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## TERRITORIAL ACQUAINTEDNESS: SHRUB HARVESTING IN MURGAB DISTRICT, TAJIKISTAN

*Key words: shrub, harvesting, Murgab, anthropological, GIS*

### Introduction

Despite semi-arid and arid desert biome, without forests, today people of Murgab district, Tajikistan, still heavily rely on traditional woody biomass energy. The region has harsh climate and a long cold and windy winter and short summer season. It is one of the largest districts of the Gorno Badakhshan Autonomous Province of Tajikistan. Currently, 75 % of the population is Kirghiz and 25% is Pamiri. The total population is around 15,000, half living in the main town and half living in six Jamaats (outside villages). Two phenomena are commonly foregrounded in scholarly work about the region: the lack of resources and Russian colonization. (Tobies 2012).

Today, local habitants currently experience heavy dependency on natural resources. When the Soviet Union broke apart, political and socio-economical frameworks, as for many other places, changed and state provisioning ceased abruptly. During the Soviet era, energy demand was supported by the State through imported coal, diesel generators and mini hydropower station. After the collapse, this supply of energy came to a halt. On an individual as well as a collective basis, locals started collecting plants, tersken (*Krascheninnikovia ceratoides*) and shybak (*Artemisia*) in the region in order to heat their houses and to cook. The problem was labeled as “teresken syndrome” by some scholars (Breckle and Wucherer 2006).

To mitigate the failure of old the Soviet hydropower station and continuing massive harvesting and ecological degradation, international organizations started projects such as thermal insulation of houses and micro-credit schemes. This has done little to improve the situation. Later, people learned to use a mix of energy sources, including animal manure and imported coal from the Alai in Kyrgyzstan. This has minimized the pressure on shrub use much more than anything else. Later work shows that the current land degradation is less severe more stable than before (Kraudzun et al. 2014).

Since then people still rely on dwarf shrubs and harvesting is in process in both main town and outside villages. Moreover, what we observe is a transformation collective harvesting practices based on reciprocity to dedicated groups called terskenchiler. These groups serve as bridge between consumers and mountain commons. They are important because, despite 60% of total population in outside villages of Murgab is energy secure due abundance of shrubs and animal manure, recent study in Alichor village suggested that decreasing access to dwarf shrubs in the future threatens those 40% energy poor and energy threatened people. As consequence, if access to shrubs becomes difficult it decreases energy security up to 30%. This recent study forecast hypothesis that availability of shrubs and increasingly difficult accessibility may destabilize

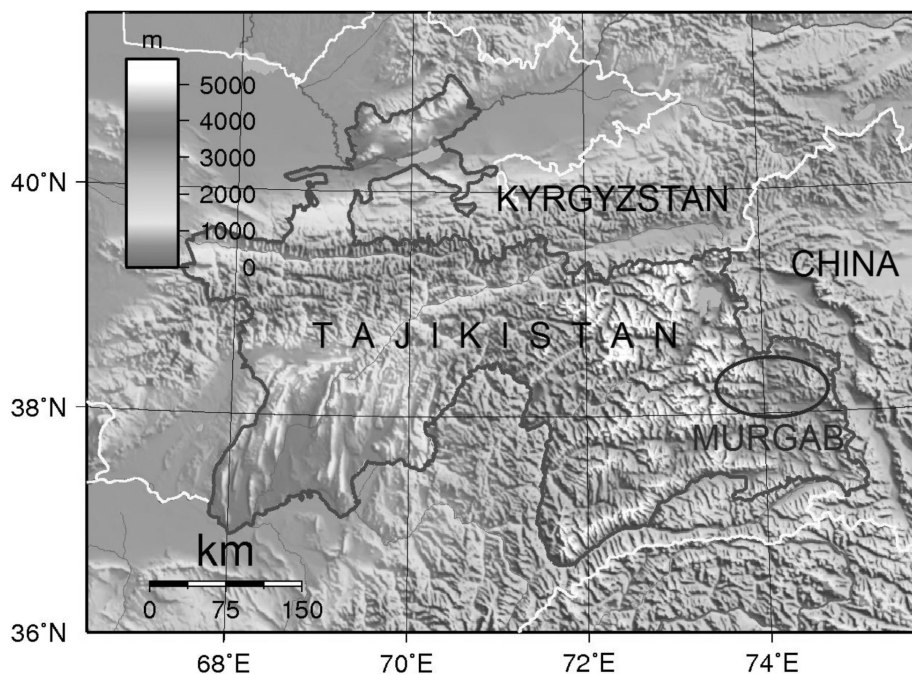


Figure 1. Murgab area in Tajikistan

the energy security (Georg Hohberg 2015). Thus, we see how harvesters and shrubs become important in degradation, energy security and finally managing mountain commons. Tajikistan map and Murgab area is exhibited in the elevation map (Figure 1).

Almost the entire previous literature renders shrub harvesting as unsustainable activity. Against the background of the relatively positive recent assessments of land degradation, the question is to what extent the terskenchilers harvesting practices really are unsustainable. This paper addresses this issue by focusing on a Murgabi terskenchiler to understand how they organize themselves within their given territory. What is the role of territory in terskenchiler's harvesting activity. How the territory does effect and regulate their harvesting activity?

Results of my ethnographical fieldwork reveals that harvesting groups are better acquainted with territories or valleys where they always find abundance of shrubby pastures, hills, and valleys. This informal knowledge allows them better orient themselves. Moreover, because of too many valleys and strategy of harvesting, Murgabi terskenchiler, have been sustaining well-adjusted harvesting, which make them certain about their energy security.

### Materials and methods

After the review of existing literature on this issues and the study of historical sources, my research design has been built. A variety of anthropological methods were used in the field, including structured interviews, participant observation, and photographic documentation. Since the community of the terskenchiler is relatively small, snowball sampling and applied multiple samplings (regional, random, dimensional, and stratified) were employed. Research was carried out between July and August 2015. Murgabi harvesters were interviewed. Most of the interview questions referred to times and places of tersken harvesting, and experiences. Since harvesters rely on traditional way of orienting themselves in those vast territories, collected geographical and determined territorial names were mapped by using geographical information systems (GIS) techniques (Figure 2). These terskenchiler's help us to understand their practice shrub harvesting.

### Results and Discussion

Historical energy usage and dependency; development of harvesting

Tersken is a general term used for widely growing shrubs in Murgab and mostly associated with (otyn), traditional biomass energy and fodder resources. It is valued as one of the (Gayp)

common pool resources. Main function of shrubs has always been tuturuk – fire starters. Since they burn quickly, tezek- dried yak dung, chym – piece of grassland, and korosho – not artificially pressed manure were main energy source prior Soviet era. People had no idea about coal before the 1960s. Even the kyk-artificially pressed manure, emerged later in 1970, was unknown to locals. Burning them was considered as primitive because of samaz – gas until they finally learned. Thus, shrubs always remains as alternative energy option.

A person who harvests tersken is called terskenchi, an identity named after tersken. However, terskenchi is a recently developed term. The original term was termechik – picker. The term “ter” means to collect but not extract. Before the sedentarization of nomads, especially children and women served as a termechik. They collected kakmach – any dead tersken unrooted by flooding. It was all about kynymdyk – meeting daily demand by feet or donkey. Seasonal migration from valley to valley always provided with kakmach and alternatively tezek – dried yak dung. Therefore people were energy secure. Collecting kakmach is still possible today but only in remote valleys.

Ripping shrubs began with the introduction of uchpul – long wooden sticks used to dig out the roots. Willow trees widely grow in western Pamir. Today, metal sticks called “lom” replaced the woody stick and are still the tool of choice among contemporary harvesters.

Terskenchi as a profession: sustainable harvesting

To become a terskenchi is not an easy task. One must know how to harvest, what to harvest, where to harvest and with what system and finally believe in certainty. Once you are in the field, extraction begins. Before harvesting, the distance between extractors must be far away. This prevents overharvesting. After displanting, the plants need to be shaken. This is important to release the seeds, which allows the shrub to regrow. Other factors of such as target and locations will be considered later. Once 150-250 plants are collected, the process of making bundles (tendoo) begins. The shrubs are stacked with their roots facing alternate directions. This helps balance the bundle. Once the bundle reaches the right size, it is tied up with wire for safe and balanced transportation. It takes between four and seven hours to harvest two to

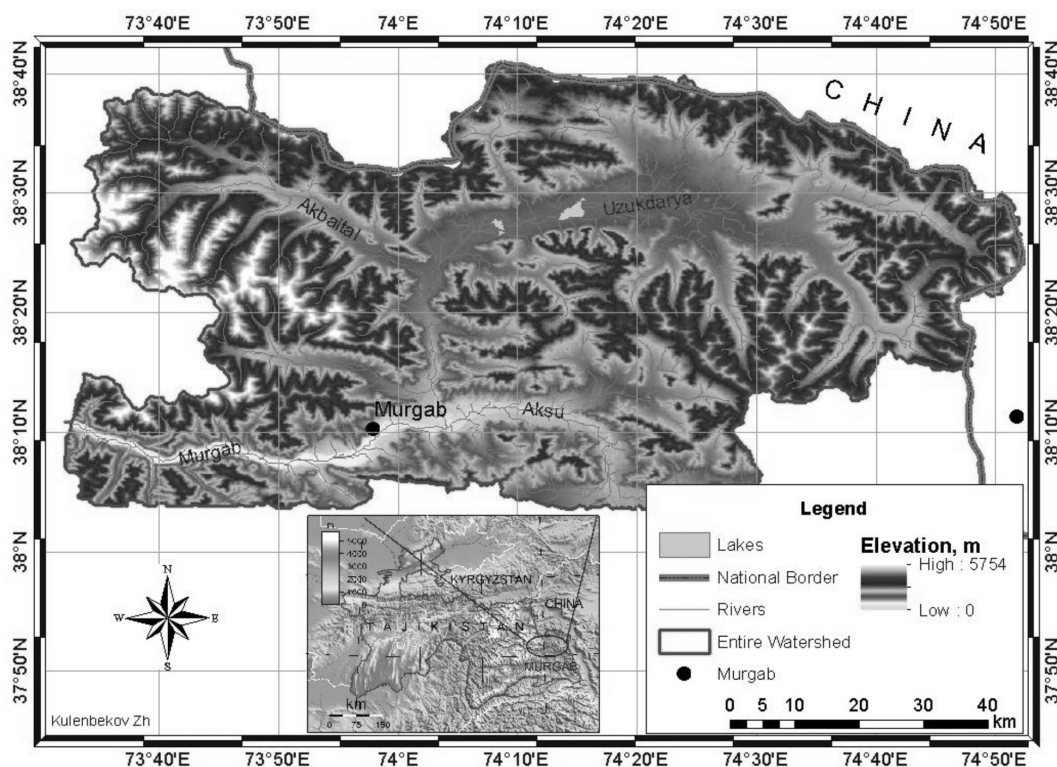
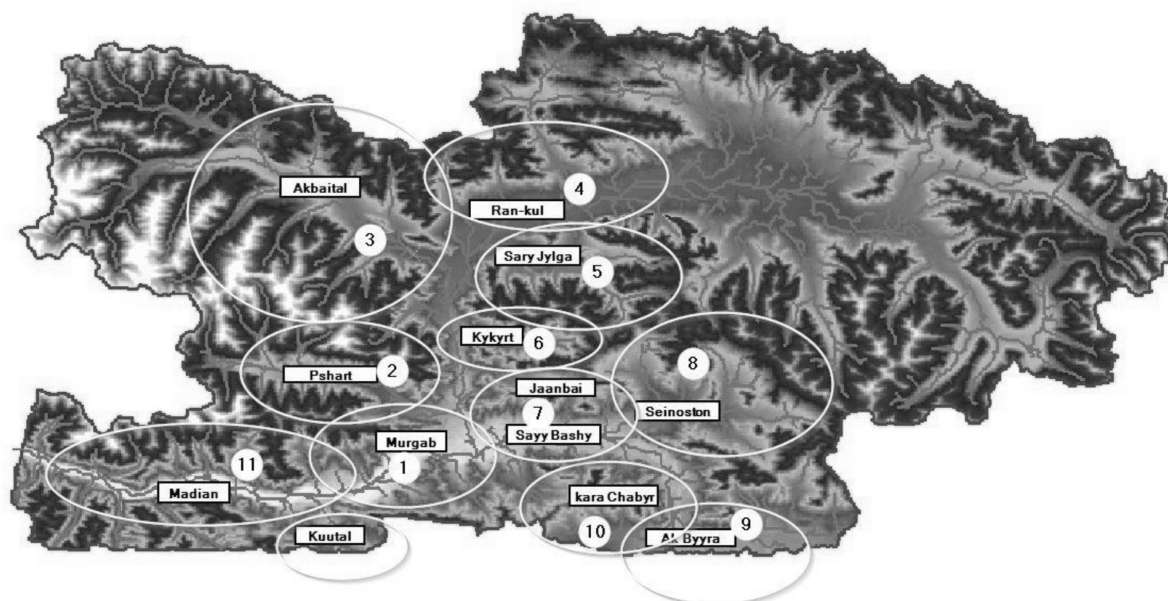


Figure 2. Murgab watershed map



**Figure 3. Location determines the distribution of different shrubs**

five bundles.

Being able to assess the quality of the woody biomass is crucial for collecting. Quality is more important than size. To determine quality one must know the different types of shrubs: kowrak, kara shybak, karga tyrmak, kok shybak, sary syigek, tersken, koi shybak, jylky shybak, kyzyl tiken, sary jygach and kurtka. Kowrak, kara shybak, kok shybak, koi shybak, jylky and shybak are subspecies of *Artemisia*. Sary jygach, sary syigek, and karga tyrmak are subspecies of *Eurotia*. Tersken mostly commonly refers to *Ceratodites*. Kyzyl tiken and too shybak are subspecies of *Acantholimon*. Terskenchiler categorize shrubs according to their burning power. The best shrubs are korak and kara shybak, which burn like coal. They have thick roots. Karga tyrmak and tersken burn almost equally well but karga tyrmak is darkish. All other types are of lower quality.

In addition to type, location plays a huge role in finding the right shrubs. One must know the distribution of the different shrubs and their locations in order to become a professional collector. Without detailed knowledge of this geography one will never find the valleys with plentiful high-quality shrubs. Over all, there are more than 25 main valleys for collection, each with ten or more small side valleys. Within these small valleys, the sun-facing side (*kyngoi*) is distinguished from the watershed (*sai*) and the

shady opposite side (*teskei*).

Location determines the distribution of different shrubs. For example, demand for korak, kara shybak, tersken and karga tyrmak is huge. Koorak can be found in Bodo and Seinoston. Kara shybak and kok shybaks are prevalent in the Alichur region, particularly in the valleys of Ak Jar, Tylpar, Kara Jylga, and so on. Such knowledge is crucial for harvester (Figure 3).

Terskenchiler all round Eastern Pamir, including systems, share cycle harvesting. Experience and local knowledge is what makes terskenchiler certain and they sustain harvesting in such way that in the future there will still be shrubs. Life in Jailoos can be examples of cycle feeding of cattle from valleys to valleys. How does the cycle harvesting work? There are main valleys such as Pshart, Madian, Kyutal, Murgab, Seinoston, Koshagy, Karachabyr, Ak-buura, Shakarak, Ran kol, which gives overall orientation to the terskenchiler. In all centers, terskenchiler have started harvesting from the closes hills. Then, they moved to closes valleys then to further valleys. Then they return to the first harvested hills to repeat the cycle. Most visited and in their third time of harvesting main valleys are Kym kyia, Seinoston, Ran kul, Ak buura and Shakarak. Terskenchiler try to visit places, which already been harvested by the Terskenchiler, after 3-10 years. They give some time for regrowth.

### Conclusion

Since the extraction of shrubs continues in Murgab district, in recent years massive harvesting has shifted from collective to groups who today, as an informal organization, supply local energy demand. Main objective of this was to focus on these key energy suppliers and study their relations with commons. It has been argued that harvesting groups are better acquainted with territories or valleys where they always find abundance of shrubs and it allows a better orientation. Since there are too many valleys, harvesters developed strategies of harvesting which allows re-harvesting after few years. After all, due to these facts, harvesters are well adjusted to their physical environment.

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