

Midterm Review of the

"Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia"

Project by UNDP – PIMS # (4505)

Final Submission February 17th, 2015

Project ID: MON12/301
Project Start: 2012
Project End: 2017

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Acknowledgement

The consultants would like to thank sincerely UNDP Mongolia and the EbA Project team for the excellent organization of the evaluation and the friendly and fruitful collaboration. In the same way we consultants would like to express thanks to all project coordinators who guided us through the region as well as to governmental officials and technical staff, who provided us with all relevant information profusively and with great hospitality. We especially appreciated the hospitality of those Aimags, who even accomodated us in their school or hospital, in some cases even accompanied by cultural events.

The atmosphere throughout the evaluation was extremely pleasant, therefore, thanks again to everyone who made that possible.

We sincerely hope, that the Midterm Review is useful for the project and wish all the best for the future of the project and all related staff.

Ingrid Hartmann and Narangarel Yansajav

Content

List of Tables

List of Figures

1. Executive Summary

1.1. Project Information Table

Table 1: Project Information Table

PROJECT/PROGRAMME CATEGORY:	Regular Project
COUNTRY/IES:	Mongolia
TITLE OF PROJECT/PROGRAMME:	Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia (UNDP PIMS 4505)
IMPLEMENTING ENTITIY:	United Nations Development Programme
EXECUTING ENTITY/IES:	Ministry of Nature, Environment and Tourism
AMOUNT OF FINANCING REQUESTED:	US$ 5,500,000 (in U.S Dollars Equivalent)

1.2. Project Description

Integrated adaptation strategies and associated programs are necessary to maintain ecosystem functions and water provisioning services in Mongolia, as the country's fragile ecosystems associated with poor socio-economic conditions are highly vulnerable to climate change. However, the capacities of institutions and rural communities have not been adequately strengthened. Therefore, to implement projects like "Ecosystem based adaptation approach to maintaining water security in critical water catchments in Mongolia" was critical to reduce climate change vulnerability and to solve other associated problems.

The implementation of the project has started in 2012 and will continue till 2017 under the joint funding from Adaptation Fund, Mongolian government and UNDP. The targeted areas are the two main critical and unique landscapes located in west and east parts of the country: Altai Mountains and Great lakes basin, Turgen and Khahiraa river basins and Ulz river basin in Eastern Steppe.

The main objective of the project is ***to maintain the water provisioning services supplied by mountain and steppe ecosystems by internalizing climate change risks within land water resource management.***

The main strategy of the project is to apply the principles of Ecosystem-based Adaptation to reduce climate change risks, which also involves to strengthen the policy and legal frameworks for increased adaptation, enhanced stakeholder participation as well as capacity building of rural capacities in decision making and trainings in various adaptation skills of communities and governmental entities in two targeted landscapes. The project is being implemented in close cooperation with the national government, research institutes, local governments and community groups

The overall objective of the project lies in maintaining the water provisioning services supplied by mountains and steppe ecosystems by internalizing climate change risks within land and water resource management regimes through an ecosystem based approach. The project aims at alleviating vulnerabilities and dismantling identified barriers by implementing three interconnected components.

1.3. Project Progress Summary per Output

Component I*: **Integrated strategies/management plans for target landscapes/river basins developed and under implementation**:*

Output 1.1.: Ecological and Socio-economic assessments and base studies as a basis for the development of ecosystem-based adaptation strategies for the target landscapes and for the development of River Basin Management Plans (Kharkhira/Turgen Ulz) have been completed. As a particular highlight, the results of the EbA study had been used as a proposal for gazetting additional Protected Areas, which had been approved already in three Aimags and is now discussed in parliament.

Output 1.2.: Economic ecological valuations have been completed in their first parts on assessing the costs of climate adaptation. A second part on costs and benefits will be completed comparing the landscape level costs and benefits of EbA. The policy relevance of the valuations is ambiguous.

Output 1.3.: Ecosystem-based Adaptation strategies for the target landscapes and River Basin Management Plans (Khakhira/Turgen, Ulz) have been mainstreamed into planning operations: Currently EbA strategies have been endorsed by 17 Soum Parliaments. Also IWRM has been ´supported in all River Basin Authorities of the targeted watesheds. The IWRM plan of Uvs lake – Tes river will be endorsed by the Minister of Environment and Green Development in compliance with the Article 4.8 of the "Law on water". In addition, concrete legal, institutional, financial and technical measures were defined for ensuring water security. Additionally, the project managed to expand the protected area network of about 600 000 ha, which led to a substantial recovery of biodiversity there and improvement of the hydrological conditions in the area demonstrated by a return of indicator species.

Component II: *Implementing landscape level adaptation techniques to maintain Ecosystem Integrity and Water Security under Conditions of Climate Change*

Output 2.1.: Capacities of rural communities for monitoring natural resources and climate change impacts and for adaptive management in two watersheds strengthened by enabling monitoring. In three communities monitoring stations were established to measure water discharge. In particular, schools were taught in biological water monitoring based on indicator species, and Aimag Laboratories received support to monitor 20 – 30 chemical elements. As an important achievement of project support, Dornood Aimag laboratory was officially certified by the government. The results of chemical and biological monitoring demonstrated that water sources were mainly clean, except of occasional faecal pollution through livestock. Additionally the project provided a glacier monitoring station in Altai Mountain.

Output 2.2. Suite of physical techniques to improve ecosystem resilience established in the two critical sites: This encompassed the rehabilitation of springs and engineered wells and the establishment of water basins. Out of the total goal of rehabilitation of 70 springs, currently 12 have been rehabilitated and fenced. Favourable conditions of availing 22,000 hectares as habitat for the white-naped crane and antelopes from farming and economic activities have been established, and 16,000 hectares pastureland which had been abandoned due to water scarcity had been rehabilitated. Water supply issues of 15 ha of agricultural land had been resolved, and innovative water supply systems had been equipped with central power systems with renewable energy. Furthermore water basins have been put in place through modern technologies and two through revival of traditional technologies. Strategically the project has a particular merit in enhancing ecosystem resilience through applying the landscape approach by balancing pasture-water-livestock ratios as the newly established or re-established water sources induced movements from overgrazed areas, where carrying where exceeded, to pastures which had still rich resources. Additionally the project started to introduce briquetting to safe fuel wood and manure resources, a component which will be put into focus in particular in 2015.

Output 2.3. Regulatory and financial mechanisms for supporting climate change resilient livelihoods strategies: The project supported certain livelihood strategies in particular women's cooperatives, which benefited from felt making and greenhouse gardening trainings, the latter ones earning about 20,000 – 30,000 Tugrig per member. Cooperatives were also trained in financial management.

Component III: *Strengthening capacities/Institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies.*

Output 3.1: Ecosystem-based adaptation approaches/integrated river basin management mainstreamed in national resource use planning and implementation mechanisms in sector policies: Concepts such as establishment of River Basin Administration (RBA) and RBA Management Plans were

introduced into the Law on Water and Law on Water Pollution demonstrating that the project indeed management to mainstream ecosystem-based adaptation approaches into planning mechanisms of sector policies. The mainstreaming of EbA into laws stabilizes the concept of EbA within the Mongolian legislation and is an important achievement of the project.

Output 3.2.: Institutional structure for river basin management integrating climate change risks (Administration and Council) established and in operation in the target areas as model for replication: The project has supported RBAs in mainstreaming climate risks and supported them through the introduction of IWRM and user groups. The project has also enhanced the participation of civil society in Water Management through involving River Basin Councils into monitoring of RBAs.

Output 3.3.: Best practices are identified and a program for up-scaling best practices developed and implemented: Almost all practices and strategies of the project are worth to be up-scaled and disseminated. The project has already worked out a dissemination strategy through print media and radio in collaboration with a Press Agency.

Table 2: MTR Ratings & Achievements

Measure	MTR Rating	Achievement Description
Project Strategy	N/A	The project strategy takes fully into account the barriers to EbA implementation. It is one of the few innovative ones which take a rigorous ecosystem approach to climate risks and is at the same time in full coherence with the climate change adaptation strategy of the country.
Progress Towards Results	Objective Achievement Rating: (6)	The project has not formulated a benchmark for achievements during the time of the MTR, but the goal of maintaining water provisioning services within the ecosystems of the targeted areas by internalizing climate change risks has been fulfilled or even highly over-fulfilled, if 50% is considered as an average benchmark. Why the rating is not a full 6 is because of minor shortcomings in the economic ecological evaluation and some minor problems within the livelihoods components
	Outcome 1 Achievement Rating: (5)	Integrated strategies/management plans for target landscapes and river basins have been developed and are under implementation already in 3 Aimags and 17 Soums. Highlights of achievements are the endorsements of 3 PA proposals on Aimag levels. Why the Outcome is not rated full 6 points is because of the ambiguous quality of the ecological economic assessment, which, however, could not be fully controlled by the PIU.
	Outcome 2 Achievement Rating: (6)	The project applies a multitude of adapted physical techniques which enhance climate resilience on community level. The highlight of the component is its full integration into the ecosystem approach, by using the location of water infrastructure as an incentive to move herders away from overgrazed area, in this way achieving a better water-pasture-livestock balance. Another highlight has been the enabling of communities to monitor physical, chemical and biological water parameters
	Outcome 3 Achievement Rating: (6)	The project has been instrumental and successful in integrating climate risk issues into RBAs, it has supported IWRM as a participatory approach in water management, and civil society monitoring of RBAs through RBCs.
Project Implementation & Adaptive Management	Achievement Rating (6)	The PIU has an excellent understanding of the ecosystem approach taken and a full overview over the measures required to implement them on the ground. The communication with all stakeholders is excellent, all planning has been immediate followed by implementation, and even external obstacles to implementation have been immediately and successfully addressed.
Sustainability	Sustainability rate (4 out of 4)	Ecological, economic, social and political sustainability is high, eventual risks have already been prevented through the project strategy or successfully mitigated.

1.4. Conclusions

After careful comparison of strengths and weaknesses of the project, clearly the strengths are dominant. In conclusion, the project strategy taken is well designed to address current climate change problems. Taking an ecosystem approach is one of the most appropriate strategies to enhance climate resilience and the interventions undertaken address the ecological conditions of the project areas in a proper way, and implementation of the ecosystem approach is done in a rigorous, effective and efficient way. Major successes can already be seen in the improved natural capital base of the project, mainly in rehabilitated creeks, rangelands and protected areas, where already indicator species, which had left the area, had returned and base flows have increased. Within the economic capital categories, improved incomes and livelihoods have been established mainly through enhanced agricultural productivity and wool processing units. However, the project's monitoring and evaluation frameworks do not support easy and efficient reporting, therefore might be revised.

Table 3: Summary of Recommendations

Rec #	Recommendation	Entity Responsible	Scope
0	The project is strategically fully in line with its major objective and implemented with high effectiveness, therefore should continue in this direction with some amendments in the project strategy	UNDP	Full project level
Corrective Actions of Project Design			
1	**Strengthening of impact and outcome level indicator monitoring and revising at least one output indicator:** - For overall **Project Goal** use data for "*stream base flows"* and "*Soil organic C*" and data from glacier monitoring for tracking not as impact indicators. Delete "*soil colour*" and "*ph*" value as indicators. If institutions have access to remote sensing data for soil moisture, this could be as an impact indicator with a target of not going below a historical average. Other soil data cannot be measured on watershed scales. Use either "*Ratio of extraction of surface water resources : ground water resources for extraction higher than 20:80*" as an indicator on watershed level and discuss with appropriate institutions about a feasible target. Or use "*number of surface water resources and their productivity/capacity*" as an indicator for water related ecosystem services. Use "*ecosystem connectivity"* as reported to the CBD, measured by linkages between ecosystems as another EbA related indicator on watershed level. Replace target for "*5% improvement*" of chemical substances in water sources by "*not higher than Mongolian Standard values*" and take action only when contamination rates are converging against this value. Replace "*reduced poverty rate*" by "*enhanced incomes*" on watershed level. On Aimag level or sub-watershed level it is also possible to use these indicators as outcome indicators. Another appropriate outcome indicator/target for Component 2 is: "*improved livestock-pasture-*	PIU in collaboration with UNDP	Logframe

	water resources balance" measured by livestock numbers: water and pasture resources within sub-watersheds, compared to carrying capacities measured within the project. Add an Output indicator which measures energy related activities to Component 2. It would furthermore be nice to distinguish between a land and a water related subcomponent or respective output indicators in Component 2. One might furthermore think about the contextual cohesion of the outputs in Component 3 and might which to shift one or another output to another component, as considered in Annex I. The project should in future be more consistent with language using "Outputs" and "Outcomes" etc.		
2	Report about the use of co-finance resources in more detail within the second phase of the project.	PIU in collaboration with UNDP	M&E Framework
3	Introduce Benchmarks and Training Plan in addition to Work Plans	PIU in Collaboration with UNDP	Work Plan
Immediate Benefits			
4	Establish a vulnerability profile of women, especially with respect to cold weather conditions and discrimination in income generation options. With respect to coldness, water monitoring posts should be provided with small dwellings like the one which the post for glacier monitoring has already received. If possible provide in-door toilets in schools	PIU	Single Activities to protect project attached staff
5	Improve ecological economic valuation scope	PIU in collaboration with UNDP	Output-related intervention
6	Link spring protection with provision of water basins for livestock	PIU	Set of Combined Activities
7	Reduce evapotranspiration in water harvesting schemes	PIU	Single Activity
8	Pilote water regeneration schemes of higher density	PIU	Single Activity
Addressing and Re-Enforcing Benefits			
9	Address snow hazards	PIU	Single Activity
10	Integration of fire management into EbA management	PIU	Strategic Intervention
11	Introduce Sustainable Intensification of pastures	PIU	Single Activity
12	Taka a mosaic landscapes approach	UNDP and PIU	Strategic Approac on Project Level
13	Strengthening wool / sheep / pasture value chain	PIU	Strategic Approach on Project level
14	Streamlining poverty reduction targets with environmental targets	UNDP and PIU	Strategic Approach on Project level
15	Introduce collection of water fees for maintenance of structures	PIU	Single Activity
16	Enhance research and implementation of traditional water harvesting	PIU	Single Activity
17	Paying more attention to snow melt and green water flows	PIU	Single Activity

18	Introduce EbA related activities into Small Grant proposals	PIU	Strategic Intervention on Output level
19	Strengthening Inter-Sectoral Collaboration among Ministries	UNDP	Strategic Intervention
20	Promoting environmental journalism on local levels	PIU	Single Activity
21	Conduct exchange visits of beneficiaries among different Aimags and target river basins	PIU	Single Activities
22	Add traditional ecological knowledge into environmental education of eco-schools	PIU	Single Activity

2. Introduction of the Objective of the Evaluation and Background Information of the Project

2.1. Purpose of the MTR and Objectives

The objective of the evaluation is to conduct a Midterm Review for the project titled “Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia” MON/12/301. The consultancy addresses the standard goals of a Midterm Review according to the “Guidance for Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Mid-Term Reviews”. The Project Goal is the monitoring of implementation and adaptive management to improve outcomes; to follow up, if the project is meeting its objectives and is likely to fulfil all expected outcomes at the end of the project, the early identification of risks to sustainability, accompanied by supportive recommendations.

2.2. Scope and Methodology

The geographical scope of the evaluation are the two project sites within the Kharkhiraa, Turgen river sub-basin in Altai Mountains and Great Lakes Depression (Altai/GLD) eco region and the Ulz river basin in the Dornood steppe and Mongol Daurian eco-region.

Figure 1: Project Locations within Mongolia

The main objective of the project is to maintain the water provisioning services supplied by mountain and steppe ecosystems by internalizing climate change risks within land and water resource management regimes. Geographically, the project covers i) the Altai Mountains and Great Lakes Basin Eco-region; ii) the Eastern Steppe Eco-region; focusing on the Turgen/Kharkhiraa Sub River Basins – (Turgen, Ulaangom, Sagil, Bukhmurun, Khovd, Tarialan, Naranbulag soums of Uvs Aimag); and the Ulz River Basin – (Chuluunkhoroot, Dashbalbar, Bayandun, Bayan-Uul, Gruvanzagal, Choibalsan, Sergelen soums of Dornod aimag; Bayan-Adarga, Batnorov, Norovlin soums of Khentii aimag).

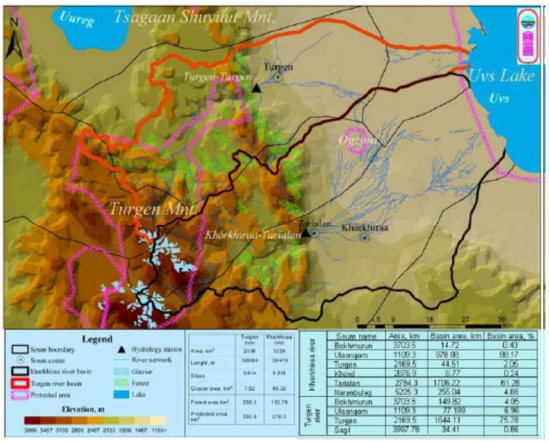


Figure 2: Altai Mountains and GLB

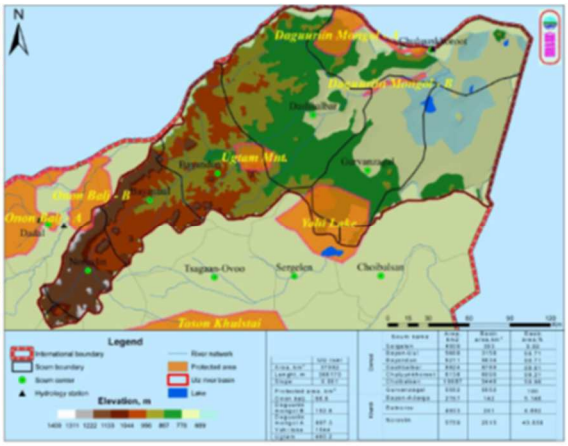


Figure 3: Eastern Steppe

Methodologically in the preparatory phase the provided literature (see Annex IV) was reviewed, the field visits were based on focused group interviews, individual expert interviews and field observation. A special participatory method – the H-Method – was used for participatory rating of project achievements in the three components (see Annex III).

The methodological approach to assess project resilience as suggested in the inception report had been the CoBRA Method and the Sustainable Livelihoods Framework (Compare Annex III). Later on the EbA framework by UNEP was also used for the system analysis in Chapter 4, while the project matrix suggested in the inception report was replaced by the one of the UNDP template for the Conduction of Mid- Term Reports.

2.3. Structure of the Report

The structure of the report follows the Template B of the TOR. In Chapter 3 the project description including the background context is given; in Chapter 4 the key findings are outlined, starting with a project design and logframe analysis, followed by an outcome analysis with a focus on the detailed achievements of the project. The project strategy is given particular attention, followed by implementation issues, sustainability, reporting and communication. At the end conclusions and recommendations are listed.

3. Project Description and Background

3.1. Development Context

The project sites are under economic conditions, where the collapse of the Soviet regime has not only led to a breakdown of the Mongolian economy, but also to a shift of the intensive agricultural system towards a more extensive herding system. This is in particular the case for the Eastern Steppe, where wide areas have been covered by irrigation agriculture mainly for wheat, and while still some broken equipment is left, this shift has been ecologically friendlier, and also most Soums recovered economically to a certain degree.

However, still the environment is under the threat of climate change, and scenarios project the following changes for the nearer future:

- Higher precipitation in coming years, but with irregular cycling.
- Higher temperatures, leading to higher evapotranspiration which is partly or fully offsetting the impacts of higher precipitation on water resources, leading to the drying up of upstream creeks, which normally feed into Ulz river, which is therefore also drying up, particularly in the middle course.
- For the nearer future an increase of surface water was projected for the northern and western mountains in Mongolia, due to reduction of permafrost areas and glacier melting.

Climate projections lead to the conclusion, that under climatic change until 2030 in particular the sectors husbandry, wildlife, mining and water will be at high risk in the eastern region, whereas the water, forest, household, livelihood and agriculture sector will be under higher risk in the Western Eco-Region.

Climate impacts have furthermore been exacerbated by anthropogenic influences, which have destroyed springs in upstream catchments.

The lack of water causes a general imbalance of livestock-pasture-water ratios, leading to irregular movements of pastoralists to upstream areas, which causes further depletion of water resources there and a degradation of pastures.

Besides climate change, there are other sometimes climate related, sometimes anthropogenic factors, like unintended fires, declining carrying capacities of pastures accompanied by changes of herd structure and locations of water points, illegal logging and poaching, unsustainable agriculture and water pollution, which aggravate the implementation of ecosystem-based adaptation.

3.2. Problems that the Project Sought to Address: Threats and Barriers Targeted

The project design is guided by the notion that societal adaptation is best achieved by ensuring the continued provision of ecosystem services and establishing the capacities required to identify and deal with new arising challenges. Within this endeavour, it has to address the following barriers:

Barrier I: Absence of landscape level framework for internalising ecosystem resilience to climate change in coherent land use and water resources monitoring and planning system.

- There is no technical experience with interventions and solutions for ecosystem based management.
- There is certain success in habitat restoration, protected areas management, reduced forest harvest and livestock management, but these are isolated efforts. Therefore, what is needed is an ecosystem or landscape level approach to reduce vulnerability to climate change

Barrier II: Inadequate demonstrated experiences in ecosystem based adaptation approaches at the landscape level

- Integrated strategies/management plans for target landscapes/river basins developed and under implementation, but decision making framework necessary for climate change resilience to address degradation of ecosystem services for rural economy.
- Major drivers such as grazing, fuel-wood consumption and water appropriation are not properly captured through an informed management structure.

Barrier III: Weak institutional capacity and policy framework to promote ecosystem based adaptation approach

- New institutions like National Climate Change Committee, the National Climate Change Authority and various River Basin Councils have been established, but are still not appropriately equipped for monitoring and have insufficient coordination and planning capacities to maintain ecosystem services under a changing climate.
- Existing and pending legislation, such as the draft pastureland management act, do not fully incorporate the need to maintain ecosystem services. Fiscal incentives promote rather exploitation of resources than their conservation and maintenance.

To address these barriers, the project undertakes an ecosystem approach with the expectation, that sustainable incomes from agriculture and pastoralism can only be achieved, if they are integrated into a sound environment which is able to supply all necessary ecosystem services required for the well-being of people. The project strategy addresses therefore technical, social and political issues through a multi-stakeholder approach. It demonstrates the practical dimensions of EbA implementation through a broad mix of interventions mainly related to pastoralism and water management. This strategy is an important part of the national climate adaptation strategy of the country, and the implementation areas have been selected in close coordination with Line Ministries as the ones, which have not yet been covered by other projects and are facing highest threats to climate change.

The overall objective of the project lies in maintaining the water provisioning services supplied by mountains and steppe ecosystems by internalizing climate change risks within land and water resource management regimes. The project aims at alleviating vulnerabilities and dismantling identified barriers by implementing three interconnected components:

Component I: Integrated strategies/management plans for target landscapes/river basins developed and under implementation;

Component II: Implementing landscape level adaptation techniques to maintain ecosystem integrity and water security under conditions of climate change.

Component III: Strengthening capacities/Institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies

3.3. Project Design Principles

In its strategy, the project applies the principles of Ecosystem-based adaptation (EbA) to increase climate change resilience at landscape level by and for maintaining or enhancing basic ecosystem services through collective action among governments, communities, conservation and development organizations and other stakeholders. The project strategy is one of the few and innovative ones, which rigorously pursues an ecosystem-based approach, and which simultaneously even improves human well-being.

3.4. Project Implementation Arrangements

UNDP is the **Multilateral Implementing Agency (MIE)** for the project. The project is implemented following UNDP's National Execution Modality (NEX). The designated Implementing Partner of the project will be the Ministry of Environment, Green Development and Tourism (MEGDT), which is responsible for implementing UNFCCC and water resource management and holds the responsibility of the senior supplier and timely delivery of inputs and outputs and for coordination of all other responsible parties, including other line ministries, relevant agencies and local government authorities.

The **Project Board** (PB) has 11 members composed of designated senior-level representatives of MEGDT, Ministry of Food and Agriculture, UNDP and local Governor's offices.

The PB is responsible for making management decisions for the project and plays a critical role in quality assuring through monitoring and evaluation of the project.

Project Assurance – UNDP Mongolia supports project implementation by assisting monitoring, project budgets and expenditures, recruiting and contracting project personnel and consultant services, subcontracting and procuring equipment upon request of the Implementing partner (MEGDT). UNDP Mongolia willl also monitor the project implementation and achievement of project outcomes/outputs and ensure the efficient use of donor funds through an assigned programme officer in the Country office in Ulaanbaatar.

National Project Coordinator (NPC) – The prime responsibility of the National Project Coordinator is to ensure that the project produces results specified in the project document to the required standard of quality and within the specified contraints of time and cost.

Project Support – The Project Implementation Unit (PIU) is a core technical team including 3 technical officers and Project Administrative and Financial Officer, a Secretary and Translator and a Driver who are supporting the NPC to execute the project activities including day-to-day operations, financial management and reporting. At the target demonstration sites, 9 local coordinators have been recruited.

3.5 Project Timing and Milestones

Table 4.lists the most important milestones of the project.

Table 4: Most important Milestones of the Project

Milestones	Dates
Submission of Concept to AF Board	September 2010
Approval of the Concept by the AF Board	November
Development of a Full Project Proposal	Januar – March 2011
Submission to AF of a Full Project Prosal	April 2011

Approval of Full Project Proposal	June 2011
Start of Project/Programme Implementation	November 2011
Midterm-Review	December 2014 – February 2015
Terminal Evaluation	June 2017
Project Close	October 2017

3.6. Main Stakeholders

Table 5: Major stakeholders of the Project

Stakeholder	*Anticipated roles*
IFAD, World Bank, Swiss Agency for Development and Cooperation, The Nature Conservancy, Wildlife Conservation Society, World Wildlife Fund	Technical inputs into the project formulation and implementation, Ensuring complementarities and synergies with activities of other on-going and future projects

Stakeholder	*Anticipated roles*
Government entities	
Ministry of Nature, Environment and Tourism	Overall conservation of nature and implementing UNFCCC and UNCCD. It is Project implementing partner and its implementing agencies , Water Agency, Forest Agency, Specially Protected Area Administration will be main counterparts
Ministry of Food, Agriculture and Light Industry	Main counterpart for pastureland management issues
Ministry of Mineral Resources and Energy	Main counterpart for mining and energy issues
Local Government (aimags and soums in the two target eco-regional landscapes)	Provides implementation support at the local level and ensures mainstreaming of local level policies
Administration for Land Affairs, Construction, Geodesy and Cartography	Main partner in land use planning and management.
State Specialized Inspection Agency	Advising on and supporting enforceability aspects of legislations
River Basin Councils	Partner in ensuring water management and conservation activities are in line with watershed/basin management plans
Academia	
Mongolian Academy of Science and research institutes	Institutes of Geo-ecology, Biology and Institute of Meteorology and Hydrology are partners in baseline and feasibility studies and continued monitoring of indicators
Communities and Private sector	
Communities	Project implementers and direct beneficiaries in the target watersheds.
National Meteorology Association	Potential partner in studies and developing land use and watershed management planning at a landscape level
National media	Information dissemination
Donors and NGOs	

4. Findings

4.1. Project Strategy

4.1.1. Project Design

The ProDoc has profoundly analyzed the basic problems of the initial lack of capacities to create an operational model for ecosystem level monitoring, assessment and planning that integrates climate change vulnerability. Under the suggested project strategy the appropriate interventions to address these underlying problems as well as existing barriers have been taken. Assumptions made by the project were fully realistic, and risks were also assessed in a feasible way. Risks were also prevented by double-fixing project results on technical, political and institutional levels and on local, regional and national scales. The climate resilience strategy is fully relevant to the challenges of climate risks, and the general threats of reduced water resources and pasture productivity on local levels and resulting threats to livelihoods.

The activities most relevant to address climate change related problems are listed in Table 6.

Table 6: Relevance of Activities to Address Climate Change Problems

Activity	Climate Change Problem addressed
Grazing management	Pasture decline of 8 – 37%
IWRM, support to RBA and RBCs, water user associations	Inadequate water resource regulation and management.
Studies on climate change Awareness raising on climate change	Climate change vulnerability and lack of climate awareness
Glacier monitoring station	Glacier loss and lack of monitoring
BioSan monitoring, rehabilitation and augmentation of wildlife habitats, application of natural reserves around wetlands	Low and reducing space for wildlife habitats

The project is an important arm of the implementation of the Mongolian Climate Change Adaptation Policy, which guarantees its full country ownership. This is strengthened through the project strategy itself, by making EbA and IWRM approaches part of regional and national laws and regulations. The project was put into place in a fully participatory manner, and the project has helped even to establish new participatory institutions, such as water and pasture user groups, IWRM, RBCs etc.

4.1.2. Logframe Analysis

The original logframe in the ProDoc aligns sufficiently project result areas with the barriers to climate change adaptation and defines coherently outcomes and outputs. Nevertheless, in the inception meeting, shortcomings of the logframe in the ProDoc have been raised, and certain changes have been conducted.

The changes are:

- Abandoning of the Outcome levels of the ProDoc and considering the components of the ProDoc logframe as outcomes in the revised logframe.
- Expansion of indicators for the overall project purpose from 2 categories (chemical elements in water and stream flows) to 4 – soil indicators and glacier monitoring.
- Adding 1 indicator to Component 1 and 6 indicators to Component 2, while outputs have been maintained.

a) *Impact and Outcome Indicators*

Some indicators and targets are not specific enough to separate influence of project impacts from other factors and can also not been measured with the necessary accuracy the measurement of the impact would require: As for instance:

"*Mean annual in-stream summer 30 day base-flow maintained (not decreased) at project site*."

The indicator is not specific, as the impact of the influence on stream base flow by project activities cannot be sufficiently separated from water related impacts outside the influence area of the project,

and is furthermore object to the dynamics of precipitation and evaporation, which makes it impossible to measure project impacts with the necessary accuracy. Therefore, the indicator does not fulfil the two first requirements of being SMART (specific, measurable).

One might instead rather use an indicator like "*Ratio of extraction of surface water resources : ground water resources for extraction higher than 20:80*" as an indicator on watershed level, since this is also one of the overall targets of the national water policies and could be measured on watershed level as an impact indicator, and on project or sub-watershed level as an outcome indicator. Feasible targets could be discussed with the responsible hydrological institutions. One could also use the "*number of surface water resources and their productivity/capacity*" as an indicator for water related ecosystem services on watershed and sub-water shed levels as impact and/or outcome indictors. For the impact of land related activities one could also use the indicator "*ecosystem connectivity"* as reported to the CBD, measured by linkages between ecosystems as another EbA related indicator on watershed and sub-watershed level.

What has been said on stream-flows, applies also for soil indicators, which are not reactive enough to project impacts to be used as measures and also not specific enough. **"***C or organic matter"* is not sensitive enough to smaller environmental impacts, also measurements are generally not sensitive enough to capture very small changes, while "*pH***"** can react on other than the project impacts, "*colou***r"** is very stable and can only be used to assess changes in the scales of decades or centuries. The indicators therefore do not fulfil the SMART criteria of either being specific or measurable. In general, soil indicators are very difficult to measure on watershed level and with feasible efforts, unless soil remote sensing data are available.

"Poverty Rates"

Poverty reduction is in the same way an unspecific indicator as streamflows, as the impacts of the project might not be high enough to influence the poverty rate in measurable ways. One might therefore rather use accumulated incomes on watershed levels compared to baselines (either collected after MTR or based on available statistical data).

b) *Targets*

"*Ground and surface water quality improved or maintained at two project sites*." with the target of 5% improvement is normally not in line with international procedures, which rather tailor targets towards the water quality standards and suggest actions only, if standards or thresholds are exceeded. If the target would be maintained, it would require action, where no action is needed, and where success can only be achieved with high efforts, since some elements are very difficult to remove from water resources, particular if they originate from the paternal materials. Therefore, these efforts should not be made, if the content of these elements do not present any health risks, which is the case, as long as they remain below Mongolian or International Standard Values, which is the case for most of the parameters monitored in the project

Another appropriate outcome indicator/target for Component 2 would be: "*improved livestock-pasture-water resources balance*" measured by livestock numbers: water and pasture resources within sub-watersheds, compared to carrying capacities measured within the project, as this is a more overarching indicator and target than the current ones on land and water related activities. .

c) ***Output Indicators***

It seems to be necessary to add one output indicator to capture the energy related activities of the project, as highlighted in Section 4.2.2.b.

For further clarity it would also be nice to distinguish between a land and a water related subcomponent or respective output indicators in Component 2, however, it would not affect progress process monitoring if this would not be done. As for instance, one might furthermore think about the contextual cohesion of Outputs in Component 3, which subsume mainstreaming of climate risk related activities into national frameworks, capacity building of governments and outreach activities under one Component, and if one should not better one or another output to another component, as considered in Annex I. One might also consider to separate Output Indicators in Component 2 into land and water related indicators and consider other suggestions in Annex I. Another question is, how cross-cutting issues like trainings are

to be monitored in the best way, – if integrated under each component, or monitored extra through a an additional training plan.

d) ***Language***

In several cases the project uses the terms “Results”, “Outputs” and “Outcomes” in a synonymous way (compare Annex I) and should try to use language more consistently in future.

4.2. Progress Towards Results

4.2.1. Component 1

OUTCOME 1: INTEGRATED STRATEGIES/MANAGEMENT PLANS FOR TARGET LANDSCAPES/RIVER BASINS DEVELOPED AND UNDER IMPLEMENTATION
Output 1.1.: Ecological and Socio-economic Assessments (Baseline studies) as a basis for the development of Ecosystem-based Adaptation strategies for the target landscapes and for the development of River Basin Management Plans (Kharkhira/Turgen Ulz)
Output 1.2.: Economic Valuations completed comparing the landscape level costs and benefits of EbA.
Output 1.3.: Ecosystem-based Adaptation strategies for the target landscapes and River Basin Management Plans (Khakhira/Turgen, Ulz) completed and operational.

a) Assessments

The project has assigned various assessments to lay the ground for its EbA strategy. According to the perception of stakeholders those assessments have been of high relevance and quality. Besides laying the ground for the necessary project interventions, the major highlight and achievement of some of the assessments – the ecological baseline study on Ulz river basin – were used for application for gazetting of additional Natural Protected Areas[1] mentioned above in three places:

- Khukh lake (95,403.9 ha),
- Upper stream of Tes river, Kharkhiraa and Turgen sub river basin (41,771 ha),
- Upper stream of Ulz river (102,563.32 ha).

These applications have been already approved by three Aimag Parliaments during the time of the Mid-Term review and are currently waiting for approval on ministry level.

Another highlight of the project is the "Permafrost study of Mongolia" which the project has initiated in cooperation with MEGD (to be completed within 16 months) to develop a science-based "Permafrost distribution map" scaled 1:1000 000.

All assessments and studies are of high technical and scientific quality and address either knowledge gaps which are necessary to be filled for the successful implementation of the EbA strategies or the immediate needs of stakeholders. The design of the studies is very clear and appealing due to the collaboration of the project with a press institute, which designs and prints the studies.

b) Ecological Economic Evaluation

The project had assigned an ecological economic assessment on the impacts of climate change on the two critical river basins in Mongolia. Within the inception phase a major discussion was directed to the better inclusion of local stakeholders needs. UNDP was also expecting more policy relevant information from the assessment. The evaluation team doubts that this has been fulfilled up to now. Until now, the available report analyse the costs of climate change under different scenarios on sensitive subsectors. As for instance, the most recent study assesses impacts on herders' livelihoods, but does not assess alternative options of climate change adaptation policies. The study had almost been finalized during the time of the MTR, but without satisfying recommendations, which one consultant, who was additionally hired, added during the time of the MTR.

UNDP itself commented that the economic ecological assessment should support decision makers how and where to make investments within the integrated adaptation framework and actions for climate resilience livelihoods. Also the scope of the planned assessment for the second period (as reported) to compare costs and benefits of agriculture under different irrigation systems is too narrow. It should include for instance the economic impacts of interventions into hydrological flows, changes of nutrient flows, interventions into natural habitats and the assessments of habitat risks, conversion of land use systems with regard to pastures, cropland and aquaculture, economic impacts of steppe fires and the

[1] Not strictly protected areas

value of certain natural habitats for ecotourism, the economic impact on potential carbon sequestration and the ecological economic impacts of changes of land use systems through irrigation.

c) Adaptation Strategies

The strategy pursued by the project to mainstream adaptation strategies into governmental planning has been instrumental in creating high ownership and sustainability of climate change adaptation and EbA policies and was implemented by the project with great success. Seventeen EbA programs were developed providing plans for adaptation measures on the landscape level for each target Soum in Kharkhiraa-Turgen and Ulz river basins and endorsed by 17 Soum's Parliament.

The project was also instrumental in mainstreaming IWRM plans into all key sectors and institutions both public and private and involving water users at all levels, so that one Integrated Water Resource Management (IWRM) plan was officially adopted by all three target Aimags. The IWRM plan of Uvs lake – Tes river will be endorsed by the Minister of Environment and Green Development (MEGD) in compliance with the Article 4.8 of the "Law on Water". Furthermore, concrete legal, institutional, financial and technical measures were defined for ensuring water security.

Additionally, the project managed to expand the protected area network of about 600 000 ha, which lead to a substantial recovery of biodiversity there and improvement of the hydrological conditions in the area.

4.2.2. Component II

Component II: Implementing landscape level adaptation techniques to maintain Ecosystem Integrity and Water Security under Conditions of Climate Change

Output 2.1. Capacities of rural communities for monitoring natural resources and climate change impacts and for adaptive management in two watersheds strengthened

Output 2.2. Suite of physical techniques to improve ecosystem resilience established in two critical watersheds.

Output 2.3. Regulatory and financial mechanisms for supporting climate change resilient livelihoods strategies.

Output 2.1. Capacities of rural communities for monitoring natural resources and climate change impacts and for adaptive management in two watersheds strengthened

The project supports three types of water monitoring: chemical monitoring, biological monitoring and physical monitoring.

a) Physical monitoring

The major parameter monitored is water recharge. In total, three surface water monitoring posts (one in Kharkhiraaa, the West, two in Ulz, Eastern target area) have been newly established with support of the project in addition to existing ones (in the West three, in the East three) in 2013. The operation staff of the posts (ten) are accordingly trained. The project provided equipment including data logger, current meters and thermometers to six surface water monitoring posts (to three posts in the West and three posts in the East, including existing and newly established posts) and adequate training to the staff (totally twelve persons) on the operation of the monitoring equipment.

b) Glacier Monitoring

One Glacier Observation Post was established in Turgen Mountains as a part of the project activities under this component. The station is supposed to provide information on glacier melting in addition to satellite monitoring. The measurements are taken in seven parallels. A post which is positioned in a downhill station and employed by the project is monitoring the depth of melting in summer in regular intervals. Data are collected on a monthly basis for snow melting monitoring to be used in a meso-scale climate study. The PIU is currently checking the technical operationability of the monitoring station.

c) Chemical Water monitoring

For chemical monitoring, the project provided field kits for conducting initial tests, to alert about alarming situations. For in-depth follow ups, measurements within Aimag laboratories complement field tests. About 20 - 30 parameters are measured. For this purpose, the project has equipped three Aimag

laboratories and facilitated their collaboration. Among the three laboratories, the Dornood laboratory received the certification as nationally acknowledged, which is also one of the major success stories of the project.

Results or chemical monitoring: Water monitoring conducted in 2013 had shown that most of the values were far below Mongolia standard values. Only magnesium, sulfate and fluoride were slightly enhanced in one site each which might have been caused by the composition of the paternal rock material the water originates from, while sulfate contents could also be enhanced by nearby tanneries or waste management sites, which needs to be followed up. Enhanced magnesium values are of no harm to human health, but could disturb industrial processes. Nevertheless, the standard values of these elements are only slightly exceeded.

d) Biological Water monitoring

The project has introduced biological water monitoring in schools. Most of these schools are in the process of becoming eco-schools[2] and welcomed the programme. Biological monitoring is based on the increasing tolerance / intolerance of certain organisms to organic pollution. For the identification of these organisms an indicator list with illustrations of indicator organisms is provided by a project of the Asian Development Bank.

Water monitoring has not yet started in all schools, but where biological monitoring had been conducted, it was received with great enthusiasm, both by teachers and by students. First results have already been achieved. In Dornood Aimag medium organic pollution was identified, obviously through faecal pollution from livestock.

The biological monitoring component creates high synergies with chemical monitoring. As for instance, in Dornood Aimag, where higher level of organic pollution were indicated by biological monitoring, also chemical monitoring showed high ammonium and nitrate levels, therefore indicating faecal contamination, most probably by livestock. To avoid further faecal pollution, separation of livestock/human drinking water is planned as an activity for 2015.

Output 2.2.: Suite of physical techniques to improve ecosystem resilience established in two critical watersheds.

Activities on Pasture-Water Management are very complex and highly integrated on landscape level through the proper linkage of pasture with water management, on administrational level through the integration of Baq, Soum, Aimag and National levels, as well as on operational level through the integration of training, planning and investment.

a) Activities Related to Carrying Capacities

Activities started with trainings which were aiming at integration of pasture management planning into Soum Planning. Training was given by a staff member of the Land Office. Training modules included:

- theory of pasture management
- pasture recovery, pasture retention
- use of pasture maps – rotational cycles
- identification of carrying capacities
- guidelines on pasture management
- technical trainings on mapping with participatory GPS and GIS

The assessment of the carrying capacity considered many parameters, among which pasture productivity translated into sheep units was the most important one. This identification of carrying capacities of the ecosystem under current conditions – not taking into account future scenarios under climate change - was one of the central merits under this component..

[2] Eco-Schools are a governmental program, which enables schools to get a special focus on environment. To qualify as eco-schools, certain criteria have to be met, such as mainstreaming environment into curricula, planting trees in the school yard etc.. Due to the synergies of this programme with the project objectives, certain features of the eco-school programme are supported by the project.

The need and relevance for assessing carrying capacities within the project area had been evident, as in other Aimags carrying capacities were by far exceeded. As for instance in Central Aimag, the average carrying capacities was 3 – 4 times exceeded, in some Baqs even 11 times.

Furthermore, it is to be expected, that under climate change, with a projected reduction of pasture productivity of about 34%[3], current carrying capacities might be further reduced, exacerbated by the decline of water resources through climatic and anthropogenic drivers, which has disrupted the pasture-water-livestock balance, which stresses the relevance of analysing pasture productivity and carrying capacity even more.

While results on carrying capacities based on participatory methods were obviously quite exact, it can be assumed, that the estimated degree, by which they are exceeded, are not based on accurate data, since a livestock census was still going on during the time of the Midterm Review. Therefore, accurate results on livestock densities to be compared with pasture productivity have not yet been available. Nevertheless, for the project area there was high evidence, that carrying capacities were exceeded around the remaining water resources, where livestock was concentrated and pasture productivity was declining both absolutely due to overuse and also relatively in terms of fodder base available per livestock unit.

Finally the project supported the integration of sustainable pasture management into Soum Planning by the foundation of pasture management groups.

Responses to exceeded carrying capacities by project interventions:

As the project has identified the cause for exceeded carrying capacities in the disruption of the livestock-pasture-water balance, the project has consequently responded technically through a development and restoration of water resources within other areas of the catchment, which facilitated the movement of herds to these water resources. Administratively and organizationally the project has responded to support rotational grazing on ecosystem level through facilitating tripartite agreements between herders, Soums and Baqs. Planning of rotational grazing was furthermore supported through participatory mapping of vegetation units and water resources with GPS, which gave an improved overview on pasture resources to the planning levels.

Both the individual activities and even more their combination reduce pressures on pastures and water resources and therefore also enhance incomes for herders, create ownership on pastures through the formation and therefore higher responsibilities of user groups.

It is in particular this combination of interventions, which are an excellent example for proper integration of project activities into ecosystem approaches on planning and implementation level.

Challenge: Long-term solutions to be found on policy level.

The challenges on carrying capacities and relative water resource scarcity on pastures might require new approaches, and in this situation, two scientific schools on grazing management in pastoral systems are in opposition: one is targeting lesser livestock numbers of higher productivity and quality, the other is promoting opportunistic grazing[4] as the most appropriate management option. The latter claims that opportunistic grazing has been evolved to respond to erratic climates and pasture and would therefore also be the most appropriate response when climate and environment change. This school is also warning that controlled grazing might be a maladaptation, based on scientific findings, that milk, wool and meat yields are four times higher under opportunistic grazing.

[3] MEGDT, UNDP and UNEP 2009: Climate Change Adaptation Mongolia. Herders assess the decline to be about 50% due to the additional impacts of diseases.

[4] Opportunistic grazing means ad-libitum grazing and no control of stocking rates. The two schools are related to two perceptions: one targets reduced livestock numbers particular for climate change adaptation so that feed base per head is enhanced and overgrazing is avoided, another one that lets nature control stocking rates and rangeland reproduction under free mobility, with the viewpoint that erratic climate regimes require also free mobility to make use of the ecosystem niches. The first approach for Mongolia stands for the government, the second one for the behaviour and preference of herders. Source: Millennium Ecosystem Assessment 2005, Volume: Conditions and Trends. Chapter: Drylands.

In the current situation of Mongolia, controlled grazing is promoted on governmental level, both by the Ministry of Environment, Green Development and Tourism as well as by the Ministry of Food and Agriculture, which in particular are in favour of establishing intensified, partially irrigated fodder production niches on pastures. This is in accordance with the National Plan for Climate Change Adaptation of Mongolia; however, herders might be ambivalent on this – on the one hand favouring intensified fodder production, on the other hand being resistant towards destocking and reduced herd sizes, which could dismantle the function of herds for insurance, social prestige and cultural traditions.

Within this tension between the two schools, the project interventions have not yet favoured any of these directions. All interventions, from the formation of pasture user groups up to mapping and water resource development, allow further developments into various directions, which also shows that the project acts strategically wisely.

b) Upstream Catchment Protection and Water Source Development in Midstream and Downstream Areas

To enhance the water – pasture balance, the project made a lot of efforts to protect the upstream catchment and develop or restore water resources in the downstream and midstream areas. This included repairing broken wells, out of which some were equipped with solar display and generator as well as the design and construction of water harvesting structures and the protection of springs.

The project has introduced quite a high number of physical techniques to improve water and pasture resilience. The water related interventions encompassed the rehabilitation of engineered wells, the protection of springs and rehabilitation of creeks in upstream areas, the establishment of various water basins with modern and traditional technologies, and the support to enhanced water monitoring capacities for physical, chemical and biological water conditions as well as of snow melting.

Rehabilitation of engineered wells

Two wells in Dornood Aimag and four wells in Uvs Aimag were repaired until the time of the Midterm Review and three of them were equipped with solar generators. In addition, the project provided support for Meteorology offices to establish ground water monitoring boreholes in five soums of two target basins. Achievements are as follows:

- Favourable condition of availing 22,000 hectares as habitat for the white-naped crane and antelopes from farming and economic activities
- Restoration of 16,000 hectares pastureland which had been abandoned due to water scarcity
- Resolving water supply issue of 15 hectares of agricultural land
- Demonstration of innovative water supply systems for inhabitants and livestock in remote area by central power systems with renewable energy .

Spring Protections in Upstream Areas

In order to create possibilities for degraded springs to restore naturally and maintain and increase fresh quality of water, the project protected twelve springs in Bayandun, Gurvanzagal, Dashbalbar, Chuluunkhoroot soums of Dornod aimag, Ulaangom, Turgen,Naranbulag, Bukhmurun, Khovd soums of Uvs Aimag in 2014 against drying out through overgrazing and trampling around the springs.

Currently indeed summer flow of Ulz river returned, but also precipitation was higher than in previous years, therefore, this fact does not necessarily indicate that this is the result of the protection of springs by the project. According to the Project Progress Report of 2014, the protected springs had the following impacts:

- Provision of more than 500 rural people as well as 69,500 livestock heads with drinking water.
- Run-off of Ulz river and Urtyn river tend to increase.
- Water supply in total 117,000 hectare land in target basins and watering capacity improved up to 69,500 heads of livestock.
- Over 300 citizens learned means and approaches to protect springs using nature-friendly eco-techniques on the spot and acquired skill to do it on their own in the future etc.

Hence, while climate change impacts themselves are not addressed, it is the anthropogenic effects, which exacerbate the impacts of climate change, which are successfully mitigated through the component. .

The project is aware, that the size of the fenced catchment matters and therefore tries to keep it as large as is economically feasible and the terrain allows. Besides that, the project is also taking into account traditional taboos, which prohibit the penetration of soils to avoid that earth spirits would be hurt, if the soil is pierced. This coincides with hydrological findings, that the sub-ground is covered by a dense network of water veins, which is very sensitive and should not be pierced as well. Therefore, instead of digging the ground for fencing, the project is applying a new and culturally compatible technology, by weighting down the fence posts by putting big stones as ballast into their lateral fastenings to fix them. Fences themselves are attached in a slight sloppy angle, which makes them more resilient against damages by animal movements from outside than a straight angle would be which coincides with the considerations.

Traditional Water Harvesting (West) Uvs Aimag Turgen Soum

The project has supported the establishment of various surface water reservoirs and the revival of currently two traditional water reservoirs in the Western project areas. The intervention has to be seen under the strategic approach pursued by the project, to revert the current ratio of surface water to groundwater use of 20 : 80 towards a ratio of 80 : 20.

Traditional water harvesting is using traditional sinks for storing run-off water from mountains. The storage capacity of these sinks has been enhanced through earth dams at the side of the sinks, which have been constructed from the soils digged out from the sinks. While this has been an appropriate method, as locally available material was used and the use of the topsoil even deepened the sink and further enhanced its storage capacities, this technology consumed a lot of topsoil, and therefore also of pasture, in particular where no other material and means of transport were available. Where pastures are put increasingly under pressure through exceeding livestock numbers and lesser productivity in the face of climate change, this technology is getting less and less feasible and sustainable. The project has therefore improved the traditional technology by replacing the element of constructing earth dams from soils by building stone dams. Stones for the dams were collected from outside areas and transported to the project area by trucks, for which a company was hired. The construction of the water-harvesting scheme created also temporary employment for unemployed local people.

The general strategy pursued by the project of using only 20% groundwater and 80% surface water is properly addressing the hydrologic situation in the country, where groundwater is more or less a non-renewable resource, and surface water is frequently lost as run-off water which is not used.

The intervention of reviving traditional water harvesting schemes itself is very feasible. The improved technology, of replacing earth dams from top soils within the sink is addressing properly the emerging global problem of diminishing soils and the national problem of pressures on pastures. However, as the project is piloting an EbA and therefore also an ecosystem and catchment approach, it would be interesting to compare the environmental costs compared by removing and transporting stones from another area with the environmental costs of removing the top soils from the traditional water harvesting area. While most probably the removal of stones from that other area might even create synergies with pasture productivity through the removal of stone cover, for piloting the technology, this should be supported by robust data.

The creation of synergies of environmental activities with addressing socio-economic problems of local unemployment is highly feasible.

The time used for labour is coincident with international standards and therefore also feasible.

c) Land-Related Activities: Rehabilitation of Riparian Area and Establishment of Ecologically-oriented Agriculture Sites

Riparian area rehabilitation has been implemented with small scale tree nurseries and ecologically-oriented agriculture since 2014, starting with **small scale tree nurseries** in Kharkhiraa, Turgen and Ulz river basins covering 10 ha of riparian area. Local communities have been provided with native seed and seedlings and on the site trainings in tree nursery. Totally 28 hectares of demonstration site to introduce climate change adaptation technologies were established in Bayandun, Bayan-Uul, Chuluunkhoroot, Choibalsan soums of Dornod aimag, Norovlin soum of Khentii aimag and Ulaangom, Turgen, Tarialan, Naranbulag and Khovd soum of Uvs aimag. As a result of this work about 15,000 seedlings of elm, aspen and bush have been produced in tree nurseries for riparian area rehabilitation.

The intervention creates synergies with environmental and income generation targets and is therefore both technically as well as economically feasible. The creation of nurseries has been frequently recommended by many stakeholders as an income generation activity, which should be replicated to other areas. While the income to be generated per farmer would be lower than for vegetable production, around 10,000 Tugrig,

d) Addressing Hazards: Fire and Snow

Damages from fire and snow, which might further increase with climate change, were issues which raised greatest concerns among stakeholders. Within one Aimag, it was reported that steppe fires had caused losses of 1,700 head livestock, one person died, houses of 20 herders were burnt and three people were badly injured. Besides drier weather conditions due to climate change, dryness also enhances the frequency and intensity of fires due to an increase of the dryness of grasses and therefore of flammable fuel loads. This is exacerbated by a change of the snow regime, leading to longer periods without snow and therefore reduced humidity of spring grasses. The most vulnerable season to fires is the hay making season. A lot of livestock dies annually from snow hazards, in particular in 2010 there was a huge catastrophe.

A specific danger are also trans-boundary fires from Russia, and a bilateral agreement has been made with the Russian Government to manage them from both sides.

Traditional responses to steppe fires are known in all communities. The most common ones are:

- Firebreaks of strips without vegetation
- Putting pots on the wind side which divert the fires
- Manure dung dam, which also act as fire breaks.

However, current capacities are not sufficient to prevent and fight fires. While both – snow and fire – are under the mandate of another UNDP project on disaster management, the project gave support on fire management in some selected communities. These included:

- Trainings on fire prevention, improvement of the communication chain for fire alarm (whom to contact first, not getting panicked),
- Roles and activities for fire mitigation (fire brigade),
- Trainings in establishing fire breaks,
- Garage for fire trucks,
- Use of the UNDP weather forecasting system by mobile; when herders receive an alert message for enhanced fire risk on their mobile phone, they start with the three local prevention measures.

e) Energy Issues

Another intervention of balancing energy flows is the introduction of energy meters within the coal-based heating systems of schools, which prevents wasting of coal, but at the same time ensures sufficient temperatures in the school premises. The intervention fills an important gap in controlling energy flows. It allows coal consumption to be better tailored to climate change, therefore is a measure for climate change adaptation, but it also services mitigation targets, as it reduces wasteful carbon emissions through the better control the intervention enables.

To save trees and other organic materials, the project has also started piloting briquetting technologies, with a production rate of 300 kg/day, made from a mixture of coal dust and dung. The technology has been piloted in some Soums within the Eastern steppe and will be promoted widely within 2015. The technology was highly

appreciated in the Soums, where it was introduced, and there was a high demand for its replication in other areas.

Briquetting is an important technology to enhance the efficiency of raw materials which have been mined or harvested for energy purposes. As for instance, coal dust would be wasted if not transformed into briquettes. On the other hand, this cannot be said for dung, and although herders widely use dung as fuel material, there might be alternative uses for dung, which could be more efficient, as for instance, if used for fertilizing greenhouses or even nurseries which would produce fuel wood for energy purposes, where sites are suitable for tree growth. This aspect might even be more relevant, as other beneficiaries interviewed during the evaluation, mentioned that the quality of the briquettes was not always constant, the density frequently too low and the heat conversion rate not sufficient. As the project is highly focussed on environmental flows, it might be a challenge to analyse also energy and nutrient flows and the most efficient uses of dung for alternative options. In case the project would opt for the production of briquettes from coal dust without the use of dung, certainly alternative briquetting technologies would also be available.

Output 2.3.: Regulatory and Financial mechanisms for supporting climate change resilient livelihoods.

a) Supporting Eco-Schools

In all three Aimags visited, schools were in the process of becoming an eco-school, which actual is a governmental initiative. The project supported the transition towards becoming an eco-school mainly by three activities:

- Introduction and promotion of indoor plants
- Promotion of outdoor tree planting
- Introduction of biological water monitoring
- General environmental education

Similar initiatives were also promoted already on kindergarten level.

An early start with environmental education will also lead to high environmental awareness in adult age. In particular the planting and caring for trees will enable children also to maintain trees when they leave schools, a practice mostly unknown to herders. However, also herder families themselves have a rich treasure of environmental knowledge, which should preferably be integrated into the environmental education in schools. Legends and fairy tales with respect to nature or old religions practices which protect the environment should be discussed also within lectures or eco-club meetings, and herder knowledge should be mainstreamed into environmental activities so that children are not alienated from their roots.

b) Greenhouses

Greenhouses have dimensions between 45-120 m2. Beneficiaries are frequently women headed households. The major marketable products are strawberries, which achieve prices up to 10,000-20,000 Tugrig. Some groups process greenhouse products and produce spices and pickles. All beneficiaries appreciated the skills learned through the intervention, particular the ones, who were also growing rain fed vegetables. The major water-related activity piloted here is drip-irrigation. Greenhouse irrigation is

mainly supplied by wells, but few receive also water by trucks. Some groups were successful already in the first year of the intervention, others made several mistakes, but no group fully failed.

Western area vegetable producers with high skills

Drip irrigation saves about 70% water compared to channel irrigation, therefore, theoretically could be considered as a method to reduce water extraction. However, investment costs are high, which probably restricts the economic feasibility to cases, where the returns from greenhouses are high. Obviously some farmers receive high revenues from strawberry production: between 10,000 to 20,000 Tugrig per kg. However, for situations, where there are no markets for vegetables, drip irrigation might be too cost intensive.

Cost-benefit calculation of drip-irrigation comparing different horticultural products should be conducted, to establish, for which products drip irrigation is mostly feasible for further replication among communities.

In most communities stakeholders recommended furthermore to include nurseries as an additional income generation option, a suggestion which complies very well with the overall target of climate change adaptation, because it creates synergies with livelihood diversification and the improvement of ecosystem services.

Where there are conflicts about stakeholder involvement within the project, mitigation measures as suggested in user associations could be applied, including all stakeholders.

c) Felt Products (Wool Processing Units)

Trainings and the formation of cooperatives for felt products, even for leather products, including the provision of the necessary equipment, have been another initiative by the project for enhancing livelihoods, in this component with a particular gender focus. Usually cooperatives have also a room where they can meet for felt making and to exhibit their products, which, however, is not heated in winter. The target beneficiaries for this component have been mainly groups, which do not originate from Mongolia and therefore are culturally not familiar with felt, such as the Buriat. The products manufactured have a high diversity, ranging from slippers and shoes over seats to carpets. All beneficiary women received the new skills of making beautiful and useful products from felt with great enthusiasm. The further use of these products varied among communities – some used the products in their own households, some tried to sell them, in one Soum the women produced shoes for the dormitories of herder schools from the wool they had received from the herders. The quality for household use is sufficient, but would have to be improved for commercial marketing.

d) Small Grant Proposals

The project has a component of small grant proposals, which gives communities the opportunity to apply for certain grants, which meet the objectives of the project. In particular in the Eastern Steppe, already grants for many communities have been approved. The small grants facilitate project implementation, as the initiative and implementation of the grants is almost fully in the hands of communities, on the other hand, it enhances the diversity of project activities and incomes of communities. The general criteria for selection of proposals are the need they address and the coherence with the EbA strategy Up to now, the number of proposals submitted have not yet exceeded the financial budget allocated to this purpose and the only proposals which have been rejected were the ones which were not in line with

the overall EbA strategy of the project, such as certain fruit trees outside areas of their ecological suitability. Currently small grant proposals are mainly related to improve agricultural production. Problems related to the proposals are:

- Hardly any proposal is related to improve environmental flows or disasters.
- Some people do not know how to develop proposals

For enhancing the scope and diversity of small grant proposals, the project could also encourage proposals on environmental issues such as improved fire management, traditional water harvesting, animal protection against heavy snow falls, general protection against damages from cold (even though this pressure might be relieved under climate change), furthermore projects on the improvement of environmental flows, such as nutrient exchange between herders and farmers etc..

Table 7: Overview over Small Grant Proposals

	Totally received		**Granted**		**Type of activity**												
					Main acitivity								other				
	Number of received SG proposals	Proposed budget, $	Number of granted SG	Approved budget, $	drip irrigation, green house	Dairy production	Reforestation and tree nursery	Eco school& kindergarten and	Wool& animal skin production	Hay making& fodder production	Fruit gardening	Well rehabilitation&	Wood souvenir production using	Bee keeping	Eco tour	Improvement of livestock breed	Eco fertilizer production
Total	119	434.528	52	150.216	7	4	5	9	11	5	1	3	1	3	1	1	1

4.2.3. Component III

Component III: Strengthening capacities/Institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies.

Output 3.1: Ecosystem-based adaptation approaches/integrated river basin management mainstreamed in national resource use planning and implementation mechanisms in sector policies

Output 3.2.: Institutional structure for river basin management integrating climate change risks (Administration and Council) established and operation in the target areas as model for replication

Output 3.3.: Best practices are identified and program for up-scaling best practices developed and implemented

a) River Basin Management

Between 2012 and 2014 a set of environmental laws were amended and approved by the Parliament of Mongolia. Concepts such as establishment of River Basin Administration (RBA) and RBA Management Plans were introduced into the Law on Water and Law on Water pollution, which shows that the project indeed management to mainstream ecosystem-based adaptation approaches into planning mechanisms of sector policies. The mainstreaming of EbA into laws stabilizes the concept of EbA within the Mongolian legislation and is an important achievement of the project, which also contributes to enhanced sustainability and stability.

The capacities of the RBAs have been substantially improved through IWRM plan development, provision of equipment and various trainings in water harvesting, water use efficiency and soft skills. The integration of IWRM plan development and the formation of water user associations into RBAs has been particular useful in Western areas, where vegetable growers had violent conflicts about water resources before, which were substantially mitigated through IWRM. Since IWRM has been successfully integrated as a planning method at governmental levels, institutions are also now capacitated to handle upcoming water conflicts in future.

IWRM itself promoted also inter-sectoral collaboration, which hardly existed on Aimag levels before. Since inter-sectoral collaboration is also essential for the implementation of climate policies in general, also other projects will benefit from the structures the project has built.

The project also supports River Basin Councils to ensure civil society participation in water management through monitoring the RBAs. Currently some RBCs are not yet well established due to a lack of funds, however, the important step forward the project has made lies in the involvement of civil society in water management issues at all.

b) Dissemination

The project has introduced many best practices which could be up-scaled and disseminated. For this purpose, the project has collaborated with a press agency to publish its documents and is active in awareness raising on climate risks also on a website, which will disseminate these lessons for further replication. The project is also active in supporting environmental journalism and competitions on journalism on climate change in rural areas,

4.2.4. Cross-cutting issues: Trainings

Trainings have preceded all activities of the project an all outcomes. For an improved reading flow they are therefore here presented as cross-cutting issues, and it might be recommendable to consider them as cross-cutting issues also in the logframe.

The trainings of the project have been appreciated by all interviewed stakeholders and also in focus group interviews. Stakeholders were addressed by various trainings according to their roles, and therefore also their appreciation for the training differs. On governmental and planning levels the trainings on water resource use efficiency and GIS have been considered as most valuable and important.

Women appreciated mostly the felt-making. While felt making is an old tradition in Mongolia, for the targeted beneficiary groups, like Buriat and others, it has not been part of their culture before. Therefore

trainings added substantially to their basic skills for improved livelihoods and in all cooperatives visited women were highly satisfied to be able to produce useful and beautiful products.

A particular added value was seen in the training of irrigated vegetable gardening in greenhouses in the Eastern Steppe, where this technology had not been known before. In the Altai mountains stakeholders have been vegetable producers since historical times and considered themselves therefore as experts in this technology, able to provide trainings themselves.

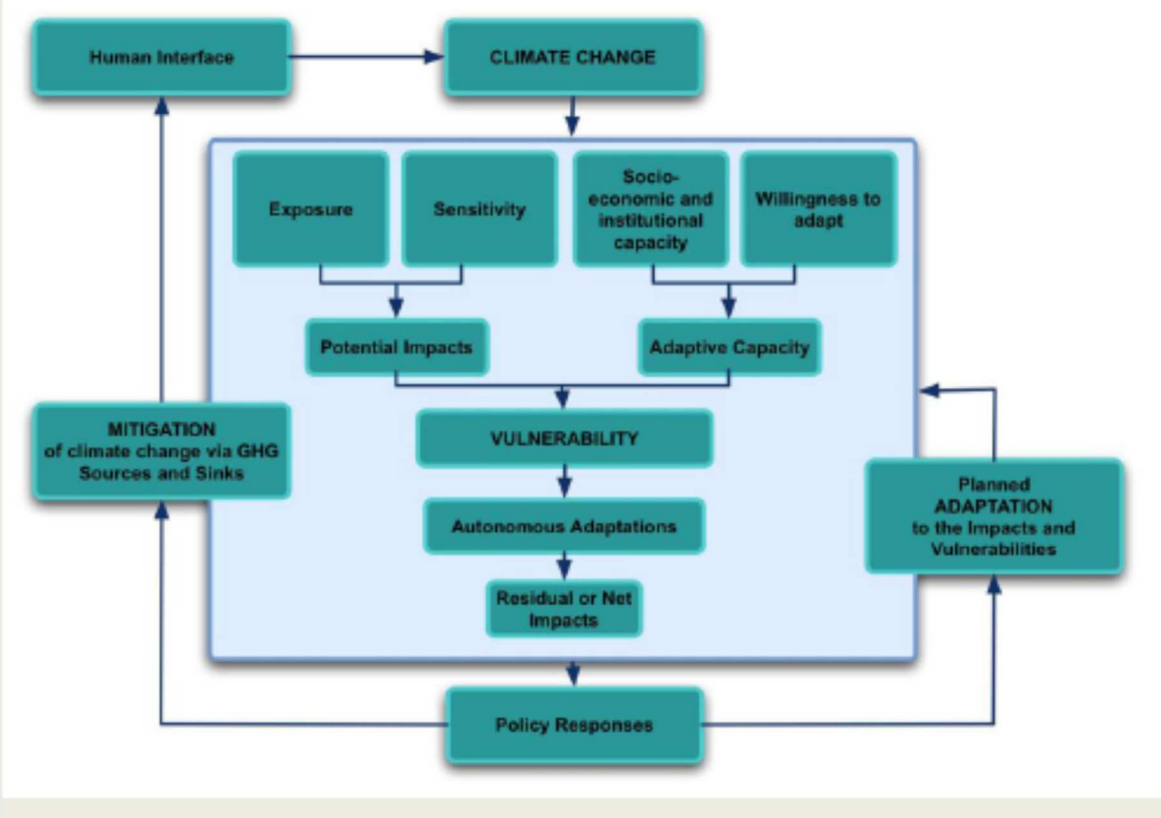
The trainings regarded as most relevant for climate change adaptation have been fire protection and pasture management.

Quality of Trainings

It was confirmed that the trainers were very competent, and trainings were of high relevance and quality. While most of the trainings had taken place in Ulaanbaatar, many stakeholders recommended to conduct also trainings on local level, in particular trainings with more practical implications for herders. For the evaluators this was an important aspect to enhance the adaptive capacities on grass root level, which would, however, probably require substantial amounts of additional funds for many more additional trainings. Despite the high appreciation of the trainings, the training components were not perceived as the initiation of the project, instead most stakeholders considered only the start of investments and practical interventions as the “real” start of the project.

4.2.5. Strategic Analysis

Figure 4: Framework for EbA Approach



EbA strategies aim at the maintenance and repair of ecosystems to enhance the delivery of ecosystem services, which are the result of the interaction of ecosystems with social and environmental systems across a range of scales. This requires interventions to address the range of drivers which influence ecosystem service delivery. A thorough strategic analysis includes variables that contain specific vulnerabilities to climate variability and extreme events as well as the underlying causes of vulnerability and their interconnectedness.

Vulnerability is impacted by exposure and sensitivity to climate change on the one hand, of offset by adaptive capabilities composed of socio-economic and institutional capacity and the willingness to adapt on the other.

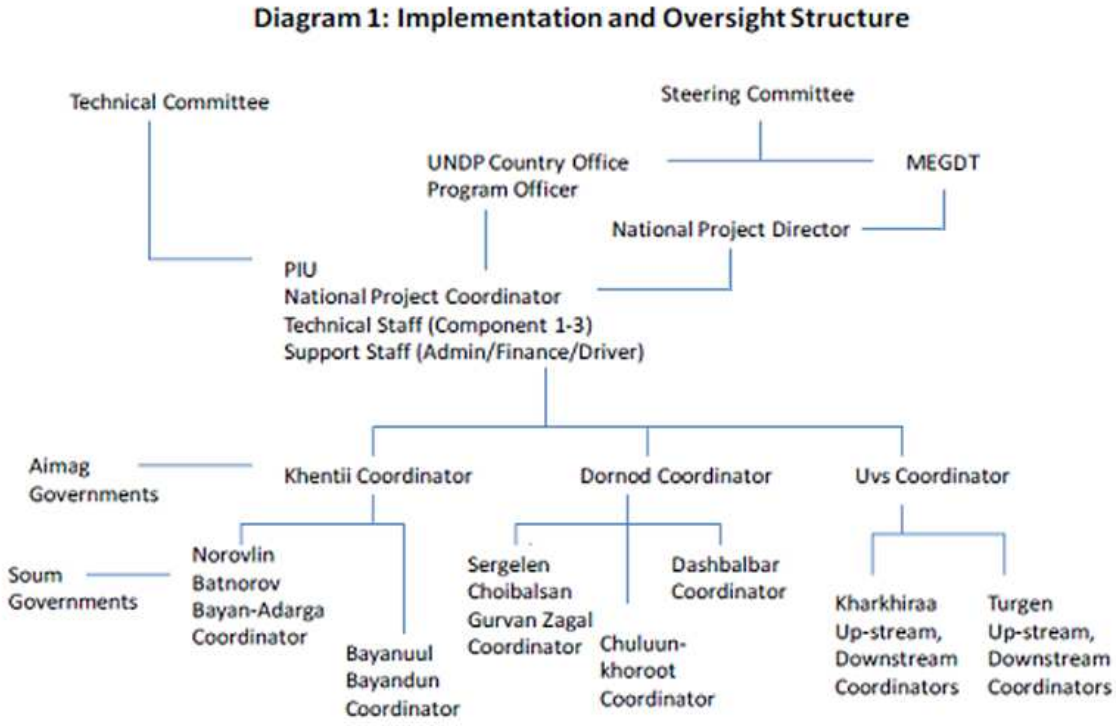
The project strategy addresses a multiple range of technical, institutional and socio-economic interventions which create mutual synergies among each other to combine into a strong adaptive strategy. Autonomous adaptation interventions can offset again vulnerability to a smaller or larger degree, which have to be addressed by policy interventions to re-strengthen adaptive capacities again

In the case of the project, enhanced sensitivities are identified in the area of reduced water resources and declining pasture availability, which enhances the vulnerability of the socio-ecological system in particular due to increased steppe fires and declining water and pasture resources and a reduction of biodiversity. Institutions had a certain budget to offset the impacts, in particular of steppe fires, but there were not enough knowledge and skills with respect to participatory management, conflict mitigation measures and not sufficient budget for full disaster prevention. In the beginning of the project, there was not an unwillingness to adapt to climate change, but a lack of awareness on climate change impacts and options to adapt. An explicit unwillingness to adaptation would probably have been there under the conditions of high water extraction during the former Soviet wheat irrigation schemes, but since these are no longer in place, the project could address current lack of adaptation measures through awareness raising measures and trainings in Integrated Water Management and Improved Water Use Efficiency etc.. The project enhanced also the skills of local communities to adapt to climate change on economic and ecological levels through various trainings. The project reduced the sensitivity to climate change through the introduction of “physical capital” in form of various structures for spring protection and the establishment of water basins etc. In addition to that the project enhanced ecological resilience of rangelands through the enlargement of protected areas and improving pasture productivity. The project has reduced also the exposure of communities to negative climate change impacts, in this case to water scarcity and declining feed resources, by enabling herders to move to more productive pastures by rehabilitating water resources there, improving by this the water-pasture-livestock balances. Besides these interventions which already fulfil all criteria for EbA, the project has additionally done everything possible to enhance resilience, measured in terms of ecosystem and social connectivity and stability. The project strategy is fully interconnecting all landscape elements. The rehabilitations of springs in sub-catchments are connected to the larger river catchment and enhance total base-flows. Protected areas exist as mosaics between wetlands and rangelands. The management of wetlands is fully intertwined with pasture management leading to a balanced and fully optimized use of resources. Socio-economically this is interconnected with certain measures for improved income generation. Further synergies of water and pasture management are created by the additional component of energy management, in particular briquetting, which will save manure and wood used for fuel, there again enhancing land productivity and water flows by retaining more nutrients for agricultural and rangeland and water flow in rangelands. The most impressive component of the project are the stability building factors, by inscribing successfully all these measures into existing laws, regulations and frameworks of governments and new or already existing institutions such as river basin authorities. Overall this proves that the strategy of the project has worked well.

4.3. Project Implementation and Adaptive Management

4.3.1. Management Arrangements

Figure 5: Implementation and Oversight Structure[5]



The overall effectiveness of the project management, as outlined in the Project Document, is high, Responsibilities and reporting lines are clear, decision making is transparent. The coordination between PIU and Aimags through the EbA project coordinators as well as through the linkages with UNDP and governments in all administrational units of the project area, which allows and equitable representation of all governmental units ,is excellent.

The establishment of a technical committee has been an important strategic step, as the technical committee could fill initial technical gaps of hired staff, and furthermore give continuous technical advice during project implementation.

NPC and PIU have an excellent reputation among all stakeholders – from Line Ministries to local partners. On the local level, it is the very timely operation of the project, the fact that implementation is directly followed by the planning activities, the project's reliability and responsiveness, which is appreciated about the project management. Local governments appreciate also very much the presence of the local coordinators, as it is facilitating intersectoral collaboration and capacity building on climate change adaptation issues.

On Ministry level it is in particular the great compentency and dynamism of the MPC and PIU, and the fact, that indeed the project is a great support to the Ministries to fulfil national endeavours in climate change adaptation, which is also new on the environmental agenda.

NPC and all members of the PIU have an excellent professional background, most of them with a higher degree from Europe, others have been University lecturers before or have other types of proven technical expertise.

The NPC has been exchanged after about the first project year, and the general view is, that the project has been managed much better since then.

4.3.2. Work Planning

All project work has been accomplished according to planning, sometimes even ahead. While the activities planned in the first component have almost all been completed, other activities to be up-scaled in Component 2 have only been fulfilled to about 20%, which is normal, since also the different components are implemented successively. There is no doubt that the project will fulfil its plan until the end of the project.

All stakeholders interviewed during the evaluation appreciated the timeliness of all activities, in particular, that planning was immediately followed by actions. Delays, which were mentioned in project reports, such as a delay in conducting baseline studies and Soum level assessment due to the central and local parliament election held in June and November 2012, as well as delays of recruiting project staff due to lack of available technical expertise were not noticed by stakeholders and it would have been beyond the means of the project management to circumvent these obstacles. The duration of the delays themselves was negligible and was even compensated by accelerated activities in the second half of the project year. The establishment of a technical committee composed of nationally recognized scientists and highly qualified experts from the Mongolian Academy of Sciences and leading universities enriched the technical expertise of the project and accelerated project progress. Even common delays by the Ministry of Finance of money transfers were not mirrored in delayed procurement of necessary items as it frequently is the case in other projects. Moreover, all project staff as well as the staff of aligned governmental agencies is highly knowledgeable, responsible, and committed to the overall goal of environmental health. It was also acknowledge by key governmental officials, that environmental health and climate adaptations are the pre-conditions for sustainable economic growth.

4.3.3 Financial Arrangement

The project is financed by governmental institutions and by UNDP (cash). Financial efficiency has not been assessed by comparing activity by activity with standard costs or costs in other projects in detail. Instead the total portfolio of activities and procured items was compared with projects of similar financial volumes, and it can be said, that indeed the number of successful interventions has been higher than in comparable projects known to the evaluation team. Therefore, also the financial efficiency of the project can be considered as excellent.

The contribution of 50% by the government to the strategic goals of the project shows its high commitment for climate change and EbA approaches. The distribution of funds has not been changed during the project lifetime, which also demonstrates that the original financial design of the project has found continuous endorsement by governmental entities.

The amount of expenditures until the date of the MTR reflects also the number and succession of project activities and therefore are also strategically well-placed.

Table 8: Co-Financing

Sources of Co-financing[6]	Name of Co-financer	Type of Co-financing[7]	Amount Confirmed at CEO endorsement (US$)	Actual Amount Contributed at stage of Midterm Review (US$)	Actual % of Expected Amount
The Government budget	Ministry of Environment, Green Development and Toursim (MEGDT)	Office supplying for the Project implementation unit in Ulaanbaatar city	113,245.03	56,622.52	50.0%

[6] Sources of Co-financing may include: Bilateral Aid Agency(ies), Foundation, GEF Partner Agency, Local Government, National Government, Civil Society Organization, Other Multi-lateral Agency(ies), Private Sector, Other

[7] Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other

The Government budget	MEGDT	Annual budget for 2 target River Basin Administration of Ulz and Kharhiraa/Turgen river basin	320,971.30	191,280.35	59.6%
The Government budget	MEGDT	Annual budget for Climate change coordination office of Mongolia	205,298.01	139,072.85	67.7%
Relevant project stakeholders provide financial and human resource contribution to project	Experts& staffs of MEGDT and its branch organization	Inputs from the Implementation partner, MEGDT, in mode of providing advice, professional skills	330,000.00	165,000.00	50.0%
The Government budget	Aimag government	Office supplying for local project units in 9 soums, and relevant expenses such as heating and electricity	230,487.02	62,582.78	27.2%
The Government budget	Aimag government	Conference hall supplying		4,139.07	
The Government budget	Aimag government	The target aimag and soums committed a total of USD 3.3 million (2.8 for Ulz, 0.5 in Kharkhiraa/Turgen) for implementation of EbA pilot measures reflected in the IWRM Plans.	3,800,000.00	760,000.00	20.0%
		TOTAL	**5,000,001.37**	**1,378,697.57**	**274.5%**

It is not possible to give more information about the expenditure of co-finances, as the PIU has not yet detailed the information to date. It is recommended to give more attention to reporting on the management of co-finances within the second project phase.

4.3.4. Project level monitoring and evaluation systems

The project monitoring and evaluation system in this case is closely intertwined with the logframe, and the logframe analysis of Chapter 3 applies partly also for the monitoring and evaluation systems. However, additionally it is suggested to review indicators of the M&E system, in particular to design sound output indicators. This is in detail described in Annex II.

4.3.5. Stakeholder Engagement

Table 5 lists the stakeholders involved into project implementation and their anticipated roles. These are political institutions on all levels as well as technical institutions as well as communities as the major beneficiaries. MEGD is well-placed as the main implementing agency, as it is also the responsible institution for implementing the UNFCCC. The integration of the Ministry of Food and Agriculture in project planning and implementation is also of paramount importance to streamline agricultural interests with environmental targets. All technical institutions such as Administration for Land Affairs, the Meteorological Association including the Institute of Hydrology and scientific organizations are very important for scientific backing of the project.

River Basin Councils are one of the core stakeholders of the project and necessary to ensure the multi-stakeholder dialogues of River Basin Agencies.

The project has collaborated excellently with all these institutions, and has particular merits even in stimulating multi-disciplinary and cross-sectoral dialogues under the umbrella of climate change adaptation, which has not yet been common in the country up to now.

The project is fully country-driven, as it strategically contributes to the National Climate Change Adaptation Plan of Mongolia. It is fully owned also by stakeholders on community level, as already in the inception phase the project has aligned national adaptation plans with local needs in a very detailed way, which are comprehensively outlined in the Inception Report of the Project.

Local beneficiaries have been selected on the basis of their needs – in particular the needs of women-headed households, their willingness and capacities. In one community it was recommended to initiate the beginning of the project more officially on local governmental level, which would have brought even more stakeholders on board.

4.3.6. Reporting

In general the text of progress reports is clear, well-structured and the topics selected for reporting are comprehensively addressed. Reports on Project Board meetings address concisely most important issues.

The answers to the evaluation matrix which compares achievements with indicators in the progress report are lengthy and detailed, demonstrating the willingness of the project team to work hard on any issues, but it is difficult to extract those data, which are really relevant to assess the project achievement.

Sometimes the issues reported do not refer to the indicators required, such as *"the importance of releasing habitats of Demoiselle Crane and Mongolian Gazelle from grazing were considered to select wells in eastern. As a result, 22.000 hectares of area were released from grazing*", which is reported to the indicator of reduced water extraction. Furthermore the inadequacy of indicators and targets reported to leads sometimes to double reporting of some issues, in particular between Component 1 and 3, where indicators are not always easy to be distinguished.

As some targets are not clear, they do not allow appropriate reporting.

To assess project achievement on time-scales is hindered by the fact, that work plans and activities are only developed on an annual basis, which makes it difficult to assess, where the project stands in comparison to the targeted achievements at the end. This might be illustrated for instance by the finding, that most of the targets as set in the current logframe are already fulfilled or over-fulfilled, but targets which will still be pursued in the second phase, such as the introduction of briquetting technologies, is mentioned nowhere. On the other hand, it is difficult to figure out under the currently existing frameworks, how those (few) targets, whose fulfilment is still lacking behind, like the coverage of land rehabilitation activities, will be covered in the second phase of the project.

This is furthermore exacerbated by the absence of Midterm indicators.

General issues reported in the project report have a very strong political and scientific focus, and refer contextually more to Component 1 and 3 of the logframe rather than to Component 2. However, during the field visits and even during the visits of institutions in Ulaanbaatar it was the impression of the evaluation team, that the major merits of the project were rather seen in their practical solutions on the ground. Therefore, reporting seems to have an "urban" bias, focussing on the issues which are discussed during board and planning meetings in the capital, less following up what is happening on the ground. Therefore, the second phase might consider to fill gaps in reporting about the local level, facilitated also by tailoring indicators better to local levels.

4.3.7. Communication

The project could not have had all these successes, if the communication would not have been excellent. Communication between UNDP and PIU is almost on daily basis and in harmony, as well as among PIU and Ministries and other stakeholders. The communication between PIU and Aimags is facilitated through the project coordinators placed in the Aimags, which on their behalf facilitate the communication between Soum cooperatives and Aimags governments. The presence of the coordinators has also enhanced inter-sectoral communication, since the coordinators themselves communicate with all sectors, which made the sectors also communicate among each other. A further entity for enhanced communication is the creation of user groups and cooperatives, which allows better communication and collaboration among each other as well as with external institutions.

Local and National stakeholders are more or less enthusiastic about the project, which demonstrates that the project has also the merit of having communicated the topic of ecosystem approach, which has been novel and unusual to most stakeholders, so well that it was adopted without any problem under the concept of climate change, which was also new to most of them.

Summary of Sustainability and Global benefits

The project has substantial global benefits in carbon sequestration and biodiversity and water resource protection.

- Assuming that under climate change 8 – 37% of the pasture is degraded, the rehabilitation of these pastures would offset high quantities of carbon emission, an amount which should be calculated under the ecological economic assessment of Component 1.
- Biodiversity protection has been improved through the enlargement of protected areas and rehabilitation of adjacent wetlands, where certain significant migratory bird species had returned to.
- Protection of global water resources: Through its water management components, the project has also saved, protected and augmented global water resources, such as the base flows in major river systems of Mongolia.

In the aspect of sustainability, the project managed to merge ecological, social and environmental sustainbility through the creation of intersectoral institutions such as RBAs, RBCs, and IWRM, supported institutionally on all administrational levels and through legislation. The project has created many synergies among its interventions, such as the improvement of pasture productivity through strategical placement of water resources in areas where carrying capacities were lower, the strengthenng of hydrological dynamics through land rehabilitation, the synergy of land rehabilitation with biodiversity protection and improved options for livelihoods as for instance through ecotourism, and synergies among the energy sector with land protection through briquette production, which would save future fuel wood resources and manure.

4.3.8. Project Effectiveness

Table 8 compares the effectiveness in achieving targets based on the Matrix of the Inception Report Methodology described in Annex III. The more detailed presentation along the template by the TOR is presented in Annex II, as it is very long due to the high number of indicators. The result is, that most targets have already been reached, mainly the ones related to assessments and developing strategies, while larger up-scaling of water use efficiency measures and land protections will have to be completed in the second project phase. As the monitoring framework of the project does not provide midterm indicators, it is not really possible to provide statements of the effectiveness of the project based on Midterm indicators, but all activities have been fulfilled timely according to work plan, and the progress, based on the activities observed, seems to be substantial.

Table 9: Analysis of Effectiveness: Comparing Targets with Project Achievements

Project Component	Target	Result	Target met during MTR	Target most likely to be met at Project end[8]
Project Objective: Maintain the water provisioning services supplied by mountain and steppe ecosystems by internalizing climate change risks within land and water resource management regimes	Annual in-stream summer 30-day base flow at 2.0 cms in Karkhiraa River, at 2.40 cms at Turgen river and at 0.20 cms at Utz River	Summer base flow of Ulz river has been increased, to previous level, but it could not be distinguished, if this has been the result of enhanced precipitation or of project interventions, which mitigated negative anthropogenic influences on water resources.	x	x
	5% improvement of surface water quality at the above sites measured by chemical and biological indicators	The target was reached on an average, but not fall elements.	-	x
Component 1: Landscape level integrated land use and water resources monitoring and planning system focused on reduction of ecosystem vulnerability to climate change	Two operational EbA strategies in place 6 EbA active Aimags in place	In all Aimags more than two EbA strategies have been put into place and mainstreamed into governmental frameworks, as for instance at least IWRM, sustainable pasture management, etc..	x	xx
	Altay Mountains / GLB: 39,420 km2, Kharkhiraa/Turgen: 1,000 km2 Eastern Steppe: 44,676 km2, Ulz: 3,750 km2 included into natural protection system	The target had already been fulfilled diromg the ;TR, . In all Aimags visited in Eastern Steppe, proposals to be registered as natural protection area had already been approved at Aimag level, and are now submitted to national level, therefore the target is most likely to be met in nearest future	On its way	x
Component 2: Landscape level adaptation techniques maintaining ecosystem integrity and water security under conditions of climate change	Total Soums with EbA strategic Programs: 17 Level of water extraction irrigation for project sites for Kharkhiraa/Turgen about 20% decreased compared to baseline	The number of Soums with EbA strategic programs has been over-fulfilled, also all Soums visited during the evaluation were implementing EbA strategic programs already now during the MTR.	Verified for the Soums visited	x

[8] X = "target likely to be met at project end"; XX = target already met during MTR.

	Number of monitored efficient wells in Kharkhirraa/Turgen: 12 Ulz: 70 Appr. 10% increase compared to baseline	Successful efforts of riparian / wetland restoration could be confirmed, as well as of sustainable grazing practices, though the area could not be verified		
	1250 ha riparian / wetland restored in Kharkhiraa/Turgen, and 2250 ha in Ulz 1500 km2 in Kharkhiraa/Turgen covered with EbA grazing practices, 12 000 km2 in Ulz (30% compared to baseline)		Verified for Soums visited	x
	10% poverty rate decreased in 17 Soums in targeted watersheds	Efforts to enhance incomes could be witnessed, though it could not be verified that incomes would be raised to the expected rate	Efforts made	Poverty rates will be decreased, but the expected rate is currently difficult to access
Component 3: Institutional and policy capacity strengthened to support EAB replication, planning monitoring, and enforcement for critical watersheds	76 Parliament members with increased EbA knowledge 30 Agency managers with increased EbA knowledge 21 Aimags and 329 Soum governments with increased EbA knowledge	The numbers could not be verified, but in all institutions visited EbA knowledge of policy makers and agency managers had substantially increased	On its way	X
	15 Soums replicating EbA	Already now the Soums visited are replicating EbA	On its way	x

In summary it can be said, that, already during this Midterm Review, all targets were met, and that there is no doubt, that more targets will be met by the end of the project**.**

4.3.9 Gender Issues

Gender consideration was taken into account already in the baseline studies. The MTR could confirm that activities specified to economic needs of women, in particular of women-headed households, were properly addressed in particular through enhancing and diversifying income generation from processing felt products and from horticultural products. Women were also involved in all committees and improved their skills in business planning.

Nevertheless, still it seemed that men had access to more lucrative income generation activities. As for instance, while also women own herds, still most income from herding is earned by men. However, this is a global pattern, though not as common in Mongolia as in other countries, but not a particular failure of the project. Gender-related income effects also depend on intra-household gender relationships rather than on the question on immediate incomes earned. This should be more closely addressed in future through participatory analysis, how women themselves view these kinds of equitability issues. Also a specific assessment of current incomes achieved by women under current conditions and a stock-taking exercise of income generating opportunities for women in rural areas might be helpful to taylor future activities more closely to women's livelihood needs.

It was striking, that the particular vulnerability of women to low temperatures was not adequately addressed by the project. The reason for this might not necessarily lie in a neglect of specific gender related vulnerabilities, but rather in the fact, that the project addresses rather global warming than remaining coldness. At any rate, many stations where women acted as posts or convened in cooperatives, such as the water monitoring stations, as well as the rooms where women cooperatives for felt-making came together, were not well-heated, which was frequently complained about, not only by the women themselves, but also on institutional levels. Meanwhile the project established a small dwelling for the post at the glacier monitoring station.

4.3.10. Special issues

In the following, some questions provided in the TOR will be answered.

Questions for the Analysis of Financial Risks

- *Was understanding of climate change risk and enhanced GOM budget enough motivation for policy makers to prioritize climate resilience over non-sustainable short-term economic benefits?*

Climate risks were understood well so far. Policy makers were not yet in the situation that the pursing of short-term economic benefit was in conflict with climate change adaptation. This might have been the case under the high water-consuming, large-scale cereal production regimes under the Soviet Union. Under the current land use conditions within the targeted regions, governments acknowledged the synergies between climate change adaptation and economic welfare, though none of the governmental officials was ready to actively enhance governmental budget for climate change adaptation. Particular expectation was put on potential incomes from tourism, if more wetlands would become registered Protected Areas. Suggestions by governmental officials were to raise income for maintenance of physical structures for climate change adaptation, to charge fees from the beneficiaries of these interventions, or from the members of the water user committees, respectively.

- *Are non-climatic drivers for ecosystem alteration sufficiently addressed by project?*

Non-climatic drivers are well addressed through the protection of springs from trampling, through improved pasture management which will reduce management-related degradation and enhanced run-off water and through general awareness creation and training and water use efficiency.

- *Level and frequency of natural disasters and their impact on communities' confidence in climate adaptation: have project measures reduced vulnerability of natural disasters in particular of herders' communities. Are current successes in climate adaptation sufficient to build incentives for further CCA.*

Major natural disasters are enhanced water scarcity, fire and snow, which are increasingly threatening the lives of humans and livestock. The enhanced frequency experienced by communities has increased the demand for climate change adaptation interventions. The project has to a certain degree mitigated water scarcity, in particular for watering livestock, and contributed to a limited degree supported to fire

mitigation. It has up to now not yet intervened on natural disasters caused by snow; however, disasters, and also disaster prevention, do not directly fall into its mandate, but are covered by a different project. However, it is recommendable, that where the project objective has linkages to those disasters, interventions should be foreseen.

- *Are adaptation measures gender sensitive and do they close inequality gaps*?

Adaptation measures benefit women, as for instance through improved access to water of better quality, improved pasture productivity and certain income generation activities. Some of these interventions are gender neutral and not particularly designed to address women's vulnerability, but have a higher impact on women than on men, as for instance the water-related interventions. Income-generating activities close inequality gaps between men and women to the certain degree, as overarching settings do allow it. Gender-disaggregated data would not be sufficient to capture the particular vulnerability of women, instead specific vulnerability profiles of women should be established and gender-specific actions targeting these specific vulnerabilities should be included into the project design.

- *Do local capacities match demands*?

The project has substantially enhanced local skills in planning and management and now match the demand to a great extent. Stakeholders mentioned, that the gaps which currently exist to adapt to climate change, are rather practical and on herder levels. Therefore communities would appreciate trainings which are really practical. Furthermore, in many cases equipment, in particular for disaster management is lacking.

Other Issues to be assessed

- *Quality and effectiveness of environmental strategy*

The environmental strategy pursued by the EbA project is highly effective, in particular due to the high synergies it creates, on the one hand through the introduction of participatory, integrated approaches, such as integrated water management, and water and pastoral user associations, on the other hand also through the synergies between pastoral management and water management, through the combination of traditional approaches of natural resource and water managed with modern approaches, and the excellent integration of all levels, from household to Baq to District and governmental level .

- *Ecosystem management capacities on Aimag and Soum levels. Which specific guidance tools have been provided for ecosystem management planning?*

The project provided numerous manuals on water use efficiency, integrated water and pasture management, on assessing pasture carrying capacities, on water monitoring and many others.

- *Integration of sectoral decision making, information quality*

Inter-sectoral decision making and information quality has been obviously substantially improved in particular on Aimag and Soum level, especially through the presence of the project coordinators, who have their offices in the governmental premises. Their communication with different sectors has also facilitated the communication among these sectors.

- *Capacities of government and decision makers to identify, assess climate risks, and mainstream them into water, land and resource management.*

It is not really the mandate of governments and decision makers to identify and assess climate risks. This is rather the task of climate scientists and meteorologists and it is also their task, to communicate this efficiently to decision makers. In this case, the project has successfully facilitated this communication through its various workshops, conferences, meetings and publications, so that during the Midterm Review no doubt was left, that these risks are sufficiently understood on governmental levels. Also the project's trainings to mainstream climate risks into water, land and resource management are fully received and applied now on governmental levels.

- *Diagnosis of climate resilience of communities – as well as its progress- Ingredients of resilience.*

The diagnosis of climate resilience of communities is a relatively complex topic, which requires usually an own framework for analysis.
Using the climate resilience framework by IUCN, which identifies four major ingredients for resilience which are: self-regulation (on planning level), adaptive learning, diversification of ecosystems and income generating activities as well as of sustainable technologies, it can be said that the project interventions have contributed a lot to strengthen these ingredients. .
On outcome level, climate resilience is mainly measured through the household economy approach, which is measuring the five types of capitals – human, financial, natural, physical and social – it can be said, that the project has also made substantial achievements in improving all these types of capital: social capital through the establishment of different use associations, human capital through the various trainings, natural capital through the EbA approach itself, physical capital through the various structures for water harvesting and saving, and financial capital as an outcome of the multiplication of the other forms of capital with each other.

- *Holistic management approaches that embrace climate risks*

Major climate risks are enhanced dryness, fires and snowfall. The project addresses the problem of dryness through holistic interventions within the water cycle by addressing planning and technical levels, through the strategic integration of water and pasture management. On social and political level it addresses integrated water management within River Basin Management Authorities and Councils. Interventions in fire risk management are rather fragmentary, since the project has also not an explicit mandate for fire management.. No interventions are foreseen for snow hazards.

4.4: Sustainability of the Project

Table 10: Risk Assessment

Project Component	Assumptions of Risks	Results
Project Objective	Are hydrological reporting stations still operational?	They are operational and reporting stations are increasing
	Comparison of impacts of climate change on water flows with adaptation achievements	Currently methodologies are not sufficient to assess the impacts of adaptation achievements on water flows and distinguish them from the influences of climate variabilities. It is recommended to use historical data as baselines to distinguish the impact of different amounts of precipitation on water flows and in this way also allow to distinguish between climatic and adaptation impacts on water flows.
Component 1: Landscape level integrated land use and water resources monitoring and planning system focused on reduction of ecosystem vulnerability to climate change	Does capacity of national stakeholders match demand and how was this alleviated by the project capacity building strategy	All stakeholders confirmed, that the quality of capacity building was meeting the demands, but that more stakeholders should be involved.
	Has protected area expansion been approved by government structures	Protected area expansion had been approved on Aimag level already, and the submission to national level is on the way.
Component 2: Landscape level adaptation techniques maintaining ecosystem integrity and water security under conditions of climate change	Capacity of Aimag / Soum level match project demands. Proposed interventions able to deliver EbA results (alleviated by strategic and participatory planning implemented under Component One that will identify and prioritize actions based upon local needs.)	Project demands widely met, however, certain engineering capacities, particularly within the hydrological field, could be strengthened. Interventions able to deliver EbA results and meet local needs

Component 3: Institutional and policy capacity strengthened to support EbA replication, planning monitoring, and enforcement for critical watersheds	National, provincial and district level receptive to project's EbA knowledge building approach (alleviated by project's information and market development strategies)	All policy levels highly receptive and appreciative to EbA's knowledge approach
	Government willing and able to finance project activities. (GOM budget likely to increase. Incentive issues alleviated by project strategy of linking success demonstrations with comprehensive capacity building efforts.	Currently little governmental willingness to finance project activities. This might change, if incomes are strengthened through tourism in protected areas, or if governmental budgets are spared in other areas, as for instance when budgets for disaster managements for instance for fire responses could be saved. Currently government's suggestions are that user associations would contribute fees to the interventions, not only for financial reasons, but also to create ownership.

a) Financial Sustainability

There are still some certain financial risks to sustainability. Currently climate change impacts are not considered as having economic impacts that are so severe that governments would feel alerted to finance adaptation under the restricted budgets available to them. However, as governments expect certain revenues from eco-tourism in protected areas which have been extended by the project, they might be willing to invest into future protection of these areas. This enhances the likelihood that financial and economic resources will continue to be availed to EbA and CCA, considering the high financial commitment of the government already now, and future sources which the private sector might provide.

While many institutional interventions, such as the water and pasture user groups which have been established, WRMs and RCs will also be sustainable without future financial support, some of the physical structures will need maintenance. To ensure financial sustainability, it is recommended, that the project introduces fees to be paid by user associations for maintenance, in particular of wells and springs, but also for greenhouses and other interventions. Another finance mechanism might be derived from water taxes.

b) Social Sustainability

All stakeholders highly appreciate the benefits accrued to them by the project and are also aware of the impacts of climate change and anthropogenic harms to water sources, therefore, fully in agreement to continue to preserve and continue project achievements within this line.

The project has created important associations and agencies, such as water user, pasture user and vegetable grower associations, as well as River Basin Councils and strengthened the work of River Basin Authorities. Apart from the close connectivity which has been emerged within these social entities and their common commitment of addressing climate change, these institutions have also achieved a lot in mitigating social conflicts. These achievements will be long-lasting.

There are currently no social or political risks which jeopardize the sustainability of project outcomes.

The project addresses fully all stakeholder' needs. Therefore, the interest of stakeholders to maintain the achievements of the project is high. This is demonstrated by the fact, that beneficiaries – not the project – suggested to contribute to the maintenance of constructions through payments of water fees. The maintenance of project achievements is also given through the high integration of the project into the climate change adaptation strategy of the government. The commitment towards EbA is also demonstrated by the high amount of governmental co-financing, which would be lost, if EbA strategies would not be further supported at the end of the project. The project has developed an awareness strategy and a strategy for further dissemination of lessons learned, which will ensure the continuation of climate change adaptation efforts also in future. Awareness on climate change as a consequence of project interventions is already high now, and has been further strengthened by making it part of the legislation.

c) Institutional Sustainability

From its beginning, the project has built institutional awareness and capacities for the adaptation to climate change in particular through integrated water management, pastoral management and land rehabilitation through extending protected areas. The project has made also sure from the beginning, that these adaptation measures are integrated into Soum and Aimag governmental plans.

It has been part of the project interventions themselves, to mainstream EbA issues into legal frameworks, governance structures and processes in a way, that they will not jeopardize the sustenance of project benefits, but on the contrary contribute to the sustainable implementation of EbA interventions also in future.

All institutions appreciate the activities of the project to a very high degree and are most likely to continue them in future.

d) Ecological Sustainability

The project interventions have contributed to improved ecological health, which is a self-regulating process, and therefore has enhanced the ecological sustainability also for the time of the end of the project. The only environmental risk which might occur to a higher degree and might materialize in higher contamination rates of water resources could occur through the expansion of mining areas.

5. Conclusions and Recommendations

5.1. Conclusions

The Project is in general very well perceived by stakeholders and has visible impacts. Strengths are overlying the weaknesses of the project by far for the following reasons:

- The Management Arrangement ensures appropriately that all necessary roles are covered by the different stakeholders. The project has also substantially supported inter-sectoral collaboration under the umbrella of climate change adaptation. The project is very time efficient. All activities are implemented according to plan, immediate action follows planning.
- All activities have been very relevant to stakeholders and to national priorities of climate change adaptation.
- The performance of the project in almost all components is highly satisfactory. The EbA strategy is excellently implemented through a landscape approach.
- The project has special merits in introducing IWRM into River Basin Management Agencies, as well as in civil society involvement in River Basin Councils; it has merits in participatory management of pastures and in balancing water-pasture resources related to livestock numbers and carrying capacities of pastures. One of the major highlights of the project is that it successfully supported communities to create additional governmentally recognized protected areas around wetlands. The project has furthermore piloted various spring protection technologies, improved and supported traditional and modern water harvesting technologies, it has enhanced capacities for physical, chemical and biological monitoring and managed to integrate all levels of stakeholders, from kindergarten and school level to Bac, Soum, Aimag and National levels. The project has also supported various income generating activities and managed to integrate various sectors under the umbrella of creating climate resilience. Hence, within project implementation hardly any shortcomings could be noticed.
- The project has made measurable progress in all indicators.

The only problem, which might exist, could rather be identified on project design level. The project logframe has many sub-components, which are not all instrumental in serving the overall objective of the project. The same is also mirrored in the high number of activities, which are doubtlessly all very beneficial for the stakeholders, but are not all coherent in contributing to the project goal. Indicators in most cases are SMART, but there is no real distinction between output, outcome and impact indicators. Some indicators are redundant or not feasible and should be abandoned. Gender issues could be better elaborated in the logframe. It furthermore seems that targets have frequently been set arbitrarily and do not reflect the scale on which they can be measured which also hinders appropriate reporting in certain ways.

Two technical outputs are not well covered: the ecological economic evaluation, for which not even a proper scope has been defined, and the monitoring of glaciers, which does not seem to monitor glacier melting properly, and furthermore does not result in proper technical action, as for instance assessing the dimensions of melting water which could be harvested etc.. In general, while also the technical performance of the project is highly satisfactory, the project could benefit from better hydrologic engineering expertise within all water related components.

5.2. Recommendations

Table 11: Summary of Recommendations

Rec #	Recommendation	Entity Responsible	Scope
0	The project is strategically fully in line with its major objective and implemented with high effectiveness, therefore should continue in this direction with some amendments in the project strategy	UNDP	Full project level
Corrective Actions of Project Design			

1	**Strengthening of impact and outcome level indicator monitoring and revising at least one output indicator:** - For overall **Project Goal** use data for "*stream base flows"* and "*Soil organic C*" and data from glacier monitoring for tracking not as impact indicators. Delete "*soil colour*" and "*ph*" value as indicators. If institutions have access to remote sensing data for soil moisture, this could be as an impact indicator with a target of not going below a historical average. Other soil data cannot be measured on watershed scales. Use either "*Ratio of extraction of surface water resources : ground water resources for extraction higher than 20:80*" as an indicator on watershed level and discuss with appropriate institutions about a feasible target. Or use "*number of surface water resources and their productivity/capacity*" as an indicator for water related ecosystem services. Use "*ecosystem connectivity"* as reported to the CBD, measured by linkages between ecosystems as another EbA related indicator on watershed level. Replace target for "*5% improvement*" of chemical substances in water sources by "*not higher than Mongolian Standard values*" and take action only when contamination rates are converging against this value. Replace "*reduced poverty rate*" by "*enhanced incomes*" on watershed level. On Aimag level or sub-watershed level it is also possible to use these indicators as outcome indicators. Another appropriate outcome indicator/target for Component 2 is: "*improved livestock-pasture-water resources balance*" measured by livestock numbers: water and pasture resources within sub-watersheds, compared to carrying capacities measured within the project. Add an Output indicator which measures energy related activities to Component 2. It would furthermore be nice to distinguish between a land and a water related subcomponent or respective output indicators in Component 2. One might furthermore think about the contextual cohesion of the outputs in Component 3 and might which to shift one or another output to another component, as considered in Annex I. The project should in future be more consistent with language using "Outputs" and "Outcomes" etc.	PIU in collaboration with UNDP	Logframe
2	Report about the use of co-finance resources in more detail within the second phase of the project.	PIU in collaboration with UNDP	M&E Framework
3	Introduce Benchmarks and Training Plan in addition to Work Plans	PIU in Collaboration with UNDP	Work Plan
Immediate Benefits			

4	Establish a vulnerability profile of women, especially with respect to cold weather conditions and discrimination in income generation options. With respect to coldness, water monitoring posts should be provided with small dwellings like the one which the post for glacier monitoring has already received. If possible provide in-door toilets in schools	PIU	Single Activities to protect project attached staff
5	Improve ecological economic valuation scope	PIU in collaboration with UNDP	Output-related intervention
6	Link spring protection with provision of water basins for livestock	PIU	Set of Combined Activities
7	Reduce evapotranspiration in water harvesting schemes	PIU	Single Activity
8	Pilote water regeneration schemes of higher density	PIU	Single Activity
Addressing and Re-Enforcing Benefits			
9	Address snow hazards	PIU	Single Activity
10	Integration of fire management into EbA management	PIU	Strategic Intervention
11	Introduce Sustainable Intensification of pastures	PIU	Single Activity
12	Taka a mosaic landscapes approach	UNDP and PIU	Strategic Approach on Project Level
13	Strengthening wool / sheep / pasture value chain	PIU	Strategic Approach on Project level
14	Streamlining poverty reduction targets with environmental targets	UNDP and PIU	Strategic Approach on Project level
15	Introduce collection of water fees for maintenance of structures	PIU	Single Activity
16	Enhance research and implementation of traditional water harvesting	PIU	Single Activity
17	Paying more attention to snow melt and green water flows	PIU	Single Activity
18	Introduce EbA related activities into Small Grant proposals	PIU	Strategic Intervention on Output level
19	Strengthening Inter-Sectoral Collaboration among Ministries	UNDP	Strategic Intervention
20	Promoting environmental journalism on local levels	PIU	Single Activity
21	Conduct exchange visits of beneficiaries among different Aimags and target river basins	PIU	Single Activities
22	Add traditional ecological knowledge into environmental education of eco-schools	PIU	Single Activity

5.2.1. Corrective actions for the design, implementation, monitoring, and evaluation of the Project

#1 Strengthening of Impact and Outcome Level Indicator Monitoring and Revising at least one Output Indicator

Strengthening of impact and outcome level indicator monitoring including replacement of some impact and outcome indicators with some stronger and more suitable ones and adding one output indicator is recommended for the following issues with reference to the Analysis given in Section 4.1.2.:

For overall **Project Goal** use data for "*stream base flows"* and "*Soil organic C*" and data from glacier monitoring for tracking, do not use them as impact indicators. Delete "*soil colour*" and "*ph*" value as indicators. If institutions have access to remote sensing data for soil moisture, this could be as an impact indicator with a target of not going below a historical average. Other soil data cannot be measured on watershed scales.
Use either "*Ratio of extraction of surface water resources : ground water resources for extraction higher than 20:80*" as an indicator on watershed level and discuss with appropriate institutions about a feasible target. Or use "*number of surface water resources and their productivity/capacity*" as an indicator for water related ecosystem services. Use "*ecosystem connectivity"* as reported to the CBD, measured by linkages between ecosystems as another EbA related indicator on watershed level.
Replace target for "*5% improvement*" of chemical substances in water sources by "*not higher than Mongolian Standard values*" and take action only when contamination rates are converging against this value.
Replace "*reduced poverty rate*" by "*enhanced incomes*" on watershed level.
On Aimag level or sub-watershed level it is also possible to use these indicators as outcome indicators.
Another appropriate outcome indicator/target for Component 2 is: "*improved livestock-pasture-water resources balance*" measured by livestock numbers: water and pasture resources within sub-watersheds, compared to carrying capacities measured within the project.
Add an Output indicator which measures energy related activities to Component 2.
It would furthermore be nice to distinguish between a land and a water related subcomponent or respective output indicators in Component 2.
One might furthermore think about the contextual cohesion of the outputs in Component 3 and might which to shift one or another output to another component, as considered in Annex I.
The project should in future be more consistent with language using "Outputs" and "Outcomes" etc.

.**# 2 Report about the use of co-finance resources in more detail within the second phase of the project**

Data on the expenses of co-finance resources did not meet the requirements for the mid-term evaluation. For the coming phase of the project it is recommended to report on this data in more detail.

 # 3 Training Plans and Additional Benchmarks to Work Plans

As work plans are re-formulated every year, one might consider to introduce benchmark for better follow-up for a lengthier period.

One might consider to establish a separate training plan, which gives an overview of all trainings and the areas they are implemented.

5.2.2. Actions to Follow up or Reinforce Initial Benefits from the Project

 # 4 Establishing Vulnerability Profiles of Women and Taking them into Account in Logframe and Implementation

For addressing the specific vulnerability of women under climate change, it might be valuable to establish a certain vulnerability profile, which will help to better tailor activities to their specific needs. This should include in particular activities to coldness, and exclusion processes from income generation activities.

 # 5 Improve Ecological Economic Valuation

Ecological economic valuation should be further strengthened and pursued, and should not be restricted to future climate change risks, but also to compare the economic impacts of current options for different interventions. Results should be policy relevant and highlight where to place investments best. They also should inform about future land productivity and its impact on income generation. Cost-benefit analyses should be conducted for the drip-irrigation scheme under the assumption of different degree of market integration for products. The economic feasibility of drip-irrigation schemes might not be given, if not all green-house products would be marketed. UNDP and PIU had following expectations from the results of the assessment, which should be taken into account. :

- Economic valuation of key ecosystem services (especially water resources for pasture/livestock, drinking water in urban and rural areas, agriculture, mining, wildlife/tourism etc.)
- Anticipated damage from CC on water resources under different climate change scenarios compared with “Business As Usual” scenarios
- Likely economic value of benefits of different adaptation options to manage climate change risks on water resources (for pasture/livestock, drinking water in urban and rural areas, agriculture, mining, wildlife/tourism etc.)
- Costs of necessary investments in US$
- Economic Rates of Return for alternative adaptation options.

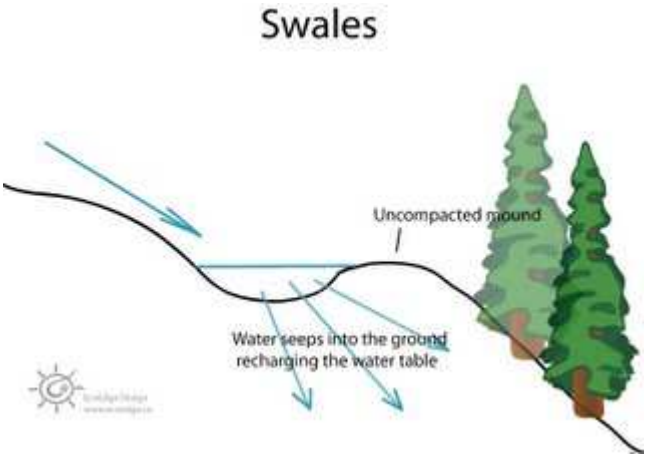
It is suggested that in addition to the previous approach by Yale University, the INVEST model by Natural Capital Project by Stanford University could be used. The Natural Capital Project provides a downloadable full-dynamic computer model free of charge as well as free-online trainings for its use, or low-cost trainings in various countries, which staff from responsible institutions could attend (compare http://www.naturalcapitalproject.org/ and http://www.naturalcapitalproject.org/InVEST.html to download the ecological economic models). The INVEST model is run on ArcGIS 9.1 and above, therefore, the previous GIS trainings provided by the project can be utilized also to apply these models. Alternatively, an international consultant could be hired to conduct ecological economic valuations on the respective questions.

 # 6 Spring Protection and Watering of Livestock

Constructions to divert the water into surface water for drinking and into surface water for creeks could be more effective, if they would be supported by more contours. As for instance, around the place behind the fence, where surface water for livestock watering is collected, one could construct a sink, a swale or a small dam as illustrated below. A diversion dam could be built to ensure that spring water is really conducted into a creek through diversion ditches or is harvested downhill and then diverted into a ditch or swale, to ensure that the run-off water, which is augmented through the fence, is not lost as run-off water further downhill, which is in particular likely, if the more down-hill pastures are degraded. The project in general and in particular this component would benefit from further hydrological engineering input, which could for instance determine the necessary size for the fenced area around the spring, and the necessary dimensions for the drinking water collection based on the ratio between spring productivity and the numbers of livestock to be watered.

A more detailed scheme is illustrated in Annex V.

Figure 6: Example of using Swales for Spring Protection



An alternative method to prevent trampling is to construct a collection pool at the spring and then channel or pipe the water to the pasture field or into a trough from which livestock can drink. Fences or other simple structures can be erected to trap drifting and blowing snow so that it will melt on the pasture in springtime or can be collected and stored. A storage structure for snow or ice can be made with stone

walls 20 cm thick (bound by concrete) and a concrete floor. Such a structure should be shaded and out of the way of the spring flood.

 # 7 Reducing Evapotranspiration in Water Harvesting Schemes

The intervention above is similar to an intervention of reducing evapotranspiration in Water Harvesting Schemes. A lot of water from water harvesting basins will be lost during summertime through evapotranspiration. Covering water reservoirs or establishing underground reservoirs or dams might be an alternative, which the project might wish to consider.

 # 8 Monitoring water flows on smaller scales and piloting water regeneration schemes of higher density

Currently, the impacts of spring rehabilitation are only monitored through base-flows of larger river systems. This might not reflect the hydrological reality, as the impact of spring rehabilitation might be too small to have measurable impact on the wider catchment, particular since this is also influenced by other factors, which might overlay the impacts of spring protection, as for instance precipitation, downstream irrigation, land use change etc. Rather than monitoring the big water systems, one might better start monitoring the creeks, which are regenerated by the project. To enhance the impacts of creek regeneration, one might also prefer to pilot the rehabilitation of many creeks in one sub-catchment rather than rehabilitating few creeks within a number of sub-catchments. Otherwise the project will monitor impacts, which cannot be expected from the scale and density of interventions.

5.2.3. Proposals for Future Directions Underlining Main Objectives

 # 9 Addressing Snow Hazards

Preventing and addressing hazards from snow as requested by communities would be a worthwhile intervention for climate change adaptation, and activities might include the establishment of physical structures for the protection of livestock and houses from snow, early warning systems of snow hazards, mobility etc. To give further recommendations is beyond the expertise of the consultants, but the project might discuss, if this would fall under its mandate at all or would be rather have to be covered by other projects. In the former case it might even consider to hire a consultant to give advice on such interventions.

 # 10 Fire Management and Protection of Head Waters and Steppe Grasses

Governments highlighted the urgent needs for further support in fire management, as currently all governmental budgets for emergencies are now spent on fire. This indicates the increasingly higher significance of fire management compared to other emergencies. Detailed suggestions for fire management were the needs for small cars, spare parts, and uniforms.

While it is beyond the scope of the EbA project to address all needs mentioned by communities. It is recommendable for UNDP to consider to start an extra project on wildfires, particularly on trans-boundary fires, which is an appropriate task for an international UN organization.

Within the EbA project – to remain within the scope of the project – one might concentrate on the protection of headwaters from fires, and reduce dryness of steppe grasses through ecosystem based interventions, so that in total the flammable fuel load will be reduced.

 # 11 Supporting Sustainable Intensification of Pastoralism

The project is requested by the Ministry of Agriculture, to support the piloting of irrigated fodder production as a new activity, which is also in line with the Mongolian National Climate Change Adaptation Plan. The project can up this suggestion within certain niches, where the hydrological conditions would allow this intervention. At the same time, the project should give guidance and recommendations, where hydrological conditions restrict intensified livestock use and nomadic or transhumant pastoralism should be maintained, and where and if hydrological conditions and cultural settings would rather be in favour of controlled grazing.

 # 12 Mosaic Landscapes

The various EbA interventions on landscape levels could be implemented through a mosaic landscape approach, where different interlinked land use and production systems are integrated as a mosaic into landscapes. These could be for instances mosaics of crop production, irrigated and non-irrigated fodder

banks, rangelands, protected areas, bioprospecting and eco-tourism sites to mainstream poverty issues into EbA (compare # 13).

 # 13 Streamlining and Enhancing Poverty Reduction Targets with Environmental Targets

One of the project targets is to reduce the poverty rate. To streamline this target with the overall project objective, it is necessary a) to either reduce poverty through activities which serve the environmental target of the project, or b) harness the environmental activities of the project to reduce poverty, or c) promote alternative income generating activities or technologies for income generating activities, which reduce the pressure on environmental stocks or flows. Within the present project livelihood activities, greenhouses fall under activity c), felt-making could fall under a), if providing a successful promotion of the sheep value chain, and ecotourism in future Protected Areas would fall under b). Also the suggested nurseries would all be under b). The project should further promote such activities, in particular nurseries would also be an activity related to category b), which would create synergies with income generation and environmental targets.

 # 14 Strengthening the Sheep/Wool Value Chain where Appropriate

If possible, initiatives to enhance the sheep/value chain should be strengthened, through economic incentives by enhancing the demand for products from sheep, wherever possible within the scope of the project. An increased proportion of sheep within the herds is beneficial for pasture productivity and therefore also for maintaining and enhancing green water flows through the reduction of run-off water. The project needs to consider closely, which activities – like felt-making and others – could be up-scaled and if up-scaling is possible under the mandate of this project, or if this component is sufficiently covered by other projects and could be abandoned. If there were an opportunity to enhance the activity to a large scale, so that it could act as an economic incentive to keep more sheep in the herd, it would have also positive impacts on pastures, as currently on an average the proportion of goats to sheep in herds is 70:30. This proportion has contributed to the degradation of pastures by goats, and a reverse ratio of 30 percent goats and 70 percent sheep would be sound to sustain the productivity of pasture, which on the other hand would also reduce water run-off and save water resources. It is however doubtful, that the current wool-processing activities would have such impacts on the larger value scale. Therefore, one might consider the following options for the future:

- Enhancing the scale of felt production, specializing on few products of really good quality with the help of design specialists, who help to improve quality and design of products and of market specialist. The final product would then not necessary be household items, but could also be felt/wool for isolation and other purposes.
- Leaving commercial production to few women or cooperatives, which have a real interest to conduct felt-making on a day-to-day level, and the rest for subsistence level.
- A third option would be, to link the activity with the Green Gold project of the Swiss government, which is more dealing with pasture rehabilitation and livestock value chains.

 # 15 Collection of Water Fees

For better maintenance of physical constructions for water management it is suggested by beneficiaries themselves to collect water fees in water user groups.

 # 16 Strengthening Inter-Sectoral Collaboration among Ministries

Inter-sectoral collaboration between different line ministries takes place, but could be strengthened. The project could for instance suggest the creation of an interdisciplinary committee of staff from all Ministries, which regular analyses policies and regulations in their complementarity with respect to water and climate change and promotes necessary reforms.

 # 17 Promoting Traditional Water Harvesting

Traditional water harvesting should further be encouraged and promoted, also other forms as the one introduced here. For instance, there is also the tradition of water harvesting by ice dams, which creates small artificial glaciers, as run-off water coming from the mountains is frozen by the ice and harvested over the winter as ice, and melting in spring, when the agricultural/horticultural season starts. Also these traditional methods would require some engineering advice on proper dimensioning of the scheme, as for instance one governor in the West mentioned, this method has once caused a flood in the village,

as too much ice was harvested, melting obviously also too fast. It is suggested, that the PIU assigns a Master thesis on this method or even a larger assessment.

 # 18 *Paying more attention to snow and green water as part of the hydrological cycle*

Despite the establishment of a glacier monitoring station by the project, snow and ice dynamics do not receive the same attention as part of the hydrological cycle as blue water. Snow dynamics should not only be monitored in mountain areas, but also with respect to drinking water resources for livestock, and as a source for plant moisture. On the other hand, the capacities of ice for water harvesting and water saving could be strengthened.

Snowmelt and summer rainwater can be collected through building small stone dams along slopes to slow down the runoff of water and allow more of it to be absorbed into the soil. Other simple measures to improve pasture water supply include piping water from rivers and springs or building water collection structures, such as small reservoirs and water tanks. However, it is important that the total volume of annual rain and the location of the collection structure are considered carefully to avoid over-extraction of water, as well as to minimize water loss.

The same applies for green water, which will in particular decline under climate change. Hydrological flows should therefore be managed in a way, that green water remains most of the time within the soil horizons through respective adaptation of cropping calendar, continuous land cover, adapted crop and grass varieties etc.

Snow is part of hydrological flows, and the project should consider interventions which protect livestock from heavy snow fall, furthermore the project should also consider interventions for the case of lacking snowfall and the impact on water resources for livestock. .

 # 19 Small Grant Proposals

As mentioned above, the project could encourage that more environmental issues are addressed through Small Grant proposals

 # 20 Promoting environmental journalism on local levels

Environmental journalisms on local levels could be promoted for further awareness raising and information exchange on environmental problems under the auspices of the press agency with whom the project collaborates, and contests among environmental journalists could be conducted.

 # 22 Exchange Visits

High demand was expressed to conduct exchange visits to other areas to collect information, how EbA approaches are implemented in other areas and to exchange experience.

Annex I: Analysis of Outputs and Activities

Project Outputs, Indicators and Activities

OUTCOME 1: INTEGRATED STRATEGIES/MANAGEMENT PLANS FOR TARGET LANDSCAPES/RIVER BASINS DEVELOPED AND UNDER IMPLEMENTATION

Outputs	Activities	Indicators
Output 1.1.: Ecological and Socio-economic Assessments (Baseline studies) as a basis for the development of Ecosystem-based Adaptation strategies for the target landscapes and for the development of River Basin Management Plans (Kharkhira/Turgen Ulz)	1.1.1. Generate detailed inventories (water, wildlife, livestock, forest, land use, pasture condition, special conservation values) and assessments of resource/ecosystem services condition in the target river basins. 1.1.2. Produce detailed social and economic assessment (agriculture, livelihood, development sectors, cultural values) for 2 target areas for the development of integrated strategies/river basin management plans. 1.1.3. Development Knowledge Management Strategy and support establishment and maintenance of databases in relevant agencies to improve information management	1. Number of integrated strategies/management plans for river basins approved and adopted by National and Aimag Governments[9] 2. Number of Aimag governments monitoring, assessing, and reporting to MEGD and relevant agencies (water authority, National Climate Change Coordination Office) on integrated river basin management measures 3. Guidelines on IWRM address climate risks (and integrate adaptation measures and EbA approaches) developed 4. Total hectares included within protected areas system in the two project sites
Output 1.2.: Economic Valuations completed comparing the landscape level costs and benefits of EbA.	1.2.1. Support establishment of Taskforce (Working Group(led by NDIC to guide Economic Valuation Study design and execution. 1.2.2. Prepare tender, and select contractor(s) to compile existing background information for the Economic Valuation Study, and to undertake (1st round of) Economic Valuation Studies 1.2.3. Support national capacity development for economic valuations of EbA strategies and ecosystem services under climate change conditions.	
Output 1.3.: Ecosystem-based Adaptation strategies for the target landscapes and River Basin Management Plans (Khakhira/Turgen, Ulz) completed and operated	1.3.1. Prepare tender and contract expert(s) to undertake a Vulnerability Assessment of the target landscapes. 1.3.2. Facilitate stakeholder collaboration for the development of Ecosystem-based Adaptation strategies for the target landscapes and River Basin Management Plans (for Kharkhira/Turgen, and Ulz)	

Soundness of Output Formulations

Output 1.3. repeats the Result Area through the formulation" *Ecosystem-based Adaptation strategies for the target landscapes and River Basin Management Plans (Khakhira/Turgen, Ulz) completed and operation.*", therefore is rather redundant on the one hand, on the other hand an output which is really completing the operation of the strategies is still missing. The formulation "Adaptation strategies for the target landscapes and River Basin Management Plans (Khakhira/Turgen, Ulz) completed" puts landscapes and management plans on the same level, and should be replaced by "Adaptation strategies for the target landscapes and River Basins (Khakhira/Turgen, Ulz). Completed…" This difference is important, because the river basin management plan might be such a strategy and an appropriate output

[9] By project close, the National Government and each Aimag within the Altai/GLB and Eastern Steppe landscapes will have adopted the EbA strategic process as formal policy

to be formulated might then be*:"Ecosystem-based Climate Change Adaptation strategies for landscapes and river basins are developed."*

It is furthermore recommendable to expand Output 1.1. and 1.3 in a way that they also embrace IWRM and PAs in a more comprehensive way, as these are also measured by the indicators (see below).

Relation between activities and outputs

For Output 1, activities are rather formulated in a general way. This can be appropriate, but it should be made sure, that the general enumeration of inventories and assessments is comprehensive and accurate and congruent with the topics mentioned in the work plan. If this would make activities look overloaded, one might think of creating sub-activities.

In general it would be recommendable, to provide a separate a complete plan of inventories and assessments to be conducted within the project, together with a schedule, when these assessments would have to be accomplished.

Relationships of indicators between outputs and outcomes

Landscape level – Component 1, national level Component 2

Indicators 1 and 2 are almost identical with indicators in Component 3 as they are referring to the adoption of EbA strategies into Aimag or Soum policies. However, Component 1 only serves the development of strategies to address climate change, and not yet their integration into policy plans, which is the mandate of Component 3. This needs to be clearly distinguished. It is therefore rather recommendable, either to shift Indicators 1 and 2 to Component 3 and align them with Indicators 6 – 9 and reformulate indicators instead: "*Number of inventories on topics a…x, which have been successfully completed"* and "*number of strategies developed for climate change adaptation and number of Soums and Aimags*..", or else, shift Output 3.1. to Component 1, and still align those indicators as suggested.

In none of the indicators any specific economic measure is mentioned, one might therefore wonder about the role of the ecological economic assessment. It is therefore recommendable to include an indicator such as "Number of EbA interventions, for which current and future costs and benefits have been calculated".

OUTCOME 2: IMPLEMENTING LANDSCAPE LEVEL ADAPTATION TECHNIQUES TO MAINTAIN ECOSYSTEM INTEGRITY AND WATER SECURITY UNDER CONDITIONS OF CLIMATE CHANGE

Output	Activities	Indicators
Output 2.1.: Capacities of rural communities for monitoring and natural resources and climate change impacts and for adaptive management in two watersheds strengthened.	2.1.1. Undertake Soum level needs assessment for capacity development, and develop capacity building programme for 2 target areas.	2.1 Number of Soums in target area considering EbA measures/Integrated River Basin Management into their annual land-use planning and in Soum development plans and strategies. 2.2 Water use efficiency improved to maintain ecosystem integrity as measured by: 2.2.1 Amount of surface water extracted for irrigation in project sites (cubic meter 2.2.2 Number of monitored wells increasing ground-water consumption efficiency in project sites 2.2.3 Small scale Rain and snow melt Water harvesting 2.3.[10] Land use practices and climate change resilience improved as indicated by 2.3.1 Total hectares of riparian and wetland habitat restored with native vegetation within project sites 2.3.2 Springs protected with livestock exclosures, Livestock watering and access to creeks managed with appropriate facilities/fencing
	2.1.2. Design community based monitoring programme with tools and mechanisms to monitor and assess the health and status of their ecosystem based on current practices and experiences.	
	2.1.3. Undertake 1st series of trainings for communities on monitoring guideline tools, mechanisms and indicators	
Output 2.2: Suite of physical techniques to improve ecosystem resilience established in two critical watersheds.	2.2.1 Identify priority areas, and undertake feasibility studies to implement adaptation measures to improve ecosystem resilience and services in each Soum	
	2.2.2. Support to and training in implementation of adaptation techniques to improve ecosystem services and resilience with community participation.	
	2.2.3. Support development of annual land use and pasture management plans that integrate adaptation techniques, discuss co-	

[10] Number added by evaluator

	financing opportunities for implementation of plans, and support implementation.	2.3.3 Total area with improved pasture land management 2.3.4 Areas with Reforestation and improved forest management in Western target areas 2.4 Decrease in average Rural Poverty rate for 17 Soums within the target watersheds. 2.5 Number of Small Enterprises established and operating successfully 2.6 Hydrological monitoring is strengthened
	2.2.4. Support to improve technical and human capacity of glacial run-off and water monitoring networks in target areas.	
Output 2.3. Regulatory and financial mechanisms for supporting climate change resilient livelihood strategies.	2.3.1. Explore options to support climate change resilient livelihood strategies	
	2.3.2. Support activities to develop climate change resilient livelihood strategies through diversification, alternative incomes, value addition to local products	

Feasibility of Outputs / Coherence Issues

The Result Area reflects very well one important component of resilience building: Sustainable Technologies.

In general the Outputs are feasible, but one might also think of creating Capacity Building as an own Outcome, and shift Output 2.1 to such a Capacity Building Outcome. The remaining Outputs 2.2. on a suite of technical interventions, and Output 2.3 on livelihoods issues, are more consistent to create one single Outcome area. As indicators for Output 2.2. address both water and land issues, one might divide this Outcome accordingly.

The component should also create an Outcome area on energy issues, which have been identified as activities in the field, but have not been captured by the Logframe.

Relation between activities and outputs

Activities reflect very well the character of resilience through self-regulation and learning activities by communities.

Activities 2.1.1. and 2.2.1 could also have been covered already under Component 1. Output 1.2, since the development of strategies would normally also include the definition of interventions.

Activities 2.1.3. should be related to all activities under this outputs, not only to a 1st series. For scheduling of these different activities the same applies as what has been said for Component 1.

Activity 2.2.2 as a training component should be shifted to Output 2.1. or to an extra Outcome Area on Trainings and Capacity Building to be built.

Activity 2.2.3 is already reflected in outputs and activities of component 1: *"Establishment of management plans.*"

Livelihood activities such as wool processing and vegetable growing might be related to the current Output 2.3 and better be emphasized there. It should be mentioned, that vegetable growing is a joint activity also with water management through with drip-irrigation, and this part is captured under Output 2.2.

Relationships of indicators between outputs and outcomes

Indicator 2.1: Is obviously linked to Output 2.1. and related activities, but the contextual linkages to the output is not clear, not even the linkage with the Result Area. As the indicator rather measure the integration of the adaptation strategies into governmental frameworks, one might rather switch the indicator to Component 3 and align it with indicators 6 – 9.

2.2 Water use efficiency improved to maintain ecosystem integrity as measured by:
- 2.2.1 Amount of surface water extracted for irrigation in project sites (cubic meter
- 2.2.2 Number of monitored wells increasing ground-water consumption efficiency in project sites
- 2.2.3 Small scale Rain and snow melt Water harvesting

It seems that Indicator 2.2. is meant as an outcome indicator and 2.2.1 – 2.2.3 are the related output indicators and should be positioned accordingly.
If 2.2. is an outcome indicator, it should also be measured, as for instance by a percentage of improved water use efficiency.

2.2.1 and 2.2.2 are SMART output indicators, however, 2.2.3 is not expressed as an indicator. It should re-formulated towards “number and volume of small scale rain and snow melt water harvesting.”
It does not seem that the output indicators measure all interventions in the field comprehensively, one might therefore add also an output indicator on number of sites for spring-water development.

2.3. seems to be another outcome indicator, measuring various outputs. It is not clear, what the ordinal number 2.3. refers to. Obviously all sub-ordinated indicators are related to land management, maybe in an earlier version there had been an output related to land management. It is suggested to re-introduce this output here.
Indicators 2.4 and 2.5 seem both to belong to livelihoods issues, while 2.4. is an overarching one and 2.5 the output indicator. As indicator 2.4 is also used as an impact indicator for the general project objective, and indeed measures impacts of all components, it should be deleted from here.
Indicator 2.6 is obviously related to the accomplishment of the installation of a glacier monitoring and two surface water monitoring stations, and therefore an Output Indicator, which belongs to the output indicators under 2.2..

<table>
<tr><th colspan="3">Project Output III: Strengthening Capacities/Institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies</th></tr>
<tr><th>Output</th><th>Activities</th><th>Indicators</th></tr>
<tr><td rowspan="4">Output 3.1.: Ecosystem-based adaptation approaches/integrated river basin management mainstreamed in national resource use planning and implementation mechanisms in sector policies</td><td>3.1.1. Conduct institutional capacity and needs assessment of NCC Authority, CCCO and related key agencies including legislative, financial and regulatory frameworks of EbA management and deliver recommendations for relevant agencies</td><td rowspan="12">River Basin Councils and sub-councils established and strengthened in target areas

1. Number of staffs of relevant agencies and local governments trained in river basin management guidelines

2. Number of Soums replicating EbA measures and integrated river basin management principles and practices within the target eco-regions

3. National mainstreaming of EbA as indicated by:

• Number of official government policy documents adopting EbA principles/practices

4. Amount of annual government spending to support application of EbA principles and practices nationally

5. Number of National Climate Change Authority EbA policy documents mainstreaming EbA within sectoral decision-making frameworks.</td></tr>
<tr><td>3.1.2 Develop National level EbA Institutional Capacity Building Programme and Action Plan</td></tr>
<tr><td>3.1.3. Support in implementation of Institutional Capacity Building Programme</td></tr>
<tr><td>3.1.4. Support review of Soum and Aimag level development plans/strategies/policies and develop recommendations to integrate EbA approaches.</td></tr>
<tr><td rowspan="3">Output 3.2.: Institutional structure for river basin management integrating climate change risks (Administration and Council) established and operational in the target areas as model for replication.</td><td>3.2.1. Support to the establishment process of the Integrated river Basin/Sub-basin management Administrations and Councils for 3 river basin/sub-basins</td></tr>
<tr><td>3.2.2. Support to the development of a guideline to prepare Integrated River Basin Management Strategy and Action Plans integrating climate change risks</td></tr>
<tr><td>3.2.3. Conduct capacity building trainings for administration/council officers</td></tr>
<tr><td rowspan="4">Output 3.3.: Best practices are identified and program for up-scaling best practices development and implemented.</td><td>3.3.1. Promote public awareness through media: newsletter, radio, TV and forums</td></tr>
<tr><td>3.3.2. Produce publications (guideline, workshop and study reports, manuals, updated flier)</td></tr>
<tr><td>3.3.3. Establish and maintain an “Interactive Climate Change Resilience Website”</td></tr>
<tr><td>3.3.4. Prepare 1st annual “State of the Ecosystem” report and disseminate to stakeholders and relevant agencies for further planning and monitoring of ecosystem state</td></tr>
</table>

General Comment

Obviously in this component the project tries to address cross-cut the policy level with the capacity building level. This makes the whole logframe clumsy, and creates duplications and inconsistencies.

Within Output 3.1. the integration of EbA strategies and management plans into governmental frameworks might be appropriate here, however, the output is very similar to the output in Component 1. To better distinguish the contents of components from each other, it might be preferable to shift this output to Component one, and make Component 3 solely a component of capacity building on good practices and their promotion, or at any rate separate the two or three issues**.**

Output 3.3: The formulation would rather refer to a scaling-up of best practices within the project, but what is meant here instead is the promotion of scaling-up and replicating best practices for climate change adaptation. The component should therefore be rephrased to *"A public relation and awareness raising programme on climate change and best practices for adaptation is put into place*."

Support to eco-schools and kindergarten is not mentioned as an activity or output, and it is suggested to put it under an extra outcome on awareness raising together with activities 3.3.

Indicators:

It seems that indicators here are widely repetitive of indicators under Output 1, a problem which would be solved by shifting the repetitive output with all its related indicators to output 1. The indicators

"*Amount of annual government spending to support application of EbA principles and practices nationally*

and: "*Number of National Climate Change Authority EbA policy documents mainstreaming EbA within sectoral decision-making frameworks*"

Are in their nature impact indicators and therefore do not justify an own outcome area.

Targets

2.2. The project activities have not reduced water extraction of existing irrigation systems, but introduced new irrigation systems, where water use efficiency is increased.

[1] Indicators, baseline and targets not compatible, as water use

Annex II: Progress towards project Outputs (Source: Annual EbA Report 2014, adapted by Evaluators)11

Project Output:										
Indicator(s):	Baseline:				Target(s):	Achievement(s):				Target fulfilled
Mean annual in-stream summer 30-day base flow maintained (not decreased) in two project sites[12]	**2012 year** -	Turgen River	Kharkhiraa River	Ulz River	Kharkhiraa River: 2.43 m³/sec Turgen River: 1.98 m³/sec Ulz River: 0.10 m³/sec (at Chuluunkhoroot)	**2013 year** -				
						Turgen River	Kharkhiraa River	Ulz River		No, situation worse than baseline[13]
	Summer minimum flow, m3/s	1.67 m3/s	4.53 m3/s	0 m3/s		1.57 m3/s	4.4 m3/s	0 m3/s		Situation worse
						2014 year - *Mean annual in-stream summer not yet calculated. Discharge:*				
						discharge: 1.44 m3/s	discharge: 1.44 m3/s	discharge: 1.49 m3/s		Situation improved for Ulz
Ground and surface water quality improved or maintained in two project sites[14]	Water chemical analysis - **2012**	Tur-gen	Khar-khira	Ulz	5% improvement on average[15]	Water chemical analysis - **2014**[16]	Turgen	Khar-khira	Ulz	% Target fulfilled
	Suspended solids (mg/l), MNS4586:1998 **35mg/l**	16	40	8.5		Suspended solids (mg/l), MNS4586:1998 **35mg/l**	6	4	6.4	In all cases overfulfilled
	Permanganate COD (mg/l) MNS4586:1998 **10mg/l**	1.4	7	5.28		Permanganate COD (mg/l) MNS4586:1998 **10mg/l**	7.3	0.5	10.6	Not fulfilled for Turgen and Ulz, overfulfilled for Kharkhira
	$NH+_4$ (mg/l) MNS4586:1998 **0.5mg/l**	0.42	0.54	0.083		$NH+_4$ (mg/l) MNS4586:1998 **0.5mg/l**	0.21	0.09	0.13	Overfulfilled in Turgen and Kharkhira, not fulfilled in Ulz
	Total mineral P (mg/l) MNS4586:1998 **0.2mg/l**	0.34	0.45	0.79		Total mineral P (mg/l) MNS4586:1998 **0.2mg/l**	0.017	0.067	0.004	Overfulfilled everywhere
	Total Fe (mg/l) MNS4586:1998 **0.1mg/l**	0.23	0.14	0		Total Fe (mg/l) MNS4586:1998 **0.1mg/l**	0.07	0.03	0.06	Overfulfilled in Turgen and Kharkhira, not fulfilled in Ulz

11Outputs are short-term development results produced by project activities. They must be achieved with the resources provided and within the time-frame specified.

12 In-stream base flow is a portion of stream flow that comes from the deep subsurface flow and delayed shallow subsurface flow during the summer (un-frozen) period.

13 The indicators are not feasible, therefore, not fulfilling them does not mean that project did not perform. (compare also recommendations)

14 (PIU): The figures are July figures which are considered most representative. Missing data will be determined during Project Year One with Output 2.1 activity.

15 Target unusual. Normally compared with standard values, which is targeted, not a general targeted percentage.

16 Evaluation: The variation of these figures is very high. It has to be made sure, that data are statistically significant.

The project also monitors and reports on biological water indicators, soil indicators, and glacier and snow depth. But these are not related to project targets.

Project Output I:				% of Target Fulfilled
1. Number of integrated strategies/management plans for river basins approved and adopted by National and Aimag Governments[17]	Operational integrated strategies/management plans for river basins(or sub-basins): 0	Operational integrated strategies/management plans for river basins: at least 2	**One** IWRM plan adopted by all 3 target Aimags (and implementation initiated from the 2015. **Seventeen** EbA programs developed for each target soum in Kharkhiraa-Turgen and Ulz river basins and endorsed to 17 soum's Parliament.	**More than 100%**
2. Number of Aimag governments monitoring, assessing, and reporting to MEGD and relevant agencies (water authority, National Climate Change Coordination Office) on integrated river basin management measures	Number of Aimag Governments implementing integrated strategies/management plans for river basins: 0	Number of Aimag Governments implementing integrated strategies/management plans for river basins:at least 3	**Two** Ulz RBA and Uvs lake – RBA **Three** Meteorology offices of Dornod, Uvs and Khentii aimag **Five** Governor's Offices of Dornod, Uvs, Khentii, Zavkhan and Khuvsgul aimag	**More than 100%**
3. Guidelines on IWRM address climate risks (and integrate adaptation measures and EbA approaches)	Current guidelines do not address adaptation and EbA issues explicitly	Guidelines for IWRM address climate risks	Guidelines for IWRM address climste risks and landscape level Soum EbA Plans are also in support of the implementation of IWRM plans for RBs.	More than 100%
4. Total hectares included within protected areas system in the two project sites	Altai Mountains / GLB: 37,420 km² Kharkhiraa/Turgen watershed: 800 km² Eastern Steppe: 42,676 km² Ulz watershed: 3,120 km²	Altai Mountains / GLB: 39,420 km² Kharkhiraa/Turgen watershed: 1,000 km² Eastern Steppe: 44,676 km² Ulz watershed: 3,750 km2	Good progress has been made in enlarging the network of protected areas: 2014 The protected area has increased almost of 6,000 km2 (600,000 hectares). It's 13% of Ulz, Kharkhiraa-Turgen river basins area.	Fulfilment rate about 7%. Not fulfilled

Project Output II:				
Indicator(s):	Baseline:	Target(s):	Achievement(s):	Rate of Fulfilment
2.1 Number of Soums in target area considering EbA measures/Integrated River Basin Management into their annual land-use planning and in Soum development plans and strategies.	Baseline :0	17	17 soums	100% - Target fulfilled

[17] (PIU Comment:) By project close, the National Government and each Aimag within the Altai/GLB and Eastern Steppe landscapes will have adopted the EbA strategic process as formal policy

2.2 Water use efficiency improved to maintain ecosystem integrity as measured by:	Kharkhiraa/Turgen River basin:0 Ulz River basin:0	Total extraction approx. 20% decreased		Not measurable[18]
2.2.1 Amount of surface water extracted for irrigation in project sites (cubic meter 2.2.2 Number of monitored wells increasing ground-water consumption efficiency in project sites[19]	Kharkhiraa/Turgen River basin:0 Ulz river basin:0	12 70	In 2014, a total of 6 wells were repaired. The project is intending to equip established boreholes with relevant measuring devices and train local hydrological officers.	Less than 10%
2.2.3 Small scale Rain and snow melt Water harvesting	No water harvesting activities:0	Number of small scale water harvesting reservoirs: 2	Based on these, 2 simple water harvesting structure were constructed in Turgun soum.	100%
Land use practices and climate change resilience improved as indicated by: 2.3.1 Total hectares of riparian and wetland habitat restored with native vegetation within project sites	Kharkhiraa/Turgen River basin: 0 Ulz River basin: 0	1250 ha[20] 2250 ha	Small scale tree nurseries in Kharkhiraa, Turgen and Ulz river basins covering 10 ha of riparian area. In 2014, a total of 5 hectares of area have been rehabilited along the river Ulz and Kharkhiraa	Less than 1%. Not fulfilled
2.3.2 Springs protected with livestock exclosures, Livestock watering and access to creeks managed with appropriate facilities/fencing	Kharkhiraa/Turgen River basin:0 Ulz river basin: 0	Kharkhiraa/Turgen: 12 Ulz: 70 (about 30% increase)	A total of **12 springs** were protected in 2014 applying. As a result, a total of 117.000 hectares[21] of pasture land were supplied with required water resources. The protected springs have been providing more than 500 rural populations as well as 69.500 livestocks with drinking water.	100%
2.3.3 Total area with improved pasture land management	Kharkhiraa/Turgen River basin:0 Ulz river basin:0	1,500 km2 12,000km2	. 117 000 ha?	More than 100%
2.3.4 Areas with Reforestation and improved forest management in Western target areas	226 ha	Western target areas: 236 ha (approx. 10% increase)	254 ha.	More than 100%$
2.4 Decrease in average Rural Poverty rate for 17 Soums within the target watersheds.	Current poverty rate: Kharkhiraa/Turgen basin: 0.495 Average Poverty headcount for Ulz basin: 0.433	Approx. 10% average decrease	Not measured	Not to be measured during MTR
2.5 Number of Small Enterprises established and operating successfully	Kharkhiraa/Turgen River basin:312 Ulz River basin:237	570 Small Enterprises at both project sites (appr. 5%[22] increase).	558	Fulfillment less than 50%

[18] The project activities have not reduced water extraction of existing irrigation systems, but introduced new irrigation systems, where water use efficiency is increased

[19] Indicators, baseline and targets not compatible

[20] The total area of 1250 is smaller than the sum of 3.1. and 3.3.

[21] It is not clear, how the figures were calculated

[22] Target is not 5% increase, but 3.8% increase

	549			
2.6 Hydrological monitoring is strengthened	Monitoring posts for glacial run-off in Western project area:0 Kharkhiraa/Turgen River basin:0 Ulz river basin:0	At least 1 in Western target area; at least 2 surface water monitoring post in Eastern target area	One Glacier Observation Post was established in Turgen Mountains. In total, 3 surface water monitoring posts (1 in Kharkhiraaa, the west, 2 in Ulz, eastern target area) newly established with support of the project in addition to existing ones (in the west 3, in the east 3) in 2013.	100%

Project Output III: Strengthening Capacities/Institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies				
Indicator(s):	Baseline:	Target(s):	Achievement(s):	% of Target fulfilment
6. River Basin Councils and sub-councils established and strengthened in target areas	River Basin Councils established and strengthened in target areas: **0**	River Basin Councils established and strengthened in target areas: at **least 3**	More than 3	100%
7. Number of staffs of relevant agencies and local governments trained in river basin management guidelines	Number of staff of relevant agencies and local governments trained in river basin management guidelines:**0**	Number of staff of relevant agencies and local governments trained in river basin management guidelines: at least staff of relevant agencies in **21 Aimags**, and members of existing river basin councils, and staff of newly established river basin administration	110	More than 100%
8. Number of Soums replicating EbA measures and integrated river basin management principles and practices within the target eco-regions	Total Soums involved in integrated river basin management: **5**	Total Soums implementing and replicating integrated river basin management :at **least 20**	Some EbA measures were initiated& implemented in **17** target soums and reflected in **IWRM Plans** of 2 target river basins & **Strategic priorities to implement EbA measures** for 2 target eco regions developed and officially approved in 2013-2014.	85%

9. National mainstreaming of EbA as indicated by: • Number of official government policy documents adopting EbA principles/practices	Number of sector policy documents revised and amended to consider mainstreaming EbA, landscape level integrated water resources and land-use management: less than 5	Number of sector policy documents revised and amended to consider mainstreaming EbA, landscape level integrated water resources and land-use management: considering priority actions, at least 7 (including pasture, agriculture)	The main EbA policy-**Strategic priorities to implement EbA measures** for 2 target eco regions was referenced to National MARCC policy document developed in 2014. Moreover the published EbA policy document was distributed to participants of National workshop of soum Governors held in 30 October, 2014 in the Parliament House of Mongolia.	Less than 30%
• Amount of annual government spending to support application of EbA principles and practices nationally	Total national annual investment in EbA: $ 0	Total national annual investment in EbA: $ 100,000	The target aimag and soums committed a total of USD 3.3 million (2.8 for Ulz, 0.5 in Kharkhiraa/Turgen) for implementation of EbA pilot measures reflected in the IWRM Plans. These amounts constitute 2.8% and 19.1% of the total proposed budget of IWRM Plans for Kharkhiraa, Turgen sub-river basin and Ulz river basin respectively.	More than 100%
• Number of National Climate Change Authority EbA policy documents mainstreaming EbA within sectoral decision-making frameworks.	Number of National Climate Change Authority Policy Documents: 0 (2 documents (National Programme and Action Plan on Climate Change) exist, but do not explicitly address EbA (in this terminology)	Number of National Climate Change Authority Policy Documents (Adaptation Strategies) at least 3	Three series of national workshops to discuss the draft National Climate Change Adaptation program for Agriculture, Water resource& Forest sector was held in 2014 co-organized with CCCO and PIU with the involvement of key decision makers& experts of 3 development sectors above. During the workshops, the NPC& all 3 experts of PIU gave their comments to reflect EbA concepts& measures into the programmes. Also the main EbA policy-**Strategic priorities to implement EbA measures** for 2 target eco regions was delivered to the workshop participants.	0

Annex III. Methodology:

Evaluative Matrix Template

Evaluative Questions	Indicators	Sources	Methodology
Project Strategy: To what extent is the project strategy relevant to country priorities, country ownership, and the best route towards expected results?			
(include evaluative question(s))	**(i.e. relationships established, level of coherence between project design and implementation approach, specific activities conducted, quality of risk mitigation strategies, etc.)**	**(i.e. project documents, national policies or strategies, websites, project staff, project partners, data collected throughout the MTR mission, etc.)**	**(i.e. document analysis, data analysis, interviews with project staff, interviews with stakeholders, etc.)**
Which are the major country priorities with respect to climate change adaptation)	Coherence between strategies described in documents with strategies reported by Project reports, Project staff and stakeholders	Project Document National Climate Change Adaptation Policy Board Meeting Reports Interviews wih Line Ministries	Document analysis Analysis of codified Interviews with Line Ministries and project staff
How consultative was process of project development and how was ownership arranged	Stakeholder involvement in project development Partnerships and User Groups, policy frameworks which incorporate project objectives and outcomes	Project Document Inception Repor Interviews with Project Staff and Focus group interviews with stakeholders	Document Analysis Analysis of Interviews with Project Staff and Focus group interviews
Which barriers have been identified to climate resilience, have strategies been appropriate to overcome these barriers	Generic assessment of coherence between strategies undertaken and barriers addressed	Project Reports UNEP EBA Strategy)	Document analysis Focus Group Interviews Coherence analysis between identified barriers with strategies undertaken (Outcome analysis
Have risks been appropriately addressed	Sustainability analysis Risk analysis	Project Document Project Reports	Comparison of risk and sustainability analysis in documents with outcomes from Expert and Focus Group Interviews
Progress Towards Results: To what extent have the expected outcomes and objectives of the project been achieved thus far?			
Which are the major outcomes and objectives of the project?	Indicators used as highlighted in logframe	Project Progress Report Logframe M&E Framework	Analysis of Logframe Analysis of M&E Framework Focus Group Interviews Indicator Analysis
How much of outcomes and objectives have been realized so far?	As above	Project Progress Report Logframe M&E Framework Results from Focus Group and Expert Interviews	Comparison of reported targets and outcomes with achieved ones from project documents triangulated with outcomes from Expert Interviews Field Observations
Which is the percentage of what has been achieved in comparison what has to be achieved at the end	%	Project Progress Reports	Calculation of the outcomes of the above outputs
Project Implementation and Adaptive Management: Has the project been implemented efficiently, cost-effectively, and been able to adapt to any changing conditions thus far? To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation?			
Has the project been implemented efficiently, cost-effectively	Outputs / financial inputs	Financial project report	Financial Analysis, generic comparison with output/input in similar projects
Has the Project been able to adapt to any changing conditions thus far	List of changing conditions Number and type of adaptation measures by the project	Project Reports, Project Staff and stakeholder interviews	Comparison of project reports with results from interviews

To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation?	Coherence of M&E framework and communication with Project's implementation	M&E Framework, stakeholder interviews on communication, observations, analysis of project communication samples	Coherence analysis
Sustainability: To what extent are there financial, institutional, socio-economic, and/or environmental risks to sustaining long-term project results?			
Will stakeholders have the capacity to accrue the financial resources to achieve outcomes after the end of the project	Financial resources commited already now General financial commitment of stakeholders now Assessed financial resources generated during project lifetime	Stakeholder interviews Project staff interviews Project annual reports Project Progress Reports	Document Analysis Analysis of Interviews
Will environmental flows and services be strengthened in a way that they will not lose their capacities after the end of the project	Environmental flows strengthened by the project Expected status of environmental health, stocks and flows at the end of the project		Analysis of indicators which measure improvement of environmental flows and services
Do institutions have made the sufficient changes / adaptations to be able and willing to maintain project outcomes	Willingness and capacities of institutions at the stage of the MTR Commitment of Institutions to maintain or improve status quo at MTR Status of mainstreamed Climate risks into legislation, local and national frameworks		Capacity analysis of institutions, analysis of commitments based on indicators, number and type of policies mainstreamed into frameworks and legislation
Are there social or political risks which would endanger sustainability	Status of external threats to social sustainability		SWOT Analysis of project interventions with respect to social sustainability Analysis of external risks in the perception of stakeholders

Questionnaire for Analysis of Financial Risks

- Was understanding of climate change risk and enhanced GOM budget enough motivation for policy makers to prioritize climate resilience over non-sustainable short-term economic benefits
- Are non-climatic drivers for ecosystem alteration sufficiently addressed by project? Review of strategic environmental assessment, landscape level ecosystem adaptation plan, regulatory and financial management techniques in their efficiency and effectiveness to inform other ecosystem management initiatives or incentives for reducing non-climatic threats to ecosystems. Assessing impacts of capacity building on the reduction of non-climatic drivers
- Level and frequency of natural disasters and their impact on communities' confidence in climate adaptation: have project measures reduced vulnerability of natural disasters in particular of herders' communities= Are current successes in climate adaptation sufficient to build incentives for further CCA
- Are adaptation measures gender sensitive and do they close inequality gaps?
- Do local capacities match demands? Assess the project capacity building strategy and its impacts.

Other issues to be assessed

- Quality and effectiveness of environmental strategy,
- Ecosystem management capacities on Aimag and Soum levels. Which specific guidance tools have been provided for ecosystem management planning.
- Integration of sectoral decision making, information quality.
- Capacities of government and decision makers to identify, assess climate risks, and mainstream them into water, land and resource management.
- Diagnosis of climate resilience of communities – as well as its progress- Ingredients of resilience.
- Holistic management approaches that embrace climate risks
-

Analysis of Efficiency:

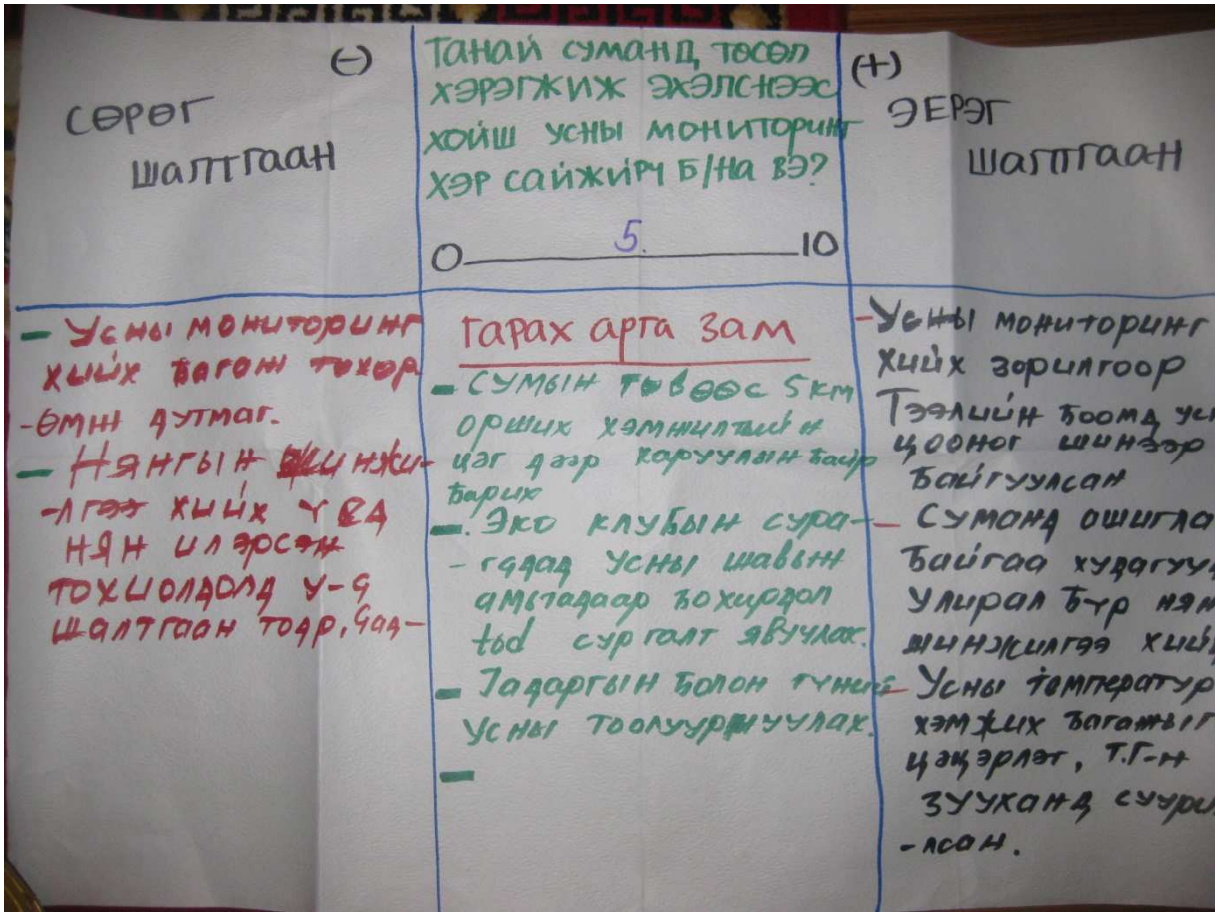
- Comparing time and budget resources used for sustainable technologies with Best Practices Documentation tbd and Baseline documents listed in the ProDoc.
- Comparing time and budget resources for all other activities with baseline documents
- Comparing timeline of activities as reported in the Quarterly Project Reports with Workplan in ProDoc.

Participatory Evaluation

Interview and Focus group discussion:
-6 focus group meetings were organized involving **42** local people including *soum and aimag level authorities, local coordinators, land officers, LS experts, Pasture management experts, Environmental Inspectors , RBA and herders, vegetable growers etc*

- Focus group discussions using participatory tools: H-Form -*evaluate current activities, determine current efforts (on a scale of 0-10), "negative" reasons (why the score is as low as it is) "positive" reasons (why the score is high as it is)identify activities/solutions to bring the score to 10.*

Result of Participatory Evaluation



Questions:

- How well the herder communities are working together for better water resource use and for better pasture management since project has started? (Score 5-6)
- How is the progress in water monitoring in your local area since the project has started? (Score 5)
- How well the local related stakeholders are cooperating for better implementation of IWRM since the project has started? (Score 8)

Negative reasons	How well the herder communities are working together for better water resource use and better pasture management since project has started? 0 6 10	Positive reasons
-The self initiation by the communities are weak -Some community groups are weak: the participation level of all members are not same	**Potential solutions:** -The community leaders should obtain leadership skill and management through attending different trainings -Organize in-country experience sharing visits for communities to learn from other communities -Public awareness activities need to be organized to disseminate the community activities in local area	-Community groups have extended their activities by establishing cooperative -Community members work together voluntarily to fence the upstream area of the local river -Communities able to do OTOR due to fixing the old broken engineered well and could able to use the abandoned pasture decreasing the pressure near river basin

Negative reasons	How is the progress in water monitoring in your local area since the project has started? 0 5 10	Positive reasons
-Local drinking water contains heavy metals which could cause health problems -Surface water resource has decreased due to the concentration of households and livestock in particular area -Without monitoring and inspection interventions, local households dig wells on their own -Lack of capacity to identify the cause of water pollution locally	**Potential solutions:** -water purifying equipment should be installed locally -Ground water monitoring need to be done -Identify protection zones along the river basin and create/build posts	-Local government officers and the community representatives attended in the training on efficient use of water resources and obtained practical knowledge -Local school students start doing monitoring on water pollution using the equipment given by the project (pH etc) - The water monitoring equipment was given by the project -Water temperature meter was installed in kindergarten

Negative reasons	How well the local related stakeholders are cooperating for better implementation of IWRM since the project has started? 0 8 10	Positive reasons
-Due to their own work duties all stakeholders could not meet regularly -Lack of finance to organize workshop and meetings locally	**Potential solutions:** -Increase the participation of local communities in planning and implementation of better water resource use -RB counsel in 2 RBA need to be strengthened	-Water users association has been established after the dispute resolution meetings -IWRM plan was developed and approved -Soums are agreed to use the water according to the schedule created by the vegetable growers -All the related stakeholders attend the trainings from the project

Annex IV: Literature

EBA 2012: Inception Report

EBA 2012: Annual Progress Report 2012

EBA 2013: Annual Progress Report 2013

EBA 2014: Annual Progress Report (2014): Draft Report

EBA 2012: Annual Workplan 2012

EBA 2013: Annual Workplan 2013

EBA 2014: Annual Workplan 2014

EBA 2012: Minutes of First Project Board Meeting 2012

EBA 2013: Minutes of Second Project Board Meeting 2013

EBA 2013: Minutes of Third Project Board Meeting 2013

EBA 2013: Minutes Fourth Project Board Meeting 2014

UNDP 2011: Approved Project Document

UNDP 2012: Project Site Location Maps

Supporting Literature

ADB, GoM, MEGD (2014): Making Grasslands Sustainable in Mongolia. Herders' Livelihoods and Climate Change. Ecosystem Based Adaptation approach to Maintaining Water Security in Critical Water Catchments in Mongolia" Project, MON/12/301

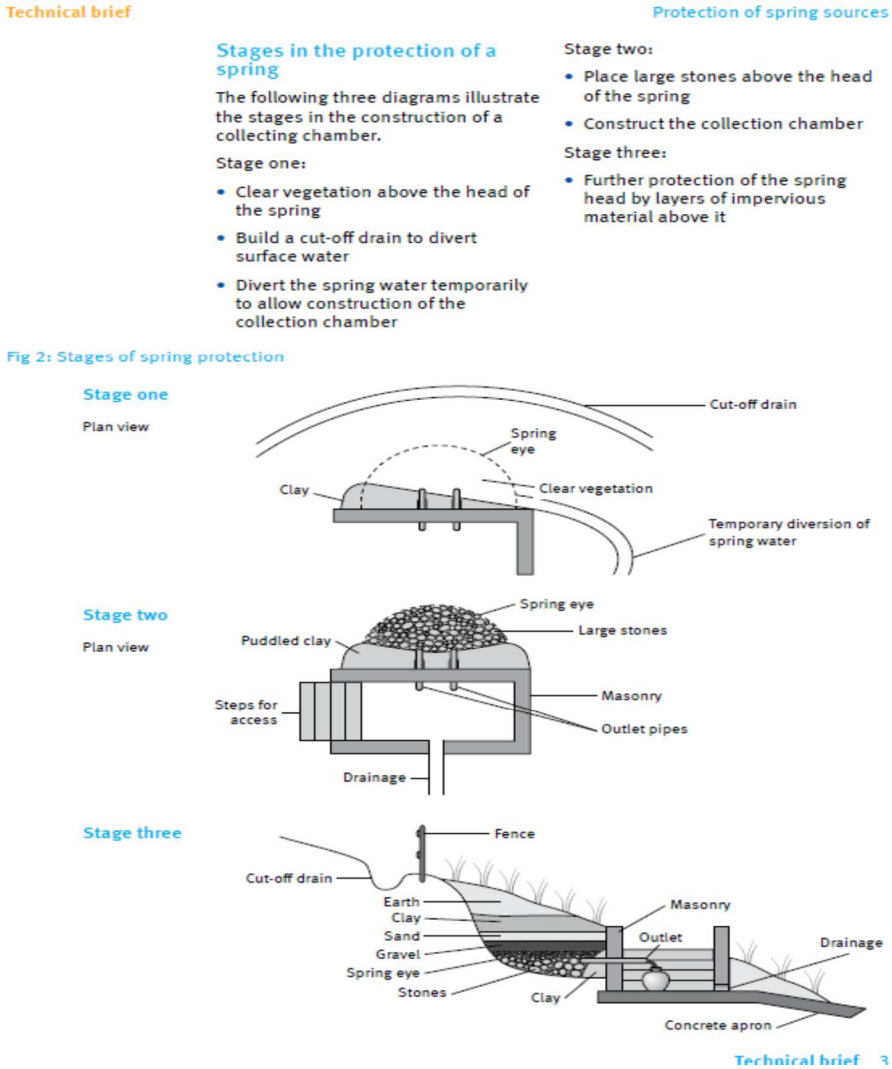
MNET, UNDP, UNEP (2009): Mongolia: Assessment Report on Climate Change 2009. http://www.unep.org/pdf/MARCC2009_BOOK.pdf

Retzer V, Reudenbach C (2005) Modelling the carrying capacity and coexistence of pika and livestock in the mountain steppe of the South Gobi, Mongolia. Ecological Modelling 189 (1-2): 89 - 104

Travers A, Elrick C, Kay R, and O. Vestergaard (2012): Ecosystem-Based Adaptation Guidance. Moving Principles to Practice. Working Document: April 2012

Water Aid 2013: Protection of Springs. Technical Brief.

Annex V: Spring Water Protection Scheme. Source: WaterAid 2013



Technical brief

Protection of spring sources

Stages in the protection of a spring

The following three diagrams illustrate the stages in the construction of a collecting chamber.

Stage one:

- Clear vegetation above the head of the spring
- Build a cut-off drain to divert surface water
- Divert the spring water temporarily to allow construction of the collection chamber

Stage two:

- Place large stones above the head of the spring
- Construct the collection chamber

Stage three:

- Further protection of the spring head by layers of impervious material above it

Fig 2: Stages of spring protection

Technical brief 3

Annex VI: List of interview for project stakeholder Meeting in Ulaanbaatar city

№	Participant's name	Position /Organization	Contact
Ministry of Environment and Green Development(MEGD)			
1.	B.Tulga	Vice minister of Ministry of Environment and Green Development (MEGD), Chairman of Project Board	266286
2.	D. Dagvadorj	Special Envoy for Climate Change, Chairman of Climate Change Coordination Office (CCCO), MEGD, NPD	311173, 99246722
3.	G. Ganbat	Director, Division of River Basin Management, MEGD	267545, 99113264
4.	B.Uyanga	Officer, Foreign Relations Department, MEGD	88016808

5.	Ts.Battsetseg	Officer of CCCO, MEGD	311086
6.	M.Davaanyam	Officer, Division of River Basin Management, Department of Policy implementation, MEGD	99007860
7.	Z.Batjargal	Project senior consultant	99086786
Ministry of Industry and Agriculture			
8.	Esun-Erdem	Officer, Crop Production Policy Implementation Department, Ministry of Industry and Agriculture	263408 261687
9.	Sh.Baranchuluun	Former Project Board Member, Former senior officer of Irrigated crop production policy implementation coordination department, Ministry of Industry and Agriculture	99043656
Land Affairs and Urban Development Office			
10.	N.Munkhuu	Senior officer, Land Affairs and Urban Development Office, Administration of Land Affairs, Construction, Geodesy and Cartography	99030152
Ministry of Economic Development			
11.	D. Erdenebayar	Director, Department of Sectoral Development Policy Coordination, Ministry of Economic Development	266303
National Agency for Meteorology, Hydrology and Environment Monitoring			
12.	D.Batkhuu	Officer responsible for Hydrology, Division of technology, information and marketing	99283747
13.	J.Batbayar	Director, Environmental Monitoring Division	99022641 96650597
Institute of Meteorology and Hydrology			
14.	G.Davaa	Head of Hydrology sector, Institute of Hydrology and Meteorology	99851585
15.	G.Gunjidmaa	Head of Research and Information department, Press institute of Mongolia	88008787
State university of Education			
16.	B.Munkhtsog	Mammalian study Laboratory , Institute of Biology	99032176
17.	Y.Batchuluun	Lecturer of Geography Department, State University of Education, Member of Project technical committee	99091640
Water Services Regulatory Commission of Mongolia			
18.	J.Gerelchuluun	Director, Price and tariff department, Water Services Regulatory Commission of Mongolia	99991219
International organizations			
19.	B.Onon	Officer, Wildlife conservation society, Mongolia	99157064
20.	Bandi	Officer, WWF	
21.	Sh.Boldbaatar	Project national consultant, Disaster risk management consultant, World Bank	312647

Schedule for interviews with project stakeholder Meeting in Ulaanbaatar city

Meeting date	Time	Participants	Position/ Organization
Ministry of Environment and Green Development(MEGD)			
	10 am	G.Ganbat	Director, Division of River Basin Management, MEGD

December 5	11 am	M.Davaanyam	Officer, Division of River Basin Management, Department of Policy implementation, MEGD
	2 pm	B.Tulga	Vice minister of Ministry of Environment and Green Development (MEGD), Chairman of Project Board
	4 pm	B.Uyanga	Officer, Foreign relations department
	5 pm	Z.Batjargal	Project senior consultant
Stakeholders, academic institutes and international organizations			
December 12	10 am	G.Davaa	Head of Hydrology sector, Institute of Hydrology and Meteorology
	11 am	D.Togtokhbayar	Head of Uvs lake-Tes river basin administration
	2 pm	G.Gunjidmaa	Head of Research and Information department, Press institute of Mongolia
	3 pm	J.Gerelchuluun	Director, Price and tariff department, Water Services Regulatory Commission of Mongolia
	4 pm	Sh.Baranchuluun	Former Project Board Member, Former senior officer of Irrigated crop production policy implementation coordination department, Ministry of Industry and Agriculture
December 17	10 am	Esun-Erdem	Officer, Crop Production Policy Implementation Department, Ministry of Industry and Agriculture
	11 am	N.Munkhuu	Senior officer, Land Affairs and Urban Development Office, Administration of Land Affairs, Construction, Geodesy and Cartography
	1 pm	J.Batbayar / Enkhmaa/	Director, Environmental Monitoring Division,
	2 pm	D.Batkhuu	Officer responsible for Hydrology, Division of technology, information and marketing
	3 pm	B.Munkhtsog	Mammalian study Laboratory , Institute of Biology
	4 pm	Bandi	Officer, WWF
December 18	2 pm	D.Dagvadorj	Special Envoy for Climate Change, Chairman of Climate Change Coordination Office, MEGD, NPD
		Ts.Battsetseg	Officer of CCCO, MEGD

TRIP AGENDA for Mid Term Evaluation

East site: Khentii and Dornod aimags

Objective:

1. Visit target soums in Ulz river basin to get familiar with achievement and impacts of EbA measures made at local level including spring protection, strawberry planting, rehabilitation of degraded riparian area and water saving techniques
2. Meet with soum Governors, local project coordinators and beneficiary adaptation groups and discuss the progresses of on-going and soum specific activities of the project.

Date and duration:
7-11 December, 2014 /4 nights and 5 days/

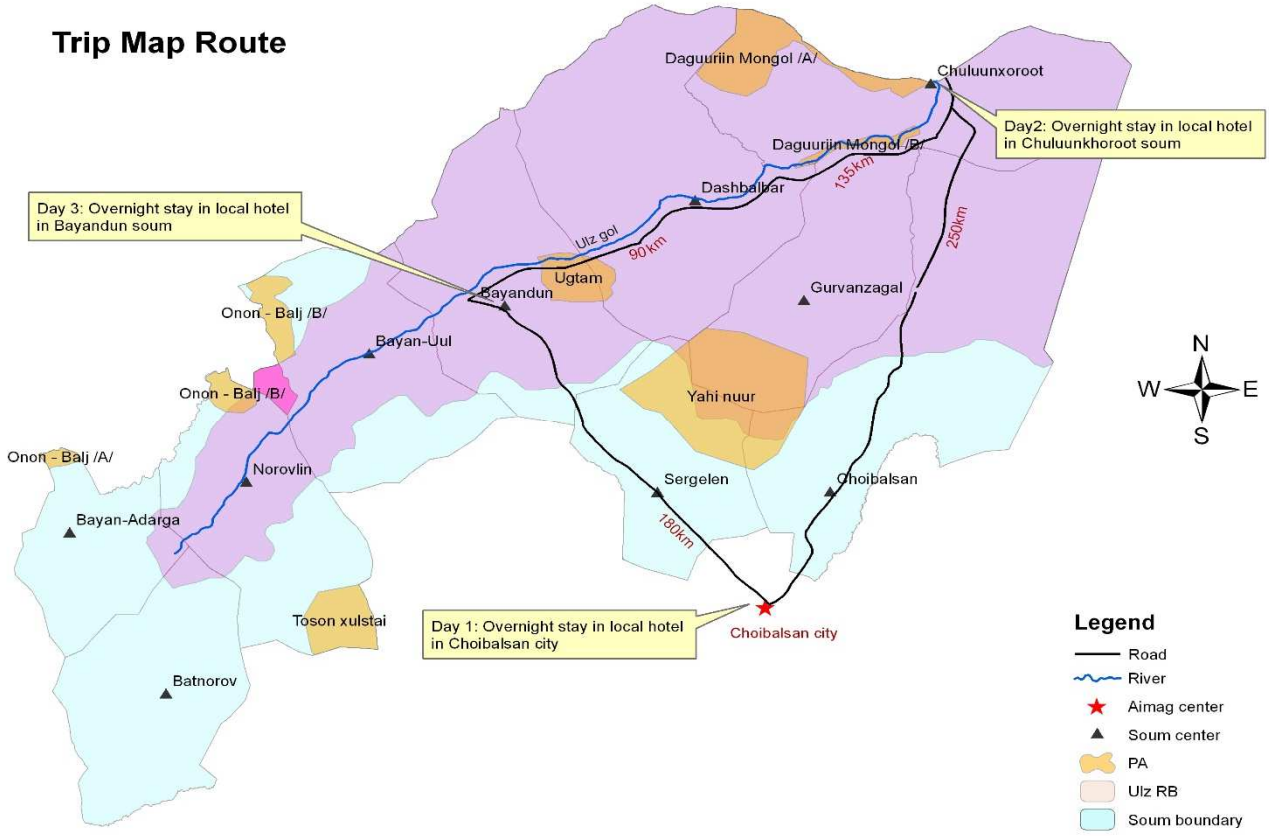
Route and distance given as in the Map:
Ulaanbaatar city- Choibalsan city, Dornod aimag (700km)- Chuluunkhoroot soum(250km)-Dashbalbar soum(140km)- Bayandun soum(90км)- Khentii aimag center(360км) - Ulaanbaatar city (334км)

Mission team composition:
1. Ms. Ingrid Hartmann, IC of the Mid-Term Review
2. Mr.Ya. Narangerel, NC of the Mid-Term Review
3. Mr. D. Tsognamsrai, CORCDE, EBA project
4. Mr. D. Enkh Amgalan, Driver
5. Mr. D.Tuvshinbayar. Gurvanzagal soum driver

Time	Activity	Specifics	Responsible staff
Day1-07 December			
08.00-18.00 19.00	-Leave UB for Choibalsan -Arrival in Choibalsan Dinner -Stay overnight in Kherlen hotel, Choibalsan		Team Mr. N. Khishigjargal, Aimag coordinator
Day2-08 December			
08.30 -12.30 13.00 14.00-19.00	- Meet with aimag coordinator and relevant officials - Lunch - Leave Choibalsan for Chuluunkhoroot soum - Dinner - Stay overnight in Chuluunkhoroot		Mr. N. Khishigjargal, aimag coordinator Mr.S.Batsaikhan, Chuluunkhoroot soum coordinator
Day3-09 December			
08.30 -13.00	- Meeting with Mr. Z. Gerelt-Od, Soum Governor and other relevant officials to discuss ongoing project activities (refer to appendix 1), - Meet with "Togoruukhan"eco-club members , get familiar with their activities - Visit and meet with "Baga Shar Burd" <u>community group members</u> -Lunch in Chuluunkhoroot soum	-Eco-initiatives -Strawberry planning -Tree nurseries -Establishment of windbreaks -Use of water saving techniques	Team, Mr. Z. Gerelt-Od, Soum Governor Mr. S. Batsaikhan, Chuluunkhoroot soum coordinator
14.00-20.00	Leave Chuluunkhoroot soum for Bayandun soum (230 km), Visit <u>"Delgerbulag" spring in</u> Chuluunkhoroot soum (15 km) en route to Dashbalbar soum	-Spring rehabilitation with environmentally sound techniques	Team, Mr. S. Batsaikhan, Chuluunkhoroot soum coordinator

Time	Activity	Specifics	Responsible staff
	Site seeing of Mongol Daurian protected area –"B" section (60km) where running Biodata (biosan) monitoring program, Visit rehabilitated engineered well (50 km to Dashbalbar soum, Tsog-Under en route to Dashbalbar soum Visit "Zuun jaraakhai" spring protection in Dashbalbar soum (40 km) *en route* to Bayandun soum Arrival and dinner in Bayandun Stay overnight in Bayandun	Rehabilitation of an engineered wells to release habitats of Eastern key species	Ms. M. Ganchimeg, Dashbalbar soum coordinator
Day4-10 December			
8.30-10.00 10.0-13.00 13.00	Meeting with Mr. B. Baatartsogt, Head of Soum Representative Khural and other officials, Visit Ulz gol RBA office, Ms. S. Boldmaa, director RBA Visit Kindergarden and meet groups Visit "Onkhoodoi" springs (8km) Visit "Naranbulag" Lunch Leave Bayandun for Khentii	Eco-initiatives by the teachers and children Spring protected by Ecologically sound techniques Water harvesting site to be constructed in 2015	Team, Ms. N. Otgonzaya, Bayandun soum coordinator
Day 5-11 December			
09.30-20.00	Leave Khentii for Ulaanbaatar		Team,

Ulaanbaatar	Choibalsan city, Dornod aimag	700 km	Bayandun soum	Chinggis city , Khentii aimag
Choibalsan city	Chuluunkhoroot soum	250 km	Chinggis city , Khentii aimag	Ulaanbaatar
Chuluunkhoroot soum	Bayandun soum	230km	Visiting springs and others	


Trip Map Route
Daguuriin Mongol /A/
Chuluunxoroot
Day2: Overnight stay in local hotel in Chuluunkhoroot soum
Daguurjin Mongol /B/
135km
Dashbalbar
250km
Day 3: Overnight stay in local hotel in Bayandun soum
Ulz gol
90km
Ugtam
Bayandun
Gurvanzagal
Onon - Balj /B/
Bayan-Uul
Onon - Balj /B/
Yahi nuur
N
W
E
S
Onon - Balj /A/
Norovlin
Sergelen
Choibalsan
Bayan-Adarga
180km
Toson xulstai
Day 1: Overnight stay in local hotel in Choibalsan city
Choibalsan city
Batnorov
Legend
Road
River
Aimag center
Soum center
PA
Ulz RB
Soum boundary

List of participants for
Local Stakeholder Meeting in Choibalsan city, Chuluun khoroot soum, Dashbalbar soum and Bayandun soum, Dornod aimag

№	Participant's name	Position /Organization	Contact
Aimag level consultation			
22.	S. Ganbat	Aimag governor	99581881
23.	N.Dugarmaa	Senior officer, Department of Development Policy, Governor's Administration Office	99888186
24.	Sh. Ganbat	Head of Environment, Nature and Tourism Office	99588969
25.	Ì. Ariyazul	Environmental officer of Department of Development Policy, Governor's Office	93013440
26.	N. Khishigjargal	Director, Director, Hydrology, Meteorology and Environment Office, Project Coordinator of Dornod Aimag	99716089
27.	Kh. Dashdorj	Director, State Protected Area Administration of Dornod	99019697
28.	N. Tuyabold	Senior officer responsible for water policy, Office of Environment	99688592
29.	Kh. Batkhuyag	Officer responsible for natural resource and mining, Office of Environment	
30.	E. Byambjav	Wildlife Officer, Office of Environment	93066138
31.	B. Ganzorig	Officer, Food, Agriculture and Small and Medium Industry Office	88071139
32.	Ts. Nansalmaa	Reforestation and Advocacy Officer, Office of Environment	99248696
Soum level consultation			
1. Chuluunkhoroot soum			
33.	Z. Gerelt-Od	Soum governor	99589577
34.	Ts.Ganbold	Chairman of soum local parliament	99586036
35.	D. Battulga	Environmental inspector	99073071
36.	Ch. Chimeg-Erdene	Head of Livestock unit	88588008
37.	S. Uugantsetseg	Land officer	89751221
38.	E. Amgaabaatar	Hydrological post	89196076
2. **Dashbalbar soum**			
39.	J. Yondonjamt	Soum governor	88845646
40.	Z.Zorigtbaatar	Chairman of soum local parliament	88201131

41.	U. Bukhchuluun	Environmental inspector	88609977
42.	B. Baatartsogt	Expert of Livestock unit	88279970
43.	U.Uranbileg	Chief of Dashbalbar station	89999867
44.	M. Ganzorig	Land officer	88589003
3. Bayandun soum			
45.	B. Batjav	Soum governor	997590602
46.	B. Baatartsogt	Chairman of soum local parliament	99065523
47.	B. Batdulam	Head of Livestock unit	99573994
48.	S. Almatnsuvd	Environmental inspector	89465546
49.	B. Otgonzaya	Land officer	95588111
50.	S.Boldmaa	Director, Ulz RBA	95588045

TRIP AGENDA for Mid Term Evaluation

West site: Uvs aimag

Objective:

3. Visit target soums in Kharkhiraa-Turgun river basin for fact finding, seeking evidence of progress and/ or impacts of the project interventions -EbA measures made at local level including spring protection, strawberry planting, rehabilitation of degraded riparian area and water saving techniques.
4. Meet with soum Governors, local project coordinators and beneficiary adaptation groups and discuss the progresses of on-going and soum specific activities of the project.

Date and duration:

13-16 December, 2014 /3 nights and 4 days/

Route and distance:

Ulaanbaatar city- Ulaamgom city, Uvs aimag (flight) - Turgen soum (36 km) – Ulaangom city (36km) - Naranbulag soum (100 km) - Tarialan soum (133 km) – Ulaangom city (135) - Ulaanbaatar city (flight)

Mission team composition:

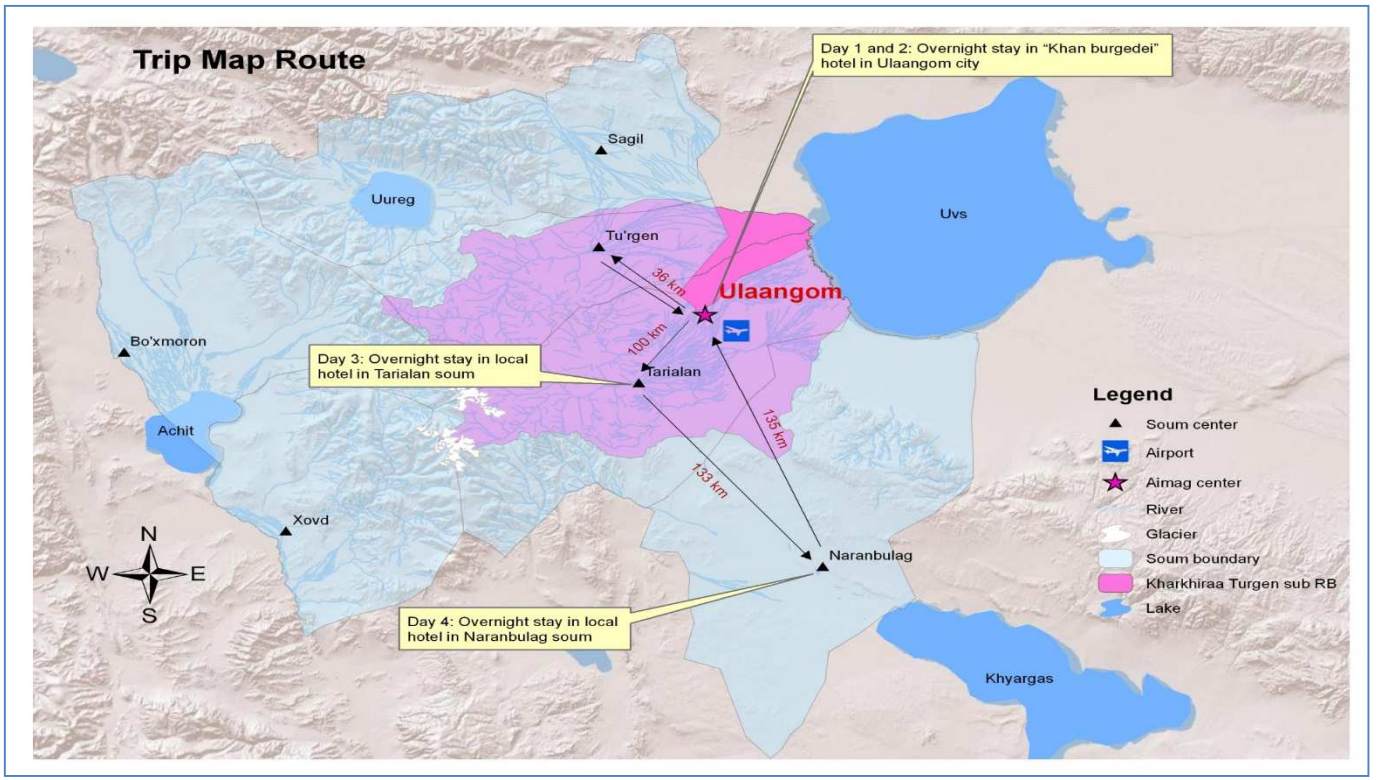
6. Ms.Ingrid Hartman, IC of Mid-Term Review
7. Ms. Y.Narangerel, NC of Mid-Term Review
8. Ms.N.Otgonjargal, NRPE
9. Mr. D.Choijilsuren, Ulaangom soum coordinator.
10. Mr.L.Munkhbat, Turgen soum coordinator
11. Mr.B.Batsukh, Ulaangom soum driver
12. Mr.S.Tsolmontsog, Turgen soum driver

Time	Activity	Specifics	Responsible staff
Day 1-13, December			
14.00-18.00	Depart for Ulaangom city, Uvs aimag (flight) Arrival in Ulaangom city (Ulaangom soum) Meet with Mr. Munkhbat, director of NAMEM of Uvs aimag and relevant engineers to discuss project on-going activities Dinner in Ulaangom city Overnight stay in “Achit nuur” hotel in Ulaangom city		Team Pickup in airport station of Ulaangom city – Mr. D. Choijilsuren, Ulaangom soum coordinator Mr. L. Munkhbat, Turgen soum coordinator Mr. Munkhbat, director of NAMEM of Uvs aimag
Day2 -14, December			
08.30 - 13.00	Meeting with Mr. O. Gankhuyag, Ulaangom Soum Governor and other officials (refer to appendix 2), Visit and meet with “Chandmani” ecoclub members in Ulaangom Visit and meet with “Khayzgaargyi nairamdal” community group representativies Lunch in Ulaangom city	-Eco initiatives by Ecoschool teachers and students -Strawberry planting -Tree planting -Vegetable seed production -Drip irrigation system -Engineered well equipped with solar display	Team, Mr. O. Gankhauyag, Ulaangom Soum Governor Mr. D. Choijilsuren, Ulaangom soum coordinator Mr. L. Munkhbat, Turgen soum coordinator
14.00-18.00	Leave Ulaangom city for **Turgen soum** (36km) - Visit traditional small scale rain and snow water harvesting catchment in Turgen soum (place name is Adargan, 27 km) *en route* to Turgen soum Arrival in Turgen soum Meeting with Mr. E. Byambaa , Soum Governor and other officials, Meet with participants who attended to the wool trainings Arrival and dinner in Ulaangom city Stay overnight in “Khan burgedei” hotel in Ulaangom city	-Simple and cost effective catchment for improving pasture water supply in the local area	Team, Mr. E. Byambaa , Soum Governor Mr. L. Munkhbat, Turgen soum coordinator

Time	Activity	Specifics	Responsible staff
Day-3, 15 December			
08.30 - 13.00	Meet with relevant officers of Governor's office of Uvs aimag Leave Ulaangom soum for **Tarialan soum** (100 km) Meeti with Mr. S. Tsolmon , Soum Governor and other officials to discuss on-going activities of the project Visit "Khan khukhii" community representatives involved in livelihood improvement activities at soum center Lunch in Tarialan soum	-Rehabilitated engineered well for improving pasture management in the area -Wool products , handicrafts	Team, Mr. S. Tsolmon , Soum Governor Mr. D. Choijilsuren, Ulaangom soum coordinator Mr. L. Munkhbat, Turgen soum coordinator
14.00-18.00	Site visit of Kharkhiraa river (upstream) closest site to see Kharkhiraa river (8km) Leave Tarialan soum for **Naranbulag soum** Visit and meet with "Mogoitiin denj" community group members Meet with Mr. Battulga.Yu, soum governor Narangin spring protected Stay overnight in Naranbulag soum	-Water Users Association -Ethnic group -Vegetable growing -Sprinkle irrigation techniques -Spring protected and rehabilitated with environmental sound techniques	Team, Mr. Uy. Battulga , Soum Governor Mr. D. Choijilsuren, Ulaangom soum coordinator Mr. L. Munkhbat, Turgen soum coordinator
Day 4, 16 December			
08.30-13.00	Depart to Ulaanbaatar		Team, Mr. D. Choijilsuren, Ulaangom soum coordinator Mr. L. Munkhbat, Turgen soum coordinator
14.00-18.00	Arrival in Ulaanbaatar city (flight)		Team

Appendix 1

1. Ulaanbaatar -	Ulaangom city	**flight**	5. Tarialan –	Narabulag soum	133 km
2. Ulaangom -	Turgen soum	36 km + 70 km	6. Naranbulag –	Ulaangom city	135 km
3. Turgen–	Ulaangom city	36 km +70 km	7. Ulaangom -	Ulaanbaatar city	**flight**
4.Ulaangom-	Tarialan soum	100km	8. Extra		300 km
			Total distance:		***880 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
Aimag level consultation			
51.	Z. Ganbold	Director, Department of Development Policy, Governor's Administration Office	99459405
52.	B. Ganbold	Head of Environment, Nature and Tourism Office	99255265
53.	D.Munkhbat	Head of Climate Technology, Hydro-Meteorological Department	93071599
54.	M.Ankhbayar	Director, State Protected Area Administration of Uvs lake basin	93094001
55.	U. Murdorj	Senior officer responsible for water policy, Office of Environment, Project Coordinator of Uvs aimag	99459858
56.	B.Enkhtuya	Head of forestry, Environment, Nature and Tourism Office	99459929
57.	D.Batzul	Officer responsible for mining, Governor's Administration Office	93081108
58.	B. Otgoi	Tourism Officer, Division of Social Security, Governor's Administration Office	93019181
59.	S. Gankhuyag	Infrastructure, Division of Social Security, Governor's Administration Office	95454859
Soum level consultation			
4. Ulaangom soum			
60.	O. Gankhuyag	Soum governor	99459745
61.	B.Gombosuren	Deputy of soum governor	99019936
62.	S.Buyandalai	Environmental inspector	99458500
63.	S.Enkhtsetseg	Officer responsible for pasture	88459798
64.	M.Osor	Ranger	93081129
65.	Ts.Uyanga	Land officer	88459266
5. **Turgen soum**			
66.	E.Byambaa	Soum governor	99458373
67.	R.Udbal	Chairman of soum local parliament	99388601
68.	Sh.Batsukh	Environmental inspector	95867110
69.	S.Gelenkhuu	Head of Livestock unit	88303109
70.	Б.Золзаяа	Land officer	99456597
71.	D.Bandi	Ranger	99771780
6. Tarialan soum			
72.	S.Tsolmon	Soum governor	99453333
73.	D.Jamsran	Chairman of soum local parliament	95891310
74.	Ch.Tsogoo	Environmental inspector	93227669
75.	Z.Tegshjargal	Head of Livestock unit	99455981
76.	D.Tumendemberel	Land officer	99450462
7. Naranbulag soum			
77.	Yu. Battulga	Soum governor	99455185
78.	R.Azbileg	Chairman of soum local parliament	88440063
79.	Ch.Ishtabkhai	Environmental inspector	99940997
80.	O.Tserensonom	Head of Livestock unit	99457610
81.	M.Sosorbaram	Land officer	89456806

Annex VII: Terms of Reference

UNDP-GEF MIDTERM REVIEW - TEAM LEADER

Location :	Ulaanbaatar, MONGOLIA
Application Deadline :	10-Sep-14
Type of Contract :	Individual Contract
Post Level :	International Consultant
Languages Required :	English
Duration of Initial Contract :	10 weeks
Expected Duration of Assignment :	32 work days

1. INTRODUCTION

This is the Terms of Reference (ToR) for the UNDP Midterm Review (MTR) of the full-sized project titled "Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia" (PIMS#4505) implemented through the Ministry of Environment and Green Development, Mongolia (MEGD) /UNDP, which is to be undertaken in 2014. The project started on the November 11, 2011 and is in its third year of implementation. In line with the UNDP-GEF Guidance on MTRs, this MTR process was initiated before the submission of the second Project Implementation Report (PIR). This ToR sets out the expectations for this MTR. The MTR process must follow the guidance outlined in the document *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF/AF-Financed Projects*.

2. PROJECT BACKGROUND INFORMATION

The project was designed to maintain ecosystem functions and water provisioning services aimed at addressing the needs of critical for survival of rural communities and national economy. The project is implemented at two large landscapes: the Kharkhiraa, Turgen river sub-basin in Altai Mountains and Great Lakes Depression (Altai/GLD) eco region and the Ulz river basin in the Dornod steppe and Mongol Daurian eco region.

Mongolia is highly vulnerable to climate change due to its geographic location, fragile ecosystems and socio-economic conditions. The combination of ongoing land and water degradation multiplied by climate change will almost certainly result in substantial ecological and social challenges. To address the challenges presented by climate change, there is an urgent need to conserve and rehabilitate the ecosystem services upon which Mongolia's rural economy, traditional culture, and rich biodiversity depend.

The main objective of the project is to maintain the water provisioning services supplied by mountain and steppe ecosystems by internalizing climate change risks within land and water resource management regimes. The project will be implemented between 2012 and 2017. Geographically, the project covers i) the Altai Mountains and Great Laeks Basin Eco-region; ii) the Eastern Steppe Eco-region; focusing on the **Turgen/Kharkhiraa Sub River Basins** – (Turgen, Ulaangom, Sagil, Bukhmurun, Khovd, Tarialan, Naranbulag soums of Uvs Aimag); and **the Ulz River Basin –** (Chuluunkhoroot, Dashbalbar, Bayandun, Bayan-Uul, Gruvanzagal, Choibalsan, Sergelen soums of Dornod aimag; Bayan-Adarga, Batnorov, Norovlin soums of Khentii aimag).

The project has three interconnected components:

(i) Landscape Level integrated land use and water resources monitoring and planning system focused upon reduction of ecosystem vulnerability to climate change developed and under implementation;
(ii) Implementing landscape level adaptation techniques to maintain ecosystem integrity and water security under conditions of climate change;
(iii) Strengthening institutional capacities to support integrated river basin management, its replication and mainstreaming in sector policies;

The breakdown of the project financing is as follows:

No	The project financing	Budget amount US$
1.	Adaptation fund	5,069,124 US$

2.	Co-financing UNDP (cash)	500,000 US$
3.	Co-financing the Government of Mongolia (in kind)	5,000,000 US$
4.	**Total co-financing**	**10, 569, 124 US$**

Upon the request of the Government of Mongolia, UNDP is the Multilateral Implementing Agency (MIE) for this project. The Project is implemented following UNDP's National Implementation Modality (NIM). The designated Implementing Partner of the project is the Ministry of Environment and Green Development (MEGD). MEGD is responsible for implementing UNFCCC and water resource management and holds the responsibility of the senior supplier. MEGD is ultimately responsible for the timely delivery of inputs and outputs and for coordination of all other Responsible parties including other line ministries, relevant agencies, and local government Authorities. The MEGD appointed the National Project Director, the chair and members of the Project Board (PB), responsible for making management decisions for the project and plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning.

3. OBJECTIVES OF THE MTR

The MTR will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document, and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The MTR will also review the project's strategy, its risks to sustainability.

4. MTR APPROACH & METHODOLOGY

The MTR must provide evidence based information that is credible, reliable and useful. The MTR team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP, UNDP Environmental & Social Safeguard Policy, the Project Document, project reports including Annual Project Review/PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review). The MTR team will review the baseline Adaptation Monitoring and Assessment Tool submitted to the AF at CEO endorsement, and the midterm Adaptation Monitoring and Assessment Tool that must be completed before the MTR field mission begins.

The MTR team is expected to follow a collaborative and participatory approach[23] ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), the UNDP Country Office(s), UNDP-GEF Regional Technical Advisers, and other key stakeholders.

Engagement of stakeholders is vital to a successful MTR[24]. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to UNDP CO; MEGD, senior officials and task team/ component leaders, key experts and consultants in the subject area, Project NPD, Project Board, NPC, project staff, project stakeholders, academia, local government and CSOs, etc. Additionally, the MTR team is expected to conduct field missions to Mongolia, including the following project sites: the Turgen/Kharkhiraa sub-river basin and Ulz river basin.

The final MTR report should describe the full MTR approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the review.

5. DETAILED SCOPE OF THE MTR

The MTR team will assess the following four categories of project progress. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF/AF - Financed Projects* for extended descriptions.

i.Project Strategy

Project design:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.

[23] For ideas on innovative and participatory Monitoring and Evaluation strategies and techniques, see UNDP Discussion Paper: Innovations in Monitoring & Evaluating Results, 05 Nov 2013.

[24] For more stakeholder engagement in the M&E process, see the UNDP Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 3, pg. 93.

- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?
- Review the extent to which relevant gender issues were raised in the project design. See Annex 9 of *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF/AF-Financed Projects* for further guidelines.
- If there are major areas of concern, recommend areas for improvement.

Results Framework/Logframe:

- Undertake a critical analysis of the project's logframe indicators and targets, assess how "SMART" the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project's objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART 'development' indicators, including sex-disaggregated indicators and indicators that capture development benefits.

ii. Progress Towards Results

Progress Towards Outcomes Analysis:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and following the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects*; colour code progress in a "traffic light system" based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as "Not on target to be achieved" (red).

Table.Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)

Project Strategy	Indicator[25]	Baseline Level[26]	Level in 1st PIR (self-reported)	Midterm Target[27]	End-of-project Target	Midterm Level & Assessment[28]	Achievement Rating[29]	Justification for Rating
Objective:	Indicator (if applicable):							
Outcome 1:	Indicator 1:							
	Indicator 2:							
Outcome 2:	Indicator 3:							
	Indicator 4:							
	Etc.							
Etc.								

Indicator Assessment Key

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved

In addition to the progress towards outcomes analysis:

- Compare and analyse the Adaptation Monitoring and Assessment Tool at the Baseline with the one completed right before the Midterm Review.

[25]Populate with data from the Logframe and scorecards
[26]Populate with data from the Project Document
[27] If available
[28]Colour code this column only
[29]Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.

iii. Project Implementation and Adaptive Management

Management Arrangements:
- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by the GEF/AF Partner Agency (UNDP) and recommend areas for improvement.

Work Planning:
- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project's results framework/ logframe as a management tool and review any changes made to it since project start.

Finance and co-finance:
- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is theProject Teammeeting with all co-financing partners regularly in order to align financing priorities and annual work plans?

Project-level Monitoring and Evaluation Systems:
- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

Stakeholder Engagement:
- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?

Reporting:
- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfil GEF/AF reporting requirements (i.e. how have they addressed poorly-rated PIRs, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

iv. Sustainability

- Validate whether the risks identified in the Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the GEF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

Conclusions & Recommendations

The MTR team will include a section of the report setting out the MTR's evidence-based conclusions, in light of the findings.[30]

Recommendations should be succinct suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects*for guidance on a recommendation table.

The MTR team should make no more than 15 recommendations total.

Ratings

[30] Alternatively, MTR conclusions may be integrated into the body of the report.

The MTR team will include its ratings of the project's results and brief descriptions of the associated achievements in a *MTR Ratings& Achievement Summary Table* in the Executive Summary of the MTR report. See Annex E for ratings scales. No rating on Project Strategy and no overall project rating is required.

Table.MTR Ratings & Achievement Summary Table for (*EbA project*)

Measure	MTR Rating	Achievement Description
Project Strategy	N/A	
Progress Towards Results	Objective Achievement Rating: (rate 6 pt. scale)	
	Outcome 1 Achievement Rating: (rate 6 pt. scale)	
	Outcome 2 Achievement Rating: (rate 6 pt. scale)	
	Outcome 3 Achievement Rating: (rate 6 pt. scale)	
	Etc.	
Project Implementation & Adaptive Management	(rate 6 pt. scale)	
Sustainability	(rate 4 pt. scale)	

6. TIMEFRAME

The total duration of the MTR will be 30 working days within approximately 8 weeks starting September 17, 2014 and ending no later than 10 December 2014. The tentative MTR timeframe is as follows:

TIMEFRAME	ACTIVITY
September 10, 2014	Application closes
September 25, 2014	Select MTR Team
September 25, 2014	Prep the MTR Team (handover of Project Documents)
September 30 (3 days)	Document review and preparing MTR Inception Report
October 7 (4 days)	Finalization andValidation of MTR Inception Report
October 20 (16 days)	Start MTR mission: stakeholder meetings, interviews, field visits
November 4	Mission wrap-up meeting & presentation of initial findings- earliest end of MTR mission
November 22 (6 days)	Preparing draft report
December 4 (3 days)	Incorporating audit trail from feedback on draft report/Finalization of MTR report
December 7	Preparation & Issue of Management Response
December 15	Expected date of full MTR completion

Options for site visits should be provided in the Inception Report.

7. MIDTERM REVIEW DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	**MTR Inception Report**	MTR team clarifies objectives and methods of Midterm Review	No later than 2 weeks before the MTR mission	MTR team submits to the Commissioning Unit and project management
2	**Presentation**	Initial Findings	End of MTR mission	MTR Team presents to project management and the Commissioning Unit

3	**Draft Final Report**	Full report (using guidelines on content outlined in Annex B) with annexes	Within 3 weeks of the MTR mission	Sent to the Commissioning Unit, reviewed by RTA, Project Coordinating Unit, GEF OFP
4	**Final Report***	Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTR report	Within 1 week of receiving UNDP comments on draft	Sent to the Commissioning Unit

*The final MTR report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

8. MTR ARRANGEMENTS

The principal responsibility for managing this MTR resides with the Commissioning Unit. The Commissioning Unit for this project's MTR is UNDP Mongolia Country office.

The commissioning unit will contract the consultants and ensure the timely provision of per diems and travel arrangements within Mongolia for the MTR team. The Project Team will be responsible for liaising with the MTR team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

9. TEAM COMPOSITION

A team of two independent consultants will conduct the MTR - one team leader (with experience and exposure to projects and evaluations in other regions globally) and one national team expert. The consultants cannot have participated in the project preparation, formulation, and/or implementation (including the writing of the Project Document) and should not have a conflict of interest with project's related activities.

The selection of consultants will be aimed at maximizing the overall "team" qualities in the following areas:

- Recent experience with result-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to climate change, biodiversity, land and water management;
- Experience working with the GEF or GEF-evaluations;
- Experience working in Central Asia region;
- Work experience in relevant technical areas for at least 10 years;
- Demonstrated understanding of issues related to gender and capacity development; experience in gender sensitive evaluation and analysis.
- Excellent communication skills;
- Demonstrable analytical skills;
- Project evaluation/review experiences within United Nations system will be considered an asset;
- A Master's degree in nature& environment science, management and or other closely related field.

10. PAYMENT MODALITIES AND SPECIFICATIONS

10% of payment upon approval of the final MTR Inception Report
30% upon submission of the draft MTR report
60% upon finalization of the MTR report

11. APPLICATION PROCESS[31]

Recommended Presentation of Proposal:

a) **Letter of Confirmation of Interest and Availability** using the template[32] provided by UNDP;
b) **CV** and a **Personal History Form** (P11 form[33]);
c) **Brief description of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted to the address UN House - 14201, United Nations Street-14, Sukhbaatar district, Ulaanbaatar, Mongolia; Tel: 976-11-327585; in a sealed envelope indicating the following reference "Consultant for Ecosystem-based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia project Midterm Review" or by email at the following address ONLY: **bids.mn@undp.org** This email address is being protected from spam bots, you need Javascript enabled to view it by **11.00 a.m., September 10, 2014.** Incomplete applications will be excluded from further consideration.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

ToR ANNEX A: List of Documents to be reviewed by the MTR Team

1. PIF
2. UNDP Project Document
3. UNDP Environmental and Social Screening results
4. Project Inception Report
5. All Project Implementation Reports (PIR's)
6. Quarterly progress reports and work plans of the various implementation task teams
7. Audit reports
8. Finalized GEF focal area Tracking Tools at CEO endorsement
9. Oversight mission reports
10. All monitoring reports prepared by the project

The following documents will also be available:
11. Project operational guidelines, manuals and systems
12. UNDP country/countries programme document(s)
13. Minutes of the Ecosystem-based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
14. Project site location maps

ToR ANNEX B: Guidelines on Contents for the Midterm Review Report[34]

[31]Engagement of the consultants should be done in line with guidelines for hiring consultants in the POPP: https://info.undp.org/global/popp/Pages/default.aspx

[32]https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

[33]http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

[34] The Report length should not exceed *40* pages in total (not including annexes).

i. Basic Report Information *(for opening page or title page)*
- Title of UNDP supported GEF financed project
- UNDP PIMS# and GEF project ID#
- MTR time frame and date of MTR report
- Region and countries included in the project
- GEF Operational Focal Area/Strategic Program
- Executing Agency/Implementing Partner and other project partners
- MTR team members
- Acknowledgements

ii. Table of Contents

iii Acronyms and Abbreviations

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1. Executive Summary *(3-5 pages)*
- Project Information Table
- Project Description (brief)
- Project Progress Summary (between 200-500 words)
- MTR Ratings& Achievement Summary Table
- Concise summary of conclusions
- Recommendation Summary Table

2. Introduction *(2-3 pages)*
- Purpose of the MTR and objectives
- Scope & Methodology: principles of design and execution of the MTR, MTR approach and data collection methods, limitations to the MTR
- Structure of the MTR report

3. Project Description and Background Context *(3-5 pages)*
- Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope
- Problems that the project sought to address: threats and barriers targeted
- Project Description and Strategy: objective, outcomes and expected results, description of field sites (if any)
- Project Implementation Arrangements: short description of the Project Board, key implementing partner arrangements, etc.
- Project timing and milestones
- Main stakeholders: summary list

4. Findings *(12-14 pages)*

4.1 Project Strategy
- Project Design
- Results Framework/Logframe

4.2 Progress Towards Results
- Progress towards outcomes analysis
- Remaining barriers to achieving the project objective

4.3 Project Implementation and Adaptive Management
- Management Arrangements
- Work planning
- Finance and co-finance
- Project-level monitoring and evaluation systems
- Stakeholder engagement
- Reporting
- Communications

4.4 Sustainability
- Financial risks to sustainability
- Socio-economic to sustainability
- Institutional framework and governance risks to sustainability
- Environmental risks to sustainability

5. Conclusions and Recommendations *(4-6 pages)*

5.1 Conclusions
- Comprehensive and balanced statements (that are evidence-based and connected to the MTR's findings) which highlight the strengths, weaknesses and results of the project

5.2 Recommendations

- Corrective actions for the design, implementation, monitoring and evaluation of the project
- Actions to follow up or reinforce initial benefits from the project
- Proposals for future directions underlining main objectives

6. Annexes

- MTR ToR (excluding ToR annexes)
- MTR evaluative matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)
- Example Questionnaire or Interview Guide used for data collection
- Ratings Scales
- MTR mission itinerary
- List of persons interviewed
- List of documents reviewed
- Co-financing table (if not previously included in the body of the report)
- Signed UNEG Code of Conduct form
- Signed MTR final report clearance form
- *Annexed in a separate file:* Audit trail from received comments on draft MTR report
- *Annexed in a separate file:* Relevant midterm tracking tools: Adaptation Monitoring and Assessment Tool

ANNEX VIII: UNEG Code of Conduct for Evaluators/Midterm Review Consultants[35]

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: ___Dr. Ingrid Hartmann_____

Name of Consultancy Organization (where relevant): __DRYRES_____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at _____*Berlin*_____ *(Place)* on *November 1st, 2014*__ *(Date)*

Signature: _____ _____

[35] www.undp.org/unegcodeofconduct

ToR ANNEX IX: MTR Report Clearance Form

(to be completec)

Midterm Review Report Reviewed and Cleared By:

Commissioning Unit

Name: _____

Signature: _____ Date: _____

UNDP-GEF Regional Technical Advisor

Name: _____

Signature: _____ Date: _____