

# COMMUNITY BASED CO-MANAGEMENT OF PASTURE and FOREST RESOURCES IN MONGOLIA

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## Abstract:

Main source of the animal husbandry feed base is natural pasture an ecologically based system. Natural pastures serve as part of the daily chain of livestock for feed and survival.

Mongolian livestock receive 90 percent of the fodder needs from total pasture area.

The natural pasture is very sensitive structure easy to be overgrazed and degraded, given a low productivity depend on climate change and influence of human activities. That is very difficult to restore even almost unfeasible to be rehabilitated. Therefore, pasture utilization system are comfortable for nomadic traditional way. In currently, Mongolian pasture land is under government but livestock is private. The herders are no tax for the pasture utilization.

Therefore, almost 70 % of whole pasture impacted by degradation. Consequently, natural pasture condition depend on herding techniques of individual herders. In the article has described pasture conservation issues depend on pasture utilization technologies, regulate of carrying capacity, herding techniques and climate changing proceeds.

The pasture conservation issues must be related with plant composition, structure of yield and productivity. There is a research results an ecologically-based system to optimize management of livestock production and biodiversity conservation.

**Key words:** *common resources, co-management, pastureland, forest, policy*

## Main Findings

Co-Management and Community-Based Natural Resources Management are effective mechanisms for overcoming the 'tragedy of the commons.' They require that all stakeholders support and actively participate in concrete management efforts. Local people are the heart of the rural development process that results from the implementation of these mechanisms. Collaborative management strategies, bringing together knowledge and expertise from various social actors, are also important for reducing natural resource degradation and for timely adaptation to climate change. Collaborative learning is key to building capacity of the stakeholders at all levels. Over time, accumulated experiences and lessons learned at the local level can serve as the basis for the formulation of enabling policies and laws.





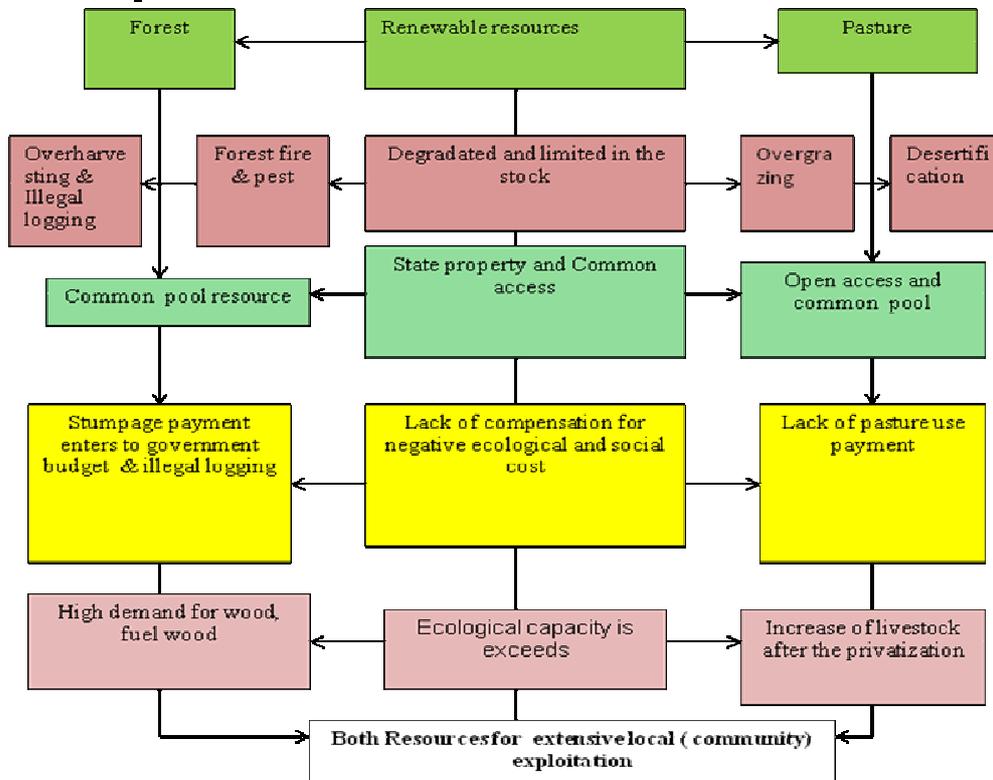
The **research methodology** combined various methods (see the photos above and below), such as:

- Participatory Rural Appraisal: to gather the insights, ideas, and interests of stakeholders concerning resource management dynamics (past, present, future)
- Analysis of stakeholders: to understand the diversity of perspectives and interests of social actors at different levels (from community to national level); and to find middle ground when different or conflicting views exist
- Participatory Monitoring and Evaluation: to continuously assess the process of change, both in terms of outcomes and learning; to make sure that all voices are heard decisions are made jointly as much as possible; to inform the learning, adapt the overall strategy and identify new directions
- Social and Gender Analysis: to understand if and how differences exist among men, women, the young and the old, and how these differences influence action
- Sustainable Livelihoods Analysis: to assess how livelihoods are “built” and “rebuilt”, what the vulnerabilities are, and to identify alternative option for improving livelihood strategies (from production of food to the commercialization of products)



**Figure1**

## Why Community based pasture and forest resources management



## 2. Introducing Co-Management of Pastureland

In our view, CBNRM is a key form of co-management. Co-management is the sharing of authority and responsibility among government and stakeholders. It is a decentralized approach to decision-making that involves user groups as consultants, advisors, or co-equal decision-makers with government. Co-management means participation of all stakeholders in the decision-making and conflict solving on issues related to the use of pasture (and other natural) resources. In Mongolia, where the land remains under state-ownership while livestock is now owned privately by herder families and communities, co-management offers a viable option to deal with major problems (see the diagram above) and manage grassland and livestock in a sustainable manner, although it requires considerable time and effort, and adequate policy and legal support, to make it work. Resource degradation –which is affecting large parts of the country (e.g., pasture degradation, drying out of wells and rivers, land erosion, water and soil pollution, deforestation, desertification) is adding additional stress on the required mobility of herders to move between ecological zones and resource niches, usually according to the seasons, quality of grasslands, and availability of water. As a result, reaching workable co-management access and use agreements to these resources has become more demanding.

Strong and appropriate policy support is needed for building on communal arrangements, where an identifiable community of users holds the resource and can exclude others from it and regulate its use. This means that, within the community, pastureland will be used as a CPI. However, when non-community herders are concerned, their inclusion will be regulated through the co-management arrangements, which the community will make with local governments and other stakeholders, according to the given legal rights and responsibilities of these stakeholders.

Decentralization, which is democratic in nature, aims to empower local governments, giving political rights to local citizens, where the market is the principal mechanism for the distribution of resources. According to democratic movements in the last decade, local governments and citizens legally have more rights on NRM, but currently they lack the means and methods for how to implement their given rights.

If pastureland and other natural resources are to be managed sustainably as common pool resources, strong herder organizations will be necessary. This however requires the participation of all stakeholders and the development of management agreements that are supported by appropriate policies interlinked at national and local levels. Co-management has been introduced in Mongolia as a way forward. Co-management processes establish effective roles and responsibilities of the stakeholders who manage, directly or indirectly, livestock (privately owned), land and water (state owned), and other natural resources (e.g., wildlife).

In most literature, Community-Based Natural Resources Co-Management is described as a balanced combination of Community-Based and Government-Based management. It seeks to bring the best of both systems together through a deliberate process of interaction, decision-making, and action. It represents a break with the Soviet-style rule under which the Mongolian people lived for many decades, and builds on traditional management forms –blowing new ideas into them.

C-management has many important features, such as (being): Instructive; Consultative; Cooperative; Advisory; and Informative. CBNRM is a central element of co-management. CBNRM is people-centered and community-focused, while co-management focuses more on a partnership arrangement between government, resource users, and the local community. Co-management includes a major role for the government. There exist two broad categories of co-management: i) Community-centered, and ii) Stakeholder-centered. Community-centered co-management seems to be more present in developing countries. Stakeholder-centered co-management often takes the form of government-industry partnership through the involvement of user groups; it seems to be more present in the developed world. Linking stakeholders into the management process is a critical element of co-management. Defining and identifying the full range of stakeholder interests is often a complex process (Bromly 1992; Ostrom and Schlager 1996; Young 1992). Among the potential advantages of co-management are efficiency and equity among all stakeholders; equity can be sought by helping the less privileged to “develop their own entitlements” (Babbit et al., 1994).

In Mongolia, as well as in other countries, study experiences shows that co-management of pastureland is special, in comparison with forest, water and other resources management. Traditionally, herders use pastureland based on group membership, such as *khot ail*, *sakhalt ail* or *neg nutgiinkan*, which means living in the same area, for example, along one river, in one watershed, in one valley and so on. Access and use to pasture are governed by site-specific community arrangements. These arrangements have gained new importance because herders now bear the main risks of pastoral agriculture, rather than the government, a major shift from the Soviet era.

Addressing natural resource management problems in today's Mongolia not only requires dealing with both the biophysical and social dynamics of sustainable natural resource management, based on the above mentioned theoretical concepts, but also the *unlearning* of "Soviet-style rule" and adaptation to the economic and political opening up that the central government has been promoting since 1992 (Ykhanbai, Bulgan, Beket, Vernooy, and Graham, 2004). Elinor Ostrom says: "Mongolian nomads have been using communal pasture appropriately for thousands of years. It is the third way of co-management which does not depend on the state or on the market".

#### ***Why co-management of pasture is needed in Mongolia?***

- Pasture remains a common resource, covering large areas of the country. A large part of the population depends on its sustainable management
- Private ownership of livestock is allowing herders to become more business oriented, but a viable household or community enterprise is only feasible if the carrying capacity of available pastures is respected, and the interests of neighboring herders are taking into consideration
- State ownership of grasslands asks for government regulation of its use
- Lack of capacity of herders and local governments to sustainably manage pasture resources requires the participation and support of other stakeholders at sectoral and national levels
- Pasture degradation is increasing country-wide, and the impact of climate change far reaching

In Mongolia, although ten years of learning by doing has led to several important results, the current capacity of national and local governments for co-management of natural resources needs to be further strengthened in terms of policy development, implementation, and monitoring. Co-management is being practiced in scattered sites all over the country and a number of supportive institutional arrangements exist, but more needs to be done to scale co-management out and up.

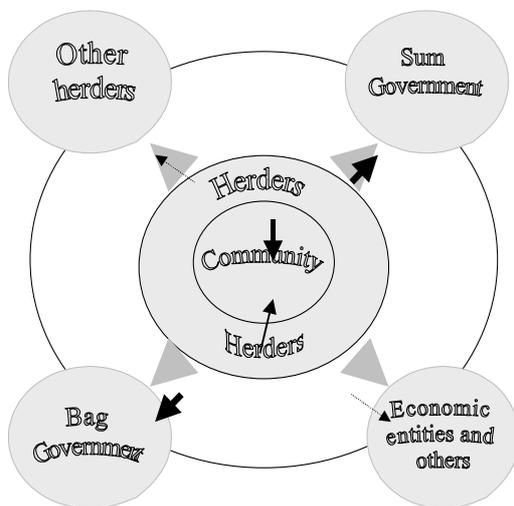
#### **Co-management interventions**

### Box1 Roles of co-management in increasing participation

- \* CM system was created at the sum level as a result of clarification of roles and responsibilities of stakeholders
- \* Advantage of participatory evaluation
- \* Possibility to involve all stakeholders' voices in decision-making
- \* Reciprocal monitoring of stakeholders in CM
- \* Improves herders' participation in NRM
- \* Participatory research with local people

There is a strong support from local governors and other actors for improving the capacities of newly established community groups in a “bottom-up” management style. In our study, the key stakeholders include communities or groups of herders, local governments, individual herders, central government, civil society, non-governmental organizations (NGOs), neighborhoods, economic units, and religious and other groups. Co-management groups, which are the central units for the management of pastureland and other resources, acquire a formalized nature (and as such as are recognized by law) once agreements between the key actors have been produced.

**Figure2 . Stakeholders in CM**



In our actions, co-management actors for pasture and other resources are subdivided between “primary” and “secondary”, and thus are accorded different roles and responsibilities in their management roles. Primary actors are herder communities and local governors (See Figure2).

Identifying the stakeholders was a starting point. Then, we formalized community organizations by the establishment of co-management communities.

Also, at the beginning the Sum (district) Level Co-Management Team (SLCMT) was established consisting of representatives of herders, communities, local governors, NGO's, school, religious leaders, and researchers from the project team. This team coordinates all co-management activities at the sum level, overseeing the efforts of the various herder communities.

The roles and responsibilities of all stakeholders are agreed to through discussions and negotiation and are adopted during a formal meeting. Regular

meetings allow individuals and other stakeholders to understand one another better and then work together at a later stage on concrete interventions (Box 1).

**Box2 Steps of a typical co-management meeting in the communities**

<b>Steps</b>	<b>How</b>
Awareness session	General introduction of objectives, plenary round of feedback.
CM agreements and/or community activities (1/3 day)	Discussions in working groups. Comments in plenary.
Discussion of achievements and failures (1/3 day)	Group discussion. Presentation in plenary. Feedback from everyone.
Clarifying directions based	By working groups. Plenary discussion.

Stakeholder analysis indicated that results of CM of pasture and other natural resources will depend firstly on the cooperation and the participation of the “primary” stakeholders. But at the start, they didn’t clearly know their roles and responsibilities for the sound management of resources. In the initial stage, to come to a shared understanding and perspective for the future among the primary stakeholders we held several “hotly” debated meetings and discussions facilitated by project study team members. These sessions followed the sequence outlined in the Box2.

As part of project interventions in the initial stage for defining and following the roles and responsibilities, communities entered into formal contracts with the local government on pasture use, according to the newly approved (by the national government) Community Procedure. We named these contract “tri-party Co-Management contracts.” They have come to play a central role in the broader process of introducing, testing, and adapting co-management in the country.

***Tri-party Co-Management contracts (agreements)*** were created between:

- Herders and their Community
- Community and *Bag* (sub-district) Governor
- Community and *Sum* (district) Governor

In these contracts, boundaries for seasonal pasture are mapped and clearly agreed to, and based on these boundaries, all regulatory measures, as well as responsibilities concerning protection and use rights, are then transferred to the community. CM contracts are different by sum and community, but in general they include the roles and responsibilities of primary stakeholders, and some reference to the roles and responsibilities of secondary stakeholders (see Box3 for the general

**Box3 General content of a co-management contract**

The rights and responsibilities of community members, *sum* and *bag* governors are stated in the contract. The roles and responsibilities of all stakeholders, as agreed upon in previous community meetings and discussions, are also included.

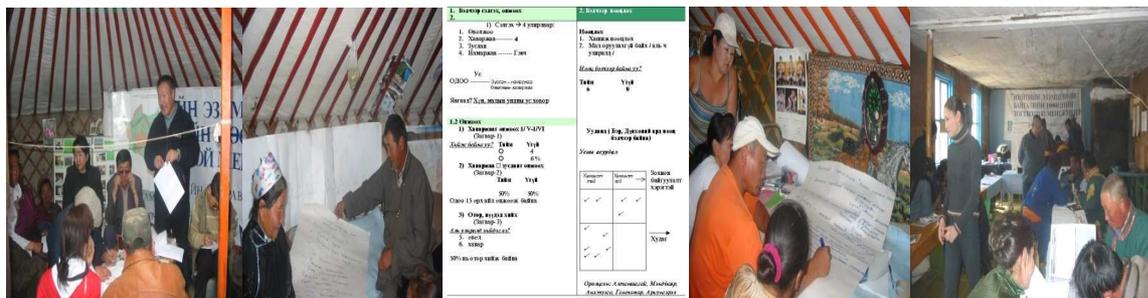
**The Local Governor agrees:**

- To approve community rights to exploit/allocate certain pasture areas according to the laws and regulations
- To link more effectively the *sum's* economic and social policy with community activities, and to support their sustainable NRM and livelihood activities
- To define community pasture borders in the *bag* and to discuss this during the *bag's* people's representatives meeting; and
- To regulate exclusion, in communication with other governors, of outsiders to the community pasture area.

**The community members agree:**

- To follow the community rules and regulations;
- To follow community decisions on pasture use; and

content of a typical contract).



In our evaluations of the effectiveness of the co-management arrangements, we found out that on average they receive very strong support from community members (although not always all members do see them favorably) as well as by local governors. For local governors, the contracts are important means to avoid and reduce conflicts among neighboring communities in their jurisdiction. Through the agreements, they also have a formal channel to bring up any emerging issues related to natural resource management and mobilize herders, for example, in an emergency situation.

### ***Boundary Management***

Two types of boundaries can be underlined in co-management: first, the cultural or customary boundaries based on ethnicity, clan or cultural differences; and second, the physical features of the pastureland, such as watersheds, mountains, or valleys, which separate neighboring communities. In terms of physical boundaries, the nomadic pastureland system requires larger land areas, the size of pastoral communities measuring several thousands of hectares. Boundaries serve several functions: they define and limit the number of legitimate users, they define areas of control, and they reference decision-making to an ecosystem. Specification of boundaries affects costs of coordination, information gathering, monitoring, and enforcement (Ostrom 1990).

During the community-based co-management arrangements, communities agree upon their physical boundaries for pasture among the herders groups by seasons of year, and by the features of valleys, mountains, and rivers. According to the agreements in the case of the community-based pasture management system, boundaries of pasture within the community are allowing for more common and flexible access. In contrast, between communities there are clearer physical as well as regulatory arrangements in order to avoid all too easy “trespassing.”

Our work with the local communities shows that, in the case of steppe and dry land ecosystems, effective community-based co-management approaches are those that have clear pasture boundaries arrangements between herder communities. Over time, these spatial and social boundaries may also become a base for group land tenure arrangements (at the national level, the government continues to debate the Pasture Law, which will ultimately define the nature of tenure of all pasture in the country, be it individually or collectively held, or a combination of these two forms). Given the ever changing conditions of the pasture resource base –requiring yearly adjustment in terms of the most appropriate number and kind of animals and related management practices, negotiable boundaries arrangements between communities are the most effective tool for co-management.

In CPI theory, the most important issues regarding boundaries are exclusion and inclusion. Clear mapping and deliberate and careful negotiation of boundaries between communities can help with conflict resolution. The average distance between seasonal pasture boundaries reached more than 100 km in some study sites. The spatial planning of pasture and NRM at the community level will always vitally important.

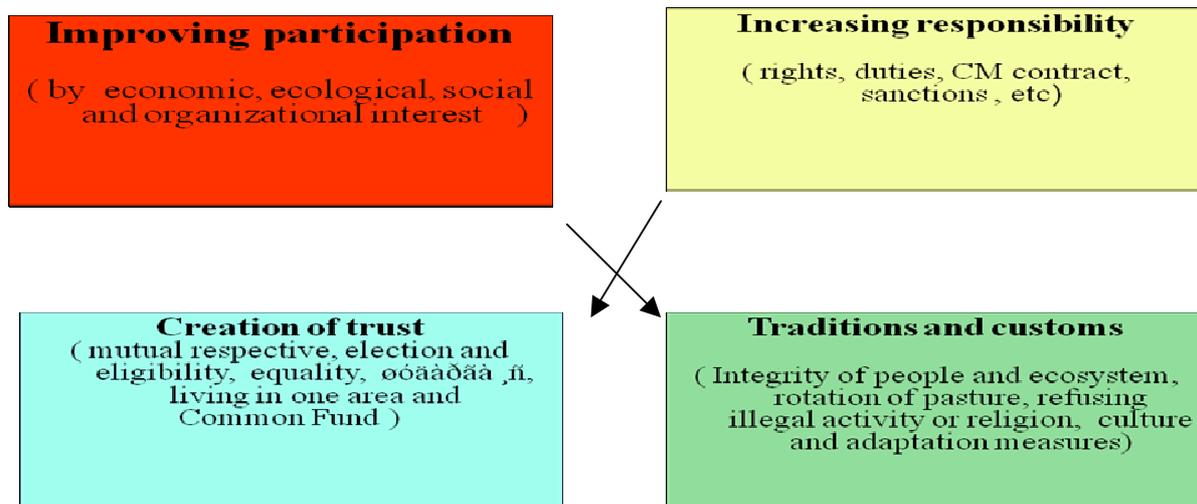
### ***Implementation of CM contracts***

During the PM&E meetings, held every year after the establishment of a CM contract, communities evaluate their co-management agreements with the three key stakeholders, i.e., the *Sum* Governor, *Bag* Governor and the community. Based on these evaluations, agreements are then updated according to actual conditions and the current needs of the community. The PM&E results show that the co-management agreements between the main stakeholders are the basis for successful implementation of CBNRM approaches, but regular review and updating are essential for maintaining relevance. The table below presents the main roles and responsibilities of the stakeholders in three of the four research sites, refined over time to be as clear and coherent as possible.

**Table1 Different stakeholders' roles and responsibilities in improving pasture management**

<b>Sum</b>	<b>Herders' roles</b>	<b>Bag role</b>	<b>Sum role</b>	<b>Community role</b>
Lun	Active participation Pasture shifting Regular herding Keeping an eye on livestock quality	Organizing <i>otor</i> and livestock movement Training	Creating legal conditions Improving livestock breed	Making arrangements Organizing herders' activities
Khotont	Increasing income Keeping good structure of herd	Restoration Making arrangements	Future planning of total sum animal numbers Training Advocacy	Maintaining right structure of herd
Deluin	Adjusting the livestock number to the pasture capacity	Controlling proper implementation Arranging movements	Organizing <i>otor</i> and livestock movement Organizing and training new herders	Improving animal quality

The accumulated experiences over the last decade indicate that the most effective CM agreements are those backed up by some kind of incentives (providing both encouragement and concrete benefits) and by simple but effective policy instruments (e.g., for sanctioning trespassers), as well as continued stakeholders' support. In the Figure3 below, we summarize the finding that participation is highly dependent on local people's' and herders' economic, ecological and social interests, and reciprocal with defined responsibilities, rights, duties and sanctions. At the start of the process, stimulating participation was crucial (for so many years, people had had not say whatsoever in the management of their own livelihoods), but in subsequent years, participation requires to be linked to being responsible individually and collectively. Building up trust is at the heart of this evolving process.



**Figure3 Incentives and regulatory forces for the co-management**

### **Dispute Management**

Disagreements within the community usually take place related to seasonal pasture use periods. Some herders want to remain in autumn or spring pasture, when most would prefer to move to other pasture to allow for regeneration of grass. To resolve disagreement on this, the project facilitates discussions and meetings, such as the People's *Khural* (Parliament) at *bag* level, with the involvement of all stakeholders, to agree on the best means of pasturing animals for the community as a whole.

Another type of disagreement is one that arises between the community and its neighbors. These disagreements on pasture use have a negative impact on community activities. The neighbors are often afraid that the community might take their pasture.

The most problematic issue during the project intervention period has been the relation between community herders and the herders not yet joining the communities or new CM agreements. As the results of a recent survey among the members of *Arjargalant*, *Ikhbulag*, *Ikhburd* communities of *Khotont sum*, and the members of *Karatau*, *Buzaukol* community of *Deluin sum*, indicate that 80% of all 126 respondents (69 male and 57 female herders) on the question if stakeholders are respecting their responsibilities, the main response was “yes” but, with the comment that non-community herders are the ones creating difficulties. Non-community people often move through community areas or live temporarily with community herders and their unplanned movements and use of local pasture and other resources (e.g., water) make difficulties for the enforcement of community-made contracts on pasture use (Ykhanbai et al. 2004).

Slowly however, as a result of follow-up negotiations between stakeholders and additional conducting awareness-building activities non-community herders have made a start with realizing the importance and benefits of co-management across larger areas. Co-management harbors the potential to settle disputes; and this potential is now being used by stakeholders (see box below). In 2008-2009, many “new” herders joined

communities or formed new ones, and after the 2009-2010 *zhud*, an increasing number of herders have come to the understanding that co-management is a viable of for sustainable agriculture. The 2009-2010 *zhud* was worse than the previous one in 1999-2000, which went into history books as the worst of the century. Our 2010 survey shows that 63% of respondent herders in *Khotont sum* (one of the most effected sums in the country) say there is advantage of community based management for pasture shifting and rotation, rather than individual management and no pasture rotation, and that those herders using these practices, were less affected than those not practicing them.

**Box4: The potential of co-management for settling disputes**

- \* CM creates a new structure to resolve disputes through the building of consensus on formal community arrangements and co-management agreements
- \* Local governors and communities *together* make an effort to define seasonal pasture boundaries
- \* Debate and negotiation are the basis for the agreements
- \* Less pasture disputes result due to clarifying each community area
- \* Regular meetings and discussions among herders allow common agreement
- \* Consciousness of the importance of sound use and protection of natural resources by joint force takes gradually shape among the *neg nutgiinkhan* (herders in one area)
- \* Disputes between the local communities and non-community or “immigrant” herders decrease as their rights to using the pasture is recognized as a result of

**The 2010 *zhud*.** In terms of numbers, similar to other badly affected areas in the country, Khotont sum’s loss was almost 50% of all animals, a reduction from 239,000 (in 2009) to 121,200 animals in March 2010. The biggest loss was of sheep and horses. Many herders, desperate to survive, are looking for other sources of income. In another study site, in Deluin sum, the animal loss was comparatively less dramatic. 81% of all 105 respondent herders in our 2010 survey, say that pasture shifting and rotation as part of co-management strongly helped them to reduce animal losses. In this sum, herders implemented last year different forms of pasture shifting and rotation. Total animal losses were only 1,5%, down from 149,500 (in 2009 ) to 146,000 animals in March 2010.

***Community members’ opinions:***

- Cooperative hay and fodder preparation is more beneficial than individual production. It reduces costs and yields more.
- Shifting pasture use practice is beneficial for regeneration of the grasses.
- Clarified roles and responsibilities of stakeholders in NRM have reduced tensions and conflicts.
- We have started making new wool products. Before, we threw away a lot of unused wool.
- Less expenses by doing some work together
- We planted trees and vegetables for the first time

**Local Governor:**

- It is very important to implement traditional and new pasture shifting methods. Together, they have increased grassland productivity.
- It has become easier to organize activities among herders because now we can meet the community leaders, and the leaders can inform others.
- Herders are not protected from natural disasters and the market economy. This project allows herders to overcome these difficulties together by being organized into a community.
- About 80% of the *Bag* herders now have joined the communities.
- Herders have begun to look for additional income sources. Because in the future, there likely will be less pasture.

**Researcher:**

- When herders join forces, it is easier to implement better pasture use practices.
- CM activities are in line with the objectives of the government policies on rural development.
- It is notable that CM agreements are very important for herders; now all stakeholders have sense of what are their duties and responsibilities.
- It's progressive that professional researchers from different organizations are involved in the project study.

### 3. Community-Based Forest resources management

Desertification as a result of overgrazed pastures and the clearing of forests by fires and sawmills, as well as the destruction and pollution of the environment from mining and other industrial activities are factors that hamper sustainable economic development in the four study areas. The project has played an active role in promoting environmentally sound production and processing, focusing on sustainable exploitation of natural resources in pilot sums. After several years of accumulating experience concerning the introduction and testing of co-management of pastures, attention was directed toward the forestry sector, representing another of the country's key natural resources. Based on the lessons learned from pasture co-management, the team contributed to the formulation of a new community forestry policy and law, which also benefitted from an evaluation of experiences from other countries in Asia and beyond. Some of the specifics of CB Forest management in Mongolia are:

- It has to be built on a company-based management tradition and experience with no or little concern for longer-term sustainability of the resource base
- Poor status of forest inventories (inadequate and outdated data) and management data

- Longer-term Forest Management Plans developed by local stakeholders under the supervision of the government are to be the heart of the new management system
- (However), prevailing interests tend to focus on short-term benefits

Mongolia is a relatively forest poor country; at the end of 2006, the total forest area was 19,3 million ha, and the timber stock stood at 1,3 billion m<sup>3</sup>, with a forest cover area about 8,14% , which is less than 10 % of country's territory. Mongolia's principal tree species are *Larix sibirica*, *Pinus sylvestris*, *Pinus cembra*, *Picea obovata* and *Betula* spp. Forest resources are not equally distributed geographically spoken (the Gobi region has almost none), and, overall, resources and systems are impacted by the forces of the steppe and desert ecosystems. The sustainable annual harvest volume for Mongolia's forest has not yet been unequivocally determined, although the most recent calculations put the amount at between 0.9 and 1.4 million m<sup>3</sup>. In Mongolia, there are a total of about 480,000 households using fuelwood, of which 99,000 are situated in Ulaanbaatar, 135,400 in aimak centers, 85,300 in sum centers, and 159,900 spread over the countryside. If they will use in average 9.2 m<sup>3</sup> fuelwood annually, than the total demand currently would be 4.4 mln.m<sup>3</sup> (WB, 2006), far exceeding the available volume.

Every year, about 1 million m<sup>3</sup> timber is cut illegally. Illegal logging in Mongolia can be broadly divided into three broad types, according to the socioeconomic context in which it occurs; (1) securing basic subsistence needs, (2) enhancing livelihoods, and (3) commercializing illegal logging (WB, 2006). From the total cases of illegal timber cutting, 80 percent concerns the transport of wood and wooden materials without any certificate, and 20 percent concerns extraction with invalid or missing documents. Most of the cases are from Batsumber, Jargalant, Bornuur, Erdene sums of Tuv aimak, Mandal sum

of Selenge aimak, Tunkel tosgon (village), Khangal sum of Bulgan aimak and Khylgant tosgon (village).

**Box 5. Forest community (“*nukurlul*”) definition according to the New Forest Law (2007) –selected section from the Forest Law (2007)**

3.1.8. “Forest community” referred to as “community” is considered a voluntary organization of local citizens, established with the purpose on protection, appropriate utilization and rehabilitation of the local forest, organized and acts according to the paragraph 1, article 481 of the Civil law, and the paragraph 8, article 3 of the Law on Protection of Nature and Environment.

18.8. A community consisting of the local area residents and willing to run activities in the direction of protection, appropriate utilization and rehabilitation of forest, has privileges to possess the forest reserves, and need to submit following documents...

18.6. Not lower than 80 percentage of all the community members should be residents of the local area, and being able to constantly look after and control the possessed under contract forest reserves.

***Institutional, legal and structural changes***

The New Forest Law was approved in August 2007 and according to the Law, there are about 20 new procedures that regulate access, use, and management. The New Forest Law is bringing about a substantive reform policy in the forestry sector of the country, focusing on decentralization,

participation, and community-based forest resources management. Little research has been done so far on the socio-economic and socio-political dimensions of participatory forest resources management. Implementing the new Law will be a major challenge given the specific history of forest exploitation to built on, as summarized above.

In Box 5, the legal definition of “forest community” is given, which was first formulated in the New Articles of the Law on Environmental Protection (2005), and in Box 6, the rights and obligations of “communities” concerning forest resources, their CM, and the legal basis for forest resources allocation to the communities, are stipulated. Co-management is the base of the forest resources management reform, and according to the New Forest Law, there are will be a new National Forest Agency, as well as Forest Bureaus in aimaks and Forest Divisions in sum and districts.

### ***Grazing land and the forest***

Animal grazing at the edge of forest areas when exceeding its ecological capacity, negatively impacts forest regeneration. Therefore, integrated management of forest and pasture land resources based on CBNRM approaches will be central to our efforts. The expectations from community-based forest resources management are:

- To allocate forest resources to local communities in a collaborative manner
- Reduced illegal logging as communities become the “owners” of forest
- Reduced illegal hunting and forest fire, insects damages to forest, as it is allocated to the communities for their monitoring and conservation
- People involved in practice to restore forest and its sound use

- Public understanding and awareness on sustainable management of natural resources will be increased

**Box 6. Forest resources allocation ( possession) to the communities and rights and obligations of the community –selected section of the Forest Law (2007)**

4.5. For issuing the ownership of forest reserves under the possession of communities, economic entities and organizations under a contract, it is allowed to have the duration of the possession to be one year as a starting phase. This phase could be used for preparations and could be followed by a 10 year and up to 60 year contract, based on the local *bag* and *khoroos citizens public khural* proposals, and resolutions of *citizens representatives khural* at the sum or district level.

4.6. A part of forest reserve possessed by the local communities, economic entities and organizations under the legislations and contracts are considered as possession forest.

4.7. In a possession forest, the possessor can utilize trees and non-timber forest products and implement forest rehabilitation and cleaning treatments according to the approved management plan.

18.1. A community should have programmes of activities and a management plan aimed at protection, appropriate utilization and rehabilitation of forest, as stated in the paragraph 3, article 9, of this law.

18.2. A community should have rules to run its activities within the framework of the legislation.

18.3. A community's number of members, capacity, forest area of responsibility, resources and ecological speciality should be considered before the hand-over of the specific part of the forest reserves to the community, according to the established possession contract.

18.4. A community should submit reports on the implementation of its program of activities and management plan dedicated to protection, appropriate utilization and rehabilitation of forest riches to the local *citizens representative khural* of soum or district on a yearly basis.

18.5. According to requirements and conditions stated in the paragraph 8, article 25, the law on protection of nature and environment, can employ volunteer-rangers in its possession area of forest reserves.

18.11. A community has the following rights with regard to appropriate utilization and possession of forests of the possessed area under contract in accordance with legislation and as stated in the contract:

18.11.1. to conduct continuous activities to be implemented according to the management plan at the possession area of territory;

18.11.2. to utilize licensed logged trees, non-timber forest products from the possession area of territory in compliance with the management plan, and to sell extra trees and non-timber forest products left over from the consumption of own use;

18.11.3. to elaborate and develop project proposals, programs and recommendations, and participate in bids for implementations of forestry measurements funded through state and/or local budgets;

18.11.4. to get involved and participate in management trainings, seminars, professional skill building or re-training activities.

18.12. A community obeying obligations under this law, should run its own activities as per stated in the contract established with the local level governor.

## 4. Conclusions

Addressing the natural resource management problems and avoiding the “tragedy of the commons” in today’s Mongolia means not only dealing with both the biophysical and social dynamics of sustainable natural resource management, but also *unlearning* “Soviet-style rule” and adapting to the economic and political opening up that the central government has been promoting since 1992. This is easier said than done. Co-management has been introduced as a way to deal the problems, both for pasture and forest resources. Co-management processes establish effective roles and responsibilities of the stakeholders who manage, directly or indirectly, livestock (privately owned), land and water (state owned), and other natural resources (e.g., wildlife). The main stakeholders are herders and herder groups, local leaders, local government authorities, and the state (represented through local government, as well as ministries). In the case of transitional economies, such as Mongolia, the implementation of co-management approaches requires adequate time as well as clear stipulation of what the government will and will not do to support agreements.

In terms of policy and legislative results, one of the biggest achievements has been the establishment of the legal foundation of herder communities as formally responsible for the allocation and management of natural resources at the local level. By changing and linking community rules with the new legal procedures governing nature and environment, a foundation for successful community-based interventions was built. It means that the national government is now providing policy support for our work and for all the herders willing to follow CBNRM practices in the country. It can be seen as a form of empowerment. The basis for this empowerment is improved knowledge and practice aimed at restoring a traditional (but not backward) way of living in Mongolia.

Currently, the effective local-level implementation of the CB Forest Law and the further scaling-up of co-management practices and agreements to the regional and national levels for pastures are the most difficult tasks. At the community level, problems encountered include the sometimes limited participation of herders in activities, ineffective communication with district-level stakeholders (and thus inadequate feedback), the lack of skilled facilitators, and the sometimes irregular use of local monitoring mechanisms. At the level of the co-management teams, participation of all stakeholders is sometimes uneven, the activity level of some is low or irregular, and some lack monitoring and evaluation skills.

Herders have told us over and over again that without concrete improvements in their livelihood, it is hard to sustain co-management over time. This points to the fact that livelihood improvement requires ongoing research, targeted training, and policy and legal support. Communities are interested in economic capacity building in such areas as processing agricultural raw materials and dairy products and marketing; adapting and expanding agricultural mini-projects at the community level with a focus on full participation of community members; breeding better quality livestock or obtaining high-quality species and new breeds; benefiting from eco-tourism and improving rural services; using and marketing rare medical herbs; using forest resources; and

participating in planting trees and perennial herbs. Currently, no organizations offer such training as part of their mandate or curriculum. This represents a huge gap in Mongolia in terms of institutionalization of co-management practices.

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