FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT

PROJECT TITLE: Mainstreaming biodiversity conservation, SFM and carbon sink enhancement into Mongolia's productive forest landscapes. **PROJECT SYMBOL**: GCP/MON/008/GFF	
Recipient Country: Mongolia	**Resource Partner:** Global Environmental Facility (GEF)
FAO project ID: 613958	**GEF Project ID:** 4744
Government /other Counterpart(s): Ministry of Environment and Green Development	
Expected OED (starting date): January 2014	
Expected NTE (End date): August 2018	
Contribution to FAO's Strategic Framework[1]	**a. Strategic objective/Organizational Result: SO2:** Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. Organizational Outcomes 1 and 2, **b. Regional Result/Priority Area:** *Asia-Pacific Forestry Strategy* **c. Country Programming Framework Outcome:** Priority no. 3 (Promotion of sustainable natural resource management as techniques for adaptation, mitigation, and management for the impacts of climate change)/ Outcome 3.2 (Enhanced participatory natural resources management of forested areas)

GEF Focal Areas:	**GEF Strategic Objectives:**
Multi-Focal Area Project focusing on: Biodiversity and Land Degradation, with SFM/REDD Incentive Mechanism	BD – 2 Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors. LD – 2 Generate sustainable flows of forest ecosystem services in drylands, including sustaining livelihoods of forest dependant people. SFM/REDD – 1 Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services.

Environmental Impact Assessment Category (insert √): A B C √

Financing Plan: GEF allocation (USD):		**3,586,364**
Co-financing (USD):		
Government of Mongolia	12,825,000	
GiZ	5,400,000	
Government of Finland:	600,000	
FAO	960,000	
Subtotal Co-financing:		**19,785,000**
Total Budget:		**23,321,364**

[1] For country office operated projects, link projects in FPMIS at OR level.

EXECUTIVE SUMMARY

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of *participatory forest management* (PFM) in the country indicates this approach can be successful.

This Project aims to develop PFM in the northern forests, thereby improving livelihoods and the ecological status of those forests. Moreover, the northern forests also hold globally important biodiversity and are an important store of carbon. The Project will therefore mainstream biodiversity conservation and carbon management into the developing participatory forest management systems. It will help expand this form of sustainable forest and land management to over half a million hectares.

Moreover, the Government has recently committed to a green development path, notably through the creation of the Ministry of Environment and Green Development and the preparation of a national Green Development Plan (draft). This project, by reversing land degradation, protecting global environmental resources (biodiversity and carbon stocks), improving livelihoods of rural poor and aiding climate change adaptation, will be an effective way to demonstrate green development at the grass roots level.

The Project Objective is *sustainable forest management in Mongolia's forest landscape secures the flow of multiple ecosystem services and benefits, including biological diversity, reduced degradation, and carbon storage, while enhancing resilience to climate change.*

The Objective will be achieved through the realization of four Outcomes and associated Outputs. The first Outcome focuses on the enabling environment for PFM, not only making it stronger, but ensuring in particular that it addresses biodiversity conservation and forest carbon management (REDD+). The second Outcome builds directly on the work of previous initiatives to develop PFM with sixteen 'advanced' forest user groups (FUGs). This Outcome will help these advanced FUGs to operationalize a more sophisticated form of PFM, with increased and more sustainable revenues, and notably improved biodiversity conservation and more attention to carbon issues. The third Outcome focuses on upscaling PFM. This will develop the capacity and operationalize 84 FUGs that are currently not active. Through this third Outcome, these 84 FUGs will adopt PFM and, by Project-end, will in many ways have caught up with the sixteen advanced FUGs. Lessons from Outcomes 2 and 3 will continuously feed into the design of activities under Outcome 1, and so contribute to strengthening the enabling environment. Outcome 4 covers M+E and information dissemination.

Outcome 1: Enabling institutional, policy and regulatory framework for Sustainable PFM. Key Outputs include a Ministerial level resolution to allow FUGs to be involved in and to benefit from timber harvesting; and a Unit in the Forest Development and Research Centre that is capable of integrating biodiversity conservation and carbon storage into all participatory forestry in Mongolia.

Outcome 2: Sustainable PFM is demonstrated that leads to improved livelihoods, biodiversity conservation and reduced carbon emissions/increased stocks. Key Outputs include the demonstration of a simple REDD+-type incentives mechanism; the demonstration of biodiversity conservation practices in 10 priority FUGs, and; increased revenue from timber and non-timber forest products at 16 FUGs.

Outcome 3: Sustainable PFM that conserves biodiversity, reduces degradation and reduces carbon emissions/increases carbon stocks expanded across significant areas of northern forests. Key Outputs include 8 PFM Extension Offices in the local government structure; and 84 FUGs going through the PFM process: i.e.: developing simple 3-year PFM plans, having FUG Certificates approved, and developing 10-year SFM Plans.

Outcome 4: Monitoring and Evaluation and Information Dissemination. Monitoring and evaluation of progress and results will be undertaken based on the targets and indicators established in the project Results Framework. A comprehensive M&E system responding to the needs of the Mongolian government, FAO, GEF and the project office has been developed, providing full details of roles, responsibilities outputs and reporting.

The project will be carried out over a period of four years and has a total value of USD 23 321 364 of which USD 3 586 364 in GEF resources and USD 19 785 000 in co-financing.

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Acronyms

AAC	Allowed annual cut
AWP/B	Annual Work Plan and Budget
BH	Budget holder
CTA	Chief Technical Advisor
DPIC	Department of Policy Implementation Coordination
FD	Forestry Department (of FAO)
FF	Field Facilitators
FOM	Forest Assessment Management and Conservation Division (in FAO)
FPMIS	Field Programme Management Information System
FRDC	Forest Research and Development Centre
FUG	Forest User Group
GCU	FAO GEF Coordination Unit in Investment Centre Division
GiZ	Technical Cooperation Agency (of the German Government)
IBA	Important Bird Area
IW	Inception Workshop
KfW	Financial Cooperation Agency (of the German Government)
LoA	Letter of Agreement
LTO	FAO Lead Technical Officer
LTU	FAO Lead Technical Unit
M&E	Monitoring and evaluation
MDG	Millennium Development Goals
MEGD	Ministry of Environment and Green Development
MIA	Ministry of Industry and Agriculture
MNT	Mongolian Tugrik
MRV	Carbon measurement, reporting and verification
MTE	Mid-Term Evaluation
NAP CD	National Action Plan for Combating Desertification of Mongolia
NDS	Mongolia's *Comprehensive National Development Strategy*
NPC	National Project Coordinator
NPD	National Project Director
NREG	Natural Resources and Environment Group (of FAO)
NTFP	Non-timber forest products
PCC	Project Coordination Committee
PFM	Participatory Forest Management
PIR	Project Implementation Review
PMO	Project Management Office
PPR	Project Progress Reports
RAP	FAO Regional Office for Asia Pacific
RF	Project's results framework
SFM	Sustainable Forest Management
TCIB	The Asia and Pacific Service of the FAO Investment Centre Division
tCO2e	tonnes of carbon dioxide equivalent – measure of greenhouse gas (emissions)
ToR	Terms of Reference
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation
USD	United States Dollar

1 – RELEVANCE (STRATEGIC FIT AND RESULTS ORIENTATION)

A. GENERAL CONTEXT

General Development Context Related to the Project

1. Mongolia has taken many steps in the past two decades to move from a socialist country towards a vibrant democracy with a booming economy. In 2013, Mongolia lies at the threshold of a major economic take-off, based partly on the recent discovery of vast, exploitable mineral resources. The share of mining in GDP has already risen to over 20 percent. The economy grew by 17.3 percent in 2011, compared to 6.4 percent in 2010, and it is expected to grow at a double digit rate in the coming years[2].

2. This economic growth has led to some benefits for many of the people of Mongolia. Poverty is on a downward trend, and according to the World Bank, decreased from 39.2 percent in 2010 to 29.8 percent in 2011. Substantial progress has also been made in regard to achieving the Millennium Development Goals (MDGs). Notwithstanding, Mongolia remains an impoverished country highly dependent upon its natural resource base. The majority of the population is spread across small urban centers and the vast steppes, where the predominant activities are herding cattle, sheep, goats, horses, yaks and camels. Herding, agriculture and community forestry play key roles providing employment, alleviating poverty and enabling marginalized communities to connect into the national economy.

3. Moreover, the current mining boom brings risks associated with a dependency on minerals and a non-diversified economy. These risks range from exposure to commodity price volatility, inflation, unemployment, rising corruption, inequality and social disruptions. These issues, along with rapid economic transition and population growth, are amongst the factors directly and indirectly placing pressure on Mongolia's unique natural resource base.

Forests in Northern Mongolia

4. Mongolia's forests can be broadly divided into two types: northern boreal forests and southern desert/steppe saxaul forests (see map in Figure 1).

5. The northern, boreal forests extend over 11.5 million hectares, of which approximately 10.4 million are considered to be intact (i.e. with crown cover over 30 percent) and 1.1 million ha are considered depleted[3]. The northern forests are divided into: (a) montane forests, dominated by Siberian spruce (*Piceaobovata*) and Siberian fir (*Abies sibirica*); (b) taiga forests, and; (c) forest steppe, dominated by larch (*Larix siberica*), Siberian pine (*Pinus sibirica*) and Scots pine (*Pinus sylvestris*). Broadleaf species such as birch (*Betula platyphylla*), aspen (*Populustremula*) and poplar (*Populusdiversifolia*) also occur to the east of the Orkhon River. The *larch is b*y far the most common species in the northern forests, covering 60% of forest stands and 70% of wood volume[4]. Basic information on the growing stocks of the most common tree species is provided in Table 1.

[2] World Bank Group, 2012. *Country Partnership Strategy For Mongolia For The Period Fy2013-2017*

[3] FAO, 2010. Mongolia Forestry Outlook Study. Working Paper No. APFSOS II/WP/2009/21. Asia Pacific Forestry Outlook Study II. Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok.

[4] Crisp, N., J. Dick, and M. Mullina, 2004. Mongolia Forest Sector Review. The World Bank. Victoria, B.C, Canada.

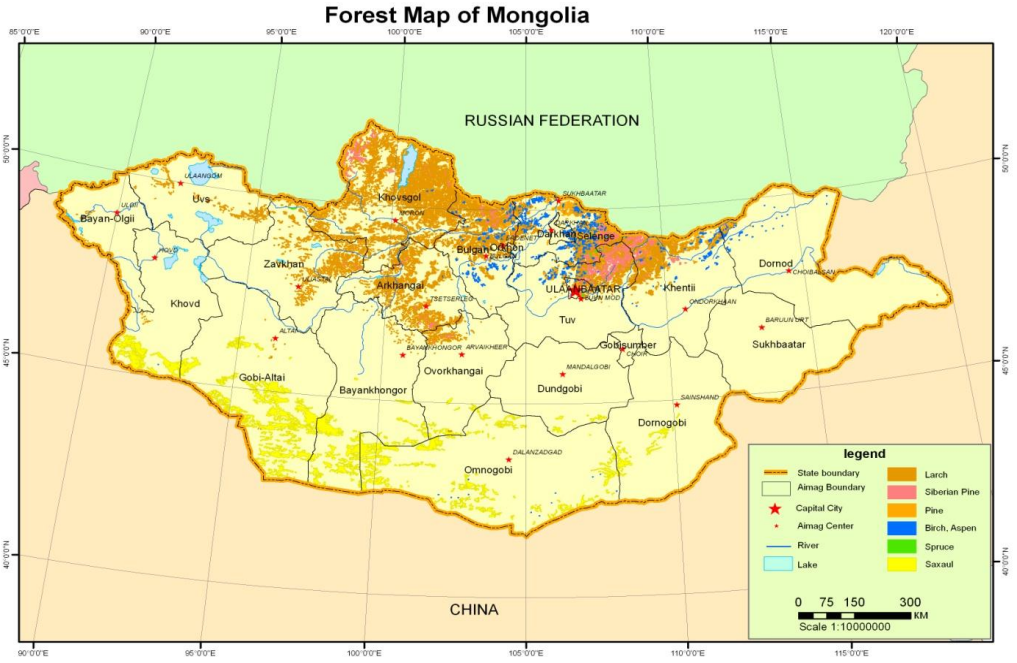


Figure 1: Map showing distribution of Mongolia's forests

Table 1: Growing stock for the most common tree species in Mongolia's northern forests

Scientific name	Common name	Area (ha)	Growing stock in 2005 (million m^3)
Larix siberica	Larch	7,526,899	1,070.8
Pinus sibirica	Siberian pine	984,658	140.1
Pinus sylvestris	Scots pine	662,113	94.2
Picea obovata	Siberian spruce	27,872	4.0
Abies sibirica	Siberian fir	2,337	0.3
Betula platyphylaa	Birch		162.0
Populus spp	Poplar	1,198,720	6.8
Salix berberifolia	Willow		1.7

Sources: FAO, 2010; Crisp et al.,

6. Northern forests are spread over 14 *aimags*, although over 80% lie in the following six *aimags*[5]: Khuvsgul (29%), Selenge (16%), Khenti (11%), Tuv (10%), Arkhangai (8.5%) and Zavkhan (5%) – see Table 2. Approximately 30% of the northern forests lie inside established Protected Areas with a management regime subject to the Protected Area Law.

Table 2: Forest area (ha) by aimag

Aimag	Forest cover	Logged area	Tree nursery	Regeneration	Non-forest	Total
Arkhangai	847,490	2,764	-	-	232,367	1,082,621
Khenti	980,150	1,175	12	79,201	71,079	1,131,617
Khuvsgul	3,383,996	36,315	3	57,070	527,982	4,005,366
Selenge	1,376,623	20,638	15	38,306	98,529	1,534,111
Tuv	492,904	3,384	7,512	1,549	39,162	544,511
Zavkhan	463,235	5,039	51	-	22,405	490,730
Other	1,887,403	57,609	1,291	576,501	7,286	2,530,088
TOTAL	**9,431,801**	**126,924**	**8,884**	**752,627**	**998,810**	**11,319,044**

data courtesy of the Administration of Land Affairs, Geodesy and Cartography,

[5] Administration in Mongolia is divided into Aimags (equivalent to province) and Soum (equivalent to District)

Biodiversity in the Northern Forests

7. Within Mongolia's borders there are two WWF Global 200 Eco-regions (Altai Sayan and Daurian Steppe), 70 Important Bird Areas (IBAs), 5 sites under the East Asian Australasian Flyway Partnership for Migratory birds, 2 UNESCO World heritage sites, and 11 RAMSAR sites. Mongolia's recorded faunal diversity includes 136 species of mammals, 436 bird species, 8 amphibian species, 22 reptile species and over 76 fish species. More than 3,000 species of vascular plants, 927 lichens, 437 mosses, 875 fungi, and numerous algae species have been recorded. There are over 150 endemic and nearly 100 relict species. Mongolia is also a last refuge for many Central and Eastern Asian species.

8. The northern forests cover approximately 10% of Mongolia. Given that more than 40% of Mongolia is desert, a great deal of the globally significant biodiversity lies in the northern forests. These northern forests are part of a transitional zone between the Siberian taiga (to the north) and grasslands to the south. They typically grow on mountain slopes between 800 and 2,500m above sea level. They belong to the southern edge of Siberia's vast forests and therefore are unique from a global environmental perspective. The forests contain more than 600 species of medicinal herbs, and about 400 species of food and other herbs. Floral diversity is significant both in the forest under-storey and the adjacent grasslands, including threatened species such as lady's slipper orchids as well as wild peonies, anemones, globe flowers and carpets of iris. The Mongolian Red Book lists 128 species of plants as endangered and threatened. This floral diversity supports a rich but still mostly unknown insect fauna (see Annex 4 for further details on the biodiversity in the northern forests and its global significance).

Biodiversity Loss and Forestland Degradation in the Northern Forests

9. Studies on the loss of biodiversity specific to the Northern Forests are incomplete, although available data suggests that northern forest biodiversity has suffered the same pressures as throughout the rest of Mongolia. During the initial transition from communism to a free-market economy, commercial hunters combined with local poachers to decimate much of Mongolia's wildlife. Large numbers of taimen (the world's largest salmonid), wild boar, red deer, marmot, lynx, brown bear and a host of other species were hunted for the market. The capture and sale of birds of prey was rampant and poorly regulated. Some studies estimate that between 1992 and 2005 the populations of key species such as Saiga, Siberian marmot, Red deer, Saker falcon, and wolves declined by 50-90%. For example, in the early 1990's, Mongolia's population of red deer exceeded 200,000: by 2005, hunting had reduced the total population to less than 20,000.

10. The underlying causes and drivers of this biodiversity loss and wildlife are numerous, including difficult economic conditions, inadequate law enforcement, and market opportunities presented by the opening of borders with neighbouring China. As a result, much of Mongolia's "productive" landscape is now largely wildlife impoverished. Moreover, socio-economic challenges led to vast increases in livestock numbers, which increased the pressures on natural habitats, including forests.

11. The hunting of wildlife is believed to have slowed in recent years due to several factors. Firstly, the massive reduction in the numbers of "easy" target species has made hunting less economically viable. Moreover, the government has suspended the hunting of many species and adopted a much more aggressive regulatory framework. Finally, public awareness of wildlife and biodiversity has increased.

12. However, the forest ecosystems have suffered from more than hunting of key species. There has been destruction and degradation of the unique forest ecosystems – which is continuing. FAO's 2010 Forest Resource Assessment for Mongolia estimates that Mongolia's northern boreal forests are being lost at an annual rate of 0.74% per year, or just over 80,000 hectares each year. As a result, total forest

cover fell from over 12.5 million hectares in 1990 to under 11 million hectares in 2010. Much of the forest that remains has been degraded by fire, diseases, pests and unsustainable harvesting (more details are provided on this in later sections). Boreal forests are affected primarily by legal and illegal logging (for timber for construction, private use and fuel wood), forest fires, insect attack and disease and grazing.

Carbon Storage and Changes

13. Globally, boreal forests[6] hold the second largest pool of terrestrial organic carbon in the world (284.2 gigatonnes of carbon), behind tropical forests (with 547.8 gigatonnes of carbon). There is, however, a fundamental difference in their carbon structures: while tropical forests store most carbon in their biomass, boreal forests store most (i.e. 60%) carbon in their soil and litter, with only 20% in the biomass. This high proportion of carbon in soil and litter is explained by the slow rates of decomposition that accompany the lower temperatures in boreal areas.

14. FAO estimates the average carbon in boreal forest biomass in Mongolia to be 53 tonnes per hectare[7]. Hence, given a total forest area of the northern forests of 10,898,000ha, the total carbon stocks *in the biomass* of Mongolia's northern forests can be estimated at 577,594,000 tonnes. However, as noted above, only 20% of boreal forest carbon is stored in the biomass. Therefore total Carbon stored in the ecosystems of the Northern forests could be close to 3 billion tonnes.

15. Estimates of forest loss in the Mongolian northern forests put annual deforestation rates at approximately 81,000 hectares. Taking the conservative value of forest carbon stocks of 53tC/ha (i.e. only including the carbon in the biomass), annual emissions of CO_2-equivalent (CO_2e) from the deforestation of Mongolia's northern forests can be estimated at 15,929,550 tCO_2e. It is noted that this is a very conservative estimate.

Participatory Forest Management

16. The predominant rural livelihoods in Mongolia are based on livestock herding systems which provide the setting for most social and economic activities. Within this context, forestry has always played a minor but important role. Moreover, forestry in Mongolia has been undergoing major changes since the 1990s, since the break-up of the Soviet Union. Over the last two decades, a unique form of Participatory Forest Management (PFM) has developed, connecting livestock-herders to forests[8] and integrating livestock raising with forestry. During the same period, government forest policy has changed from a focus on timber production. It first evolved to environmental protection and conservation in the 1990s and 2000s. It is now evolving again towards sustainable utilization. The government institutions responsible for managing forests have also evolved – most importantly in line with the national decentralization process. Accordingly, decision-making has been somewhat decentralized to lower levels of government.

17. National policy now supports the establishment of Forest User Groups (FUGs). FUGs represent a tool to involve rural communities in forest management, provide income possibilities to rural communities, and provide practical management mechanisms for Mongolia's vast forests. Formally, 817 such groups have formed[9]. Typically, one FUG may involve 20-40 members, and be responsible for 4-6,000 hectares of forest. National legislation regulates the permitted activities of an FUG – and their activities are overseen and officially supported by local government forestry agencies.

18. In some places, groups of FUGs have joined together to form associations (Forest User Associations). These are an informal way to collaborate, share resources and ensure lessons and

[6] Found in the arctic, sub-arctic and cold continental regions of the northern hemisphere
[7] FAO, 2010. Global Forest Resource Assessment 2010. Country Report: Mongolia.
[8] PFM is a wide range of processes and mechanisms that enable local forest stakeholders and resource owners to be a part of decision-making in all aspects of forest management
[9] Although the vast majority are inactive, and only exist 'on paper'

practices are quickly disseminated across the country. As in other countries, it is possible that these associations will ultimately form a pyramid of civil society organisation, with forest user associations existing at soum, aimag and national level. The Government has indicated it would prefer such a situation, as it would facilitate government – FUG interactions.

19. The long term vision is for forests to become a substantial source of income for rural communities, opening the prospect of highly productive forests, managed by FUGs, employing high-tech systems of sustainable forest management. This would diversify the livelihoods of rural communities and make them less dependent on herding. This would also lessen the burden of forest management on government agencies and provide a sustainable and cost-effective pathway for preserving the rich biodiversity of Mongolian forests.

20. Some of the main steps taken so far to support this government objective include[10]:

- The concept of PFM for Mongolia has been developed and introduced into national policy;
- Initial capacity to undertake PFM has been developed with sixteen FUGs and initial implementation of simple forest management plans has started, such as undertaking simple forest assessments, sketch mapping, patrolling, developing business plans and harvesting/selling firewood;
- All the technical building blocks for PFM in Mongolia (e.g. detailed guidelines on how to establish a FUG, detailed PFM implementation guidelines, management and planning tools, and training material) have been developed;
- Institutional capacity (including training staff and strengthening government agencies, etc.) has been developed in national and local government forest agencies; and,
- Basic support has been provided to strengthen the national level policy framework.

21. Notably there is a vast amount of training and guidance material for operationalizing PFM in the Mongolian context.

22. The approved methodology for establishing FUGs and operationalizing PFM consists of a one-year establishment phase, a six-year foundation phase, followed by a 60-year implementation phase incorporating full user and access rights. More details of this accepted national three-phase approach to developing FUGs and PFM in Mongolia are provided in Annex 5. This approach has been enshrined in Law (Forest Law, 2012, Article 4). This methodology is the basis for all support to FUGs through the current Project.

23. In and near protected areas, some recent pilots have taken place to involve FUG members in biodiversity monitoring[11]. This form of biodiversity monitoring is cost-effective and generates useful information on biodiversity. It also has been shown to lead to FUG members becoming more committed to biodiversity conservation. At present, many Mongolian academic experts and government officers do not appreciate this monitoring as they feel it lack scientific authority.

The Sixteen Leading FUG Sites: Forests, Forest Degradation, Land Degradation, Biodiversity Loss and Carbon Loss

24. During the period 2007-2013, FAO has been working closely with the Government of Mongolia to support the development of 16 FUGs[12]. The sixteen FUGs are: Uguuj Buren, Monostoi, Dundat and

[10] Much of this was done with support from FAO and other international partners.
[11] For example with support from WWF in Khenti province.
[12] Mostly through the Project: "*Capacity Building and Institutional Development for Participatory Natural Resources Management and Conservation in Forest Areas of Mongolia*", GCP/MON/002/NET

Bukht (all in Bulgan Aimag); Urmugtkhairkhan in Darkhan Uul aimag; Amarlingui, Buural Sansar, Galtain Gol, Delger Onon and Seruunbayalag (all Khentii aimag); Badar, Taliin Tolgoi and Urt Bulag (all Khuvsgul aimag); and Altansumber, Dalt, Khargistain (all in Selenge aimag) - see Figure 2 for the location of these FUG forest communities.

25. The 16 FUGs cover a total area of 81,796 hectares, of which 64,531 hectares of forest land.

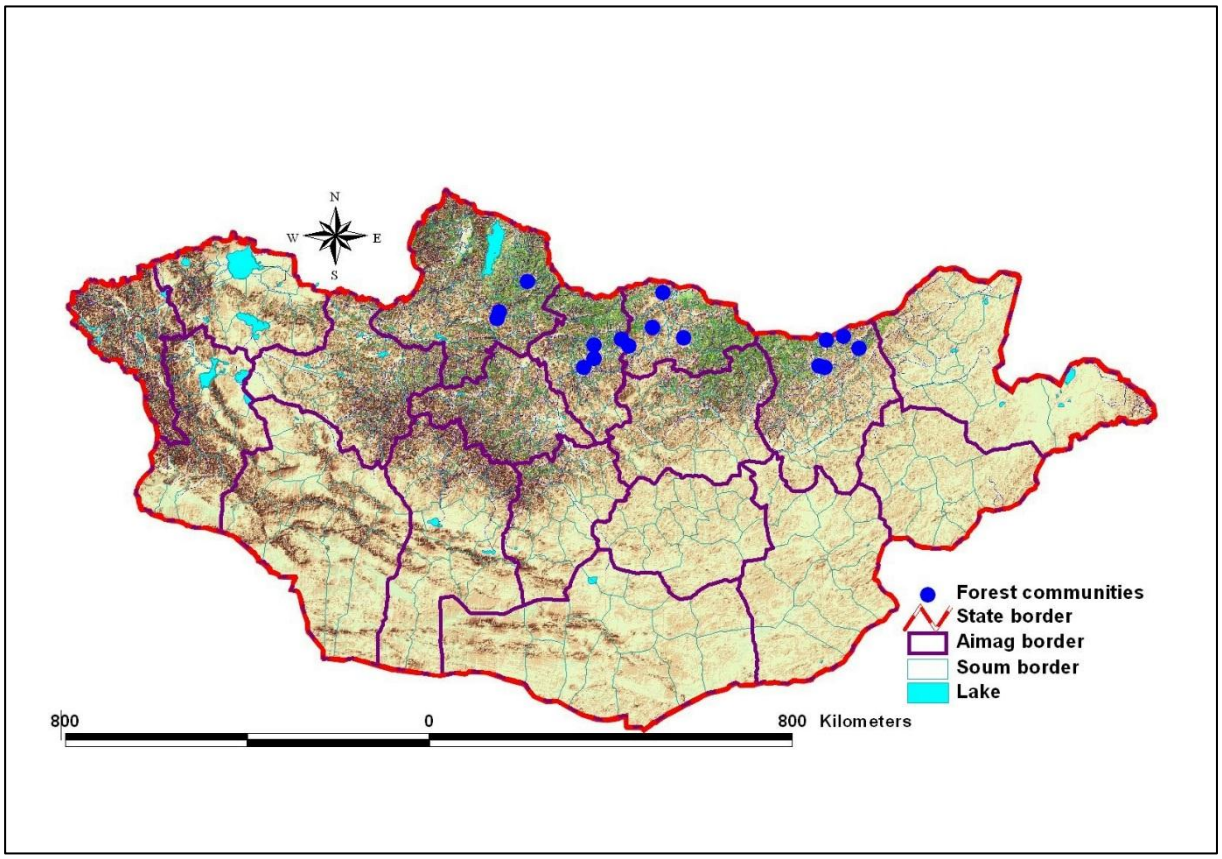


Figure 2: Map showing location of study FUGs

26. In the preparation of this project, an initial study was undertaken of these 16 FUGs. An overview of the socio-economic and basic ecological situation of these 16 FUGs is provided in the accompanying report "*Reference Data on the Sixteen Lead-FUGs*"[13]. The main findings of this study are summarized in the following paragraphs:

27. General. The 16 FUG include a total of 442 members of which 212 are women, or 48%. The average size of each FUG is 25 members. Each of these FUGs has a registered management plan and a business plan. The principal activity for each FUG is livestock raising, although all FUGs recognize the potential for high levels of revenue from forestry. Table 3 provides key economic data on the 16 FUGs. As can be seen from Table 3, largely with the support of GCP/MON/002/NET, many of the FUGs have already started generating significant revenue. Moreover, many additional revenue generating activities have been identified.

[13] Prepared by Dashzeveg Tserendeleg

Table 3: Key Economic Data on the 16 FUGs

FUG name, forest area by hectares	Number of members (women)	Current forest management plan objectives	Previous management plan activities	Current profitable activities, amount	Potential profit generating activities
Huvsgul Aimag					
Talyn tolgoi 3.500ha	31 (14)	1.No forest fire 2.Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Assisted natural regeneration work in 10ha area. Carried out thinning in 5ha area. Result of good patrolling work no forest fire and no illegal logging.	560 м^3 fuel wood valued 7.000.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Urtbulag 3.200ha	26 (10)	1.No forest fire 2.Make the FUG more functional with regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Carried out a cleaning work in 10ha area and thinning in 5ha rea. Regular patrolling work is carried out monthly basis.	640 м^3 fuel wood valued 8.000.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Badar 18.000ha	34 (14)	1.No forest fire 2.Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Carried out natural regeneration work in 2ha in Tsegtsger. Identified 5ha for thinning work this year. Reported illegal logging to soum government and took measurement in May 2012.	40 м^3 fuel wood valued 1.666.000₮	Forest regeneration work Tree nursery Tree planting Seed collection
Bulgan Aimag					
Uguujburen 2.752ha	34 (16)	1. No forest fire 2.Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Made cleaning work in 20ha area during 2010-2011. Regular patrolling work during 4 seasons. Established patrolling post 2012	300 м^3 fuel wood valued 10.000.000₮	Forest regeneration work Tree nursery Tree planting Seed collection
Dundat-Urguu 3.300 ha	27 (13)	1.Stop forest fire 2. Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Reforestation work in 10ha area in 2012. The FUG has 2 volunteer rangers and do regular patrolling work.	400 м^3 fuel wood valued 14.000.000₮	Forest regeneration work Tree nursery Tree planting Seed collection
Monostoi 7.000ha	22 (9)	1.No forest fire 2.Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Regular patrolling work during Spring and Fall for forest fire prevention. 4 fences built to see natural regeneration. Field study for Darkhan agriculture university students.	200 м^3 fuel wood valued 7.000.000₮.	Forest regeneration work Tree nursery Tree planting Seed collection
Bukht 690ha	32 (15)	1.No forest fire 2.Make the FUG more functional and run regular activities. 3.Halt illegal logging 4.Strengthen FUG members	Regular patrolling work during Spring and Fall together with rangers.	.	Forest regeneration work Tree nursery Tree planting Seed collection
Darkhan-Uul, Selenge Aimag					

FUG name, forest area by hectares	Number of members (women)	Current forest management plan objectives	Previous management plan activities	Current profitable activities, amount	Potential profit generating activities
Altansumber 7.482ha	17 (5)	1.No forest fire 2.Reduce forest pest 3.Halt illegal logging 4.Strengthen FUG members	Total of 132m3 fuel wood and 40m3 lumber are prepared and sold via forest cleaning. Regular patrolling work in Spring-Fall together with rangers.	40 $м^3$ fuel wood valued 1.700.000₮.	Forest regeneration Tree nursery Tree planting Seed collection
Khargistai Bayanburd 7.403ha	40 (13)	1. No forest fire 2.Enroll FUG members in vocational training. 3.Halt illegal logging 4.Wildlife protection and conservation.	Thinning in 0,5 ha as a piloting training. Regular patrolling work during Spring and Fall together with rangers.	450 pieces of logs valued 1.000.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Dalt 473ha	14 (4)	1. No forest fire 2. Halt illegal logging 3. Strengthen FUG members	Mostly protection activities. Regular patrolling during Spring and Fall which resulted no illegal logging and forest fire.		Forest regeneration Tree nursery Tree planting Seed collection
Urmugtkhairhan 2.672ha	15 (6)	1. No forest fire 2. Halt illegal logging 3. Strengthen FUG members 4. Assist in natural regeneration.	Forest cleaning work and regular patrolling during Spring and Fall which resulted no illegal logging and forest fire	35 $м^3$ fuel wood valued 3.347.000₮.	Forest regeneration Tree nursery Tree planting Seed collection
Khentii Aimag					
Delgeronon 6.000ha	43 (18)	1. No forest fire 2. Halt illegal logging 3. Strengthen FUG members	Reforestation in 85 ha area. Thinning in 5 ha. Regular patrolling during Spring and Fall.	150 $м^3$ fuel wood valued 5.250.000₮. 43 $м^3$ logs valued at 2.700.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Seruunbaylag 10.200ha	42 (21)	1. No forest fire 2.Enroll FUG members in vocational training. 3.Halt illegal logging 4.Wildlife protection and conservation.	Carried out cleaning work in 1.8 ha area. Regular patrolling and monitoring during spring and Fall. No forest fire took place.	50 $м^3$ fuel wood valued 1.750.000₮ 30 $м^3$ logs valued 1.250.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Amarlingui 4.133ha	43 (24)	1. No forest fire 2. Halt illegal logging 3. Strengthen FUG members	Reforestation in 6 ha. Regular patrolling during Spring and Fall which resulted no illegal logging and forest fire.	200 $м^3$ fuel wood valued 7.000.000₮ 50 $м^3$ logs valued 3.200.000₮	Forest regeneration Tree nursery Tree planting Seed collection
Galtaingol 5.200ha	30 (18)	1. No forest fire 2. Halt illegal logging 3. Strengthen FUG members	Forest cleaning work and regular patrolling during Spring and Fall which resulted no illegal logging and forest fire.	30 $м^3$ valued 1.100.000₮ 40 $м^3$ logs valued 2.500.000₮	Forest regeneration Tree nursery Tree planting Seed
Buuralsansar 1.065ha	28 (12)	1.No forest fire 2.Improve FUG functionality. 3.Halt illegal logging 4.Strengthen FUG members	Thinning in 4 ha. Regular monitoring and patrolling work during Spring and Fall which resulted in no forest fire.	100 $м^3$ fuel wood valued 3.500.000₮ 58 $м^3$ logs valued 3.600.000₮	Forest regeneration Tree nursery Tree planting Seed collection

It is noted that the price of 1m^3 of fuel wood varies from 35.000₮-55.000₮ depending on Aimag and Soums.

28. Forest Cover and Degradation. For the sixteen leading FUGs, the data shows that only 17% of the forest is highly covered (i.e. with a canopy cover greater than 70%), where as 57% has a cover of less than 50%. These figures indicate the relatively degraded state of these forests. The main factors causing degradation are livestock grazing, fires, logging and pests. Table 4 provides estimates on the levels of forest disturbance for each factor. Table 4 also provides estimates of the levels of active forest management at the sites.

Table 4: Forest areas by disturbances and management practice in the 16 FUGs.

	Forest Impact	**Area (ha)**	**% total forest area**
Forest disturbances	Livestock grazing (inside the forest)	19,746	31%
	Fire (pre-2010)	14,408	22%
	Logging**	8,992	14%
	Pests	3,971	6.2%
	Disease	443	0.7%
	Storm damage	88	0.1%
Forest management practice	Forest cleaning*	215	0.3%
	Of which, approx.:		
	- Fuelwood	*142*	*0.2%*
	- Household use	*32*	*0.05%*
	Reforestation	164	0.25%
	Thinning	107	0.17%

*The practice of removing/gathering dead and down wood.
**Reportedly mostly illegal logging carried out by private companies on FUG land, both prior to and following the granting of land for FUG use.

29. From Table 4, it is clear that large tracts of forest have experienced fire and logging, although in most cases this was *prior* to the establishment of the FUG. Another notable point is that only a very small percentage of the forests are under active forest management. They represent an important potential for sustainable harvesting of forest resources.

30. Carbon. The total carbon stored in the biomass in the 16 FUGs is estimated to be 2,849,043 tonnes. The forest disturbances indicated in Table 4 lead to carbon emissions, which are partly offset by forest growth. The net annual carbon emissions[14] in the current situation from these FUGs are estimated to be 1,430,366 tonnes CO_2e (see Annex 8 for details).

31. Biodiversity. The PPG study concluded: (i) each FUG has significant biodiversity, with all of the key northern forest species being found at some or most of the FUGs. Moreover, some FUGs lie very close to an IBA or to an existing protected areas; (ii) whereas over recent decades the biodiversity has greatly declined, there has been some improvement in the most recent years; (iii) the farther the FUG is from an urban centre, the greater the biodiversity and the lower the threat.

32. Detailed information on: (i) the biodiversity recorded in each FUG; (ii) range of the key globally threatened mammal species; (iii) threats to biodiversity, and; (iv) recent measures to conserve biodiversity, is available in the accompanying report "*Biodiversity status in the area where community is implementing cooperative forest management*"[15]. A summary is provided in Annex 4.

[14] Accounting for emissions from deforestation, emissions from forest degradation and forest removals (sequestration).
[15] Prepared by Amgalanbaatar Sukh

33. Through project GCP/MON/002/NET and other initiatives, it has been demonstrated in the sixteen FUGs that it is possible to sustainably increase the harvest of forest products[16]. This leads to healthier forests, reduced carbon emission and increased revenues. In turn, given the low population pressure, the increased revenue can lead to reduced pressure on biodiversity, as possibly indicated by increased population of some indicator species.

Barriers to Sustainable Forest Management

34. As seen from the previous sections, PFM has the potential to reduce poverty, increase income, conserve biodiversity, reduce land degradation and reduce levels of greenhouse gases. However, there are a series of barriers to rolling out PFM in Mongolia. These are briefly presented in the following paragraphs.

Barrier One: Inadequate capacity amongst the Forest User Groups (FUGs)

35. FUGs can be divided into two groups: those having already benefitted from internationally supported initiatives and those not yet having had such support. The former includes the 16 FUGs supported by FAO, which are widely considered to be amongst the most advanced FUGs in Mongolia. These 16 FUGs have made significant progress in terms of forest mapping, basic forestry planning, patrolling, fire control and harvesting/selling small quantities of dead wood[17], and are generating some revenue. However, even in these 16 advanced FUGs, capacity remains very limited, for example:

- Available funds for investment are very limited and access to credit is almost absent;
- Equipment is very basic;
- Ability to undertake forest cleaning is limited to very small areas;
- They have no mandate or ability to undertake thinning or harvesting;
- FUGs have very limited information on markets and limited access to markets;
- FUG legal status remains weak and so they are restricted in terms of the type of forest activities in which they can engage;
- FUG internal organization remains fragile and conflicts remain a potential problem; and,
- The FUG members have very little understanding of biodiversity;
- FUG members have little understanding of carbon and managing forest carbon stocks.

36. Moreover, beyond these 16 leading FUGs, the vast majority of FUGs have not yet benefitted from any internationally supported initiatives and their capacity situation is far bleaker. In most cases, these FUGs exist only on paper. Typically, they have no management plan, and there are no true ongoing management activities. In most cases the only interactions between these FUGs and the forest are the use of forest land for grazing and the collection of dead wood for immediate use as fuel.

Barrier Two: Inadequate capacity in local government agencies to provide extension services

37. As described in other sections of this document, the ongoing decentralization process means that most responsibilities related to forestry have been delegated to the lower levels of administration, notably to the Aimag Environmental Protection Agencies, the Inter-Soum Forestry Units and the Soum Governments. These agencies now have a very clear mandate related to conservation and sustainable use, and for supporting PFM, and they have a growing budget.

38. A capacity assessment undertaken during the preparation of this project revealed that these agencies have very limited capacity. This can be seen in terms of: (i) number of staff; (ii) number of trained staff; (iii) equipment; (iv) attitudes to and knowledge of biodiversity issues, and; (v)

[16] See GCP/MON/002/NET Terminal Evaluation (FAO, 2012)
[17] Analysis drawn from *Introduction to the Sixteen Lead*-FUGs (Dashzeveg Tserendeleg)

knowledge of PFM. However, it is noted that capacity has been increasing in recent years. See the accompanying report "*Assessment of Aimag and Soum Forest Management Capacity"*[18].

39. In order to develop and expand PFM, the most important government agencies are the inter-soum Forestry Units. These are mandated to support and develop FUGs. Currently 36 such Units have been established, but only 22 are functioning, each with a staff of 3-5. Ultimately, the government plans to establish such a Unit in each Soum with forest. At present, even the Units with staff have a very basic understanding of PFM and how to support its implementation. They also have very poor understanding of biodiversity. Aimag level capacity to support forestry is not significantly better.

40. A common complaint amongst FUGs is that the local government agencies are able to 'police' the forests and the FUGs, but they are not able to support them – despite their legal mandate.

Barrier Three: Absence of a complete, comprehensive model of PFM

41. This is a corollary to barriers one and two above. It is also noted that the development of PFM capacity takes time, and experience from other countries suggest that the time needed to develop a complete functioning model typically takes two decades or more.

42. Already, significant progress has been made on the development and implementation of PFM in Mongolia, and a great deal of documentation has been prepared on this subject. This is all based on the actual situation in northern Mongolia, and on the real experience with developing FUGs over the past five years. As mentioned above, this consists of the overall PFM map (Annex 5), the detailed methodologies, training material and forest assessment tools for almost all stages. Also, there have been many training events. However, early lessons from the PFM in Mongolia point to the following specific gaps:

- More attention needs to be paid to business development and to understanding and accessing markets;
- There is no integration of biodiversity, biodiversity monitoring or biodiversity conservation;
- Models currently do not include many promising recent global innovations, such as REDD+ mechanisms and biodiversity offsets;
- There is no specific inclusion of managing forest carbon or optimizing carbon storage. Although this is partly covered by 'good forestry practices', the specific management practices for optimizing carbon are not integrated; and
- Finally, the models have not been fully operationalized – the most advanced FUGs are in the early stages of the second phase of the three phase process. As the models are operationalized, more lessons will be learnt leading to a refining of the model.

Barrier Four: Poor functioning and incomplete markets for forest products and the poor development of the value chain

43. There is a great deal of demand for forest products in Mongolia, notably timber. There is demand in particular for wood for fuel, for wood for the construction industry and for furniture. For each, there is demand from households and from small and medium enterprises. There is also demand to supply the national wood processing sector. There is also demand for non-timber forest products (NTFP) such as berries, nuts and medicinal herbs. Currently, the demand for these products is not freely expressed through the markets, for example in the price of timber, wood and non-timber products at the edge of the forest.

44. The Ministry of Environment and Green Development (MEGD) sets the official allowed annual cut (AAC), usually in the range 600,000 m³ - 972,000 m³. However, estimates of annual wood

[18] Compiled by Dashzeveg Tserendeleg

consumption lie between 1.4 million m³ and 5.51 million m³ (the large variation is due to uncertainties in the use of fuelwood). Hence there is currently a great imbalance between demand and legal supply.

45. There is also a high *potential* sustainable supply of forest products to meet this demand. In many places, the ability of Mongolia's forest to supply wood-fuel, timber, NTFP and tourism and eco-system services lie well *above* current harvesting levels. Notably there are known to be vast amounts of deadwood lying in the forest. Also, in many areas, there is a potential for thinning and harvesting activities to provide more wood.

46. At present, the match between supply and demand is undermined by the lack of market infrastructure. This includes the lack of good vehicle access to forested areas. This also includes the lack of technologies for SME to develop wood fuel and to process wood for construction and furniture. This includes the inability of FUGs and communities to prepare the type of products demanded by markets. This also includes local regulations which forbid the transport of forest products across *Aimag* boundaries.

Barrier Five: Gaps remaining in the national enabling environment and persistent resistance to PFM

47. Great progress has been made in a relatively short time with regards to the enabling environment for PFM. Until recently, the official, national approach to forests was one of '*do not touch'*. This has evolved and there is now a general understanding of the need to move from protection to sustainable utilization and sustainable harvesting. Moreover, a legal framework has been created to encourage the creation of FUGs, several government technical services now have a focus on supporting FUGs, and FUGs are allowed to generate revenue from certain forest harvesting practices.

48. Notwithstanding, overall, at national level, amongst decision-makers and experts, many people remain uncomfortable with the idea of further increasing the involvement and responsibility of FUGs. It is still widely believed that FUGs have inherent incentives to unsustainably over-harvest and, therefore, any increase in their rights will lead to rapid deforestation and degradation. Hence, access and utilization rights remain very limited, FUGs cannot harvest timber in any way. As a result, FUGs have very limited incentives to invest in forest management. Secondly, it is widely believed that FUGs will not be able to develop the necessary skills for more complex forms of forest management, such as thinning, logging and scientific monitoring.

49. In theory, FUGs can become involved in sustainable harvesting by cooperating with forest enterprises on a broad range of issues through co-management, covering issues such as monitoring, and even thinning and harvesting. However, there are few successful models of this happening. The incentives for both FUGs and enterprise to do this are very limited. Even for those products which FUGs can harvest, the regulatory framework does not fully facilitate their access to markets, and to making sufficient revenue to act as an incentive for sustainable forestry.

50. This reticence is backed-up by many decrees and regulations. Although the government has recently overhauled the legal framework for natural resources management[19], it is still illegal for FUGs to harvest anything other than dead wood and some NTFP. FUGs are not allowed to harvest anything in protected areas.

51. Further, although at the *Aimag* and *Soum* levels the government agencies have a sufficient focus on forestry and participatory forestry, at the national level, a recent government restructuring appears to have downgraded the importance of forestry and participatory forestry. Finally, at the national level, there is very little understanding of biodiversity and the potential for sustainable harvesting and conservation of biodiversity. Most forestry professionals feel that their work is not connected to

[19] See discussion below. In 2012 there were 12 new or amended laws related to natural resources management, and, as a result, 71 implementation decrees have either been approved (or are being developed). Many of these relate to forestry and participatory forestry.

biodiversity – with the small exception of some understanding of wildlife, and some demand for improved wildlife management and more exploitation of hunting.

52. The current situation in the national enabling environment can be summarized as:

- Forests in FUG areas are under harvested, meaning revenue is lost, forests are not managed, and the potential for fire, insect, disease and illegal harvesting is too high;
- Forests in non-protected, non-FUG areas are subject to harvesting by companies, typically with nominal management practices, again creating the potential for fire, insect, disease;
- Forests in protected areas cannot be harvested. However, in many cases, it is possible to harvest sustainably and without affecting biodiversity. This is an economic loss from the FUG perspective, and undermines motivation to support forest protected areas.

B. SECTOR GOVERNANCE AND STAKEHOLDERS

Legislation and Policies

53. Prior to 1990, natural resource use – including water use, grazing, hunting and forestry – was managed according to specific, detailed planning frameworks and guided by national objectives. When the system of governance changed, the previously established conservation system collapsed almost overnight. The necessary management structure required to sustainable manage the resources is still being established.

54. All forest land belongs to the state, and a series of laws and regulations stipulate access and user rights and obligations. The key law is the Forestry Law (2007), which mandates the shift from management of forest by the State towards privatization and community-based natural resource management.

55. The Forest Law was updated in 2012, when all forestry related laws were combined into one Law. This happened as part of a broader process to overhaul natural resource management laws, with for example, laws covering watershed management, community based resource management and the environment being revised. The government is now finalizing 23 implementation decrees for this Law (see Annex 6).

56. An overview of the other key laws is provided in Table 5.

Table 5: Overview of pertinent legislation

NAME OF LEGISLATION	RELEVANCE
Law on Environmental Protection (1995, updated 2012)	Allows citizens to form partnerships and economic entities to protect and use forests under contract; establishes state ownership of natural resources; requires environmental monitoring; establishes state inspectors and rangers; delegation of environmental protection to NGOs
Law on Fees for Harvest of Timber and Fuel Wood (1995)	Establishes fees for the harvest of forest timber and fuel wood, and requires fees to be paid to the State budget. Establishes related rights and responsibilities of local government agencies, communities and economic entities (including FUGs).
Community Procedure for Community-based Natural Resource Management	Sets out the procedure for granting contracts to FUGs and is the main policy document which guides national level implementation of community-based natural resource management
Regulation on the Activities of Forest Professional Organizations (No 307 of 2009)	Regulates the activities of private economic entities.
Law on forest and Steppe Fire Prevention 1996	Establishes processes throughout all levels of government for preventing fires in forests and grasslands, for extinguishing fires, and recovering damages.
Law to Prohibit Mineral Exploitation in Forest Areas and River Headwaters (2009)	This law prohibits mineral exploration and extraction in forested areas and in river headwaters. It allows exploration and mining licences in forest areas and river headwaters to be revoked, on payment of compensation.
Law on Special Protected Areas (1994)	Defines activities and rights in strictly protected areas.
Law on Buffer Zones (1997)	Establishes buffer zones around protected areas.

57. In summary, the policy, legislative and regulatory framework has undergone many changes in recent years, and continues to be in a state of dynamic flux. Generally, in the legal framework, there has been a slow transition from production, to protection and then to sustainable harvesting involving community groups. However this transition is far from complete and the rights of both enterprises and community groups remain limited.

Agencies and Stakeholders

58. The MEGD has overall responsibility for the management of forests. Its roles and responsibilities include supervising the implementation of forest legislation, making and enforcing rules and regulations for forest protection, ensuring inter-sectoral coordination for forest protection. They also include some practical measures such as setting the Annual Allowable Cut, approving forest management plans for Aimags and issuing or withdrawing licences for Forestry Professional Organizations. MEGD also houses the focal point for the Rio Conventions and GEF. MEGD is also responsible for management of the protected area system.

59. Within MEGD, the Division of Forest Protection and Coordination of Reforestation in the Department of Policy Implementation Coordination takes the lead for managing and supervising the forestry sector. This Division has a unit responsible for developing PFM.

60. MEGD recently established the Forest Research and Development Centre (FRDC). FRDC is the implementing arm of the Ministry, responsible for operationalizing policy, including PFM. It has the mandate to develop capacity in local government agencies to support PFM, to directly support development of a PFM system, and to prepare and maintain forest databases and inventories.

61. The MEGD is also establishing River Basin Committees for the 29 river basins in Mongolia. It aims to establish these within the forestry units at Aimag, Soum or inter-Soum levels.

62. Another key national agency is the Ministry of Industry and Agriculture (MIA). MIA works closely with herder communities and increasingly with FUGs. It is responsible for supporting economic and livelihood development, including in rural and remote areas, and manages several related large national programmes.

63. Mongolia is moving towards a decentralized governance structure. Accordingly the Aimags (provinces) and Soums (districts) have immediate authority over many natural resource use and access issues. The national government sets broad natural resource use parameters while Aimag and Soum governments have immediate authority over territorial ecosystem management. For example, in most cases, Soums may determine the location and extent of grazing activities, water use and extraction, and the consumption levels of many biological resources. In 2009, MEGD adopted a regulation that makes it mandatory for local government to support communities that are interested in setting up community managed areas under the Forestry Law and the Environmental Protection Law. The maximum duration of related resource management agreement between local governments and community groups was extended from 5 to 10 years, providing a greater incentive for community based natural resource management.

64. An initial study of stakeholders was undertaken as part of the preparation of this Project. The findings are presented in Annex 7. The analysis looked at governmental (national and local), non-governmental, academic, community and international stakeholders and partners. The analysis summarizes their pertinent activities, it delineates geographical and thematic overlap with this Project, it provides basic budgetary information, and it identifies potential collaboration activities.

65. The most important stakeholders for the success of this project are the FUGs and the Inter-Soum Forestry Units. The MEGD, MIA and the Soum and Aimag governments are also key. To the extent that they emerge naturally, FUG Associations may also be important. Finally, international partners working on PFM and with FUGs are also key partners in developing and establishing FUG, PFM and sustainable forest management.

C. RATIONALE

Baseline Initiatives and Investments

66. A recent study[20] of investments and funding flows to the forest sector in Mongolia produced the following main findings:

- The Government of Mongolia directly funds forest sector capital and recurrent expenditures worth around 12.5 billion Mongolian Tugrik (MNT) (US$ 9 million) a year;
- This equates to a total annual public spending of 125,000 MNT/km^2 (US$ 90 for each square kilometer) in boreal forest;

[20] Lucy Emerton and Enkhtsetseg Bat-Ochir (Draft, April 2013). Forest Sector Financing Flows and Economic Values in Mongolia.

- More than 90% of the recurrent budget is allocated to on-the-ground forest management activities: pest control, fire management; forest cleaning, thinning and enforcement; reforestation and rehabilitation; inventory and forest organisation; nurseries and seedling preparation; and support to Forest User Groups; and,
- Public funding to the forest sector has been rising steadily over the last five years: recurrent budgets have increased by a factor of more than two and a half times since 2008.

67. Specifically, the Project baseline consists of the following initiatives and investments:

Government of Mongolia:

68. Through its Division of Forest Protection and Coordination and Reforestation, the MEGD invests approximately $4 million each year into PFM and supporting FUGs. This support covers all 14 northern Aimags. This goes mostly into support for data collection, training and provision of basic equipment. This also goes into policy development, legislative development and preparation of guidance and advisory material – all at the national level, related to sustaining and replicating PFM. The MEGD also invests heavily in traditional pest control (spraying) and fire control.

69. Through its Forest Research and Development Centre, the MEGD invests approximately $0.86 million each year. This is invested in training, tree planting, seed collection and covers all 14 northern Aimags. The Centre is also supporting development of the national forest inventory. It also undertakes some research, e.g. on pest control.

70. The Aimag governments, through their Environmental Protection Agencies, have an average overall annual budget of $0.8 million[21] for environmental protection – and forest protection is a key component of this in northern areas. The EPA oversee and regulate all environmental related issues within the Aimag, including forestry, flora, fauna, soil, air, water etc.

71. The Soum Forest Units play the key role specifically in developing and guiding PFM and FUGs. There are currently 22 Units operational – and most cover two or more Soums. Their combined annual budget is approximately $0.7 million. This investment covers issues such as fee collecting, issuing licenses, determine areas for logging etc.

72. The MIA has several planned programmes related to developing FUGs and PFM, with a focus more on economic development. These include: (i) a rural road building programme which would increase access to forests, and so increase access to markets for forest products; (ii) a soft loan programme to develop the wood processing sector by providing basic processing equipment to FUGs (i.e. wood chippers, small tractors) and investing in small and medium furniture and chipboard manufacturers;[22] and (iii) a soft loan programme to develop the pressed wood-fuel sector by providing basic processing equipment to FUGs (i.e. wood chippers, small tractors) and investing in a number of small scale wood-fuel briquette factories. This programme aims to directly support 100 FUG, although most are in areas close to the capital and not so important in terms of biodiversity.[23]

International Partners

73. The German Government is investing in the "*Biodiversity and Adaptation of Key Forest Ecosystems to Climate Change*" project through GiZ. Phase 1 is for three years and has an allocation

[21] This varies from aimag to aimag, and year to year.

[22] In particular, the government is planning to establish a production facility to produce 30,000 m^3 of chipboard per year in the Batsumber soum of Tuv Province, as well as a facility to produce 2,000 tonnes of wood-plastic composites per year in Batshireetand area covered by the project.

[23] In the area of influence of the project, the government is planning the establishment of ten wood-fuel production facilities with a capacity to produce 2,000 tonnes of fuel per year as well as a facility with capacity to produce 2,000 tons of wood-plastic composites per year.

of 3.6 million Euro. The overall goal is "*improvement of the political and institutional framework and capacity building for biodiversity conservation through protection and sustainable management of the chosen ecologically significant areas under consideration of climate change and the need for improvement of living conditions of the rural population*". This programme has three components: (i) climate change and adaptation policy; (ii) stabilization and use of forested ecosystems, and (iii) conservation and sustainable management of protected areas in the Khangai region. Many activities are closely related to the PFM, biodiversity and carbon, notably: capacity building of FUGs and FUG members; developing PFM training material and other advisory material; developing participatory and sustainable forestry in areas near to and surrounding protected areas; and, helping FUGs to engage more productively in the forestry sector market.

74. GiZ is also to commence collaborating closely with the UN-REDD Programme in the development of the national forest inventory, inventory database and satellite forest monitoring. This investment will greatly increase the accuracy and usefulness of forest data, and therefore contribute greatly to forest management at all levels in Mongolia.

75. The German Government is also investing in protected area management through KfW. This investment will greatly improve the infrastructure in selected protected areas through grants and soft loans. The protected areas in the northern forests is one of the two focus areas in the first phase. KfW have allocated 15 million Euros to the first three year Phase. Certain activities of FUGs and local governments in buffer zones are to be eligible for support under this programme.

76. The Government of Finland is investing in forest research, forest inventory and forest management training, through FINNIDA and the National University of Mongolia. This €465,000 investment will focus mostly on FUGs and PFM practices and technologies. Most of this work is directly related to sustainable management in FUG areas.

Forest User Groups

77. Finally, the investments of FUG members are the most important baseline initiatives. Notably, the 16 lead FUGs have each prepared a sustainable forestry management plan and a business plan. These plans list the committed activities of the FUG members over the coming three years, and they estimate potential revenues from sales. These plans focus on issues such as patrolling, cleaning, planting, monitoring and stopping illegal logging, monitoring and stopping poaching, and NTFP harvesting. The plans set out the required investments from both FUG and other partners, in terms of hardware, software and in-kind investments. In order to implement these plans, the concerned FUGs have to invest in small scale tools and equipment to undertake this work. They also have to participate in training and planning exercises.

Incremental Reasoning (added value of the GEF financing)

78. The Project is designed to build on the baseline, to overcome the barriers to PFM, and lead to global benefits in terms of conserving biodiversity, managing forest carbon and reversing land degradation. The details of the benefits are described below in Part 2.A. This section describes how the project complements and influences the baseline in order to yield the benefits.

79. As described above, there are currently five main barriers to PFM. The baseline initiatives and investments described above will go some way to removing these barriers in the coming years. The following sections describe the incrementality of this Project with regards to removing or lowering each barrier.

80. #1 Inadequate capacity amongst the Forest User Groups (FUGs). In the baseline, the sixteen lead FUGs will continue to evolve but will not reach autonomy, and will not '*graduate'* into fully fledged community forest management organizations. Importantly, they will not be addressing biodiversity

conservation, and they will not appreciate the potential of forest carbon management. With GEF support through this Project, the sixteen lead FUGs will reach a mature level of sustainable operations, and will have the tools, skills and capability to mainstream biodiversity conservation and enhanced carbon sequestration into their operations.

81. #2 Inadequate capacity in local governments agencies to provide extension services. In the baseline, local government agencies will be mandated to support FUGs. They will improve in this regard, but they will not have tools to deal with biodiversity and carbon losses. Most importantly, forest degradation will continue at previous levels (81,000 hectares deforested per year, in addition to the substantial ongoing forces of forest *degradation*), and this will affect all northern forests and all FUGs). With GEF support, the capacity of the local government agencies to support FUGs and PFM will be developed, thereby leading to increased sustainable forest and land management across vast tracts of the northern forests. Developing this local capacity is a priority of this project.

82. #3 Absence of a complete, comprehensive model of PFM. In the baseline, there will be lessons learnt relating to PFM and there will be more understanding and appreciation of how to implement it. Yet, there will be no comprehensive model for PFM in Mongolia that leads to independent FUGs and that integrates biodiversity conservation and forest carbon management. With GEF support, the PFM model at the FUG level will be enhanced, lessons will be documented, and the factors necessary for replication will be put in place.

83. #4 Poor functioning and incomplete markets for forest products. In the baseline, the efforts, in particular of MIA, will help develop demand for forest products, and increase access to markets and opportunities for adding value along the chain. However, FUGs will still be unable to effectively access markets, and FUGs will certainly not be able to exploit the market in order to support sustainable forest management, biodiversity conservation and carbon sequestration. In the baseline, MIA's efforts will not target those FUGs with greatest potential for biodiversity conservation and carbon storage. With GEF support, the market access skills of FUGs will be increased, and specific measures will be supported to develop the carbon market. The GEF support will also focus on overcoming specific local market access barriers, such as bans on cross-aimag travel, and the need for equipment in order to produce sufficient quantities of forest products. GEF support will enable FUGs, local governments and national agencies (MEGD and MIA) to mainstream biodiversity conservation, and carbon storage practices and objectives into its investment programmes. Market-oriented measures to support biodiversity conservation will be piloted (see Outputs 2.3 and 2.4 below).

84. #5 Gaps remaining in the national enabling environment and persistent resistance to PFM. In the baseline, most support to PFM takes place at the FUG level. At the national level, although the national government is working on developing the legislation and regulatory framework, and operationalising the recent decrees, without support from international partners, it seems likely that most weaknesses will remain. In particular, the institutional resistance to allowing FUGs to undertake more and broader PFM will remain. GEF support, using FAO's international comparative advantage and neutrality, will develop ways to remove this barrier, for example through: (i) ensuring market forces are allowed to promote sustainable forestry; (ii) ensuring local communities can fully benefit from forest resources; (iii) analyzing the remaining policy/legislative barriers and proposing acceptable solutions, and; (iv) raising awareness.

85. To summarize, the Project will build on and modify the baseline investments. Adding to the baseline, it will provide targeted support for barrier removal. Specifically, it will focus on global environment values (biodiversity, forest carbon management and forest/land conservation). The GEF support will lead to a mainstreaming of these issues into baseline initiatives and investments.

D. FAO's COMPARATIVE ADVANTAGE

86. FAO is the global lead technical UN Agency for agriculture, forestry and fisheries with six decades of accumulated knowledge and global, national, and local experience. It is the main UN Agency for collecting and disseminating relevant information utilized worldwide in these sectors, and the only UN agency with a Forestry Department (FO). The FAO FD employs about 150 staff including about 10 working in the Asia Pacific region. FAO

87. Within FAO, the FD takes the lead in supporting member countries to implement sustainable forest management by providing policy advice, technical knowledge and reliable information, while ensuring that forests and trees contribute to sustainable livelihoods. The FAO FO works to balance social and environmental considerations with the economic needs of rural populations living in and near forest areas. At both global and national levels, FAO serves as a neutral forum for policy dialogue, as a reliable source of information on forests and trees and as a provider of expert technical assistance and advice to help countries develop and implement effective national forest programmes. FAO has a rich and unique experience worldwide designing and implementing projects with country partners to build institutional capacities for forestry, wildlife and natural resources management and in integrating forestry with biodiversity conservation and forest management.

88. In Mongolia, FAO has been a key player in the forestry sector since 2000. Through this period, it has been closely involved in the development of strategies, policies and regulations. It has also been a successful advocate in the forestry sector. Specifically, FAO has been involved in PFM in Mongolia since 2003 when the project "*Support to the Development of Participatory Forest Management*" helped identify community based forest management as one of the major and most promising strategies to resolve difficulties in the forest sector in Mongolia, and recommended the implementation of a pilot project to test a suitable approach for participatory forest management. Subsequently the project "*Capacity building and institutional development for participatory natural resources management and conservation in forest areas of Mongolia*" piloted and tested PFM systems and developed most elements of a comprehensive PFM approach. As a result of this support, FAO is reputed as a key international partner, by government, NGOs and international partners, on PFM related issues in Mongolia. The experience FAO has gained in working with Mongolian partners is an important element in FAO's comparative advantage to implement this GEF project, as the project will build on this foundation of lessons learnt and good practice to scale up PFM nationally.

89. FAO also has significant experience on land rehabilitation and climate change mitigation and recently developed Ex-Act, a software to monitor carbon impacts of projects of this type. Finally, FAO will bring to this project its global knowledge of best practices gained through its numerous technical programmes and field projects. FAO is also one of the three UN agencies responsible for implementing activities of the UN-REDD Programme in 46 countries, including Mongolia. FAO takes the lead on issues related to forest monitoring and carbon measurement, reporting and verification (MRV) for REDD+. This proposed project is closely inter-connected with UN-REDD activities in Mongolia, as well as with Mongolia's national REDD+ Readiness framework – further justification of FAO's comparative advantage.

90. The preparatory phase of the project placed strong emphasis on stakeholder participation. Consultations and group discussions were held with most stakeholders, including national and regional government agencies, Non-Governmental Organizations (NGOs), donors and local stakeholders in each of the pilot areas. The PPG phase included the briefing of key government officials regarding project design and urgency. Several workshops generated in-depth discussions and agreement regarding project strategy, activities and priorities. The final project document was designed with stakeholders' full involvement and thorough vetting by representatives of key organizations.

E. LINKS TO NATIONAL DEVELOPMENT GOALS, STATEGIES, PLANS, POLICY AND LEGISLATION, GEF/LDCF/SCCF AND FAO'S STRATEGIC OBJECTIVES

Alignment to National Development Goals and Policies

91. Development Policy The overall objective of Mongolia's *Comprehensive National Development Strategy (NDS) for 2008-2021* (referred to as the National Development Strategy) is to develop Mongolia into a middle-income country through achieving its MDGs, which it aims to do by 2015. Generally, this project, contributes to that objective as it helps improve income and lower poverty levels. More specifically, the National Development Strategy contains a Development Priority (No 5) to improve the State's Environmental Policy, with a specific Strategic Objective (No 4) which aims to establish conditions to enable sustainable forest management. This details modern management methods and increased participation by local communities, two strategies that this project will enhance.

92. Forest Policy Forest Policy has evolved significantly in recent years and is mostly expressed through laws and implementation decrees. As discussed at various points in this document, the main thrusts of forest policy currently are: (i) increasing community participation; (ii) progressively allowing more sustainable use, evolving from the pure protection in recent years; and (iii) assuring protection from fire, insects and disease. Over the past ten years, a series of national statements, laws, decrees and regulations related to PFM have been issued, demonstrating the government's commitment to establishing PFM as a core to management of the forestry sector.

93. Biodiversity The National Biodiversity Strategy and Action Plan includes Objective 7 "establish a public information program to improve people's knowledge of biodiversity and the importance of conserving it", Objective 9 "control hunting and fishing", and Objective 14 "ensure that agriculture and forestry are carried out in ways compatible with biodiversity conservation". This project contributes to all of these, particularly Objective 14. Mongolia's reports to the Convention on Biological Diversity have given increasing importance to forest biodiversity and its conservation. Notably, the 4th report (2009) provides detailed information on forest ecosystems and species, and their importance.

94. Climate Change The National Action Program on Climate Change (2011) has, as one of its objectives, to increase forest cover by 30,000 hectares by 2016. Under Output 3.1, it aims to improve the legal environment to reduce the impact of climate change and it includes several other outputs and activities related to increasing forest cover, reducing greenhouse gas emissions and managing carbon. Moreover, in 2012, Mongolia initiated development of a National REDD+ Readiness Roadmap, and is fully committed to participating in a future international REDD+ mechanism. The National REDD+ Readiness Roadmap should be finalised and endorsed by the government by the third quarter of 2013.

95. Land Degradation The Mongolian government places significant importance on integrated land management. In April 2010, Mongolia adopted the National Action Plan for Combating Desertification of Mongolia (NAP CD). The NAP CD recognises the eminent role of local population and entities in reversing land degradation and desertification. Although the focus is on steppe and desert ecosystems, the NAP CD does recognise the global importance of the northern forest ecosystems, their importance to local sustainable development, and the fact that they are suffering from degradation.

96. Forest Law Linkages and Implementation (see Annex 6). The key law is the Forestry Law (2007), which mandated the shift from management of forest by the State towards privatization and community-based natural resource management. Then, in 2012, a packet of new and revised laws related to natural resource management and the environment was approved. This includes laws pertaining to: Animals; Environmental Protection; Fees for using Natural Resources; Soil and

Combating Desertification; Forest and; Water. Under this revised forest Law, the government is preparing 23 implementation decrees. Many of these are pertinent to PFM and FUGs. Until now, 11 of these have been approved, including: *Regulation of Soum or intersoum Forest Unit*[24] and *Incentives to reforestation and forest protection*[25].

Alignment with FAO Strategic Framework and Objectives

97. This Project is aligned with FAO's Global Strategic Objective 2 (SO2)**:** *Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. The Project's focus* to help local forest user groups improve their forest management practices while benefiting their own livelihoods will contribute in particular Organizational Outcome 1 (OO1) under SO2: *Producers and Natural Resource Managers Adopt Practices that Increase and Improve the Provision of Goods and Services in the Agricultural Sector Production Systems in a Sustainable Manner.* In addition, the Project's work to strengthen the relevant policy framework in Mongolia will contribute to SO2, OO2: *Stakeholders in member countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers – in the transition to sustainable agricultural sector production system.*

98. In addition, through its proposed activities, the project supports FAO's Global Goals for Forests and Forestry as set out in its 2010 Strategy for Forests and Forestry of: (1) improving forestry decision making; (2) increasing the benefits and appreciation of the benefits from trees, forests and forestry, and; (3) increasing forest resources and increasing the recognition and value of ecosystem services from forests.

99. The Project is also aligned to, and contributing to, the "*FAO Country Programming Framework (CPF) for Mongolia (2012-2016)".* In particular, it will contribute to the CPF's Priority no. 3, *Promotion of sustainable natural resource management as techniques for adaptation, mitigation, and management for the impacts of climate change)*. The main contribution is to the second Outcome 3.2, *Enhanced participatory natural resources management of forested area*s, however, this project also contributes to the Outcome 3.2, *Enhanced capacity to restore and conserve natural forests.*

Alignment with GEF Focal Areas

100. The project is consistent with the GEF biodiversity and land degradation focal areas and also accords with the objectives of the sustainable forest management area of work. The project is aligned with BD-2, "*mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors*" as it will strengthen policy and regulatory frameworks that devolve responsibilities for production forest and wildlife management to local communities and create incentives for sustainable use. It will also build the necessary institutional capacity and knowledge base at national, provincial and local levels to support local user groups and ensure sustainable management of forest and wildlife resources in production forests and produce biodiversity friendly management and harvesting. The project will also to some extent strengthen capacities of FUGs and local governments to produce biodiversity-friendly goods and services – by ensuring biodiversity becomes an integral part of FUG management plans, and exploring innovative revenue streams such as forest carbon (REDD+), biodiversity offsetting, labeling, etc.

101. The project will contribute to the objectives of the Land Degradation focal area, specifically LD-2 (*generate sustainable flows of forest ecosystem services in Arid, semi-arid and sub-humid zones, including sustaining livelihoods of forest-dependent people*), by promoting sustainable forest management, avoiding deforestation and contributing to ecological and social sustainability. It will scale up innovative and proven participatory forest management practices which support community

[24] Determine objectives of Forest Units, clarify activities to be carried out, and its institutional structure

[25] Incentives are given to whom reveal illegal activities in the forest, preventing from illegal activities to take place, planting and growing trees and seedlings and preventing from forest fire

rights and improve forest management practices to maintain natural forest cover and ecosystem services in dry land habitats. The project will greatly enhance PFM capacity in Mongolia, through the preparation and implementation of FUG management plans, covering an area up to 500,000 hectares. The focus will be on overcoming barriers to sustainable harvesting of forest products, timber and non-timber, in part through exploring innovative revenue streams.

102. The project will contribute to sustainable forest management focal area, specifically SFM 1 (R*educe pressures on forest resources and generate sustainable flows of forest ecosystem services*), by reducing pressure on forest resources, maintaining natural forest and carbon stores and enhancing carbon sinks to reduce greenhouse gas emissions. It will contribute to sustainable forest management and local livelihoods through targeted interventions on forest policy, strengthened protection and fire management and enhanced knowledge for improved decision-making to ensure sustainable harvesting of timber and non-timber products. By working at a landscape scale to improve smallholder management practices, the project will support the management of forests to retain connectivity and wildlife corridors between important biodiversity areas. Notably, the project will link into Mongolia's national REDD+ readiness activities, and will initiate the piloting of REDD+ activities at the subnational level and the collection of data and lessons for future national implementation.

2. PROJECT FRAMEWORK AND EXPECTED RESULTS

A. PROJECT STRATEGY (OBJECTIVE, OUTCOMES, OUTPUTS)

Project strategy: objectives, outcomes, outputs

103. The Project Objective is *sustainable forest management in Mongolia's forest landscape secures the flow of multiple ecosystem services and benefits, including biological diversity, reduced degradation, and carbon storage, while enhancing resilience to climate change.*

104. The Objective will be achieved through the realization of three Outcomes and associated Outputs. The first Outcome focuses on the enabling environment for PFM, not only making it stronger, but ensuring that it addresses biodiversity conservation and forest carbon storage issues through the application of sustainable forest management (SFM) principles and practices. The second Outcome builds directly on the work of previous initiatives to develop PFM in the sixteen leading FUGs. This Outcome will help these advanced FUGs to operationalize a more sophisticated form of PFM, with increased and more sustainable revenues to the FUG members, and notably improved biodiversity conservation and more attention to carbon issues at the FUGs. It will also increase the inherent sustainability of the FUG operations. The third Outcome focuses on upscaling PFM, by developing the capacity and operationalizing 84 FUGs that are currently not active. Through this third Outcome, these 84 FUGs will adopt PFM and, by Project-end will in many ways have caught up with the sixteen advanced FUGs. Lessons from Outcomes 2 and 3 will continuously feed into the planning and design of activities under Outcome 1 and so contribute to strengthening the enabling environment.

Outcome 1: Enabling institutional, policy and regulatory framework for sustainable PFM

This is defined as a PFM that includes a focus on increasing revenue to local communities, reducing carbon emissions/increasing carbon stocks, and conserving forest biodiversity.

Description of Incrementality

105. This Outcome focuses on removing Barrier #5, *gaps remaining in the national enabling environment and persistent resistance to PFM.*

106. In recent years, the Government has taken steps to improve the enabling environment for PFM. The legal situation has been greatly improved, and generally community based natural resource management is enshrined in law, particularly in the Forest Law and the Environment Law. The recent proclamation of a series of sub-decrees under these laws includes several which support community based natural resource management (see Annex 6). The related institutional framework has also improved, with the appointment of a unit in the MEGD responsible for participatory forestry, and the establishing of Forest Units in the Soum governments. The Government, with support from international partners, has also (i) increased the availability and management of data necessary for PFM and (ii) developed a series of practical tools for operationalizing PFM.

107. However, some weaknesses remain in the enabling environment, and these are not going to be fully addressed in the baseline, and this Outcome directly addresses those. First of all, despite recent progress and successes, many national level policy makers remain uninformed about PFM, and/or remain doubtful that local communities can truly play a strong role in forestry management. The first Output addresses this limited awareness and lack of recognition. Without GEF, these key national level policy makers may remain opposed to PFM, and thereby opposed to the benefits that PFM can bring in terms of global environmental services.

108. In particular, there is strong resistance to local communities being involved in timber harvesting or even forest thinning. This resistance is based on a fear that unregulated local communities will quickly clear the forests to make a rapid profit. In the baseline, this resistance prevents local communities from generating meaningful revenue from forests, and so is a major barrier to their true involvement in PFM, and so acts against the multiple benefits that PFM can generate. However, other departments in government recolonize that in order to achieve meaningful PFM, incentives are needed for sustainable forestry. Accordingly, in response, this Project will help concerned agencies to establish and maintain a policy dialogue across government on these key issues. Moreover, all the lessons from Outcomes 2 and 3 related to co-management and sustainable harvesting will be fed into the national policy-making processes (the actual work with FUGs at the grass roots will be implemented under Outcome 2).

109. The final two Outputs focus specifically on ensuring that PFM, as it develops, mainstreams biodiversity conservation and reducing carbon emissions/increasing carbon stocks. In the baseline, as PFM develops, these global environmental factors are not considered. The incremental support provided by this Project will ensure they are integrated by: (i) revising and updating the formal Guidelines from national government that govern the preparation and implementation of local (Aimag and Soum) forest plans and (ii) developing targeted capacity in the Forest Research and Development Centre – the government body responsible for implementing forestry policy.

<u>Output 1.1 National policy and decision-makers recognise importance of carbon storage and biodiversity conservation in PFM</u>

110. This Output provides the foundation for all other Outputs in this Outcome. Based on the findings of the PPG preparatory studies and on the gaps identified, under this Output a series of strategic activities will build awareness and support for sustainable PFM amongst key national decision-makers and policy-makers – a PFM that conserves biodiversity and carbon, through the application of sustainable forest management (SFM) principles and practices.

111. The first activity will be an ongoing preparation of documents (and other communication tools) that capture and illustrate the benefits of PFM, including the carbon and biodiversity benefits. These documents/tools will be specifically designed to raise awareness and targeted at *decision-makers* in the MEGD and the Ministry of Finance. These tools will be prepared as and when lessons emerge through the lifetime of the Project.

112. Under the second activity, policy makers will be directly exposed to the benefits that PFM brings by field observation in a country in the region (possibly Nepal or China, to be determined) through South-South cooperation. Through visiting and observing more advanced PFM in another setting, policy makers will see how: (i) PFM can help overcome poverty and contribute to social development and stability; (ii) PFM can lead to enhanced biodiversity conservation, SFM and carbon storage, and; (iii) communities can be empowered to play a direct role in sophisticated forest management, and not just limited to collecting dead-wood.

113. The third activity, completely financed by the UN-REDD Programme and GiZ, is the development of the National REDD+ Readiness Roadmap. This process will establish the links between PFM and national forestry management and the implementation of global conventions and international financial mechanisms. By making PFM (and biodiversity) part of this broader package of high level policy initiatives, it will give a direct boost to both PFM and the conservation of forest biodiversity. This will ensure biodiversity is mainstreamed in an effective way into the high-profile national REDD+ implementation process.

114. One specific gap identified by the PPG was in the understanding of the economic value of forest ecosystem services, notably of biodiversity conservation and watershed protection. A full knowledge of the true value that forest ecosystems contribute to the local and national economy, and of the difference in value that effective PFM can bring, will be a vital tool in convincing decision-makers of the need for PFM. Hence, one activity under this Output is a study on ecosystem services, and of innovative financing mechanisms, followed by a workshop to bring the results to the attention of decision-makers[26].

115. Finally, the Project will support two high level conferences on PFM, whereby the lessons from the Project will be presented to national decision-makers. These conferences, one in Year 2 and one in Year 5, will focus on bringing all the ground-based lessons from Outcomes 2 and 3 directly to the attention of decision-makers.

Output 1.2 Strengthened national policy on co-management

116. Perhaps the most important obstacle to increasing the revenue to FUGs from PFM (and therefore undermining incentives for PFM, and therefore limiting commitment to biodiversity and carbon conservation), is the effective bans on communities benefitting from any form of timber harvesting. This Output aims to slowly reverse this situation. This Output will draw strongly from findings under Outcome 2 (where new and innovative approaches to FUG involvement are to be piloted) and Outcome 3.

117. The first activity is to establish and support an inter-sectoral PFM technical working group. This will consist of experts from various government and non-government agencies – including those agencies that currently oppose FUG involvement in harvesting. The working group will be tasked with analyzing the problem in detail and seeking solutions, mostly through observing developments in Outcome 2 and being informed of experience in other countries.

118. The working group will be supported to undertake a detailed barrier analysis – an analysis of the barriers in Mongolia to community involvement in any form of timber harvesting. The results of this analysis will identify the key leverage points for the Project to address.

119. Based on the work of the working group and the findings of the analysis, the Project will support the drafting and promotion of policy recommendations to allow FUGs to directly benefit from sustainable timber harvesting, for example through co-management arrangements with private enterprises. The project will go on to support a consultation process, leading to the preparation of a

[26] This is linked to grass-roots studies of ecosystem services to be undertaken at two FUGs under Outcome 2.

government legislative tool enabling and guiding PFM. The project will support the submission of the legislation to Parliament and support its appraisal.

Output 1.3 Ministerial Approved Forestry Planning Guidelines to Soum and Aimag governments (that promote sustainable PFM).

120. In the decentralized system of governance in Mongolia, national agencies issue Guidelines to guide the actions of the Aimag and Soum governments. The Guidelines play a key role in the management of natural resources. Current Guidelines on forestry planning do not address biodiversity conservation or forest carbon management. This Output will lead to revised Guidelines and will operationalize the Guidelines.

121. The first activity it to undertake a thorough review of the existing Guidelines, to identify the entry points (for biodiversity and carbon) and to identify weaknesses. The second activity is to review related legislation and regulation (notably related to biodiversity in forests), to ensure this Output is fully aligned with national legislation and is able to exploit all opportunities.

122. The third and final activity, which will draw on the continual lessons from Outcome 2, will be to revise the Guidelines that the MEGD issues to Aimag and Soum governments on forestry management and planning. This activity, undertaken in a participatory manner, will produce Guidelines that direct biodiversity friendly, carbon enhancing forestry planning in all Aimags and Soums in Mongolia. The Government will be responsible for the roll-out and associated training.

Output 1.4 A Unit in FDRC empowered to integrate biodiversity conservation and carbon storage into all participatory forestry in Mongolia

123. The recent institutional restructuring of the MEGD, whilst maintaining the overall responsibility for PFM in the Department of Policy Implementation Coordination in MEGD, established the FDRC and mandated it with the operational responsibility for PFM. Although FDRC PFM implementation capacity will develop in the baseline, this Output will mainstream capacity for biodiversity conservation and forest carbon management into FDRC.

124. The FDRC will remain an advisory, supervisory and coordination body – with actual forestry activities implemented by Aimag and Soum staff (see Outcomes 2 and 3). Hence, only limited and focussed capacity is required at this level. Initially two staff will be given full training on biodiversity conservation and carbon storage – bringing them up to date on recent global developments and the implications/opportunities for Mongolia.

125. The second activity, completely financed by the UN-REDD Programme and GiZ, is the development and implementation of Mongolia's new multipurpose National Forest Inventory that is REDD+ compatible (i.e. includes measurement of forest carbon stocks in its methodology). This will ensure that FDRC has access to accurate and up-to-date data and information - needed for its role in PFM development. FDRC can use this improved data to support and learn lessons from PFM. It can also ensure that biodiversity status and trends are fully linked to into the forestry databases.

126. The Project will also support an institutional assessment covering the internal working practices and workplans of the FDRC, and of the ToR of concerned staff members. Based on international best practices, the Project will propose to MEGD and FDRC a revision of these practices, including revised ToR for FDRC staff involved in PFM, biodiversity conservation and forest carbon management.

127. Finally, and drawing together all the advances under the first three activities, the fourth and final activity under this Output will be to formally establish a Unit in FDRC that is responsible for advising on the conservation and sustainable management of forest ecosystems – with a focus on conserving globally significant forest biodiversity and managing forest carbon stocks and emissions. This Unit

will be suitably equipped, and will be responsible over the long term for ensuring that PFM conserves biodiversity and increases forest carbon stocks in Mongolia.

Outcome 2: Sustainable PFM is demonstrated that leads to improved livelihoods, biodiversity conserved and reduced carbon emissions/increased stocks.

Description of Incrementality

128. This Outcome focuses on removing barrier #3, *absence of a complete, comprehensive model of PFM*. Over the past ten years, with support from international partners, Mongolian stakeholders have taken great steps to developing models of PFM. However, as yet, these models are incomplete. Only the first stages of the model have been rolled out, and as the later stages are rolled out, more lessons will be learnt. Three elements are known to be weak or lacking altogether, these are: (i) models that generate meaningful levels of revenue, and therefore it has not been possible yet to create strong incentives for communities to participate in PFM; (ii) models that adequately mainstream biodiversity conservation, and; (iii) models that adequately mainstream forest carbon management.

129. The Government is keen to increase opportunities for income generation. The Project will support this (Output 1.2 above, and Output 2.4 in this Outcome) - although most related activities will be primarily funded by co-financing partners and private sector investments. The Project will ensure that lessons learnt are fully integrated into the model.

130. Under this Outcome, at the 16 leading FUGs, the model for PFM will be refined and improved in order to address present weaknesses. The model will be adapted to fully account for REDD+ (Output 2.2) - i.e. a fully functioning model of how to implement REDD+ at the FUG level will be demonstrated in 16 FUGs (as part of Mongolia's Phase 2 of REDD+ implementation to pilot and demonstrate activities at the subnational level). The model will also be adapted to demonstrate diverse approaches to conserving biodiversity (Output 2.3). At least four approaches to biodiversity conservation will be demonstrated in four FUGs, and many of these replicated in 10 FUGs. The Project will support participatory monitoring of the activities and impacts, and will use the findings of the monitoring to formally establish the model.

131. This Outcome also contributes to removing barriers #1 (*inadequate capacity amongst the Forest User Groups)* and #4 (*poor functioning and incomplete markets for forest products)*. There are ongoing related efforts in the baseline; with GEF support these efforts will be strengthened and will mainstream biodiversity and carbon management. Hence, with regards to barrier #1, all four Outputs under this Outcome have been designed to build capacity of the FUGs. Output 2.1 develops overall forestry planning and management capacity, whereas Outputs 2.2, 2.3 and 2.4 focus respectively on capacity to address REDD+, biodiversity and income generation. With regards to barrier #4, Output 2.4 includes specific activities and strategies aiming to increase the access of FUGs to markets and to develop the market for the FUG forest products.

132. The Project adopts an integrated approach to PFM that will also support Mongolia in capacity building and piloting/implementation of PFM and of REDD+ activities. Within this integrated approach, many of the project strategies and activities form integrated building blocks for the development and implementation of Mongolia's National REDD+ strategy – i.e. many activities will combine to build national and local level awareness and technical capacity, and directly lead to reduced emissions of carbon from deforestation and forest degradation, enhancement and conservation of forest carbon stocks and sustainable management of forests. Notably, through Outputs 2.1 – 2.4, in the 16 leading FUGs, the project will support steps related to: Participatory Land Use Mapping; Forest Patrolling; Silvicultural Capacity Building and Implementation of Improved Silvicultural practices; and Piloting of PES for Forest Grazing Exclusion Areas (see Annex 8 for a justification and description of the strategy and detailed description of proposed activities related to REDD+). Also,

under Output 2.3, this project will demonstrate positive incentives for activities that lead to increased carbon storage.

Output 2.1 Continually improving forest planning and management in the 16 lead FUGs

133. This Output focuses on continuing the process that started in 2007 with 16 of the most advanced FUGs in Mongolia. As and when necessary, these FUGs will be provided with refresher training and training on emerging issues (for example on improved thinning and silvicultural techniques, and on how to identify slopes that are erosion prone and therefore must be protected/have special management designations). It is expected that three sets of training will be offered to each FUG over the course of the Project.

134. The second activity is the implementation of FUG Forest management plans. As discussed previously, each FUG has already prepared such a plan and started implementation. These Plans focus notably on improving silvicultural practices patrolling, restricting illegal logging and poaching and observing for fires. They also include some simple income generating activities. These activities lead directly to an improvement in forest health (and so carbon levels and biodiversity). These activities are financed by the FUGs themselves. This implementation will continue through years one and two; prior to the preparation of more advanced management plans.

135. Under the third activity, and as a basis for future activities and more sophisticated planning, the Project will support advanced participatory mapping. This will build on the previous 'sketch-mapping' undertaken by FUG members, but will ensure the maps can be linked to accurate national forest and land use maps derived from satellite remote sensing data. A connection between the participatory sketch maps and the digital maps will be created – that can be used both as a basis for FUG decisions and for designing REDD+ activities and higher level planning. New maps will be produced at each of the 16 FUGs. The maps will also identify key biodiversity areas (see Output 2.3) and SFM priorities. The preparation of these maps is also a required step in the second phase of the official PFM process (see Annex 5). This is also in line with the Forestry Law (2012), Article 4.

136. The fourth activity will be to support the preparation of ten-year SFM Plans in each of the 16 FUGs. This is also a required step in the second phase of the official PFM process (see Annex 5). The Project will ensure that these ten-year Plans fully mainstream biodiversity conservation and decreasing carbon emissions/increasing storage – and so will include activities that lead to increased forest carbon and biodiversity. For example the piloting of sustainable grazing, improved fire management, wildlife management, harvesting of medicinal plants, etc., may be incorporated into these Plans.

137. The fifth activity will focus specifically on improving capacity to *monitor* forests and forest changes. Participatory monitoring, and the information it generates, will be used as a basis for other FUG and Project activities, and for designing of REDD+ activities. The Project will provide training on monitoring to all 16 FUGs, as well as the required basic monitoring equipment (*this monitoring will be tied into monitoring for REDD+ and for biodiversity which are described under Outputs 2.2 and 2.3 below*).

138. The final activity under this Output contributes to implementing the ten-year SFM Plans in the sixteen FUGs. In this, REDD+-type incentives will be used to incentivize the FUGs to behavior that leads to increased carbon storage[27]. The incentives will be distributed and the impacts (on behavior and forest) will be monitored and recorded.

Output 2.2 Simple REDD+-type incentives demonstrated in 16 advanced FUGs.

[27] Note, the design of these incentives (i.e. the type of incentive, the level of payment, the distribution system, etc.) will be determined under Output 2.2

139. This Output links with national efforts to implement REDD+ in Mongolia. Under this Output, the Project will design the approach to distributing REDD+-type incentives to the 16 FUGs and establish the needed mechanisms. (Note: Output 2.1 will monitor this process, and Outcome 1 will feed the findings to national government REDD+ stakeholders and policy makers).

140. The first activity will be training and awareness raising for the 16 FUG members, to ensure they are aware of the basics of REDD+, including the concept of incentives and the objective of incentive piloting under this project, and their roles, responsibilities and rights as members of pilot FUGs.

141. The second activity, based on best international practices and recent international developments, will be to design a benefit distribution system that is suitable for Mongolia. This will involve studies, seminars and workshops. The distribution system will include a participatory monitoring element that will also be designed under this Output. The monitoring will be designed to feed into Mongolia's national forest monitoring system for REDD+.

142. The third activity will be to facilitate the signing of REDD+ agreements and formalizing the benefit distribution system to be piloted. Depending on the structure of the benefit distribution system, the agreements are likely to be signed by the Aimag government and the FUG, as well as national government and the Project. The Agreements will specify the responsibilities and rights of the FUGs and will specify the incentives to be provided in compensation for activities implemented by FUG members. The agreements will then be implemented, and incentives will be distributed (which will provide the incentive for many of the activities implemented under Output 2.1). A small amount of the project funds have been set aside to cover the costs of these incentives. One form of incentives system to be piloted is PES for the implementation of grazing exclusion areas in forest land, the structure of which will be developed with FUGs and documented in management plans (see Annex 8 for full details).

143. The Project will be responsible for closely monitoring and documenting all progress, impacts, challenges, successes and failures under this pilot REDD+ incentives system. The Project will prepare a comprehensive lessons learnt document that will be fed up to national REDD+ stakeholders and decision makers, as well as to the international REDD+ community through FAO/UN-REDD Programme staff.

Output 2.3 Biodiversity conservation practices demonstrated in 10 priority, advanced FUGs.

144. This Output will demonstrate how biodiversity conservation can be effectively integrated into forestry management at the community level. The first activity will be training and awareness raising for the 16 FUG members, to ensure they are all aware of the basics of biodiversity and why it should be conserved.

145. The second activity will be to establish biodiversity conservation management, as part of PFM, at the ten most important FUGs. The steps to doing this are:

- (1) Identify high conservation value forests (habitats, etc..). This will happen as part of the PFM mapping exercises, whereby key habitats and ecosystems will be determined. Biodiversity expertise will be integrated into these mapping exercises;
- (2) Determine biodiversity management activities that can maintain these values. These activities will be an integral part of FUG PFM plans. Biodiversity expertise will be integrated into PFM planning exercises to determine the activities;
- (3) Measure these biodiversity values. Biodiversity surveys will be undertaken, as appropriate, in the 10 FUGs;
- (4) Implement biodiversity management and conservation activities. These activities will be implemented as part of PFM Plan implementation. This may include controlling

grazing, protecting breeding grounds, protecting nesting sites, patrolling for hunters, undertaking research on medicinal and nutritional values, sustainable harvesting, etc;

- (5) Participatory monitoring. This will be integrated into the FUG PFM monitoring and carbon monitoring. See next paragraph for details.

146. The Project will establish a participatory biodiversity monitoring system across the ten most advanced FUGs. This monitoring will be established immediately at the outset of the Project (and be connected to other forest and carbon monitoring under other Outputs). The monitoring will be based on the counting of two easily recognizable, globally important, permanently resident species that inhabit large areas of the forests: the musk deer (*Moschus moschiferus)* and the saker falcon (*Falco cherrug)*. These are both listed as *vulnerable* on the IUCN global Red List, both are relatively easy to spot, and are recognizable by FUG members. Details of the approach to monitoring is provided in the accompanying report "*Biodiversity status in the area where community is implementing cooperative forest management*"[28]. In summary, participatory biodiversity monitoring involves FUG members undertaking monthly transect walks and noting sightings and observations with regards to biodiversity, in particular the two indicators species mentioned above. The information collected through this monitoring will be collated from all participating FUGs and be used to construct biodiversity maps and fed up to national PA and biodiversity decision makers in MEGD. The Project will provide linkages between participatory monitoring and academic approaches to biodiversity, who in the baseline do not recognize the usefulness of FUG participatory biodiversity monitoring.

147. The final activity will take place at two FUGs. The Project will undertake a full valuation of ecosystem services. This will estimate the values of biodiversity to the local and national economy, both the actual and the potential values, and will propose possible financial tools to generate funds from biodiversity that flow to the community. This work will provide the grassroots data to feed into the national study on ecosystem services and innovative financing mechanisms being undertaken under Output 1.1.

Output 2.4 Increased revenue from timber and non-timber forest products at the 16 advanced FUGs.

148. Table 6 below illustrates the previous and potential revenues for the 16 FUGs from forestry activities. In each case, previous revenue was possible due to the support of project GCP/MON/002/NET. These revenue generating-activities are now almost sustainable, but in the baseline some additional support is needed in the form of training and business skills development.

Table 6: Past and potential revenue generation

FUG name, forest area by hectares	Previous annual revenue from forest activities and amount	Additional potential profit generating activities	Potential annual revenue from forestry
Talyn tolgoi, 3.500ha	560 м^3 fuel wood valued 7.000.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	12.000.000₮
Urtbulag, 3.200ha	640 м^3 fuel wood valued 8.000.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	14.000.000₮
Badar, 18.000ha	40 м^3 fuel wood valued 1.666.000₮	Forest regeneration work; Tree nursery; Tree planting Seed collection; NTFP for household use	10.000.000₮
Uguujburen. 2.752ha	300 м^3 fuel wood valued 10.000.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	13.000.000₮
Dundat-Urguu, 3.300	400 м^3 fuel wood valued	Forest regeneration work; Tree	15.000.000₮

[28] Prepared by A. Sukh

ha	14.000.000₮	nursery; Tree planting; Seed collection; NTFP for household use	
Monostoi, 7.000ha	200 м^3 fuel wood valued 7.000.000₮.	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	11.000.000₮
Bukht, 690ha	.	Forest regeneration work; Tree nursery; Tree planting; Seed collection	8.000.000₮
Altansumber, 7.482ha	40 м^3 fuel wood valued 1.700.000₮.	Forest regeneration work; Tree nursery ; Tree planting; Seed collection; NTFP for household use	11.000.000₮
Khargistai Bayanburd, 7.403ha	450 pieces of logs valued 1.000.000₮	Forest regeneration work; Tree nursery ; Tree planting; Seed collection; NTFP for household use	11.000.000₮
Dalt, 473ha		Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	6.000.000₮
Urmugtkhairhan, 2.672ha	35 м^3 fuel wood valued 3.347.000₮.	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	10.000.000₮
Delgeronon, 6.000ha	150 м^3 fuel wood valued 5.250.000₮. 43 м^3 logs valued at 2.700.000₮	Forest regeneration work; Tree nursery ; Tree planting; Seed collection; NTFP for household use	12.000.000₮
Seruunbaylag, 10.200ha	50 м^3 fuel wood valued 1.750.000₮ 30 м^3 logs valued 1.250.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	8.000.000₮
Amarlingui, 4.133ha	200 м^3 fuel wood valued 7.000.000₮ 50 м^3 logs valued 3.200.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	12.000.000₮
Galtaingol, 5.200ha	30 м^3 valued 1.100.000₮ 40 м^3 logs valued 2.500.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use	9.000.000₮
Buuralsansar, 1.065ha	100 м^3 fuel wood valued 3.500.000₮ 58 м^3 logs valued 3.600.000₮	Forest regeneration work; Tree nursery; Tree planting; Seed collection; NTFP for household use.	10.000.000₮
Total	**85,563,000₮ (US$50,330)**		**172,000,000₮ (US$101,170)**

149. The potential revenue generation figures in Table 6 are conservative, they neglect potential revenue from forest management contracts and carbon storage incentives. Even without these, as can be seen from the Table 6, there is a great potential to generate a far greater revenue from sustainable forest activities – if the barriers can be removed. This Output sets about removing these barriers.

150. This Output, which is mostly supported by co-financing, supports the 16 FUGs in their endeavours to generate more income from sustainable forestry activities. Currently, the FUGs collect deadwood, but are unable to sell it widely, and much has to be used by the FUG members. Moreover, they do not have the capacity to process it. This current lack of forestry revenues greatly undermines incentives for PFM.

151. The first activity aims to increase the access to the local markets in the Aimag centre, and in the neighbouring Soums and Aimags. This will involve negotiations with local government agencies to lift any informal restrictions on cross-border transport. This will ensure the FUGs can obtain higher prices

for their dead wood, and therefore give them more incentive to collect more wood, and possibly to subsequently employ people to collect deadwood.

152. The second activity looks specifically at several policy initiatives being developed in the baseline by MIA. The MIA aims to increase road infrastructure to remote FUGs, and to support the development of enterprises that will use deadwood to manufacture chipboard and wood fuel. Demand for fuelwood is predicted to grow to over 1 million m^3 per year – potentially a vast market for the FUGs. Under this Output, this activity will train and build the capacity of the 16 FUGs to be able to connect with and benefit from the MIA programmes, ensuring they have a large market for their deadwood (and ensuring that the enterprises have a good supply source for their inputs). This may include the development of standard purchase agreements.

153. MIA also aims to provide credit for small-scale machinery that increases the availability of wood for manufacturers of chipboard and wood fuel. The small scale machinery – i.e. tractors and wood chippers, can be used by FUG members to collect and process deadwood, before supplying it to the manufacturing enterprises. The Project can ensure that the 16 leading FUGs benefit from this opportunity.

154. Finally, under the fourth activity, the Project will pilot co-management of timber harvesting in two FUGs. The Project will work with two FUGs and one/two logging enterprises to develop a co-management agreement that: (i) gives significant benefits to the FUGs in exchange for their forest management inputs; (ii) provides an incentive for biodiversity friendly, carbon enhancing sustainable timber harvesting, and; (iii) provides adequate revenue to the logging enterprise. The co-management agreement used can become a model for all such agreements across Mongolia.

Outcome 3: Sustainable PFM that conserves biodiversity, reduces degradation and reduces carbon emissions/increases carbon stocks expanded across significant areas of northern forests

Description of Incrementality

155. This Outcome has two parallel aims. The first is removing barrier #1, *inadequate capacity amongst the Forest User Groups (FUGs).* Under this Outcome, the project will work with 84 FUGs that currently exist 'only on paper'. The 84 FUGs will be supported to develop and implement PFM. By Project-end, they will have implemented 3-year simple PFM plans, and will have developed 10-year PFM plans.

156. The Project will also work with the emerging FUG Associations. As these emerge naturally from the grassroots at soum, aimag and even national level, the Project will provide training and facilitate meetings and develop capacity. It is expected that these Associations will become a key civil society mechanism to support FUGs, as well as a good interaction mechanism between FUGs and government.

157. Prior to project activities in the Outcome, the Government will select the 84 FUG to be supported. The Criteria for selecting these FUGs are:

- Formed in voluntary basis, and so committed to PFM;
- Meet minimum requirements in terms of capacity and ability to act;
- Committed support from the local government;
- FUGs that are close to each other;
- FUGs that are free of conflicts – both internally and with partners;
- Proximity to protected areas and/or intervention of GiZ;
- FUG forest fund – sufficient to make measurable impacts.

158. In the baseline, the Government intends to support these FUGs, but the baseline programme is progressing slowly, and, most importantly, there is almost no focus on addressing biodiversity and forest carbon management in the baseline.

159. The second aim of this Outcome is removing barrier #2, i.e. *inadequate capacity in local government agencies to provide extension services.* The Government is committed to establishing Soum Forestry Units as the main tool to provide PFM extension services. Twenty-two are functioning so far, and in total 36 have been established to date. As of yet, none of these Units have the needed capacity to implement their mandate, particularly with regards to PFM.

160. In the baseline, the Government will continue to establish these Units, and provide them with basic equipment and training. These Units will slowly become active. However, in the baseline, progress will be slow and there will be no focus on biodiversity or carbon.

161. The Project will adopt a 'capacity-development-by-doing' approach. That is, under this Outcome, eight Soum Forest Units will be directly supported to provide extension services to 84 FUGs. This will have two tied results: (i) the eight Forest Units will become capable of supporting FUGs and (ii) the 84 FUGs will become capable of implementing PFM.

162. As mentioned previously, a methodology for developing FUGs and their capacity to do PFM has been prepared for Mongolia (and the three-phase methodology is summarized in Annex 5). Under this Outcome, the Project will accompany 84 FUGs through the first two phases of this methodology – that is 84 FUGs that are currently inactive.[29]

Output 3.1 Eight PFM Extension Offices (established in inter-soum Forestry Units).

163. The first Output establishes eight PFM Extension offices, each one in an existing Soum Forest Units. These Extension offices will ultimately take the lead in supporting PFM in FUGs across their Soum. In the baseline, the Government intends to implement similar measures, but the programme is progressing slowly, and most importantly there is no focus on addressing biodiversity and carbon issues in the baseline. The 'Extension Office' consists simply of comfortable working space, basic equipment and trained staff with the Forest Unit.

164. The project will first train one PFM officer in each Forest Unit. The Officer will be provided with comprehensive training on PFM, with extended PFM modules on income generation (including technical capacity to support the FUGs in supplying sustainably sourced material to wood fuel and chipboard facilities planned by Government), biodiversity conservation and forest carbon management/REDD+. This Officer will act as a resource person. The Government will commit to supporting his/her position and actions over the coming five years.

165. Next, the Project will equip the Forest Units with basic extension equipment. The government will provide the office/room space; and the Project will provide, for example: training material, posters and leaflets, flip-charts, projectors, a computer package, etc. This will ensure that the Forest Unit has the basic equipment to be able to (i) run simple training courses in-house and (ii) provide basic technical support on-site to FUGs.

166. The third activity will be to develop a detailed work plan for Extension activities for each of the eight Forest Units. This extension work-plan will set out how the newly established Extension office will provide support to FUGs in its region – these plans will be largely implemented through the other Outputs under this Outcome.

[29] Note, the methodology will have undergone the necessary modifications for biodiversity and carbon.

Output 3.2 FUG Associations at Soum, Aimag and National Level

167. The FUG Associations have been developing amongst groups of FUGs at the soum level. It is observed they are a good way to provide FUG-to-FUG support and networking. Moreover, they are a good focal point for interactions between FUG and government. As this situation evolves, it is expected that inter-soum (aimag) and inter-aimag (national) forest user Associations will develop. There is already a fledgling association in Khenti Aimag. These are civil society organizations.

168. As the first activity, where requested, the Project can provide basic training to these Associations on issues such as: (i) planning (ii) proposal writing (iii) book-keeping. The second activity would facilitate meetings of groups of Associations, facilitating the negotiations and development of Aimag level user group associations. Finally, towards the Project, it is hoped that a national meeting of forest user Associations can be held, leading possibly to the establishment of a national association of forest users, a civil society organization that fully represents FUGs.

Output 3.3 Formal PFM methodology in Mongolia enhanced with measures to conserve biodiversity and reduce carbon emissions/increase carbon stocks

169. Over the past few years, with support from FAO, the Government has developed a comprehensive package of support material for PFM and FUGs. This notably includes a detailed approved methodology and training package, to be used by Mongolian PFM practitioners, when supporting FUGs and PFM. This material is 'organic', in the sense that it is to be periodically updated and, if necessary, revised. This material was developed without the inclusion of activities relating to biodiversity, or to the potential of improved management of carbon and participation in REDD+.

170. The first activity under this Output will be to update all the concerned guidelines and training material, focusing mostly on adding biodiversity conservation and carbon issues.

171. The second activity will be to provide training to key national and Aimag forestry staff on the new material. These people will not be expected to use the material, but will be expected to supervise its use, and so will need to be well versed in the contents.

172. The third activity will be to provide hands-on training to the PFM Officers (i.e. from Output 3.1) on the new material. These PFM Officers will be expected to use the material intensively, and the training will make them fully competent in all aspects of its use and coverage. Forestry Officers from other Soums should also be able to participate in this training.

173. As a result of these activities, through the revised materials, all future support to PFM at the FUG level should pay adequate attention to addressing biodiversity issues and to increasing forest carbon stocks/reducing emissions.

Output 3.4 84 *simple 3-year* PFM Plans approved, 'Certificates' issued and Plans implemented by FUGs (resulting in: revenues increase, forest ecosystems conserved, biodiversity conserved and carbon emissions reduced/sequestration increased

174. This Output, using the PFM Extension Offices and as appropriate the Associations (Outputs 3.1 and 3.2), and using the revised material from Output 3.3, will support the 84 FUGs as they travel through the ***first*** phase of developing PFM.

175. The first set of activities cover the main steps in the first phase of developing PFM (from Annex 5). Hence, the Project will support 84 FUGs with: (i) initial training and awareness raising on PFM; (ii) a rapid carbon assessment and rapid biodiversity survey (these are new steps to be introduced into the PFM methodology, by the project, to ensure global environmental benefits); (iii) support to

negotiating and facilitating signature of *Constitutions*; (iv) the preparation of simple forest management plans, and finally; (v) the negotiation and issuance of "*3-year Certificates*"[30].

176. Through this, the FUGs will have the capacity, the formal mechanisms and the Plans to be able to implement basic PFM.

177. The 84 FUGs will then implement the Plans. This is *mostly co-financed*. The FUGs, using their own resources, will: collect dead wood, monitor for fires, monitor for poaching, and monitor for illegal logging. They will also harvest NTFP and sell dead wood, in line with their Plans. All this work, whilst leading to the improved health of the forest ecosystem and facilitating biodiversity conservation, will be a contribution of the FUG members to the Project Objective.

178. The Project will support some simple biodiversity conservation measures in 10 of the FUGs. The details of these measures are not known now and will be identified through (i) the rapid biodiversity survey under the above activity.

179. Finally, with support from Project partners, but also through direct support of the Project, each of the 84 FUGs will develop a simple business plan. These plans will notably define inputs, activities and projected revenue for the FUG members from forestry activities. The plans will provide a management tool so that the FUGs can generate income from sustainable forestry. In particular, these business plans will be designed to enable FUGs to benefit from planned investments by Government in forest product production facilities, first in Tuv, Khuvsguul, Selenge and Bulgan Aimags.

180. Project partners, notably MIA and GiZ will also provide business training skills to the FUGs. This will ensure that the 84 FUGs are more able to generate income from forestry, and so have more incentive to participate in sustainable forest management.

Output 3.5 84 *10-year* SFM Plans prepared and approved.

181. This Output, using the PFM Extension Offices and as appropriate the Associations (Outputs 3.1 and 3.2), and the revised material from Output 3.2, will support the 84 FUGs as they travel through the second phase of developing and implementing PFM. The key steps are:

- Demarcation of FUG boundaries. This is a vital step in establishing FUGs that are able to operate on a financially sustainable basis;
- Preparation of land-use maps for the FUGs. These maps will be developed through a combined participatory (sketch-mapping) and remote sensing-based approach (involving digitalised maps used in REDD+ planning and preparation). Accordingly, the maps will be useful to the FUG members, and will also link into the national forest inventory and national forest monitoring system for REDD+;
- Preparation and approval of 10-year SFM plans for each of the 84 FUGs. In addition to covering basic forestry management and income generation, the Project will ensure that these ten-year plans fully integrate biodiversity conservation and decreasing carbon emissions/increasing storage. They are to be approved by the Soum and Aimag government.

182. Hence, by the end of the Output, the 84 FUGs will have in many ways caught up with the 16 advanced FUGs in Outcome 2. Moreover, the Soum Forest Units will have developed significant capacity to support FUGs and to develop PFM.

[30] For some selected FUGs, some may have already started the PFM process and have approved three year plans. In this case, on a case-by-case basis, the project will help them move forward from their current point, immediately integrating biodiversity and carbon.

Outcome 4: M&E and information dissemination

183. The objective of this component is to ensure systematic data collection from the field to effectively monitor and evaluate project progress indicators, monitor risk mitigation measures and design new measures to face unexpected risks, and to extract lessons learned (including successes and failures) that might be useful for future LDCF/GEF initiatives. Financing under this component will address: i) the design and operation of the project's M&E system based on results-based management; ii) mid-term and final project evaluations, including defining response strategies to recommendations provided by these evaluations and, if necessary, adjustment of project implementation; and iii) the project's communication and awareness raising strategy

Output 4.1 M&E system operating and providing systematic information about meeting project outcome and output targets

184. The project will undertake monitoring and evaluation (M&E) at the site (FUG), local (Soum) and national level. This will include full monitoring of ecological, social and economic variables. The project will develop and implement participatory monitoring that is compatible with the monitoring of REDD+ activities and impacts at the local level – including the monitoring of environmental impacts and biodiversity. The outcomes of this monitoring will be fed up to national stakeholders to inform decision-making. This monitoring will be linked into the emerging national forestry monitoring system and the country's developing REDD+ architecture. Overall, this will support national capacity to monitor environmental impacts.

Output 4.2 Midterm and final evaluations

185. By the end of the third and fifth years of project implementation, FAO's independent evaluation unit will arrange, in consultation with the project team and other partners, a mid-term and a final project evaluation, respectively. The provisions for these evaluations are discussed in greater detail in section 4-E and 4-F below.

Output 4.3 Information dissemination

186. A high level priority for all project actions will be to capture lessons learned, disseminate these lessons, and establish protocols for this adaptive learning to continue well beyond project implementation. The project will create pathways to use project results to inform sector investment. This effort will include semi-annual formal reporting of project activity and results and the generation of a website as a portal for capturing best practices. This website will reflect data generated by the project sponsored activities, and lead to summaries and recommendations of existing policies and proposed improvements. A very important element of this programming will be the design of a comprehensive hand-over strategy. This will be completed prior to Project Year five. The strategy will detail implementation responsibilities and identify specific tracks for project implementation funding. Resulting recommendations will include how to best promote and expand the sustainable continuation of project successes, including national and local level activities, into the future.

B. GLOBAL ENVIRONMENTAL BENEFITS

187. The global environmental benefits to be generated by this project are summarized in the Project's results framework (RF) in terms of the target values under each indicator. They can be summarized as:

Land degradation

188. The Project will *directly* improve forest management over 100 FUGs or approximately 454,000 hectares. As a result of this Project, 454,000 hectares of forest land will be under improved, multi-purpose management. This will lead to an improvement in the services provided by the forest

ecosystem, notably in terms of provisioning services (fuel, but also food and animal feed), regulating services (climate regulation, fire and drought control and erosion control) and supporting services (habitat for biodiversity and soil formation). This will lead to a range of benefits such as biodiversity conservation, enhanced carbon storage and reduced carbon emissions, conservation of water ecosystem services, conservation of forest values and increased sustainable revenue from FUG forests.

189. The project will *indirectly* improve sustainable forest management over all northern forests. It is estimated that 2.6 million hectares of forests over five aimags will benefit positively. By improving forest management capacity, and by creating models and tools for rolling out PFM, the project will help forests to be managed in a way that: conserves ecosystem services, conserves biodiversity, reduces forest carbon emissions and enhances forest carbon stocks, provides for local livelihoods, conserves watershed management services, and reduces the risks of fires, pests and disease.

Biodiversity Conservation

190. The Project will directly implement biodiversity conservation activities in 16 FUGs. That means at least 64,000 hectares of unique forest ecosystems will benefit from increased levels of sustainable use and biodiversity conservation. Some of the specific biodiversity benefits include:

- Increases in population of key, vulnerable indicator species (i.e.: musk deer, saker falcon) at prioritized four FUGs;
- Unique northern forest habitats conserved;
- Improved conservation status for the 12 mammals, 20 birds, seven fish, four reptiles and amphibians and 64 plants, listed in Annex 6;
- Greatly increased knowledge of biodiversity values through the surveys and monitoring.

191. The Project will indirectly support improved, biodiversity friendly, sustainable forest management through at least 390,000 hectares (i.e. at the 84 upscaled FUGs in Outcome 3) and, indirectly, over 2.6 million hectares of forests in the five Northern aimags (this will be delivered as a result of the new tools, guidelines and enhanced capacity). As a result of this, these forest ecosystems, and this forest biodiversity will benefit from increased levels of conservation.

Reduced Carbon Emissions and Increased Carbon Stocks

192. The Project will have a direct impact on carbon in the 16 leading FUGs. It will also have an indirect impact across the 84 FUGs (Outcome 3), and a reduced indirect impact across all the Mongolia northern forests. These impacts are calculated in the following sections.

193. See Annex 8 for full details of the calculation.

Direct Impacts

194. Based on the PPG analysis, in *the 16 leading FUGs*, the baseline carbon emissions and removals are as presented in Table 7 (see Annex 8).

Table 7: Annual and 5-year Baseline carbon emissions/removals from the 16 leading FUGs

	Emissions and Removals (tCO_2e/yr)	**Emissions and Removal Baseline over 5 years**
Emissions from deforestation	77,370	8,476,519
Emissions from forest degradation	1,617,934	
Removals from forests	-264,937	-324,687
Total balance of emissions/removals	**1,430,366**	**7,151,832**

195. In the alternative project scenario, due to the project interventions, these emissions/removals will be modified as follows:

Avoided Emissions from Deforestation

196. The baseline is a deforestation (estimated to be the national average rate of 0.74% per year) and so emissions of 77,370tCO_2e/yr. In the project alternative, through the engagement with the FUGs in forestry capacity building activities, the project will ensure that anthropogenic activities do not lead to deforestation in the 16 FUGs (this has already been achieved with international support in the past). In the project alternative there will be no deforestation, hence avoided emissions of **77,370tCO_2e/yr**.

Avoided Emissions from Forest Degradation

197. Fire: Through enhanced forest patrolling/monitoring and forest cleaning activities, this project aims to reduce the incidence of forest fires by 75% compared to pre-2010 values; thus avoiding a loss of 20tC/ha (73.4 tCO_2e/ha) over 10,806ha, i.e. an aggregate avoidance of **793,160tCO_2e/yr**.

198. Logging: Through enhanced forest patrolling, this project aims to reduce the incidence of illegal logging over the FUGs' forest areas by 75%; thus avoiding a loss of 5tC/ha (18.35tCO_2e/ha) over 6,744ha, i.e. an aggregate avoidance of **123,752tCO_2e/yr**.

199. Grazing in forest areas: Through the implementation of pilot grazing exclusion areas, this project aims to reduce the area of forest subject to livestock grazing by 30%; thus avoiding a loss of 5tC/ha (18.35tCO_2e/ha) over 5,924 ha, i.e. an aggregate avoidance of **108,702tCO_2e/yr**. The carbon calculations are based on the implementation of grazing exclusions beginning in the second year, leading to avoided emissions as of the third year.

200. Total avoided emissions due to the project interventions in reducing forest degradation are therefore: **793,160 + 123,752 + 108,702 = 1,025,614 tCO2e/year** (from the third year onwards. This equals 982,134 tCO2e/year when averaged over the five-year project period)**.**

Enhanced Forest Carbon Sequestration

201. Enhanced forest regeneration: Taking a conservative value of improved forest regeneration over 50% of the total FUG forest area (32,266 ha), due to enhanced patrolling, improved forest management and grazing exclusion, and allowing for 30% of the total additional annual potential carbon sequestration due to enhanced forest regeneration (at 2tC/ha/yr) in year one, 60% in year two, 90% in year three and 100% in years four and five – to account for incremental implementation of project activities. This will bring about an estimated additional sequestration of **236,829tCOe/yr**.

202. Enhanced forest growth from thinning: Through technical capacity building and handing of responsibility for thinning to FUG members, this project aims to implement thinning practices in an additional 301ha of FUG forests; leading to enhanced sequestration of 4tC/ha/yr in these areas. This will bring about an estimated additional sequestration of **4,419tCOe/yr**. This calculation is based on thinning activities initiating in the second year of the project and enhanced growth initiating in the third year

203. Total enhanced sequestration due to the project interventions to increase carbon stock are therefore: **236,829 + 4,419 = 241,247 tCO2e/year.**

204. Hence, for the 16 FUGs (See Table 8), the project will reduce annual emissions from forestry from the 16 FUGs by **1,059,504 tCO2e** and enhance forest carbon sequestration by **241,247 tCO2e** per year. Over the 5-year lifetime of the project, this will lead to avoided emissions of 5,297,517 tCO2e and additional sequestration of 913,205 tCO2e (see Table 8).

Table 8: Total direct avoided emissions and sequestration for the 16 FUGs (5 years +15 years).

	Baseline emissions (tCO_2e/yr)	Project avoided emissions (AE) in tCO_2e			
		Avoided annual emissions	AE over project lifetime (5 years)	Long-term AE over yrs 6-20	Total AE from 16 FUGs
Emissions from deforestation	77,370	-77,370	-386,850	-1,160,550	-1,547,400
Emissions from forest degradation	1,617,934	- 982,134*	-4,910,669	-14,732,007	-19,642,676
Total emissions	1,695,304	**-1,059,504**	**-5,297,517**	-15,892,557	-21,190,074
	Baseline sequestration (tCO_2e/yr)	**Project sequestration**			
		Additional annual sequestration	**Additional sequestration over project lifetime**	**Additional sequestration over years 6-20**	**Total Sequestration from 16 FUGs**
Carbon sequestration	-264,937	**-241,247**	**-913,205**	-2,739,615	-3,652,820

*Based on the annual average of the total; resulting from emission reduction activities over the five-year project period

Indirect Impacts

205. In addition to acting in the 16 FUGs (64,000 ha), the project will indirectly affect Carbon emissions/ sequestration in: A) the 84 FUG (390,000 ha) for upscaling (Outcome 3) and; B) more indirectly across Northern Mongolia forest land (10,444,000 ha) as a whole (due to the improved enabling environment and introduction of best practices). These indirect impacts are calculated for a period of 17 years (final 2 years of the project and 15 years post-project).

206. Table 9 calculates the aggregate figures for indirect avoided emissions and sequestration.

A) For the 84 FUGs, it is assumed that the success of the carbon mitigation activities will achieve 25% the success rate of the leading 16 FUG. This conservative estimate is based on the following assumptions: 1) the comparatively lower capacity in these FUGs, and the need to undertake the planning and capacity development process, will lead to slow implementation; 2) members of the additional 84 FUGs will have not been extensively involved in FUG activities and therefore require a period of familiarization and training in forest management/monitoring, thus limiting the success of activity implementation during the project lifetime; 3) that all newly engaged FUGs can be reached by local Forest Department officials and project staff on a (semi-)regular basis and that FUG members can participate in soum-level training events; 4) that newly engaged FUG members agree to implement and take ownership of project-funded carbon mitigation activities; 5) newly trained FUG members assume responsibility for and effectively implement enhanced forest monitoring/patrolling activities.

B) Mongolia's Forest Resources Assessment (FRA 2010) determines northern forest cover to be 10,898,000 ha. Subtracting the 454,000 ha of FUG areas influenced directly and indirectly by the project leaves 10,444,000 ha for additional indirect impacts due to the improved enabling environment and introduction of best practices.

Application of the 0.74% deforestation rate based on loss of AGB of 53tC/ha[31] (194.5tCO2e) leads to 15,032,049 tCO2e/yr = 255,544,836 tCO2e over seventeen years. We then add the deforestation figures of 1.5 tCO2e/ha/yr loss per ha over the same 10,444,000 ha area = 15,666,000 tCO2e/yr = 266,322,000 tCO2e over seventeen years. These together (emissions from deforestation and deforestation) are then added to give the overall emissions baseline from N forests for the 17 year period of 521,866,836 tCO2e.

The project applies a conservative filter to calculating indirect benefits, assuming that 25% of 10,444,000 ha of remaining Northern forests will be indirectly impacted by project activities, *i.e.* 2,611,000 ha, for which the baseline emissions of **130,466,709 tCO2e** are emitted over a seventeen year period (emissions baseline for Northern forests). Carbon sequestration baseline for the 2,611,000 ha of northern forests is estimated at 3tCO2e/ha/year[32] = 7,833,000 tCO2e/year x 17 years = 133,161,000 tCO2e for 17 year period.

In projecting indirect impacts of the project on this 25% of northern forest area, the project applies a second conservative filter, assuming that 10% of the baseline emissions will be avoided as a result of indirect project impacts for a total of -13,046,671 tCO2e mitigated from Northern forests (indirect project benefits to N forests). The project assumes that additional sequestration will be enabled to the level of 5% above the baseline levels for an additional 6,658,050 tCO2e over 17 years.

New Table 9: Direct (5 years + 15 years) and Indirect (17 years) Project C Benefits.

	Baseline and Project Values (tCO_2e)	Direct		Indirect		Grand total
		16 Lead FUGs (project 5 years)	**16 FUGs (post-project years 6-20)**	**84 FUG[33] under Outcome 3 (17 years)[34]**	**25% of Mongolia's northern Forests[35] (17 years)**	
Baseline	**Total emissions baseline**	8,476,519	25,429,557	19,487,559	130,466,709	183,860,344
	Total C sequestration baseline	-1,324,687	-3,974,061	-19,890,000	-133,161,000	-158,349,748
	Total Baseline Emissions/ Removals	7,151,832	21,455,496	-402,441	-2,694,291	25,510,596
Project	**Total avoided emissions**	**-5,297,517**	**-15,892,557**	-27,216,150	-13,046,671	-61,452,895
	Additional carbon sequestration	**-913,205**	**-2,739,615**	-4,690,725	-6,658,050	-15,001,595
	Total Project Removals	**-6,210,722**	**-18,632,172**	**-31,906,875**	**-19,704,721**	**-76,454,490**
	Net Totals:	941,110	2,823,324	-32,309,316	-22,399,012	-50,943,894

207. The second to the bottom row in Table 9 provides the estimated avoided emissions and the estimated increased sequestration, across both **direct impacts** for project five year period (**-6,210,722 t/CO2e) and for post project 15 year period (-18,632,172)** and **indirect impacts** over a 17 year period of **-31,906,875tCO2e for** 84 FUG targeted under Component 3 and **-19,704,721tCO2e** across more broadly the larger northern Mongolia forest lands for a total indirect benefit forecast of **-51,611,596 tCO2e**. The **grand total direct and indirect benefit forecast across 20 years** from project inception is: **-76,454,490tCO2e.**

[31] FAO Forest Resource Assessment (FRA) (2010).

[32] Conservative average value taken from: McGuire, C.J., 2010, *J. Sus. Dev.* 3(1):11-16; Yu, X. et al., 2011, *Chin. Geogra. Sci.* 21(3):279-289.

[33] Assumptions: area coverage by 390,000 ha (from 64,000 to 454,000). Assume success rate of 25% of leading 16 FUG

[34] **final 2 project years + 15 post project**

[35] 25% coverage of 10,444,000 ha of N forest; 10% baseline emissions avoided; 5% additional sequestration.

C. COST EFFECTIVENESS

208. Cost effectiveness is a concept that is built-in to the programmatic strategy of the GEF. In projects like this one, GEF finances the 'incremental costs' of achieving global environmental benefits, meaning the activities of the partners in the baseline cover most of the basic development and forestry issues. For this Project, this means that the FAO/GEF project builds on top of a large baseline. With a baseline and co-financing of over $21 million, the FAO/GEF costs are less than 20% of the entire Project. That means, for every $1 invested, FAO/GEF gains over $5 of impact.

209. The proposed Project follows on from previous collaboration between FAO and Mongolia on PFM. Evaluations[36] of these previous projects stated "*the implementation of the Project was efficient and effective*" and the "*approach has proven effective*". The proposed Project will build on the lessons and implementation approach of the previous phases of the support to ensure cost-effectiveness. Moreover, the present Projects builds on the specific implementation arrangements – rather than reconstructing new ones – which include capacity in the MEGD, capacity in the FAO office, a cadre of dedicated and competent staff[37] and capacity in the Aimag and Soum governments.

210. Several alternative designs and approaches were considered for cost-effectiveness during project design. These alternatives included focusing on providing more hardware, and focusing all capacity development efforts on national government agencies. Ultimately, it was decided that these approaches would not have as much impact per input, hence the selected focus of developing the soft capacity of the Forest Units through a learning-by-doing approach[38], i.e. their capacity will be built as they support FUGs, thereby achieving two results with one sets of activities. This approach underlies Outcomes 2 and 3.

211. The Project also intends to minimize the use of international consultants where national expertise is available. This will reduce the travel costs and the costs of consultancy fees. Notwithstanding, where international expertise is unique or exceptionally credible, it will be utilized.

212. At the FUG level, the Project will rely extensively on farmer-farmer and FUG-FUG experience sharing. Not only is this less costly than using national or international experts, but also, if well managed and backed up with global expertise when pertinent, it is can also be the most effective.

3 – FEASABILITY

A. ENVIRONMENTAL IMPACT ASSESSMENT

Project name: Mainstreaming biodiversity conservation, SFM and carbon sink enhancement into Mongolia's productive forest landscapes.

Project description: Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the

[36] One of which was entirely independent.
[37] Notably the four Field Facilitators – see section on implementation arrangements below.
[38] GEF support will provide a small amount of hardware – mostly office equipment and simple forestry management and monitoring equipment. Co-financing will lead to investments in larger scale wood processing equipment.

country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon. This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Outcome 1: Enabling institutional, policy and regulatory framework for sustainable PFM

Mongolia is currently developing its enabling environment for sustainable forestry. Following the break-up of the Soviet Union, Mongolia's forests suffered tremendously from over-harvesting and under-management. The first response, over one decade ago, was aimed at broad-scale *protection* of forests and *stopping* all harvesting. This had many positive impacts, but weakness in the forest governance framework led to increases in forest fires and illegal harvesting.

The Government is currently developing a more sophisticated response through a *sustainable use and harvesting* approach – which takes into account the comprehensive value of the forests (notably as a carbon store, a protector of watersheds, an habitat for biodiversity and as a key input to local economic, cultural and leisure activities). This Outcome, by helping to develop this enabling environment, will contribute to the Government's objectives. This Outcome is fundamentally about improving the environmental resource base. There are no on-the-ground activities under this Outcome, so there is no apparent danger of unintended environmental impacts.

Outcome 2: Sustainable PFM is demonstrated that leads to improved livelihoods, biodiversity conserved and reduced carbon emissions/increased stocks.

This Outcome takes place in 16 FUGs with a total area of approximately 80,000 hectares, of which 64,000 is forestland. Under this Outcome, the Project will work with local government and FUGs to introduce improved forestry techniques, and also to improve biodiversity conservation and carbon storage. The emphasis will be on sustainable forestry, and maintaining long-term ecosystem values. Moreover, the Project will improve forest patrols and monitoring, supporting a reduction in pest, fires and illegal activities – and so contributing overall to ecological improvement. Based on previous experience, there are no anticipated negative environmental impacts of these activities. However, the Project is also to introduce participatory forest monitoring aligned to Mongolia's national forest monitoring system for REDD+, which will be a mechanism to monitor the environmental impact of activities under this Outcome.

Outcome 3: Sustainable PFM that conserves biodiversity, reduces degradation and reduces carbon emissions/increases carbon stocks expanded across significant areas of northern forests

This Outcome supports an additional 84 FUGs with a total area of approximately 390,000 hectares. Currently, these areas are experiencing ecological decline, due mostly lack of management, forest fires, illegal logging and poaching activities. Under this Outcome, the Project will initiate in the 84 FUGs the development of participatory forest management – the first steps towards a participatory system to control illegal activities, to positively support biodiversity and increase carbon storage, and to fully ensure the integrity of the ecological services. Based on previous experience, there are no anticipated negative environmental impacts of these activities. However, the Project is also to introduce participatory forest monitoring aligned to Mongolia's national forest monitoring system for REDD+, which will be a mechanism to monitor the environmental impact of activities under this Outcome.

Outcome 4. Monitoring and Evaluation and information dissemination

The project will undertake monitoring and evaluation (M&E) at the site (FUG), local (*Soum*) and national level. This will include full monitoring of ecological, social and economic variables. The project will develop and implement participatory monitoring that is compatible with the monitoring of

REDD+ activities and impacts at the local level – including the monitoring of environmental impacts and biodiversity. The outcomes of this monitoring will be fed up to national stakeholders to inform decision-making. This monitoring will be linked into the emerging national forestry monitoring system and the country's developing REDD+ architecture. Overall, this will support national capacity to monitor environmental impacts.

Certification

Project Category C	**Yes**	**No**
I affirm that I have performed an environmental review of this project and certify that the project conforms to the pre-approved list of projects excluded from environmental assessment and that the project will have minimal or no adverse environmental or social impacts. No further analysis is required.	X	

Title, name and signature of project leader: _____

B. RISK MANAGEMENT

Risks and Mitigation measures

Risk/Assumptions	**Rating Impact/ Probability** High - Low (5-1)	**Mitigation Measure**
The scope of forest activities that FUGs are permitted to undertake continue to be so restricted by Government policy that FUGs cannot generate enough revenues from PFM for it to act as an incentive.	Impact: 4 Prob: 2	Currently, national and local governments restrict FUG in-forest economic activities almost entirely to cleaning, NTFP collection and limited grazing. Timber harvesting, even thinning, is not allowed. This means that the large sources of revenue are not accessible to FUGs. The government has good reasons to maintain this restriction, based on past experience and on the current low capacity of almost all FUGs in Mongolia. The Project has several strategies to mitigate this risk: (i) continually increasing capacity of targeted FUGs; (ii) developing co-management mechanisms whereby FUGs do not directly harvest but receive much of the revenue from harvesting; (iii) seeking to pilot thinning and limited harvesting by the most advanced FUGs, and; (iv) undertaking advocacy and policy work at national level. It is strongly believed that significant progress can be made on this measure.

Risk/Assumptions	Rating Impact/ Probability High - Low (5-1)	Mitigation Measure
Climate change impacts may increase to the extent that even if the project implements activities to improve land conditions in forest lands it may not be enough to make a difference. Moreover, new climate change related threats could emerge, such as insect infestations or disease.	Impact: 3 Prob:2	The forests are currently vulnerable to fire and pests – these are two vectors that are likely to be exacerbated by the impacts of climate change. Although the project cannot remove the dangers associated with climate change, by improving management and monitoring, it will directly increase the landscape's resilience and 'climate change adaptive' capacity. That is, the capacities developed under this Project will increase the capacity of FUGs to adapt to climate change, thereby lowering the risks associated with climate change. For example, FUGs will have increased capacity to monitor/mitigate the incidence and impacts of pests and fires. This situation will be monitored in a continuous manner by the Government and FAO. Note: the great deal of deadwood currently lying in Mongolia's forest is a fire risk, which is likely to increase with climate change. The Project will help stakeholders balance consideration of the benefits of deadwood to forest ecosystems with the risk some deadwood can pose for fire.
Financially sustainable models of biodiversity conservation measures in northern forests cannot be developed.	Impact: 2 Prob: 3	To a great extent, improved forest management will equate to improved biodiversity conservation, and the Project will contribute to this. However, in cases where biodiversity is threatened by factors other than poor forest management, sustainable models of biodiversity conservation are required. This applies for example to threats such as poaching, over-grazing and infrastructure development. This is a challenge in all countries. If financially sustainable models are not determined, the biodiversity will be exposed to the threats once the project is finished. In response, the Project has a major activity in Outcome 1 to determine innovative and sustainable financial models (i.e.: *Study and workshop on innovative financing mechanisms of biodiversity conservation in northern forests*). Following this, this situation will be monitored and appropriate management responses implemented.

Risk/Assumptions	Rating Impact/ Probability High - Low (5-1)	Mitigation Measure
Globally, the development of REDD+ is delayed leading to lower enthusiasm for REDD+ activities in Mongolia.	Impact: 1 Prob: 4	To some extent, the Project is based on the premise that in the near future global REDD+ funds will be available to provide an incentive for sustainable forestry in Mongolia (i.e. as part of a post-2020 global climate change agreement that includes REDD+ as a mitigation option for developing countries). However, global negotiations under the UNFCCC related to REDD+ may not advance, and the funds for REDD+ may not materialize. The Project treats REDD+ as one possible source of finance for sustainable forestry. However, it does not pin all hopes on REDD+. Studies show that in most cases sustainable forestry in Mongolia will be financially viable even without large REDD+ funds, and this Project will develop this. This situation will be monitored in a continuous manner by the Government and FAO.

4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

A. INSTITUTIONAL ARRANGEMENTS

General Institutional Context and Responsibilities

213. As described in Section 1 B, several government agencies have responsibilities for forestry related issues. The entities that will most directly be interacting with the projects are the MEGD, its Department of Policy Implementation Coordination (DPIC) and its Forest Research and Development Centre (FRDC), the Ministry of Industry and Agriculture (MIA), and the Aimag and Soum government representatives.

214. MEGD has overall responsibility for the management of forests. Hence it will take overall responsibility for this Project. This responsibility will be held through the DPIC and its Division of Forest Protection and Coordination of Reforestation (and within this division, the unit mandated with developing PFM). Also, the FRDC is the implementing arm of the Ministry, including PFM. The FDRC will collaborate in many activities, providing technical inputs. It will be a beneficiary of the Project in terms of capacity building. It will also be responsible for mobilizing technical support to the Project's diverse activities.

215. The MIA is also a key agency for the Project success. The MIA is responsible for supporting economic and livelihood development. The MIA will be responsible for coordinating the Project with its programmes to support rural development and economic development in the FUG areas. MIA will also benefit from capacity building under this Project.

216. With Mongolia's increasingly decentralized governance structure, the Aimag and Soum governments have an important role to play in the Project success and follow-up. They will be responsible for monitoring and learning from the Project, and then for replicating across their jurisdiction. However, given their current very limited capacity, they will also be important beneficiaries of the Project's capacity development.

Coordination with other Ongoing and Planned Related Initiatives

217. Coordination will be assured by the MEGD and the FAO office in Mongolia. MEGD will ensure coordination with national initiatives, whereas FAO will facilitate coordination with internationally supported initiatives. Regular meetings between MEGD, FAO and the Project will monitor coordination and seek ways to optimize it. One Project staff member (see below) will be responsible for coordination through her/his ToR.

218. The Project is designed to coordinate closely with ongoing related initiatives as this is mandatory for GEF projects. This coordination has several forms: (i) coordination with "baseline programmes or projects" – this refers to projects/programmes that provide critical baseline investments on which this GEF investment is built; (ii) coordination with other, related GEF projects in Mongolia and in the region, and; (iii) coordination with other national and international initiatives with which lessons can be shared.

Coordination with the baseline programmes and projects

219. *Government of Mongolia*. Coordination with all ongoing efforts by the Government to strengthen participatory forestry is essential. This includes efforts by MEGD, MIA and Aimag/Soum governments. These efforts cover training, developing regulations, support to FUGs, monitoring, provision of equipment to local governments, increasing access to loans and to transport infrastructure, etc. This covers forestry – but also includes biodiversity conservation and implementation of REDD+. Annex 7 provides further information on these, and on the geographical and thematic overlaps between this Project and the ongoing efforts by the government to strengthen participatory forestry. MEGD will assure coordination.

220. *The German Government through GiZ.* GiZ is currently implementing the "*Biodiversity and adaptation of forest key ecosystems to climate change programme*". This Project has three components: (i) climate change and adaptation; (ii) stabilization and use of forested ecosystems, and; (iii) conservation and sustainable use of protected areas. In addition, GiZ is collaborating with the government and the UN-REDD Programme on the design and implementation of Mongolia's new national forest inventory. There is a strong history of coordination between GiZ, FAO and MEGD on forestry issues in Mongolia, and, given the continuing strong geographical and thematic overlap, this coordination will continue through the life of the present Project.

221. *The Government of Finland through the National University of Mongolia*. This two year Project focuses mainly on research into forest management practices and training on tree planting techniques. There is also a small component on strengthening capacity to prepare forest inventories. There is a strong history of coordination between the Finnish government, FAO and MEGD on forestry issues in Mongolia, and, given the continuing strong geographical and thematic overlap, this coordination will continue through the life of the present Project.

222. *FAO global and national programmes*. FAO is implementing several programmes and projects closely related to the present Project. These are notably:

- Capacity Building and Institutional Development for Wildlife Management within the framework of Participatory Forest Management in Mongolia (TCP/MON/3403);
- TCP Facility in support of TCP/MON/3403 (TCP/MON/3402);
- Integrated Livestock-based Livelihoods Support Programme (with activities in Khenti Aimag);
- Moving Forward for the Understanding and the implementation of the forest instruments in Mongolia (GCP/INT/118/JPN).

223. FAO is also actively participating, along with UNDP and UNEP, in activities under the UN-REDD Programme in Mongolia. Mongolia joined the UN-REDD Programme in March 2011. Since, there have been several phases of discussions, awareness raising and planning. The National REDD+ Readiness Roadmap, which will guide the country through REDD+ Readiness, is under advanced preparation. In addition to being involved centrally in all these developments, FAO is driving the preparation of a REDD+ compliant national forest inventory and national forest monitoring system. This support from FAO through the UN-REDD Progarmme is anticipated to continue over the Project implementation period.

Coordination with GEF projects

224. There are two closely related UNDP/GEF projects: (i) *Mongolia's Network of Managed Resource Protected Areas*, a medium-sized project that is scheduled to start in late 2013. This aims to catalyse the strategic expansion of Mongolia's PA system through establishment of a network of Managed Resource Protected Areas in under-represented terrestrial ecosystems. In addition to the general thematic overlap, this UNDP/GEF project aims specifically to increase the area of sub-boreal mixed forest under protected area status, and one of its three project sites is in Khenti aimag; (ii) *Strengthening Protected Area Network In Mongolia Project* which started in early 2011 and has the objective of catalyzing the management effectiveness and financial sustainability of Mongolia's PA system. This project works towards overcoming personnel, institutional and systemic financial and operational barriers, and developing and deploying new management and budget models. At the national level, the project supports MEGD to develop improved policies on PA management and financing, including revision of PA and buffer zone laws, and other PA related policy and programmes.

225. There is a strong history of coordination between UNDP, FAO and MEGD on biodiversity and forestry issues in Mongolia, and, under the guidance of the UN Resident Coordinator, this will continue. Once the present Project starts up, coordination and collaboration mechanisms will be established, including possibly joint inputs, activities and/or outputs.

226. The UNDP/UNOPS/UNESCO/GEF *Integrated natural resource management in the Baikal Basin transboundary ecosystem.* This is a two country (Russia and Mongolia) project focusing on the Baikal basin. In addition to preparing a TDA/SAP, this project focuses on water ecosystems and water biodiversity. Links will be established with this project as feasible and relevant.

Coordination with other related national and international initiatives

227. Annex 7 provides information on the international partners involved in similar initiatives. This includes KfW, TNC, WWF, WCS and others. There is a strong history of coordination between FAO and these partners on biodiversity and forestry issues in Mongolia. Once the present Project starts up, coordination and collaboration mechanisms will be established, including possibly joint inputs, activities and/or outputs.

228. Detailed discussions have taken place with KfW. KfW aims to develop a programme of grants to strengthen the protected area management system, and the initial focus is on the northern forests. Given this strong geographical overlap, KfW have indicated their intention to collaborate with the present Project. KfW grants may be able to support FUGs with the development of sustainable forest management.

B. IMPLEMENTATION ARRANGEMENTS

a) Roles and responsibilities of Government partner.

229. **Main project partner:** The project will be implemented by the Government of Mongolia, represented by the Ministry of Environment and Green Development (**MEGD)** and the Aimag and Soum local governments. The MEGD will be the center of the project's work and operations as described below. The MEGD will be the lead government counterpart and the Project Executing Partner. As such, the MEGD will have lead technical responsibility for the project, with FAO providing administrative and procurement support to MEGD.

230. The MEGD will carry out its responsibilities to support Project execution through its DPIC and the **National Project Director** (NPD). The NPD will be a senior staff member designated by MEGD, and will be the lead person responsible for ensuring smooth execution of the project on behalf of the Government of Mongolia. The NPD is **not** financed by the Project. The NPD is responsible to the Government for the successful implementation of the Project and the Project's impacts. The duties of the NPD include (i) acting as the responsible focal point at the political and policy level within MEGD, and (ii) ensuring all necessary support input from Government personnel are provided by MEGD to enable the project to implement all of the proposed component activities; and (iii) reviewing and providing input to annual work plans and budgets in consultation/collaboration with the FAO representative; (iv) and to participate in the selection of recruitment of consultants. The Terms of Reference for the NPD can be found in Annex 10.

231. **Project Coordination Committee (PCC):** A PCC will be established and chaired by the MEGD and will be comprised of representatives from DIPC, FDRC, MIA and the seven concerned Aimag governments. Project co-funders and FAO will be standing invitees to PCC meetings. The PCC will provide policy guidance, review results-based Annual Work Plans and Budgets and provide recommendations for resolving any constraints faced by the project. The PCC will be critical to ensuring:

- close linkages between the Project and other ongoing projects and programmes relevant to the project;
- sustainability of key Project outcomes, including up-scaling and replication; and,
- effective coordination of Government partner work under this Project.

232. **Project Management Office (PMO):** The PMO will be hosted by the MEGD and will act as secretariat to the PCC. The PMO will be led by the National Project Coordinator (NPC), a full-time Project position, in close collaboration with a part-time Chief Technical Advisor (CTA). The PMO will be comprised of a small core group of operational and technical staff, namely: the NPC; the CTA; an expert on forest biodiversity, and an expert on forest carbon issues. The PMO will also include experts on an M&E, Knowledge Management and Communications. One full time staff member will also serve as the Deputy NPC. The PMO will also include Financial and Administrative Staff and four Field Facilitators. The PMO staff will be recruited by the project and report to the BH. The PMO will carry out its functions in line with FAO rules and regulations.

233. The following are some of the key functions of the PMO:

- to technically identify, plan, design and support all activities;
- to liaise with government agencies and to regular advocate on behalf of the Project;
- to prepare the Annual Work Plan and Budget (AWP/B);
- to be responsible for day-to-day implementation of the project in line with the AWP;
- to ensure a results-based approach to project implementation, including maintaining a focus on project results and impact as defined by the RF indicators;
- to coordinate project interventions with other ongoing activities;
- to monitor project progress;
- to be responsible for the elaboration of FAO PPRs and the annual PIR, and;
- to facilitate and support the midterm review and final evaluation of the Project.

234. The PMO will also be supported by a series of national and international consultants to provide short term inputs to the Project. These will be finalised during the project implementation, and are tentatively identified as:

Expertise	Months	
	National	International
Monitoring and Evaluation	3.5	1.5
Forest law and policy	4	1.5
Biodiversity conservation financing	-	1.5
REDD/Forest Monitoring	7	2.5
REDD/Benefit distribution mechanisms	7	4
Forest biodiversity ecosystems		5
Livelihoods and business development	8	3.5
Communications and knowledge management	8	-
Gender	8	

235. Terms of Reference for all short and long term personnel are provided in Annex 10.

236. **National Project Coordinator (NPC)** will lead the PMO and work closely with the NPD. The NPC reports to the BH on operational issues and to the LTO on technical issues. The NPC is a full-time position. The NPC will lead and organize the day-to-day execution of the project. The NPC will also take the lead in communications with government agencies and advocacy. The NPC will also be responsible for providing technical advice and guidance in his/her area of technical expertise. The NPC will report on Project progress to PCC meetings, and will develop and submit semi-annual PPRs and annual PIRs. In addition to technical and substantive duties, the NPC will:

- Oversee creation of a participatory monitoring system for the Project's work;
- Ensure real-time monitoring of Project progress and the alerting of the NPD, BH and the LTO to potential problems that could result in delays in implementation;
- Help identify consultant candidates and work with the BH to ensure their timely recruitment;
- Ensure the Project's effective and efficient work with stakeholders in the pilot areas;
- Help organize and supervise consultant inputs;
- Oversee creation of the Project's approach to managing and sharing knowledge, and to identifying and disseminating lessons learned;
- Communicate, advocate and engage in policy dialogue.

237. **Chief Technical Adviser (CTA)** will directly support the NPC and the PMO and ensure best international technical and management practices are integrated into the Project work plan and activities. The CTA reports to the BH on operational issues and to the LTO on technical issues. The CTA is a part-time position of approximately 12 weeks per year.

238. The CTA will support all aspects of the day-to-day execution of the Project. The CTA will also be responsible for providing technical advice and guidance in his/her area of technical expertise. The CTA will support the NPC in reporting on Project progress to PCC meetings, and will contribute to the development of semi-annual PPRs and annual PIRs. In addition the CTA will:

- Ensure latest and best international practices and approaches are reflected in the design and planning of Project Activities;
- Design and propose a participatory monitoring system for the Project's work;
- Support the National Project Director in the day-to-day monitoring of Project progress and the alerting of the BH and the LTO to potential problems that could result in delays in implementation;
- Help identify consultant candidates, especially international candidates;
- Support design of the Project's work with stakeholders in the pilot areas;
- Help organize and supervise consultant inputs;

- Propose an approach to managing and sharing knowledge, and to identifying and disseminating lessons learned;
- Provide on-the-job capacity development to all members of the PMO;
- Communicate, advocate and engage in policy dialogue.

239. **Field Facilitators (FF)** Four FF will be recruited and will be responsible for the coordination and planning of all FUG level activities. The FF are the Project's key strategic mechanism for delivering PFM to FUGs and for building the capacity of local governments. The FF will take the lead in communicating with local government, advising on the preparation of local work plans, designing and running training for local government officials, designing and running training for FUGs, designing local activities, trouble shooting at the local level, ensuring Project inputs are delivered effectively to local governments and FUGs, and ensuring linkages along the following communication line: FUG – Soum – Aimag – National government – FAO – international.

240. **Other key partners.** Other partners supporting the execution will work closely with the MEGD through their nominated technical focal points at the national and local levels. These other key partners include: FDRC, MIA, the concerned Aimag Governments and the concerned Soum Governments. Initial information on the potential role of these partners is provided in Annex 7.

241. One important vehicle for collaboration will be through Letters of Agreement (LoA) that will be elaborated and signed between FAO and the respective collaborating partner. This will include government and civil society organizations. Funds received under an LoA will be used to execute Project activities in conformity with FAO's rules and procedures.

b) FAO's role and responsibilities, both as the GEF Agency and as an executing agency, including delineation of responsibilities internally within FAO

242. FAO will be the GEF implementing and executing agency. As the GEF Agency, FAO will be responsible for Project oversight to ensure that project implementation adheres to GEF policies and criteria, and that the Project efficiently and effectively meets its objectives and achieves expected outcomes and outputs as delimited in the Project document. FAO will report on Project progress to the GEF Secretariat and financial reporting will be to the GEF Trustee. FAO will closely supervise and provide technical guidance to the Project by drawing upon its capacity at the global, regional and national levels, through the concerned units at FAO-HQ, the Regional Office in Bangkok and the FAO Representation in Mongolia.

243. In addition, At the request of the Government of Mongolia, the project will be executed by FAO via its Direct Execution (DEX) modality in close consultation with MEGD. FAO, in consultation with the NPD, will deliver procurement and contracting services to the project using FAO rules and procedures, as well as financial services to manage the GEF resources. For more detail, please see description below.

244. **Executing Responsibilities (Budget Holder):** Under FAO's Direct Execution modality, the FAO Representation in Mongolia will hold the budget and operational responsibilities for this project. The budget holder (BH) will schedule the technical backstopping and monitoring missions as required. The FAO Representative will ensure timely operational, administrative and financial management of the Project's GEF resources, including the disbursement of funds. The BH will in consultation with the NPD: (i) review and clear annual work plans and budgets and monitor them once approved; (ii) review procurement and subcontracting material and supporting documentation and obtain internal FAO approvals; (iii) schedule technical backstopping and monitoring missions; (iv) participate in project supervision missions; (v) prepare financial and monitoring reports (see section "Financial management of and reporting on GEF resources" below); (vi) provide operational oversight to contracted activities carried out by the Project partners; and (vii) prepare budget revisions; (viii) be accountable for safeguarding resources from inappropriate use, loss, or damage; (ix) be responsible for

addressing recommendations from oversight offices, such as Audit and Evaluation; and (x) establish a multi-disciplinary FAO Project Task Force to support the project.

245. . Operations and reporting - including the procurement of goods and contracting of services for Project activities - will be done in accordance with FAO rules and procedures. As such, FAO will, in close coordination with the NPD, be responsible for the timely recruitment of key project posts listed above such as the NPC, the CTA, and the FF. In accordance with FAO rules and procedures, final approval of the use of GEF resources rests with the FAO Representation in Mongolia.

246. **The FAO Lead Technical Unit (LTU).** The Forest Assessment Management and Conservation Division (FOM) of FAO's Forestry Division (FD) will be the LTU within FAO for this Project and will provide overall technical guidance to its implementation. FOM will delegate the responsibility for direct technical supervision to the FAO Regional Office for Asia Pacific (RAP) - Natural Resources and Environment Group (NREG).

247. **FAO Lead Technical Officer (LTO**) The Senior Forestry Officer of RAP/NREG will be the LTO for the Project and will have primary accountability for the timeliness and quality of the technical services provided throughout project execution. The LTO will work in close collaboration with the National Project Director. Under the general technical oversight of the LTU, the LTO will provide technical guidance to the Project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force. The Project Task Force is thus composed of technical officers from the participating units (see below), operational officers, the Investment Centre Division/GEF Coordination Unit and is chaired by the BH. The primary areas of LTO support to the project include:

(i) review and ensure clearance by the relevant FAO technical officers of all the technical Terms of Reference (TOR) of the project team and consultants;
(ii) ensure clearance by the relevant FAO technical officers of the technical terms of reference of the Letters of Agreement (LoA) and contracts;
(iii) In close collaboration with MEGD and NPD, lead the selection of the project staff, consultants and other institutions to be contracted or with whom an LoA will be signed;
(iv) review and clear technically reports, publications, papers, training material, manuals, etc.;
(v) monitor technical implementation as established in the project RF;
(vi) review the Project Progress Reports (PPRs) and prepare the annual Project Implementation Review (PIR);
(vii) Represent FAO in the PSC;
(viii) Provide technical support to the National Project Director;
(ix) Provide technical inputs to procurement and contract documentation;
(x) Review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
(xi) Support the PMU in preparing the AWP/B, with support from the Budget Holder and clearing it prior to submission to the PSC;

248. **FAO Project Task Force (FAO-PTF).** The FAO-PTF will be led by the Budget Holder and include the LTU, LTO, TCI Asia Service and GEF Coordination Unit, and other technical units supporting the project's work. The main role of the task force is to provide technical guidance to the LTO and the PMU for the implementation of the project, contribute to specific project activities as required, and troubleshoot should implementation issues arise.

249. **Participating units** from across FAO will be involved in supporting the Project's work and in ensuring that the Project stays on track to achieve its overall objectives and indicators of success. When appropriate, these units within RAP or HQ will provide technical support in areas such as: forest and watershed management, forest enterprises development, biodiversity conservation, wildlife management, REDD+, land management, gender, and climate change adaptation. The Asia and Pacific

Service (TCIB) of the FAO Investment Centre Division will provide adaptive management support and results-based management oversight and guidance to the LTO and the participating units.

250. **FAO GEF Coordination Unit in Investment Centre Division (GCU)** will review and approve PPRs, annual PIRs and financial reports and budget revisions. The GCU will undertake supervision missions if considered necessary in consultation with the LTU, LTO and the BH. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the GCU. The GCU will ensure that the project's mid-term review and final evaluation meet GEF requirements by reviewing evaluation ToRs and draft evaluation reports. Should the PIRs or mid-term review highlight risks affecting the timely and effective implementation of the project, the GCU will work closely with the BH and LTO to make the needed adjustments in the project's implementation strategy.

251. **The FAO Finance Division** will provide final clearance of any budget revisions, will provide annual Financial Reports to the GEF Trustee and, in collaboration with the GCU, will call for project funds on a six-monthly basis from the GEF Trustee.

C. FINANCIAL PLANNING AND MANAGEMENT

Financial Plan - by Component

Component	Co-funders				GEF	Total
	GiZ	Finland	FAO	Government		
Outcome 1: Enabling institutional, policy and regulatory framework for participatory SFM.	3,100,000	0	265,000	1,075,000	483,972	4,939,447
Outcome 2: *Sustainable PFM is* is demonstrated that leads to improved livelihoods, biodiversity conserved and reduced carbon emissions/ increased stocks.	500,000	200,000	395,000	2,650,000	1,483,076	5,295,421
Outcome 3: *Sustainable PFM* that conserves biodiversity and reduces carbon, reduces degradation emissions expanded across significant areas of northern forests.	1,800,000	400,000	300,000	8,100,000	1,274,076	11,813,382
Outcome 4: M+E and Information Dissemination	0	0	0	0	130,000	130,000
Project Management	0	0	0	1,000,000	215,240	1,193,064
Total	**5,400,000**	**600,000**	**960,000**	**12,825,000**	**3,586,364**[39]	**23,371,364**

[39] With $50,000 for PPG, this totals 3,586,364

GEF Inputs

252. The GEF funds will finance inputs needed to generate the outputs and outcomes under the Project. These include: (i) local and international consultants for technical support and Project management; (ii) support to designing and piloting of REDD+ activities; (iii) support to direct biodiversity monitoring and conservation activities; (vi) LoA/contracts with technical institutions and service providers supporting the delivery of specific Project activities on the ground; (v) international flights and local transport and minor office equipment; and (vi) training and awareness raising material.

Government Inputs

253. The Government of Mongolia, through the MEGD will provide in-kind support in terms of office facilities (including electricity, telephone and fax line, internet line facility, cleaning, etc.) and time of key staff, including the NPD. The Aimag and Soum Governments – notably the Soum Forest Units - will provide technical assistance, coordination and participation in project activities. The Government will also provide substantial investments into forestry and FUG development across the seven concerned Aimags. These investments – both cash and in-kind – are estimated to value in total: USD 12,825,000.

FAO and other Partner Inputs

254. FAO will provide technical assistance, backstopping, training and supervision of the execution of activities financed by GEF resources. The GEF project will complement and be co-financed by several projects and activities implemented by the FAO Representation in Mongolia funded by the FAO Technical Cooperation Programme and by various donors through trust fund arrangements, as follows:

- *Capacity Building and Institutional Development for Wildlife Management within the framework of Participatory Forest Management in Mongolia* - TCP/MON/3403 ($295,000);
- TCP Facility in support of TCP/MON/3403 - TCP/MON/3402 ($100,000);
- *Integrated Livestock-based Livelihoods Support Programme*, with activities in Khenti Aimag – ($300,000);
- *Moving Forward for the Understanding and the implementation of the forest instruments in Mongolia*, GCP/INT/118/JPN ($40,000); and
- FAO/UN-REDD Programme support to preparation of a National Forest Monitoring System (NFMS) Action Plan and to the design of the National Forest Inventory (NFI) ($225,000).

255. With a total value of USD 960,000, these contributions will be managed as an integral part of the GEF project by FAO and will be assessed and recorded each year by the Project team in accordance with GEF policies and procedures.

256. The German Government, through GiZ, is a key collaborating/co-financing partner under this Project. This GEF Project has been designed to complement the GiZ Project entitled *Biodiversity and adaptation of forest key ecosystems to climate change programme.* This GiZ initiative includes large components to train and up-skill FUG and FUG members, and to combine PFM with biodiversity conservation in and around protected areas in the northern forests. It also includes support to the preparation of the national forest inventory[40]. GiZ is also committed to providing 2-3 experts to support Project activities for a period of 2-3 years. An informal collaboration agreement will be developed between FAO and GiZ upon GEF project inception. These investments value an estimated USD 5.40 million.

[40] This funding is earmarked, pending approval, planned for Autumn 2013.

257. The Finish Government, through the National University of Mongolia is funding support to research into forest management practices and training on tree planting techniques, and to the national forest inventory. These investments value an estimated USD 600,000.

Financial Management of, and Reporting on, GEF Resources

258. **Financial Records**. FAO shall maintain a separate account in United States dollars for the Project's GEF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the Project in accordance with its regulations, rules and directives.

259. **Financial Reports** The BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

1. Details of project expenditures on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document, as at 30 June and 31 December each year.
2. Final accounts on completion of the Project on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document.
3. A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the Project, when all obligations have been liquidated.

260. The BH will submit the above financial reports for review and monitoring by the LTO and the FAO GCU. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

261. **Budget Revisions**. Semi-annual budget revisions will be prepared by the BH in accordance with FAO standard guidelines and procedures.

262. **Responsibility for Cost Overruns**. The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the Project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

263. Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 percent flexibility should be discussed with the GCU/TCIB with a view to ascertaining whether it will involve a major change in Project scope or design. If it is deemed to be a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the Project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

264. Savings in one budget sub-line may not be applied to overruns of more than 20 percent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the GCU upon presentation of the request. In such a case, a revision to the Project document amending the budget will be prepared by the BH.

265. Under no circumstances can expenditures exceed the approved total Project budget or be approved beyond the NTE date of the project. **Any over-expenditure is the responsibility of the BH.**

266. **Audit**. The Project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

267. The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the Governing Bodies of the Organization and reporting directly to them, and an internal audit function headed by the FAO Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

D. PROCUREMENT

268. Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with the Rules and Regulations of FAO. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). *Manual Section 502*: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502. *Manual Section 507* establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits ("Best Value for Money").

269. As per the guidance in FAO's Project Cycle Guide, the BH will draw up an annual procurement plan for major items which will be the basis of requests for procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

E. MONITORING AND REPORTING

270. Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the project Results Framework (RF) (Annex 1 and described below). The project Monitoring and Evaluation Plan has been budgeted at USD 130,000 (see Table 10). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. Integrated into all Outcomes, the Project monitoring and evaluation approach will also facilitate learning and mainstreaming of project outcomes and lessons learned into international good practice as well as national and local policies, plans and practices.

Oversight and Monitoring Responsibilities

271. The M&E tasks and responsibilities clearly defined in the project's detailed Monitoring Plan (see below) will be achieved through: (i) day-to-day monitoring and supervision missions of Project progress (PMO); (ii) technical monitoring of indicators (PMO); (iii) FUG-level monitoring of FUG PFM plans and business plans (FUGs with support from FF and PMO); (iv) midterm and final evaluations (independent consultants and FAO Evaluation Office); and (v) continual oversight, monitoring and supervision missions (FAO).

272. At the initiation of implementation of the GEF project, the PMO will set up a project progress monitoring system. Participatory mechanisms and methodologies for systematic data collection and recording will be developed in support of outcome and output indicator monitoring and evaluation.

273. The Project's Inception Phase begins upon FAO approval of the Project and signature of the Execution Agreement. During the three-month inception phase, specific Project M&E issues will be refined and subsequently discussed at the Inception Workshop (IW): (i) the Project's RF indicator targets and their means of verification, and assumptions and risks; (ii) the M&E indicators and their baseline; (iii) drafting the required clauses to include in consultants' ToRs to ensure they complete their M&E reporting functions (if relevant); and (iv) provision of a detailed overview of reporting, M&E requirements and the respective M&E tasks among the project's different stakeholders; (iv) based on the Project RF and the relevant GEF Tracking Tools (for SFM/REDD and for biodiversity), finalization of the first annual work plan; (v) financial reporting procedures and obligations, and arrangements for annual audit; (vi) schedule of PCC meetings. Roles and responsibilities of all project organization structures will be clarified and meetings planned.

274. The Inception Phase will conclude with the holding of an Inception Workshop (IW) organized by the PMO. The IW will: (a) assist all stakeholders to fully understand and take ownership of the Project; (b) review and confirm/finalize Project indicators and results framework with stakeholders; (c) Review the Project's first AWP with results-based annual budget; (d) discuss the roles, functions, and responsibilities within the Project's decision-making structures; (e) review a detailed M&E work plan and budget based on the M&E plan summary presented in Table 10 below. The first PCC meeting will be held within the two months of the IW.

275. The day-to-day monitoring of the Project implementation will be the responsibility of the PMO under the leadership of the NPC, and supported by the CTA. One PMO staff member will be clearly mandated to be responsible for Project M&E. M&E is to be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The preparation of the AWP/B and semi-annual PPRs will represent the product of a unified planning process between main project partners. As tools for results-based-management, the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets.

Indicators and Information Sources

276. The project's RF indicators will be the main reference point for M&E of Project outcomes including contributions to global environmental benefits (see Annex 1). The RF's indicators and means of verification will be applied to monitor Project performance and impact. Data collected will be of sufficient detail to track outputs and outcomes and flag Project risks early on, using FAO's monitoring procedures and progress reporting formats. The PMO will link each AWP/B to the RF indicators to ensure that Project implementation maintains a focus on achieving the impact indicators as defined. A key element to this will be the elaboration and monitoring of output target indicators in each AWP/B that cumulatively lead to outcome level results. Output targets will be monitored on a semi-annual basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.

277. The main sources of information to support the M&E programme will be: (i) participatory progress monitoring and workshops with beneficiaries; (ii) on-site monitoring of the implementation of FUG forest management plans; (iii) PPRs prepared by the PMO; (iv) consultants reports; (v) participants training tests and evaluations; (vi) mid-term and post project impact and evaluation studies completed by independent consultants; (vii) financial reports and budget revisions; (viii) PIR prepared by the LTO supported by the BH and the PMO; and (ix) FAO supervision mission reports.

Reports and their Schedule

278. Specific reports that will be prepared under the M&E programme are: (i) project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) PPRs; (iv) annual PIR; (v) technical reports; (vi) co-financing reports as necessary; and (vii) terminal report. In addition, assessment of the GEF Biodiversity and SFM/REDD Tracking Tools against the baseline (completed during project preparation) will be required at midterm and final project evaluation.

279. **Project Inception Report.** Immediately after the IW, the PMO will prepare a Project inception report in consultation with the BH and other project partners. The Inception Report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the IW. To insure smooth transition between project design and inception, the IW and work planning process will benefit from the extensive input of parties responsible for providing technical support to the original project design. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan based on the monitoring and evaluation plan summery presented below. The draft inception report will be circulated to the LTO and the GCU and the NPD for review and comments before its finalization, no later than one month after the IW. The report should be cleared by the BH, LTO and the GCU and uploaded in Field Programme Management Information System (FPMIS) by the BH.

280. **Annual Work Plan and Budget (AWP/B).** The draft of the first AWP/B will be prepared by the PMO in consultation with the Project Task Force and reviewed at the project IW. IW inputs will be incorporated and the PMO will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the PMO will organize a project progress review and planning meeting for its review. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the GCU on a no-objection basis prior to uploading in FPMIS by the BH. The AWP/B must be linked to the project's RF indicators so that the project's work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year (See AWP/B format in Execution Agreement Annex 6.B).

281. **Project Progress Reports (PPR):** PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project's RF (Annex 1). The purpose of the PPR is to identify constraints, problems or bottlenecks that impede timely implementation and to take appropriate remedial action. In consultation with the PCC, the PMO will prepare semi-annual PPRs and submit them to the BH in a timely manner. Each PPR will be submitted by the BH to the LTO and GCU for review on a no-objection basis. In the event of LTO/GCU comments, the PMO will incorporate them and the revised PPR is re-submitted to the LTO for final endorsement prior to final approval by the GCU, uploading in FPMIS and sharing with stakeholders. (See PPR format in Execution Agreement Annex 6.A).

282. **Annual Project Implementation Review (PIR)**: The PMO will prepare the annual PIR covering the period July (the previous year) through June (current year). The draft PIR will then be reviewed by the LTO and subsequently submitted by the BH to the GCU for review and approval no later than 10 September each year. The GCU will upload the final report on FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The GCU will provide the updated format when the first PIR is due.

283. **Annual Financial and Operational Report**. The Government of Mongolia requires the project to submit an annual financial and operational report to MEGD by the 15 August.

284. **Technical Reports:** Technical reports will be prepared as part of Project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the PMO to the BH who will share it with the LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of said report for uploading to FPMIS. Copies of the technical reports will be distributed to Project partners as appropriate.

285. **Co-financing Reports:** The PMO will be responsible for collecting the required information and reporting on in-kind and cash co-financing as indicated in the project document/CEO Request. The PMO will submit the report to the BH in a timely manner on or before 31 July of every year covering the period July (the previous year) through June (current year). (See co-financing report format in Execution Agreement Annex 6.D).

286. **GEF-6 Tracking Tools**: Following the GEF policies and procedures, the tracking tools for Biodiversity (BD – 2), Land Degradation (LD – 2) and SFM/REDD will be submitted at three moments: (i) with the Project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the Project's terminal evaluation or terminal report. At Project mid-term and end, the tracking tools will be completed by the PMO in close consultation with the NPD.

287. **Terminal Report:** Within two months before the end date of the Execution Agreement, the PMO will submit to the BH a draft Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to Mongolia's ongoing work to develop PFM. This report will specifically include the findings of the final evaluation. A final Project review meeting should be held to discuss the draft Terminal Report before it is finalized by the PMO and approved by the FAO LTO and the GCU. (See instructions for Terminal Report in Execution Agreement Annex 6.E).

Monitoring and Evaluation Plan Summary

Table 9: Summary of the main M&E reports, responsible parties, timeframe and costs.

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Inception Workshop (IW)	PMO, supported by the LTO, BH, and GCU	Within three months of project start up	USD 10,000
Project Inception Report	PMO, LTO, BH, and GCU	No later than one month post IW.	-
Field based impact monitoring	PMO, MEGD and other relevant agencies to participate.	Periodically - to be determined at inception workshop.	USD 40,000

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Supervision visits and rating of progress in PPRs and PIRs	LTO, other participating units and GCU	Annual or as required	The visits of the LTO and the GCU will be paid by GEF agency fee. The visits of the NPC and CTA will be paid from the project travel budget
Project Progress Reports	PMO, with inputs from NPD, PCC and other partners	Semi-annual	USD 0 (as completed by CTA and PMO)
Project Implementation Review report	PMO supported by the LTO and cleared and submitted by the GCU to the GEF Secretariat	Annual	Paid by GEF agency fee
Co-financing Reports	PMO, NPD	Annual	0 (as completed by CTA and PMO)
Technical reports	PMO, LTO & Participating Units	As appropriate	-
Mid-term Evaluation	External Consultant, FAO Office for Evaluation in consultation with the project team including the GCU and other partners	At mid-point of project implementation	USD 40,000 for independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team including the GCU and other partners	At the end of project implementation	USD 40,000 for external, independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Terminal Report	CTA, LTO, TCSR Report Unit	At least two months before the end date of the Execution Agreement	0 (as completed by CTA and PMO)
Total Budget			**USD 130,000**

F. PROVISION FOR EVALUATION

288. An independent Mid-Term Evaluation (MTE) will be undertaken towards the middle of Project Year Three to review progress and effectiveness of implementation in terms of achieving Project objective, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term if necessary. FAO (the Office of Evaluation) will arrange for the MTE in consultation with project management. The evaluation will, *inter alia:*

(i) review the effectiveness, efficiency and timeliness of project implementation;
(ii) analyse effectiveness of partnership arrangements;
(iii) identify issues requiring decisions and remedial actions;
(iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
(v) highlight technical achievements and lessons learned derived from project design, implementation and management.

289. An independent final evaluation will be carried out three months prior to the terminal review meeting of the project partners. The final evaluation would aim to identify the project impacts and the sustainability of project results and the degree of achievement of long-term results. This evaluation would also have the purpose of indicating future actions needed to expand on the existing project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities responsible for related issues to ensure replication and continuity of the processes initiated by the project.

G. COMMUNICATION AND VISIBILITY

290. Giving high visibility to the project and ensuring effective communications in support of the Project's message it to be addressed through a number of activities that have been incorporated into the Project design. These include: (i) the recruitment of one PMO staff member responsible (inter alia) for communications and knowledge management; (ii) the preparation of documents and communication tools that capture the Project's economic, ecological and social benefits; (iii) two high level national conferences to raise awareness and lobby for participatory SFM, and; (iv) several awareness raising activities.

291. These inputs and activities will be integrated into the Project Workplan, and, as such, will come out of the Project's technical activities rather than be stand-alone activities.

5. SUSTAINABILITY OF RESULTS

A. SOCIAL SUSTAINABILITY

292. The Project respects and builds on existing social capital. It works with existing community frameworks and administrative frameworks. In particular, it provides existing communities with skills and capacities to take better control over their livelihoods and to engage, on their own terms, with the regional and national economy.

293. The focus of the Project is the Forest User Groups – the FUGs – which are basically existing sub-clans that traditionally have lived a semi-nomadic existence, with a focus on livestock-raising. These FUGs have traditionally harvested fire-wood, but on a very limited basis. This Project will give these FUGs the technical and organizational capacity to improve and diversify their current livelihoods. As such, the Project can only make positive contributions to social capacity. There is no aim to create new groups, networks or institutions.

294. The Project will neither support nor encourage any displacement of people nor lessening of access rights. No Project activities should have a negative impact on social capacity.

295. Finally, an important element of social sustainability is the Project's attention to gender issues. A senior expert on gender issues will be recruited (part-time) to develop an approach to gender, to ensure the Project is managed so as to have a positive impact on gender, and to establish the necessary monitoring framework to monitor gender.

B. ENVIRONMENTAL SUSTAINABILITY

296. The Project is designed to yield environmental benefits. That is the main rationale behind the Project. The Project aims to improve forest management, with forest ecosystem health and resilience a key target for the Project. The Project also aims to contribute directly to biodiversity conservation. Hence the Project should only have positive impacts on the environment.

297. There is no reason to expect that any of the Project activities should lead to pollution, watershed degradation, the introduction of alien species or any other form of environmental damage. This situation will be monitored using standard FAO procedures and mechanisms.

C. FINANCIAL AND ECONOMIC SUSTAINABILITY

298. A key approach of the Project is to develop ways for communities to generate increased revenue from sustainable forestry practices. The Project supports planning, management and skills development related to income-generating forestry practices. In particular, two Project outputs (2.4 and 3.4) focus entirely on developing business skills in the FUGs. Finally, the Project will also help local communities to access regional and national markets, by: (i) facilitating access to transport links; (ii) facilitating access to credit programmes for small-scale technology and; (iii) linking community producers of natural forest products to SME users.

D. SUSTAINABILITY OF CAPACITIES DEVELOPED

299. The Project builds on a proven approach to develop FUG capacity in Mongolia. The Government and FAO have been working on PFM with FUGs for several years, and have developed a full approach to develop this capacity.

300. The Project works with and through the local government structure to develop their capacity to take on the Project challenges after the FAO and GEF funding is completed. Notably, the Project works with the Forest Units at the Soum level. The Government is committed to establishing and equipping these, and in recent years it has developed these, establishing more than twenty. This Project will support these to perform their mandate – that is a *capacity development-by-doing* approach. After this Project, the Forest Units will have the technical and organizational skills to continue supporting FUG development. The Government has already allocated sufficient budget to cover these issues.

E. APPROPRIATENESS OF TECHNOLOGY INTRODUCED

301. This Project is not technology centred. However, new methods and practices will play an important role in helping the FUGs to develop. These include forest practices that have already been piloted in Mongolia and have been proven to be locally suitable. There is no reason to expect that any of the practices/methods introduced and developed will be inappropriate. This situation will be monitored using standard FAO procedures and mechanisms.

LIST OF KEY DOCUMENTATION PREPARED THROUGH THE GEF PREPARATORY GRANT (PPG)

Assessment of Aimag and Soum Forest Management Capacity, Dashzeveg Tserendeleg

Reference Data on the Sixteen Lead-FUGs

Biodiversity status in the area where community is implementing cooperative forest management, (translation) Amgalanbaatar Sukh

ANNEXES

Annex 1: Results Framework

<table>
<tr><th>Objective and Outcomes</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Assumptions</th></tr>
<tr><td rowspan="3">Project Objective: sustainable forest management in Mongolia's forest landscape secures the flow of multiple ecosystem services and benefits, including biological diversity, reduced degradation, and carbon storage, while enhancing resilience to climate change.</td><td>Improved SFM and Biodiversity Oriented management</td><td>Less than 100,000 hectares in 5 aimags under PFM, and all without a biodiversity orientation.</td><td>7 aimags or 2.5 million hectares, all managing forests with clear biodiversity conservation orientations.</td><td>Project reports</td><td rowspan="3">PFM program will continue to be priority despite possible changes in Government.</td></tr>
<tr><td>Musk deer population stabilized.</td><td>6525 (2012 census, for all Mongolia – 10 Aimags)</td><td>Population stable or increasing</td><td>National wildlife census</td></tr>
<tr><td>Direct and indirect avoided emissions and increased absorption of Carbon (C)</td><td colspan="2">
<table>
<tr><th></th><th>Baseline and Project Values (tCO_2e)</th><th>16 Lead FUGs (project 5 years)</th><th>16 FUGs (post-project years 6-20)</th><th>84 FUG under Outcome 3 (17 years) [1]</th><th>25% of Mongolia's northern Forests (17 years)</th><th>Grand total</th></tr>
<tr><td rowspan="3">Baseline</td><td>Total emissions baseline</td><td>8,476,519</td><td>25,429,557</td><td>19,487,559</td><td>130,466,709</td><td>183,860,344</td></tr>
<tr><td>Total C sequestration baseline</td><td>-1,324,687</td><td>-3,974,061</td><td>-19,890,000</td><td>-133,161,000</td><td>-158,349,748</td></tr>
<tr><td>Total Baseline Emissions/ Removals</td><td>7,151,832</td><td>21,455,496</td><td>-402,441</td><td>-2,694,291</td><td>25,510,596</td></tr>
<tr><td rowspan="3">Project</td><td>Total avoided emissions</td><td>-5,297,517</td><td>-15,892,557</td><td>-27,216,150</td><td>-13,046,671</td><td>-61,452,895</td></tr>
<tr><td>Additional carbon sequestration</td><td>-913,205</td><td>-2,739,615</td><td>-4,690,725</td><td>-6,658,050</td><td>-15,001,595</td></tr>
<tr><td>Total Project Removals</td><td>-6,210,722</td><td>-18,632,172</td><td>-31,906,875</td><td>-19,704,721</td><td>-76,454,490</td></tr>
<tr><td></td><td>Net Totals:</td><td>941,110</td><td>2,823,324</td><td>-32,309,316</td><td>-22,399,012</td><td>-50,943,894</td></tr>
</table>
</td><td>UN REDD reports and Project reports[2]</td></tr>
</table>

[1] final 2 project years + 15 post project

[2] Direct and indirect project-related carbon benefits will be measured through a combination of spatial analysis (through remote sensing/GIS and participatory mapping) and regular forest carbon stock measurement undertaken as part of Mongolia's new multipurpose REDD+-compatible national forest inventory.

Objective and Outcomes	*Indicator*	*Baseline*	*End of Project target*	*Source of Information*	*Assumptions*
Component 1: Strengthened institutional, policy and regulatory framework Outcome 1: Enabling institutional, policy and regulatory framework for Sustainable PFM (including increased revenue to local communities; reduced carbon emissions/increased carbon stocks, and; biodiversity conservation).	Government budgetary support to the forestry and wildlife sectors.	$9 million to all forestry activities.	$12 million	UN-REDD reports *(Emerton et al for baseline*)	Forest and wildlife sectors will continue to receive planned government support despite periodic pressures to cut government expenditures/ budget.
	Issuance of legal or regulatory instruments	Do not exist for co-management/PFM.	New resolution on co-management. New Guidelines to Aimag and Soum governments.	Project reports	
	New Unit established responsible for both biodiversity and carbon in PFM.	FDRC was recently established – it has a broad mandate for PFM, nothing for biodiversity, and is responsible temporarily for forest inventory.	FDRC has a Unit focussed on PFM, including mandate and capacity for biodiversity and carbon.	Project reports.	
Outputs: 1.1 National policy and decision-makers recognise importance of carbon storage and biodiversity conservation in PFM 1.2 Strengthened national policy on co-management 1.3 Ministerial approved Forestry Planning Guidelines to Soum and Aimag governments (that promote sustainable PFM). 1.4 A Unit in FDRC empowered to integrate biodiversity conservation and carbon storage into all participatory forestry in Mongolia					
Component 2: Models for participatory SFM that improve livelihoods, conserve	Increases in population of indicator species (musk deer, saker falcon) at prioritized 10 (FUGs).	Baseline to be established in first six months of project.	Musk deer population to increase by 10%. Salker falcon population to increase by 30%	Participatory monitoring undertaken by FUG.	

<table>
<tr><th>Objective and Outcomes</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Assumptions</th></tr>
<tr><td rowspan="3">biodiversity and reduce emissions/increase carbon stocks.

Outcome 2: Sustainable PFM is demonstrated that leads to improved livelihoods, biodiversity conserved and reduced carbon emissions/increased stocks.</td><td>Enhanced biodiversity conservation and management over 80,000 hectares (16 FUGs) of high biodiversity forest.</td><td>Low level awareness and no management activities.</td><td>10-year FUG SFM Plans have clear activities, targets and indicators for biodiversity.</td><td>FUG reports.</td><td rowspan="3"></td></tr>
<tr><td>Direct avoided emissions and increased absorption of Carbon (C) (in 16 FUGs)</td><td>
<table>
<tr><th>Baseline C emissions/ removals from the 16 FUGs</th><th>Emissions and Removals (tCO_2e/yr)</th></tr>
<tr><td>Emissions from deforestation</td><td>77,370</td></tr>
<tr><td>Emissions from forest degradation</td><td>1,617,934</td></tr>
<tr><td>Removals from forests</td><td>-264,937</td></tr>
<tr><td>Total baseline emissions/ removals</td><td>1,430,366</td></tr>
</table>
</td><td>Over the five years of the Project, over 6.2 million tCO2e removed/not emitted.</td><td>Project reports</td></tr>
<tr><td>Increased revenue from SFM activities</td><td>Across the 16 FUGs, the average revenue is $3161/FUG (see table 6)</td><td>100% increase in revenue, to at least $6,200 per FUG on average</td><td>Project reports and FUG business plans</td></tr>
<tr><td colspan="6">Outputs:
2.1 Continually improving forest planning and management in 16 advanced FUGs.
2.2 Simple REDD+-type incentives demonstrated in 16 advanced FUGs.
2.3 Biodiversity conservation practices demonstrated in 10 priority, advanced FUGs.
2.4 Increased revenue from timber and non-timber forest products at the 16 advanced FUGs.</td></tr>
<tr><td>Component 3: Expanding biodiversity friendly, climate</td><td>454,000 hectares of forestlands under improved multi-functional</td><td>16 FUGs have good but simple forest management, not including biodiversity</td><td>100 FUGs are all implementing 10-year SFM plans, fully covering biodiversity and carbon management.</td><td>Project reports</td><td></td></tr>
</table>

<table>
<tr><th>Objective and Outcomes</th><th>Indicator</th><th>Baseline</th><th>End of Project target</th><th>Source of Information</th><th>Assumptions</th></tr>
<tr><td rowspan="3">friendly participatory SFM.

Outcome 3: Sustainable PFM that conserves biodiversity, reduces degradation and reduces carbon emissions/increases carbon stocks expanded across significant areas of northern forests.</td><td>management (this includes the 100 FUGs from Outcomes 1 and 2)</td><td>and carbon management.</td><td></td><td></td><td rowspan="3"></td></tr>
<tr><td>Biodiversity conservation objectives mainstreamed into PFM Plans covering at least 454,000 hectares.</td><td>No mainstreaming of biodiversity in PFM plans.</td><td>100 FUGs are implementing SFM plans that appropriately account for biodiversity</td><td>Project reports</td></tr>
<tr><td>Capacity of local government to support PFM and FUGs (Capacity development scorecard – see Annex 9)</td><td>297 out of 792 total score possible (see score for each Unit in the table below. The complete table is provided in Annex 9. The maximum rating that each unit could have is 33).

<table><tr><th>Forest Unit</th><th>Score</th></tr><tr><td>Altanbulag soum</td><td>11</td></tr><tr><td>Mandal, Kharaa</td><td>18</td></tr><tr><td>Turgen soum</td><td>12</td></tr><tr><td>Erchimt-Ider</td><td>14</td></tr><tr><td>Delgermurun</td><td>15</td></tr><tr><td>Nars shinesen tugul</td><td>17</td></tr><tr><td>Khovd soum</td><td>10</td></tr><tr><td>Khentiin shines</td><td>16</td></tr><tr><td>Batshireet</td><td>16</td></tr><tr><td>Batsumber soum</td><td>15</td></tr><tr><td>Mongonmorti</td><td>13</td></tr></table></td><td>To increase by 30% overall, to 386 by end of project.</td><td>Project reports</td></tr>
</table>

Objective and Outcomes	*Indicator*	*Baseline*	*End of Project target*	*Source of Information*	*Assumptions*
		Tosontsengel soum 9 Inter soum 13 Inter-soum 9 Khongor soum 11 Inter soum 11 Inter soum 8 Bulgan soum 12 Khutag-Undor 12 Khyalganat 10 Inter soum 12 Ikh-tamir 9 Erdenemandal 11 Bayanshishged 13 **297**			
	Direct and indirect avoided emissions and increased absorption of Carbon (in 84 FUGs)		Over the five years of the Project, over 8,1 million tCO2e removed/not emitted.		
Outputs: 3.1 Eight PFM Extension Offices (established in inter-soum Forestry Units); 3.2 FUG Associations at Soum, Aimag and National Level; 3.3 Formal PFM methodology in Mongolia enhanced with measures to conserve biodiversity and reduce carbon emissions/increase carbon stocks; 3.4 84 simple 3-year PFM Plans approved, 'Certificates' issued and Plans implemented by FUGs (resulting in: revenues increase, forest ecosystems conserved, biodiversity conserved and carbon emissions reduced/sequestration increased); 3.5 84 10-year SFM Plans prepared and approved.					
Outcome 4: M&E and information dissemination	Number of visitors accessing project website	0	To be determined at project inception	Website information	Project technical, coordination and steering committees are established and project and project
	Midterm and Final evaluations carried out and recommendations incorporated	No midterm or final evaluations implemented	Midterm review carried out by end of third year of project implementation. Final evaluation carried out by 5th year of project implementation	FAO	

Objective and Outcomes	*Indicator*	*Baseline*	*End of Project target*	*Source of Information*	*Assumptions*
	into this and future projects				has started implementation.
	Number of "lessons learned"/"Best practice" documents published and disseminated	0	At least 4	Number of downloads from project website Information from training sessions	
Outputs: 4.1 M&E system operating and providing systematic information about meeting project outcome and output targets 4.2 Midterm and final evaluations 4.3 Information dissemination					

Annex 2: Work Plan (results based)

Outcomes, Outputs and Indicative Activities	Co-finance	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Outcome 1: Enabling institutional, policy and regulatory framework for sustainable PFM (including increased revenue to local communities; reduced carbon emissions/increased carbon stocks and; biodiversity conservation).																					
Output 1.1 National policy and decision-makers recognise importance of carbon storage and biodiversity conservation in PFM																					
1.1.1 Prepare documents and communication tools that capture the economic, ecological and social benefits of participatory SFM	NG				■					■				■				■			
1.1.2 High level visit to other country to observe economic, ecological and social benefits of PFM	NG						■														
1.1.3 Preparation, approval and initial implementation of National REDD+ Roadmap - all co-financed	NG, FAO																				
1.1.4 Study and workshop on ecosystem services and innovative financing mechanisms for biodiversity conservation in northern forests	NG, FAO								■	■											
1.1.5 Two high level national conferences to raise awareness and lobby for participatory SFM	NG					■												■			
Output 1.2 Lessons from Outcomes 2 and 3 related to co-management and sustainable forest harvesting are fed into national policy																					
1.2.1 Establish inter-sectoral technical working group on FUG economic activities	NG								■												
1.2.2 Analyse specific barriers to increased FUG involvement in thinning and harvesting activities	NG											■									
1.2.3 Draft and promote policy recommendations to allow FUGs to directly benefit from sustainable timber harvesting	NG, FAO													■	■	■	■				
Output 1.3 Ministerial approved Forestry Planning Guidelines to Soum and Aimag governments (that promote sustainable PFM).																					
1.3.1 Review of current forestry guidelines from national government to local governments	NG, AG, SG								■												
1.3.2 Review legislation and regulations pertaining to biodiversity conservation in forests	NG, AG, SG									■											
1.3.3 Based on lessons learnt under Outcome 2, revise and negotiate participatory approval of Guidelines to local governments, ensuring approach to PFM, FUG, biodiversity and carbon is fully integrated into all local government forestry activities, particularly into the preparation of Soum and Aimag Forest Plans	NG, AG, SG											■	■	■	■						

Outcomes, Outputs and Indicative Activities	Co-finance	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 1.4 A Unit in FDRC empowered to integrate biodiversity conservation and carbon storage into all participatory forestry in Mongolia																					
1.4.1 Train two FDRC members in forestry biodiversity conservation	NG				■			■													
1.4.2 Preparation of REDD+ compliant national forest inventory and data base - all co-financed	NG, GiZ, FAO			■	■	■	■														
1.4.3 Propose revision to ToR of concerned staff members in FDRC	NG									■											
1.4.3 Establish a Unit inside FDRC responsible for conserving global forest ecosystem services (biodiversity and carbon)	NG												■								
Outcome 2: Sustainable PFM is demonstrated that leads to improved livelihoods, biodiversity conserved and reduced carbon emissions/increased stocks																					
Output 2.1 Continually improving forest planning and management in 16 advanced FUGs.																					
2.1.1 Refresher training as necessary on: thinning, cleaning, basic sylvicultural practices, fire management, biodiversity and carbon friendly grazing systems	AG, SG, GiZ, Fin					■	■	■	■									■	■	■	■
2.1.2 FUG continue to implement existing simple 3-year management plans (harvesting and sales of dead-wood and NTFP, patrolling for fires, poaching and logging, etc) - all entirely undertaken by FUG	FUGs	■	■	■	■	■															
2.1.3 Prepare participatory land-use maps/sketch maps (suitable as a basis for basic REDD+ activities)	NG, AG, SG, FAO, GiZ					■	■														
2.1.4 10-year SFM Plans (that fully mainstream biodiversity conservation and reducing carbon emissions/increasing stocks) prepared and approved for the 16 FUGs	AG, SG							■	■												
2.1.5 Training on monitoring, followed by systematic monitoring of forest quality, forest change, fire, pests, poaching, logging	FUG							■	■					■				■			
2.1.6 In line with 10-year plan, and incentivized by simple REDD incentives (see Activity 2.2.4) implement forest management activities that lead to reduced carbon emissions/increased stocks (for example piloting of grazing systems that are carbon and biodiversity friendly).	FUG									■	■										

Outcomes, Outputs and Indicative Activities	Co-finance	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 2.2 Simple REDD+-type incentives demonstrated in 16 advanced FUGs																					
2.2.1 Training and awareness raising for FUG members and local governments on REDD+ benefit distribution systems	NG, AG, SG, FAO			■	■	■	■														
2.2.2 Design of *simple* benefit distribution system together with participatory monitoring system	NG, FAO					■	■	■													
2.2.3 Facilitate signature of Agreements between FUG, Aimag Government and Project	NG							■	■	■											
2.2.4 Under the Agreement (from 2.2.3), provide incentives to 16 FUGs in compensation for FUG actions under 2.1.2, 2.1.5 and 2.1.6.	NG									■	■										
2.2.5 Monitor all aspects of REDD+ incentives and prepare a comprehensive lessons learnt document	NG, FAO										■				■				■		
Output 2.3 Biodiversity conservation practices demonstrated in 10 priority, advanced FUGs.																					
2.3.1 Training and awareness raising for FUG members and local governments	GiZ			■	■	■	■														
2.3.2 establish biodiversity conservation management, as part of PFM, at the ten most important FUGs	GiZ					■	■														
a Identify high conservation value forests (habitats, etc..).						■	■	■													
b Determine biodiversity management activities that can maintain these values.								■	■												
c Measure these biodiversity values.																					
d Implement biodiversity management and conservation activities.										■	■	■	■	■	■	■	■				
e Participatory monitoring.								■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.3.3 Valuation of ecosystem services at two selected FUGs	GiZ							■	■												
Output 2.4 Increased revenue from timber and non-timber forest products at the 16 advanced FUGs.																					
2.4.1 Training, negociation and facilitation to increase ability to access markets in soums and aimags for deadwood and NTFPs	AG, SG					■	■	■	■												
2.4.2 Training and skills provision to link FUG to MAI national programmes to (i) improve road infrastructure (ii) provide loans for wood collection and processing equipment (iii) develop private sector capacity to manufacture chipboard and wood-fuel briquettes	NG (MAI), AG, SG							■	■	■	■										
2.4.3. Priority FUGs obtain small-scale wood collecting and processing equipment under MAI soft loan programme - all co-financed	NG (MAI)									■	■										

Outcomes, Outputs and Indicative Activities	Co-finance	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
2.4.4 In at least 2 FUGs, negotiate co-management agreement between FUG and private enterprise, so that FUG can fully benefit from sustainable timber harvesting activities	NG, AG, SG											■	■								
Outcome 3: Sustainable PFM that conserves biodiversity and reduces carbon emissions expanded across significant areas of northern forests.																					
Output 3.1 8 PFM Extension Offices (established in inter-soum Forestry Units).																					
3.1.1 Train PFM Officers (one from each of eight of the existing offices)	AG, SG, GiZ		■	■																	
3.1.2 Equip 8 Extension Offices with equipment	AG, SG		■	■																	
3.1.3 Develop detailed plan to support and activate at least 84 FUGs	AG, SG			■	■																
Output 3.2 FUG Associations at Soum, Aimag and National Level;																					
3.2.1 Basic training support to Associations	AG, SG					■	■	■	■												
3.2.2 Facilitate inter-association meetings and networking	SG							■	■	■											
3.2.3 National meeting of FUG Associations	NG																■				
Output 3.3 Formal PFM methodology in Mongolia enhanced with measures to conserve biodiversity and reduce carbon emissions/increase carbon stocks																					
3.3.1 Updated PFM guidelines and training material (accounting for need to conserve biodiversity and reduce carbon emissions/increase stocks)	NG, GiZ			■	■																
3.3.2 Train national and local staff on the updated guidelines and training material	NG, FAO				■	■	■														
3.3.3 Train Field Facilitators and PFM Officers on the updated guidelines and training material	NG, FAO				■	■	■														
Output 3.4 84 simple 3-year PFM Plans approved, 'Certificates' issued and Plans implemented by FUGs (resulting in: revenues increase, forest ecosystems conserved, biodiversity conserved and carbon emissions reduced/sequestration increased);																					
3.4.1 Undertake initial training and awareness raising in 84 FUGs	AG, SG						■	■													
3.4.2 Negotiate and facilitate signature of FUG 84 Constitutions	AG, SG						■	■													
3.4.3 Undertake rapid carbon assessment and rapid biodiversity survey in each FUG	AG, SG							■	■												
3.4.4 Prepare 84 simple forest management plans (including activities related to biodiversity conservation and linking into REDD+) that cover the 3-year period and negotiate/issue 83 "3-year Certificates"	AG, SG									■	■										

Outcomes, Outputs and Indicative Activities	Co-finance	Year 1				Year 2				Year 3				Year 4				Year 5			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
3.4.5 FUGs implement the management plans: harvesting and selling dead-wood and NTFPs, patrolling for fires, poaching and logging, etc	FUG																				
3.4.6 Implement priority biodiversity conservation actions in at least 10 FUGs	GiZ, AG, SG																				
3.4.7 Training on management and business skills (all co-financed)	NG, GiZ																				
3.4.8 Identification of priority products and markets and preparation of simple business plan	AG, SG																				
Output 3.5 84 10-year SFM Plans prepared and approved.																					
3.5.1 Final demaracation of FUG boundaries	NG, AG, SG, FAO, GiZ																				
3.5.2 Prepare participatory land-use maps/sketch maps (suitable as a basis for basic REDD+ activities)	NG, AG, SG, FAO, GiZ																				
3.5.3 10-year SFM Plans (that fully mainstream biodiversity conservation and reducing carbon emissions/increasing stocks) prepared and approved for the 84 FUGs	NG, AG, SG																				

Annex 3: Results-Based Budget

Oracle code and description	Outcome 1					Outcome 2					Outcome 3						Comp 4	PM	GEF
	1.1	1.2	1.3	1.4	Total	2.1	2.2	2.3	2.4	Total	3.1	3.2	3.3	3.4	3.5	Total			
5300 Salaries professionals																			
National Project coordinator and senior PFM professional	8,862	8,862	8,862	8,862	35,446	8,862	8,862	8,862	8,862	35,446	8,862	8,862	8,862	8,862	8,862	44,308	0		**115,200**
Field Facilitators (4)					0	25,547	25,547	25,547	25,547	102,187	25,547	25,547	25,547	25,547	25,547	127,733	0		**229,920**
REDD Incentives Manager					0		29,568			29,568						0	0		**29,568**
Forest biodiversity ecosystems expert (component 2 technical support)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,920	**73,920**
National Operations and administrative officer					0					0						0	0	76,320	**76,320**
Finance and Operations assistant					0					0						0	0	65,000	**65,000**
driver	2,848	2,848	2,848	2,848	11,391	2,848	2,848	2,848	2,848	11,391	2,848	2,848	2,848	2,848	2,848	14,238	0		**37,020**
5300 Sub-total salaries professionals	**11,709**	**11,709**	**11,709**	**11,709**	**46,837**	**37,256**	**66,824**	**37,256**	**37,256**	**178,592**	**37,256**	**37,256**	**37,256**	**37,256**	**37,256**	**186,279**	**0**	**215,240**	**626,948**
5570 International Consultants																			
Chief Technical Adviser and PFM Adviser	14,769	14,769	14,769	14,769	59,077	14,769	14,769	14,769	14,769	59,077	14,769	14,769	14,769	14,769	14,769	73,846	0	0	**192,000**
External M&E consultant (Mid and final)					0					0						0	71,600	0	**71,600**
Law and policy expert (Component 1 technical support)		12,500			12,500					0						0	0		**12,500**
Expert on innovative biodiversity conservation financing approaches (mostly component 1)	12,000				12,000			6,000		6,000						0	0		**18,000**
REDD (forest monitoring expert, Componet 2, technical support)					0	22,500	0	0	0	22,500						0	0		**22,500**
REDD (benefit distributions expert, component 2, technical support)					0	9,000	9,000		9,000	27,000						0	0		**27,000**
Forest biodiversity ecosystems expert (component 2 technical support)	3,250				3,250	3,250		19,500	3,250	26,000				3,250		3,250	0		**32,500**

Oracle code and description	Outcome 1					Outcome 2					Outcome 3						Comp 4	PM	GEF
	1.1	1.2	1.3	1.4	Total	2.1	2.2	2.3	2.4	Total	3.1	3.2	3.3	3.4	3.5	Total			
Livelihoods business expert (Component 2 and 3 technical support)					0	5,000			15,000	20,000				10,000		10,000	0		30,000
Sub-total international Consultants	30,019	27,269	14,769	14,769	86,827	54,519	23,769	40,269	42,019	160,577	14,769	14,769	14,769	28,019	14,769	87,096	71,600	0	406,100
National consultants					0														
External M&E consultant (Mid and final)					0					0						0	8,400		8,400
Law, policy and institutional expert (Component 1 technical support)	2,400	2,400	2,400	2,400	9,600					0						0			9,600
REDD (forest carbon monitoring expert, Componet 2, technical support)					0	9,000	0			9,000						0			9,000
REDD (benefit distributions expert, component 2, technical support)					0		9,000			9,000						0			9,000
Communications and knowledge management advisor	1,569	1,569	1,569	1,569	6,277	1,569	1,569	1,569	1,569	6,277	1,569	1,569	1,569	1,569	1,569	7,846			20,400
Livelihoods business expert (Component 2 and 3 technical support)					0	5,100			5,100	10,200				10,200	0	10,200			20,400
Gender expert (all components)	1,569	1,569	1,569	1,569	6,277	1,569	1,569	1,569	1,569	6,277	1,569	1,569	1,569	1,569	1,569	7,846		0	20,400
Sub-total national Consultants	5,538	5,538	5,538	5,538	22,154	17,238	12,138	3,138	8,238	40,754	3,138	3,138	3,138	13,338	3,138	25,892	8,400	0	97,200
5570 Sub-total consultants	35,558	32,808	20,308	20,308	108,981	71,758	35,908	43,408	50,258	201,331	17,908	17,908	17,908	41,358	17,908	112,988	80,000	0	503,300
5650 Contracts																			
Output 1.1: 2 high level conferences	23,000				23,000					0						0			23,000
Output 1.1: Study and workshop on innovative biodiversity conservation financing/PES	20,000				20,000					0						0			20,000
Output 1.2: 1 national working group		18,000			18,000					0						0			18,000
Output 1.3 support guidelines preparation			10,000		10,000					0						0			10,000

Oracle code and description	Outcome 1					Outcome 2					Outcome 3						Comp 4	PM	GEF
	1.1	1.2	1.3	1.4	Total	2.1	2.2	2.3	2.4	Total	3.1	3.2	3.3	3.4	3.5	Total			
Output 2.1: participatory mapping					0	32,000				32,000						0			32,000
Output 2.1: prepare 10 year SFM plans					0	16,000				16,000						0			16,000
Output 2.2: REDD type incentives					0		448,000			448,000						0			448,000
Output 2.3 Ecosystem valuation assesment in 2 FUGs					0			8,000		8,000						0			8,000
Output 2.3: establish biodiversity conservation management at the ten most important FUGs					0			200,000		200,000						0			200,000
Output 2.3: participatory monitoring in 10 FUGs					0			40,000		40,000						0			40,000
Output 2.4: facilitate co-managemetn arrangements					0				10,000	10,000						0			10,000
Output 3.2 Support to FUG associations					0					0		30,000	30,000			60,000			60,000
Output 3.3 Update guidelines and trainign material					0					0			12,000			12,000			12,000
Output 3.4 support negociations and preparation of simple 3 year planning, including Carbon and BD rapid assessments					0					0				100,800		100,800			100,800
Output 3.4 implement priority biodiversity conservation actions in 10 FUGs					0					0				125,000		125,000			125,000
Output 3.5: 84 10-year SFM Plans prepared and approved.					0					0					84,000	84,000			84,000
5650 Sub-total Contracts	43,000	18,000	10,000	0	71,000	48,000	448,000	248,000	10,000	754,000	0	30,000	42,000	225,800	84,000	381,800	0	0	1,206,800
5900 Travel																			
Travel - Consultants – International	15,000	15,000	15,000	15,000	60,000	15,000	15,000	15,000	15,000	60,000	15,000	15,000	15,000	15,000	15,000	75,000			195,000
Travel - Consultants – National	6,154	6,154	6,154	6,154	24,615	6,154	6,154	6,154	6,154	24,615	6,154	6,154	6,154	6,154	6,154	30,769			80,000
Travel - Consultants - PP TCDC/TCCT					0					0						0			0

Oracle code and description	Outcome 1					Outcome 2					Outcome 3						Comp 4	PM	GEF
	1.1	1.2	1.3	1.4	Total	2.1	2.2	2.3	2.4	Total	3.1	3.2	3.3	3.4	3.5	Total			
Travel – Training					0					0						0			0
Tavel - Consultants - National Project Personnel	7,692	7,692	7,692	7,692	30,769	7,692	7,692	7,692	7,692	30,769	7,692	7,692	7,692	7,692	7,692	38,462		0	100,000
Travel - Non Staff	15,000				15,000	15,000				15,000	15,000					15,000			45,000
5900 Sub-total travel	43,846	28,846	28,846	28,846	130,385	43,846	28,846	28,846	28,846	130,385	43,846	28,846	28,846	28,846	28,846	159,231	0	0	420,000
5023 Training and workshops																			
M &E: Inception workshop, Annual planning workshops, Final workshop		0	0	0	0	0	0	0	0	0						0	50,000	0	50,000
1.1.2 High level visit to study PFM in other countries	60,000				60,000					0						0			60,000
1.4.Train FDRC Staff				6,000	6,000					0						0			6,000
2.1.1 refresher training for 16 FUGs					0	48,000				48,000						0			48,000
2.1.5 training on monitoring					0	12,000				12,000						0			12,000
2.2.1 Training on REDD					0		12,000			12,000						0			12,000
2.3.1 Training on Biodiversity					0			18,000		18,000						0			18,000
2.4 training on business skills etc					0				44,000	44,000						0			44,000
3.1 train PFM officers					0					0	30,000					30,000			30,000
3.3 training on new materials					0					0			20,000			20,000			20,000
3.4 train new FUG members					0					0			117,316			117,316			117,316
5023 Sub-total training	**60,000**	**0**	**0**	**6,000**	**66,000**	**60,000**	**12,000**	**18,000**	**44,000**	**134,000**	**30,000**	**0**	**137,316**	**0**	**0**	**167,316**	**50,000**	**0**	**417,316**
6000 Expendable procurement																			
Output 2.1 SFM Package to 16 FUGs					0	24,000				24,000						0			24,000
Output 3.1 8 PFM Extension offices equipment package (motorbike, PC, printer, camera, GPS, books, posters,)					0					0	88,000					88,000			88,000
Output 3.4 84 simple PFM packages					0					0					84,000	84,000			84,000
FUG field equipment (silvicultural equipment)												18,500				18,500			18,500
6000 Sub-total expendable procurement	**0**	**0**	**0**	**0**	**0**	**24,000**	**0**	**0**	**0**	**24,000**	**88,000**	**18,5000**	**0**	**0**	**84,000**	**190,500**	**0**	**0**	**214,500**

Oracle code and description	Outcome 1					Outcome 2					Outcome 3						Comp 4	PM	GEF
	1.1	1.2	1.3	1.4	Total	2.1	2.2	2.3	2.4	Total	3.1	3.2	3.3	3.4	3.5	Total			
6100 Non-expendable procurement																			
PC Package - national office (5 desk stations, printer, server, etc)	1,346	1,346	1,346	1,346	5,385	1,346	1,346	1,346	1,346	5,385	1,346	1,346	1,346	1,346	1,346	6,730	0	0	17,500
6100 Sub-total non-expendable procurement	**1,346**	**1,346**	**1,346**	**1,346**	**5,385**	**1,346**	**1,346**	**1,346**	**1,346**	**5,385**	**1,346**	**1,346**	**1,346**	**1,346**	**1,346**	**6,730**	**0**	**0**	**17,500**
6300 GOE budget																			
Utilities (telephone, electricity)	4,615	4,615	4,615	4,615	18,462	4,615	4,615	4,615	4,615	18,462	4,615	4,615	4,615	4,615	4,615	23,077			60,000
Vehicle operation rental (field car 4X4 2 nos)	9,231	9,231	9,231	9,231	36,923	9,231	9,231	9,231	9,231	36,923	9,231	9,231	9,231	9,231	9,231	46,154			120,000
6300 Sub-total GOE budget	**13,846**	**13,846**	**13,846**	**13,846**	**55,385**	**13,846**	**13,846**	**13,846**	**13,846**	**55,385**	**13,846**	**13,846**	**13,846**	**13,846**	**13,846**	**69,231**	**0**	**0**	**180,000**
TOTAL	**209,305**	**106,555**	**86,055**	**82,055**	**483,972**	**300,052**	**606,770**	**390,702**	**185,552**	**1,483,076**	**232,202**	**147,702**	**278,518**	**348,452**	**267,202**	**1,274,076**	**130,000**	**215,240**	**3,586,364**

SUBTOTAL Comp 1	483,972	13.5%
SUBTOTAL Comp 2	1,483,076	41.4%
SUBTOTAL Comp 3	1,274,076	35.5%
SUBTOTAL Comp 4	130,000	3.6%
SUBTOTAL Project Management	215,240	6.0%
TOTAL GEF	**3,586,364**	100.0%

Annex 4: Description of Biodiversity

This Annex provides summary information on the status of biodiversity in the Northern Forests (part 1) and in the 16 advanced FUG areas (part 2)

1. Biodiversity in Northern Forests

The northern forests are part of a transitional zone between the Siberian taiga (to the north) and grasslands to the south. They typically grow on mountain slopes between 800 and 2,500m above sea level. Because they belong to the southern edge of Siberia's vast forests they are precious from a global environmental perspective. The forests contain more than 600 species of medicinal herbs, and about 400 species of food and other herbs. Floral diversity is significant both in the forest under-storey and the adjacent grasslands, including threatened species such as lady's slipper orchids as well as wild peonies, anemones, globe flowers and carpets of iris. The Mongolian Red Book lists 128 species of plants as endangered and threatened. This floral diversity supports a rich but still mostly unknown insect fauna.

The northern forests lie in two distinct eco-regions – Altai-Sayan and Hangay. Altai-Sayan is composed of high mountains, forest steppes, and mountainous forests at higher altitudes that transition into steppe and desert steppe at lower altitudes. Seventeen unique ecosystems are found within the eco-region (stretching also over parts of Russia and China) leading to particularly rich biodiversity. Species such as the snow leopard, Altay argali, and Siberian Ibex make their homes here. However, most of the northern forests lie in Hangay. Hangay eco-region encompasses almost 260,000 square kilometers and is located within the northwestern part of Mongolia. It is composed of mountain ranges and both forest and meadow steppe. The region is rich in vegetation with forests of larch and pine trees, and steppe grasses including *Stipa* and *Cleistogenes* species. Wildlife found in the region includes rodents such as the mountain hare, field mouse, and red squirrel; larger mammals such as the wild boar, red deer, and roe deer also make their home here. This eco-region is currently considered underrepresented within the protected areas network. Hangay forests are rich in species and over 1,200 plant species have been recorded in this region. Coniferous forests are found on the northern slopes of the region's mountains while the southern slopes are covered with steppe vegetation. Larch (*Larix sibirica*) is the dominant tree but in the open steppe, patches of forest with pine, particularly on sandy ground are found.

Figure 1 shows the location of Mongolia's forests. Figure 2 shows the location of Mongolia's protected areas. Approximately 3 million of the 10 million hectares of the northern forests lie inside a protected area. The high correlation between forests and protected area indicates the conservation value of the forests.

The global significance of the northern forests are also indicated by their inclusion in several global hotspot lists. For example, there are 16 *important bird areas* (IBAs) in Khuvsgul, Bulgan, Selenge and Khenti Aimags alone (Figure 3). The Altai-Sayan ecoregion a WWF Global Ecoregion and is considered one of the last remaining untouched areas of the world.

Information on specific species and status is greatly lacking. However Tables 1 – 5 provide lists with some information on mammals, birds, fish, reptiles and plants in the Northern

forests. As can be seen, there are four mammals[1] on the IUCN global red list and twelve birds on the IUCN global red list.

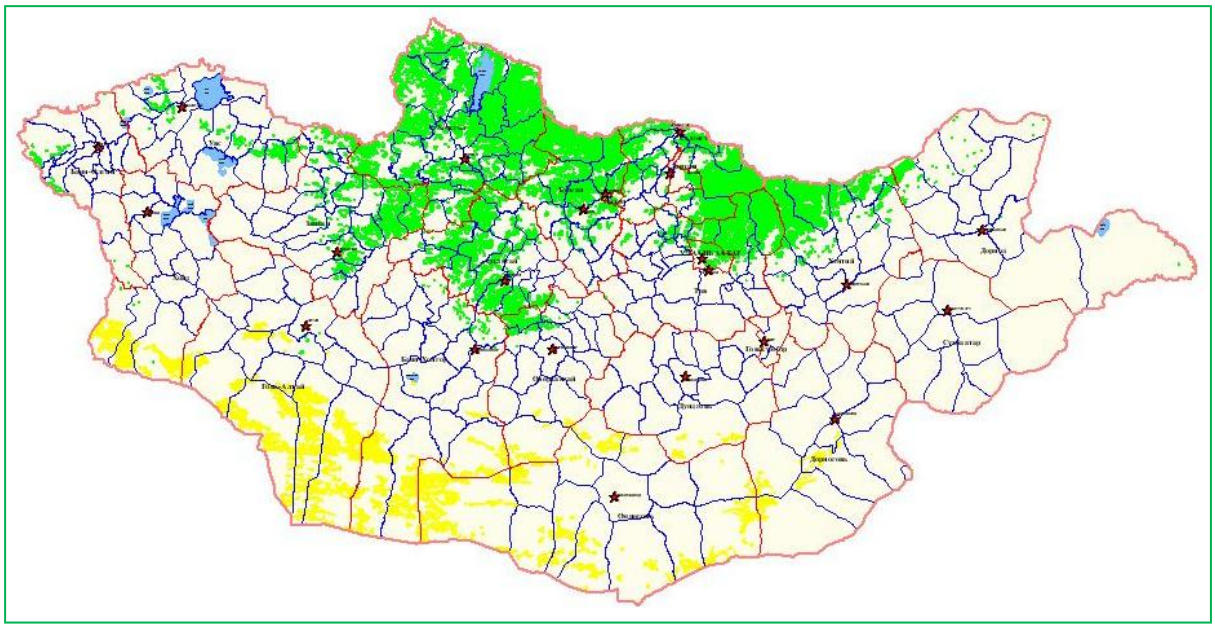
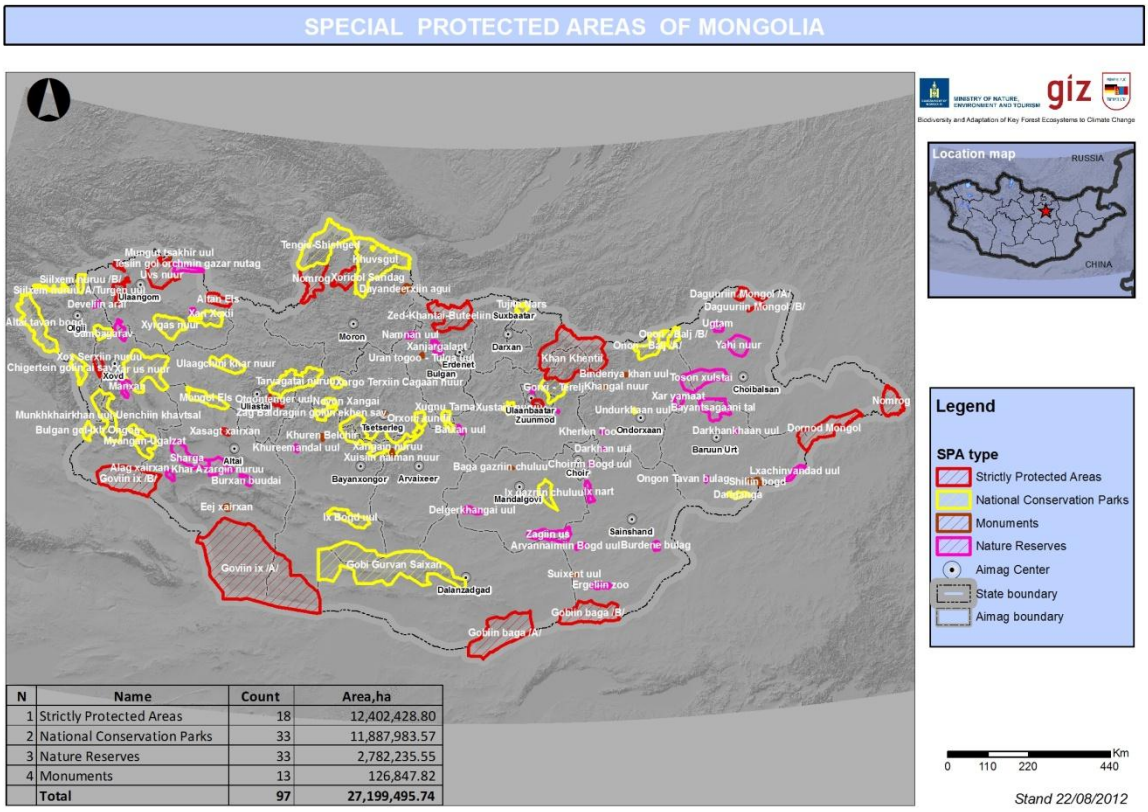


Figure 3 - map showing location of forests

[1] Although, it has to be noted, the existence of snow leopard is contested and at best limited to extreme parts of this region.



N	Name	Count	Area,ha
1	Strictly Protected Areas	18	12,402,428.80
2	National Conservation Parks	33	11,887,983.57
3	Nature Reserves	33	2,782,235.55
4	Monuments	13	126,847.82
	Total	97	27,199,495.74

Figure 4: showing location of protected areas.

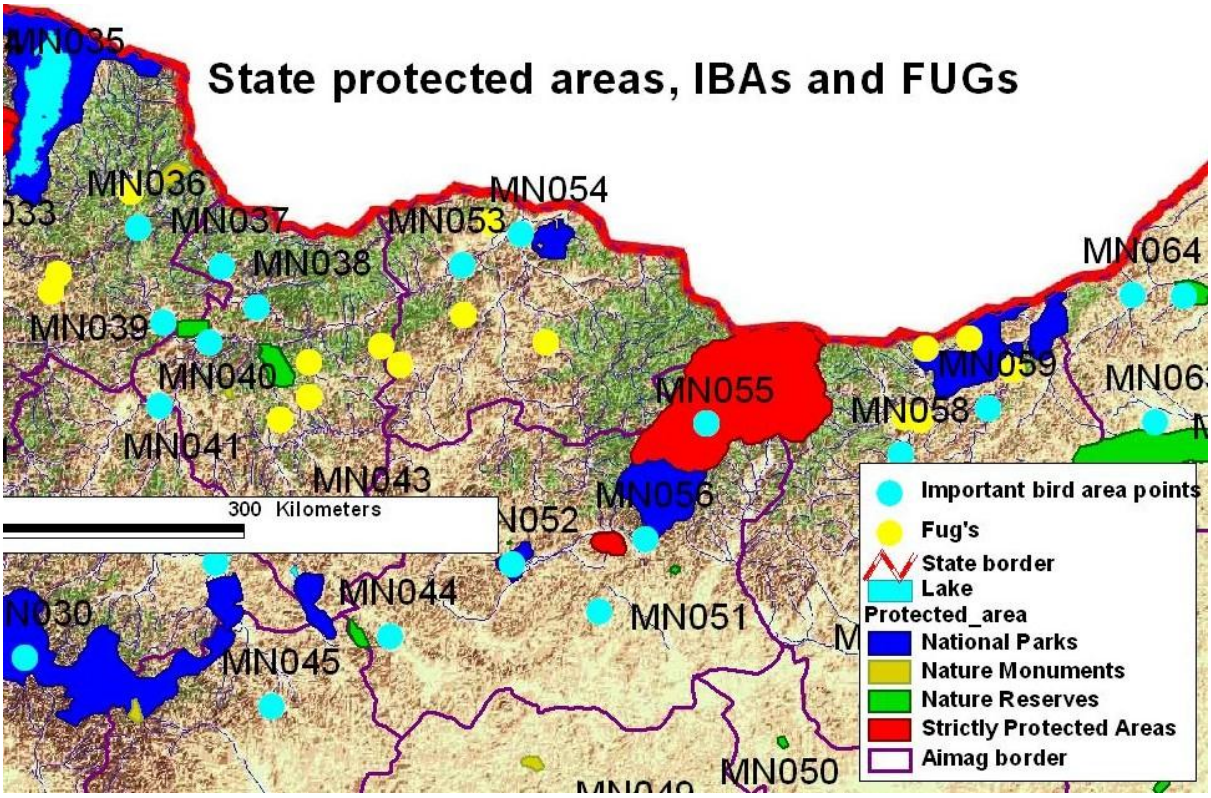


Figure 5: Map showing location of IBAs in northern forests

Table 10: Mammals and status in northern forests

ID	Latin name	English name	IUCN list	Regional status
1	*Pteromys volans*	Sibirian flying squirrel	NT	DD
2	*Sciurusvulgaris*	Eurasian red squirrel	NT	NT
3	*Myopus schisticolor*	Wood lemming	NT	DD
4	*Micromys minutus*	Eurasian harvest mouse	NT	DD
5	*Lynx lynx*	Eurasian lynx	NT	NT
6	*Otocolbus manul*	Pallas's cat	NT	NT
7	*Uncia uncia*	Snow leopard	EN, C2a(i)	EN
8	*Cuon alpinus*	Asiatic wild dog	EN, C2a(i)	RE
9	*Gulo gulo*	Wolverine	VU, A2c	LC
10	*Lutra lutra*	Eurasian otter	NT	DD
12	*Moschus moschiferus*	Siberian musc deer	VU, A1acd	EN

Table 11: Birds and Status in Northern Forests

Birds				
#	Latin	English	IUCN List	Regional status
1	*Anser cygnoides*	Swan Goose	VU	NT
2	*Anas falcate*	Falcated Duck	NT	NT
3	*Anas formosa*	Baikal Teal	VU	VU
4	*Circus macrourus*	Pallid Harrier	NT	DD
5	*Aquila clanga*	Greater Spotted Eagle	VU	EN
6	*Aquila heliaca*	Imperial Eagle	VU	VU
7	*Haliaeetus leucoryphus*	Pallas's Sea-Eagle	VU	EN
8	*Aegypius monachus*	Cinereous Vulture	NT	LC
9	*Falco cherrug*	Saker Falcon	VU	VU
10	*Falco vespertinus*	Red-footed Falcon	NT	NA
11	*Falco naumanni*	Lesser Kestrel	VU	LC
12	*Coturnix japonica*	Japanese Quail	NT	LC
13	*Grus vipio Pall.*	White-naped Crane	VU	VU
14	*Grus monacha*	Hooded Crane	VU	VU
15	*Crex crex*	Corn Crake	NT	DD
16	*Otis tarda*	Great Bustard	VU	VU
17	*Limnodromus*	Asian Dowitcher	NT	VU

	semipalmatus			
18	*Limosa limosa*	Black-tailed Godwit	NT	LC
19	*Numenius madagascariensis*	Far Eastern Gurlew	VU	LC
20	*Emberiza aureola*	Yellow-breasted Bunting	VU	NT

Table 12: Fish and status in northern forest area

Fishes					
ID	**Latin name**	**English name**	**Mongolian name**	**IUCN list**	**Regional status**
1	*Acipenser baerii*	Siberian sturgeon	Шивэр хилэм	VU	CR
2	*Leuciscus idus*	Ide	Бух загас		NT
3	*Thymallus arcticus*	Arctic grayling	Шивэр хадран		NT
4	*Thymallus grubei*	Amur grayling	Амарын хадран		EN
5	*Thymallus nigrescens*	Huvsgul grayling	Хөвсгөл хадран	EN	EN
6	*Brachymystax lenok*	Lenok	Зэвэг		VU
7	*Hucho taimen*	Taimen	Тул		EN

Table 13: Reptiles and amphibians in northern forests

ID	**Latin name**	**English name**	**IUCN list**	**Regional status**
1	*Salamandrella keyserlingii*	Siberian salamander	LC	VU
2	*Hyla japonica*	Far Eastern tree frog	LC	VU
3	*Natrix natrix*	Grass snake	LC	NT

Table 14: Plants and status in northern forests

Plants				
ID	***Latin name***	**English name**	**IUCN list**	**Regional status**
1	*Calypso bulbosa*	Calypso orchid	Not evaluated	CR
2	*Dactylorhiza fuchsii*	Fuch's orchis	Not evaluated	CR
3	*Neottia camtshatea*	Kamchatka Neottia	Not evaluated	CR
4	*Neottianthe cucullata*	Two leaf Hoodshaped Orchid	Not evaluated	CR
5	*Platanthera bifolia*	Lesser Butterfly orchid	Not evaluated	CR

6	*Mitella nuda*	Naked Miterwort	Not evaluated	CR
7	*Oxycoccus microcarpus*	Littlefruit Cranberry or Mossberry	Not evaluated	CR
8	*Lancea tibetica*	Tibetan Lancea	Not evaluated	CR
9	*Saussurea dorogostaiskii*	… none	Not evaluated	CR
10	*Diphasiastrum alpinum*	Alpine Club moss	Not evaluated	EN
11	*Diphasiastrum complanatum*	Northern Running pine or Christma Green	Not evaluated	EN
12	*Lycopodium clavatum*	Common club moss	Not evaluated	EN
13	*Abies sibirica*	Siberian Fir	LC	EN
14	*Pinus pumila*	Siberian Dwarf Pine	LC	EN
15	*Juniperus pseudosabina*	Xinjiang Juniper	LC	EN
16	*Juniperus sabina*	Sabina Juniper	LC	EN
17	*Nuphar pumila*	Dwarf Cowlily	Not evaluated	EN
18	*Nymphaea candida*	White water lily	Not evaluated	EN
19	*Nymphaea tetragona*	Water lily	LC	EN
20	*Orchis militaris*	Helm shaped Orchis	Not evaluated	EN
21	*Adonis mongolica*	Mongolian adonis, Pheasant's eye	Not evaluated	EN
22	*Paeonia lactiflora*	White Peony	Not evaluated	EN
23	*Saxifragahirculus*	Marsh Saxifrage	Not evaluated	EN
24	*Cardamine parviflora*	Small flowered Bitter-cress	Not evaluated	EN
25	*Drosera anglica*	English Sundew or Great Sundew	Not evaluated	EN
26	*Drosera rotundifolia*	Roundleaf Sundew	Not evaluated	EN
27	*Gentiana algida*	Arctic Gentain	Not evaluated	EN
28	*Acorus calamis*	Myrtle Flag or Sweet Flag	LC	VU
29	*Paris verticillata*	Whorled Paris	Not evaluated	VU
30	*Tofieldia coccinea*	Northern False Asphodel	Not evaluated	VU
31	*Gagea hiensis*	… none	Not evaluated	VU
32	*Maianthemum dilatatum*	May lily or False Lily of the valley	Not evaluated	VU
33	*Corallorhiza trifida*	Early coral root, Northern coral root	Not evaluated	VU
34	*Cypripedium calceolus*	Lady's Slipper-orchid	Not evaluated	VU
35	*Cypripedium*	Grand Lady's	Not evaluated	VU

	macranthon	Slipper		
36	*Epipogium aphyllum*	Leafless Epipogon, Chost orchid or Spurred Coralroot	Not evaluated	VU
37	*Allium altaicum*	Altai onion	Not evaluated	VU
38	*Festuca komarovii*	… none	Not evaluated	VU
39	*Paeonia anomala*	… none	Not evaluated	VU
40	*Rhodiola rosea*	Golden root, Roseroot or Aaron's rod	Not evaluated	VU
41	*Viola brachyceras*	Shortspured Violet	Not evaluated	VU
42	*Hedysarum sangilense*	… none	Not evaluated	VU
43	*Vicea tsydenii*	… none	Not evaluated	VU
44	*Rhamnus parvifolia*	Small leaved Buckthorn	Not evaluated	VU
45	*Rhododendron adamsii*	… none	Not evaluated	VU
46	*Rhododendron aureum*	Golden rhododendron, Golden Rosebay	Not evaluated	VU
47	*Vaccinium myrtillus*	Bilberry, Whortleberry	Not evaluated	VU
48	*Comastoma pulmonarium*	Swelt Gentain	Not evaluated	VU
49	*Caryopteris mongolica*	… none	Not evaluated	VU
50	*Artemisea lithophila*	Quarred Wormwood, Stoneloving Wormwood	Not evaluated	VU
51	*Rhaponticum carthamoides*	Maral root	Not evaluated	VU
52	*Solidago dahurica*	… none	Not evaluated	VU
53	*Sambucus williamsii*	North China Red Elder	Not evaluated	VU
54	*Larix dahurica*	Daurian larch	LC	NT
55	*Ephedra fedtschenkoae*	Fedchenko's Ephedra	LC	NT
56	*Lilium dahuricum*	Daurian Lily, Pennsylvania Lily	Not evaluated	NT
57	*Lilium martagon*	Martagon Lily	Not evaluated	NT
58	*Carex selengensis*	… none	Not evaluated	NT
59	*Melica nutans*	Mountain Melick	Not evaluated	NT
60	*Adonis sibirica*	Siberian adonis	Not evaluated	NT
61	*Hylotelephium pallescens*	Pallescent Stonecrop	Not evaluated	NT
62	*Rhododendron*	… none	Not evaluated	NT

	dauricum			
63	*Rhododendron ledebourii*	… none	Not evaluated	NT
64	*Gentiana macrophylla*	Largeleaf Gentain	Not evaluated	NT

II Biodiversity in Sixteen Leading FUGs

For the purpose of this Project, a rapid biodiversity assessment of 16 FUGs was conducted. The location of the FUGs is illustrated in Figure 4. The sixteen FUGs are: Amarlingui, Buural Sansar, Galtain Gol, Delger Onon and Seruunbayalag (all Khentii aimag); Badar, Taliin Tolgoi and Urt Bulag (all Khuvsgul aimag); Urmugtkhairkhan in Darkhan Uul aimag; Altansumber, Dalt, Khargistain (all in Selenge aimag); and Uguuj Buren, Monostoi, Dundat and Bukht (all in Bulgan Aimag).

Game species do exist in FUG managed areas but their population and home range diminished considerably during last 10-20 years. However, due to better patrolling and managing the forested areas, FUG members do realize that some of the species are coming back and are seen more often than before. The FUG members do want to protect the wildlife species and help to stabilize the species in their areas as their habitat. They request, bio-technical or protection measurements to be carried out by FUG members besides managing the forest fund.

The number of mammals and the number of bird species recorded by the communities in each of these FUGs is presented in Figures 5 and 6. Table 6 provides information for each FUG on which bird species were recorded there. From the information provided during the rapid assessment, we can conclude: (i) each FUG has significant biodiversity; (ii) whereas over recent decades the biodiversity has greatly declined, there has been some improvement in the most recent years; (iii) the farther the FUG from an urban centre, the greater the biodiversity and the less the threat.

Detailed information on the biodiversity recorded in each FUG, and on the range of the key globally threatened mammal species, and on the threats to biodiversity, and on recent measures to conserve biodiversity, is available in the report "*Biodiversity status in the area where community is implementing cooperative forest management*" (*Amgalanbaatar Sukh*).

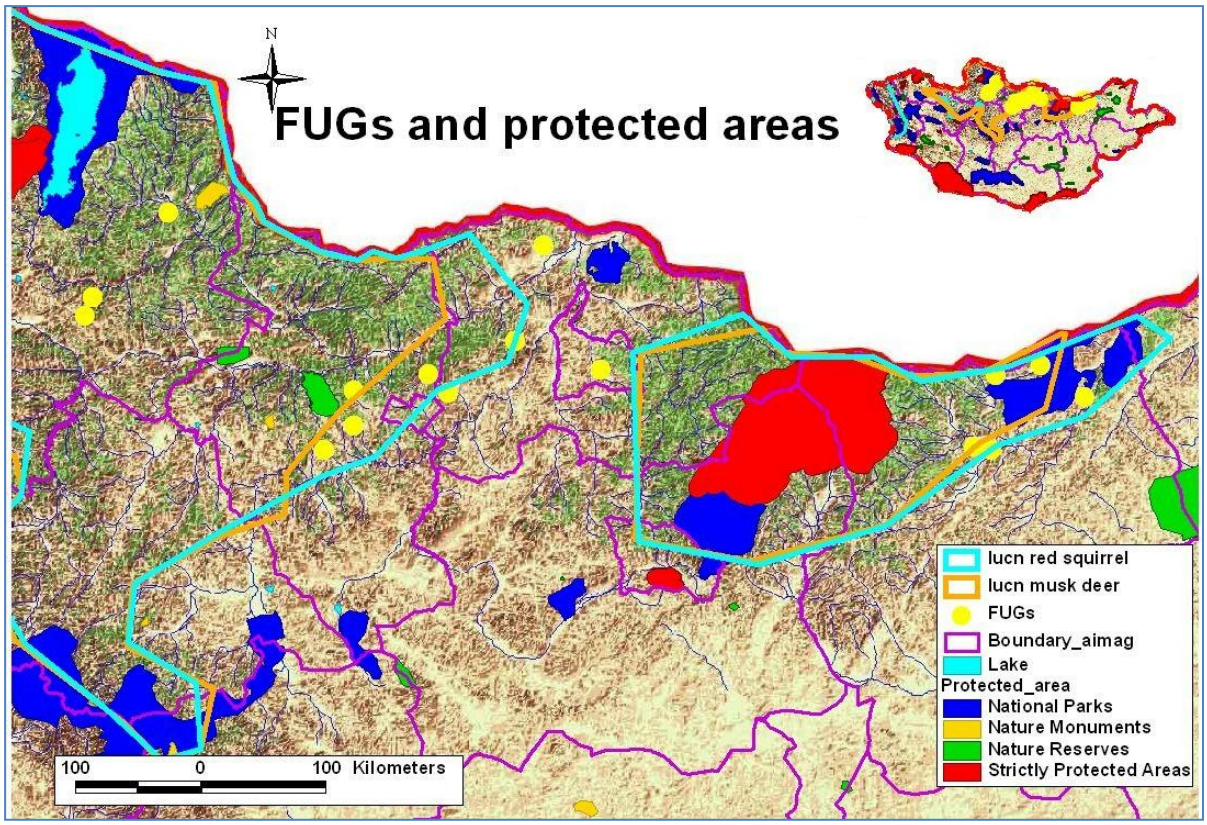


Figure 6: showing location of FUGs with respect to protected areas

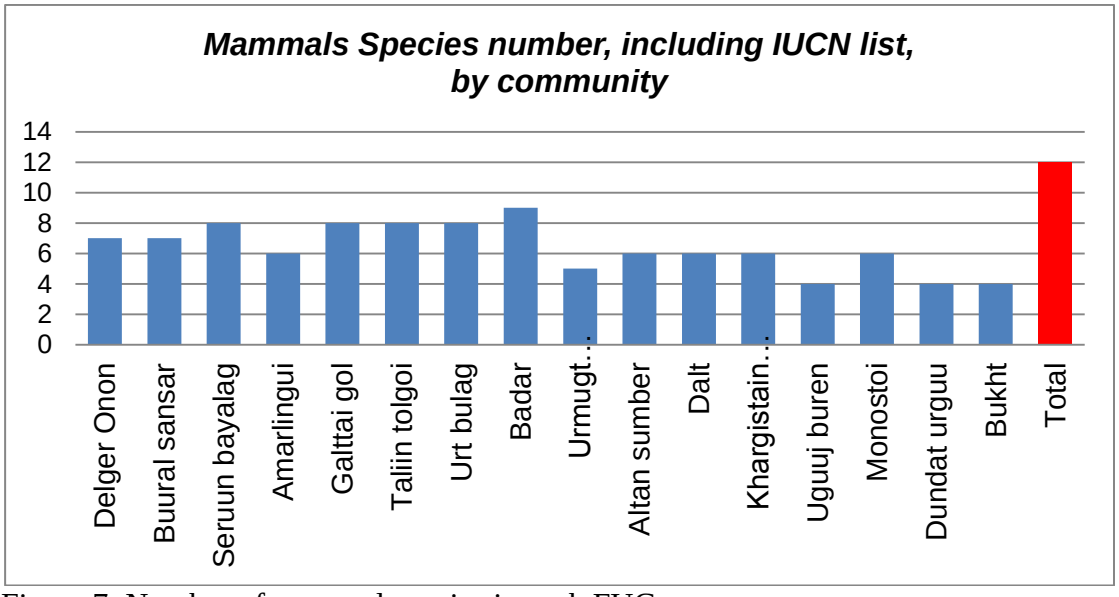


Figure 7: Number of mammal species in each FUG area

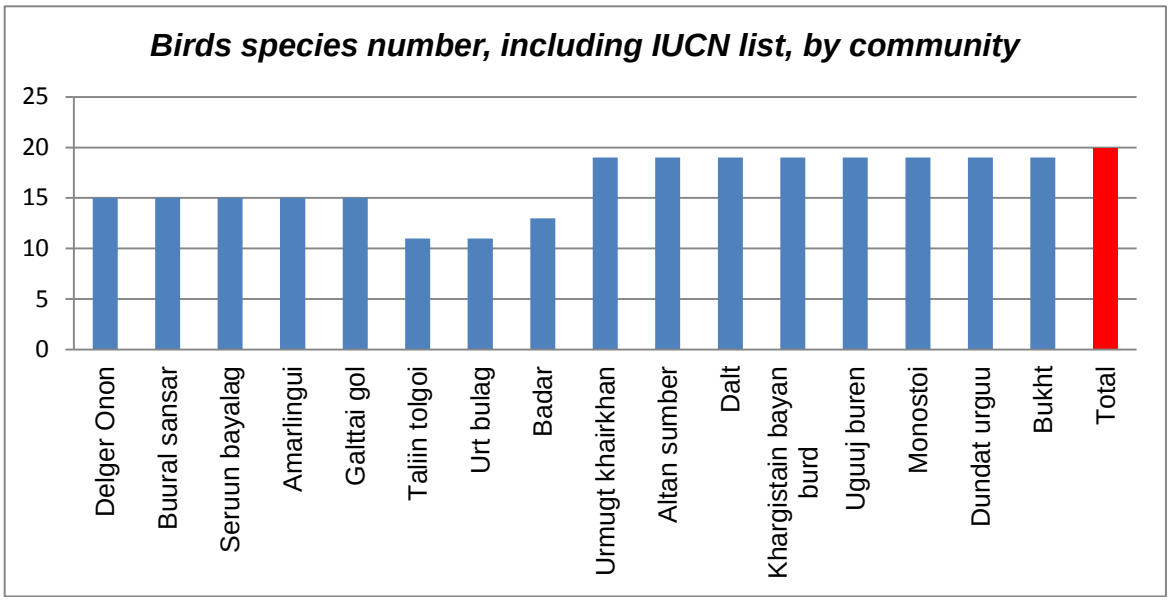


Figure 8: Number of bird species in each FUG area

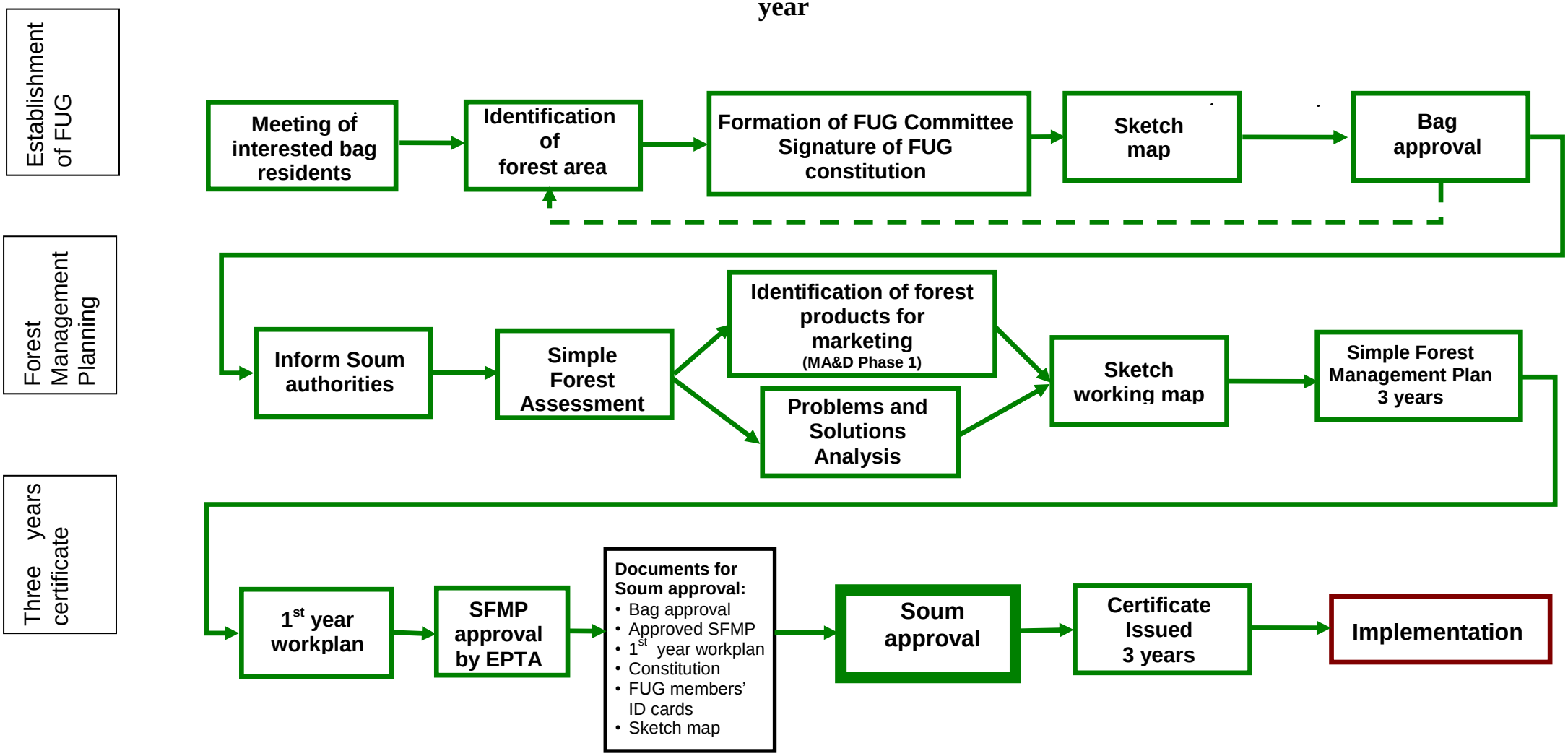
Table 15: Showing which bird species were recorded in each FUG area

Birds																				
ID	Latin name	English name	IUCN list	Binder, "Delger Onon"	Binder, "Buural sansar"	Binder, "Seruun bayalag (game)"	Dadal, "Amarlingui"	Dadal, "Galttain gol"	Tunel, "Taliin tolgoi"	Tunel, "Urt bulag"	Tsagaan-Uur, "Badar" (game)	Khongor, "Urmugt khairkhan"	Sant, "Altansumber" (game)	Baruun buren, "Dalt"	Tsagaannuur, "Khargistain bayan burd"	Khangal, "Uguuj buren"	Bugat, "Monostoi" (game)	Bugat, "Dundat urguu"	Orkhon, "Bukht"	**Total**
1	*Anser cygnoides*	Swan Goose	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
2	*Anas falcata*	Falcated Duck	NT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
3	*Anas formosa*	Baikal Teal	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
4	*Circus macrourus*	Pallid Harrier	NT	+	+	+	+	+				+	+	+	+	+	+	+	+	13
5	*Aquila clanga*	Greater Spotted Eagle	VU	+	+	+	+	+				+	+	+	+	+	+	+	+	13
6	*Aquila heliaca*	Imperial Eagle	VU								+	+	+	+	+	+	+	+	+	9
7	*Haliaeetus leucoryphus*	Pallas's Sea-Eagle	VU						+	+	+	+	+	+	+	+	+	+	+	11
8	*Aegypius monachus*	Cinereous Vulture	NT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
9	*Falco cherrug*	Saker Falcon	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16

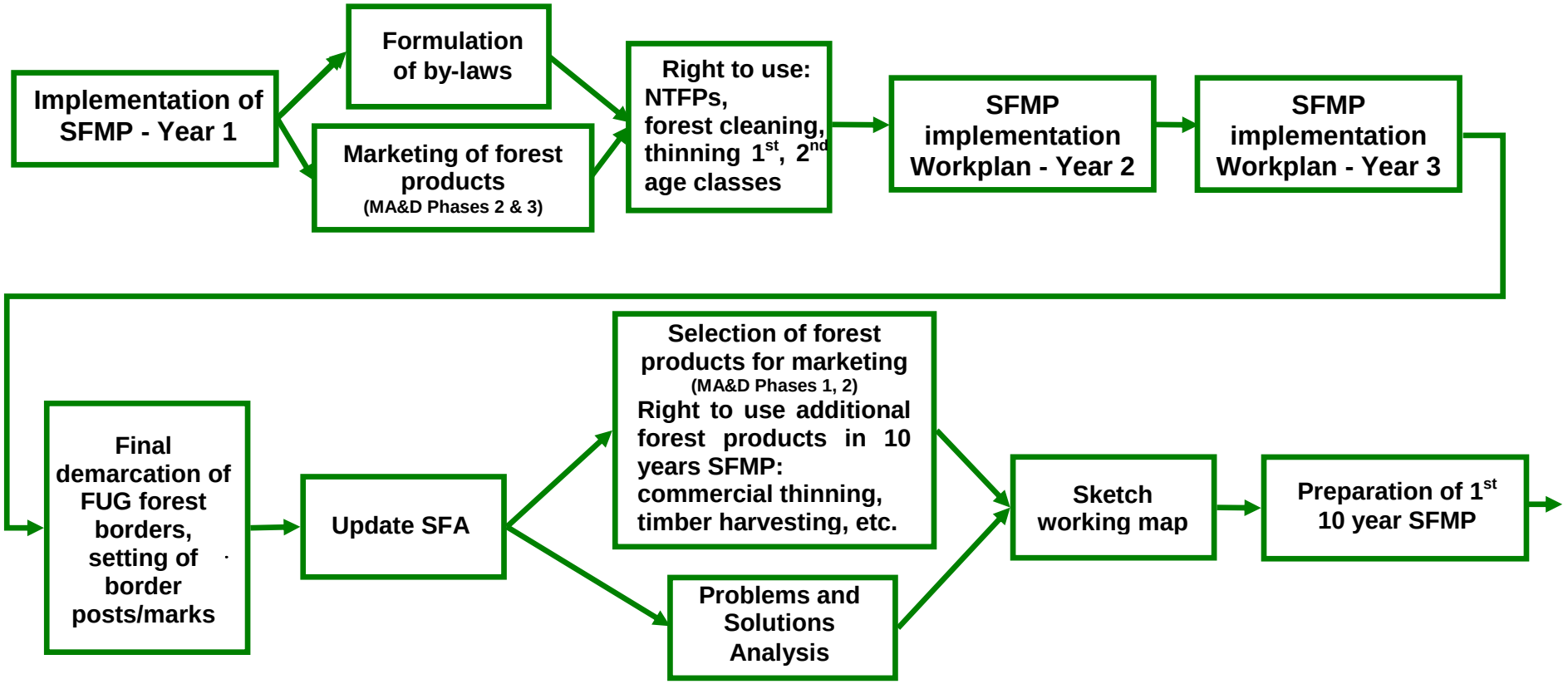
10	*Falco vespertinus*	Red-footed Falcon	NT	+	+	+	+	+												5
11	*Falco naumanni*	Lesser Kestrel	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
12	*Coturnix japonica*	Japanese Quail	NT	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	15
13	*Grus vipio Pall.*	White-naped Crane	VU	+	+	+	+	+				+	+	+	+	+	+	+	+	13
14	*Grus monacha*	Hooded Crane	VU								+	+	+	+	+	+	+	+	+	9
15	*Crex crex*	Corn Crake	NT									+	+	+	+	+	+	+	+	8
16	*Otis tarda*	Great Bustard	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
17	*Limnodromus semipalmatus*	Asian Dowitcher	NT	+	+	+	+	+			+	+	+	+	+	+	+	+	+	14
18	*Limosa limosa*	Black-tailed Godwit	NT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
19	*Numenius madagascariensis*	Far Eastern Gurlew	VU									+	+	+	+	+	+	+	+	8
20	*Emberiza aureola*	Yellow-breasted Bunting	VU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16
Дүн				15	15	15	15	15	11	11	13	19	19	19	19	19	19	19	19	262

Annex 5: The Phased Approach to Developing PFM in Mongolia

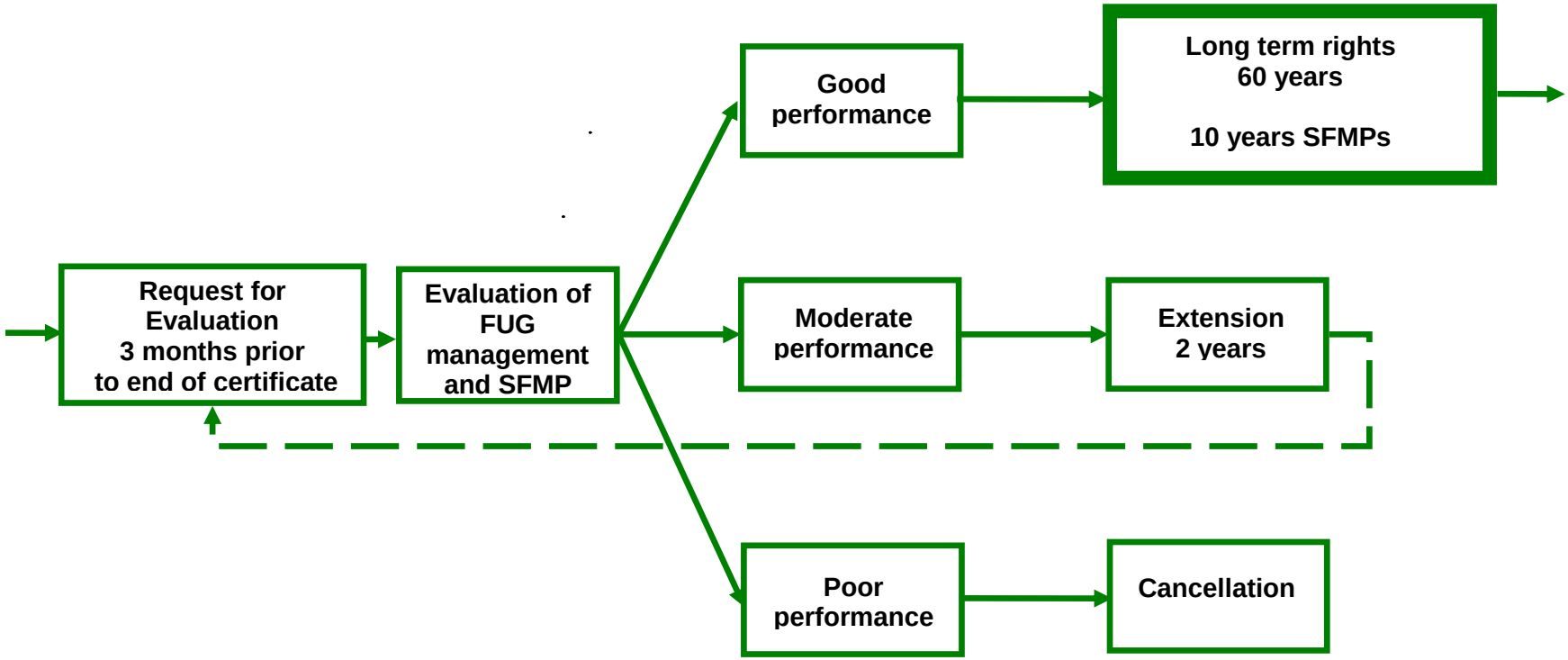
Phase 1: Establishment Phase 1 year



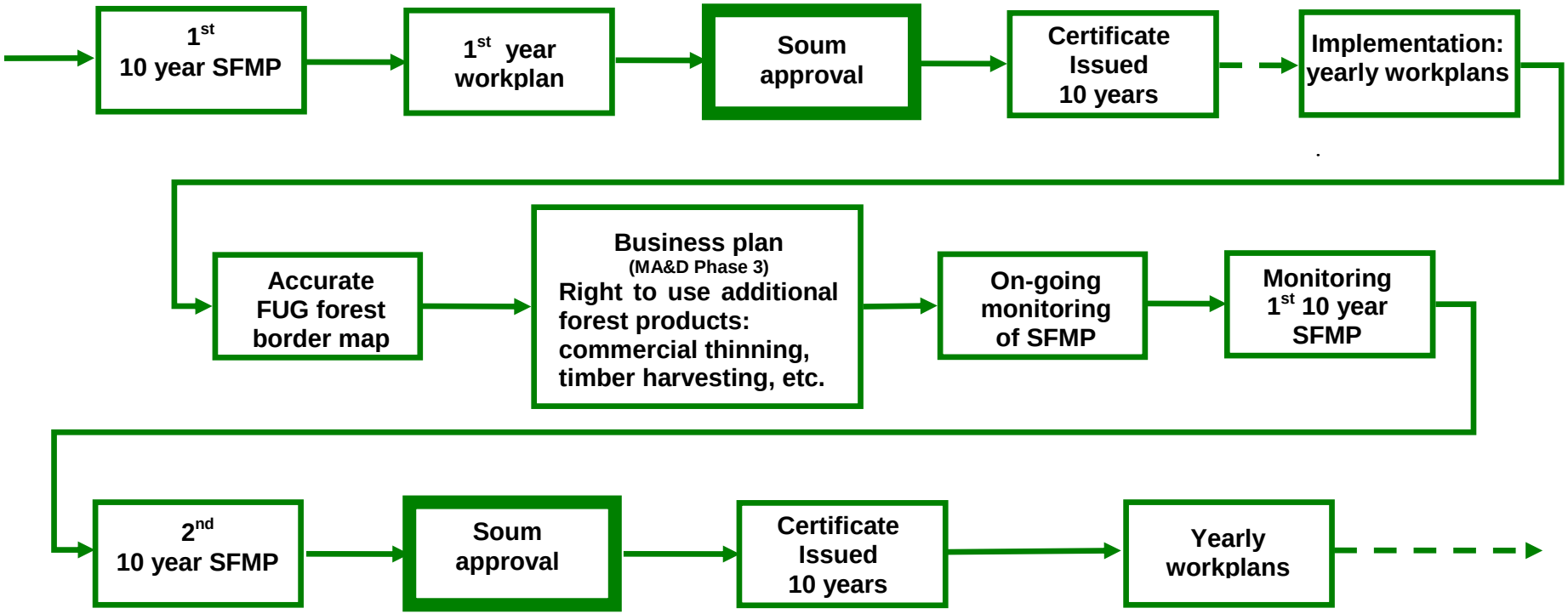
Phase 2: Foundation Phase (1)
3 years



Phase 2: Foundation Phase (2)
3 years



Phase 3: Implementation Phase
Long term rights: 60 years



Annex 6: Forestry Law Implementation Decrees under Finalization (as of April 2013)

The key law is the Forestry Law (2007) which mandates the shift from management of forest by the State towards privatization and community-based natural resource management.

In 2012, a packet of new and revised laws related to natural resource management and the environment was approved. These are:

1. Law on air, which introduced remuneration/incentives of people and enterprises for using energy saving or environmental friendly heating for household;

2. Law on animal, which combined the former law on animal species and animal hunting;

3. Law on Environmental Protection, which was reformulated in a sense of a paradigm shift from the exclusive state conservation to a concept of a participatory management of natural resources;

4. Law on Fee for using natural resources, which combined the laws regulating fees for using natural resources (fees for using plants, water, fuelwood, hunting)

5. Law on Waste, which introduced a 3R principle and combined several waste related laws in one;

6. Law on soil and combatting desertification, which sets a framework for combatting desertification and land degradation as well as protection of soil in settlements;

7. Law on Forest, which combined forestry relevant laws in one;

8. Law on Fee for water pollution, which set a fee amount according to a pollution degree. The payment of water cleaning measures shall be financed from this payment;

9. Law on Water, which foresees an integrated water management and decentralization of water management;

10. Law on Environmental Impact Assessment, which defines and increases the roles and responsibilities for conducting an impact assessment.

Under the revised Law on Forest, the government is preparing 23 implementation decrees Until now, 11 of these have been approved, these are briefly described in the following table:

Sub-decree on	Sub-decree Objective
Forest database, reporting and how to use its forms	How to collect data and input into forest fund database, using forms, analyze, keep, protect and distribute the data
Forest inventory	How to conduct forest inventory in forest funds managed by the government, Aimag, Soum, districts, economic entities, FUGs in order to determine its size, resource, forest changes. The data also serves as a base to determine how much carbon is stored or lost.
Regulation of Soum or intersoum Forest Unit	Determine objectives of Forest Units, clarify activities to be carried out, and its institutional structure
Payment of conservation cost to	A third party who is going to carry out activities such as

	those who manage forest fund on a contractual basis	logging, timber harvesting, collecting NTFP in one of the managed forest area will pay certain percentage of conservation cost. Conservation costs include protection, regeneration and silvicultural activities.
	Calculating damages caused by forest fire	How to calculate damages caused by forest fire
	Regulation on forest professional organizations	How to obtain professional organization certificate, requirements of professional organizations
	Certificate template of FUGs and economic entities	Describes templates of certificates to be obtained by FUGs and economic entities
	Silvicultural activities in state special reserve areas	Describes what kind of silvicultural activities can be carried out in state special reserve areas.
	Cleaning and thinning	Describes how to plan, organize, monitoring of cleaning and thinning in the forest.
0	Incentives to reforestation and forest protection	Incentives are given to whom reveal illegal activities in the forest, preventing from illegal activities to take place, planting and growing trees and seedlings and preventing from forest fire.
1	Planning, organizing, financing reforestation and cilvicultural activities and value planted forest buy planted forest to the government and tenure planted forest	How to plan and organize reforestation and cilvicultural activities and monitoring and evaluation work. Describes value and purchase of planted forests to the state or tenure to who planted them.

Annex 7: Stakeholder Analysis

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
Ministry of Environment and Green Development (MEGD) - Department of Policy Implementation Coordination - Division of Forest Protection and Coordination of Reforestation	Main counterpart for the Project. The Division is responsible for development and support to participatory forest management in Mongolia.	Total. The Division's activities cover all the themes and all the areas supported by the GEF project. Planning to start investing into Forest Units to make them more functional.		Ongoing	5.7 billion tugrug Or 4.071.000 USD	Essential. Will be the key executing Agency. Ministry has a policy or vision to see FUGs as economic entities in the future. Moreover, transporting wood collected from cleaning to prospective plants as raw materials.
MEGD – River Basin Committees	Not yet established. There are 29 river basins in Mongolia, and a Committee will be established within MEGD for each. Their role would be to coordinate activities leading to integrate resource management at river basin level.	Strong.	Strong, as they focus on natural resources management.	In some cases, the Committee activities may start up during the Project.	Not known.	Project can help Committees to become established. Committees can help project coordinate with other partners.
MEGD - Clean Technology and Science Division	GEF Operational Focal Point. Has responsibilities related to macro-coordination of all GEF Projects.	Not applicable	Not applicable	Not applicable	Not applicable	General support from Division will facilitate coordination and lesson-sharing with other GEF projects.
MEGD - Foreign Cooperation	One of the main counterpart agencies in terms of foreign relations. Project reporting will	Not applicable	Not applicable	Not applicable	Not applicable	General support from Division will facilitate

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
Division	be required.					implementation and coordination with other projects and other international partners.
MEGD – Centre for Forest Research and Development	This recently established Centre, under the Ministry, is responsible for most implementation of policy and regulation. The Centre also is responsible for forest inventory, and for all forest related researches and studies. This includes pest control.	Total. The Centre's activities cover all the themes and all the areas supported by the GEF project. Extensive forest inventory work will be conducted and all the data will be collected for the center for better use. This data will be a base for Carbon measuring and its related incentives that the project will work on collaboratively.		The center just became functional.	1.2 billion tugrug or 858.000 USD	Essential - will be a key partner in designing FUG level activities, implementing FUG level activities, and in replication and upscaling.
Ministry of Agriculture and Industry	All types of Forest industries, business and private sector work. This includes overseeing investments in wood processing plants and in pressed fuel plants.	Total. The Ministry's forest related activities cover all the themes and all the areas supported by the GEF project. There are total 400 private sectors working in wood industry and 240 of them are working in Aimags. About 4000 staff are working in them. Location for board plant and pressed fuel factories are determined.		Ongoing	About 6 billion tugrug. The Ministry is also hoping to access Chinggis Bonds, thereby increasing the amount of soft loans available for the wood processing industry.	The Ministry can invest in the companies and plants, thereby creating a market for wood from FUGs (initially deadwood), and thereby helping FUGs to generate revenue from PFM.
Aimag Governments (Environmental Protection Agencies, EPA)	EPA oversee and regulate all environmental related issues within the Aimag such as forestry, flora, fauna, soil, air, water etc.	Total - Khenti, Huvsgul, Bulgan and Selene Aimags.	They cover activities related to forestry, wildlife and biodiversity .	Ongoing	Khentii-356 million tug Huvsgul-600 million Bulgan-2.8 billion tug	Collaboration is essential. They will provide support to the project – staff, expertise, facilities.

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
						They will be partly responsible for follow-up and sustainability. They will benefit, a little, from project capacity development.
Soum governments (Governors, forestry unit)	Implement all environmental related activities within the Soum, with the assistance of Aimag EPA office. Usually have 1-2 rangers and state inspectors	Total- depending on selection of 84 FUGs	They cover activities related to forestry, wildlife and biodiversity.	Ongoing	Budget varies from soum to soum. Average 2 million tugrug for each Soum.	Collaboration is essential. They will provide support to the project – staff, expertise, facilities. They will have some responsibilities for follow-up and sustainability. They will benefit, a little, from project capacity development.
Inter-Soum (Participatory) Forest Units	There are currently 26 units operational. They implement all forest related activities such as fee collecting, license issuing, determine areas for logging etc. The key unit to support PFM development and upscaling, and to interact (provide extension) to FUGs.	Total - depending on selection of FUGs	Total, they cover all forest related activities, including support to FUGs, and support to upscaling PFM.	Ongoing	Average 35 million tug	Collaboration is essential. They will provide support to the project – staff, expertise, facilities. They will have some responsibilities for follow-up and sustainability.

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
						They will benefit significantly from project capacity development.
Protected Area Management Agencies	Oversee and implements all environmental related activities within the park boundaries.	Protected areas cover approximately 30% of all northern forests. Currently, only one of the 16 FUGs has buffer zone activities. Actual overlap in the future will depend on the selection of FUGs – though it is likely that some will be close to protected areas or in buffer zones.	Depending on the selection of FUGs. Overall focus is more on activities within the Buffer-zones.	Ongoing	For example, the budget of the two protected area administration located in Huvsgul aimags is 335 million and 290 million tugrugs.	Collaboration should be possible between the concerned FUGs and the concerned protected area agency, though probably not at the macro level. Where relevant, project should build FUG capacity to interact with protected areas and become a constructive stakeholder in protected area management and related biodiversity conservation.
FUGs	Prepare short, medium and long term (simple) forest management plans for their area. Currently responsible for monitoring, basic forest conservation activities, and harvesting of basic products.	Total	Total	Ongoing	FUGs average spending is 1.5 million tugrugs.	FUGs are to be the main beneficiary of project capacity building. Changed activities and approaches of FUG

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
	Note, most FUGs currently have very little capacity.					will lead to project achieving its objectives.
GiZ – Biodiversity and Climate Change Project	The Project has three components: (i) climate change and adaptation (ii) stabilization and use of forested ecosystem (iii) conservation and sustainable use of protected areas. They are also working on the forest inventory as an input to developing REDD.	Khentii aimag for protected area. If FUGs selected in Arkhangai aimag, then there will be possible collaboration. GIZ has selected a forest fund in Tsagaan-Uur soum of Khuvsgul aimag which is close to one of the 16 pilot FUGs GiZ is supporting two vocational schools in the GEF project intervention area.	The inventory work of GiZ is directly connected to the forest carbon work in the GEF project. The work on *stabilization and use of forested ecosystem* focuses on vocational training including for FUG members, and so is directly related to project efforts to build FUG capacity and revenue potential. Overall includes a focus on forest enterprises/private. Overall this should contribute to expanding the timber sector and improving forest management. Examples of collaboration include; component (i) supports silvicultural guidelines; component (ii) supports developing the vocational training sector related to forestry.	2012 - 2022	10 million euros	Notably on the forest inventory and on development of FUG capacity and forestry product sector. GiZ can also provide qualified volunteers to support the GEF project (2-3 experts for 2-3 years each). .
KfW – Environmental Investment	Still under preparation, but main aim of this grant seems to be to improve protected area management/help implement protected area management plans.	The selection for which projects to be funded is not carried out yet.	Overall focus is more on protected area management than PFM, making this mostly complementary rather than directly supportive of GEF	Possibly to start in late 2013 or early 2014.	Phase 1: 15 million euro. Per application gets funding of maximum of	The project is at pre-feasibility stage. Possibilities for

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
	Possibly, grants will be made available to protected area authority in order to implement parts of their plan.	One initial focus is likely to be northern forests, therefore good possibility for geographical overlap.	project. However, given that the GEF project will support FUGs, it may enable FUGs to participate in protected area management (especially buffer zone management), and so enable FUGs to participate in KfW financed activities.		500.000 euro.	collaboration to be developed during GEF inception and implementation phases. If FUGs selected close to Protected areas or their bufferzones.
Government of Finida/NUM Project	2 year project. Mainly on forest research, training on tree planting techniques, and inventories.	Some, depending on the selected area for research and selected training beneficiaries. NUM has its field research camp located in Tuv Aimag.	Reforestation, support of natural regeneration and some research activities.	Aim to start in 2013/	460.000 euro	The collaboration with Finish government was initiated by FAO PFM project and should be strong. Plantation technique should be shared for reforestation wok of FUGs.
Private sector – logging companies	Responsible for logging, formally in line with approved management plans. This is in both FUG and non-FUG areas.	Logging companies are typically aimag based, with approximately 10 in each aimag. Hence some overlap in the aimag's targeted by GEF project. There are about 240 of them based in Aimag consists of 2400 staff.	Use of forest products for income generation.	Ongoing	Not applicable	Project can empower FUGs to interact with logging companies, and so lead to possible co-management in the future. This would lead to (i) upscale in FUG management activities (ii) increased revenue for both FUG and company.

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
Private sector – wood processing companies	Approximately 400 companies across Mongolia employ 4000 people to create MDF boards, boards and furniture. Other companies produce brick fuel processing plants – using deadwood.	Activities of these companies cover all areas of GEF project.	Use of forest products for income generation.	Ongoing	Not applicable.	FUGs supported by Project can provide wood to these companies, leading to revenue to FUGs. Project can empower FUGs to be more effective in these relationships.
FAO	Food, agriculture, vegetable planting, PFM, and supporting local households to better income generation.	Not applicable.	Tripartite implementing program was developed and signed by MEGD, MFLI and FAO.	Ongoing	Overall annual spending is around 10 million USD.	Essential
UN REDD	Mongolia joined the UN-REDD Programme in 2011 and has three Technical Working Groups (Drivers and Strategies; Stakeholders and Safeguards; Reference Levels and MRV). A draft roadmap has been prepared. Within this framework, FAO is providing small-scale support related to forest monitoring.	Not applicable.	Significant overlap related to: forest inventories, sustainable forestry management; understanding carbon storage issues; developing REDD+ Readiness, etc.	Ongoing	Currently limited.	Essential
WWF	Ongoing programme focuses on Altai Sayan and Amur Basin. Two themes addressed are endangered species and freshwater fish. Approach covers (i) protected area networks (ii) community based natural resource management (iii) Integrated river basin management (iv) and responsible mining.	Khentii Aimag – they have ongoing activities in Darkhan Soum.	Items (ii), (iii) and (iv), notably (ii).	Ongoing	About 500.000 USD a year	Might be scope to collaborate on national level capacity building (institutions, policies, regulations). Might be scope to join forces in Khentii Aimag, or at

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
						Darkhan Soum or at PFMU level. Possibilities for collaboration to be developed during GEF inception and implementation phases.
The Nature Conservancy	TNC programme includes: • Conservation planning at sub-national scale ('development by design'); • Developing a methodology and test running biodiversity offsets; • Balancing development of the minerals sector with conservation; • Working with herder communities on grasslands.	TNC focuses on grasslands. However, in many cases the grasslands herders may also be members of forest user groups. There are activities with herders in Khentii Aimag in Darkhan and Dadal Soums.	Work with biodiversity offsets and minerals sector may overlap with our work – as there are many mining concessions in northern forest.	Ongoing	Not relevant	Possibilities for collaboration to be developed during GEF inception and implementation phases.
Wildlife Conservation Society (WCS)	WCS conducts research on key species. WCS has established Important Bird Areas. WCS has to educate the Mongolian public on wildlife conservation, and helped to strengthen the country's laws on hunting and wildlife trade. WCS is working with herder communities (through Livestock	In many cases the herder groups may also be forest user groups. WCS is working notably with groups in Khentii Aimag, there may be interface between	Community natural resources management can include both forests and grasslands. Potential to collaborate on policy or national enabling environment issues, such as: • Biodiversity offsets (in mining sector); • Support to	Ongoing	Not relevant	Possibilities for collaboration to be developed during GEF inception and implementation phases. Might be scope to collaborate on national level capacity building, or

Partner	Description of Activities	Geographical overlap (with GEF Project)	Thematic overlap (with GEF Project)	Timing of Activities	Budget for related Activities (annual)	Role in Project and Potential to collaborate
	Herder Community Conservation groups) to collaborate in monitoring and protecting steppe wildlife. This includes aspects related to governance, and revenue generation	forest and steppe management.	environment Law implementation decrees			on activities in Khentii.

Annex 8: Approach to Reducing Emissions of Carbon Dioxide and Enhancing Carbon Stocks in Mongolia's Northern Forests.

This Annex first introduces REDD+ in the context of PFM and Mongolia's northern forests before estimating current carbon storage levels in Mongolia. It then takes a closer look at the 16 leading FUGs, estimating the baseline for carbon emissions/sequestration in the absence of a project. It then proposes an approach to managing forest carbon through PFM in the 16 Project FUGs – an approach that is to be piloted in the Project. It then estimates the reduced emissions/increased sequestration that can be achieved through the project.

I REDD+, REDD+ Potential in Mongolia, PFM and Estimated Carbon Emissions from Mongolia's Northern Forests

REDD+: International Policy and Local Implementation

As part of international efforts to mitigate climate change, REDD+ aims to provide positive incentives to developing countries for activities that enhance forest carbon sinks and that reduce GHG emissions from the forest sector. In addition to reducing emissions from deforestation and degradation, the United Nations Framework Convention on Climate Change (UNFCCC) REDD+ negotiations have evolved to include the conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks. This wide scope was agreed upon to allow broad non-Annex I Party participation, based on differing national circumstances.

Parties at COP16 in Cancun, December 2010, adopted Decision 1/CP.16, section C of which covers "*Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries"*. The five activities under REDD+ are defined for the first time in Decision 1/CP.16, paragraph 70:

"Encourages *developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:*

i. Reducing emissions from deforestation;
ii. Reducing emissions from forest degradation;
iii. Conservation of forest carbon stocks;
iv. Sustainable management of forests;
v. *Enhancement of forest carbon stocks.*"

Decision 1/CP.16 also specifies that the above activities should be implemented in three phases, beginning with the development of national strategies or action plans, policies and measures, and capacity building (Phase 1). This should be followed by the implementation of national strategies or action plans and – importantly – demonstration activities (Phase 2). The final phase of REDD+ is the national implementation of activities that should be full

measured, reported and verified (MRV) (Phase 3) – i.e. the carbon mitigation impact of the activities will be estimated and reported to the UNFCCC Secretariat, and will undergo some form of official verification (yet to be decided upon).

Phase 2 of REDD+ represents a key lesson learning stage during which countries will have the opportunity to pilot different methods, activities and/or policies, allowing the incorporation of improvements to these as feedback is received and more and better data and information become available. The scale and scope of demonstration activities will be country-specific, and as such they could be implemented at the subnational level in some countries (e.g. a particular province, district or community) or at the national level (e.g. a national policy).

Participatory Forest Management in Mongolia

Participatory forest management (PFM), a wide range of processes and mechanisms that enable local forest stakeholders and resource owners to be a part of decision-making in all aspects of forest management, is often cited as an existing successful model for local-level forest management from which implementers of REDD+ can learn many lessons. A key challenge facing countries, as they seek to integrate REDD+ into their forest policy and management frameworks, is determining if and how forest carbon issues can be mainstreamed into their PFM initiatives and activities.

Forestry in Mongolia has been undergoing major changes since the 1990s, due to rapid changes in the societal setting and the livestock herding systems which are the predominant livelihood source of the rural population. Over the last two decades, a unique form of PFM has developed, connecting pastoralists to forests. PFM brings benefits to pastoralists in terms of more control over access to grazing lands and opens pathways for forest-based income generation through sustainable harvesting of firewood, Non-Timber Forest Products (NTFPs) and eventually, timber.

Over the past 20 years, government forest policy has shifted from a focus on timber production to environmental protection and conservation. Government institutions to manage forests have evolved, decentralizing decision making to lower levels and involving rural communities through Forest User Groups (FUGs). Starting from a number of successful cases, the government is committed to extending PFM to 629 FUGs throughout the country.

Early attempts to build the capacity of FUGs focusing only on forest-based income generation turned out to be unsustainable because of market access and collective pasture issues. A lack of legal status for FUGs turned out to be another bottleneck. Following an extended public consultation process, a new forestry law was adopted in 2007, giving full legal status to FUGs. From 2007-2012, a training approach for FUG development was developed with support of a Dutch-funded FAO project. The present GEF-FAO project aims to build on the Dutch project by further strengthening the original 16 FUGs that were worked with and incorporating biodiversity and forest carbon issues into their activities at the local level.

The Government of Mongolia's interest in implementing REDD+ activities presents a potential opportunity to promote effective PFM by FUGs by incentivising good local-level forest management practices that could in turn lead to ecological, economic and social benefits.

REDD+ in Mongolia

Mongolia is currently in Phase 1 of REDD+, with the government to date having focused on the implementation of capacity building activities such as workshops and training events, as well as the clarification of institutional arrangements for the implementation of REDD+. As part of its capacity building efforts, Mongolia joined the UN-REDD Programme (a collaborative REDD+ capacity building programme between FAO, UNDP and UNEP) in March 2011. The government is aiming to finalize its REDD+ Readiness Roadmap in 2013, which will set out the activities that the country will need to implement through the three phases of REDD+.

A specific early technical focus of capacity building efforts has been the methodological design of Mongolia's multipurpose national forest inventory (NFI), supported by GIZ and FAO. This work area aims to redesign the NFI to incorporate the measurement of forest variables that will facilitate the estimation of forest carbon stocks and forest carbon stock changes over time. The NFI can also be designed to collect data on other parameters that are useful to the country, such as timber stocks, biodiversity and social uses of forests. Together with data on land use changes derived from remote sensing (e.g. satellite data), forest carbon stock data will be used to assess the emissions and removals of greenhouse gases (GHGs) from the land use and forestry sector. This will constitute the 'Measurement' component of 'MRV'; with the 'R' comprising the reporting of the national GHG inventory to the UNFCCC Secretariat, and 'V' being the verification of the inventory coordinated by the UNFCCC.

In addition to awareness raising and capacity building/development activities that are currently being undertaken as part of phase 1, the government is also planning demonstration/pilot activities to be implemented at the sub-national level in phase 2. Activities that will be implemented at 16 FUGs through this FAO-GEF project represent a key effort in phase 2 implementation. Through a coordinated multi-stakeholder approach to planning and implementation of REDD+ in the country, the lessons learned from implementing pilot REDD+ activities in the target FUGs through this GEF project will built upon to inform national REDD+ policies and measures for national-level implementation in Phase 3. The implementation of activities under this GEF project will therefore represent an important contribution to Mongolia's REDD+ demonstration activities and learning-by-doing approach to for REDD+ implementation.

Mongolia's Northern Forests

Mongolia's forests can be divided into two broad types: northern boreal forests and southern desert/steppe saxaul forests. Mongolia's northern forests extend over 11.5m ha, of which approximately 10.4m ha are considered to be intact (> 30 percent crown closure) and 1.1m ha are considered depleted[1]. The northern forests are divided into (a) montane forests, dominated by Siberian spruce (*Piceaobovata*) and Siberian fir (*Abies sibirica*), (b) taigaforests and (c) forest steppe, dominated by larch (*Larix siberica*), Siberian pine (*Pinus sibirica*) and Scots pine (*Pinus sylvestris*). East of the Orkhon River, broadleaf species such as birch (*Betula platyphylla*), aspen (*Populustremula*) and poplar (*Populusdiversifolia*) also occur. By far the most common species in the northern forests is larch (*Larix siberica*), covering 60% of forest

[1] FAO, 2010. Mongolia Forestry Outlook Study. Working Paper No. APFSOS II/WP/2009/21. Asia Pacific Forestry Outlook Study II. Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok.

stands and 70% of wood volume[1]; see table one for the growing stocks of the most common tree species.

Table 1. Growing stock for the most common tree species in Mongolia's northern forests (FAO, 2010; Crisp et al., 2004).

Scientific name	Common name	Area (ha)	Growing stock in 2005 (million m^3)
Larix siberica	Larch	7,526,899	1,070.8
Pinus sibirica	Siberian pine	984,658	140.1
Pinus sylvestris	Scots pine	662,113	94.2
Picea obovata	Siberian spruce	27,872	4.0
Abies sibirica	Siberian fir	2,337	0.3
Betula platyphylaa	Birch		162.0
Populus spp	Poplar	1,198,720	6.8
Salix berberifolia	Willow		1.7

80% of the northern forests are contained in six *aimags*: Khuvsgul (29%), Selenge (16%), Khenti (11%), Tuv (10%), Arkhangai (9%) and Zavkhan (5%) – see Table 2 (high forest *aimags* shown in green).

Table 2. Forest area (ha) by *aimag* (data courtesy of the Administration of Land Affairs, Geodesy and Cartography).

Aimag	Forest cover	Logged area	Tree nursery	Regeneration	Non-forest	Total
Arkhangai	847,490	2,764	-	-	232,367	1,082,621
Bayan-Olgii	22,322	246	9	-	-	22,577
Bulgan	1,428,546	7,887	41	468,425	-	1,904,898
Darkhan-Uul	71,421	387	30	-	-	71,838
Dornod	61,312	41,770	-	32,545	-	135,627
Khenti	980,150	1,175	12	79,201	71,079	1,131,617
Khuvsgul	3,383,996	36,315	3	57,070	527,982	4,005,366
Orkhon	15,576	-	17	-	17	15,610
Ovorkhangai	147,191	2,801	-	42,286	-	192,278
Selenge	1,376,623	20,638	15	38,306	98,529	1,534,111
Tuv	492,904	3,384	7,512	1,549	39,162	544,511
Ulaanbaatar	68,508	12	1,104	154	7,269	77,047
Uvs	72,527	4,506	90	33,091	-	110,213
Zavkhan	463,235	5,039	51	-	22,405	490,730
TOTAL	**9,431,801**	**126,924**	**8,884**	**752,627**	**998,810**	**11,319,044**

Estimation of Carbon Stocks in Mongolia's Northern Forests

[1] Crisp, N., J. Dick, and M. Mullina, 2004. Mongolia Forest Sector Review. The World Bank. Victoria, B.C, Canada.

Taking an average figure of 53t of carbon in living forest biomass per ha[1] and a total forest area coverage of 10,898,000ha[3], the total carbon stocks in Mongolia's northern forests can be estimated at 577,594,000tC.

Carbon Emissions from Mongolia's Northern Forests

Figures from the most recent FAO Global Forest Resource Assessment (FAO FRA, 2010) place the rate of deforestation of Mongolia's northern forests at 0.74% per year for the period 2005-2010, amounting to 81,900ha of forest loss per year (see Table 3).

Table 3. Change in land categories, 1990-2010 (FAO FRA, 2010).

Land Categories	Area (1,000 ha)				Change per year
	1990	2000	2005	2010	
Forest	12,536	11,717	11,308	10,898	-81.9
Saxaul and shrub	4,855	3,401	2,674	1,947	-145.4
Other land	139,259	141,532	142,668	143,805	227.3

Taking the conservative value of forest carbon stocks of 53tC/ha (FAO FRA 2010) (and therefore a CO_2-equivalent (CO_2e) value of 194.5tCO_2e), ***annual emissions from the deforestation of Mongolia's northern forests can be estimated at 15,929,550 tCO_2e***.

II Factors Affecting Carbon in the 16 Leading FUGs, and Estimations of the Baseline for Carbon Storage Trends in the 16 Leading FUGs.

Forest Status in the 16 Project FUGs

Data on the status of the forests in each of the 16 FUGs was gathered by a national consultant between March-April 2013. The primary method of data collection was consultations with FUG facilitators – four individuals who have each worked with four of the FUGs for the past five years. Additional data and information were also collected directly from FUG Chairpersons during field visits.

The 16 FUGs cover a total land area of 80,796ha, of which 64,531 is forest land. Estimations of the total areas covered by each dominant tree species is shown in Table 4.

Table 4. Forest areas by species in the 16 FUGs.

Species	Area (ha)	% total forest area
Larch	40,234	62
Pine spp.	14,147	22
Birch	9,950	15

[1] Global Forest Resource Assessment 2010. Country Report: Mongolia. FRA2010/136. Food and Agriculture Organization of the United Nations, Rome.

Spruce	3,720	5.8
Willow	1,780	2.8
Aspen	394	0.6
Poplar	182	0.28
Other	1,094	1.7

To gauge the levels of forest structure and condition in the 16 FUGs, the facilitators and Chairpersons were asked to estimate the crown cover distributions in each FUG (from the categories 10-30%; 30-50%; 50-70%; and 70%+). The results, illustrated in Figure 1, show a proportionally higher composition of lower-density canopy cover, which is characteristic of boreal forests (compared, for example, to tropical forests) but which is also a likely indication of the relatively degraded state of these FUG forests.

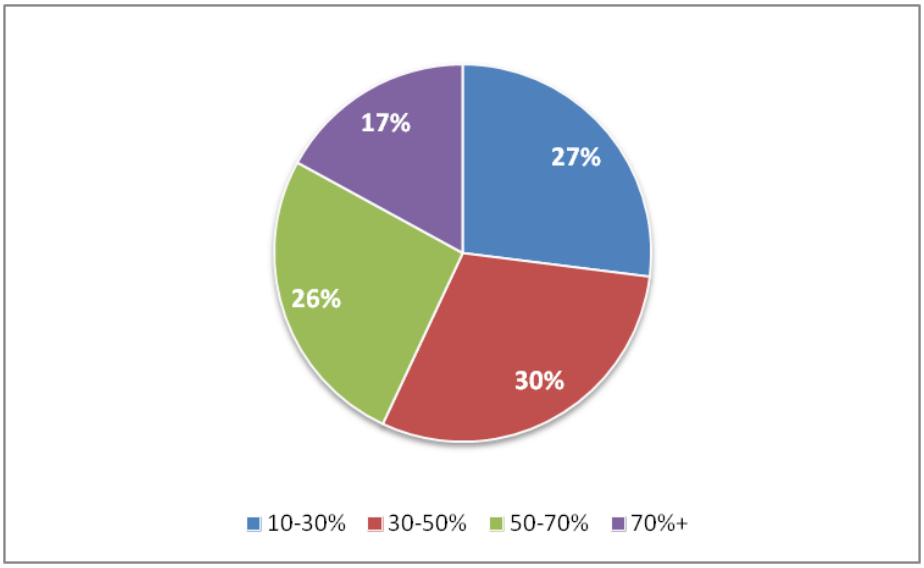


Figure 1. Distribution of forest crown cover in the 16 FUGs.

The figures in Table 5, showing forest areas by management practice and disturbances, highlights the limited scale of active forest management that has taken place in the 16 FUGs, with forest cleaning (gathering of dead and down wood) being the most common. The material gathered from cleaning is used both as fuelwood and for household use. To date the FUGs have received very little silvicultural management training, and therefore the majority of the thinning (the selective removal of trees to improve growth rates and/or health of the remaining trees) has been carried out by professional forestry companies. Meanwhile, FUGs have been reforested a modest amount of land, 164ha, with more training and tools required to increase this total.

The most significant forest disturbances (in terms of area coverage) in the FUGs are livestock grazing within forest areas and fire. The 16 FUGs report that the incidence of fire has reduced to zero since 2010, following the implementation of activities under the Dutch-funded project, though extensive forest areas remain fire-damaged from previous fires (between 2002-2010). A considerable area of FUG forests (14%) has been subject to (reportedly illegal) logging carried out by private companies, both prior to and following the granting of the forest areas to FUGs. Pests, tree diseases and storms are reported to have affected relatively small areas.

Table 5. Forest areas by management practice and disturbances in the 16 FUGs.

	Forest Impact	Area	% total

		(ha)	forest area
Forest management practice	Forest cleaning*	215	0.3%
	Of which, approx.:	*142*	*0.2%*
	-Fuelwood	*32*	*0.05%*
	-Household use		
	Reforestation	164	0.25%
	Thinning	107	0.17%
Forest disturbances	Livestock grazing (inside the forest)	19,746	31%
	Fire (pre-2010)	14,408	22%
	Logging**	8,992	14%
	Pests	3,971	6.2%
	Disease	443	0.7%
	Storm damage	88	0.1%

*The practice of removing/gathering dead and down wood.
**Reportedly mostly illegal logging carried out by private companies on FUG land, both prior to and following the granting of land for FUG use.

The management practices and disturbances listed in Table 5 have distinct impacts on forest structure, condition and carbon stocking levels, which can be summarized as follows:

- Forest cleaning: Removal of dead wood forest carbon pool, followed by the burning of the majority of the material, leads directly to forestry emissions; though the reduced understorey fuel load in the forest greatly decreases the probability that a forest floor fire (low impact/emissions) will become a forest crown fire (high impact/emissions).
- Reforestation: Directly enhances forest carbon stocks / sequestration of atmospheric carbon.
- Thinning: Enhances tree health and growth rates, and therefore forest carbon sequestration.
- Livestock grazing: Reduces forest biomass/carbon stocks and slows regeneration of degraded areas.
- Fire: Burning of biomass and soil releases forest carbon stocks as carbon dioxide emissions to the atmosphere (though it is a key feature of boreal forests).
- Logging: Removes aboveground living biomass and extraction process often damages other trees, vegetation and soils. If area is left to regenerate, growth rates of remaining trees are often enhanced, leading to greater sequestration.
- Pests and diseases: Can affect tree growth, leading to reduced carbon sequestration.

Though there are extensive areas impacted by the above practices and disturbances, it is important to note that a large proportion of the FUGs' forest areas (approximately 50%) is reported as un-impacted.

Forest Carbon Stocks in the 16 Project FUGs

The timing and magnitude of the impacts on forest carbon stocks of the activities and disturbances listed in Table 5 have a profound effect on 1) standing carbon stocks, 2) forest carbon emissions, and 3) forest regeneration and carbon sequestration rates. Because timings and the extent of the disturbances are unknown for the 16 FUGs, a conservative approach is taken to the estimation of current carbon stocks, where it is assumed:

- 50% of the total forest area is taken as un-impacted and stocking a (conservative) average of 53tC/ha;
    - (64,531/2) x 53 = 1,710,071.5 tC
- 50% of the total forest area is taken as impacted (given the reported crown cover and disturbance figures) and stocking 30% reduced carbon stocks from the conservative average – i.e. 35.3tC/ha
    - (64,531/2) x 35.3 = 1,138,972.2 tC

Giving total carbon stocks for the forests of the 16 FUGs as: 2,849,043.7tC

Forest Emissions and Removals from the 16 Project FUGs

Emissions from deforestation

As outlined above, the FUGs report that since 2010 the incidence of fire, a key emissions-inducing factor, has been reduced to zero. Nevertheless, given the need for ongoing support to FUGs to continue to suppress the incidence of fire, a conservative approach is taken by applying the national deforestation rate to estimate emissions from deforestation in the 16 FUGs, where:

- The national deforestation rate for northern forests, 0.74%, is applied to the total FUG forest area, the average carbon stock level is (53+35.3)/2) – thus accounting for half of the forests as degraded; and the tC to tCO_2e conversion factor is 3.67; giving:

- 64,531ha x 44.15tC/ha x 3.67; giving:

    - A total deforestation rate of 477.5ha per year; and

- Total emissions from the 16 FUGs of **77,370 tCO_2e/yr**.

- Taking the **five year lifetime of the project**, baseline emissions from deforestation from the 16 FUGs (in the absence of this project) can be estimated at **386,848 tCO_2e**.

- Taking medium-term view of **20 years**, baseline emissions from deforestation from the 16 FUGs (in the absence of this project) can be estimated at **1,547,391 tCO_2e**.

Emissions from forest degradation

Anthropogenic disturbance factors continue to exert pressure on the FUG forests (see Table 5), reducing forest carbon stocks and releasing emissions from forest degradation. Conservative values of carbon emissions per hectare were associated with each of the degradation activities[1], producing the figures shown in Table 6.

Table 6. Emissions from forest degradation in the 16 FUGs.

	No. ha	tC lost per ha of	tCO 2e lost per ha	Total emissions per year

[1] Informed by expert knowledge of Dr. D. Mollicone, Forestry Officer, FAO.

		activity	of activity	(tCO2e)
Emissions from fire	14,408	20	73.4	**1,057,547**
Emissions from livestock grazing in forests	19,746	5	18.35	**362,339**
Emissions from logging	8,992	5	18.35	**165,003**
Emissions from pests, disease and storm damage	4,502	2	7.34	**33,045**
Total emissions from degradation				**1,617,934**

- These calculations give total baseline emissions from forest degradation from the 16 FUGs of **1,617,934 tCO_2e/yr**.

- Taking the **five year lifetime of the project**, baseline emissions from forest degradation from the 16 FUGs (in the absence of this project) can be estimated at **8,089,671 tCO_2e**.

- Taking medium-term view of **20 years**, baseline emissions from forest degradation from the 16 FUGs (in the absence of this project) can be estimated at **32,358,684 tCO_2e**.

Forest removals

In addition to the emissions from forest disturbances, forests continue to sequester atmospheric carbon through photosynthesis (Net Primary Productivity – NPP) – known as 'forest removals', which needs to be accounted for in the carbon calculations. Drawing on the estimated crown cover figures, where lower crown cover forest land has a lower rate of NPP than higher crown cover areas due to lower living biomass, the figures in Table 7 are reached.

Table 7. Removals from forests in the 16 FUG areas.

Crown Cover (%)	Total area coverage in 16 FUGs	Potential Annual NPP (tC/ha/yr)	Total NPP (tC/yr)	Total Removals (tCO_2e/yr)
10-30	17,417	0.5	8,708	31,959
30-50	19,330	0.9	17,397	63,847
50-70	16,766	1.5	25,149	92,296
70+	11,019	1.9	20,936	76,837
Total Removals per year				**264,937**

- Taking the **five year lifetime of the project**, baseline sequestration by forests from the 16 FUGs (in the absence of this project) can be estimated at **1,324,687 tCO_2e**.

- Taking medium-term view of **20 years**, baseline sequestration from forests from the 16 FUGs (in the absence of this project) can be estimated at **5,298,746 tCO_2e**.

Total Baseline Forest Emissions and Removals

Table 8 summarizes the total balance of baseline (absence of project) emissions and removals per year from forests in the 16 FUGs, showing that the forests in the 16 FUGs are a net source of emissions.

Table 8. Balance of emissions and removals from forests in the 16 FUG areas.

	Emissions and Removals (tCO_2e/yr)
Emissions from deforestation	77,370
Emissions from forest degradation	1,617,934
Removals from forests	-264,937
Total balance of emissions/removals	**1,430,366**

- Taking the **five year lifetime of the project**, net emissions by forests from the 16 FUGs (in the absence of this project) can be estimated at **7,151,832 tCO_2e**.

- Taking medium-term view of **20 years**, net emissions from forests from the 16 FUGs (in the absence of this project) can be estimated at **28,607,329 tCO_2e**.

III Proposed Approach to Managing Forest Carbon through PFM in the 16 Project FUGs

An objective of this project is to reduce emissions from deforestation and forest degradation and enhance sequestration through participatory forest management (PFM) activities implemented by FUGs. To achieve this objective, the following five forest monitoring and management activities will be implemented with FUGs in collaboration with other local, regional and national stakeholders.

Activity 1: Participatory Land Use Mapping

The first activity will involve the participatory mapping of FUG land areas, which will then inform and underpin the formulation of land use planning and resource management plans. The objective of this activity is to produce clear and easily interpretable (by all local stakeholders) land use maps that can be used to guide PFM activities. **This effort will for the first time identify and demarcate FUG areas in the context of multiple land uses, and administrative boundaries, alongside vulnerabilities, risks and threats; produced through a collaborative (national-local) and participatory approach combining modern digital mapping technology with local knowledge**.

The first step will be the collection of data and mapping of the FUG areas using remote sensing data and GIS mapping techniques. This will be carried out by the Environmental Information Centre in Ulaanbaatar, which is receiving training in 2013 through the UN-REDD Programme on remote sensing and GIS. The maps produced will be based on freely available data (e.g. Landsat 8) and will be produced to clearly represent different land uses (forest land, grassland, etc.) in FUGs. The maps will identify: priority areas of critical natural forest and pastures with healthy plant communities; areas under moderate pressure; areas vulnerable to permanent degradation, extensively used for grazing, forest resource use or suffering high rates of erosion; new opportunities for forest/pasture management, including improved forest condition and cover (areas of good potential for natural forest regeneration; previously forested areas of good potential for reforestation) and improved pasture land

condition (areas in need of wind breaks; degraded areas, etc.); Areas of overlap or joint use such as transhumance corridors used for moving animals between winter and summer pasture; Areas that may be sensitive to livestock use, for example, newly seeded forested areas, areas with special values or special reserve areas; particularly vulnerable areas; FUG and state forestlands.

The second step will be to print maps of each FUG in colour on A0 size paper which will then be taken to FUG members. The lay-out and content of each map will be thoroughly explained to members. FUG members will then undertake mapping exercises to validate the remote sensing-based maps, with the support of FUG facilitators and project staff, identifying any mistakes, highlighting specific land uses and/or disturbances (e.g. fire damage) in certain areas, locations of roads and *gers*, pasture areas, etc. (i.e. a sketch-mapping exercise based on a remote sensing/GIS-derived map). This will be done by placing transparent overlays on the printed maps, for FUG members to sketch on, both existing and planned changes to the landscape and/or infrastructure, such as planned roads.

Importantly, for the purposes of this project, FUG members, in collaboration with local Forest Department officers, will use the maps as the basis for planning land use and management of their FUG areas. This will include the delineation of areas to be assigned for silvicultural activities such as forest cleaning and thinning, routes to be taken on forest patrols (see next activity), and/or areas to be designated for conservation, e.g. areas of biodiversity importance or habitat of key indicator species. Where necessary, and as part of the quality control of the mapping exercises, field verification and transect walks will be carried out in FUG forest areas to validate the land use. The mapping could require considerable fieldwork to identify and understand the impacts of land use choices and to develop an understanding of the impact of actions to mitigate climate change caused by LULUCF.

All changes and additions will be made on the overlays on the maps, which will then be taken back to the national-level GIS operators to incorporate the edits. Final versions of the maps will be re-printed, laminated and taken back to the FUGs. These maps will then be available to FUG members to plan and implement forest monitoring and management activities. The map-based plans will indicate areas of particular concern, determining what may be done for risk mitigation in those areas, and other aspects that will be clarified through the process. The result will be full, community-driven FUG-level land use management plans for the pilot FUGs that will initially form the strategic basis for implementing sustainable forest management practices and become the reference for land use decision making going forward.

Activity 2: Enhanced, structured and incentivised forest patrolling

Members of the 16 FUGs began forest patrolling exercises under the Dutch-funded project. The objective of this activity in this project is to incentivise the continuation and intensification of forest patrolling, in order to enhance passive fire management and control, and prevent illegal logging (which has to date impacted 8,992ha across the 16 FUGs). Under this activity, FUG members, working with local Forest Department officers and project staff will be enabled to apply new approaches to forest monitoring and reporting of incidences of forest disturbances, to enable FUGs to improve the pro-active management of their forest areas.

The first step under this activity will involve the training of FUG members to carry out forest patrolling and monitoring. The training will cover 1) health and safety issues relating to

patrolling and contingency planning, 2) patrol objectives and requirements, 3) communication links, 4) control measures and follow-up actions, 5) evidence collection and documentation, and 6) reporting. The training courses and exercises will be recorded and printed as forest patrolling training manuals, in Mongolian, which will be kept by FUG members for future reference. The second step will involve the collaborative formulation of forest patrolling plans for each FUG, including the periodicity and means of the patrols, to be field tested and adjusted as necessary, as well as the identification of necessary equipment and potential incentives for FUGs. The main actors involved in the delivery of this activity will be the FUG committees and the local Forest Department officers. The third step will be trial runs of the monitoring of FUG forest areas, following the collaboratively finalised monitoring plans, which will be developed by FUG members, supported by project staff and supervised by local Forest Department officers. In at least four of the FUGs the patrolling equipment will include GPS units (as well as accompanying training on their use) to track the patrols and begin the process of collecting data on FUG forest monitoring activities. In the future, once Mongolia has a centralised satellite land monitoring system – a key technical component of the national REDD+ architecture – this local information will be fed up and incorporated into the national system.

The piloting of forest monitoring incentives, the nature of which will be collaboratively agreed upon with FUG members, could, for example, be based on the receipt of GPS patrol data, from FUG members to national-level government GIS operators, on a monthly basis. Through this approach, **this project would be the first in Mongolia to support an innovative approach to linking national- and local-level forest monitoring as a way to reward and incentivize regular participatory forest monitoring**, while building a national database of local forest monitoring activities.

Forest patrolling as a means to <u>reduce emissions from deforestation and forest degradation</u>

Reducing forest degradation: Addressing the incidence of fire: FUG members will receive training from project officers and local Forest Department officers on the management and control of fire in the field. Fire management plans and materials will be developed by project officers in collaboration with government officials, and be based on individual circumstances and capacities of each FUG. To prevent the incidences of fire, FUGs may trial controlled burning in parts of their forest areas. Active management practices may focus on the creation of fire-lines to break the spread of the fire (for example through the use of water, tree-cutting or pit digging, as appropriate). Where fires are found and controlled, these will be noted on the "living" monitoring and management plans developed in Activity 1. The project will also investigate the feasibility of establishing early-warning communication systems to allow neighbouring FUGs to alert each other to the presence and movement of fire.

Reducing forest degradation: Addressing the incidence of illegal logging: Action plans to address incidences of illegal logging will be collaboratively developed by a coalition of FUG members, local law enforcement officials, local Forest Department officers and Tsum darghas, with the support of project officers. While the legal procedures to be developed cannot be speculated upon, the project activities and carbon calculations are based on an immediate cessation of illegal logging activities encountered through enhanced and incentivised forest patrolling by FUG members.

Reducing deforestation: Preventing forest land use changes: Regular patrolling activities will allow FUG members to gain a greater oversight of land use activities in their FUG areas and thereby prevent unplanned land use changes from forest land to other land uses such as grassland (e.g. for grazing), infrastructure or cropland. This will allow FUGs to ensure that their forest areas are safeguarded from the national annual deforestation rate of 0.74%.

Based on the quantitative lessons learned from the first project that worked to build the capacity of these 16 FUGs, it is (conservatively) estimated that this plan for **enhanced, incentivised and collaboratively planned forest patrolling will lead to a 75% reduction in emission from fire, and a 75% reduction in emissions of forest degradation from logging activities, in the 16 FUGs** (see next section for carbon calculations). In addition, this enhanced oversight of FUG forest areas will allow members and local Forest Department officers to prevent the threats to the conversion of forest land to other land uses.

Activity 3: Expansion of forest area under cleaning by 200% to 645ha

The current total of 215ha of forest land currently being cleaned by FUGs equates to 13.4ha per FUG. The objectives of this activity are to 1) expand the FUG forest area being cleaned and 2) support access to markets of the products of forest cleaning, beyond its current uses of fuelwood and other household uses. Under this activity, FUG members, working with local Forest Department officers and project staff will be enabled to expand the forest area being cleaned. The objective under this activity is to **increase the forest land under cleaning by 200%, to an average of 40ha per FUG, totalling 645ha for the 16 FUGs** (see next section for carbon calculations).

Expanding the forest area being cleaned will act as a form of active fire management to reduce the understorey fuel-load by removing dead and down wood. Supporting FUGs to access markets for products such as fuelwood and wood chips (for industrial processes) will (under a successful scenario) lead to increased household incomes from their forest areas and incentivise the cleaning of further areas to feed these markets. This activity will therefore support the building of both ecological and economic sustainability of the project outcomes through the building of technical and operational capacity and resilience of the FUGs.

Sub-activities will include:

1. The provision of equipment and training for FUG members by project officers and through local Forest Department officers;
2. Collaborative spatial planning of cleaning activities, led by FUG members with the support of project officers and local Forest Department officers (based on the maps produced in Activity 1); and
3. The facilitation of discussions and working sessions between FUGs and the private sector and government (including Tsum darghas) to address the marketing of forest products.

Activity 4: Silvicultural Capacity Building and expansion of forest area being thinned by 78% to 408ha

This activity aims to support the building of technical capacities of FUG members for active silvicultural management with a focus on stand improvement through thinning (otherwise

referred to as 'improvement cutting'). This activity will promote improved forest growth through the reduction of stand density and lead to increased net biomass increment, and thereby enhance forest carbon sequestration. In addition, thinning promotes enhanced forest health by limiting the spread of tree diseases and pests, thereby helping address – and mitigating the resulting emissions from – two other factors affecting FUG forests. It can also increase a stand's resilience to environmental extremes and stresses such as droughts and extreme temperatures, and thus promote the conservation of forest carbon stocks as well as enhance sequestration.

The first stage of this activity will involve the training of members at *soum* centres on silivicultural management through a two-day training workshop. These training events will bring together four FUGs at a time to facilitate the sharing of lessons. This will be followed immediately by a two-day practical field training programme to provide detailed guidance on the implementation of the theory. These week-long training events will be carried out in four *soum* centres (four FUGs to attend each event) twice over the length of the project. In addition to the training, the project will provide FUGs with the necessary tools to carry out the thinning of their forest areas.

The second stage will be supervised implementation of thinning in FUG forest areas. FUG members, having undergone training and in possession of the necessary equipment, will be supported in the field, through this project, by local Forest Department officers and project staff, to thin a pre-selected forest area (based on land/forest use mapping resulting from Activity 1). Following the supervised thinning, FUGs will be able to request further ad-hoc support and training from FUG facilitators and national-level project officers, as necessary.

Forest thinning as a means to <u>enhance forest carbon sequestration</u>: Currently, private forest companies are thinning 107ha of FUG forests, equating to 6.7ha per FUG. Under this project, 1) the responsibility and capacity for thinning will be transferred to FUG members and 2) **forest areas being thinned will be increased to 30ha per FUG over the lifetime of the project, totalling 408ha, leading to enhanced carbon sequestration by FUG forests (see next section for carbon calculations**). To promote the implementation of this (labour-intensive) silvicultural activity, the project will provide FUG members with an incentive for each hectare of forest they thin, in addition to the training and tools. The nature and frequency of the incentives will be pre-determined with FUG members, and spot-checks will be carried out by FUG facilitators to validate compliance. With the incentives bringing about enhanced carbon sequestration, this activity will serve as a key vehicle for learning lessons for the implementation of the REDD+ activity of 'enhancement of forest carbon stocks'. Under this activity, FUG members, working with local Forest Department officers and project staff will be enabled to apply new approaches to active forest management, and thus improve the health and resilience of their forest areas, while enhancing forest carbon sequestration.

<u>Activity 5: Payment for ecosystem services (PES) mechanisms piloted to reduce over-grazing and restore critical ecosystem services generated by healthy summer pastures over 6,000ha of grazing-impacted forest land</u>

Grazing exclusion as a means to <u>reduce emissions from forest degradation and enhance forest carbon sequestration</u>: The forests of northern Mongolia provide critical ecosystem services beyond carbon sequestration and storage, including flood regulation through soil conservation and erosion control, provision of habitat, landscape integrity services and livelihood provision – including for the raising of livestock. The forest edge is particularly

vulnerable to the effects of over-grazing, which reduces the resilience of the forest and undermines the provision of these ecosystem services. With almost 20,000ha of forest impacted by livestock grazing in the 16 pilot FUGs, this activity aims to pilot the implementation of grazing exclusion areas inside the forest and at the forest edge, in order to 1) **reduce emissions from forest degradation** and 2) enhance the resilience and regeneration of trees and other vegetation at the forest edge, and thus **enhance carbon sequestration** in previously impacted/degraded forest areas (see next section for carbon calculations). This will be another central activity of the project from which lessons for REDD+ implementation will be learned and document (relating to the REDD+ activities 'reduced emissions from forest degradation' and/or 'conservation of forest carbon stocks'.

This activity will for the first time plan and implement total grazing exclusion zones as well as rotational exclusion zones in FUG forest areas. The latter will allow vegetation periods of recovery of at least one year between periods of grazing; thereby allowing plants time to set seed on different sections of each pasture each year, thereby improving vegetation cover. After seed set of important perennial forage species these areas will then be grazed to allow other areas of the pasture to recover. This will ensure that "better" forage species remain as part of the vegetation cover. Under this activity, FUG members, working with local Forest Department officers and project staff will be enabled to apply an innovative forest management technique that will promote regeneration and significantly enhance forest carbon sequestration. **The ultimate objective of this activity is to reduce the forest area subject to grazing by 30% compared to baseline levels**.

The first phase of this activity will be the development of PES/grazing exclusion management plans with FUG members and committees, consisting of a two-day management planning workshop for each FUG. This process will include the mapping of land uses and land use activities under Activity 1, on the basis of which FUG members, with the support of project staff, will determine priority conservation sites, e.g. alluvial corridors and slopes, as well as degraded forest areas. Priority will also be given to areas of fragmentation between forest areas, in an effort to enhance landscape connectivity and promote habitat expansion and migration corridors for wildlife. These priority sites will be zoned as grazing exclusion areas, while the remaining forest (edge) areas will be subject to rotational grazing exclusion. Each brief, succinct management plan will detail specific actions to be taken, the number of animals allowed to graze on each plot and will draw upon the indicators to be monitored. Each PES plan will also specify priority forest management/improvement actions needed, which will be discussed among the FUG members and a short list of priority activities submitted for funding by the project. The management plans will also set out a series of incentives for the adoption of grazing exclusion areas, which could be based on the size of the exclusion area(s), total forest area, livestock herd size and FUG member numbers. An adaptive management approach will be taken to the structuring of incentives, in that they will remain flexible throughout the project period to allow adjustments to be made according to FUG feedback. The grazing exclusion PES pilot will be formally launched with a PES inception workshop bringing together decisions makers from MoEGD, MoAI and soum administrations. The inception workshop will provide the crucial official starting point for the PES work and will reinforce the primary elements of the buyer and seller relationship central to the PES, and specify actions to be taken by main parties, including monitoring and payment schedules.

In the pilot operations stage, a PES working group, comprised of eight members (MoEGD, MoAI and FUG chairpersons) will meet twice per year. Working group meetings will be used

as an opportunity to enhance the capacity of existing institutions to support PES through training in collaborative resource management skills, and establishing cost-effective monitoring and verification activities. Capacity building will also focus on the FUG members, with activities designed to strengthen the social capital within the groups. To support the implementation of the exclusion areas, FUGs will be provided with tools to build fences. GPS points of the fenced areas will be taken and mapped onto the land use/zoning maps produced through the project. Rotational exclusion zones will be in place for one year before being re-opened to livestock and fencing another equivalent area. It is estimated that this activity will contribute to the facilitation of enhanced forest regeneration on 50% of the total combined forest area of the 16 pilot FUGs. Ensuring that PES recipients comply with their contracts requires appropriate monitoring. Evaluation and monitoring will be done semi-annually. Monitoring will determine changes in management (rotational grazing, reduced animal numbers, etc.) and changes in forest condition near the end of the grazing season (productivity, cover, erosion, etc.). Unscheduled monitoring visits will also be conducted to reduce the incentive for cheating during the in-between times. The emphasis on monitoring will be on cost-effectiveness, using easily measured indicators in order to hold down PES transaction costs and increase stakeholder ownership and ability to monitor over the long-term. The administration of this PES pilot will be undertaken by a sub-committee to the Project Coordination Committee. The Board will oversee the implementation of the pilot. Membership of this sub-committee will include the MEGD and chairpersons of the FUGs where piloting is being implemented.

Estimations of Avoided Carbon Emissions and Enhanced Carbon Sequestration through Project Activities in the 16 Project FUGs

Table 9a summarizes the carbon figures under the baseline and project scenarios. This project will reduce annual emissions from forestry from the 16 FUGs by 1,059,504 tCO_2e and enhance forest carbon sequestration by 241,247 tCO_2e per year, leading to avoided emissions of 5,297,517 tCO_2e and additional sequestration of 913,205 tCO_2e over the lifetime of the project. Explanations and justifications underpinning the additional emissions and removals are set out below the table.

Table 9a. Baseline and project emissions and removals from forestry.

		Project avoided emissions (AE) in tCO_2e			
	Baseline emissions (tCO_2e/yr)	**Avoided annual emissions**	**AE over project lifetime (5 years)**	**AE over yrs 6-20**	**Total AE from 16 FUGs**
Emissions from deforestation	77,370	-77,370	-386,850	-1,160,550	-1,547,400
Emissions from forest degradation	1,617,934	- 982,134*	-4,910,669	-14,732,007	-19,642,676
Total emissions	1,695,304	**-1,059,504**	**-5,297,517**	-15,892,557	-21,190,074
		Project sequestration			
	Baseline sequestration (tCO_2e/yr)	**Additional annual sequestration**	**Additional sequestration over project lifetime**	**Additional sequestration over years 6-20**	**Total Sequestration from 16 FUGs**

Carbon sequestration	-264,937	**-241,247**	**-913,205**	-2,739,615	-3,652,820

*Based on the annual average of the total; resulting from emission reduction activities over the five-year project period – some initiating in year 1 and others in year 3.

Table 9b. Avoided emissions and enhanced sequestration by project activity.

Avoided Emissions Activities	**Project time period years (1-5)**
1) Prevention of deforestation / forest land use change	386,848
2) Reduce fire by 75%	3,965,802
3) Reduce logging by 75%	618,762
4) Reduce livestock grazing in forests by 30%	326,105
Totals	**5,297,517**
Enhanced Sequestration Activities	
1) Enhanced regeneration of forests	899,949
2) Enhanced forest growth through thinning	13,256
Totals	**913,205**

Avoided Emissions from Deforestation

Through the continuation of engagement with the FUGs in forestry capacity building activities through the project will continue to ensure that anthropogenic activities do not lead to deforestation, thus deviating from the national average rate of 0.74% per year and avoiding 77,370tCO_2e/yr. This is based on avoided deforestation of 477.5ha, using the conservative figure of 162.03tCO_2e released per ha of deforestation.

Avoided Emissions from Forest Degradation

Fire: Through enhanced forest patrolling/monitoring and forest cleaning activities, this project aims to reduce the incidence of forest fires by 75% compared to pre-2010 values; thus avoiding a loss of 20tC/ha (73.4 tCO_2e/ha) over 10,806ha, leading to the avoidance of 793,160tCO_2e/yr through this activity. The number of ha in this calculation is based on 75% of the total number of ha affected by fire up to 2010

Logging: Through enhanced forest patrolling, this project aims to reduce the incidence of illegal logging over the FUGs' forest areas by 75%; thus avoiding a loss of 5tC/ha (18.35tCO_2e/ha) over 6,744ha, leading to the avoidance of 123,752tCO_2e/yr through this activity.

Grazing in forest areas: Through the implementation of pilot grazing exclusion areas, this project aims to reduce the area of forest subject to livestock grazing by 30%; thus avoiding a loss of 5tC/ha (18.35tCO_2e/ha) over 5,924ha, leading to the avoidance of 108,702tCO_2e/yr through this activity. The carbon calculations are based on the implementation of grazing exclusions beginning in the second year, leading to avoided emissions as of the third year.

Enhanced Forest Carbon Sequestration

Enhanced forest regeneration: Taking a conservative value of improved forest regeneration over 50% of the total FUG forest area (32,266ha), due to enhanced patrolling, improved forest management and grazing exclusion, and allowing for 30% of the total additional annual potential carbon sequestration due to enhanced forest regeneration (at 2tC/ha/yr) in year one, 60% in year two, 90% in year three and 100% in years four and five – to account for incremental implementation of project activities. This will bring about an estimated additional sequestration of 236,829tCOe/yr.

Enhanced forest growth from thinning: Through technical capacity building and handing of responsibility for thinning of FUG members, this project aims to implement thinning practices in an additional 301ha of FUG forests; leading to enhanced sequestration of 4tC/ha/yr in these areas. This will bring about an estimated additional sequestration of 4,419tCOe/yr. This calculation is based on thinning activities initiating in the second year of the project and enhanced growth initiating in the third year

Proposed Approach to Mainstreaming Forest Carbon into Up-Scaling to a further 84 FUGs

A second major objective of this project is the scaling-up forest carbon activities to a further 84 FUGs. The scope and scale of activities in these 84 FUGs will be limited compared to activities in the original 16, due to the need for extensive prior capacity building of FUG members before more in-depth forest management activities are implemented – as was achieved through the Dutch-funded project for the 16 FUGs. This project will support the implementation of three types of activities in the 84 FUGs, outlined below.

Forest Data Collection

The first activity will be to support the collection of baseline data on the extent and condition of FUG forest areas, accompanied, where possible, by sketch mapping of FUG land areas. This information should include information on parameters beyond strictly forestry, including numbers of livestock and proximity to nearest market centres – in order to collate a full understanding of the context and potential of forestry within each FUG. The methodology for collecting this data should follow the same approach as that of the Dutch-funded project. This data will facilitate an approximate appraisal of standing carbon stocks and forestry emissions and removals from each FUG, on the basis of which further activities can be developed according to their ecological, social and economic circumstances.

Forest Patrolling/Monitoring

Initial capacity building of the FUGs will also focus on enhanced forest patrolling, with the objective of reducing the incidence of fire and illegal logging (as well as other drivers of deforestation and forest degradation). FUG members will receive basic training on forest fire management and be supported to formulate a forest patrolling schedule based on available human and time resources. If the success rates of the Dutch project in reducing forest fires can be replicated, significant reductions in emissions from forestry will be readily achievable through this activity.

Though the nature and areal extent of the FUGs is as yet unknown, it can be conservatively estimated (based on the forest areas of the original 16 FUGs) that 84 FUGs will cover a forest

area of 500,000ha. Under circumstances where 20% of this area is regularly affected by fire (following the ratio of fire impact from the original 16 FUGs) (i.e. 100,000ha), and taking a value of 20tC lost per ha of fire damage (and therefore 73.4 tCO_2e/ha), emissions from the 84 FUGs could be estimated at 7,340,000 tCO_2e/yr). If forest patrolling could bring about reductions of 50-75% of this amount, emissions from the 84 FUGs would be reduced by 3,670,000-5,505,000 tCO_2e/yr.

Capacity Building for Forest Cleaning

Members of the 84 additional FUGs will also receive initial capacity building on forest cleaning, in order to begin the process of reducing understorey fuel loads, and therefore the risk of large-scale forest crown fires, as well as increase the amount of wood material available to them for household uses. This activity will involve delivering training to FUG members at *soum* centres on the principles of sustainable forest management and undertaking field training exercises.

Annex 9: Capacity Scorecard for the 24 (Inter-soum) Forest units

The following was prepared in April 2013. The score represents the average score given by (i) the PFM Officer in the MEGD and (ii) the forest unit itself. The score card will be completed, using the same methodology, at (i) mid-point and (ii) project end.

Summary Table

Forest Unit	Aimag	Aggregate rating	Maximum Rating Possible
Altanbulag soum	Selenge	11	33
Mandal, Kharaa	Selenge	18	33
Turgen soum	Uvs	12	33
Erchimt-Ider	Huvsgul	14	33
Delgermurun	Huvsgul	15	33
Nars shinesen tugul	Huvsgul	17	33
Khovd soum	Khovd	10	33
Khentiin shines	Khentii	16	33
Batshireet	Khentii	16	33
Batsumber soum	Tuv	15	33
Mongonmorti	Tuv	13	33
Tosontsengel soum	Zavkhan	9	33
Inter soum	Orkhon	13	33
Inter-soum	Dundgobi	9	33
Khongor soum	Darkhan-Uul	11	33
Inter soum	Dornod	11	33
Inter soum	Bayan-Ulgii	8	33
Bulgan soum	Bulgan	12	33
Khutag-Undor	Bulgan	12	33
Khyalganat	Bulgan	10	33
Inter soum	Uverkhangai	12	33
Ikh-tamir	Arkhangai	9	33

Erdenemandal	Arkhangai	11		33	
Bayanshishged	Khuvsgul	13		33	
Grand total			**297**		**792**

Details for each Soum Forest Unit Assessed

Aimag: Selenge
Forest unit name: Altanbulag soum FU

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and	0	

	plans		
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	2
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1

	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	0
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	0
	TOTAL (maximum 33)		11

Aimag: Selenge
Forest unit name: Mandal, Kharaa

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1

	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	1
	In the Unit there is little knowledge of national biodiversity policy and plans	1	
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	2
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	

8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	2
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	2
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	18

Aimag: Uvs
Forest unit name: Turgen soum

Indicator	Stages	Rating	Average Score by FUs

			and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	1
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG	The Unit has good ability to provide business development support to	3	

on how to develop business and marketing skills	FUGs The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	

	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		12

Aimag: Huvsgul
Forest unit name: Erchimt-Ider

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	2
	In the Unit there is little knowledge of national forestry policy and plans	1	
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	2
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1

	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	0
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	

	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		14

Aimag: Huvsgul
Forest unit name: Delgermurun

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and	0	

	plans		
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	2
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	0
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support	The Unit has good ability to support FUGs on forestry practices	3	

on forestry practices to FUGs	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	2
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	15

Aimag: Huvsgul
Forest unit name: Nars shinesen tugul

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	2
	In the Unit there is little knowledge of national forestry policy and plans	1	
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	

	The Unit has some, but insufficient, ability to monitor biodiversity	2	2
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	

	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		17

Aimag: Khovd
Forest unit name: Khovd soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	

	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	

	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	0
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	0
	TOTAL (maximum 33)		10

Aimag: Khentii
Forest unit name: Khentiin shines

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			

1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	2
	In the Unit there is little knowledge of national forestry policy and plans	1	
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	2
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to	1	

	FUGs The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	0
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	16

Aimag: Khentii
Forest unit name: Batshireet

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	2
	In the Unit there is little knowledge of national biodiversity policy and plans	1	
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	

	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	0
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack	2	2

	key training		
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	2
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		16

Aimag: Tuv
Forest unit name: Batsumber soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	

3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation	2	

	and regulations		
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	2
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	2
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		15

Aimag: Tuv
Forest unit name: Mongonmorti

Indicator	**Stages**	**Rating**	**Average Score by FUs and MEGD**

Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	

	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	2
	The Unit has limited ability to enforce forest legislation and regulations	1	
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	13

Aimag: Zavkhan
Forest unit name: Tosontsengel soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and	The Unit has good ability to monitor forests	3	

condition in general	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	0
10. Staff	The Unit has enough staff and they are well trained	3	

	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		9

Aimag: Orkhon
Forest unit name: Inter soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or	0	

	REDD		
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	2
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation	The Unit has adequate ability to enforce forest legislation and regulations	3	

and regulations.	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	13

Aimag: Dundgobi
Forest unit name: Inter-soum

Indicator	Stages	Rating	Average Score by FUs and

			MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	0
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business	2	

	development support to FUGs		
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	2
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	0

TOTAL (maximum 33) 9

Aimag: Darkhan-Uul
Forest unit name: Khongor soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			

4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	

10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	2
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	11

Aimag: Dornod
Forest unit name: Inter soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	

	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	2
	The Unit has limited ability to support FUGs on forestry practices	1	
	The Unit has very little ability to support FUGs on forestry practices	0	

8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		11

Aimag: Bayan-Ulgii
Forest unit name: Inter soum

Indicator	Stages	Rating	Average Score by FUs

			and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	0
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and	The Unit has good ability to provide business development support to FUGs	3	

marketing skills	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	0
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	

	The Unit has none of the equipment required to fulfill its mandate	0	0
		TOTAL (maximum 33)	8

Aimag: Bulgan
Forest unit name: Bulgan soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	

Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1

	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		12

Aimag: Bulgan
Forest unit name: Khutag-Undor

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	

forests or REDD	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1

	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	2
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	0
	TOTAL (maximum 33)		12

Aimag: Bulgan
Forest unit name: Khyalganat

Indicator	**Stages**	**Rating**	**Average Score**

			by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	0
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	2
	The Unit has limited ability to monitor forests	1	
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	0
6. Ability to provide support to FUG	The Unit has good ability to provide business development support to	3	

on how to develop business and marketing skills	FUGs The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	

	The Unit is lacking most of the equipment needed to fulfill its mandate	1	
	The Unit has none of the equipment required to fulfill its mandate	0	0
		TOTAL (maximum 33)	10

Aimag: Uverkhangai
Forest unit name: Inter soum

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy	0	

	and plans		
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	2

	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	1
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		12

Aimag: Arkhangai
Forest unit name: Ikh-tamir

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of	In the Unit there is good knowledge of carbon sequestration or REDD	3	

carbon sequestration and storage by forests or REDD	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	

	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	0
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		9

Aimag: Arkhangai
Forest unit name: Erdenemandal

Indicator	Stages	Rating	Average

			Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1
	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	2
	The Unit has limited ability to monitor biodiversity	1	
	The Unit has very little ability to monitor biodiversity	0	

6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	
	The Unit has limited budget but can perform some tasks	2	
	The Unit has a very limited budget and can only perform very basic tasks	1	1
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	0
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its	2	

	mandate		
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
	TOTAL (maximum 33)		11

Aimag: Khuvsgul
Forest unit name: Bayanshishged

Indicator	Stages	Rating	Average Score by FUs and MEGD
Overall forestry knowledge			
1. Knowledge and understanding of national forestry policy and plans	In the Unit there is good knowledge of national forestry policy and plans	3	
	In the Unit there is some knowledge of national forestry policy and plans	2	
	In the Unit there is little knowledge of national forestry policy and plans	1	1
	In the Unit there is almost no knowledge of national forestry policy and plans	0	
2. Knowledge and understanding of carbon sequestration and storage by forests or REDD	In the Unit there is good knowledge of carbon sequestration or REDD	3	
	In the Unit there is some knowledge of carbon sequestration or REDD	2	
	In the Unit there is little knowledge of carbon sequestration or REDD	1	1
	In the Unit there is almost no knowledge of carbon sequestration or REDD	0	
3. Knowledge and understanding of national biodiversity policy and plans	In the Unit there is good knowledge of national biodiversity policy and plans	3	
	In the Unit there is some knowledge of national biodiversity policy and plans	2	
	In the Unit there is little knowledge of national biodiversity policy and plans	1	1

	In the Unit there is almost no knowledge of national biodiversity policy and plans	0	
Ability to implement mandate			
4. Ability to monitor forest health and condition in general	The Unit has good ability to monitor forests	3	
	The Unit has some, but insufficient, ability to monitor forests	2	
	The Unit has limited ability to monitor forests	1	1
	The Unit has very little ability to monitor forests	0	
5. Ability to monitor biodiversity	The Unit has good ability to monitor biodiversity	3	
	The Unit has some, but insufficient, ability to monitor biodiversity	2	
	The Unit has limited ability to monitor biodiversity	1	1
	The Unit has very little ability to monitor biodiversity	0	
6. Ability to provide support to FUG on how to develop business and marketing skills	The Unit has good ability to provide business development support to FUGs	3	
	The Unit has some, but insufficient, ability to provide business development support to FUGs	2	
	The Unit has limited ability to provide business development support to FUGs	1	1
	The Unit has very little ability to provide business development support to FUGs	0	
7. Ability to provide technical support on forestry practices to FUGs	The Unit has good ability to support FUGs on forestry practices	3	
	The Unit has some, but insufficient, ability to support FUGs on forestry practices	2	
	The Unit has limited ability to support FUGs on forestry practices	1	1
	The Unit has very little ability to support FUGs on forestry practices	0	
8. Ability to enforce forest legislation and regulations.	The Unit has adequate ability to enforce forest legislation and regulations	3	
	The Unit has some, but insufficient, ability to enforce forest legislation and regulations	2	
	The Unit has limited ability to enforce forest legislation and regulations	1	1
	The Unit has very little ability to enforce forest legislation and regulations	0	
Staff and Equipment			
9. Unit operating budget	The Unit has sufficient budget to perform most tasks	3	

	The Unit has limited budget but can perform some tasks	2	2
	The Unit has a very limited budget and can only perform very basic tasks	1	
	The Unit has almost no budget	0	
10. Staff	The Unit has enough staff and they are well trained	3	
	The Unit has staff, but they are either insufficient in number or they lack key training	2	2
	The Unit has staff, but they are insufficient in number and they lack key training.	1	
	The Unit has too few staff.	0	
11. Equipment	The Unit has sufficient equipment to fulfill its mandate	3	
	The Unit is lacking some of the key equipment needed to fulfill its mandate	2	
	The Unit is lacking most of the equipment needed to fulfill its mandate	1	1
	The Unit has none of the equipment required to fulfill its mandate	0	
		TOTAL (maximum 33)	13

Annex 10 Terms of Reference for Short and Long Term Personnel

Terms of Reference

National Project Director

Timing/Duration Full time for project duration

Background Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

The Government of Mongolia will appoint a national director for this FAO-supported project. The National Project Director supports the project and acts as a focal point on the part of the Government. This responsibility normally entails ensuring effective communication between partners and monitoring of progress towards expected results.

The National Project Director is the party that represents the Government's ownership and authority over the project, responsibility for achieving project objectives and the accountability to the Government and FAO for the use of project resources.

In consultation with FAO, the MEGD will designate the National Project Director from among its staff at not lower than the Deputy Minister or Head of Department level. The NPD will be supported by a full-time National Project Manager (NPM).

Main tasks

- Assume overall responsibility for the successful execution and implementation of the project, accountability to the Government and FAO for the proper and effective use of project resources;
- Serve as a focal point for the coordination of projects with other Government agencies, FAO and outside implementing agencies;
- Ensure that all Government inputs committed to the project are made available;
- Supervise the work of the National Project Manager and ensure that the National Project Manager is empowered to effectively manage the project and other project staff to perform their duties effectively;
- Select and arrange, in close collaboration with FAO, for the

appointment of the National Project;

- Supervise the preparation of project work plans, updating, clearance and approval, in consultation with FAO and other stakeholders and ensure the timely request of inputs according to the project work plans;
- Represent the Government institution (national counterpart) at the tripartite review project meetings, and other stakeholder meetings.

PMO National Staff

Title National Project Coordinator and senior PFM professional

Timing/Duration Full time for project duration

Background Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks Manage Project management office

- Prepare annual and quarterly workplans and prepare ToR for all inputs;
- Ensure all PMO staff and all consultants fully understand their role and their tasks, and support them in their work;
- Oversee day-to-day implementation of the project in line with the workplans;
- Assure quality of project activities and project outputs;
- Organise regular planning and communication events, starting with inception mission and inception workshop;
- Oversee preparation and implementation of M&E framework;
- Oversee preparation and implementation of Project communication and knowledge management frameworks;
- Prepare progress reports and all monitoring reports.

Lead interactions with stakeholders

- Liase with government agencies and regularly advocate on behalf of the Project;
- Coordinate project interventions with other ongoing activities, especially those of co-financers and other GEF projects;
- Regularly promote the project and its outputs and findings on a national, and where appropriate, regional stage.

Key competencies/qualifications

- At least ten years experience in the Mongolian forestry sector;
- Demonstrated ability to adopt new ideas;
- Demonstrated commitment to participatory forest management in Mongolia;
- Demonstrated ability to communicate, including advocating to government agencies;
- Demonstrated ability to manage, including project management, office management ;
- English language skills highly preferential.

Title
Forest biodiversity ecosystems expert

Timing/Duration
Full time for project duration

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

The aim of this assignment is to ensure that biodiversity and biodiversity conservation is fully integrated into the project strategy and activities, and that all activities are designed in the light of a full understanding of biodiversity.

- Design all activities related to biodiversity;
- Oversee the quality of all inputs and activities related to biodiversity;
- Ensure biodiversity is integrated into all activities, in Outcome 1 – 3;
- Provide regular training and awareness raising on biodiversity in northern forests for government, local government, technical experts and FUGs;

- Advise on the integration of biodiversity and its conservation into PFM methodologies, tools and approaches in Mongolia;
- Advise on the integration of biodiversity and its conservation into all FUG management plans;
- Help set up a biodiversity monitoring system, covering the 16 FUG and the five northern AImags, including participatory aspects;
- Support the National Project Coordinator with all planning and reporting and monitoring tasks when related to biodiversity.

Key competencies/qualifications

- Higher degree related to biodiversity and its conservation;
- At least ten years experience in the Mongolian biodiversity sector;
- At least five years experience working with the forestry sector in Mongolia;
- Previous experience working on biodiversity conservation with international partners
- Demonstrated commitment to participatory natural resource management techniques in Mongolia;
- English language skills preferential.

Title Field Facilitators (4)

Timing/Duration Four x Full time for project duration

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

The Field Facilitators provide and channel guidance to local governments and to forest users, and to provide the full communication links between local and national forest stakeholders.

- Provide capacity development to local forest units
- Provide training and awareness raising of FUGs
- Oversee rolling out of PFM at 100 FUGs and provide

ongoing technical support

- Oversee the preparation of management plans, and their implementation, ensuring coverage of REDD+ and biodiversity, at 100 FUG
- Oversee the preparation of management plans, and their implementation, at the sixteen leading FUGs, ensuring biodiversity and carbon are conserved and measured, livelihoods are greatly improved, and all lessons learnt are well documented;
- Liaise regularly between FUG, local government and PMO and national government;
- Provide regular feedback and advance warning on conflicts, and assist with conflict resolution.

Key competencies/qualifications

- Demonstrated experience on operationalizing PFM in Mongolia
- Excellent communication skills, with national government, national and international experts and local forest users
- Demonstrated ability to open up to new approaches and new practices

Title REDD Incentives Manager

Timing/Duration Full time, two years during years 2 - 4

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

The main task of this REDD Incentives Manager is to manage the REDD payments mechanisms being piloted in the 16 FUGs.

This contributes mostly to Output 2.2. Specifically:

- Assist with training and awareness raising;
- Monitor on a regular basis the REDD measures being taken in the 16 FUGs that improve forest management and lead to increased carbon storage;
- Oversee the payments being made to FUGs in exchange for the REDD measures;

- Ensure on a regular basis that reporting and auditing of REDD measures and payments is up to international standards;
- Ensure that conflict resolution mechanisms are being used when necessary and are effective;
- Prepare regular reports on the REDD+ payments, on the use of payments, of the impacts of payments, etc;
- Ensure all lessons learnt are captured.

Key competencies/qualifications

- Higher degree related to financial management or business management;
- At least ten years working on mechanisms for allocating payments to local communities and local people in Mongolia;
- Demonstrated successful experience working with international partners and international funds for poverty alleviation in Mongolia;
- Demonstrated experience working in rural areas in Mongolia;
- Previous experience on projects related to forestry is preferable;
- English language skills preferential.

Title National Operations and administrative officer

Timing/Duration Full time for project duration

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

- Insert standard TOR
- May depend on NEX assessment

Key competencies/qualifications

- Insert standard qualifications
- May depend on NEX assessment

Title Finance and Operations assistant

Timing/Duration	Full time for project duration
Background	Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation. Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon. This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.
Main tasks	- Insert standard TOR - May depend on NEX assessment
Key competencies/qualifications	- Insert standard qualifications - May depend on NEX assessment

International Advisors and Experts

Title	Chief Technical Adviser and PFM Adviser
Timing/Duration	70 weeks over five years. It is anticipated that this will be 3 x (3-4) week missions to Mongolia per year, plus time allocated from home-base in-between mission, plus an initial six week mission to support inception period and inception workshop.
Background	Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation. Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon. This Project will mainstream biodiversity conservation and

carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Support the National Project Coordinator in all tasks (refer to TOR for NPC), ensuring:

- Best international experience and practices are mainstreamed into the project activities;
- Project outputs are to international standards;
- REDD+ is fully addressed through all activities;
- Biodiversity conservation is fully addressed through all activities;
- M&E, communications and knowledge management are to international standards.

Take a lead role in identifying and guiding all international experts and all international activities.

Provide technical guidance to all TOR, all workplans, and the activities under the project.

Take a lead role in the preparation of project knowledge outputs.

Assist with the training and capacity development of all project staff and experts.

Assists with advocacy and promoting the project on the national and international agenda.

Key competencies/qualifications

- Higher degree related to forestry or forest management;
- At least fifteen years experience successfully supporting the development of participatory forest management in developing countries;
- Demonstrated knowledge of forest biodiversity, biodiversity conservation, and REDD+ issues;
- Demonstrated ability to effectively communicate, using written, verbal and IT techniques, with all forms of forest stakeholders – including government, international partners, national experts and forest users;
- Previous experience in Mongolia is highly preferable;
- Mongolian language skills preferential.

Title

External M&E Consultant

Timing/Duration

Two missions of approximately 3 weeks each.

Timing to be determined in line with project implementation schedule.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a

danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks Working closely with the concerned national consultant, the main task of this assignment is to lead mid-term and final project evaluation, in line with GEF and FAO guidelines, rules and procedures.

Key competencies/qualifications In line with GEF and FAO guidelines, rules and procedures.

Title Forest law and policy expert

Timing/Duration Six weeks during years 1-2

Background Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks Working closely with the concerned national consultant, this assignment focuses specifically on the development of the needed legislative tool to allow FUG users to benefit economically from timber harvesting. This contributes mostly to Output 1.2. Specifically:

- Advise on establishment of inter-sectoral technical working group on FUG economic activities – contribute to ToR of group and facilitate first meeting;
- Support group as it analyses specific barriers to

increased FUG involvement in thinning and harvesting activities;
- Help draft a Resolution that allows FUG participation in thinning and harvesting activities under specified conditions, and help support approval of the Resolution.

Key competencies/qualifications
- Higher degree related to forestry or legal issues;
- Demonstrated experience supporting the preparation of forestry sector laws related to participatory forest management;
- Previous experience in Mongolia;

Title Expert on innovative biodiversity conservation financing approaches

Timing/Duration Six weeks during years 1-2

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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Main tasks

This assignment focuses on the valuation of biodiversity and the consideration of ecosystem services values in the development of forestry. This contributes to Outputs 1.1 and 2.3. Specifically,

- Design a study on ecosystem services and innovative financing mechanisms for biodiversity conservation in northern forests;
- Facilitate a workshop on ecosystem services and innovative financing mechanisms for biodiversity conservation in northern forests;
- Design a study to establish the value of ecosystem services at two selected FUGs;
- Provide guidance to (i) the study on ecosystem services and innovative financing mechanisms for biodiversity conservation in northern forests and (ii) the study to establish the value of ecosystem services at two selected FUGs;
- Analyse findings from above;
- Help finalize outputs to international standards.

Key competencies/qualifications
- Higher degree related to financial value of ecosystem services
- Demonstrated experience on undertaking general

studies to assess the value of ecosystem services across a nation;

- Demonstrated experience on undertaking studies at the local level to assess the value of biodiversity and/or ecosystem services in remote forests;
- Previous experience in Mongolia is preferential.

Title REDD - Forest Monitoring Expert

Timing/Duration Nine weeks, over years 1 – 2.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned national consultant, the main task of this assignment is to develop capacity to undertake forest monitoring, and to establish a framework for systematically monitoring forests in the 16 leading FUGs. This monitoring system should be linked to the emerging national forest monitoring system and ongoing efforts to build REDD+ readiness in Mongolia. This monitoring system should also be participatory – in that the FUG members should be able to easily complete the forest monitoring. This contributes mostly to Output 2.1. Specifically,

- Design approaches to monitoring forests at the FUG level by FUG members. These approaches should be aligned with the needs of a REDD system, and should be designed to provide the information needed by REDD incentive mechanisms;
- Ensure the monitoring system is (i) aligned to existing approaches of FUG (ii) coordinated with biodiversity monitoring being prepared under Output 2.3
- Develop materials and other tools to be used when monitoring forests;
- Help train national and local government staff on the approach to forest monitoring;
- Develop the data-base or other national tool to collect and collate all data on forests from the FUGs, and to link this information to the national forestry monitoring system;
- Ensure all work is fully informed by latest

developments and needs regarding REDD+.

Key competencies/qualifications

- Higher degree on forest
- 10 years working of forest monitoring systems
- Demonstrated experience developing participatory forestry monitoring systems
- Previous experience in Mongolia is highly preferential.

Title REDD+ benefit distributions expert,

Timing/Duration Fourteen weeks, over years 1 – 3.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned national consultant, the main task of this assignment is to design and set-up the benefit distribution system to be piloted in 16 FUGs. This contributes specifically to Output 2.2. Specifically:

- Assist with training and awareness raising on REDD+, in particular on benefit distribution systems;
- Help design a REDD+ benefit distribution system that is suitable for Mongolia to be piloted in 16 FUGs;
- Help prepare and finalize REDD+ agreements that formalize the benefit distribution system to the 16 FUGs, and support their signature by concerned parties;
- Help prepare the REDD+ monitoring system to monitor REDD+ implementation at the 16 FUGs and ensure all lessons learnt are captured.

Key competencies/qualifications

- Higher degree related to forestry
- Previous successful experience working on the design of REDD+ benefit distribution systems in countries with a similar socio-economic context to Mongolia;
- Previous experience in Mongolia is preferential

Title Forest biodiversity ecosystems expert

Timing/Duration 20 weeks during years 2-4.

Most likely to be 5 missions of 3 weeks, with some follow-up from home-base between missions.

Background

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Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

The main task of this assignment, working closely with the PMO Forest biodiversity ecosystems expert, is to integrate biodiversity conservation into PFM at 16 FUGs. The main focus is Output 2.3, although there are also contributions to Output 1.1 and 3.4.

- Contribute to overall awareness raising on importance of biodiversity conservation;
- Contribute to refresher training for 16 lead FUGs, raising understanding on forest biodiversity and its conservation;
- Help develop and implement training programme for local government and FUG leaders on forest biodiversity and its conservation;
- Design and help start up the process to establish biodiversity conservation management, as part of PFM, at the ten most important FUGs, covering: identifying high value areas; identifying management/conservation issues; measuring biodiversity values, and monitoring biodiversity;
- Identify approaches to integrating biodiversity conservation/management into the 84 new PFM forestry plans.

Key competencies/qualifications

- Higher degree related to forest biodiversity;
- Demonstrated experience working on forestry biodiversity conservation programmes;
- Demonstrated experience successfully working on participatory approaches to forest biodiversity conservation;
- Previous experience in Mongolia preferential.

Title Livelihoods business expert

Timing/Duration Fifteen weeks, during years 2 – 4.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned national consultant, the main task of this assignment is to ensure that the FUG can increase their revenue from timber and non-timber forest products. The focus will initially be the 16 lead FUGs (Outputs 2.1 and 2.4), with some support to other FUGs (3.4). Specifically:

- Help design a training programme for FUGs, to give them greater capacity to interact with local governments, and to access MIA funded programmes;
- Help design a programme to convince Aimag and Soum governments to open markets for NTFP and wood, and allow FUGs to act in those markets freely;
- Help identify the needs in terms of capacity and equipment for FUGs in order to add value to their forest products;
- Help design the steps required to negotiate co-management agreement between (at least 2) FUG and private enterprise, so that FUG can fully benefit from sustainable timber harvesting activities.

Key competencies/qualifications

- Higher degree related to small and micro business development;
- Demonstrated experience on programmes developing micro businesses in economic context similar to Mongolia;
- Demonstrated experience working in the forestry sector with small and micro and family enterprises;
- Previous experience in Mongolia preferential.

National Experts and Advisors

Title	External M&E consultant (Mid and final)
Timing/Duration	14 weeks in two assignments. Timing to be determined in line with project implementation schedule.
Background	Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation. Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large volumes of carbon. This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.
Main tasks	Working closely with the concerned inter-national consultant, the main task of this assignment is to support and contribute to mid-term and final project evaluation, in line with GEF and FAO guidelines, rules and procedures.
Key competencies/qualifications	In line with GEF and FAO guidelines, rules and procedures.

Title	National Law, policy and institutional expert
Timing/Duration	16 weeks, during years 1-2
Background	Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation. Sustainable forest management of Mongolia's large tracts of forest represents a potential alternative revenue source for many of Mongolia's poor. The recent introduction and piloting of PFM in the country indicates this approach can be successful. The northern forests also hold globally important biodiversity and store large

volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

This assignment will provide inputs and guidance to all Outputs under the first Outcome.

The consultant will work closely with the concerned inter-national consultant, especially on Output 1.2

- Facilitate communications and advocacy with Ministry officials;
- Help establish the inter-sectoral technical working group on FUG economic activities;
- Facilitate the meetings of inter-sectoral technical working group on FUG economic activities;
- Provide support to drafting the Resolution that allows FUG participation in thinning and harvesting activities under specified conditions, and help support approval of the Resolution.
- Facilitate approval of the resolution;
- Help review legislation and regulations pertaining to biodiversity conservation in forests;
- Help design the process to establish a Unit in FDRC empowered to integrate biodiversity conservation and carbon storage into all participatory forestry in Mongolia;

Key competencies/qualifications

- Higher degree related to forestry or legal issues;
- Demonstrated experience supporting the preparation of forestry sector laws related to participatory forest management;
- English language communications skills are highly preferential.

Title

Forest carbon monitoring expert

Timing/Duration

30 weeks, mainly in years 1-2

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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This Project will mainstream biodiversity conservation and

carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned international consultant, the main task of this assignment is to develop capacity to undertake forest monitoring, and to establish a framework for systematically monitoring forests in the 16 leading FUGs.

This monitoring system should be linked to the emerging national forest monitoring system and ongoing efforts to build REDD+ readiness in Mongolia. This monitoring system should also be participatory – in that the FUG members should be able to easily complete the forest monitoring.

This contributes mostly to Output 2.1. Specifically,

- Help design approaches to monitoring forests at the FUG level by FUG members. These approaches should be aligned with the needs of a REDD system, and should be designed to provide the information needed by REDD incentive mechanisms;
- Help ensure the monitoring system is (i) aligned to existing approaches of FUG (ii) coordinated with biodiversity monitoring being prepared under Output 2.3
- Support development of materials and other tools to be used when monitoring forests;
- Train national and local government staff on the approach to forest monitoring;
- Help develop the data-base or other national tool to collect and collate all data on forests from the FUGs, and to link this information to the national forestry monitoring system.

Key competencies/qualifications

- Higher degree related to forestry;
- 10 years working of forest monitoring systems;
- Demonstrated experience working with participatory forestry management;
- English language communications skills are highly preferential.

Title

REDD benefit distributions expert

Timing/Duration

30 weeks, mainly in years 1-2

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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forests also hold globally important biodiversity and store large volumes of carbon.

This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned international consultant, the main task of this assignment is to support the design and set-up the benefit distribution system to be piloted in 16 FUGs.

This contributes specifically to Output 2.2. Specifically:

- Assist with training and awareness raising on REDD+, in particular on benefit distribution systems;
- Help design a REDD+ benefit distribution system that is suitable for Mongolia to be piloted in 16 FUGs;
- Help prepare and finalize REDD+ agreements that formalize the benefit distribution system to the 16 FUGs;
- Support signature of the agreements by the concerned parties;
- Help design a system to monitor follow-up to the agreements.
-

Key competencies/qualifications

- Higher degree related to natural resources management;
- Previous experience on the design of mechanisms to allocate results-based funds to rural communities;
- Demonstrated successful experience working with international partners and international funds for poverty alleviation in Mongolia;
- Demonstrated experience working in rural areas in Mongolia;
- English language communications skills are highly preferential.

Title

Communications and knowledge management advisor

Timing/Duration

34 weeks over the first three years, with the first part lasting for ten weeks.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

This assignment will support the MEGD and the PMO on communicating and disseminating messages from the project. The assignment will cover written, verbal, electronic and other forms of media.

The aim is to ensure that PFM is raised on the agenda of decision-makers and politicians at the national and local level in Mongolia, and that PFM is fully understood and appreciated.

This assignment contributes to all Outcomes of the project. The consultant will work with the NPC and the CTA. Specific tasks include:

- Determine the principal messages to be disseminated by the Project;
- Determine the key audiences for each message;
- Determine the optimal media for conveying the messages to the targeted audience;
- Draft a communication strategy;
- Train PMO and MEGD staff on communication techniques;
- Design a system for monitoring the effectiveness of the project's communications;
- Work with the PMO staff to design, develop and support use of communication tools as the project evolves, conveying the project findings and outputs: websites, posters, leaflets, TV interviews, radio interviews, facebook, twitter, etc….

Key competencies/qualifications

- Higher degree in media relations or communications
- Ten years experience in communications or media relations with a national government agency or international private sector organization
- Demonstrated ability to (i) train (ii) develop communication tools – written, verbal, electronic, etc.
- Perfect English language skills
- Previous work in the forestry sector is highly preferential.

Title

Livelihoods business expert

Timing/Duration

34 weeks over the first three years, with the first part lasting for ten weeks.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-

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This Project will mainstream biodiversity conservation and carbon management into the developing participatory forest management systems, and help expand this form of sustainable forest management to over half a million hectares.

Main tasks

Working closely with the concerned international consultant, the main task of this assignment is to ensure that the FUG can increase their revenue from timber and non-timber forest products. The focus will initially be the 16 lead FUGs (Outputs 2.1 and 2.4), with some support to other FUGs (3.4). Specifically:

- Help design a training programme for FUGs, to give them greater capacity to interact with local governments, and to access MIA funded programmes;
- Run a training programme for FUGs, that will develop their capacity to interact with local governments, and their capacity to benefit from MIA funded programmes for small and micro enterprise development;
- Help design and implement a programme of advocacy and awareness raising to convince Aimag and Soum governments to open markets for NTFP and wood, and to allow FUGs to act in those markets freely;
- Survey and identify the needs in terms of capacity and equipment for FUGs, in order to add value to their forest products;
- Support the FUGs in the development of their business development plans;
- Help design the steps required to negotiate co-management agreement between (at least 2) FUG and private enterprise, so that FUG can fully benefit from sustainable timber harvesting activities.

Key competencies/qualifications

- Higher degree related to small and micro business development;
- Demonstrated experience on programmes developing micro businesses and family businesses in rural Mongolia;
- Demonstrated experience working in the forestry sector with small and micro and family enterprises;
- Demonstrated ability to interact effectively with FUGs, and local governments;
- English language communications skills are preferential.

Title Gender expert

Timing/Duration 34 weeks over the first three years, with the first part lasting for ten weeks.

Background

Mongolia is an impoverished country on the verge of an economic boom due to a rapid growth in the exploitation of mineral resources. However, the benefits of this boom are unlikely to equitably reach all of Mongolia's people. Moreover, a boom in one sector may lead to the many dangers associated with an under-diversified economy (inflation, unemployment, etc). There is also a danger that poorly regulated mining sector development could lead to environmental degradation.

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Main tasks

The aim of this assignment is to ensure that gender considerations are integrated into all project approaches, strategies, activities, inputs and outputs. The assignment will also be responsible for advising MEGD and PMO on gender issues. Specifically:

- Assess and analyze the project from a gender perspective;
- Identify key gender issues in the project and key gender entry points;
- Identify awareness and training needs regarding gender in the PMO and MEGD;
- Prepare a practical strategy for integrating gender into the project, including a training programme and a gender monitoring framework;
- Train PMO and MEGD staff on gender issues;
- Work with the PMO staff to (i) integrate gender into all project workplans (ii) integrate gender into all project ToR (iii) review all outputs from a gender perspective;
- On a regular basis, monitor the effectiveness of the project with regards to addressing gender issues;
- Prepare regular lessons learnt and best practices material.

Key competencies/qualifications

- Higher degree related to social issues or gender;
- At least ten years experience working on gender issues in rural Mongolia;
- Demonstrated experience successfully working with international partners on natural resource management issues;
- Demonstrated ability to interact effectively with a range of stakeholders – national government, local government and local forest users;

- English language communications skills are preferential.