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REPORT OF THE PORTFOLIO MONITORING MISSION IN MONGOLIA

INTRODUCTION

Context and scope of the mission

1. As part of the Knowledge Management (KM) Strategy and the secretariat's work plan for FY16 which was approved by the Adaptation Fund Board (the Board) at its twenty-fifth meeting (Decision B.25/19), the Adaptation Fund Board secretariat (the secretariat) conducts missions to projects/programmes under implementation to collect and analyze lessons learned through its portfolio. So far, such missions have been conducted in Ecuador, Senegal, Honduras, Nicaragua, Jamaica, Argentina and Uruguay. This report covers the FY16 portfolio monitoring mission that took place in June 2016 in the project "Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia" implemented by the United Nations Development Programme (UNDP).
2. The mission targeted this project for the following reasons:
 - a) it enables to explore implications of the Ecosystem-Based Adaptation (EBA) approach, including its efficiency, effectiveness and sustainability;
 - b) it may allow drawing lessons from the valuation of ecosystem services;
 - c) it may allow taking stock of the arrangements for monitoring and evaluation, and the value of mid-term review in adjusting progress towards results.

Methodology

3. The secretariat was represented by a senior climate change specialist and a junior professional associate. An Adaptation Fund Board alternate member was also part of the delegation. The mission was carried out from 12 to 18 June, and included field visits to project sites. The methodology used for the monitoring mission comprised qualitative semi-structured interviews with key stakeholders from communities, local government, non-government entities, the private sector, academia, ministries and the UNDP Mongolia office. The mission combined meetings with government officials, Project Implementation Unit (PIU) and UNDP staff members, communities and local and national partners. The mission visited project sites in Uvs Province ("aimag"). A set of guiding questions had been prepared for the mission and shared in advance with UNDP (see Annex 1). These questions covered the aforementioned objectives.

PROJECT/PROGRAMME CONTEXT AND PROGRESS TO DATE

Context

4. Mongolia is highly vulnerable to extreme weather events including droughts, flash flooding and harsh winters. In addition, unsustainable agriculture and development practices are accelerating the deterioration of the country's land and water resources and associated ecosystem services.
5. The objective of the project is to maintain the water supplies of the mountain and steppe ecosystems, targeting two eco-regions: the Altai Mountain/Great Lakes Basin and the Eastern Steppe. As a first step, the project provides strategic guidance for development sectors. The National Government and Provincial Governments then adopt the completed strategies as formal policy to guide future resource management decisions. The project focuses upon better tactics for

grazing management, restoration of riparian zones, survivability of biodiversity, and efficiency of water use. Success is being measured by how well community-level implementation improves the overall integrity of water provisioning services within each watershed relevant to climate change challenges. An ecosystem-planning program is established within each watershed to guide implementation and coordinate future resource management decision-making. A map of the country including the project locations is provided in Figure 1 below.

6. The project has three components:

- Landscape level integrated land use and water resources monitoring and planning system focused upon reduction of ecosystem vulnerability to climate change;
- Landscape level adaptation techniques maintaining ecosystem integrity and water security under conditions of climate change; and
- Institutional and policy capacity strengthened to support Ecosystem-based Adaption replication, monitoring, and enforcement for critical watersheds.

7. In order to achieve this goal, an inter-institutional approach has been followed by the government of Mongolia. The project is implemented by UNDP, and is executed by the Ministry of Environment, Green Development and Tourism of Mongolia (MEGDT).

Progress to Date

8. The project was approved by the Board in June 2011, and the agreement was signed by UNDP in November 2011. The inception workshop was held on 14 June 2012 in Ulaanbaatar and marked the commencement of the project implementation. The expected duration of the project is six years. In line with the performance-based grant financing used by the Fund, UNDP had already submitted four annual project performance reports (PPR) to the Board at the time of the mission. To date, the Board has transferred the amount of US\$ 4,968,853 or 90% of the US\$ 5,500,000 approved for the project. The project's implementation progress has been rated satisfactory every year since the project's inception. As of February 2016, the following results had been achieved:



Figure 1: Map of the target sites

- 22 policy plans were developed and are operational, including three Integrated Water Resource Management Plans, two EBA strategies for two target basins, and 17 Soum EBA programmes for integrated land use and water resources monitoring and planning. The Integrated Water Resource Management (IWRM) plans to the two target river basins were approved by the Ministry in June 2014. For nationwide application, the existing IWRM guidelines have been revised by integration of EBA principles and approaches and submitted to the MEGDT for endorsement.
- The capacity of river basin administrations (physical/infrastructure support in establishment), river basins councils at aimag-level, Meteorology and Hydrology authorities, Environmental protection departments, environmental laboratories in all three target aimags (support in getting accredited) for monitoring, assessment and reporting are well advanced through project supported activities including expansion of nation-wide hydrological monitoring network, upgrading national level environmental and water data base (water census with technical support to river basin administrations and river basin councils, participatory biodiversity monitoring). Within this scope, five small scale portable, energy efficient dwellings of size of 2.5 and 3.5 m were provided

to the earlier established five water monitoring posts with support of the project in Norovlin, Bayan-Uul, Dashbalbar, Chuluunkhoroot and Ulaangom

- Proposals on extension of protected areas upstream of Ulz (102,563.32ha) and Tes Rivers (around 369,466 ha) and Khukh Lake (around 95,402.9 ha) were approved by the Representatives Khurals of respective aimags (Khuvsgul, Zavkhan, Uvs, Khentii and Dornod). Proposals were submitted to MEGDT in 2014. MEGDT is further processing the proposals for submission to the Cabinet and to Parliament for approval.
- A total of 156 person obtained various internationally recognized approaches and knowledge including landscape based EbA, sustainable pasture management principles, rotational use of degraded pasture planning and implementation, "Simple point" program and photo plant monitoring etc. As a result, 17 pasture control points covering 20,000 ha were selected.
- A total of 13 springs (seven in Kharkhiraa and five in Turgen) were rehabilitated in 2015 applying EBA principles and environmentally sound techniques for increased and safe drinking water supply for local population and livestock, as well as for potential recovery of overgrazed areas.
- 68 public buildings (soum administration offices, schools, hospitals, kindergartens) were equipped with several automatic instruments including thermometers and manometers to ensure and monitor proper heating mode of central systems for fuel efficiency. According to the latest assessment made by the National consultant, coal consumption was approximately decreased by 15 percent.
- Drip irrigation systems with water meters were installed in two project sites in order to improve efficiency of water usage for agricultural irrigation. Site responsible water users are keeping records on water consumption in order to compare efficiency of drip and regular irrigation systems. Collected data will be used for further replication. Preliminary assessment shows drip irrigated lands used two times less labor and water as used to be.
- Through repairing wells, a total of 10.000 ha of abandoned and remote pasture emerged to be re-used for livestock husbandry and a total of 6.800 ha were freed for grazing of wild animals.
- Two traditional rain and snow melts catchments, one small scale engineering water catchment, one water channel, and one dry well have been established.
- Ten small scale tree nurseries covering 22.5 ha areas were established. The responsible communities were involved in series of on-site trainings including tree and strawberry planting, greenhouse farming, irrigation technologies etc. In addition to that, several reforestation and forest management activities were conducted in target areas with the State funding such as 811.4 ha in Kharkhiraa, Turgen river basin and 1359 ha in Ulz river basin
- 17 soums initiated pasture rotation and other EbA grazing practices in their territory. Activities consist of pasture irrigation through spring protection, well rehabilitation and established water harvesting structures. The total area with improved pasture land management amounts to 110,000 ha in Kharkhiraa, Turgen and 976,000 ha Ulz river basin respectively.
- The achievements of 52 small grant projects were reviewed on the ground with involvement of soum authorities and the Project local coordinators. As per assessment,

50 small projects were evaluated as satisfactory. The remaining two projects will continue activities and their implementations will be assessed in 2016. The final assessment will be carried out in 2016 during the project internal monitoring.

- The previously established Glacier Observation Post in Turgan Mountains and other six surface water monitoring posts are fully operational. Monthly measurements were conducted at the Glacier post during the warm season of 2015 (July, August, September, and October). In addition, the project provided five water monitoring posts (Norovlin, Bayan-Uul, Dashbalbar, Chuluunkhoroot and Ulaangom soums) with small scale dwelling in order to ensure favorable work condition during cold period.
- At mid-term, the project had targeted a total of 43,600 beneficiaries (31,950 directly and 11,650 indirectly), among which 58 per cent were women, and 74 per cent were youth.

MEETINGS, SITE VISITS AND FINDINGS OF THE MISSION

9. The representatives of the secretariat and Board member met with a number of stakeholders during the week of the mission, discussing various aspects of the project implementation and execution, and undertook field visits in the province of Uvs (see Figure 1 and 2 below). The agenda of the mission is provided in Annexes 2, 3 and 4 of this report. This section summarizes the findings of such visits and meetings during the week of the mission.



Figure 2: Meeting with Eco club members at Chandmani Eco-school in Ulaangom sum



Figure 3: Meeting with beneficiaries (handcrafts producers) at Uvs Lake

Findings of the mission

The ecosystem-based adaptation approach experience

At local level

10. A challenge faced by the government at the local level is the institution and enforcement of overgrazing regulations, which is a complex issue since Mongolia is a semi-nomadic society. The current political framework encourages herders to produce more and more animals as a strategy to absorb climate shocks (namely droughts and extreme cold) based on the assumption that statistically, having more animals will result in less losses of animals (in absolute value) during such extreme weather events. However, the focus on quantity of animals has led to a decrease in the

quality of animals, which has coincided with a decline in previously widespread veterinary services. UNDP is working with the government to shift animal production from a quantitative to a qualitative approach, in order to add value to the existing production rather than increasing the production itself. This is one of the potential activities that UNDP is looking at for developing for funding by the Green Climate Fund (GCF) and other sources of funding. Such overgrazing issues have arisen in the country after the end of the socialist period, as the total size of herds has increased from 20 million animals to around 60 million currently. The privatization of herds grazing on state-owned pastures has led herders to increase the size of their herds as an “insurance policy”. An earlier system of pasture use fees that were relative to the size of the herd, have been scrapped at around the turn of the millennium. The government has now approved a draft law on livestock management which at the time of the mission was available for public comments. The project and UNDP have provided some feedback based on the lessons learned by the AF project to the Ministry of Food and Agriculture (MOFA).

11. The project is supporting the National Agency of Meteorology, Hydrology and Environmental Monitoring work and existing glacier and surface water monitoring networks by providing glacier monitoring stations, as explained in the previous section. As a result, it strengthens the existing network but also the capacity of local communities in using monitoring information. However, glacier-related data seem to not have reached international glacier monitoring centers yet. Given the acuteness of glacier loss at national and global levels, efforts could be potentially made to improve the dissemination of such data internationally. The project is also supporting a groundwater monitoring network (three additional stations have been funded by the project). Important outcomes of the project includes the provision of such stations, the improvement of data collection (both in terms of quality and quantity), and use by final users.

12. According to the representatives of the technical committee and national consultants, a challenge that the project team has faced is the lack of awareness of communities on climate change, who usually consider this topic as reserved for scientists. According to experts and stakeholders met during the mission, the project has helped raise awareness among communities on climate change. For instance, herders usually moving from one region to another based on climate condition know that this constitutes already an adaptation strategy. However, some gaps remain and they are progressively made aware that new ways to adapt are needed, even though they may not have the sufficient capacity to access or implement such measures. Indeed, local communities do not currently access knowledge and lessons learned on adaptation from neighboring countries. In addition, there have been to date very few assessments on future climate change scenarios and on what impacts could arise from climate change, on vulnerability assessments of communities and on actions that need to be taken to cope with this. As a result, the studies and assessments that the project has produced are very useful. Lessons learned were threefold: i) local herders and farmers have very few ideas and methods to adapt to a changing climate; ii) there is not a lot of information shared from adaptation best practices from neighboring countries; iii) Mongolia still need to diagnostics/assessments future climate change impacts so that it can anticipate and take actions accordingly.

13. A lesson learned at local level originated from a past dispute taking place in the Uvs Aimag in terms of water usage where upstream users were overusing water. The project supported the establishment of water user groups, which are now ready to solve such conflicts thanks to trainings and capacity building activities. In addition, handbooks developed by the project were of great help in solving these conflicts.

14. Taken into account the traditional aspects when implementing water related modern technologies and demonstrating through pilots were very important aspects. That helps creating new opportunities for youth and limiting urbanization

15. Newsletters have been produced combining all the outcomes and activities in the Uvs river basin. They were distributed during public events organized by the Ministry. Once the guidelines are reaching the yurts, communities will read them since the literacy rate is very high (97.5 per cent), especially because books are traditionally highly revered but at the same time are quite a scarce commodity in remote areas. The international cooperation unit of the Ministry regularly organized events for which they have required support from the project.

16. The project has supported local research on the impact of climate change on biodiversity. For instance, a tool developed by Princeton University was used to model the impact of climate change on the Eurasian skylark, the white-naped crane, marmots, and gazelles (also Altai snowcock, mountain ungulates, Gobi bear) on different horizons: 2020, 2050 and 2080. The same approach has been adopted for endangered species of flora and for insects. This work has been supported by the project in the framework of the first economic valuation study of the project.

17. WWF has performed a study using the methodology “Active River Area” from The Nature Conservancy, 2008. The study provides a very detailed map of the riparian network in Mongolia. The AF project supported trainings and capacity building in using such maps at the local level in the Uvs Province. One of the outcomes of the study was to make recommendations on no-go zones for mining activities. The MEGDT accepted in 2015 the delimitation results of the study, although its “validation” is still needed. Every river basin has a water basin river authority which is in charge of monitoring the activities taking place in the basin. Each of them should have a river basin management plan with a horizon of 2030. Climate change impacts have been taken into account in the analysis of the study.

18. The project has supported the creation of a “curriculum” course model-based designed to government policies, for teachers. It is divided into three sections: i) climate change and ecosystems (change in climate, ecosystem services), ii) climate change and society (climate change and population, health, water and iii) climate change mitigation and adaptation (greenhouses, EBA management). The curriculum document details the different skills, knowledge and appreciation that students can obtain through the course. It includes case studies, explanations on how to change bad behaviors in climate change, training plans, workshop programmes, and methodologies to calculate footprints and water-prints etc. It includes compulsory and optional courses. The curriculum has been approved and is being implemented since 2015 at the Bachelor degree level and since 2016 at the Master degree level; next semester it will be implemented for PhD degree students. Trainings for trainers are organized as well.

19. The goals of the river basin administrations are to provide information and methodology to citizens and representatives of government in order to implement river management plans and coordination and the inter-sectoral management of water use. There are also river basin councils representing users and consumers. The water users’ association roles are to provide monitoring and evaluation of the river management plan and ensure participation of local communities. Its main duty is to allocate water. These two bodies (water users’ association and river basin councils) have been created with the support of the AF project thanks to which double protection of springs have been implemented, water catchments have been established (including catchments collecting snow melts). In addition, the project implements its own small projects through a small grants scheme. The project helps in increase ecological adaptation and awareness, and assisted on studies and

water census. The main policy document is the river management plan. Implementation is now 35 per cent inUvs province. The project provides an EBA-based adaptation strategy. Based on this, there are seven sum level EBA plans. The river basin management plan is related and coordinated with the aimag and sum policy documents. For activities and local measures supported by the project are considered as measures that are reflected in the management plan, they are aligned with the management plans.

20. The project has supported some eco-clubs that, further to a natural resource monitoring role (see below), have conducted various trainings related to climate change, and have raised awareness on local level regarding natural resources and water management and adaptation to climate change.

At the government level

21. UNDP is currently preparing a new country programme strategy for Mongolia that is planned for 2017. Its main objective will be to reduce vulnerability of people in terms of i) poverty and inequality and ii) vulnerability caused by environmental degradation and exclusion from decision making processes. Regarding the latter, it is highly related to the agricultural sector, which represents seven per cent of the economy, but 20 per cent of workforce, and to the mining industry which has boomed over the last years, and puts a lot for pressure on ecosystem services and water resource availability. In addition, the joint impacts of desertification, climate change-related impacts (lack of precipitation, increased temperatures) and the recurrence of El Nino phenomena had caused dramatic impacts on livestock production. For instance, around ten million of animals were lost during the winter 2009/2010, which is a significant part of the total of 56 million animals that Mongolia has. Oversupplies of meat, overgrazing and increasing of herd size have made these challenges even more acute and increase the degradation of lands. This has resulted in a higher debt level, mostly through informal sector that in turns increases the urbanization of rural communities.

22. The climate change and green policy documents have been approved by the government and are now being implemented. An action plan was approved in January 2016 in order to implement more than 200 measures. Such documents follow an Ecosystem-Based Adaptation approach and fits into the national agenda. It also highlights the adaptation measures that the project is currently implementing. It divides the country into 29 water basins with 21 river basin administrations. The Fund's project is targeting two water basins.

23. Against this backdrop, the type of activities that the Fund is supporting is the kind a programme UNDP and the government want to scale up to reach their objectives, as they address key issues for the country such as water regulations and water harvesting. One of the challenges faced is how to invest in a sustainable manner and how to enforce existing regulations and develop new ones. As part of the future country programme, UNDP is looking at potential partnerships with GCF on the topic of farming and ecosystems' preservation.

24. Representatives of the governments have expressed their willingness in implementing a second phase of the project, building on lessons learned and capacity built during this project.

The use of monitoring and reporting to improve adaptive management

25. The project development phase has been led by two consultants (one international, one national). The project has chosen a bottom-up approach to define the initial indicators included in

the project proposal. The project development team has conducted some consultations with key stakeholders, including communities, the MEGDT, the MOFA, the Ministry of Industry, the Administration of Land Affairs, Geodesy and Cartography, and has received the support of an external monitoring and evaluation advisor. During the consultations with stakeholders, a list of indicators has been recommended such as species to be restored by the project for instance. These indicators were included in the initial project proposal that has been approved by the Board.

26. During project implementation, national and local executing entities (not UNDP) are in charge of collecting data, when they have sufficient capacity. When a local executing entity does not have sufficient capacity to measure some indicators, e.g. in the case of the indicator related to water discharge on rivers, the project has closely worked with other specialized national agencies to monitor such indicators and has provided the necessary equipment and monitoring stations in a few cases. When some of these values are not exactly known, there are estimated at best, using local entities and feedback from the communities.

27. Within the PIU, there are three different officers in charge of coordinating the implementation of each of the project's components. They are also in charge of monitoring the indicators (output and outcome level) of their respective component, and of filling the Project Performance Report (PPR) template sections related to these components. A financial officer is in charge of filling the financial data section of the PPR and the PIU coordinator aggregates all these information and performs a first quality check. Once this PIU-level aggregation and quality check is performed, the draft report is sent to the programme officer at UNDP who reviews the report, sends it back to the PIU if needed, making sure that it fits the Fund reporting standards. Finally, the report is sent to the secretariat, as part of implementation entity reporting requirements.

28. Annual Work Plan and Budget are prepared by the PIU on an annual basis, including quarterly work plans and budget. In terms of reporting, and in addition to the Fund reporting requirements (mainly annual PPRs, mid-term review and terminal evaluation), the PIU also reports to the implementing entity (UNDP) through the Atlas system, an Enterprise Resource Planning platform that is used by UNDP to manage projects, finances, human resources, inventory and procurement, on a quarterly basis. The PIU also reports on risks-related information. Disbursements from the implementing entity (UNDP) to the executing entities are made according to such quarterly plans. In addition to these quarterly reports, the PIU also reports to UNDP on an annual basis using a reporting template from UNDP. The implementing entity conducts a couple of visit to the Project Implementing Entity annually with procurement, technical and finance experts. The PIU also reports on a bi-annual basis to the MEGDT. Finally, the PIU reports to the Ministry of Finance of Mongolia on procurement, for contracts over one million Tugrik (local currency, equivalent to USD 482).

29. The planning of the activities is mainly done during the winter, when ground-level activities are challenging due to harsh winters. It is also during that season that most of the trainings and capacity-building activities take place. Some requests may also be received from local governments during that season. If they include relevant climate change adaptation activities, they are then incorporated to the work plans. The preparation of ground-level activities takes place mostly during the spring, until they start during the summer. Most of the activities are wrapped-up by October, when the winter season starts. As a result, the disbursements are mostly done during the second quarter of the year (spring).

30. Although the PIU experienced some challenges during the first year in getting familiar with the Fund's PPR template, the experience of the PIU staffs in reporting was very helpful in meeting the PPR criteria. The results tracker tab of the PPR was seen as the most challenging section of the

PPR template, although the implementing entity would like to suggest the Water basin authority to use this tool as their official reporting tool. The PIU spends around 10 per cent of its time on planning-related activities, 60 per cent in implementation-related activities and 30 per cent in reporting-related activities.

31. Although communities are not involved in some of the project activities such as glacier monitoring and automatic weather stations, the project has engaged them into various community-led monitoring activities such as pastures monitoring and to a lesser extent water quality monitoring through eco-clubs. A main lesson learned from this experience was that communities were not necessarily aware that palatable species production had decreased. As such, involving them in the monitoring of the species has raised their awareness of climate change related impacts, and has helped them in understanding better the consequences of overgrazing, facilitating the creation of buffer zones for rehabilitation of pastures by the project. The project has followed a bottom-up approach in such monitoring, providing community-level trainings with herders' communities. Another important side-benefit of this approach was that the local communities took note of the existence of local government programs aiming at supporting them, including through the annual land use management plans. In addition, the community monitoring approach has allowed the development of synergies with other projects, e.g. lessons from an energy efficient project had led the project to use energy efficient housing to build two project infrastructures (automatic weather station). Synergies have also been noted in terms of local governance. For instance, UNDP will work with the Swiss Agency for Development and Cooperation (SDC) in the same region as the Fund's project in order to support the parliament representatives in better planning in terms of pastures management, protected area and ecosystem based management of natural resources.

32. Another example of community-level monitoring is the monitoring of pastures conducted in the Türgen soum, where pastures' conditions are being monitored through Geographic Information System (GIS) and on-site pictures during the summer. This approach is being used to show herders the benefits of allowing the land to recover from overgrazing and raise awareness on the impact of overgrazing. The local parliament has been highly supportive of such process and involved in its implementation. Such approach of pictures monitoring is an idea scaled up from the Green Gold project of the Swiss Agency for Development and Cooperation (SDC).

33. Similarly, water quality monitoring is being done in both project sites through students from eco-clubs hosted by schools or universities. Such ground-level data are collected once in a month and forwarded to both the basin river association and the PIU in Ulaanbaatar for monitoring and reporting specific for the project components. This is especially important in the eastern site, where mining-related industries induce high risks of water pollution. The project is trying to go beyond its monitoring role of natural resources and to design some advice for local communities for instance in terms of filtering the water or boiling it before using it.

34. During the portfolio monitoring mission, the team discussed with representatives of the implementing entity (UNDP) the inherent challenges of evaluating the impacts of adaptation projects, such as the Mongolia one. Such projects typically produce their outputs mostly towards their end, and during project implementation it is often not possible to assess the impacts of the project beyond its lifetime. This would require ex post evaluations done after the end of the project, perhaps three or five years (or longer) afterwards. The practical challenge of conducting such later evaluations is that project funds are practically always tied to the project budget that is closed at the end of the project. During discussions between UNDP and the mission team it was suggested that other sources of funding e.g. through small grants could help in evaluating projects' impacts after their end and could help gathering important impact information and experiences.

35. As part of the Fund's reporting requirement, the project has undertaken a Mid-Term Review (MTR) in 2015. Once finalized, the report has been shared with key stakeholders, including the project's Board members and other key stakeholders. Beneficiaries and stakeholders were generally in agreement with the MTR findings and recommendations. The PIU has also estimated the MTR as reflecting the reality of the project and its challenges. A management response has been approved by the project's Board. Among the 22 recommendations, 21 have already been implemented by the project. Such changes included minor changes for some indicators to reflect better the goal and ground-level reality of the project (e.g. removal a poverty reduction indicator).

Strategies for adapting agricultural systems to climate change

36. Traditionally, there was no set price on water. However, the water basin administration is now collecting water payments to support government budget as water resources are now recognized as a major issue for the country. In this respect, one of the recommendations from the mid-term review was to have some follow up action with respect to this recommendation to collect water uses fees. However, due to the sensitivity of the topic, the project Board recommended to first make an assessment on the feasibility to collect payments for water use. Current responsibilities regarding the water resources are rather scattered across different governments' organization (e.g. the MEGDT, the MOFA, the National Water Committee etc.). Also, the coordination of such activities across different ministries has been challenging for the project.

37. The project has implemented "double protection" of springs in a few target sites. This is a crucial issue since springs are drying up in the western part of the country and since the Uvs River basin, one of the target regions of the project, has around one thousand springs. Currently, the spring water comes from leakages from sub-soil so it is very sensitive to dry climate. The soil around the springs is swampy and very sensitive so it can be easily degraded and compacted due to overgrazing that causes in turn springs' disappearance. For example, in the Khentii Aimag, 70 per cent of the springs have dried up among the 611 springs that the aimag has. Similarly, in the Dornod Aimag, 62 per cent of springs dried up, for a total of 354 springs. Within this backdrop, the project is implementing spring protection measures (around 10/15 ha of springs in the Uvs region). Local herders were cooperative as the protections were built. In addition, the project has arranged trainings and has involved the herders in the construction of these infrastructures. Construction materials were chosen by herders who wanted to use natural materials that can be naturally degraded. In a few cases, such protection has allowed the community to request further funding from the local district to protect additional springs. A side benefit that has been observed is that local populations have also better quality water for their own consumption since springs are protected and animals stay out of the springs. The maintenance of these infrastructures is deeply anchored into local pastures plans. However, for pasturelands located in abandoned areas, some memorandum of understandings were signed with communities to ensure the maintenance of these infrastructures, where some sum-level administration, NGOs or water users' groups are in charge of maintaining the infrastructures. That reduces the risk of communities not taking ownership of the infrastructures.

38. According to the MOFA, the project has introduced water saving methodologies that are very important. The introduction of these technologies has been done in an integrated manner. The project has conducted a cost benefit analysis at the households' level regarding different irrigation techniques, concluding that drip irrigation is the most suitable technology for the country, producing 3 to 4 times more benefits. Based on this study, the law on agriculture that was approved in 2016

had reflections on irrigation and also outlined that drip irrigation systems are the most suitable for the country and that the government should implement loan schemes to allow financing such structures. Another policy document that has also been approved this year was the policy document to develop agriculture sector from 2015 to 2025. This has also introduced drip-irrigation with the support of irrigation as a main priority.

39. An important outcome of the project was the definition of a method allowing solving water resources-based conflicts. In Mongolia, such issues are observed between small scale and large scale farmers, crop farming and livestock farming; crop producers and mining companies etc. The project has supported clearer guidelines on water user associations, cooperation between NGOs, the private sector and government. A pilot group was established in two water groups to test this approach. It allowed conflicts to decrease during the last two years and communities to learn how to efficiently use the water resources and how to protect them. Such methodologies and approach would be used to shape the national water law currently under development.

40. Finally, the project has established a pilot water catchment to restore the water resources. Such catchment has a small capacity but should be able to divert water from region with water to regions where there is no water. During the first field visit, channels have been constructed to collect water melting from snow and to divert it to the valley. If there is enough snow, it feeds into a small lake that has been created. The infrastructure that existed since the 1990s has been rehabilitated. Such approach could be replicated/continued.

41. There are two main programmes currently implemented by the government: i) the programmes on Mongolian livestock and ii) the government policy on the agricultural sector. Measures implemented in these documents are improving pastures management, quality of livestock, and fodder availability for livestock production. In addition, another important work is done on pasture irrigation. It has been noted that, since there is no direct activity in the field of livestock production per se (but rather fodder production and water availability), the level and effectiveness of coordination between the project and the Ministry of Food and Agriculture had probably room for improvements.

42. The Ministry of Food and Agriculture has agencies in every aimag called “Agencies of food and agriculture”. The sums have units on “Husbandry and Veterinary services” in which there are theoretically two specialists i) one on crop production and ii) one on husbandry. In some sums where crop production is important, there are agronomists as well. There are training centers for these specialists where NGOs and other agencies provide trainings. The MOFA has a dedicated budget on trainings, plus other funding sources for trainings.

43. Various concrete activities have been witnessed during the field visits such as the implementation of water saving techniques, including drip irrigation systems. Irrigation-related data are reported into guideline documents that the project has produced. Diversification of agricultural activities is also being pushed by the project. For instance, strawberry production has been introduced as a cash-crop production. In addition, trees have been planted as wind breaker and soil protection, and seeds are being produced.

Lessons learned

Ecosystem-Based adaptation

44. While scope for ecosystem-based methods for climate change adaptation may exist in different types of environments, they appear to have particular advantage over engineering-type methods in relatively sparsely-populated areas, where structural investments might be prohibitively expensive. Mongolian mountains and grasslands are a good example of such an environment. While suitable for EbA methods, such environments typically host natural resources based economies and livelihoods, and are therefore prone to conflicts between different uses, which necessitates a holistic natural resources management approach that is able to balance the different needs. The Adaptation Fund project in Mongolia has demonstrated a number of good and potentially replicable EbA methodologies. However, as noted above, it takes place in a complex political environment where widespread and relatively uncontrolled overgrazing is a major underlying driver of ecosystem vulnerability. While realizing the enormity of the challenge, and the fact that there are other government and donor initiatives aimed at improving the sustainability of grassland management, it would be very important for the EbA activities to be tightly anchored in the larger picture of sustainable grassland management. From the perspective of the Fund, a lesson learned is that the technical review of project proposals has to continue to pay attention to such multiple challenges, both in terms of the analysis of the underlying drivers that would need to be taken into account in the project design (for example for policy-related activities), and in terms of implementation arrangements that are inclusive of stakeholders with potentially conflicting interests.

45. The Adaptation Fund project has been instrumental in compiling various types (biological, hydrological, etc.) of data and developing information that did not exist before. This is crucial for properly designing adaptation interventions, as long as such data are properly compiled into easily accessible databases, including international data collection and dissemination networks and the Adaptation Fund project can be seen as a ground-laying project for future interventions. The role of Fund projects as producers of basic climate-related information may benefit from further analysis, as much of it may go unnoticed at the Fund level.

46. While the ecosystem-related adaptation challenges the project is addressing are particular, they are not necessarily unique. Promoting regional exchanges among EbA practitioners from different countries might yield unexpected benefits through transfer of innovative technologies and practices.

Monitoring and reporting

47. Even though the Fund reporting requirements were not perceived to be too cumbersome by the Implementing Entity and the Executing Entities, the PIU reports that it spends a considerable amount of time on fulfilling the different reporting requirements of different stakeholders (the Fund, and other national ministries and/or agencies). As a result, the Fund may think about potential ways to simplify/streamline further its reporting requirements, such as limiting the number of indicators in its strategic results framework or limit its reporting requirements to the sole core indicators, in order to allow the implementing and executing entities to spend more time to the actual planning and implementation of the concrete activities that the Fund is supporting. In addition to such simplification, capacity building support could be provided to implementing entities with respect to the reporting requirements of the Fund, in order to allow an even smoother fulfilment of such requirements. Finally, the Fund could attempt to harmonize its reporting requirements with implementing entities and country-level reporting requirements in order to further alleviate the time spent by executing entities on reporting. Having noted this, it should be recognized that this project has a very high number of different types of activities, which contributes to the challenges in monitoring and reporting on those activities. Therefore, other projects following a more streamlined

approach may not share this challenge to a similar extent. This is something the Fund could also explore through future portfolio monitoring missions.

48. A positive outcome of the project is that the Implementing Entity and the executing entities would like to have the Fund's results tracker adopted by a national organization (the water basin authority). The Fund may wish to communicate further about the tools it has developed for its reporting requirements.

Annex 1: Key questions

A set of questions was prepared for the objectives of the mission, which were applied for the mission.


Key guiding questions in the targeted learning plan	
Mission objectives	Key questions for the mission
<p><u>Objective 1</u>: to collect lessons learned from the ecosystem-based adaptation approach experience, at different levels:</p> <ul style="list-style-type: none"> At the local level, for the communities and ecosystems involved, including both adaptation and non-adaptation benefits; At the government level, where the key question is which kind of role EbA can play in the big picture of national adaptation interventions, how it can be efficiently mainstreamed into national policies, and how ecosystem services are valued in the context of adaptation. 	<ol style="list-style-type: none"> How is the project benefiting local communities through the EbA approach? <ol style="list-style-type: none"> Adaptation and non-adaptation benefits How is the project benefiting local ecosystems through the EbA approach? <ol style="list-style-type: none"> Adaptation and non-adaptation benefits Has the project influenced the way EbA is seen by the government as a component in adaptation strategies? Has it led to any follow-up or up-scaled actions? What kind of implications has the EbA approach had on: <ol style="list-style-type: none"> Efficiency and effectiveness Sustainability Avoiding environmental and social risk What are the possibilities of continuing, expanding or replicating the EbA activities? Has the project contributed new information on the value of ecosystem services? What are the possibilities for applying that information?
<p><u>Objective 2</u>: to learn how monitoring and reporting have been used to improve adaptive management in the project</p> <ul style="list-style-type: none"> How relevant indicators were defined by the implementing/executing entities, and measured during implementation; How the communities have been involved in 	<ol style="list-style-type: none"> How were the indicators defined at project design stage? How have the indicators been measured during implementation? What are the main experiences from community participation in monitoring? Has community participation enhanced monitoring outcome, and has it been cost-effective? Have there been co-benefits resulting from community participation in monitoring? How was the mid-term review (MTR, 2015) seen by the project stakeholders?




<p>monitoring of natural resources;</p> <ul style="list-style-type: none"> • How the mid-term review has been used to inform and reshape project activities. 	<p>7) Did the MTR help improve project performance?</p> <p>8) Have changes been implemented to project design following the MTR?</p> <p>9) What, if any, could be improved in MTRs as a tool for reflection within the project?</p>
<p><u>Objective 3: to gather information on strategies for adapting agricultural systems to climate change in two different ecosystems:</u></p> <ul style="list-style-type: none"> • water management perspective • From a livestock perspective 	<p>1) How were the livestock/water management activities rationally selected to address the identified climate change impacts? Were they proposed by communities? Are they deemed adequate by communities, by the government?</p> <p>2) Have they evolved throughout project implementation, and what were the reasons for such changes?</p> <p>3) Are these techniques being adopted by the target communities? If not, why?</p> <p>4) How did the demonstration sites influenced on their adoption?</p> <p>5) How the water management techniques/activities have influenced on the livestock production systems? Are they effective/efficient?</p> <p>6) What is the expected impact of the project on larger policies related to agriculture, especially to water and livestock management?</p> <p>7) How is the project addressing anthropogenic pressures or non-climatic factors that may exacerbate climate related risks (e.g. current agricultural/economic, or institutional framework?</p> <p>8) How appropriate are the selected measures to address these factors?</p> <p>9) How are such practices integrated into the replication part of the project (under component 3) and more widely across other sectors/institutions?</p> <p>10) How are these technologies being sustained?</p>

Annex 2: Agenda of the mission

Time	Activity	Responsible parties/persons	Place/ Notes
June 11, Saturday			
23:30	Arrival in Ulaanbaatar Pick up arranged by Country Office (CO)	AFB Board members and Donor countries and Representatives of and Bangkok regional hub: <ul style="list-style-type: none"> ○ Mr.Mikko Ollikainen , AFB secretariat ○ Mr.Hugo Remaury , AFB Secretariat ○ Ms.Yuka Greiler , Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs ○ Ms.Lisa Farroway, RTA, Bangkok regional hub, UNDP in Asia and the Pacific 	“Chinggis Khaan” international airport
June 13, Monday			
DAY 1			
08:30	Pick up to walk to UNDP Country Office	UNDP : DRR, PO, ETL/Donor mission group	Ms. Khaliun, the Project Secretary will see at Lobby of Tuushin hotel to walk to CO, UNDP
09:00-09:45	Briefing at UNDP Country Office , Mongolia <ul style="list-style-type: none"> ○ Ms. Beate Trankmann, Resident Representative ○ Ms.Daniela Gasparikova, Deputy Resident Representative 		

09:45-10:15	<ul style="list-style-type: none"> ○ Ms. Bunchingiv B., Environment team leader ○ Ms. Chimeg J., Program officer (PO) ○ Ms. Lisa Farroway Security briefing	Amartuv, Security officer, UNDSS	UNDP CO UNDSS, UN House
10:20-12:00	<ul style="list-style-type: none"> ✚ Introduction meeting at PIU (Project staff) ○ Ms .TuyaTs., National project coordinator ○ Mr.Enkhbat M., Administrative and finance officer ○ Mr. Tsognamsrai D., Community outreach and rural conservation development expert ○ Ms.Sumiyasuren J., Strategic planning expert ○ Ms. Otgonjargal N., Natural resource policy expert ○ Ms. Khaliun G., Translator/Secretary ○ Mr. Enkh-Amgalan D., Driver 	PIU	PIU (in walking distance from CO) Mrs. Chimeg, PO will join On Field for trainings On Field for Local adaptation work coordination On Field In walking distance: Felicita Restaurant/ Secretary Khaliun and Officer Otgonjargal will join
12:00-13:20	Lunch break		
13:30-15:30	Meetings with representatives of the Implementing partner in Ulaanbaatar city /Annex 1. List of Meeting participants / (Discussion topic mainly on Implementation, Outcomes, Co-financing, Mainstreaming and Sustainability issues) <ul style="list-style-type: none"> ✚ Meeting with Representatives of Project Board, National Project Director (NPD) and Officials of Ministry of Environment, Green Development and Tourism (MEGDT) 	PIU, NPD, ETL and UNDP CO	MEGDT, Khaan meeting room NPC. Tuya and PO. Chimeg will join to Meeting facilitation

	<ul style="list-style-type: none"> ○ Ms. Daniela Gasparikova, Deputy Resident Representative of UNDP and Co-chair of Project Board ○ Mr. Munkh-Erdem G., Director of Land Management and Integrated Water Policy Coordination Department, and Chairman of Project Board ○ Ms. Bulgan T., Director of Department of Green Development Policy ○ Mr. Tuvshinbayar Kh., Head of Division of River Basin Administration and NPD, Member of Project Board ○ Ms. Enkhsaikhan Ts., Head of International Cooperation Division of MEGDT and Project Board member ○ Mr. Battulga D., Vice director of National Agency of Meteorology, Hydrology and Environmental Monitoring and Member of Project Board ○ Ms. Tuya Ts., NPC, Secretary of Project Board 		On Mission to Russia
15:30-17:00	<p> Meeting with Representatives of Technical Committee and National Consultants</p> <ul style="list-style-type: none"> ○ Mr. Batjargal Z., Project former consultant on EBA management issues and coordination/mainstreaming of best practices/ Job title: National focal point of UNFCCC and Green Climate Fund in Mongolia, non formal Advisor on Climate Change for the Minister ○ Mr. Jadamba D., Project national consultant on Riparian area and Spring protection, Member of Technical Committee ○ Mr. Baranchuluun Sh. Project national consultant on Irrigation and Water Users Groups/ Technical Committee Member/ Job title: Head of Food and Hydro mechanical department of School of Technology and Engineering, Mongolian University of Life sciences 		MEGDT, Khaan meeting room
<div> <div>June 14, Tuesday</div> <div>DAY 2</div> </div>			
09:00	Pick up by Mr. Dagvadorj, Driver of Managed Resources of Protected Areas Project to drive to Ministry of Food and Agriculture	PIU/Donor mission group/ UNDP (All relevant parties)	Meet at Entrance at Tuushin hotel

09:30-10:30	<p> Meeting with representatives of Ministry of Food and Agriculture</p> <ul style="list-style-type: none"> ○ Mr. Altangerel B., Officer of Crop Production Policy Implementation Department, Ministry of Food and Agriculture and Project Board Member ○ Mr. Byambadorj N., Officer of Department of Livestock Policy Implementation <p>Pick up by Mr. Dagvadorj, Driver of Managed Resources of Protected Areas Project to drive back to UNDP CO</p>	PIU/Donor mission group/ UNDP (All relevant parties)	PO. Chimeg and NPC. Tuya will see at the Ministry to join to Meeting facilitation
11:00-13:00	<p> Meeting with International NGOs , Media and Research institutions</p> <ul style="list-style-type: none"> ○ Mrs. Munkhchuluun., WWF ○ Mr. Ulziisaikhan D., Journalist at MONTSAME News Agency ○ Mr. Adiya Ya., Institute of General and Experimental biology ○ Oyunbaatar D., Senior researcher, Institution of Hydrology, Meteorology and Environment as replacement of Technical Committee Chairman due to Mr. G. Davaa's absence 	PIU/Donor mission group/ UNDP (All relevant parties)	<p>Meeting room, Ministry of Food and Agriculture</p> <p>Meeting room at UNDP CO (5th floor)</p> <p>Officer Otgonjargal/ Secretary Khaliuna will join if translation is necessary</p>
13:00-14:20	Lunch break around UNDP CO	PIU/Donor mission group/ All relevant parties	Meeting room at UNDP CO (5 th floor)
14:30-15:30	<p> Meeting with representatives of Land Affairs and Urban Development Office and Research institutions</p>		Officer Otgonjargal/ Secretary Khaliuna

	<ul style="list-style-type: none">○ Ms. Otgonchimeg, Officer, Land Affairs and Urban Development Office, National Agency of Land Management, Geodesy and Cartography○ Ms. Batchuluun Y., National University of Education○ Mr.Enkhbileg. D, Freelance expert on Wildlife conservation and management options with applications of GIS and Maxent in context of Climate change		will join if translation is necessary
June 15, Wednesday			
DAY 3			
04:30	Leave for airport and pick up by Van arranged by EbA Project	PIU will be responsible for trip and meeting arrangements to and at target sites	Meet at Entrance of Tuushin hotel and drive to “Chinggis Khaan” international airport
06:20-08:20	Flight to Ulaangom city, Uvs aimag (Hunnu Airline)		
08:30-09:00	Arrival in Ulaangom city / Check in to Grand hotel will be after Local Meeting at the Uvs Aimag Governor’s Administration Office		
	Start of Field trip to Western target area- Kharkhiraa Turgen sub river basins in Uvs aimag	PIU/Donor mission group/ DRR and officers ,UNDP Mongolia (All relevant parties)	“Tsagaan deglii” local airport
	/Please refer to Annex 2. Trip agenda /		
June 16, Thursday			
DAY 4			
Field trip	Field trip to Western target area- Kharkhiraa Turgen sub river basins in Uvs aimag	PIU will be responsible for trip and meeting arrangements to and at target sites	Uvs aimag
	/Please refer to Annex 2. Trip agenda /		
June 17, Friday			
DAY 5			

07:30	Leave for Ulaangom Airport	PIU/Donor mission group/ UNDP (All relevant parties)	“Tsagaan degli” local airport
08:40-13:30	Flight back to UB (Hunnu Airline- transit through Khovd aimag) Pick up by Van by EbA Project to drive back to Tuushin hotel		“Chinggis Khaan” international airport
16:00-17:00	Debriefing at UNDP CO, Mongolia		UNDP Country office
June 18, Saturday		DAY 6	
tbd	Departure	Donor mission group	“Chinggis Khaan” international airport

Annex 3: List of institutions/stakeholders met by the mission

In Ulaanbaatar:

Date	Time	Activity	Place / Participants
June 13	09:00-09:45	<u>Briefing at UNDP Country Office , Mongolia</u>	UNDP Country Office (CO), UN House <ul style="list-style-type: none"> ○ Ms. Beate Trankmann, United Nations Resident Coordinator ○ Ms. Daniela Gasparikova, Deputy Resident Representative of UNDP and Co-chair of Project Board ○ Ms. Lisa Farroway, RTA, Bangkok regional hub, UNDP in Asia and the Pacific ○ Ms. Bunchingiv B., Environment team leader ○ Ms. Chimeg Junai, Program Analyst of UNDP ○ Ms. Yuka Greiler, Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs ○ Mr. Mikko Ollikainen, AFB secretariat ○ Mr. Hugo Remaury, AFB Secretariat
	09:45-10:15	<u>Security briefing</u>	UNDSS, UN House <ul style="list-style-type: none"> ○ Mr. Amartuv N., security officer, UNDSS

			<ul style="list-style-type: none"> ○ Ms. Yuka Greiler , Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs ○ Mr. Mikko Ollikainen , AFB secretariat ○ Mr. Hugo Remaury , AFB Secretariat
	10:20-12:00	<u>Introduction meeting at the Project Implementation Unit</u>	PIU office <ul style="list-style-type: none"> ○ Ms. Tuya Ts., National project coordinator ○ Mr. Enkhbat M., Administrative and finance officer ○ Ms. Otgonjargal N., Natural resource policy expert ○ Ms. Khaliun G., Translator/Secretary ○ Mr. Enkh-Amgalan D., Driver ○ Ms. Chimeg Junai, Program Analyst of UNDP ○ Ms. Yuka Greiler, Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs ○ Mr. Mikko Ollikainen, AFB secretariat ○ Mr. Hugo Remaury, AFB Secretariat
	13:30-15:30	<u>Meeting with Chairman of Project Board, Board members, National Project Director (NPD) and officials of Ministry of Environment, Green Development and Tourism (MEGDT)</u>	“Khaan” meeting room at MEGDT <ul style="list-style-type: none"> ○ Mr. Munkh-Erdem G. Director, Department of Land

			<p>management and Integrated Water Policy Coordination of MEGDT, Chairman of Project board</p> <ul style="list-style-type: none"> ○ Mr. Tuvshinbayar Kh., Head of Division of River Basin Administration and National Project Director, Member of Project Board ○ Ms. Bulgan T., Director of Department of Green Development Policy ○ Mr. Battulga D., Vice director of National Agency of Meteorology, Hydrology and Environmental Monitoring and Member of Project Board ○ Ms. Enkhsaikhan Ts., Head of International Cooperation Division of MEGDT and Project Board member (not present) ○ Ms. Daniela Gasparikova, Deputy Resident Representative of UNDP and Co-chair of Project Board ○ Ms. Tuya Ts., NPC, Secretary of Project Board
	15:30-17:00	<u>Meeting with Representatives of Technical Committee and National Consultants</u>	<p>“Khaan” meeting room at MEGDT</p> <ul style="list-style-type: none"> ○ Mr. Batjargal Z., National focal point of UNFCCC and Green Climate Fund in Mongolia, non formal Advisor on Climate Change for the Minister and Project former consultant on EBA management issues and

			coordination/mainstreaming of best practices <ul style="list-style-type: none"> ○ Mr. Baranchuluun Sh, Head of Food and Hydro mechanical department of School of Technology and Engineering, Mongolian University of Life sciences, Project national consultant on Irrigation and Water Users Groups and Member of Technical committee ○ Mr. Jadamba D., Project national consultant on Riparian area and Spring protection
June 14	09:30-10:30	<u>Meeting with representatives of Ministry of Food and Agriculture</u>	Office of Crop Production Policy Department at MOFA <ul style="list-style-type: none"> ○ Mr. Byambadorj N., Senior officer of Department of Livestock Policy Implementation (body in charge of drafting the pasture law) ○ Mr. Altangerel B., Officer, Crop Production Policy Implementation Department, Ministry of Food and Agriculture and Project Board member
	11:00-13:00	<u>Joint meeting with International NGOs , Media and Research institutions</u>	Meeting room, UNDP CO <ul style="list-style-type: none"> ○ Mr. Oyunbaatar D., Senior researcher, Institution of Hydrology, Meteorology and Environment as replacement of Technical Committee

			<p>Chairman due to Mr. G. Davaa's absence</p> <ul style="list-style-type: none"> ○ Mr. Adiya Y., Mongolian academy of science, Institute of General and Experimental biology ○ Mr. Ulziisaikhan D., Journalist of Montsame agency ○ Otgonchimeg Officer, National Agency of Land Management, Geodesy and Cartography ○ Batbold D., Director of WWF ○ Munkhchuluun B., Officer at WWF ○ Batchuluun Y., National University of Education ○ Enkhbileg D, Freelance expert
	14:30-15:30	<u>Joint meeting with representatives of Land Affairs and Urban Development Office and Research institutions</u>	<p>Meeting room, UNDP CO</p> <ul style="list-style-type: none"> ○ Mr. Enkhbileg. D, Freelance expert on Wildlife conservation and management options with applications of GIS and Maxent in context of Climate change ○ Ms. Batchuluun Y., National University of Education ○ Mr. Purevdorl Surenkhorloo, freshwater and climate change officer at WWF ○ Ms. Munkhchuluun B., Officer at WWF

Field trip: in UVS AIMAG /KHARKHIRAA, TURGEN RIVER SUB BASIN:

Date	Time	Activity	Place
June 15	09:00-10:30	<u>Meeting with relevant Aimag stakeholders: Aimag Governor's Office, RBA, EPA, PAA, and Center for meteorology, hydrology and environmental monitoring</u>	<p>Meeting room of Aimag governor's administration office</p> <ul style="list-style-type: none"> ○ Mr. Chimed.Ch, Aimag Parliament Speaker ○ Mr. Ganbold.Z, Director of Development Policy Division of Governor's Administration Office and Project Board member ○ Mr. Togtokhbayar. D, Director, Uvs Lake-Tes River Basin Administration ○ Mr. Munkhbat.D, Head of Hydro-Meteorological Office ○ Mr. Ankhbayar M, Head of PAA of Uvs lake ○ Mr. Ochir. Ya, Food, Agriculture and Small and Medium Industry Officer, Division of Development Policy, Governor's Administration Office ○ Mr. Daalkhai B., Officer, Crop production technology officer, Department of Food and Agriculture, Governor's Administration Office ○ Mr. Ganbold.B, Head of Environment, Nature and Tourism Office ○ Mr. Murdorj.U, Senior officer responsible for water policy, Office of Environment and Project Coordinator of Uvs aimag

			<ul style="list-style-type: none"> ○ Mr. Otgoi.D, Land management and Environmental Policy Officer, Division of Development Policy, Governor's Administration Office
	Throughout	<p>Local communities, eco-club members, project beneficiaries</p> <p><u>Visit Environmental unit of Turgen soum for introduction on Photo monitoring on degraded pasture and rotational pasture use</u></p> <p>“Yoliin am” valley for rehabilitated water channel for ensuring pasture water supply and meet with Local herders and communities (85 km from Ulaangom city, will take approx. 1.30 hour)</p> <ul style="list-style-type: none"> - Rehabilitation of water structures for channeling rain, snow and flood water from “Yoliin am” valley for improved pasture water supply (constructed in 2015) 	<p>Target sites</p> <p>Visit Technology transfer site for ecologically oriented agriculture and meet “Dasan zohitsokhui/ Adaptation” community group in Ulaangom soum (5 kms from the center of Ulaangom city)</p>
June 16		<p><u>Visit and meet with eco club members at Chandmani Eco-school in Ulaangom soum.</u></p> <p>Eco initiatives by Eco school members</p> <ul style="list-style-type: none"> • Introduction on activities of Eco clubs • Introduction EbA and CC curriculum • Exhibition of products made by school students using recycled raw-materials/ • River water quality monitoring; the project bought some water quality measures instruments (paper changing colors) 	
17 June 2016		<u>Debriefing</u>	<p>Best Western Hotel, Ulaan Bator</p> <ul style="list-style-type: none"> ○ Ms. Beate Trankmann, United Nations Resident Coordinator ○ Ms. Daniela Gasparikova, Deputy Resident Representative of UNDP

			<p>and Co-chair of Project Board</p> <ul style="list-style-type: none"> ○ Ms. Lisa Farroway, RTA, Bangkok regional hub, UNDP in Asia and the Pacific ○ Ms. Bunchingiv B., Environment team leader ○ Ms. Chimeg Junai, Program Analyst of UNDP ○ Ms. Yuka Greiler, Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs ○ Mr. Mikko Ollikainen, AFB secretariat ○ Mr. Hugo Remaury, AFB Secretariat ○ Daniel Valenghi, Head of Programme, Swiss Cooperation Office of the Embassy of Switzerland
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List of people to meet in Ulaanbaatar city

#	Participant's name	Position /Organization	Contact	Relevancy of stakeholders
<i>UNDP Mongolia</i>				
1.	Beate Trankmann	Resident Coordinator UN, Resident Representative of UNDP Mongolia	327585-1101	UNDP <i>Implementing entity</i>
2.	Daniela Gasparikova	Deputy Resident Representative of UNDP Mongolia and Co-chair of Project board	327585-1111	
3.	Bunchingiv B.	Environment Team Leader	327585-1124	
4.	Chimeg J.	Program Officer	327585-1125	
5.	Amartuv	Security officer , UNDSS	319624	
<i>PIU</i>				
6.	Tuya Ts.	National project coordinator, Secretary of Project board	94092390	PIU Project board
7.	Enkhbat M.	Administrative and Finance officer	99825360	PIU
8.	Tsognamegsrai D.	Community Outreach and Rural Conservation Development Expert	88342299	
9.	Sumiyasuren J.	Strategic planning expert	99791226	
10.	Otgonjargal N.	Natural resource policy expert	88821171	

11.	Khaliun G.	Translator/Secretary	99062529	
12.	Enkh-Amgalan D.	Driver	98646566	
Ministry of Environment, Green Development and Tourism (MEGDT)and Project Board members				
13.	Munkh-Erdem G.	Director, Department of Land management and Integrated Water Policy Coordination of MEGDT, Chairman of Project board	91114911	MEGDT Executing entity Project Board
14.	Tuvshinbayar Kh.	Head, Division of River Basin Management, MEGDT, National project director and Member of Project Board	266311 99005123	MEGDT Executing entity Project Board
15.	Enkhsaikhan Ts.	Head, Division of International Cooperation, MEGDT, Member of Project Board	266197	MEGDT Executing entity Project Board
16.	Battulga B.	Vice director of National Agency of Meteorology, Hydrology and Environmental Monitoring and Member of Project Board	99113286	Project Board National Agency of Meteorology, hydrology and Environmental Monitoring
17.	Bulgan T.	Director, Green Development Policy and Strategy planning, MEGDT	310357	MEGDT Executing entity
Meeting with Representatives of Technical Committee and National Consultants				

18.	Batjargal Z.	National focal point of UNFCCC and Green Climate Fund in Mongolia, non formal Advisor on Climate Change for the Minister and Project former consultant on EBA management issues and coordination/mainstreaming of best practices	99086786	Project Technical Committee Project national consultant
19.	Oyunbaatar D.	Senior Researcher, Institute of Hydrology, Meteorology and Environment	99851585	Project Technical Committee
20.	Jadamba D.	Project national consultant on Riparian area and Spring protection	99262868	Project Technical Committee IFAD- Mr. Jadamba will provide information on how IFAD methodology was introduced in spring protections
21.	Baranchuluun Sh.	Head of Food and Hydro mechanical department of School of Technology and Engineering, Mongolian University of Life sciences, Project national consultant on Irrigation and Water Users Groups and Member of Technical committee	99043656	Project Technical Committee Project national consultant Universities/Research institutions
<i>Ministry of Food and Agriculture</i>				
22.	Byambadorj N.	Officer of Department of Livestock Policy Implementation	91009921	Ministry of Food and Agriculture
23.	Altangerel B.	Officer, Crop Production Policy Implementation Department, Ministry of Food and Agriculture and Project Board member	261687 99267659	Ministry of Food and Agriculture Project Board
<i>International organizations</i>				
24.	Batbold D.	Director of WWF	99041022	WWF

25.	Munkhchuluun B.	Officer, WWF	311658	WWF
<i>Mongolian Academy of Science and Research institutes/ Universities</i>				
26.	Batchuluun Y.	National University of Education		Universities/ Research institutes
27.	Adiya Y.	Institute of General and Experimental biology	93116264	Mongolian Academy of Science
28.	Enkhbileg D.	Freelance expert	91911940	Research institutes
<i>National media</i>				
29.	Ulziisaikhan D.	Journalist of Montsame agency	99194870	National media
<i>National Agency of Land Management, Geodesy and Cartography</i>				
30.	Otgonchimeg	Officer, National Agency of Land Management, Geodesy and Cartography	99030152	National Agency of Land Management, Geodesy and Cartography SDS - Ms. Otgonchimeg will provide information on how project introduced methodology of photo-monitoring on pasture which was initiated by 'Green Gold' project funded by SDS

List of people to meet in Uvs aimag/ Kharkhiraa, Turgen river sub basin

#	Participant's name	Position /Organization	Contact	Relevancy of stakeholders
1.	Ganbold Z.	Director of Development Policy Division of Governor's Administration Office and Project Board member	99459045	Local government Project Board
2.	Chimed Ch.	Aimag Parliament Speaker		Local Government

3.	Togtokhbayar D.	Director, Uvs Lake-Tes River Basin Administration	99458022	RBA/RBC
4.	Ganbold B.	Head of Environment, Nature and Tourism Office	99255265	Local stakeholder
5.	Munkhbat D.	Head of Hydro-Meteorological Department		<p>Local stakeholder</p> <p>Ministry of Mineral Resources and Energy /Local branch agency, State Specialized Inspection Agency - Mr.Munkhbat.D will provide information on how project cooperates with branch laboratories of State Specialized Inspection Agency on water quality inspection and more etc.</p> <p>Briefings on management of mineral resource and energy at local level integrated with project activities in target sites will be given from Ulz RBA particularly.</p>
6.	Daalkhai B.	Crop production technology officer, Department of Food andAgriculture, Governor's Administration Office		Local stakeholder
7.	Ochir Y.	Food, Agriculture and Small and Medium Industry Officer, Department of Development Policy, Governor's Administration Office		Local stakeholder
8.	Murdorj U.	Senior officer responsible for water policy, Office of Environment and Project Coordinator of Uvs aimag	9945985	Local stakeholder

9.	Otgoi D.	Land management and Environmental Policy Officer, Department of Development Policy, Governor's Administration Office		Local stakeholder SDS- Mr. Otgoi.D will provide information on how project introduced methodology of photo-monitoring on pasture which was initiated by 'Green Gold' project funded by SDS
10.	Local communities, eco-club members, project beneficiaries			

Annex 4: Site visit agenda and associated appendixes

Date and duration:

15-17 June, 2016 /2 nights and 3 days/

Route and distance: Ulaanbaatar city- Ulaangom city, Uvs aimag (flight) –Sagil soum (“Yoliin am” valley) (85km)-Turgen soum (53 km)-Ulaangom (32km)-Naranbulag soum (80 km)–Uvs lake (30km)-Ulaangom city (35km)-Airport in Ulaangom(15km)-Ulaanbaatar city (flight)

Mission team composition:

Team A:

1. Ms.Daniela Gasparikova, DRR, UNDP
2. Mr.Mikko Ollikainen, AFB secretariat
3. Mr.Hugo Remaury, AFB Secretariat
4. Ms.Yuka Greiler, Head of GPCC, Swiss Agency for Development and Cooperation, Federal Department of Foreign Affairs
5. Ms.Lisa Farroway, RTA, Bangkok regional hub, UNDP in Asia and the Pacific
6. Ms.Bulgan.T, Director of Department of Green Development Policy and Strategic Planning, MEGDT
7. Mr.Tuvshinbayar.Kh, National Project Director, Head of Division of River basin administration, MEGDT
8. Ms.Bunchingiv B., Program office, Environment cluster, UNDP Mongolia
9. Ms.Tuya.Ts, National project coordinator , EbA project

Team B:

1. Mr.Tsognamsrai.D, CORCDE, EbA project
2. Ms.Sumiyasuren.J, SPE, EbA project
3. Mr.Choijilsuren.D, Ulaangom soum project coordinator
4. Mr.Munkhbat.L, Turgen soum coordinator
5. Mr.Togtokhbayar.D, Director of Uvs lake-Tes river basin administration
6. Mr.Enkh Amgalan D., PIU driver
7. 3 Drivers (Local units and Local aimag)

Additional information:

- **Mean** climate characteristics of June of Ulaangom city: *Temperature mean: +17.5°C, Maximum temperature: +35.0°C, Minimum temperature: -3.1°C Precipitation: 27.5mm, wind speed: 2m/sec*
- Time difference between Ulaanbaatar and Ulaangom: *1 hour*

Time	Activity	Specifics	Responsible staff
Day 1-June 15 (Wednesday)			
06:20	Depart for Ulaangom city, Uvs aimag (flight)	Aero Mongolia airline Destination: Ulaangom city	Pickup in the airport of Ulaangom city –Project officers
09:00~10:30	<p>Meeting with relevant Aimag stakeholders: Aimag Governor’s Office, RBA, EPA, PAA, Hydro-Meteorological Office</p> <p><i>/Please refer to Appendix. List of participants/</i></p> <p>Coffee and tea will be served at the meeting.</p> <p>Meeting with relevant stakeholders of Uvs Aimag:</p> <ul style="list-style-type: none"> - Mr.Chimed.Ch, Aimag Parliament Speaker - Mr.Ganbold.Z, Director of Development Policy Division of Governor’s Administration Office and Project Board member - Mr.Togtokhbayar.D, Director, Uvs Lake-Tes River Basin Administration - Mr. Munkhbat.D, Head of Hydro-Meteorological Office - Mr. Ankhbayar M, Head of PAA of Uvs lake - Mr.Ochir.Ya, Food, Agriculture and Small and Medium Industry Officer, Division of Development Policy, Governor’s Administration Office - Mr.Daalkhai B.,Officer, Crop production technology officer, Department of Food andAgriculture, Governor’s Administration Office - Mr.Ganbold.B, Head of Environment, Nature and Tourism Office - Mr.Murdorj.U, Senior officer responsible for water policy, Office of Environment and Project Coordinator of Uvs aimag - Mr.Otgoi.D, Land management and Environmental Policy Officer, Division of Development Policy, Governor’s Administration Office 	<p>Interview with the project stakeholders at Aimag level at Meeting room of Governor’s Administration Office.</p> <p><i>Meeting main points:</i></p> <ol style="list-style-type: none"> 1. Aimag policy on Crop production in context of CC, IWRM, Surface and ground water and Glacial monitoring networks, Protected areas management etc... 2. Aimag policy on Land use management more specifically pasture uses; sustainable use of pasture, Livestock structure and number in context of CC. <ul style="list-style-type: none"> • What inputs provided from the Project and implemented -what changes brought-how effective the interventions- any lessons learned-sustainability-further needs 	Team A and B

Time	Activity	Specifics	Responsible staff
10:30~13:00	<p>Leave Ulaangom city for “Yoliin am” valley for rehabilitated water channel for ensuring pasture water supply and meet with Local herders and communities <i>(85 km from Ulaangom city, will take approx. 1.30 hour)</i></p> <p>Lunch will be served at “Yoliin am”.</p>	<p>Yoliin am” valley for rehabilitated water channel for ensuring pasture water supply and meet with Local herders and communities <i>(85 km from Ulaangom city, will take approx. 1.30 hour)</i></p> <p>Rehabilitation of water structures for channeling rain, snow and flood water from “Yoliin am” valley for improved</p>	<p>Team A and B</p> <p>Brief information will be made by Sanjjav ., Sagil soum Governor</p>
14:00~15:00 15:00~16:00	<p>Leave “Yoliin am” valley for Turgen soum (53 km)</p> <p>Visit Environmental unit of Turgen soum for introduction on Photo monitoring on degraded pasture and rotational pasture use (Ranger, meteorologist, land officer of Turgen soum)</p> <p>Coffee and tea will be served at the meeting.</p>	<ul style="list-style-type: none"> • Photo monitoring on pasture assessment, Soum activities on sustainable pasture use in relation to it 	Team A and B
16:00~16:30 16:30~18:10	<p>Leave Turgen soum for Ulaangom city (32km)</p> <p>Visit Technology transfer site for ecologically oriented agriculture and meet “Dasan zohitsokhui/ Adaptation” community group in Ulaangom soum <i>(5 kms from the center of Ulaangom city)</i></p> <p>Part of it to visit “On-job training” of local small scale farmers of 7 soums of Turgen and Kharkhiraa subriver basin to replicate technology of water saving, and its monitoring on water uses, water allocation, soil maintenance, types of seeds and seedlings of vegetables, fruits etc..and importance of rotational planting</p>	<ul style="list-style-type: none"> • Water saving techniques and drip irrigation system are introduced and monitored • Strawberry planting is introduced • Tree planting as wind breaker and soil protection • Vegetable seed production only for Green houses tested and rotational planting is initiated • In Ulaangom case new sorts of vegetables adapted to CC are tested first time at this site (potatoes, strawberry) 	<p>Team A and B</p> <p>Mr.Batsuuri.L, head of "Dasan zohitsokhui" community group</p>
18:30~19:30	Dinner in the "Grand" hotel in Ulaangom city	Dinner will be paid by visitors	
Day 2-June 16			
07:20~08:00	Breakfast in the "Grand" hotel in Ulaangom city	Breakfast provided free by the hotel	

Time	Activity	Specifics	Responsible staff
08:10~09:00	Visit and meet with eco club members at Chandmani Eco-school in Ulaangom soum.	Eco initiatives by Eco school members <ul style="list-style-type: none"> • Introduction on activities of Eco clubs • Introduction EbA and CC curriculum • Exhibition of products made by school students using recycled raw-materials/ 	Team A and B
09:00~09:30	Leave Ulaangom city for Teel dam (20 km)	- Brief information on Landscape, Water users groups and water allocation of farmers by Mr.Togtokhbayar.D, Director, Uvs Lake-Tes River Basin Administration.	Team A and B
09:30~10:00	Site visit of Kharkhiraa river valley Stop on way to “dry well” in the “Teeliin boom” that is meander point of Kharkhiraa river Coffee and tea will be served during introduction.		
10:00~11:40	Leave Teel dam for Naranbulag soum (60 km)	<ul style="list-style-type: none"> • Spring rehabilitation techniques; water supply for livestock and local population of the Soum 	Team A and B
11:40~12:30	Visit “Naranbulag” spring protected at Naranbulag soum		
12:30~13:30	Lunch in Naranbulag soum	Lunch will be paid by visitors.	
13:30~15:00	Leave Naranbulag soum for "dry well" established in 2015	<ul style="list-style-type: none"> • Water harvesting techniques • Drip irrigation system • Fodder plantation based on accumulated water resources 	Team A and B, “Bayan teal” herder group
15:00~15:30	Visit pilot "dry well" and meeting with representatives from soum Water Users Group (80 км)		
15:30~18:00	Leave Naranbulag soum for Uvs Lake (30km) Bird watching point Visit to Lake monitoring post	<ul style="list-style-type: none"> • Eco tourism with involvement of local community • Surface water monitoring 	Team A and B Representatives of Administration of Uvs Lake protected area and Regional center for Meteorology,

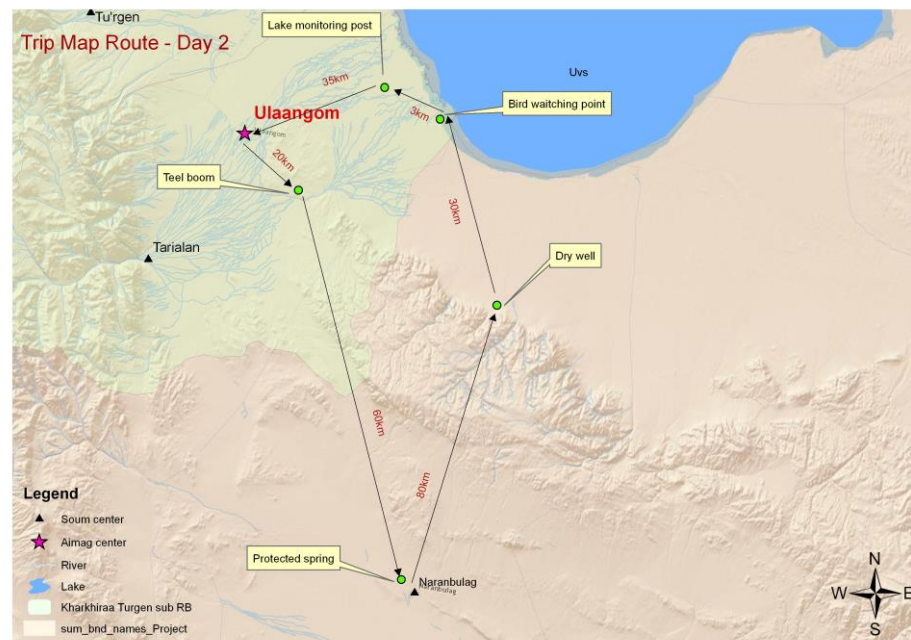
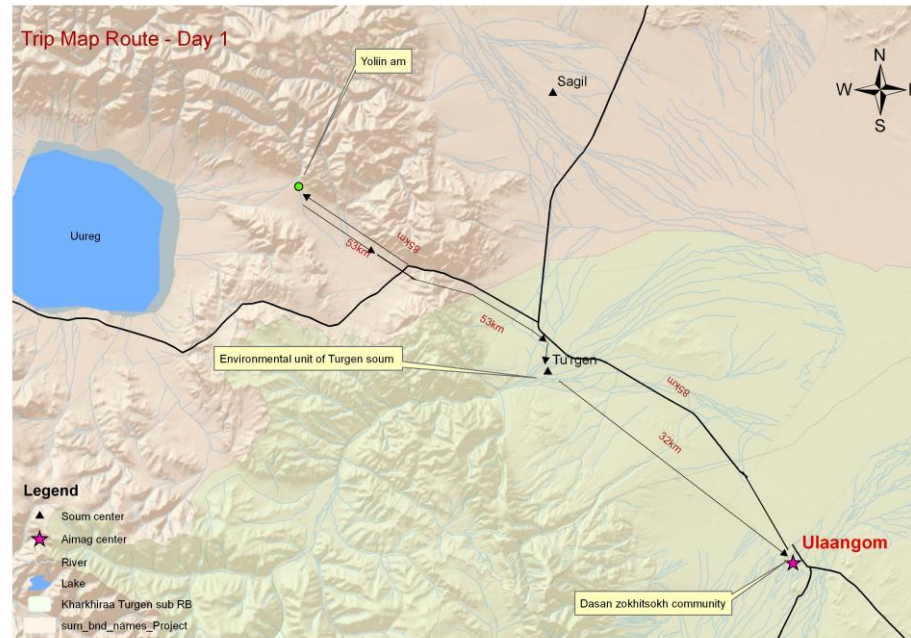
Time	Activity	Specifics	Responsible staff
	Visit Exhibition stand on Handmade products (woolen, wooden, diary, hay/fodder making, and honey etc.) and meet with representatives of beneficiaries Coffee and tea will be served during introduction		Hydrology and Environment monitoring of Uvs aimag
18:00~20:00	Dinner at tourist camp “Uvs Lake” and concert and performance of folk arts.	Organized meal.	Team A and B Representatives of Aimag stakeholders
20:00~20:30	Back to Ulaangom city (30km)		
Day 3-June 17			
07:00-07:30	Breakfast	“Grand” hotel	
07:40	Leave for the Airport		Leave for the Airport
08:40 13:30	Departure for UB (transit through Khovd aimag). Arrival in Ulaanbaatar city.	Aero Mongolia airlines Destination: Ulaanbaatar city Departure time: 08:40 Landing time: 13:30	Departure for UB (transit through Khovd khot). Arrival in Ulaanbaatar city.

Appendix 1

EbA

1. Ulaanbaatar-	Ulaangom city	flight
2. Ulaangom-	Sagil soum("Yoliin am"valley)	85km
3. Sagil soum-	Turgen soum	53 km
4. Turgen-	Ulaangom city	32 km
5.Ulaangom-	Naranbulag soum	80 km

5. Naranbulag –	Uvs Lake	30 km
6. Uvs Lake-	Ulaangom city	35 km
7.Ulaangom -	Ulaanbaatar city	flight
8. Extra		200 km
Total distance:		515 km



Appendix 2.List of participants for Local Stakeholder Meeting in Ulaangom city, Ulaangom soum, Turgen soum, Tarialan soum and Naranbulag soum, Uvs aimag

	Participant's name	Position /Organization	Contact
<i>Aimag level consultation</i>			
31.	Tsendsuren D.	Aimag governor (tbd)	98451000
32.	Chimed Ch.	Aimag parliament speaker	
33.	Ganbold Z.	Director, Department of Development Policy, Governor's Administration Office	99459405
34.	Ganbold B.	Head of Environment, Nature and Tourism Office	99255265
35.	Munkhbat B.	Head of Climate Technology, Hydro-Meteorological Department	93071599
36.	Ankhubayar M.	Director, State Protected Area Administration of Uvs lake basin	93094001
37.	Murdorj U.	Senior officer responsible for water policy, Office of Environment, Project Coordinator of Uvs aimag	99459858
38.	Enkhtuya B.	Head of forestry, Environment, Nature and Tourism Office	99459929
39.	Batzul B.	Officer responsible for mining, Governor's Administration Office	93081108
40.	Otgoi B.	Tourism Officer, Division of Social Security, Governor's Administration Office	93019181
41.	Daalkhai B.	Officer, Crop production technology officer, Department of Food and Agriculture, Governor's Administration Office	99124614
42.	Gankhuyag S.	Infrastructure, Division of Social Security, Governor's Administration Office	95454859

43.	Togtokhbayar D.	Director, Uvs Lake- Tes River Basin Administration	99458022
<i>Soum level consultation</i>			
1. Ulaangom soum			
44.	Gankhuyag O.	Soum governor	99459745
45.	Gombosuren B.	Deputy of soum governor	99019936
46.	Buyandalai S.	Environmental inspector	99458500
47.	Batsaikhan D.	Officer responsible for pasture	88459798
48.	Osor M.	Ranger	93081129
49.	Bold-Erdene Ts.	Land officer	99504117
2. Turgen soum			
50.	Byambaa E.	Soum governor	99458373
51.	Udbal R.	Chairman of soum local parliament	99388601
52.	Batsukh Sh.	Environmental inspector	95867110
53.	Gelenkhuu S.	Head of Livestock unit	88303109
54.	Zolzaya B.	Land officer	99456597
55.	Bandi D.	Ranger	99771780
3. Sagil soum			
56.	Sanjjav L.	Soum governor	95719292
57.	Delgejkhishig D.	Chairman of soum local parliament	99133214
58.	Maidarnyam D.	Environmental inspector	96168126
59.	Alimaa G.	Officer responsible for pasture	99168625
4. Naranbulag soum			

60.	Battulga Yu.	Soum governor	99455185
61.	Azbileg R.	Chairman of soum local parliament	88440063
62.	Ishtavkhai Ch.	Ranger	99940997
63.	Tserensonom O.	Head of Livestock unit	99457610
64.	Sosorbaram M.	Land officer	89456806
5. Tarialan soum			
65.	Tsolmon S.	Soum governor	99453333
66.	Jamsran D.	Chairman of soum local parliament	95891310
67.	Tegshjargal Z.	Deputy of soum governor	93227669
68.	Tsogoo Ch.	Environmental inspector	99455981
69.	Tumendemberel D.	Land officer	99450462