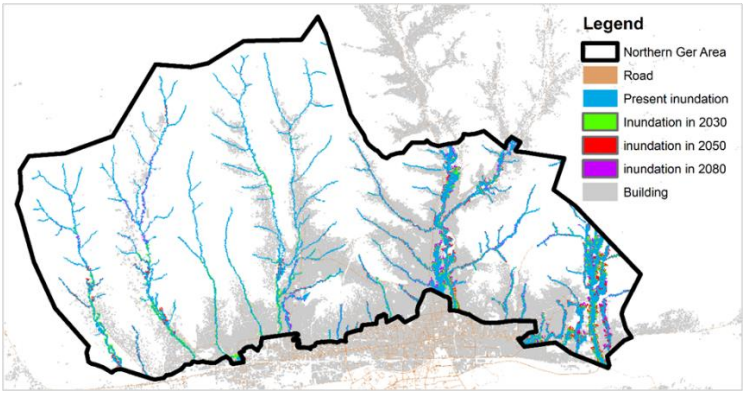
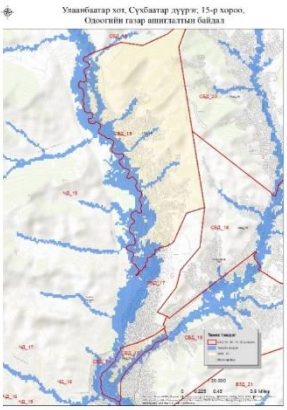
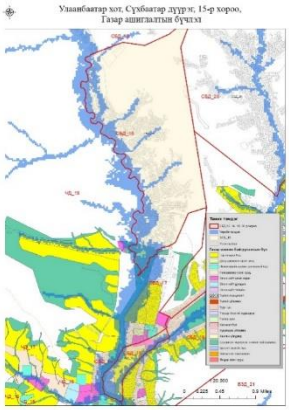
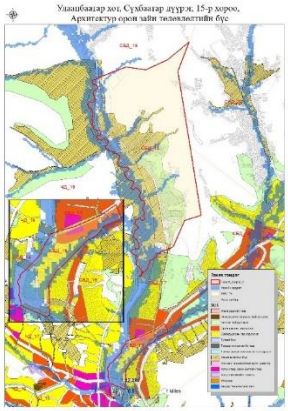
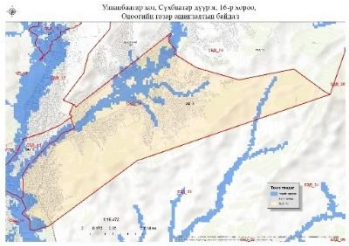
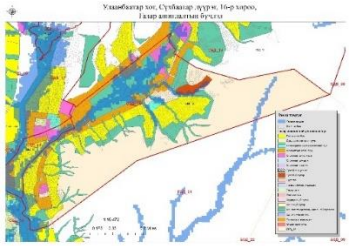
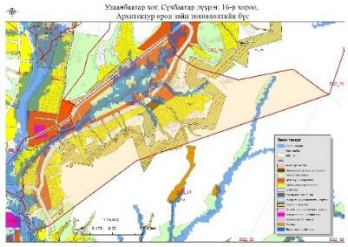
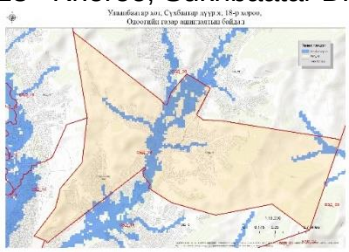
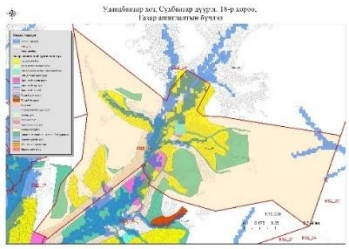
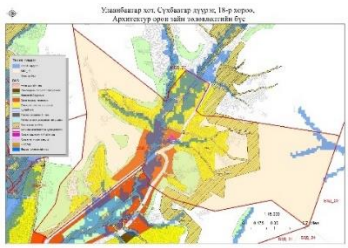
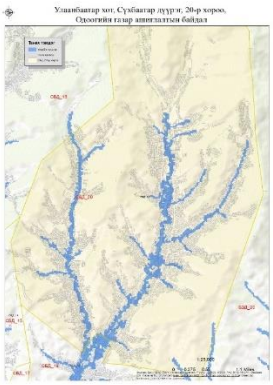
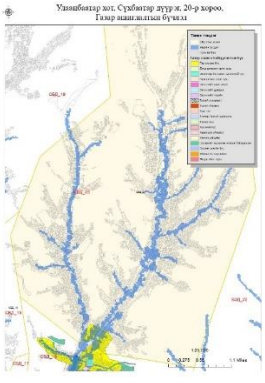
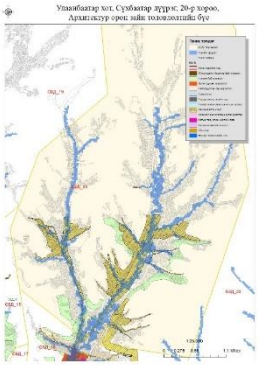


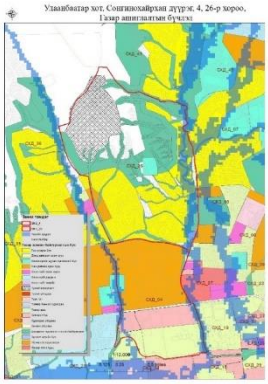
Figure 14 - Current and future flood risk map of northern ger areas of Ulaanbaatar City

During the study, the team also reviewed the current land use and future land use plans for the northern ger areas of Ulaanbaatar against the flood risk maps. Figure 14 shows the current and future flood risk areas in the northern ger areas of Ulaanbaatar city. Table 3 illustrates review results of the current and future land use against the flood risk map in the cases of 6 khoroos of Ulaanbaatar ger areas which the current project proposal focuses on.

Table 3. Present and future flood risks in the selected vulnerable khoroos in Ulaanbaatar ger areas versus land use and development plans under the current Urban Development Master Plan[16]

Flood risk and the current land use	Flood risk and Land Use Plan under the current city Master plan	Flood risk and Spatial Development Plan under the current city Master plan
15th Khoroo of Sukhbaatar District		
		
16th Khoroo, Sukhbaatar District		
		
18th Khoroo, Sukhbaatar District		
		
20th Khoroo, Sukhbaatar District		
		
26 and 19th Khoroo, Songinokhairkhan district		

[16] Larger maps will be provided at the full proposal stage when annexes are allowed



The first column of the Table 3 shows that in the 6 khoroos highlighted, the numbers and location of population and infrastructure that are at risk of flooding. The 2nd and 3rd columns show that numbers of development activities that have been planned under the current Urban development master plan of the city without consideration of flood risk. The review's conclusion is that the existing flood risk will be increased in the future and more people and assets will be under flood risk if development continues under a business-as-usual scenario, even if the urban development master plan is implemented in its present form. This highlights the need for both physical adaptation measures and policy and capacity interventions to ensure that future planning and policy making effectively considers climate change and projected future flood risk, so that new infrastructure and public services planned for the rapidly growing Ger areas are not planned in a way that increases vulnerability.

Ger communities suffer from 3 types of flooding throughout the year. Apart from the flooding caused by heavy rain during the summer, there is the winter flooding from bursting springs and spring flooding from snow and permafrost melts. The number of burst springs in winter in the northern ger areas has been increased in recent years due to melting permafrost,, creating a very challenging situation for households to cope with. When households are affected by flooding from burst springs, there are few options for households other than leaving the home to live somewhere else temporarily or permanently. Moreover, when families move, they often rent, which places an additional financial burden on them, further driving poverty. and returning when the situation improves. Figures 15, 16, and 17 show photos of different types of flooding in Ger areas. All photos were taken in the Khoroos targeted by the proposed project. Please note that the photos are small due to space constraints, but additional photographic evidence can be provided to the AF on request.

Figure 15. Winter flooding from burst of a spring

Figure 16. Spring flooding from ice melt

Figure 17. Summer rain flooding

Summary of climate change hazards and their impacts

- Ulaanbaatar has experienced significant temperature increases. The annual average temperature has increased by 2.6°C in the last 75 years, and future projected increase could be as much as 6.3°C under a high emissions scenario
- Rainfall has shown a slight decline in the last 75 years, however, there are substantial variations between seasons. Future projections show no significant increasing or decreasing trend.
- Despite only slight changes in rainfall, flooding is a serious problem in Ulaanbaatar. There are 3 types of flooding, flooding arising from burst springs that occurs in winter, from snow melt in the nearby mountains that occurs in spring and from heavy rains that typically occurs in summer (see Figures 15, 16, and 17).
- It is estimated that a total of 9,378 people are extremely at risk from flooding in the project's target areas, and a further 40,275 are moderately at risk. The secondary or knock-on impacts of this flooding have not yet been comprehensively estimated, but will be further assessed during the preparation of the full funding proposal. However, consultations undertaken in the preparation of this concept note highlight that the knock-on effects of flooding in the target areas are damage to houses and other assets, public health problems as the floods damage sanitation facilities, loss of income and livelihood opportunities, indebtedness as people have to borrow to repair their houses and damage to public infrastructure including access roads.

Drivers of Vulnerability and Adaptive Capacity Constraints

A rapid vulnerability assessment will be included as an annex to the full funding proposal. However, based on desk research, consultations and UN-Habitat's past implementation experience, including from the AF-funded FRUGA project, the following drivers of vulnerability and gaps in adaptive capacity have been observed. These have been linked to the project's components and outputs, which are introduced in the next sub-section.

Extensive rural urban migration. This is partly driven by climate change, as increasingly frequent and severe dzuds in rural areas cause loss of livestock and incomes and therefore drive people to Ulaanbaatar to seek alternative economic opportunities. Because incomes are greater and economic opportunities more plentiful in Ulaanbaatar compared to rural areas, non-climate related migration is also high. New migrants tend to settle in the Ger areas where houses are poorer quality (and in some cases are in the form of traditional Mongolian tent houses), there is less infrastructure (including a near total absence of flood protection and drainage infrastructure) and a lack of other basic services, including sanitation. While the project does not directly address the causes of rural-urban migration, ***Outputs 1.3 and 1.5*** are designed to address vulnerability and urban adaptation into policy and planning, which in turn is designed to improve the knowledge base and capacity to address drivers of vulnerability, including rapid population growth driven by rural-urban migration.

Inadequate Infrastructure. As mentioned above, the Ger areas are almost entirely without protective and drainage infrastructure, which means they are unable to prevent flooding and cannot recover quickly when floods occur (which, as the consultations undertaken for the concept note highlight (See Table 9, for example) are happening persistently). Activities under ***Component 3*** are designed to reduce vulnerability arising from a lack of (or inadequate) infrastructure.

Capacity and policy. Both national and local government have repeatedly highlighted capacity constraints as being a limitation on the ability to plan and programme adaptation actions. At the sub-national level, both the municipality and khoroo level officials consulted so far in the development of this concept have highlighted that they need additional capacity. At the national level, high level targets, policies and plans are emerging; Mongolia submitted an updated Nationally Determined Contribution (NDC) in 2021, is currently developing a National Adaptation Plan (NAP) and has incorporated climate change into its Sustainable Development Vision 2030. However, these targets, policies and plans are either under formulation (NAP) or are recent, and so their objectives are in the early stages of being translated into actions on the ground. Part II, Section D of this concept note elaborates on the alignment between this project and these strategies. Addressing vulnerability that is driven by a lack of capacity will be assessed under ***Outputs 1.1 and 1.2*** an addressed by activities under ***Component 2*** of the proposed project. ***Output 1.4.*** has been included to provide continued support to strengthening the policy and planning response at the national level, with a particular focus on NDC and NAP, on the understanding that these will guide future climate finance programming and investment.

Financial Resources. Finances are also extremely constrained in Mongolia. Sub-national government has very little budget at its disposal once it has met its operational costs and so cannot afford to programme multi-million-dollar adaptation investments. What money it does invest in flood management is focused on flood response and clean-up in the immediate aftermath of a flood event. Similarly, national government has very minimal financial resources to programme into adaptation. Mongolia has innovated in trying to mobilise additional climate finance. XAC Bank, a commercial bank, has become accredited to the Green Climate Fund for example, however it has focused on mitigation projects such as in renewable energy where it can generate a return on its investment. So far, it has not developed any project ideas on adaptation. This all means that Mongolia has a serious shortfall of domestic climate finance that it can invest in critical flood protection and drainage infrastructure, such as that proposed under this project. Financial resource constraints are addressed by ***Output 2.3***, which has been included to strengthen local and national governments on mobilizing greater levels of domestic public and private finance.

Project / Programme Objectives

Main objective

The main objective of the proposed project is to enhance the resilience of communities in six Khoroos of Ulaanbaatar to floods caused by snowmelt, bursting springs and melting permafrost. This objective will be achieved through four components that seek to achieve the following objectives:

1) Enhance the policy and regulatory environment at the national and city level to reduce risks and enhance adaptive capacity in the future in terms of changing climate in urban areas
2) Build capacity at the national, city and community level to adapt now and in the future
3) Reduce risks from flooding through physical infrastructure in the target areas
4) Improve and enhance the knowledge base to sustain and replicate the project's gains.

Over 75% of the project's investment (excluding Project Cycle Management Fee) will be in the physical infrastructure component. This reflects the preferences of the communities, khoroo and city administrations and national government. The effectiveness and sustainability of the infrastructure will be supported through the other Components, especially Components 2 and 4. Activities under the policy component (Component 1) will ensure that urban adaptation priorities in Ulaanbaatar and elsewhere – which meet the needs of two-thirds of Mongolia's population – are mainstreamed into future updates of the NDC and Mongolia's forthcoming National Adaptation Plan (NAP).

Project / Programme Components and Financing

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
Component 1 – Enhance the policy and regulatory environment at the national and city level to reduce risks and enhance adaptive capacity in the future	1.1 Identify adaptation needs in the urban development sector: 1.2 Review of existing adaptation policy and regulations from the urban context and suggest required integration of urban adaptation measures 1.3 Detailed Khoroo and District level flood/hazard risk, exposure and vulnerability assessment reports prepared for the selected Ger areas 1.4 Integration workshops held to ensure that urban adaptation is prominently featured in Mongolia's NAP and 2025 NDC update, and climate change adaptation considerations are mainstreamed into future urban-related policies and plans 1.5 Urban adaptation mainstreamed into local government policy and planning in the target areas	Mongolia's climate change (NDC and NAP), urban and sub-national policies and plans reflect urban adaptation considerations and future financing needs	282,498
Component 2 – Build capacity at the national, city and community level to adapt now and in the future	2.1 Capacity building programme implemented at the sub-national level to plan for and manage urban adaptation actions 2.2 Capacity building programme implemented at the community level to manage and maintain small-scale adaptation infrastructure 2.3 Capacity built to meet future urban adaptation financing needs and community-based disaster risk reduction and assets protection trainings	Mongolia has the capacity in place to plan for, design, manage and finance its future urban adaptation needs	394,793
Component 3 – Reduce risks from flooding through physical infrastructure in the target areas	3.1 Technical studies – Engineering and hydrological - required for flood protection in the selected areas 3.2 1.54 km retention wall, 5.578 km urban drainage constructed, and 1.781 km drainage repaired Sukhbaatar District Khoroo 18, 20, 15, 16. 3.3 2.182 km of flood protection canals constructed in Songinokhairkhan District Khoroo 26 and 4. 3.4 Trees and bushes planted by the communities along the flood protection facilities to create additional resilience and broader environmental sustainability 3.5 400 flood resilient sanitation facilities constructed by the target communities	Physical assets developed in response to climate change impacts - specifically flood-adaptation measures	5,495,442
Component 4 – Improve and enhance the knowledge base to sustain and replicate the project's gains.	4.1 Knowledge captured from project implementation and disseminated through media, web-stories and case studies 4.2 National and local government and research community have increased knowledge resources at its disposal 4.3 Bringing Global Knowledge on best practices to Implementing Partners and communities	National and local governments and communities have the knowledge necessary to manage their own adaptation planning and actions, now and in the future	471,630
6. Project/Programme Execution cost (9.5%)			697,470
7. Total Project/Programme Cost			**7,341,833**
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (8.5%)			624,056
Amount of Financing Requested			**7,965,889**

Projected Calendar

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	April 2023
Mid-term Review (if planned)	April 2025
Project/Programme Closing	March 2027
Terminal Evaluation	March 2027

Target Area (Khoroos or communities)

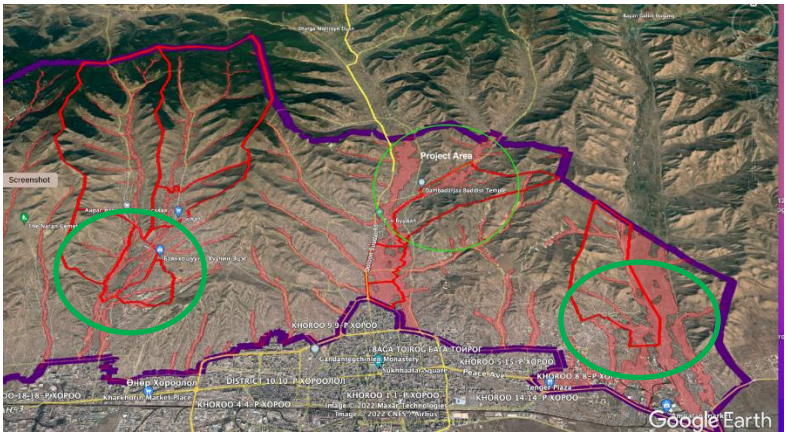
The Flood Risk Assessment and Management Strategy of Ulaanbaatar City supported by the World Bank, specified the most vulnerable target settlements for hazard and risk mapping and the production and improvement of adaptive infrastructure which were: (1) Tolgoit zuunsalaa, (2) Mon Laa (3) District III, IV flood control levee (4) Selbe river (5) Gorkhi and (6) Baatarkhairkhan Uliastai river.

The review of the information from the Municipality has identified several areas shaded in red in the map in Figure 19 that are affected by flooding. The areas circled in green were visited by the project team during the development of this concept note. The area to the left of the picture are the target Khoroos in Songinokhairkhan District and the area in the centre are the target Khoroos in Sukhbaatar District. These areas belong to two main areas of the above list and are located in the lower bed of Tolgoit zuunsalaa and an upper arm of Selbe river.

This assessment corroborates the work done by UN-Habitat, presented above, which shows that in these areas, there are two particular problems requiring attention. The increase in temperature is thawing the under-surface permafrost layer and springs are emerging at several locations typically during the winter. In spring and summer, melting snow and heavy rain leads to flash flooding, especially in river basins and areas adjacent to rivers – which is the case in much of the overall area targeted by the project.

Without effective, well-constructed embankments, drainage infrastructure and other protective measures, floods will continue to damage houses and other infrastructure. Of particular concern is the use of pit latrine type toilets, that can turn floods into a public health hazard by contaminating water and causing disease outbreaks during and after flood periods.

Figure 18. Vulnerable locations in northern Ger areas north of Ulaanbaatar and the project's three proposed target areas



The most severely affected communities are the new informal settlers who have moved into the riverbeds, gullies and areas adjacent to them. In the lower-lying Khoroos, stagnant water is an additional problem. This stagnant water, which is polluted due to overflow of the latrines, can stay for months and impedes the mobility of residents and access to critical services, with vehicles being unable to enter the Khoroo. After the summer, the stagnant and polluted water freezes, causing a further hazard, and then melts again in summer.

With this information the UN-Habitat community mobilization and technical team conducted a rapid assessment of the area the following three locations: 15th khoroo of Sukhbaatar District; 26th Khoroos of Songinokhairkhan District; and Bayanzurkh District. The international mission in March 2022 also visited the target field sites, to conduct an initial inspection.

After further consultation with the Governor's Office and the three district authorities of Songinokharkhan, Sukhbaatar and Bayanzurkh Districts, the field visit by the AF focal person from the Ministry of Environment and Tourism, the UN-Habitat

team identified the below mentioned Khoroos as the most vulnerable in terms of being impacted by floods and/or areas from which run-off takes place on a frequent basis and require floods adaptation and protection work:

Area 1: Sukhbaatar District	Khoroo 15, 16, 18, 20
Area 2: Songinokharkhan District	Khoroo 26, 4
Area 3: Bayanzurkh District.	Visited by the team but not included in the proposal.

Area 1 contains a population of **32,495** persons living in 8,637 households on 6,468 plots. The prevalence of poverty in this area is approximately 20-30 per cent of the population. The area experiences frequent flooding particularly due to thawing of permafrost, bursting springs, and surface water flooding as there are no embankments around the springs and along the river to protect the houses. The residents then face serious health issues during flood periods as a consequence of floating garbage and overflowing of pit latrines.

Area 2 contains a population of **17,158** persons living in 4,869 households in 3,729 plots. The prevalence of poverty in this area is over 30 per cent. People in both Khoroos reported surface water flooding, exacerbated by a lack of drainage and overflowing pit latrines solid waste contamination during flooding periods.

The combined population of these two areas is 49,653 residents of which approximately 24,853 residents (50%) are female; of which 19,184 residents (38.6%) are under 18 years old; 5,566 are elderly (above 60 years), and 1,349 are disabled. The preparatory work undertaken for the development of this concept note assesses that 40,275 of these people are moderately vulnerable to flooding, and 9,378 are extremely vulnerable to flooding. Please note that these figures are preliminary and will be re-visited during the preparation of the full funding proposal.

It is expected that all 49,653 residents of the target areas will be beneficiaries of the physical infrastructure investments under Component 3; 9,378 people who have been assessed as highly vulnerable to flooding will be direct beneficiaries, and the remaining 40,275 will be indirect beneficiaries. 50% of the direct and indirect beneficiaries will be women. Further details on the specific infrastructure investments, their location and beneficiaries are provided in Part II, Section A, below and in Table 4.

Output	**Beneficiaries**
1.1 Identify adaptation needs in the urban development sector:	100 (70m/30w) – local and national government
1.2. Review of existing adaptation policy and regulations from the urban context and suggest required integration of urban adaptation measures	
1.3. Detailed Khoroo and District level flood/hazard risk, exposure and vulnerability assessment reports prepared for the selected Ger areas	200 (140m/70w) – local and national government, Khoroo level officials
1.4. Integration workshops held to ensure that urban adaptation is prominently featured in Mongolia's NAP and 2025 NDC update, and climate change adaptation considerations are mainstreamed into future urban-related policies and plans	50 (35m/15w) National level officials from Ministry of Environment and Tourism
1.5. Urban adaptation mainstreamed into local government policy and planning in the target areas	200 (140m/70w) local and national government, khoroo officials (not counted as likely the same beneficiaries as Output 1.3
2.1. Capacity building programme implemented at the sub-national level to plan for and manage urban adaptation actions	200 (300m/200w) Municipal and khoroo level
2.2. Capacity building programme implemented at the community level to manage and maintain small-scale adaptation infrastructure	1000 (500m, 500w)
2.3. Capacity built to meet future urban adaptation financing needs and community-based disaster risk reduction and assets protection trainings	100 (70m, 30w) Mostly municipal level
Component 3 – See Table 4	9,378 direct, 40,275 indirect. 50% gender balance

4.1. Knowledge captured from project implementation and disseminated through media, web-stories and case studies	Not estimated
4.2. National and local government and research community have increased knowledge resources at its disposal	250 (150m/100w)
4.3. Bringing Global Knowledge on best practices to Implementing Partners and communities	1250 (625m/625w)

This gives a total number of beneficiaries across all the project's activities to 52,803. Of these, it is expected that at least 26,397 (49.5%) will be women. Please note that capacity building activities that target local and national government have a target of around 30-35% female participation given that Mongolian government institutions are overwhelmingly male – it was decided that a gender parity target would be unrealistic. Please also note that a number of beneficiaries for Output 4.1 has not been estimated. It is not known how many people can be reached through media and other communications channels. This will be re-visited at the full funding proposal stage.

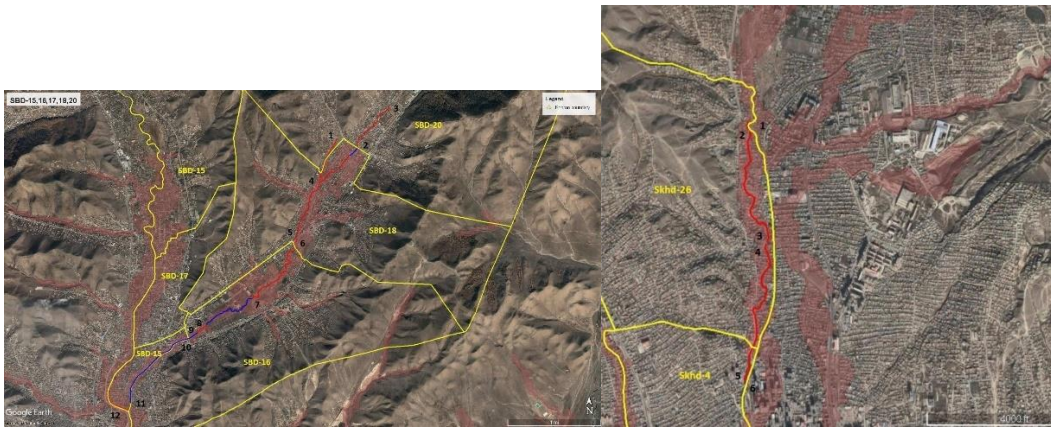


Figure 19. Selected area: Area 1: Sukhbaatar District - Khoroos 15, 16, 18, 20[17] (left)

Figure 20. Selected area: Area 2: Songinokharkhan District - Khoroo 26, 4 (right

During consultations with communities and local and national government, several adaptation options were considered. These included protection of the areas around the sites where springs frequently burst, construction of embankments, construction of improved sanitation systems, drainage and wastewater infrastructure, waste management systems and disposal, tree planting and other, softer adaptation measures. The activities proposed in the table above, and described further in Part II, Section A, are directly influenced by these consultations.

[17] Note that in the maps SBD refers to Sukhbaatar District and SKHD to Songinokhairkhan Districts. The numbers are used for Khoroo ID.

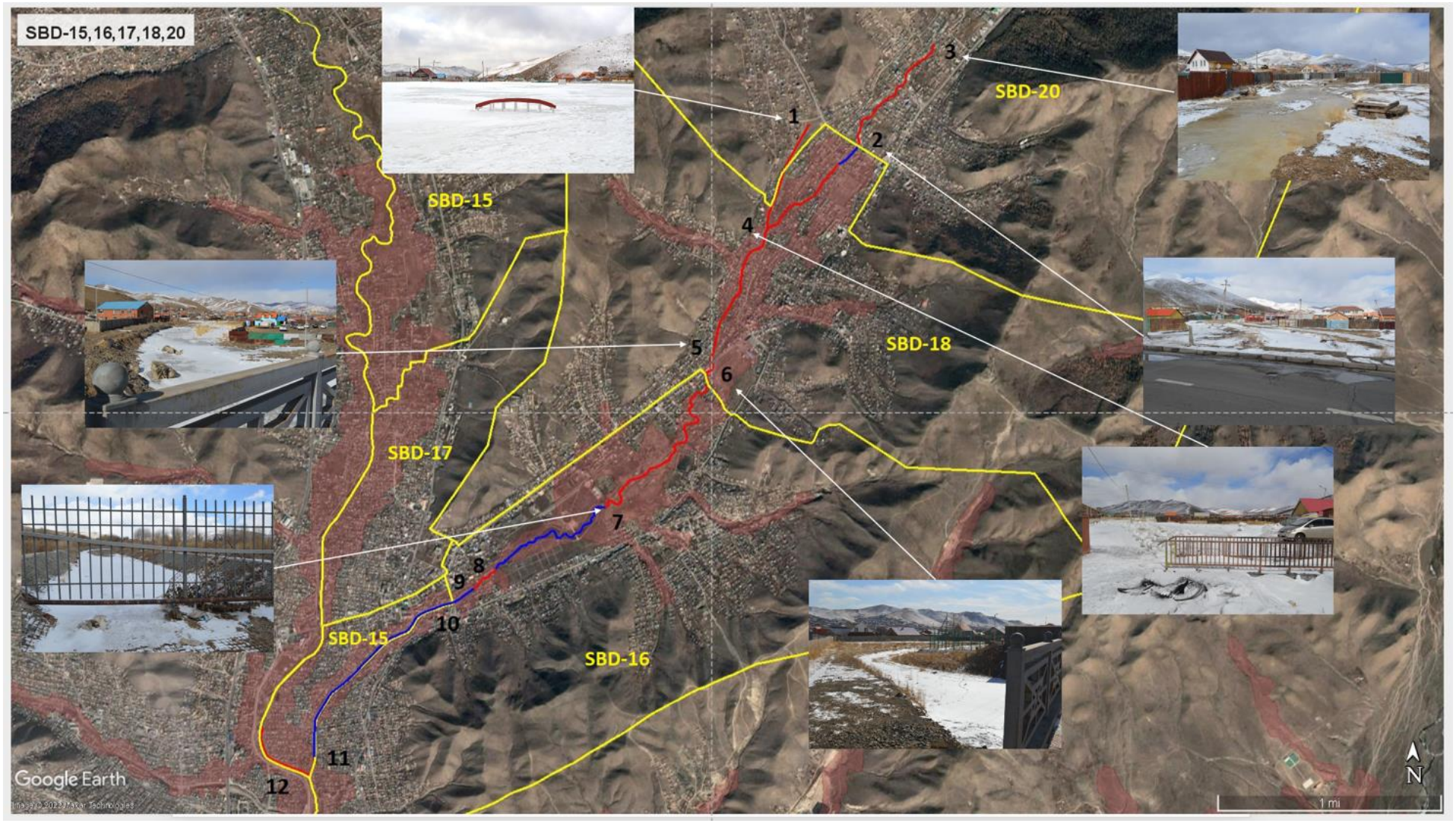


Figure 21 - Photographs of different proposed locations

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. **Describe *the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.***

As Section 1 of this Concept Note establishes, Ulaanbaatar is vulnerable to the impacts of climate change. Khoroos 15, 16, 18, 20 of Sukhbaatar District and Khoroos 26 and 4 of Songinokhairkhan District, targeted by this project, are especially vulnerable, considering not only their exposure to climate change hazards by also their underlying vulnerability, arising from the low-income nature of the areas, unplanned urban development, and partial informality. Adaptive capacity is also low, given that local government budgets are constrained and there is minimal capacity among the communities themselves to construct, manage or maintain small-scale adaptation infrastructure.

To achieve the project's overall objective, which is to enhance the resilience of communities of six Khoroos of Ulaanbaatar to floods caused by snowmelt and melting permafrost, the project will work in conjunction with communities, the local and national government and civil society to adapt to increasing snow melt and melting permafrost, which leads to bursting springs, flooding and damage to homes and infrastructure. However, to sustain and replicate the project's successes, it will also work closely with the local, municipal and national level governments.

The activities proposed under the project have been designed to address the risks and vulnerabilities faced by the poorest and most vulnerable in the target khoroos. To do this, the measures are a combination of soft and hard activities and are interdependent and mutually supportive. The soft measures include a stronger policy component than the previous UN-Habitat-implemented Adaptation Fund project in Mongolia, which is designed to ensure that urban adaptation and resilience considerations are mainstreamed into future iterations of the NDC and the NAP. The capacity building component will focus on city and local level capacities and will enhance the ability of local officials to manage adaptation infrastructure. The capacity building component also contains activities designed to improve the financial sustainability of the interventions, as well as build capacity toward mobilizing further finance in the future.

The components and outputs of the project are as follows:

Component 1 – Enhance the policy and regulatory environment at the national and city level to reduce risks and enhance adaptive capacity in the future

1.1 Identify adaptation needs in the urban development sector
1.2 Review existing adaptation policy and regulations from the urban context and suggest required integration of urban adaptation measures
1.3 Detailed Khoroo and District level flood/hazard risk, exposure and vulnerability assessment reports prepared for the selected Ger areas
1.4 Integration workshops held to ensure that urban adaptation is prominently featured in Mongolia's NAP and 2025 NDC update, and climate change adaptation considerations are mainstreamed into future urban-related policies and plans
1.5 Urban adaptation mainstreamed into local government policy and planning in the target areas

These outputs have been included in the proposed project to address the vulnerabilities that arise from limited adaptive capacity in policy and planning at the sub-national level. Outputs 1.1, 1.2, and 1.4 are specifically targeted to increase adaptive capacity through improved policy and planning at the national and subnational levels. Outputs 1.3 and 1.5 also relate to policy and capacity, but are specifically designed to respond to the urbanization challenges the northern Ger areas of Ulaanbaatar are facing, especially considering that climate change and the increased flooding it is causing have not been included in the current Urban Development Master Plan. As a result of the successful achievement of these outputs, Ulaanbaatar will be supported to plan more effectively for climate change and present and future flood risk. Through the project, the city will 'lock in' resilience through its master planning, rather than locking in vulnerability.

Component 1 has been designed to align with and contribute to several Outcomes and Outputs of the AF Strategic Results Framework. Project Outputs 1.1 and 1.2 align with and contribute to AF Strategic Results Framework Output 1.2 Targeted population groups covered by adequate risk reduction systems. Project Output 1.3 aligns with and contributes to AF Strategic Results Framework Output 1.1: Risk and vulnerability assessments conducted and updated. Project Outputs 1.4 and 1.5 contribute to and align with AF Strategic Results Framework Output 7: Improved integration of climate-resilience strategies into country development plans

Component 2 – Build capacity at the national, city and community level to adapt now and in the future

2.1 Capacity building programme implemented at the sub-national level to plan for and manage urban adaptation actions
2.2 Capacity building programme implemented at the community level to manage and maintain small-scale adaptation infrastructure
2.3 Capacity built to meet future urban adaptation financing needs and community-based disaster risk reduction and assets protection trainings

All Outputs under Component 2 have been included to address gaps in capacity at various levels of government. However, output 2.3 also addresses the lack of adaptive capacity in terms of financial resources. This will strengthen capacity at the national and sub-national level to mobilize greater levels of climate finance from domestic and international, public and private sources, and to explore new and/or innovative financing mechanisms.

Component 2 has been designed to align with and contribute to AF Strategic Results Framework Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socio-economic and environmental losses. Project Outputs 2.1 and 2.2 contribute to achieving AF Output 2.1: Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events, while project Output 2.3 contributes to achieving AF Output 2.2 Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance.

Component 3 – Reduce risks from flooding through physical infrastructure in the target areas
3.1 Technical studies – Engineering and hydrological - required for flood protection in the selected areas
3.2. 1.54 km retention wall, 5.578 km urban drainage constructed, and 1.781 km drainage repaired Sukhbaatar District Khoroo 18, 20, 15, 16.
3.3. 2.182 km of flood protection canals constructed in Songinokhairkhan District Khoroo 26 and 4.
3.4 Trees and bushes planted by the communities along the flood protection facilities to create additional resilience and broader environmental sustainability
3.5 400 flood resilient sanitation facilities constructed by the target communities

Outputs under Component 3 have been included to directly address the vulnerabilities that arise from inadequate infrastructure in the project's target areas.

Component 3 has been designed to align with and contribute to AF Strategic Results Framework Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets. All outputs under the project's Component 3 are designed to align with and contribute to AF Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability.

Component 4 – Improve and enhance the knowledge base to sustain and replicate the project's gains.
4.1 Knowledge captured from project implementation and disseminated through media, web-stories and case studies
4.2. National and local governments and climate change research communities have increased knowledge resources at its disposal
4.3 Bringing Global Knowledge on best practices to Implementing Partners and communities

Component 4 has been included to build knowledge that will support the institutionalization and sustainability of the benefits achieved through the activities implemented under the other components. Enhanced knowledge, achieved through Component 4 can be seen as 'essential underwriting' of activities under Components 1-3.

Component 4 aligns with AF Strategic Results Framework Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level. All outputs are designed to align with and contribute to AF Output 3.2. Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning.

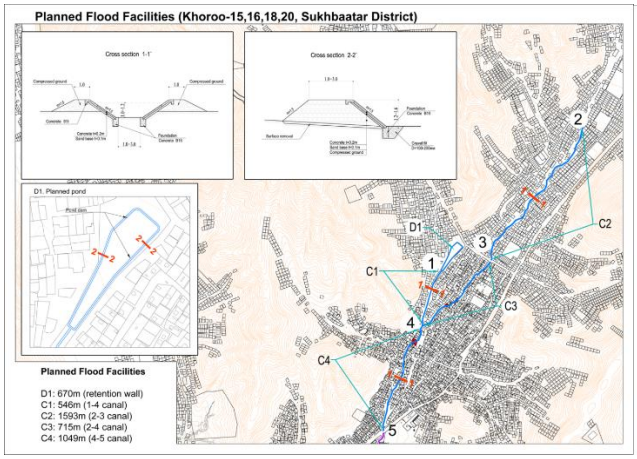
Figure 23 shows the tentative alignment (location) of the urban drainage to be constructed under Output 3.2 in Sukhbaatar District's Khoroos 18, 20, 15, 16. The alignment has been tentatively divided into manageable sections for contracting purposes. This alignment and division will be revisited during the development of the full proposal.
D1: There is currently a park where a burst spring has emerged and flooded not only the park but also the nearby houses. So, it is proposed to construct an embankment (670m) around the park as shown in cross-section 2-2. The work will consist of 1.2 to 1.6m of compressed earth embankment with concrete surface. The tree-planting work will also focus on this area. There will be a co-benefit to this activity of restoring the park to be a safe, inclusive and usable public space.
C1, C2, C3 and C4: are located along an existing stream where the bank will be strengthened with compressed earth with concrete surface as shown in cross section 1-1. The length of each section is 546 metres, 1593m, 715m and 1049m respectively.

The Figure 23, below, shows the downstream section in Sukhbaatar District covering Khoroos 15 and 16.
C5, C6: are continuations of the above work on strengthening the banks along the stream as shown in cross section 1-1. The

length is 1456m and 219m.
C7: There is already an existing canal which require repair and reinforcement. The total length is 1,781m.
D2 and D3: These two locations of 533m and 337m require reinforcement of the bank as shown in cross-section 2-2.

Figure 24 shows the tentative alignment (location) of the urban drainage to be constructed under Output 3.3 in Songinokhairkhan District Khoroos 26 and 4.
C1 and C2 in khoroo 24 will be 1076m and 806m in length and C3 in khoroo 4 will be 300m long. The drain is located along an existing stream where the bank will be strengthened with compressed earth with concrete surface as shown in cross section 1-1.

Figure 25 shows a schematic drawing of the improved and affordable pit latrines to be provided to vulnerable households. The septic tanks will be strengthened in consideration of the permafrost interaction, ensure that wastewater does not leak or penetrate into the soil and ground water table and provide convenient access for emptying. The design will take into consideration the needs of the elderly and the disabled.



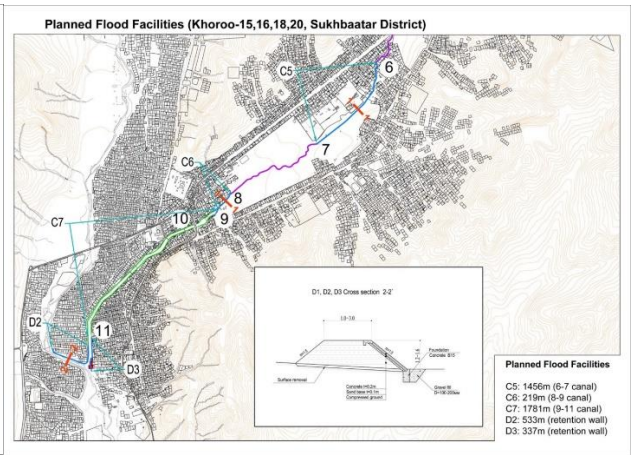
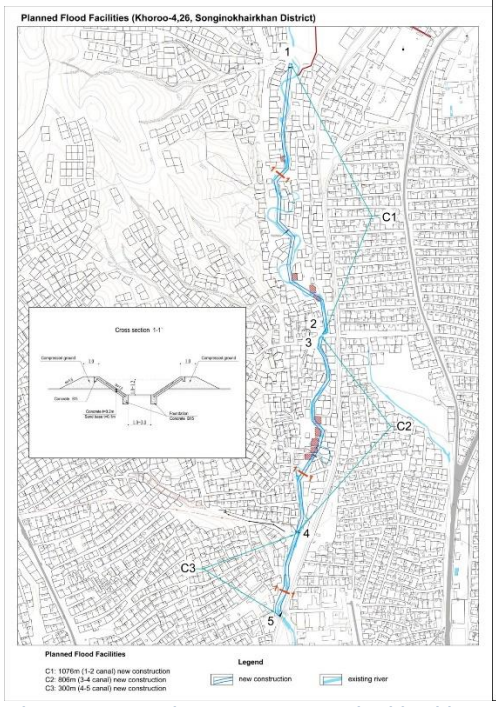


Figure 22 – Selected area 1 Sukhbaatar District – Khoroo 15, 16, 18, 20 (left)

Figure 23 – Further diagram of proposed activities in Target Area 1 (right)



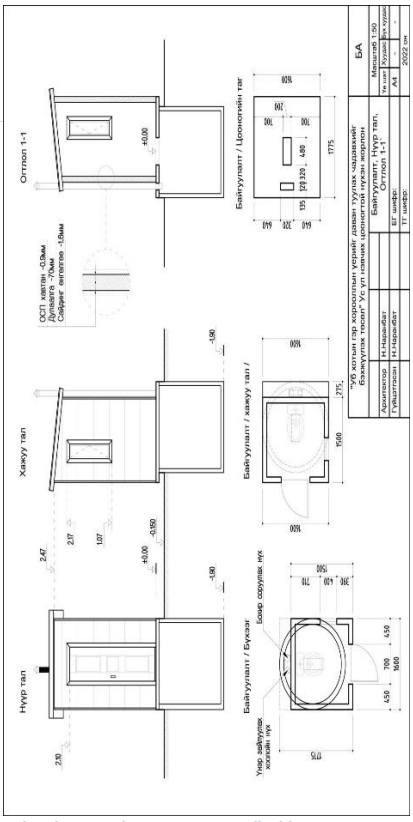


Figure 24 – Project Area 2: Songinokharkhan District – Khoroo 26, 4 (left)

Figure 25 – Latrine design (right)

Table 4. Concrete interventions and supporting activities (corresponding to prioritized resilience building interventions in the above)

Concrete interventions / activities		Target Khoroos	Estimated number of beneficiaries	Estimated cost (US$) and cost-effectiveness of direct beneficiaries (area within the Khoroo)	Design details		
Area	**Detailed activities (for more details see environmental and social risks screening sheets in annex 5)**				**Location (see maps)**	**Dimensions**	**Description (incl. relevant info for risks screening)**
Area 1 (Sukhbaatar District Khoroo 15,16,18, 20)	**Embankment protection around spring** Construct a flood retention wall / embankment	18	Direct: 300 Indirect: 9,495	154,770	See figures 20&21 D1: From #375, Belkh-48 to #300, Belkh-48	Pkg 1 Length: 670m 1 – 3 m wide, 1.2 – 1.6m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Pond, Cross section 2-2 Land status: public Land use: park Material: concrete, compressed ground
	Flood protection and drainage infrastructure Drainage channels	18	Direct: 1628 Indirect: 9,495	252,853	See figures 20&21 C1: From #300, Belkh-48 to #208, Belkh-48	Pkg 1 Length: 546 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
		18		331,117	See figures 20&21C3: From #365, Belkh-48 to #208, Belkh-48	Pkg 3 Length: 715 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
		18		485,792	See figures 20&21C4: From #208, Belkh-48 to #26, Belkh-39	Pkg 4 Length: 1049 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground Preliminary alignment show that 2 plots encroached upon the riverbed will be affected. Affected plot 4 309# Belh-48, 50#Belh-47, 50a#Belh-47, 50b#Belh-47
		20	Direct: 1,253 Indirect: 4,450	737,718	See figures 20&21C1: From #1, Tsolmon-11 to #422, Tsolmon-2	Pkg 2 Length: 1,593 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground

		16	Direct: 688 Indirect: 11,766	674,274	See figures 20&21C5: From #102, Oichid-1 to #14060, Dambadarjaa	Pkg 5 Length: 1,456 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
		16		101,419	See figures 20&21C6: From #25, Belkhi-34 to #1-1, Belkhi-32	Pkg 6 Length: 219 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
	Renovation of existing structure	16		536,108	See figures 20&21C7: From #1-1, Belkhi-32 to #177, Belkh-8	Pkg 6 Length: 1,781 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
	Flood protection and drainage infrastructure Construct a flood retention wall / embankment	15	Direct: 320 Indirect: 6,648	123,123	See figures 20&21D2: From #81, Dambadarjaa-20, to #7, Dambadarjaa-1	Pkg 7 Length: 533 m 1m wide, 1 – 1.2m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
		15	Direct: 688 Indirect: 11,766	77,847	See figures 20&21D3: From #177, Belkh-8, to #282, Belkh-11	Pkg 7 Length: 337 m 1m wide, 1 – 1.2m high compressed ground embankment with 1.5m concrete slope surface on concrete foundation	Cross section 2-2 Land status: public Land use: river Material: concrete, compressed ground Preliminary alignment show that 4 plots encroached upon the riverbed will be affected: 235#Belkh11, 282#Belkh11, 282a#Belkh11, 282b#Belkh11
Area 2 (Songinokhairkhan District Khoroo 26 and 4)	**Flood protection and drainage infrastructure** Drainage channels	26	Direct: 1,280 Indirect: 10,400	498,296	See figure 22 C1: From #33, Bayanbulag-5 to #1, Bayanbulag-2	Pkg 8 Length: 1076 m 1 – 3 m wide, 1.2 – 1.6m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground Preliminary alignment show that 4 plots encroached upon the riverbed will be affected: 7# Bayanbulag-5, 26#Bayanbulag-2, 21#Bayanbulag-2, 37#Bayanbulag-2
				373,259	See figure 22 C2: From #101, Bayanbulag-1 to #1, Bayanbulag-2	Pkg 9 Pkg C2: 806m 1 – 3 m wide, 1.2 – 1.6m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground Preliminary alignment show that 5 plots encroached upon the riverbed will be affected: 27#Bayanbulag-1, 30#Bayanbulag-1, 31#Bayanbulag-1, 52#Bayanbulag-1, 98#Bayanbulag-1

		4	Direct: 21 Indirect: 6,819	138,930	See figure 22 C3: From #49, Ikh naran-13 to #54, Ikh naran-8	Pkg 10 C3: 300m 1 – 3 m wide, 1.2 – 1.6m high compressed ground embankment with 1,5m concrete slope surface on concrete foundation	Cross section 1-1 Land status: public Land use: river Material: concrete, compressed ground
Total				**5,400,738.61**			

Area 1 (Sukhbaatar District Khoroo 15,16,18, 20)	**Flood resilient latrines** Construct suitable latrines (for rocky or muddy underground)	20	Direct: 526 (>268 women) Indirect: 8,969 (Rest of Khoroo 20)	65,787 = 125 pp	See figure 23	66 units of latrines	Design: see figure 23 Land status: mixed Land use: residential Designs will ultimately be agreed upon with residents. Design support comes from the university and other partners. Latrines will be placed within residential plots. The selection of beneficiaries / locations within the khoroos will be done by the khoroo members themselves besides some basic criteria: Income / poverty Flood vulnerability Willingness to cost share The final selection of residents / locations could not be done in advance because it's an agreement process of the khoroo which would raise too much expectation without having secured the funding.
		18	Direct: 874 (>446women) Indirect: 3,676 (Rest Khoroo 18)	109,199 = 125 pp	See figure 23	109 units of latrines	
		16	Direct: 936 (>477 women) Indirect: 10,830 (Rest Khoroo 16)	116,981 = 125 pp	See figure 23	117 units of latrines	
		15	Direct: 143 (>73 women) Indirect: 6,541 (Rest Khoroo 15)	17,922 = 125 pp	See figure 23	18 units of latrines	
Area 2 (Songinokhair khan District Khoroo 26 and 4)		26	Direct: 622 (>317 women) Indirect:9,806 (Rest Khoroo 26)	77,722 = 125 pp	See figure 23	78 units of latrines	
		4	Direct: 99 (>51 women) Indirect: 10329 (Rest Khoroo 4)	12389 = 125 pp	See figure 23	12 units of latrines	
Total				400,000		400	

B. ***Describe how the project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation*** **Fund.**

The proposed project will build on the successful approach taken during the AF-funded FRUGA project. That project adopted a form of the People's Process, UN-Habitat's successful community-driven approach to implementing projects for recovery and long-term resilience that has been implemented throughout the Asia-Pacific region over many years. The People's Process is predicated on the idea that stronger social ties amongst the urban poor and vulnerable reduces risk across social, economic and environmental dimensions and provides essential support in times of current or future stress – such as severe floods whose impacts are worsening as a result of climate change. Without an approach that builds a more resilient community, people in Ulaanbaatar face ever-greater risks arising from climate change, as well as the possibility of mal-adaptation. The creation of a sense of social harmony between the urban policy makers, the residents and other groups in society allows for improved communication and the sharing of experiences which would ultimately lead to greater social resilience.

Table 5. Economic, Social and Environmental benefits

Type of benefit	Baseline	With/after project
Economic	As highlighted in Section 1 of this concept note, climate change is already leading to damage to housing and infrastructure (with severe economic implications), direct costs of clean-up and recovery and loss of livelihood.	There will be less damage to housing and public infrastructure, resulting in less public budget and private income/savings being invested in clean-up, recovery after flood events. There will be potential for greater public and private investment in the newly flood-protected areas, in this rapidly growing area on Ulaanbaatar. Community members will benefit from the option to provide cash-labour to the construction elements of the proposed project
Social	Climate change impacts in rural areas are a driver of rural-urban migration, such as the type currently being witnessed in Ulaanbaatar. Flood impacts that are increasingly likely as a result of climate change will contribute to social dislocation between communities, as well as negative health impacts – especially for the elderly and more vulnerable segment of the population.	There will be a reduction in health-related impacts due to lower flood risks While rural-urban migration is driven by factors outside the scope of the project, rural-urban migrants who move to the project's target area will be less vulnerable (at present, recent rural-urban migrants – who often lack community and social safety nets, live in the area and are more vulnerable)
Environmental	As highlighted in Section 1, climate change is already causing negative environmental impacts to the target area, including snow melt, melting permafrost and higher temperatures and earlier thaws that drive flooding. The flood prone nature of the land in the target area means it cannot presently be used for any productive or environmental conservation purpose.	As a result of the project, there will be reduced flood risk. Part of the currently flood prone area in Khoroo 18 was formerly used as a park/public space. The project will return the area to become safe and inclusive public space. This public space will include a number of trees that will make an incremental improvement air quality, as a co-benefit. Land downstream of the project's target site will be protected and consequently there will be a reduced risk of erosion

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.

The proposed project will maximize investment in physical infrastructure to ensure the greatest return in terms of adaptation benefits per dollar spent. The project will also make several strategic investments in policy alignment and capacity development to ensure that urban adaptation considerations are mainstreamed into national policy, especially the under-development National Adaptation Plan (NAP) and future iterations of Mongolia's Nationally Determined Contribution (NDC).

The cost-effectiveness rationale of Component 1 is that, by ensuring that urban adaptation needs – especially in Ulaanbaatar – are integrated into the NAP, NDC, urban-related policies and plans, and local government planning, there is a greater chance that future climate change and urban development investment will be targeted to the most vulnerable people, and that investments won't be directed towards maladaptive activities, or investment that causes negative environmental and social impacts. Activities under Output 1.5 have been included in the project to ensure that decision makers at the city and national levels will have the most relevant and up-to date information available to them. In this regard, activities under Component 1 should be seen as strategic investments.

Component 2 is the capacity building component of the proposed project. These activities focus at the sub-national and community level and are designed so that ownership and management of the infrastructure assets can be transferred to and sustainably managed by the community and sub-national government. Activities under Output 2.3 have been included to ensure that financing needs can be met in the future. This project cannot meet all current and future adaptation needs of the people of Ulaanbaatar, so it is essential that capacity is built to support the future mobilization of domestic, international and public and private finance to meet current and future adaptation needs.

Component 3 are the physical adaptation infrastructure investments. 69 per cent of the project's execution budget will be invested in the physical infrastructures. In Khoroo 20 of Sukhbaatar District where a spring has burst, a flood defense embankment will be created that will also retain and enhance the features of the current park. The cost-benefit of the investment here will be increased by designing the infrastructure, so it forms part of a multi-functional green public space. This will bring co-benefits in terms of an urban ecosystem, the public good of a safe, inclusive public space and a contribution to improved air quality.

The embankment of the current river will be strengthened on both banks and provide a drainage channel so that the water does not overflow and flood the houses and ger plots. The character of the river will be maintained throughout the alignment. Based on initial consultations for the preparation of this concept note, it was agreed by the local engineering team that this drainage would be cheaper and less risky against the AF Environmental and Social Safeguard policy. The alternative would be to construct an underground system to gradually release melting permafrost. However, this would be more expensive, untested from an engineering perspective and carry greater risk of disruption to houses/private land.

Activities under Component 3 will also invest in flood protection measures in Khoroos 26 and 4 of Songinokharkhan District that will address overflows that emanate from the river. The engineering team has assessed that there is no feasible alternative to than to invest in these measures.

According to the hydrological study conducted by the engineers and hydrologists, and based on further consultation, the engineering solutions proposed are the only ones available that are likely to be effective in supporting communities in the target area to adapt. However, alternative citing of the drainage infrastructure was considered. However, under the alternate citing of the infrastructure in khoroos 15, 16, 18 and 20 of Sukhbaatar District, the infrastructure would affect 24 private residential plots. Households on these plots would be entitled to compensation under the law of between US$20,000 and US$50,000, depending on various factors, including the precise location and nature of the disruption. Taking the median of US$35,000, we can estimate that if compensation had to be paid to all plot holders, this would add US$840,000 to the cost of the drainage infrastructure, and would trigger a potentially serious environmental and social safeguard risk under the involuntary resettlement safeguard area of the AF Environmental and Social Policy.

A similar situation would also arise in Khoroos 4 and 26 of Songinokairkhan Distrct. During the preparation of the concept note, an alternative citing of the infrastructure was considered, but under this alternative citing, 26 private, residential plots would be affected. As above, plot holders would be entitled to compensation, so using the same assumptions as above, compensation would add an estimated US$910,000 to the cost of the infrastructure. As above, this alternative citing was not given further consideration as it would be too expensive and could potentially add a serious environmental and social safeguard risk under the involuntary resettlement safeguard area of the AF Environmental and Social Policy.

Other types of adaptation options, including ecosystem-based adaptation were considered but disregarded before costing could be done as they were deemed un-implementable or unlikely to be effective.

The alternative of taking no further action (i.e. not submitting a proposal) was also considered. However, the damage from flooding is costing the Municipality alone on average between US$1.4-1.7m per year at present, which is before the additional costs arising because of climate change are considered. This figure does not consider the amount individual households or small businesses in the target area have to invest each year in clean up and recovery from floods (these costs have not been estimated). Consultations with the Municipal Emergency Management Agency in 2021 revealed that the agency received 200 flood calls and rescued more than 230 people from flood hazard. Since the beginning of 2022, 140 flood calls were received and 155 people have been saved. These service costs have been paid from the emergency reserve funds of the Municipality. The Municipality owned Hydrology engineering company provides response services in the flood affected areas on call. According to the flood protection specialist of the Mayor's Office, a team of 7-8 persons equipped with heavy machinery work to alleviate damage caused by winter flooding from November to March in around 20 places where springs burst, including all of the project's target areas.

Finally, the project's 4th component is around improved knowledge. This component has been included in compliance with the Adaptation Fund's strategic programme and also to ensure that the knowledge and learning potential contained in the project can be captured, stored and shared with stakeholders across government, civil society and communities. Without this component, there would be a risk that knowledge is either not captured at all, or that it is captured but not institutionalized and there would be no contribution to institutional memory arising from the project.

D. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

Mongolia ratified the United Nations Framework Convention of Climate Change (UNFCCC) in 1993, the Kyoto Protocol in 1999 and the Paris Agreement on Climate Change in 2016. In doing this, it submitted a National Determined Contribution (NDC) to the Paris Agreement in 2015 and an updated NDC in 2021, ahead of the 26th Conference of the Parties (CoP) to the UNFCCC. Mongolia's updated NDC includes both adaptation and mitigation targets. Under adaptation, there are several targets that are relevant to this project, and that this project contributes to achieving. This includes:

- "*Conduct and regularly update risk assessments for natural disasters, and reduce the disaster risks based on the partnership of various stakeholders*", which is aligned with the proposed project's **Output 1.3**: Detailed Khoroo and District level flood/hazard risk, exposure and vulnerability assessment reports prepared for the selected Ger areas
- *"Identify social groups vulnerable to climate change and build their resilience to overcome the risks;"* which is aligned with the project's **Component 3,** which implements adaptation actions through physical infrastructure and ecosystem-based measures. The project has worked to ensure that it targets the most vulnerable groups in the Ger areas of Ulaanbaatar
- "Ensure equality for the vulnerable groups and increase employment by providing knowledge and education." This is aligned with the project's **Output 4.3** Bringing Global Knowledge on best practices to Implementing Partners and communities, which will support enhancing knowledge at various levels, including the community.

The project has also included Output 1.4: Integration workshops held to ensure that urban adaptation is prominently featured in Mongolia's NAP and 2025 NDC update, and climate change adaptation considerations are mainstreamed into future urban-related policies and plans. This has been included to ensure that the next iteration of the NDC, which is likely to be developed during the proposed project's implementation period, includes lessons learned from the project and more explicitly targets vulnerable urban populations.

Mongolia is currently developing a National Adaptation Plan (NAP), with support from UNEP and the Green Climate Fund. This project is in its early stages of implementation, which means that the NAP will be developed during the proposed project's implementation period. As the NAP will guide investment in adaptation in the medium to long term, it is vital that steps are taken to ensure urban adaptation priorities are aligned, integrated and coordinated in the NAP formulation process. This will also be addressed by activities under Output 1.4.

Mongolia also has a National Programme on Climate Change, and while there is no specific climate change law, there are numerous laws relevant to climate change, including the Law on Air, Law on Energy, and Law on Forest. While these laws are not directly related to the proposed project, they are laws that must be complied with and therefore the project will ensure compliance throughout its implementation.

Mongolia's Sustainable Development Vision 2030 is the overarching development framework. The proposed project is in alignment the following goals and objectives of Vision 2030:

- Goal 2, Sustainable Economic Development, Energy and Infrastructure Objective 6: Provide greater independence to urban areas and settlements, build roads and transportation, and engineering infrastructure, create a healthy, safe and comfortable living environment for citizens, and improve urban planning in line with world-class green development model.
- Goal 2.3.2, Coping with Climate Change: Objective 1: Establish national capacity to cope with climate change, and strengthen the system to prevent from meteorological hazard and natural disaster risks.
- Goal 2.3.3. Ecosystem Balance, Objective 2: Improve the planning of cities and urban settlements, enhance the quality of and accessibility to infrastructure facilities, advocate scientific and clean living habits among the populace, and improve the quality of the environment and waste management systems.

All the interventions identified in Output 3 are aligned with the Ulaanbaatar Master Plan 2020, specifically under Priority 1: Ulaanbaatar will be a safe, healthy and green city that is resilient to climate change and Priority 2: Ulaanbaatar will provide a livable environment for its residents through appropriate land use planning, infrastructure and housing.

The proposed activities are consistent with the key strategic directions, recommendations and target areas within the Flood Risk Management Strategy of Ulaanbaatar City, including reduce flood risk through resilient urban development, land use and waste management, protection of social infrastructure and strengthened utility services.

E. Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund

The table below describes how the physical infrastructure constructed by the project complies with various national laws, standards and procedures. Components 1,2 and 4 are not included as they are 'soft' components, however, they are described below.

Table 6. Compliance with laws and national technical standards

Expected concrete output or intervention	Relevant laws, regulations, standards and procedures	Compliance, procedure and authorizing office	Potential risks and impacts identified during concept preparation
3.1 Technical studies – engineering and hydrological, required to implement the physical interventions	Related laws: • Law on Land • Law on Water • Urban Development Law • Disaster Management Law • Building Code	1. ToRs to be issued by the executing entity and discussed with relevant government stakeholders prior to issue/advertisement 2. A competitive process will be undertaken to select a firm with the relevant knowledge, expertise and experience to undertake the studies with full legal compliance 3. The selected contractor will enter into a contract that stipulates the laws and a contractual requirement to maintain full legal compliance 4. The contract implementation will be closely monitored by the Project Management Unit, who will reserve the right to flag any legal compliance risks or issues	Risk that the technical studies do not actively consider AF Environmental and Social Policy principles. Mitigation – Consideration of AF Environmental and Social principles will be a contractual obligation for the contractor.
3.2. 1.540 km retention wall, 5.578 km urban drainage constructed, and 1.781 km drainage repaired Sukhbaatar District Khoroo 18, 20, 15, 16. 3.3. 2.182 km of flood protection canals constructed in Songinokhairkhan District Khoroo 26 and 4.	Related laws: • Law on Land • Law on Water • Urban Development Law • Disaster Management Law • Building Code Norms & Standards: • Basic Procedure for Hydrotechnical Construction Design BND-33-01-03 • River Hydrotechnical Construction BND-33-01-05 • Hydrotechnical Construction Foundation BND-33-04-09 • Capacity and Performance of Hydrotechnical Construction BND-33-05-09 • Concrete and Ferroconcrete Structure for Hydrotechnical Construction BND-33-06-09 • Norms and Regulations for Estimation of Hydrological Characteristics BND-201-14-86	Engineering design stage: 1. ToRs to be issued by the executing entity and discussed with relevant government stakeholders prior to issue/advertisement 2. A competitive process will be undertaken to select a firm with the relevant knowledge, expertise and experience to undertake the studies with full legal compliance 3. The selected contractor will enter into a contract that stipulates the laws and a contractual requirement to maintain full legal compliance 4. The contract implementation will be closely monitored by the Project Management Unit, who will reserve the right to flag any legal compliance risks or issues Construction phase 1. Selection of the construction company, separate from the design company 2. Contractual process with the construction company that follows the same principles as in selection of the design company (i.e., ensures legal compliance through contractual provisions) 3. Contract for supervision, which details out legal compliance requirements, giving the supervisor a mandate to check and ensure continued legal compliance 4. Further monitoring of the construction by the Project Management Unit	Activities under these outputs trigger the following risks under the AF's Environmental and Social Policy:

Please also note that the design and construction of the interventions will following the various norms and standards mentioned in Basic Procedure for Hydro-technical Construction Design BND-33-01-03; River Hydrotechnical Construction BND-33-01-05; Hydrotechnical Construction Foundation BND-33-04-09; Capacity and Performance of Hydrotechnical Construction BND-33-05-09; Concrete and Ferroconcrete Structure for Hydro- technical Construction BND-33-06-09; and Norms and Regulations for Estimation of Hydrological Characteristics BND-201- 14-86.

In addition, the construction of sanitation works will assure adherence to the standards mentioned in MNS 5924: 2015 Pit latrine

and Sewage Pit, Technical requirements; MNS3342:82 Nature and Environmental protection. General requirements for protecting ground water and hydrosphere from pollution; MNS 6055:2009 General environmental and space requirements for the disabled in the civil construction planning, and MNS 6279:2011 Water sup- ply and sanitation facilities. Terms, definitions glossary.

F. Describe if there is duplication of project / programme with other funding sources, if any.

UN-Habitat is a well-established implementation partner working with poor and vulnerable communities in Ulaanbaatar and has a long track record of supporting the local and national government in the areas of climate resilience, water and sanitation, infrastructure, urban planning, and affordable housing.

Beginning in 2018, UN-Habitat was the implementing entity on a project entitled 'Flood Resilience in the Ger Areas' (FRUGA), funded by the Adaptation Fund, and executed by World Vision. Prior to this, the agency had been supporting Mongolia on climate resilience through the Cities and Climate Change Initiative (CCCI), which was implemented in 12 countries in the Asia-pacific region.

The FRUGA project aimed to enhance the climate change resilience of the most vulnerable settlements in seven Khoroos characterised by larger Ger areas. Under the project, a hydrological study was carried out, which in addition to making recommendations relevant to that project, also highlighted the urgent need to construct flood control and drainage facilities adjacent to the FRUGA target khoroos (see map below). This recommendation was made both a) because these areas adjacent to the FRUGA project (i.e. those targeted by this project) have adaptation needs in their own right and b) because adaptation in these areas will help to sustain the adaptation benefits achieved by the FRUGA project. This assessment corroborated independent assessment work undertaken by UN-Habitat that also highlighted the flooding caused by bursting springs in the winter, snowmelt in the spring and heavy rain in the summer. That study found that the areas' flood condition will continue to damage houses and other infrastructure at the same time increasing the flood risk in the downstream and other low-lying areas. without effective, well-constructed embankments, drainage infrastructure and other protective measures. Of particular concern is the also use of pit latrine type toilets, that can turn floods into a public health hazard by contaminating water and causing disease outbreaks during and after flood periods. Such risks and vulnerabilities are an ongoing threat to the adaptation gains made under the FRUGA project.

During the preparation of this concept note, the proposed target areas were visited and site inspected by the engineers and hydrologists who worked on the climate change and flood simulation model and flood risk mapping under the FRUGA project and these experts developed the alignment of the drainage and flood protection infrastructure presented in this concept note. Again, this was done with both the adaptation needs of the target communities and sustaining the adaptation benefits of the FRUGA communities in mind. The recommended areas and interventions were validated through the meetings with the target khoroo administrations and communities also with the local government agencies such as Urban Planning, Development and Engineering Departments of Ulaanbaatar Municipality and respective divisions at the district level, with all stakeholders agreeing that the proposed project is in alignment with and will enhance FRUGA (rather than causing overlap or duplication). These consultations also confirmed that the proposed interventions are consistent with the city master plan.

It is important to note that the proposed project was requested by government, with Ulaanbaatar Municipality in particular advocating for a second project. In addition to the consultations, the proposed target areas were visited by Ulaanbaatar Municipality staff and the AF Focal Point from the Ministry of Environment and Tourism to review and re-confirm both their vulnerability and to ensure that there is no overlap between FRUGA target areas and the proposed project. The map below shows the target areas. FRUGA target areas are shown in dark blue, while the proposed project is shown in green.

Discussions regarding the proposed management arrangements are ongoing and these will be presented in detail at the full funding proposal stage.

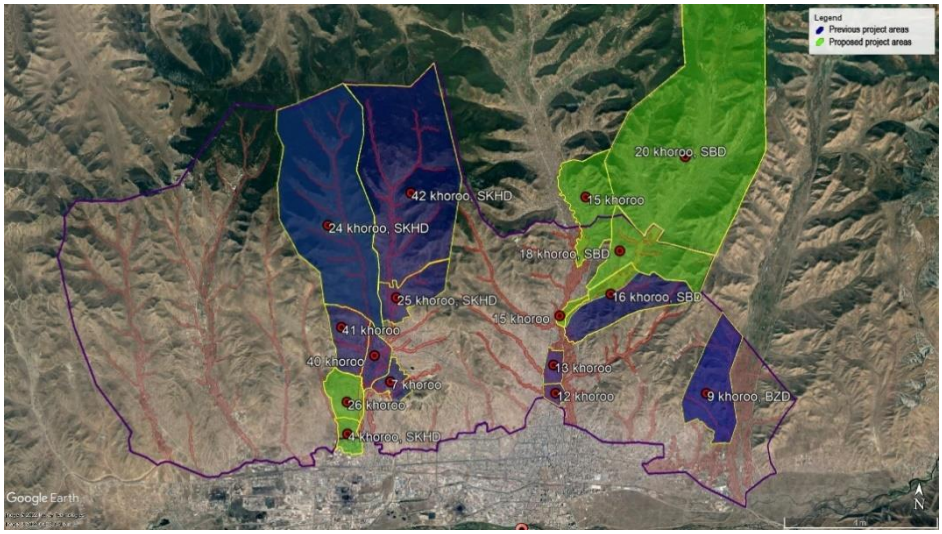


Figure 26 - Target areas of the previous and proposed projects

UN-Habitat is currently the lead implementing partner for the ongoing Ulaanbaatar Urban Services and Ger Areas Development Investment Programme of ADB, through the establishment of Community Development Councils (CDC's) a key component of the agency's flagship People's Process. The agency also has prior experience implementing major WASH infrastructure projects in the other proposed locations of Songinokhairkhan District (SKhD).

Based on UN-Habitat's long-standing presence in Mongolia, its ability to work effectively with government at the national and sub-national level and other development partners. These working relationships will enable to project begin and be implemented smoothly and without delays.

There are several other relevant projects currently under implementation in Mongolia, which are listed in the table below. In all cases, UN-Habitat will endeavour to maintain continued coordination with the implementing agency/partner, to avoid duplication. Note, there are a number of GCF Readiness projects ongoing in Mongolia that focus on building capacity at the Ministry of Environment and Tourism. These projects have not been included for reasons of space but further consultations to be undertaken in the preparation of the full proposal will ensure that the activities of these projects are not duplicated in the present proposed project.

Table 7. Selected other relevant projects and programmes under implementation or recently completed in Mongolia

Implementing entity/donor	Project title	Approximate total budget	Project duration	Coordination
UNEP/GCF	Adaptation Planning support	US$2.9m	3 years	This project will support Mongolia in the development of its first NAP. Coordination is vital to the success of output 1.1 of this proposed project
EBRD/GCF	Green Cities Facility	EUR744 m[18]	5 years	Primarily a mitigation project. However, there are adaptation elements in the project in terms of housing and water supply. Further consultations will take place at full proposal stage
FAO/GEF (CBIT)	Strengthening Capacity in the Agricultural and Land-use Sectors for Enhanced Transparency in Implementation and Monitoring of Mongolia's Nationally Determined Contribution	US$1.25 m (inc co-finance)	2018-2022	While primarily rural-focused, this project supports transparency efforts around the NDC and therefore coordination will be required in the implementation of activities under Component 1 of this proposed project.
ADB/GCF	Ulaanbaatar Green Affordable Housing and Resilient Urban Renewal Project (AHURP)	US$544m (inc co-finance)	2018-2026	The project is focused on housing and does not work in the same target locations of Ulaanbaatar as this proposed project; however, further consultations will be necessary to avoid duplication

[18] Across all 9 countries targeted by the project

ADB/EBRD	Ger Area Urban Development Investment Program (GADIP)		9 years	The multi tranche financing facility (MFF) program aim to support the Ulaanbaatar city master plan in upgrading priority service and economic hubs (sub-centers) in ger areas. The program is geographically targeted with multi sector interventions. It proposes an integrated solution to respond to the urgent demand for basic urban services and establish a network of well-developed urban sub-centers providing economic opportunities, housing, and urban services as catalysts for growth in the ger areas.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

The project has included a dedicated knowledge component: Component 4 – Improve and enhance the knowledge base to sustain and replicate the project's gains. This component includes three outputs, so that knowledge-building and sustaining activities can be focused at the local/community, city and national and global levels.

At the local level, informed by UN-Habitat's People's Process approach, and its two decades of project implementation experience in Mongolia, the project will involve beneficiaries and community organizations, as well as government at the Khoroo level in the design, construction, management and maintenance of the infrastructure to be constructed under Component 3. Knowledge activities will focus on enhancing knowledge, capturing and documenting local knowledge that has not otherwise been captured, and ensuring that knowledge is passed on to future generations.

At the level of Ulaanbaatar Municipality and the national government, all lessons learned from the project will be captured and made publicly available in Mongolian language. UN-Habitat will work with UNDP and UNEP to ensure that all knowledge materials are made available on the under-development knowledge and information portal in the country. This approach will reduce duplication (i.e., the project will avoid building separate knowledge portals).

The project will also have a global knowledge element, both using UN-Habitat's global network to inform the project of best practices from elsewhere, while also publishing stories and best practices to support Mongolia to be a global knowledge leader in urban resilience.

Other outputs/components of the project will produce knowledge. Output 1.4 will develop detailed Khoroo level flood/hazard risk, exposure and vulnerability assessment reports for the project's target areas. These reports will be public once complete and approved by the government counterpart and made available through the aforementioned knowledge/information platform.

The capacity building activities under Component 2 will use updated versions of training materials used in earlier projects, including FRUGA. These materials will also be made available for government use and wider replication, again, utilizing the under-development knowledge and information platform.

H. ***Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.***

The first international mission to Mongolia took place between 20 and 27 March, 2022, upon the reopening Mongolia's borders. During this mission, the consultants visited the target field sites, to conduct an initial inspection. The mission also met with the Adaptation Fund Focal point, Mr. Batjargal Zamba to discuss the formative idea. During this meeting, Mr. Zamba encouraged UN-Habitat to proceed with the development of the concept note, in consultation with the Ministry of Environment and Tourism, Ulaanbaatar Municipality and representatives of the communities.

This design of the project has been informed by in-depth khoroo community level consultations and district level consultations with presiding Governors, conducted as part of a rapid needs assessment on climate vulnerability in the two target areas. Meetings were conducted with the designated khoroo representatives and consultations were made with the khoroos communities including the most vulnerable groups; disabled, elderly, informal people, indigenous people, and recent migrants.

Focus group discussions and individual meetings were conducted among the khoroo officials and with representatives of community in 15, 16, 17, 18, 20th khoroos of Sukhbaatar district and 26 and 4th khoroo of Songinokhairkhan District. During the

discussion the location of springs bursts were identified, and flood risk map was developed. Also discussed with their main concern and needs on flood facility. Demographic information was collected using a questionnaire prepared by UN-Habitat team. The information collected included: demographic data, existing social and physical infrastructure, existing projects in khoroo level, maintenance of the flood facilities and taken measures on flood risk from khoroo and district.

Table 8. Participants of FGD among the khoroo officials

Khoroo	15	16	17	18	20	26	4
Participant	5	6	3	4	3	9	6
Male	0	1	0	1	0	2	1
Female	5	5	3	3	3	7	5
Khoroo Governor	1	1	1	1	0	1	1
Khoroo Coordinator	1	1	1	0	1	1	
Kheseg leader	3	4	1	3	2	2	1

Meeting and date	Participants	Discussion points	Outcome
22 March 2022, Meeting with 15th Khoroo administration and residents	• 15th Khoroo Governor of Sukhbaatar District • Khoroo Manager • 3 Kheseg Leaders • A group of residents 100% of participants were women	• Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding • Comments by Khoroo manager, 3 Kheseg Leaders and community members on the current flood risk and challenges for households. • The Khoroo Governor requested support to strengthen physical and institutional capacity of the khoroo to cope and adapt with flood risk.	• Household disaster risk assessment was done under World Vision Disaster resilient community project. • An existing flood protection dam was constructed a long time ago and supposed to provide flood protection to Dambadarjaa 20-24th streets, but it has eroded in several places. The rest of Khoroo areas don't have any flood protection and residents suffer from flooding frequently. • Khoroo mobilizes inhabitants for cleaning up the Khoroo area including the flood dam. • The Khoroo governor has been requested for several years by residents to build flood protection facilities.
29 March 2022, Meeting with 16th Khoroo administration and residents	• 16th Khoroo Governor of Sukhbaatar District • Khoroo manager • 4 Kheseg Leaders • A group of residents 83.3% of participants were women	• Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, current phenomena of winter spring burst and its impact on the residential areas • Comments by participants on the current flood risk and challenges for households and khoroo administration. • Support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt to flood risk and find a good resolution for the bursting spring winter flooding	• Very little coverage of the flood protection facilities for the khoroo despite the high flood risk • A hydrology study was done under the UN-Habitat FRUGA project • Residents in Belkh-11 and Oichid-1 streets suffer from ground water flooding and burst of springs during winter • District administration is planning to provide a bridge and small drainage in Oichid 1 street. • Many small springs are located around the spring that is known as "Dondogdulam" mineral water spring • There is a tree nursery in the 16th khoroo. • Residents have been complaining about the persistent flooding situations to the Khoroo Governor but no improvement activity has undertaken for many years.
25 March 2022, Meeting with 17th khoroo administration	• 17th Khoroo Governor of Sukhbaatar District • Khoroo manager • Kheseg Leader 100% of participants were women	• Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, current phenomena of winter spring burst and its impact on the residential areas • Comments by participants on the current flood risk and challenges for households and khoroo administration. • A support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt to flood risk and find a good resolution for the bursting spring winter flooding	• Household disaster risk assessment was done under World Vision Disaster resilient community project. • Khoroo areas suffer from permafrost impact. Khoroo Office building was affected and cracked due to permafrost interaction • Dambadarjaa 60-63rd streets are always wet due to stagnant water accumulation • A spring burst during the winter has occurred frequently since 2018 • A small-scale drainage was constructed with the funding from District local development fund
22 March 2022, Meeting with 18th khoroo administration	• 18th Khoroo Governor of Sukhbaatar District • 3 kheseg Leaders • 3 residents 71.4% of participants were women	• Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, current phenomena of winter spring burst and its impact on the residential areas • Comments by participants on the current flood risk and challenges for households and khoroo administration. • Support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt to flood risk and find a good resolution for the bursting spring winter flooding	• A spring known as Gunjiin bulag has been a cause of winter flooding for the households in the khoroo frequently in the last 10 years. The residents have been requesting the khoroo, district and city administration for a sustainable solution of the problem. But they have been only able to provide a temporary support to break and remove ice coverage when its size becomes big. • Ministry of Construction and Urban Development is piloting a small project called "Service center" to provide a localized solution of water and sanitation system for 200 households in the khoroo.
23 March 2022,	• A khoroo Manager	• Briefing by Khoroo Governor on the khoroo area	• The khoroo is located at the hilly area so during snowmelt and

Meeting with 20th khoroo administration and residents	• 2 kheseg leaders • A small group of local residents 100% of participants were women	situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, current phenomena of winter spring burst and its impact on the residential areas • Comments by participants on the current flood risk and challenges for households and khoroo administration. • Support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt to flood risk and find a solution to the bursting spring winter flooding	rain flash flood comes from the mountain side and brings stone and gravel. • The area belongs to permafrost area. The most of houses are cracked under the influence of permafrost. • Residents call often emergency service due to winter flooding because of spring burst. Emergency service provides only ice cracking and removal service. The residents are living with this problem for years now without a proper solution.
21 March 2022, Meeting with administration and residents of 26th khoroo	• 26th Khoroo Governor • Khoroo Manager • 2 kheseg leaders • A small group of local residents 77.7% of participants were women	Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, current phenomena of winter spring burst and its impact on the residential areas • Comments by participants on the current flood risk and challenges for households and khoroo administration. • A support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt to flood risk and find a good resolution for the bursting spring winter flooding	• Household disaster risk assessment was done under World Vision Disaster resilient community project. • The khoroo is located at the river basin area so most residents live in flood prone areas and suffer from flooding throughout of year. • Residents call often emergency service during flooding but the emergency service provides only flood water pumping or ice removal service. • The residents are living with this problem for several years without a long-term solution.
23 March 2022 Meeting with administration and residents of 4th khoroo	• 4th Khoroo Governor • A kheseg leader • 4 residents 83.3% of participants were women	• Briefing by Khoroo Governor on the khoroo area situation in terms of flood risk, existing flood protection facilities, history of flooding and damages and loss occurred due to flooding, • Comments by participants on the current flood risk and challenges for households and khoroo administration. • A support was requested by the Khoroo Governor to strengthen physical and institutional capacity of the khoroo to adapt with flood risk	• "Elderly Friendly Program" and "Women's Employment Support Sub-Program" are being implemented by Songinokhairkhan District Governor's office. • Small scale drainage pipes were built on Ikh Narang 2nd Street. • There is a small bridge over the water source located on 13 Ikh Narang Street, 4th section, 4th khoroo, Songinokhairkhan district.

Table 9. Overview of Focus Group Discussions and individual meetings

l. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Table 10. Justification for the project

Outputs	Baseline without AF	Additionality (With AF)	How the proposed activities go beyond business as usual (BAU)
1.1 Identify adaptation needs in the urban development sector 1.2 Review of existing adaptation policy and regulations from the urban context and suggest required integration of urban adaptation measures	There is a tendency to see climate change from only an environmental perspective. While not necessarily wrong, this approach is not holistic and can hinder decision makers' ability to identify adaptation needs in urban areas.	The project interventions will encourage a more holistic model that closely integrates climate change adaptation and urban development, supporting Ulaanbaatar to become more resilient in the long term.	The BAU would be a continuation of the baseline where climate change is viewed as a specific environmental problem and urban development, migration and environmental degradation are seen as separate, sectoral issues.
1.3 Detailed Khoroo level flood/hazard risk, exposure and vulnerability assessment reports prepared for the remaining Ger areas	No detailed risk, hazard or vulnerability information exists at the khoroo level in the target khoroos, meaning that future development planning and investment decisions will not be based on the latest vulnerability information.	Detailed risk, hazard and vulnerability information means that future development planning and investment decisions will consider present and likely future climate change risks	The BAU is that the target khoroos continue to develop in a haphazard and unplanned manner, characterized by substantial population growth, sprawl, inadequate infrastructure and public services, all exacerbated by increasingly severe flooding arising from climate change-driven floods and melting permafrost
1.4 Integration workshops held to ensure that urban adaptation is prominently featured in Mongolia's NAP and 2025 NDC update, and climate change adaptation considerations are mainstreamed into future urban-related policies and plans	NAP is under development, NDC to be revised and updated around 2024. Future iterations may not consider urban vulnerability or adaptation needs. This would be problematic as almost half of Mongolia's population lives in Ulaanbaatar alone	Urban resilience issues – especially the vulnerabilities and types of adaptation actions proposed by this project, will feature more prominently in the next NDC update and the forthcoming NAP	The BAU is that adaptation priorities, articulated by the next and future iterations of the NAP and NDC, will tend to be rural focused. While there are rural adaptation needs, this would miss the adaptation needs of the almost 50% of Mongolia's population that lives in Ulaanbaatar, and is facing increasingly frequent and severe threads from flooding and melting permafrost.
1.5 Urban adaptation mainstreamed into local government policy and planning in the target areas	Urban plans/municipal development strategies are periodically updated. They may not adequately consider climate change risks or adaptation needs. Note that activities under Outputs 1.2 and 1.3 are justified through the same baseline without them and will achieve the same additionality.	Adaptation considerations are mainstreamed into plans/development strategies at the sub-national level.	Adaptation actions, if and when implemented would be stand-alone, or project based and outside the framework of urban planning or municipal development plans
2.1 Capacity building programme implemented at the sub-national level to plan for an manage urban adaptation actions	Existing capacities to plan for adaptation and development in a manner that fully considers climate change related risks, hazards and vulnerabilities is limited	Enhanced capacity building at the sub-national level will lead to future decision making that is better informed by present and future climate change risks	The BAU is either that capacity levels would remain the same (and therefore capacity relating to urban adaptation would be limited) or other funding or capacity building support would be sought, introducing the risk that it might not be focused on key challenges around adaptation in urban infrastructure for the poorest and most vulnerable communities.

2.2 Capacity building programme implemented at the community level to manage and maintain small-scale adaptation infrastructure	Community capacity to manage and maintain is thought to be low	Communities in the target Khoroos will have the capacity to manage and perform basic maintenance on the infrastructure, and will be aware of how to request more major maintenance, when required	The BAU is that capacity would likely remain low, as no other external partner seems likely to provide this support in the short-medium term. Where maintenance would take place, it would likely be provided by external contractors with a greater risk of community disempowerment or poor-quality maintenance work
2.3 Capacity built to meet future urban adaptation financing needs and community-based disaster risk reduction and assets protection trainings	Current capacity at the sub-national level to mobilize climate finance is very limited. Capacity at the national level exists, but most climate finance at present goes through the banking system, not sub-national government	There will be capacity to advocate for and partner in the mobilization of climate finance at the sub-national level, leading to greater resourcing for future adaptation actions	The BAU would be a continuation of the current situation where climate finance bypasses local/municipal government. Where provided, future adaptation finance would be reliant on outside donors and more likely to be top down, and not reflective of the vulnerabilities of the poorest and most vulnerable.
3.1 Technical studies – Engineering and hydrological - required to implement the physical interventions prepared 3.2. 1.540 km retention wall, 5.578 km urban drainage constructed, and 1.781 km drainage repaired Sukhbaatar District Khoroo 18, 20, 15, 16. 3.3. 2.182 km of flood protection canals constructed in Songinokhairkhan District Khoroo 26 and 4.	People in the target Khoroos are experiencing floods on a regular basis, largely relating to snow melt and melting permafrost. Without improved infrastructure, people in the target areas will continue to suffer to effects of these hazards, which become worse because of continually rising temperatures	People in the target Khoroos will be resilient to floods as a result of improved infrastructure.	The BAU is that the target areas would continue to see population growth, a lack of infrastructure and basic services and increasing risks arising from climate change-related flooding and melting permafrost. Other adaptation options exist (as discussed in Part II, Section C of this concept note), however, they are not viable and so the most likely BAU is that no other funder is likely to support either the adaptation measures proposed in this concept note or other adaptation measures.
3.4 Trees and bushes planted by the communities along the flood protection facilities to create additional resilience and broader environmental sustainability	There are currently no ecosystem-based adaptation measures that have been implemented or are planned in Ulaanbaatar	People in the target Khoroos will be more resilient to floods as a result of the ecosystem-based adaptation measures implemented under this project	The BAU is that ecosystem-based adaptation measures would remain untested and therefore communities would not benefit from this low-cost adaptation option.
3.5. 400 flood resilient sanitation facilities constructed by the target communities	Floods cause sanitation issues in the target areas as traditional sanitation systems in Mongolia are not designed to cope with the frequency and severity of floods currently being experienced (which are likely to become worse in the future)	400 households will be safer and more resilient as a result of the 400 flood-resilient sanitation facilities constructed and installed under the project.	The BAU is that the sanitation issues described in the baseline would persist and likely worsen, leading to increasing public health problems and pollution. It is unlikely another funder would provide support on this issue until a serious, large-scale public health problem emerged (this would then be a reactive, response project, rather than an adaptation measure).
4.1 Knowledge captured from project implementation and disseminated through media, web-stories and case studies 4.2. National and local government has increased knowledge resources at its disposal	Without activities under this output, knowledge would not be captured or sustained. This would mean it less likely that the project's benefits would be sustained	Knowledge will be captured and stored, and institutional memory will be increased	The BAU would be that knowledge would not be institutionalized and would dissipate. Global best practices would be slower to reach Mongolia, if indeed they were to reach at all.
4.3 Bringing Global Knowledge on best practices to Implementing Partners and communities	There is no mechanism to bring best practices to Mongolia at present	Best practices from other relevant contexts will be introduced and learnings adapted.	

Please note that there is no anticipated need for co-financing of any of the activities proposed under the project as the budget requested is sufficient to implement the activities in whole. However, government staff may contribute some time and other in-kind resources such as meeting facilities to support the project, but this has not been counted in the total budget at this stage.

As stated in Part I, the project has four objectives, one corresponding with each of the four components of the project. Activities under 1.1 and 1.2 are necessary to provide the most detailed and accurate analysis of the current policy and regulatory baseline. Activities under Output 1.3 are essential to provide local, city and national level decision makers accurate information necessary to enhance the policy and regulatory environment in a way that is based, as closely as possible, on the realities faced on the ground, as well as likely future scenarios. Activities under outputs 1.1, 1.2 and 1.3 should be seen as foundational building blocks to achieving the objective. Activities under Output 1.4 are focused on the national level. By focusing on the NDC, which sets high level priorities, goal and objectives for adaptation (and mitigation) and the NAP, which is currently under development lays out a detailed framework for prioritizing, financing, implementing and monitoring adaptation actions, the project ensures there is comprehensive integration in high-level national climate policy goals. Finally, activities under Output 1.5 will support the Ulaanbaatar Municipality to integrate adaptation into urban policy and planning. Combined, Outputs 1.4 and 1.5 strengthen Mongolia's adaptive capacity to climate change through enhanced city and national level policy.

Objective two focuses on government capacity to adapt now and in the future. Activities under Output 2.1 focus at the municipal and Khoroo level, the community level is targeted under Output 2.2 and Output 2.3 focuses on the national level. Output 2.1 should be seen as a continuation of the planning work under 1.5. Output 2.2 is necessary both to meet the objective but also to ensure buy-in, acceptance and sustainability at the community level, which is vital to the success of the project, while activities under Output 2.3 are necessary because without the capacity to mobilize more finance, from more diverse sources and through a greater range of funding instruments, Mongolia will not be able to meet its future adaptation needs.

The project's third objective focuses on reducing risk in the target Khoroos through physical infrastructure. Activities under 3.1 are the technical studies required. These should be seen as preparatory activities to ensure that the infrastructure is safe, effective and fit for purpose. This is also an essential set of activities to ensure compliance with the project's ESIA (developed at full proposal stage) because the studies will review the risks identified and contribute to minimizing and mitigating them. Activities under Outputs 3.2, 3.3, and 3.5 are the physical constructions that have been selected the achieve greater resilience called for under the third objective. Finally, activities under 3.4 focus more on ecosystems, however, these (along with the physical infrastructure) are still physical adaptation measures that are expected to bring tangible adaptation benefits in terms of a reduction in vulnerability and increased resilience.

Finally, the project's 4th objective relates to enhanced knowledge for sustainability. The three outputs under this objective focus on capturing and disseminating knowledge (4.1), increasing the knowledge resources that the government has at its disposal, and importing global best practices. All of these activities are necessary and would not happen without AF support. Each should be seen as equally necessary in achieving the project's 4th objective.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.

Institutional

The proposed project is in full alignment with Mongolia's urban development and climate change policy goals. To support institutional sustainability goals, the project's components include activities around ensuring that the project's area of focus is mainstreamed into the forthcoming NAP and future iterations of the NDC, and activities to build capacity at the community and municipal level.

Social

Community consultations were used extensively in the design of this concept note and will also be extremely important to the design of the full proposal and eventual implementation of the project. UN-Habitat's People's Process approach will be drawn upon to directly engage communities in the planning, design, construction, management and maintenance of the infrastructure built under the project. Moreover, because the project targets an area of Ulaanbaatar that is home to rural urban migrants (some of whom have already been the victims of Dzuds – a climate change driven phenomenon – the project will have a secondary social benefit of increasing the resilience of these migrants. Finally, because the project will incorporate public space among the adaptation measures, it will contribute towards social cohesion and enhanced community wellbeing.

The knowledge activities under Component 4 of the project will support awareness raising on environment and health, while also building community capacity on project management, negotiation and cooperation as an enabler of building resilience in the community.

Economic

Adaptation measures are essential to reduce economic losses and opportunity costs that arise from flooding. Avoiding damage from floods will have substantial economic benefits

Financial

The project will support financial sustainability through activities under Output 2.3

Environmental

The public space constructed in Khoroo 18 as part of the adaptation measures under Component 3 will bring secondary environmental sustainability benefits. While the remaining construction is not green infrastructure, building with nature principles will be essential. The project will take a 'do-good' approach to environmental sustainability and minimising risk to Ulaanbaatar's sensitive environment.

Infrastructure sustainability in the communities

The proposed project also considers sustainability of the infrastructure to be constructed under Component 3 as this accounts for nearly 70% of the project investment. The project will establish an institutional framework to support communities and sub-national government to sustain the interventions and replicate them in the future.

The project will be influenced by UN-Habitat's People's Process which puts people at the heart of their own adaptation and disaster risk reduction. Establishment of Community Development Councils (CDCs) of beneficiaries has been a demonstrated success in previous UN-Habitat projects, including the AF-funded FRUGA project. Building such community-level institutions means that the organisational structures have potential to continue after the project has closed. The CDCs then coordinate and manage day-to-day management and maintenance of the infrastructure. Moreover, community governance structures like CDCs encourage communities to work together, reduce the potential for conflict and contributes to improved social cohesion, which is an important component of adaptive capacity.

The project will seek to use local materials, designs and local contractors to reduce environmental and social risk while supporting the local economy.
The physical drainage infrastructure proposed under Outcome 3 was identified based on hydrologist and engineers' recommendations based on a flood model that was developed under the FRUGA project funded by AF and implemented by UN-Habitat. The selected interventions were validated through the meetings with the target khoroo administrations and communities also with the local government agencies such as Urban Planning, Development and Engineering Departments of the Ulaanbaatar city and respective divisions at the district level. The interventions are also consistent with the city master plan.

According to current laws and regulations in Mongolia, the flood protection and drainage facilities will be registered as the property of Ulaanbaatar City upon completion, and the Municipality will formally inspect the construction and approve it. There

will then be a formal hand-over process the Hydrology Facility Management Company will be in charge of operation and maintenance of the facilities, and will do this in partnership and consultation with the communities. Note that the Hydrology Facility Management Company is owned by the Municipality, and currently has an allocated budget of approximately US$1.2m per year. A portion of this budget will be allocated to maintenance of the infrastructure. The CDCs will work in partnership with the company, reporting, for example, maintenance issues that require investment or technical capability not available at the CDC level.

The sanitation component will be implemented through a tripartite agreement signed between the project, beneficiary households, and the Community Development Council (CDC) covering operation and maintenance roles and responsibilities. The beneficiary households will take responsibility for operation and maintenance of the facilities once construction has been completed.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.

During the preliminary consultations that have taken place in the preparation of this concept note, and through the diligent application of precautionary principles, potential risks for further screening have been identified against 13 of the 15 AF environmental and social principles.

Communities consulted in the initial phase highlighted some risks. These include the risk of maladaptation, in effective infrastructure design/construction that fails to protect them against flood waters, and prolonged inconvenience arising from delayed or slower than anticipated construction. These risks are captured under the climate change and involuntary resettlement principles, respectively.

Table 11. Checklist of compliance with AF Environmental and Social Principles

Checklist of environmental and social principles	No further assessment anticipated required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		X
Access and Equity		X
Marginalized and Vulnerable Groups		X
Human Rights		X
Gender Equity and Women's Empowerment		X
Core Labour Rights		X
Indigenous Peoples	X	
Involuntary Resettlement		X
Protection of Natural Habitats		X
Conservation of Biological Diversity		X
Climate Change		X
Pollution Prevention and Resource Efficiency		X
Public Health		X
Physical and Cultural Heritage	X	
Lands and Soil Conservation		X

A full risk and impact assessment, and Environmental and Social Management plan will be prepared at full proposal stage, if the concept note is successful. However, the initial screening means that the proposed project is provisionally classified as a Category B project. This is because, although risks have been identified, they are expected to be small-scale, reversible and easily mitigated with management measures. This assessment will be re-confirmed at the full proposal stage and an Environmental and Social Impact Assessment, and Management Plan (including budget and roles and responsibilities for project personnel) will be developed at the full funding proposal stage). Table 12, below, shows the preliminary risks identified so far and indicative risk mitigation measures. Unless stated, it is assumed that only the physical construction related activities under Component 3 will trigger risks. This table will be revisited and substantially elaborated at the full proposal stage.

Table 12. Brief description of risks and possible mitigation measures

Adaptation Fund environmental and social principles	Possible Risks	Possible Risk Mitigation Measures

Compliance with the Law	Failure to comply with the laws and regulations identified in Part II, Section E of this concept note	Compliance with the law is written into all contractual agreements with third party contractors. Regular monitoring/inspection
Access and Equity *Marginalized and Vulnerable Groups*	If improperly sited or designed, the infrastructure may not benefit the poorest, most vulnerable or recent migrants	Continued consultation that gives strong weighting to the poorest, most vulnerable and recent migrants. Grievance mechanism. Please note that, for now, these two principles have been merged
Human Rights	Risks to human rights emerge from the risk of involuntary resettlement. See below	See involuntary resettlement, below.
Gender Equity and Women's Empowerment	There is a risk that any negative impact of the project may disproportionately affect women. There is also a risk that the project's soft activities under components 1, 2, and 4 may exclude women.	Quotas for the inclusion of women in activities under Components 1, 2, and 4. Engagement with women's community groups or representatives at design and construction phase to reduce the risks of differentiated impacts
Core Labour Rights	Violations of labour rights of contractors working under or employed by the project	Ensuring that workers are paid a fair, living wage and that contractors comply with national laws and ILO core conventions
Indigenous Peoples	No risks identified. There are no indigenous people identified as living in the target area. Rural-urban migrants are captured under the access and equity and marginalized and vulnerable groups safeguarding area.	
Involuntary Resettlement	There is a risk that, if improperly planned, he infrastructures under Component 3 could infringe on private land/property, access to private land or property, or land that people use for business/livelihoods	Further research and consultation at the detailed design phase to ensure that infrastructure is only constructed on public land. Full prior and informed consent process prior to starting construction
Protection of Natural Habitats *Conservation of Biological Diversity*	The proposed project is in a densely populated urban area. There are not thought to be any significant natural habitats or areas of important biodiversity in or near the project site. However, this will be explored in more detail at the full proposal stage No mitigation measures identified Note that protection of natural habitats and conservation of biodiversity have been combined at this stage.	
Climate Change	There are wo potential risks under this principle, unnecessary emissions arising from the construction or operation of the infrastructure, or maladaptation arising from poor design or improper functioning of it	Contractors will be required to source local materials where possible (reducing emissions from transportation). Avoiding maladaptation risks will be a factor in selecting design companies at the implementation stage
Pollution Prevention and Resource Efficiency	With improper site management, construction waste may be disposed of improperly	Requiring construction contractors to dispose of waste in compliance with procedures and guidelines of the government of Mongolia
Public Health	Risks to public health (and safety) could arise from the following: 1) Poor site management, 2) contamination of drainage water (either directly or indirectly from project activities), 3) Maladaptation (where infrastructure is ineffective or directs flood waters elsewhere)	Following safe construction site management best practices, principles and protocols, monitoring to ensure that waste and other harmful materials don't contaminate water. See Climate Change principle for maladaptation.

Physical and Cultural Heritage	No risks identified	
Lands and Soil Conservation	This risk has been triggered as construction will be taking place in a flood prone area	Further study will be undertaken during the preparation of the full proposal

The proposed project also considered the potential for inter-community tension arising from the location of the project's interventions. No evidence could be found of tensions arising from similar previous projects, and no community members raised any examples of tensions arising from assistance being provided to one community over another. The selection of the project's target areas followed a rigid process that involved a) selecting the most vulnerable communities according to available vulnerability information, b) working with government at the local and national level to ensure the communities chosen are the most vulnerable and the most in need and c) consulting with communities across numerous Khoroos (not only those chosen by the project) to determine the most effective location for the intervention. This process was designed to both establish whether there is any risk of the project creating social tensions (and no evidence for such a risk was found) and mitigating that potential risk by going through a participatory, inclusive, consultative and vulnerability-focused approach to determining the project's target areas.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[2]

Dr. Batjargal Zamba, National Focal Point for the Adaptation Fund, Ministry of Environment and Tourism of Mongolia Address: Margad Center, 8th khoroo, Sukhbaatar District, Ulaanbaatar – 14191 Mongolia Tel: 976-7000 0743; 976-7000 0744 Fax: 976-11-310743 e-mail: zbatjargal@mne.gov.mn; z_batjargal@yahoo.com	Date*: 8 August 2022*

MINISTRY OF ENVIRONMENT AND TOURISM
OF MONGOLIA
CLIMATE CHANGE RESEARCH AND COOPERATION CENTRE
STATE OWNED ENTERPRISE
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Date 2022, August 8
Ref. 56

To: The Adaptation Fund Board

Re: Endorsement of the Ger Community Resilience Project Concept Note

Dear Madam, Sir,

In my capacity as the National Designated Authority for the Adaptation Fund in Mongolia, I confirm that the aforementioned concept note is in accordance with the Government of Mongolia's national priorities in implementing climate change adaptation actions to reduce the impacts caused by the adverse effects of climate change. Numerous discussions have taken place between UN-Habitat as Multilateral Implementing Entity, various stakeholders and the Ministry of Environment and Tourism, throughout which all stakeholders agreed to give support to the project.

Accordingly, I am delighted to endorse the aforementioned concept note and request the Adaptation Fund to give it due consideration. If approved, I understand UN-Habitat will lead the development of a full project proposal in discussion with the Ministry of Environment and Tourism, which will establish in detail the project's budget, management arrangements and measures to avoid undue environmental and social impacts.

Yours Faithfully,

BATJARGAL ZAMBA
NATIONAL FOCAL POINT FOR THE ADAPTATION FUND

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines by the Adaptation Fund, and prevailing National Development and Adaptation Plans in Mongolia, including the updated NDCs of 2021, the National Programme on Climate Change, Green Development Policy and the Sustainable Development Vision 2030, and subjected to the approval by the Adaptation Fund Board, commit to implementing the programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this programme.

Rafael Tuts
Director, Global Solutions Division | Officer-in-Charge, Office of the Deputy Executive Director | United Nations Human Settlements Programme
Tel +254 20 7623726 | Cell +254 713 601 278 | Email raf.tuts@un.org

Signature:

Implementing Entity Coordinator

Date: 5 August 2022

Project Contact Person:

Laxman Perera, Human Settlements Officer, Regional Office for Asia and the Pacific, United Nations Human Settlements Programme (UN-Habitat);
Email: Laxman.Perera@un.org

Annex 1 - Initial Gender Assessment

This gender assessment has been developed to provide the following:
1) A situational analysis of the gender issues in the local context in Ulaanbaatar and, in light of this, to demonstrate what measures have been taken to ensure that women and men will have equal opportunities to build resilience, address their differentiated vulnerabilities and increase their capacity to adapt to climate change impacts through the project implementation, and
2) To ensure compliance with the international gender and climate change treaties and, consequently, adherence to the Adaptation Fund Gender Policy.

This Gender Assessment is preliminary and will be revisited and expanded when the full funding proposal is being developed to ensure the project's results framework, budget and environmental and social safeguards approach are designed in a way to meet the differentiated adaptation needs of men and women, and to ensure that the project does not discriminate between men and women or contribute in any other way to gender inequality.

Gender Issues

As Part I of this Concept Note highlights, Mongolia faces significant environmental management challenges due to climate change. Various models indicate that continued global warming increases winter temperatures and snow. Since the 1940s, the frequency of days of extremely high temperatures (i.e., the maximum air temperature above 26°C) has increased on average by 16 to 25 days per year, and the frequency of days with extreme cold (minimum air temperature below –50°C) has decreased by 13 to 14 days per year.

The increased frequency of *dzuds* has dramatically heightened the risks of poverty for rural people, especially herders. This results in migration to urban areas. Education system reforms which began in 2006 that mandates school enrollment of children from the age of 6 has greatly contributed the herder families' movement to the urban centers, as they seek educational opportunities for their children. Almost 50% of the population of Mongolia now lives in the capital city of Ulaanbaatar. Rapid urbanization is putting a strain on limited water supply systems and sanitation services in the city, and an increase in temperature and evaporation rates caused by climate change during the summer result in earlier and more rapid spring thaw and melting permafrost, which leads to increased flood risk, particularly in the the low-lying areas and river valleys of northern Ulaanbaatar where migrants have settled. Flash flooding and landslides can occur after heavy rain, impacting livelihoods and claiming lives.

As Part 1 of the concept note highlights, floods have serious impacts and the levels of impact faced by women and men are partly determined by pre-existing gender inequalities. Moreover, women and other vulnerable groups often take longer to recover after flood events as men may return to the labour market, but women tend to remain in the home and take on financial and domestic burden during the recovery period.

These key gender-based inequalities and discrimination that exist have the potential to impact women's capacity to build resilience. As women are structurally disadvantaged by entrenched gender inequality, direct and indirect discrimination, and social and economic disadvantage, they are burdened by the worst impact of disasters and climate change. Moreover, the elderly, children and the disabled people also face crucial disadvantages as a group due to their dependency on other people, with women often taking on caring roles.

Gender Equality Status

In the World Economic Forum Global Gender Gap Index, Mongolia is ranked 7th in the region (out of 20 East Asia and Pacific countries) and 69th globally (156 countries) with a score of 0.716.[19]

Table 13 - Global Gender Gap Index - Overview

	rank	2006	rank	2021
Global Gender Gap Index	**42**	**0.682**	**69**	**0.716**
Economic participation and opportunity	21	0.704	23	0.769
Educational attainment	20	0.999	73	0.993
Health and survival	1	0.980	1	0.980
Political empowerment	101	0.046	116	0.122

Gender equality has been one of the primary priorities of the Government of Mongolia, and Mongolia's success in progressing gender equality in health and education is very noteworthy. However, over the past 15 years, the ranking of Mongolia has fallen in three out of the four areas. The 2017 edition of the Global Gender Gap Index ranked Mongolia 53 out of 145 nations, indicating that Mongolia is falling slightly in the rankings and that women's equality is either stagnating or not proceeding as quickly as in other nations.

[19] Gender Gap Index of World Economic Forum, 2021

Table 14 - Gender equality by sector

	rank	score	avg	f	m	f/m
Health and survival						
Healthy life expectancy, years	1	1.060	1.029	63.8	57.1	1.12
Educational attainment						
Literacy rate, %	1	1.000	0.897	98.7	98.2	1.00
Enrolment in primary education, %	119	0.984	0.755	95.2	96.8	0.98
Enrolment in secondary education, %	1	1.000	0.950	51.3	48.7	1.05
Enrolment in tertiary education, %	1	1.000	0.927	76.7	54.7	1.40
Economic participation and opportunity						
Labour force participation rate, %	85	0.795	0.655	58.9	74.1	0.79
Estimated earned income, int'l $1,000	54	0.666	0.494	9.7	14.5	0.67
Legislators, senior officials, managers, %	24	0.775	0.349	43.7	56.3	0.78
Professional and technical workers, %	1	1.000	0.755	54.1	46.0	1.18
Political empowerment						
Women in parliament, %	113	0.209	0.312	17.3	82.7	0.21
Women in ministerial positions, %	85	0.232	0.235	18.8	81.2	0.23
Years with female/male head of state (last 50)	72	0.000	0.144	0.0	50.0	0.00

Health: Significant progress has been made in the health sector, but such gains can be interrupted by climatic events coming on top of economic stresses (as in 2007-2009) and the COVID-19 pandemic. Also, there is a significant gender gap in health between women and men. The average life expectancy for women in 2021 was 63.8 years, which was 5.7 years longer than men at 57.1 years. The air pollution in Ulaanbaatar city, which is several times worse than the safe levels recommended by the World Health Organization, has a high impact on the health of pregnant women, fetus weights, and stillbirths. In addition, the city has high levels of pulmonary diseases, asthma, and other respiratory diseases, especially among children and the elderly. Low-level access to safe drinking water and using of basic sanitation facilities (pit latrines) expose many of the population to an increased risk of disease outbreaks.

Education: Achieving gender parity in education has been one of the outstanding achievements for Mongolia, with a literacy rate of 98.7% for women and 98.2% for men. The enrollment in primary school for females was 95.2% and 96.8% for males, but at higher levels of education, women are increasingly more educated than men.

Economic sectors: The four leading economic sectors in Mongolia are (i) agriculture, forestry, fisheries, and hunting; (ii) wholesale and retail trade, car and motorcycle maintenance services; (iii) the processing industry; and (iv) the mining industry. Men's labor force participation rate and income are significantly higher than women's across all sectors. Male labour force participation is 74.1% compared to female participation at 58.9%. Women in Mongolia continue to receive lower wages than men in many sectors of the economy, particularly in rural areas. In 2018, women earned 82.1% of the average monthly remuneration of men. This is almost a 20% wage gap, and the gap is widest in manufacturing, construction, information and communications, finance, and insurance. The tradition of passing land and other immovable property down to sons is still strong. In a 2014 survey, only 17.6% of the respondents planned to transfer the title deeds to their daughters.

Governance: Mongolia is well down the world ranking with a 17.3% representation of women in the Parliament (where 30% is considered a minimum critical mass required for women as a group to exert a meaningful influence in legislative assemblies). Women hold only 18.8% of ministerial positions. During the past 50 years, no woman has risen to the position of head of state. Therefore, much focus on improving gender equality in key socio-economic and political areas is required alongside the challenges of combating disaster and climate impacts. According to the 2021 Global Gender Gap Index of the World Economic Forum, the political empowerment of women was assessed as particularly low in Mongolia, which was placed 116th out of the 156 countries listed. Women also remain underrepresented in civil service leadership roles. Mongolian women, therefore, do not yet have a strong voice in the political and policy-making processes. The COVID-19 pandemic has adversely affected people. Out of 26 State Emergency Commission members, only three were women (11.5%).

Effects of COVID-19: Compared to men, women are more likely to be working on the front lines and fighting against the coronavirus pandemic. Women make up 81.9 percent of all health workers in Mongolia, which is much higher than the global average of 70.0. During the lockdown period, women, especially women with disabilities and pregnant women, had difficulty getting urgent medical services. Maternal mortality increased by 27.8 percent. Due to the lockdowns, there was indoor crowding, and the increased burden of unpaid work at home has negatively impacted women's mental health, increased work burden, and increased domestic and gender-based violence. During the COVID-19 pandemic, the pre-existing inequalities in the health sector and in health status have increased women's vulnerability. The micro, small and medium-sized enterprises, a sector largely dominated by women, faced severe revenue loss.[20]

[20] UNDP (2021) COVID-19 Impact on Women and Girls in Mongolia.

Others: With the increasing rise in risks related to climate and disaster, the disparity in socio-economic development is likely to be exacerbated by climate change related impacts. Both direct and indirect impacts of climate change and hazards for women and men are determined by preexisting gender inequalities.

Female-headed households make up roughly 25% of homes in Mongolia. The Time Use Survey (NSO Mongolia, 2009) has noted that single-parent families, which are usually female-headed, continue to become more vulnerable, particularly to flooding, suffering from land grabbing, and reduced levels of disaster assistance.

Data from the Participatory Living Standards Assessment of the NSO have identified that a disproportionate number of female-headed households live in poverty and that the proportion is growing. The unemployment rate is higher among young women than young men, and it has been rising among young women. Women are limited to engage in livelihood or employment opportunities because of the tasks at home.

In some cases, women are left alone to manage the household due to the death of a husband or due to divorce. The Human Development Report of Mongolia 2016 indicates that "young women face more difficulties entering or re-entering the labor market. The occupational segregation of women is widespread, resulting in a concentration of women in a narrow range of occupations such as education (where 80.6 percent of people employed in the sector are female), health and welfare (79.4 percent female workers), and the social sciences, business, and law (64.3 percent female workers). Women employed or engaged in small enterprises need to work longer hours than men to manage tasks at home and work.

Legal and Administrative Framework Protecting and Promoting Gender Equality

Mongolia's Constitution enshrines basic principles of gender equality and prohibits gender-based discrimination. The Law on Promotion of Gender Equality, Article 16 stipulates that "men and women have equal rights in the political, economic, social, and cultural life and family relations." This legal framework creates an enabling environment not only for women as individuals but also for women-led enterprises. Furthermore, Article 14 stipulates that "everyone shall be free from any type of discrimination based on his/her ethnicity, language, race, age, sex, social status, wealth, employment, position, religious belief, viewpoints, and education level."

At the global and regional level, the Sendai Framework for Disaster Risk Reduction 2015−2030, the Ha Noi Recommendations for Action on Gender and Disaster Risk Reduction, and
the Ulaanbaatar Declaration of the 2018 Asian Ministerial Conference on Disaster Risk Reductionall recognize the importance of promoting the participation of women in decision-making in disaster risk reduction (DRR) and ensuring gender-sensitive policies for disaster risk management.

The Ulaanbaatar Declaration specifically called on all governments and stakeholders to: "Promote full and equal participation of women in leading, designing, and implementing gender-sensitive disaster risk reduction policies, plans, and programs, through joint efforts by public and private sector, supported by appropriate legal frameworks and allocation of necessary resources."

Gender equality has been an important focus area for the Government of Mongolia. Several legal documents contain more specific provisions on gender equality: the Constitution of Mongolia (1992), Law on Promotion of Gender Equality (2011), Labour Law (1999), Law on Domestic Violence (2005), Law on Social Welfare (2012), Law on Family (1999), Law on Environmental Protection (LEP) 1995 (Rev. 2008)

In line with these policies, several programs are being implemented by the government: National Program on Ensuring Gender Equality (2017-2021), National Programme of Community Participatory Disaster Risk Reduction (2015–2025), National Action Programme on Climate Change (NAPCC) 2011, National Green Development Policy (NGDP) 2014, Environmental Sector Gender Strategy 2014–2030

Other programs include the National Program on Combating Domestic Violence, the National Program on protection from trafficking in children and women for sexual exploitation, the Mid-term Strategy and Action Plan for Implementing the Law of Mongolia on Promotion of Gender Equality (2013 – 2016), National Program on Combating Domestic Violence, National Program on protection from trafficking in children and women with the purpose of sexual exploitation, Mid-term Strategy and Action Plan for Implementation of the Law of Mongolia on Promotion of Gender Equality (2013 – 2016), etc.

The National Committee on Gender Equality is the government body led by the Prime Minister responsible for implementing gender equality. It comprises 13 Ministries of Mongolia as its sub-council, nine districts, 21 provinces, and the city of Ulaanbaatar as its subcommittees. One gender focal person is assigned at the Ulaanbaatar Municipality, and there are social welfare workers in every khoroo are assigned as the gender focal persons.

On the international level, Mongolia is a signatory to several international instruments pertaining to women's rights and gender equality, most importantly the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which it ratified in 1981.[21]

Data baseline – overview of disaggregated data (beneficiaries) in target communities

[21] https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx?Treaty=CEDAW&Lang=en

The data collected by UN-Habitat from the six khoroos in two target districts show that 49,653 people live in 13,506 households. In one-third of the cases, more than one family lives in one plot. In the proposed project target areas, there appears to be a balanced representation of both men and women. The combined number of women for the six khoroos slightly exceeds that of men. The project will actively encourage women's involvement in implementation, advisory, and decision-making roles as part of its concept and design.

The data indicate that 4% of households in the target area are female-headed, while 10.2% of people live below the poverty line. They are one of the prioritized vulnerable target groups for the concrete project interventions under Component 3 (construction of flood control facilities and improved sanitation facilities).

№	Information	Sukhbaatar District				Songinokhairkhan		TOTAL
		15th khoroo	16th khoroo	18th khoroo	20th khoroo	26th khoroo	4th khoroo	
1	No. of Plots	1,089	1274	1,996	2,109	2,456	1,273	**10,197**
2	Households	1,818	3056	2,297	1,466	3,050	1,819	**13,506**
3	Total population	6,684	11766	9,495	4,550	10,461	6,697	**49,653**
4	Male	3,364	5813	4,771	2,262	5,274	3,316	**24,800**
5	Female	3,320	5953	4,724	2,288	5,187	3,381	**24,853**
6	People with disability	212	293	202	256	202	184	**1,349**
7	Single headed family	138	140	76	41	62	38	**495**
8	People under poverty line	128	170	143	52	456	431	**1,380**

Initial Gender Assessment

During the initial consultations, meetings with the key stakeholders were conducted where most participants were women. The discussions focused on problems being faced, mitigation measures, identification of specific needs regarding proposed interventions, and interest in participating in project activities and the decision-making process.

During on-site consultations via the People's Process, women were observed to be very active in the communities. The number of women attendees in the initial consultations exceeded that of the men. Aside from the numbers, the women participants were observed to provide substantive inputs in analyzing the problems and issues and coming up with recommended solutions. Equal involvement of women and men in the project activities will be ensured through community planning and consultations throughout the project. Besides that, the following stakeholders have been consulted to understand specific gender issues and needs:

Type of stakeholder	Specific stakeholder
National/City government	Department of Climate Change, Ministry of Environment and Tourism Municipality of Ulaanbaatar – Engineering Division under the Mayor's Office, Hydrology facilities management company, Emergency Management Agency
Local Authorities & Communities	District authorities of SonginoKhairkhan and Sukhbaatar and districts and six Khoroo Authorities residents for Khoroos 26 and 4, 15, 16, 18 and 20.
UN agencies	UNDP, UNICEF
IFI's/INGO's/LNGO's	ADB

Gender Considerations in the proposed project

The Gender Action Plan will describe the proposed measures to be included in the project design to promote gender equality and mainstream gender in the project's four (4) main outputs.

The proposed project's main objective is to enhance communities' resilience in six Khoroos of Ulaanbaatar to floods caused by snowmelt, bursting springs, and melting permafrost. This objective will be achieved through four components that seek to achieve the following objectives:

1) Enhance the policy and regulatory environment at the national and city level to reduce risks and enhance adaptive capacity in the future in terms of changing climate in urban areas
2) Build capacity at the national, city, and community levels to adapt now and in the future
3) Reduce risks from flooding through physical infrastructure in the target areas
4) Improve and enhance the knowledge base to sustain and replicate the project's gains.

Addressing the gender concerns will entail close consultation and collaboration with women from the project design stage, implementation, operations, and monitoring and evaluation. The project, as part of its concept and design, will actively encourage

the involvement of women in implementation, advisory, and decision-making roles contributing to alleviating the absence of women in the fields of science, technology, and construction.

Women in Mongolia are mainly responsible for household tasks such as household water and sanitation, health and hygiene, cooking and managing food, childcare so they are more vulnerable to flood hazards, experiencing deficits in food, clothing, communications, fuel wood, disease exposure, water quality problems, and sexual harassment. Therefore, the project will make sure women are consulted on appropriate infrastructure design, operation and maintenance features and pay more attention on their empowerment and resilience building activities.
. Equal involvement of women and men in the project activities will be ensured through community planning and consultations throughout the project period.

Entry points to integrate gender considerations (how to empower women)

The specific gender objectives for the project are:
- To contribute to improving gender equality within the targeted six Ger khoroo settlements
- To promote gender empowerment and women's leadership within the project implementation and within decision-making bodies.
- To support and strengthen the women's resilience building for flood related risks

The project design and approach are 'gender-responsive' because, even during the project preparation phase, gender equality and women's empowerment have been proactively considered in the project's design. The initial data collection focused on issues, needs, perceptions, activity prioritization, and identifying and verifying specific gender-related risks and impacts. This has been done through desk research, women's focus group discussions, and community decision-making processes.

Design of intervention activities

The project aims to provide people access to better sanitation and flood resilient environment, improving their quality of life and family health. The benefits will be achieved through the construction of flood control facilities and improved sanitation. As per the results of stakeholders consultations, the anticipated impacts of project interventions are the following:

Flood control facilities: The provision of flood facilities will increase environmental safety and security and lessen the risk of waterborne diseases brought by a flash flood and overfill of pit latrines. It will also enable the local Government and communities to improve the road network and access to their plots for better and safe mobility in the area, especially for women, children, and the elderly and differently-abled.

Improved sanitation will include better hygiene practices and convenience, especially for women, children, and persons with disabilities. Other potential benefits include decreased incidences of waterborne and other diseases related to water pollution and poor sanitation; and economic or business opportunities due to reliable sanitation services. The risk of women and children to waterborne infectious diseases, and consequently the medical costs of these diseases, will be reduced due to improved sanitation facilities at the household level. Proper household practices on sanitation, hygiene, and health will be communicated to the target area communities through a community awareness program involving information, education, and communication campaign.

Gender-responsive indicators
Women are well represented in community groups. Therefore, the project design team found no evidence to suggest that women have unequal opportunities to participate in the project and do not benefit equally from interventions.

During the full proposal development phase, the project will ensure 50% representation during of the meetings, consultations, community votes, participatory planning, and monitoring initiatives under the People's Process approach. A comprehensive list of indicators will be included in the Gender Action Plan. The main gender-focused indicators the project will aim to achieve are:
- 50% of the members of the communities established to implement the project will be female
- 50% of trainees at all training/workshops and learning events will be female
- Commitment to greater involvement of female senior government representatives in the project
-50% of direct beneficiaries of improved toilets will be female

Gender disaggregated information will be collected to monitor progress toward and achievement of the above gender targets. Gender FGDs will be conducted every 6 months, and an analysis will be included in project reports to establish a qualitative baseline of gender perceptions and monitor changes in behaviors and attitudes as the project progresses.

Promoting an enabling environment for gender equality: Implementation, Performance Monitoring and Evaluation

Policy Arrangements: The Project Advisory Committee Secretariat will aim to enhance gender equality in the composition of members by reaching out to female government representatives and including them in the PAC

Management Arrangements: The principal Gender Focal Point for the project will be the National Project Manager of the Implementing Entity. The counterpart gender focal point within Government will be the designated gender focal point of the Municipality of Ulaanbaatar. Furthermore, a gender focal point will be esablished for each executing entity and partner as a condition of project participation.

Capacity Building Strategy: The community groups established as part of the People's Process, will aim for gender equality in the composition of training participants and will also ensure gender parity and gender considerations in the planning and implementation. Women will form 50% of the community groups and will receive the training and capacity building designed for the training on project implementation delivered by the Peoples Process. Women will be encouraged to be involved in executing operations and maintenance plans and mechanisms for concrete interventions.

Monitoring: The monitoring of the GAP will be done using a participatory approach with the key stakeholders at the kheseg, khoroo, district, and municipal levels. Disaggregated data focused on climate change-related issues, needs and perceptions of vulnerable groups, activity prioritization, and identifying and verifying potential risks and impacts will be collected through Community surveys and public consultations

Specific Focus Group Discussions will be held with women and other vulnerable groups to discuss the prioritization and selection processes of interventions proposed under the project. Vulnerable groups will continue to be consulted via FGDs beyond the community consultation processes of the People's Process. The grievance mechanism to be established under the project will further provide a platform for feedback and consultation where necessary.

During community mobilization planning and implementation, IE and EE staff will ensure sensitization around gender issues will be conducted for both women and men around gender-specific participation and roles within the project.

Knowledge Management, Information Sharing and Reporting

All knowledge components of the project will also ensure gender parity and gender considerations in the planning and implementation. The Operational Manual developed for the project will contain a Gender approach linked to AF GP. The project will maintain a gender and age disaggregated database of direct beneficiaries and stakeholders involved in the project. The lessons learned in workshops and training organized for the city- and district government officials will also try to ensure 50 percent women's participation if possible.

A specific knowledge component to track the gender and youth responsiveness and impact of the project, a rapid survey on Knowledge Attitudes and Practices (KAP), will be organized by the national implementation team through targeted Focus Group Discussions with women and youth during the project.