Yak, a Green Icon and a Good Investment

Caroline Kang
SIT Study Abroad

Follow this and additional works at: https://digitalcollections.sit.edu/isp_collection

Part of the Agribusiness Commons, Agricultural and Resource Economics Commons, Civic and Community Engagement Commons, and the Entrepreneurial and Small Business Operations Commons

Recommended Citation
https://digitalcollections.sit.edu/isp_collection/1069

This Unpublished Paper is brought to you for free and open access by the SIT Study Abroad at SIT Digital Collections. It has been accepted for inclusion in Independent Study Project (ISP) Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.
Yak, a Green Icon and a Good Investment

Caroline Kang
June 4th, 2011
SIT World Learning
Mongolia: Nomadic Culture & Globalization
Academic Director: S. Ulzijargal
Acknowledgments

I am especially thankful to my ISP adviser, Khishgee who has been very supportive and encouraging of my research by connecting me with all the necessary contacts, organizing a trip to Arkhangai, and supplying me with a wealth of information when and where needed. I am grateful to you and your staff for allowing me to be part of your organization, your family for these past couple weeks. Through you, I came to understand the nature and significance of your work, and in time, it became a cause that mattered to me as well. Маш йх ъяярлалаа ёгч хйшкээ, for your patience and your big participation in this research!

Secondly, I would like to express my warmest thanks to the people who participated and contributed to this study by taking the time out for the interviews.

Thank you to the SIT staff for always being ready to help me out when I was in a rut and to lend a listening ear when I needed to talk or rant. Also, thank you so much for always looking out for me, for your smiles and chuckles, and our little but meaningful chats.

And lastly, I would like to give special thanks to my Ulaanbaatar host family who kept me grounded throughout the ISP period. Thank you so much for always having your door open to me and for being the kind of support system that is uncannily similar to the one I have back home. You made me realize and appreciate that beyond all the external experiences, what took place inside your home - the little moments - are the things that will stay with me the longest as my adventures in Mongolia come to a close. Thank you.
# Table of Contents

Acknowledgments ...........................................................................................................2

Introduction ....................................................................................................................4

Methodology ..................................................................................................................5

Significance of Yak in Mongolia and its Biological Breakdown .........................6

The Necessity of the Yak Market.................................................................9

  Environment .................................................................................................................9
  Economics ..................................................................................................................13

The Mongolian Yak Society ..........................................................................................21

Challenges .......................................................................................................................27

Marking the Progress .................................................................................................31

Sustainable Operations ...............................................................................................35

In a Nutshell ...................................................................................................................38

Glossary .........................................................................................................................40

Appendix: Mini Gallery ...............................................................................................41

Work Cited .....................................................................................................................43
Introduction

“Yak, A Green Icon and Good Investment” was conceived after I briefly interned for the Mongol Yak Society during the NGO Drop Off. I became interested and even, invested in their mission. For three weeks of the ISP period, I worked closely with the Mongolian Yak Society based in Ulaanbaatar and researched how increasing the productive value of yaks through improved communications, equipment, knowledge, and support will address several key environmental and economic issues. I further focused on the Mongolian Yak Society and its role as a detached entity that intervenes on various levels of the yak wool value chain: who they represent, what kind of methods and process they are using, how the communities selected for the MYS programs/project are responding to the initiatives, and more importantly, why yaks even matter at all? Why are yaks an important investment for Mongolia’s future? And how are we as non-Mongolians affected by this as well?

Made in USA. Made in China. Made in Sri Lanka. Made in Italy. Made in Mongolia. The tags stitched onto the back of every article of clothing and carefully concealed, have origins some only know the name of. People who live in these seemingly remote and far-removed places have no face and name; their lives are a mystery. Yet, when we finger the tags, hold the fabric in our hands, and eventually buy and wear the clothes from stores, we are indirectly connected to the makers living thousands of miles away. What
stories do the clothes hanging in the back of our closets, folded or rather haphazardly stuffed in our dressers, strewn about on the floor and perhaps on the bed have? There is a story; and we need to begin from the source.

**Methodology**

For the ISP Period, I opted to stay in Ulaanbaatar and work closely with the Mongolian Yak Society, an organization active both in the city and in the countryside. It is headed by one of the noted figures in the cashmere and yak wool industry, Tsedev Khishigjargal; she took on an additional responsibility of being my adviser and helped me to navigate and establish contacts for my interviews.

The structure of the research period is marked by four weeks: the first week was mostly spent on literature review to prepare for the interviews and to understand my observations, the second week, I met with my adviser, went over the logistics of our plan and scheduled interviews, the third week, my adviser with her two assistants and a fellow American, a social entrepreneur/ co-founder of Khunu and I went to Arkhangai where we met yak herders and did a brief tour of Ikh Tamir Soum, and the fourth week, I conducted interviews. The structure of the order of my interviews was initially based on a bottom up approach where we intended to work our way up from the bottom of the yak wool chain- the yak herders. However, due to the time restraints, scheduling conflicts, and the convenience of some of the
interview sites, interviews were arranged and largely done on the basis of availability. The interviewees ranged from yak herders, to workers from the yak wool processing factory in Ikh Tamir Soum, and to big and small processing and manufacturing factories in UB. There were some notable limitations: the inability to conduct follow-up interviews to clarify and ask for additional information, and to gauge and understand the nuances of what the interviewees said as it might have been misinterpreted, misunderstood or lost in translation, and recognizing that the questions might have not been phrased and translated in a way to encourage candid and forthright responses.

**Significance of Yak in Mongolia and its Biological Breakdown**

“Yaks are of superior quality than the rest.”¹ This is a claim I have heard frequently from yak herders who own other kinds of livestock to administrative workers in cashmere/textile factories in Ulaanbaatar. One herder from Arkhangai asserted, “Yaks are good animals- they provide wool, delicious milk, and are handsome creatures. I pray to god for the well-being of these animals. I respect them; they are self-sufficient and have a strong survival instinct. In addition, they have the ability to adapt to extreme conditions.”² Yaks are well-liked and unsurprisingly so. A vice director from one of the cashmere companies added that yaks do not need provisions such as hay or a pen for security; there is not much dependency on humans unlike other animals.³ By contrast, for those living in the mountainous regions of
Mongolia, yaks are indispensable. There is no waste as every part of the animal ranging from its meat, milk, hide, wool, dung and to its coarse hair is used either for private consumption or sold for supplemental income. For example, they make dairy products such as butter, cream, cheese, and yogurt to eat and to sell; and at times, ferment and distil the milk to have it as an alcoholic drink. They burn yak dung to keep the ger warm throughout the year, and use its coarse hair to make ropes to hold down the ger structure. Yak products underpin the economy in these areas. Furthermore, they are used as pack animals, lugging goods across great distances, as wagon transport, and are also used for “forest work to loosen heavy tree trunks.” Yak is the quintessential green icon.

With yak population a little over 600,000 in Mongolia, it hardly seems to make a difference against the tens of millions of other livestock that exist on the same expanse of land. However, its biological characteristics make yaks the fittest animals to survive in the extreme conditions of Mongolia. Yaks thrive well in temperatures below 5 degrees Celsius and even down to -40 degrees Celsius- a typical temperature during the winter. The absence of functioning sweat glands (with an exception of a few) gives them the ability to resist cold by enabling them to conserve heat. Additionally, the down fiber in the coat increases exponentially and a layer of subcutaneous fat accumulates to better insulate these animals from the long and bitter winters. Their large chest, lungs, and heart allow them to cope with low oxygen content in air and their highly pigmented skin protects them from the
effects of solar radiation. Yaks also have the ability to withstand periods of nutritional deprivation and quickly regain what they have lost in weight over winter. They are resilient creatures that dig deep into thick layers of snow for fodder underneath and are the only domestic animal to be able access and graze on a variety of different herbage located at 2000-4000m above sea level. They “walk freely in precipitous places at higher altitudes, which cannot be reached by horse or sheep or goats, and can cope well with marshy ground. Yaks can swim across rapids and are at ease trekking through snow.” Simply put, yaks are unique animals.

Naturally, yak wool also has properties that rival merino wool and cashmere on an equal plane. Khunu, an adventure-wear company that uses yak wool from the Himalayas, lists four distinguishing traits: their thermal properties have been scientifically proven to be warmer than merino wool, the material is “breathable,” meaning that it has a “remarkable capacity to absorb moisture from our body and release it into the environment” and odorless as it “reduces the chance for odors to generate because it is better at absorbing sweat and evaporating into the air.” Lastly, the soft down hairs make the garment made from yak wool nearly as soft or perhaps some would argue, equivalent to the texture and feel of cashmere. Only in recent years, did combed yak wool start to garner interest from processors, manufacturers, and buyers - the upper portion of the value chain. This interest led to the inevitable development of yak wool value chain. And without a doubt, it was a critical event.
The Necessity of the Yak Market

The necessity of the yak market stems from the urgency in providing alternatives to vulnerable and isolated communities in the countryside. It will provide growth in areas that are economically stagnant as a result of distance, use of traditional channels to market their goods, and the lack of infrastructures that repels resettlement for those living in or on the fringes of the city. Simply put, the “development of pastoral economies is key to poverty alleviation and to improving food security, as well as to the wider goal of creating sustainable livelihoods.” Additionally, the environment will get a reprieve from a more balanced ratio of different kinds of livestock grazing on the land, and from a break of expanding ger districts replaced with a manageable population size. City authorities will not be overwhelmed by which issue to tackle first; instead, it will troubleshoot quicker, assess the situation and effectively spend the state’s budget.

Environment

Walking down Peace Avenue, and down intersecting streets of Ulaanbaatar, it is difficult to miss the big billboards with advertisements from Gobi, Goyo and Altai Cashmere Companies, the three powerhouses when it comes to producing cashmere in Mongolia. Numerous cashmere shops have sprouted up near and on Seoul Street, and variety of competing cashmere
brands take up huge space on upper floors of the State Department Store and Ulaanbaatar Department Store. There is no doubt that these items are a hot sell. As the second largest source for cashmere after China\textsuperscript{13}, it is no wonder that the manufacturing companies are trying to vamp up their sells even more. The demand is there.

Mongolia is known for its endless steppe. Thus, it may be feasible to accommodate a higher population of livestock than the official count of 32.7 million (not taking into account the birthing season of 2011); after all, the 2009-2010 winter claimed 10 million livestock.\textsuperscript{14} But, there needs to be a change in people’s approach to livestock production. The grasslands are becoming nude with patches of premature baldness in a season where it is usually cloaked in green. The land is rapidly deteriorating due to the overgrazing of pastures, especially by goats – the source for the coveted cashmere.

Why are goats so damaging? Their eating habits and their hooves are two primary factors why countries with an overpopulation of goats are now experiencing land degradation and more frequent severe dust storms.\textsuperscript{15} Goats are unintentionally malicious in that they “consume over 10% of their body weight daily in roughage, eating very close to the roots and stripping bark from seedlings, preventing the regrowth of trees.”\textsuperscript{16} As one researcher commented, “The goats have stiletto heels,” which uproots plants that are necessary to hold the dust in place and breaks up the soil crust.\textsuperscript{17} As a result,
the Alashan Plateau in China (Inner Mongolia) barely exists anymore.\textsuperscript{18} After China’s cashmere boom of two decades, the grassland has been mowed down by thousands of goats trying to survive on a limited space, vividly illustrating Hardin’s Tragedy of the Commons. Herders struggle to keep their animals alive by resorting to buying cut grass and corn by the truckload.\textsuperscript{19} Some are transported home on a motorcycle because it has become too weak to walk.\textsuperscript{19} Herders can only look on with dismay as the “diamond fiber” of goats no longer feel and look as they used to; its down fiber is shorter and coarser. Water is rationed and factories can no longer operate consistently due to the scarce amount of natural resources.\textsuperscript{20} The state has implemented emergency measures to rectify the situation: banned grazing on more than a third of the province, and required herders to refrain their animals from roaming on the land and instead to feed them by hand. They have started to stitch “massive checkered straw mats into the surface of the desert,” and plant seeds by planes, willing millions of trees to grow to do some damage control.\textsuperscript{21}

The dust storms’ far reaching effects are indicative of how large this damage is. In 1998, a dust storm that rose from both Mongolia and China, layered with additional pollutants from the smokestacks was swept east and reached the western parts of the States with such intensity that city officials advised its citizens to stay indoors.\textsuperscript{22} According to a research by the state-run Korea Environment Institute, “1.8 mil South Koreans sought medical help and cost the country $7.8 bil in damage to industries such as airlines and
semiconductors,” back in 2002. A month ago, Korea experienced the worst dust storm in its history, causing the weather agency to raise its yellow dust watch from advisory to warning.24

Of course, it does not help that American consumers encourage the cashmere production due to the appeal of a bargain price for an item that has always been considered “too luxurious to afford.” When it is sold at Costco for as little as $19.99, there is no reason not to buy. As herders see good profit from raising Kashmir goats with middlemen and companies buying it for more than 68,000 tugrug for one kg, they are hoping to increase their herd both for huge revenue and to compensate for losses during dzud. It is by far one of the most profitable sources of income in a country where the poverty rate toes 35-36%. Even in mountainous areas such as Arkhangai where there is a huge concentration of yaks, it still does not compare to the number of goats that is present there as well. When asked about the problem of overgrazing by the goats, a quality engineer from a cashmere company in Mongolia shrugged and commented in an ambivalent manner that overgrazing resulting from an overpopulation of goats were solely herders’ responsibility. Her company wants quality cashmere which means they expect careful maintenance of the goats. “If there are many goats,” she said, “the quality of the goats will go down, and that is not desirable.” Indeed, who is responsible when every individual involved in this value chain is guided by self-interest and survival?
Those who are unable to make it out in countryside, exhausted and depleted every which way of their animals, mental and physical strength from unrelenting bitter dzuds and accumulated loans, leave for Ulaanbaatar in hopes that they will find another source for income and better living conditions. However, the lack of infrastructure and services are placing these herders and their families at a disadvantage even more. And the expanding ger district is also contributing to the grim air pollution situation in UB. Some of the negative externalities of pollution are produced by the inefficient stoves used by the people living in the ger districts of Ulaanbaatar. The ger/individual house heating systems are the dominating source of ground level pollution in UB due to their proximity, and their low level of emissions as the stacks are only located 2-3 meters above ground. According to World Bank’s Mongolia Poverty Assessment in 2006, heating is a poverty-related concern. Due to the nature of winters in Mongolia, heating is a necessary expense for survival. The poor in Ulaanbaatar spend money primarily on dirty fuel (lignite coal and some wood) during the winter months; it is of a very poor quality but is the only grade that they can afford.

Economics

One particular morning, the weather forecast stated that it was minus 10 degrees Celsius with a strong wind. On the streets, men and women were dressed in layers with appropriate winter accessories: fur hats, mufflers, and thick scarves. Around the trashcans covered in snow on the edge of the sidewalks, there was a crowd of children picking up recyclables with their
bare hands, and tucking them into their pockets and into the plastic bag that they had just found. One kid’s face was rubbed raw by the wind, and another kid had his hands wrapped with strips of what I presumed to be old clothing. Poverty had a face on the streets of Ulaanbaatar.

Researchers reported in 2006, that only a specific group of the population was benefiting from the economic growth.\textsuperscript{32} The Gini Coefficient, an indicator of income inequality, had been sharply rising\textsuperscript{33}; unsurprisingly, the wealth was being unevenly distributed among the population, hence the growing disparity. Education, training, and health reforms are critical stepping-stones for the poor and vulnerable groups to rise out of poverty. A strong education system is the lifeline for any country. Simply put, education system that is accessible and effective is necessary because it will “contribute solidly to future national economic well-being by providing a highly skilled workforce capable of responding to new opportunities in the global economy.”\textsuperscript{34} Education raises intellectual standard, and nurtures “human resources and talent.”\textsuperscript{35} However, the number of street children is rapidly increasing due to the influx of migrants from rural areas who are unable to find employment that pay enough for them afford the expenses of raising multiple children. In a 2006 report of ger district inhabitants, funded by Asia Foundation, the study showed that the largest percentage of why households relocated to the ger districts was for the sake of their children. About 4,000 children are estimated to live on the streets at least part-time.\textsuperscript{36}
As a developing country, it is vital that the government take responsibility for basic services such as education, health care and training, ensuring quality and accessibility for all its citizens. Prioritizing these services/public facilities particularly in poor areas will “offer social benefits and economic returns in terms of poverty reduction and a productive workforce.”\(^{37}\) By providing assistance and support, poverty reduction will address the lack of human resources and alleviate the country’s dependency on welfare; and thus, a huge portion of the country’s budget may go towards funding other development sectors such as technology, innovations and science among others. Essentially, targeting poverty is key to sustainable development in Mongolia. When asked about what approaches needed to be taken in order to tackle this issue, one World Bank representative replied that for starters, “The Government needs to try and create economic opportunity in the rural areas. This starts with building the necessary infrastructure to enable productive economic activities to take place and to improve quality of lives in rural areas. However, given that Mongolia is a geographically large country with a small and widely disbursed population, this becomes expensive to do. The types of activities that make most sense include animal husbandry, tourism, cashmere industry and meat production.”\(^{38}\) Without acknowledging and addressing poverty first, conservation and development cannot be effectively implemented- they are all interrelated.

For a country that only has a population of 2.7 mil people, 36%
poverty rate is alarmingly high. The unemployment rate initially was triggered by the withdrawal of Soviet systems; after transitioning from a centralized economy to a free-market economy, there was no longer guaranteed employment, pensions, universal education, universal health and subsidized day care. Currently, the poverty rate remains high due to the feeble and ineffective existing institutions. As raising herds becomes increasingly difficult due to extreme weather conditions (i.e. dzud, drought), deteriorating pastureland, inflation of food prices and unexpected circumstances, rural flight is becoming more prevalent. In a March 2010 UB Post article “Dzud Situation” the journalist reported that an estimated 20,000 people (5000 households) were expected to arrive in the coming months for some kind of respite after the 2009-2010 winter. People who decide to resettle in the ger districts of UB come in hopes of finding better employment opportunities and improved living standards but instead generate income through informal sector activities where they are usually taken advantage of and are exploited for their labor. Children from these families voluntarily or involuntarily leave their families and take shelter in the streets, or NGO-funded shelters, or in the sewers. They pick up scraps of metals and recyclables to sell back to processing factories or at the markets. Some families choose to supplement their meager incomes by participating in the illegal wildlife trade. And then there are those who turn to small-scale mining, otherwise known as “ninja” mining as a coping strategy; it is estimated that at least 100,000 Mongolians are involved in high risk gold mining. The safety rate is abysmal in these areas as these miners work with
no safety gear, have no insurance for the loss of lives or injuries, and are threatened by robbers. In addition, the health of miners and miners’ families is affected especially when “working in areas where mercury is used to separate the gold from the ore or has been used and has been discarded.”

Ger districts in UB are growing. Mr. Ganbold Davaadorj, the vice mayor of UB in charge of Industry and Ecology, mentioned briefly in his lecture that there was a tentative proposal in relocating people in the ger districts in government sponsored housing where there will be running water, sewage and heating systems, and electricity. Over the past 10 years, the Vietnamese government has successfully re-housed over 35,000 people from the slums. When refugees from the countryside fled into the old capital during the Vietnam War, they settled mainly along the city’s network of four large canals. Many of these people live on less than $1 a day. The slums are very much visible especially when you travel 5 minutes out of District 1, the center and the most cosmopolitan district in Ho Chi Minh City.

During my fall semester in Vietnam, I took Environmental Sustainability in Vietnam class where I had the opportunity to learn about these kinds of issues. Usually, people who are resettled in these projects are often left with no choice but to leave their newly constructed apartments to slums in other districts. While they are not required to pay rent, they are expected to pay the maintenance fees and expenses that come with owning an apartment. Finding decent employment that will allow them to be free of
the threat of poverty is the challenge. Without any education and training in special skills, it is difficult to break out of this cycle. Some of our lecturers remarked how services such as electricity, heating, water, city transportation and garbage collection in Ulaanbaatar are inexpensive and how this is a big burden on the city budget because the government cannot motivate people to save energy. They note that this is primarily one of the reasons why people are willing to move into the city. Although politicians are weary on voting further liberalization of prices on these commodities, they have recently decided to increase the tariffs. Unless there is a system in which the government assists the low-income households by providing special skills training and information on job availability/placements in addition to new housing, this proposal is not beneficial to anyone.

With the largest undeveloped deposit in the world, Oyu Tolgoi, Mongolia is poised for a cataclysmic transformation once the project is underway. The estimated revenue that is predicted to generate through this operation trumps all objections to the Oyu Tolgoi venture. One may say it is an economic tackle, but at the great expense of the environment. At the moment, Mongolia is barely circulating enough revenue to expand its economic sector without the assistance of foreign aid, donations, and loans. These untapped mineral resources will invariably shift Mongolia’s stance to a pro-active economy rather than a passive one that it has been for the past two decades.
Although the hype of the mineral deposits has many people anticipating the profits, Prime Minister Sukhbaatar Batbold remains level-headed, well aware that “Mongolia needs to look beyond the coal and copper mines that are driving its economic boom to find a more balanced model of growth.” He notes that while the mining industry will place Mongolia at an advantage with the inflow of foreign capital, it is a “tool” in assisting the creation of jobs in many other sectors. The worries of developing Dutch Disease where the “financial benefits of a resource boom lead to a hollowing out of other sectors,” linger not too far behind. The exchange rate appreciation will make Mongolia’s exports less desirable as it becomes more expensive, inevitably drying out the manufacturing sector.

The World Bank lecturers emphasized a more nuanced approach after acknowledging the significance of the mining sector. Unavoidably, there will be significant infrastructure expenses in the development of the mining sector in addition to the loss of vegetation, wildlife habitat, pastureland, and water resources. Hence, it is the government’s responsibility to address the question of whether or not a particular mining project is worth the risks. By first constructing an effective framework with conditionality of what mining companies can and cannot do and by allowing legitimate companies to come in and to work within this system, the government is more in control of the unpredictable economic, environmental, and external factors.

Former World Bank’s country manager for Mongolia, Arshad Sayad
stated, “Several things need to be done to generate employment. One of them is realizing mining will not generate jobs. We need to look at other industries where you can add more value, like meat and cashmere.”

Although mining is capital intensive, it is not labor-intensive. However, it is an opportunity to funnel huge budget revenues generated by the mining sector through channels that promote more inclusive growth, such as the Human Development Fund, and investing in infrastructure development, industrial parks and in training programs. The growth of spinoffs from related informal services and sectors such as suppliers for mining can help diversify economy. And according to the lecturers at World Bank, by providing incentives or placing conditionality in agreements with mining companies to build processing plants, or plan for housing for the associated rural community, linkages between mining and other sectors can be enhanced. Some small businesses have already set up shop around these areas to provide services to the miners: gold buying, meal provision, small shops and kiosks, and renting of sleeping space.

In any case, Mr. Sayad has a point. It would not be wise for Mongolia to become completely dependent on mining; the government needs to focus on sectors capable of stimulating employment or domestic input, and outputs of high value products to create margins to deal with possible Dutch Disease.
The Mongolian Yak Society

Formally established in 2007, the Mongolian Yak Society was created under the “Green Gold” pasture ecosystem program sponsored by the Swiss Agency for Development and Cooperation. Headed by Tsedev Khishigjargal, the organization has taken on considerable tasks to address environmental and societal consequences of heedless overstocking, rural flight, and high unemployment and poverty rate. The MYS works across 5 aimags: Hovsgol, Arkhangai, Zavkhan, Bayankhongor, and Ovorkhangai. A total of 35 soums.

The Mongolian Yak Society’s mission is to implement a bottom-up approach, with focused support for yak herders to stimulate the yak wool value chain. They envision this assistance will spur growth and investment in the countryside and maintain the growth of the market. In line with this, the organization hopes to engage in the fight against desertification that “threatens cashmere industry in Mongolia and by extension the pastoral nomadic lifestyle of 50% of the population from which they draw their national values, identity and pride.” Through a gradual shift of emphasis to the benefits of breeding and management of yaks, they hope to effectively appeal to both domestic and international communities. Some of their objectives are:

- Improving income opportunities for yak herders by developing products of high value, overall market acceptability and access to marketing networks.
- Encouraging sustainable development by producing new value-added
products (i.e. yak cheese)

- Strengthening and building up capacity of human resources

There are educational workshops and trainings for yak herders in select aimags, soums, and bags to help their products remain competitive on the market. They are educating herders to refrain from shearing yak wool where it fetches a very low price and comb their yaks instead. This allows for a better collection of the soft down fiber where the average market price for combed yak wool is 10 times higher. Therefore, there is a heavy emphasis in three areas: quality control of raw material, requirements/expectations of customers, and marketing information. In addition, their training has two components: in-class and field training. Herders are taught to apply and practice new techniques or methods learned in class to ensure the effectiveness of their training. These herders train their eyes and improve their sense of touch to spot concentrations of quality down fiber and comb it in a particular direction with a certain level of pressure to maximize their yield on down. Staff members frequently make the journey to these aimags and soums for several weeks for these projects. The projects undertaken by the Mongolian Yak Society mirror the objectives of its sister organization, the Mongolian Society for Rangeland Management; they aim to provide the yak herders with the necessary knowledge and tools for herders to lessen the gap between their outputs and outputs of already established and polished competitors of cashmere. The organization expects to thoroughly prepare the yak herders on how to sustain this particular growing economic sector.
Trade fairs are organized in collaboration with other organizations such as AVSF and Mercy Corps to provide a space for herders to engage directly with processing companies without the presence of middlemen. For yak herders, this organization and its projects are invaluable.

There will also be a concerted effort to support local factories to establish their own local brands. Already, a Yak Wool factory has been renovated in Ikh Tamir, Arkhangai Aimag to allocate space for an increasing number of employees and new technologies. This factory has two divisions: one for classification, otherwise known as grading, and one for knitting. Its current capacity is 10 tons of wool per year, which is equal to an output of 15,000 knitted products per year.

Through MYS participation in international forums, “Cashmere World,” and “Prime Source Fashion,” it has been garnering strong support from abroad. And with the assistance of the National Chamber of Commerce, the Mongolian Yak Society was able to publicize their events and other relevant information through the media. Indeed, if one takes a look at the progress this organization has made since the year they started operating, it is clear that this trajectory is an incline. According to Ms. Tsedev, in 2006, the price for yak wool per kilogram was merely 500 Tugrugs. Five years later, the price has risen to 6,000-7,000 Tugrugs per kilogram. In comparison with cashmere, yak wool still toes a low price; nonetheless, this jump signals a
positive sign for the herders that there is a growing demand for yak products. Rest assured, raising yaks may be profitable after all.

Furthermore, the Mongolian Yak Society has a special affinity with Women Herders’ Union. Women Herder’s Union in Khaan Undool Bag of Ikh Tamir Soum, Arkhangai was launched a year ago headed by a woman named Chansa. Chansa had been selected by the MYS to attend a two-week training session in Kyrgyzstan to learn about women cooperatives and attend workshops on how to make high quality handicrafts through the sponsorship of SDC. Kyrgyzstan is particularly well known for their traditional felted wool crafts. After she returned home, she visited the women in her area to tell them about her experiences and what she had learned. By raising awareness in her community, other women started to express interest in possibly organizing a cooperative and sharing their skills to collectively make and sell handcrafted goods.

The bag center, originally a dormitory for a primary school next door decades ago, has become a meeting space for these women. Here, they make an assortment of handicrafts such as felt mats, saddle mats from 2nd and 3rd grade of the yak wool (usually from adult yaks) and sheep wool as well as deels for both men and women. They are marketing towards those living in the countryside who are in need of these items but do not necessarily have to time to make it themselves. One woman who is part of this cooperative stated that she enjoyed this social activity and was quite
excited to teach her skill and pass on a legacy to the next generation. “Usually,” she said, “there is no time to meet together since we are too busy with our responsibilities and chores at home.” Nevertheless, those who have joined this fairly new organization are committed to developing the union through their participation. The occasional educational workshops and training further encourage community development and provide opportunities for women to develop vocational skills through projects that encourage the value-added production of handcrafted goods. This is a means to provide supplemental income for the family.

During the Mungunmorit and Bayankhongor homestays, the SIT students learned that the soum governments cover all expenses for children who live in the countryside to live in a dormitory in the Soum Center for their education. Many of these children choose to continue their education in Ulaanbaatar after they graduate from their secondary schools. However, the lack of information and resources places these children at a disadvantage due to the lack of preparation that is inevitably an effect of this condition. The Mongolian Yak Society strives to educate and counsel women by providing them with useful information on career jobs and opportunities, and on institutions of higher education for their children. One university student, who I met at this organization, came under my adviser’s tutelage as a result of this exchange; while she had an interest in fashion and in developing her tailoring skills, she did not know what options were available to her since such information was limited in the countryside. This student is now
attending the Textile Institute. And the MYS supports her to study in the city by providing her with a paid part time job at the organization and allowing her to utilize the space to apply and experiment what she learns from school to enrich her work experience. Ms. Tsedev foresees a time when her assistants will return to their respective hometowns in the countryside to oversee operations in coinciding regions MYS is active in. She explained that these students have a strong attachment to their birthplaces and are interested in actively serving their local communities and improve the living conditions for the residents later on. On the other hand, someone who grew up in the city would be less invested, and perhaps have a difficult time adjusting to their new environment. It is likely that they would view their work in the countryside as a temporary situation. When I asked one of the girls if she would like to work back home or in her hometown, she promptly answered, “yes.”

A little over a month ago, the SIT students went to the World Bank for an environmental series week. What was striking about the first two gentlemen’s lectures was the impression they left me on the development of Mongolia. They noted that Mongolia could not compete on an international scale unless the government utilized their current resources to restructure frameworks and policies to maximize yield on mining revenues, and then used the profit to build up infrastructures necessary to sustain the economic growth. They also mentioned that in the climate of higher productivity, efficiency, and profitability, nomadic herding would not survive. Conversely,
higher productivity, efficiency, and profitability would not happen under a nomadic environment. Unhealthy dependency on the mining sector seemed inevitable and cultural repercussions seemed high. Also during the lecture, Dr. Hancock suggested that the production of cashmere and leather should take place in the country rather than in China, shifting the focus to developing sectors capable of high value and domestic input. Naturally, by concentrating on the high-end market, it would create margins to deal with the Dutch Disease. The Mongolian Yak Society has begun unknowingly to dispute and address some of their claims by assisting the development of the yak wool value chain.

Challenges

Several challenges remain.

Cashmere has been established for centuries as an item that symbolized one’s status in society. The associations made with cashmere are usually ones of wealth, luxury, and glamour. On the other hand, as a representative from Best Cashmere Company said, “for those who do not know about yak wool have the tendency to automatically assume and imagine a rough, scratchy, and unappealing looking product.” To break that conceptualization and build the product’s credibility from the very bottom, as many people do not know about yak wool, can be difficult. He continued, “For 30 years, Mongolians have used cashmere products and know the
quality for sure. And working around this attachment and persuading people to give yak wool a try is a challenge."

In addition, Chinese companies have been processing a mixed blend of yak wool and another fiber to create yarns and products that can be sold at a very low price and on the claim that it is 100% yak wool. The vice director of Best Cashmere Co., brought out two pairs of socks that looked exactly the same and asked for me to feel it. One felt rougher compared to the other one which had a soft texture. It turned out that the rough textured one was a sample made from a Chinese processed- yarn. Socks like these are sold at local markets for 3500 mnt; however, real yak wool socks can be marked up to 15,000 mnt. This causes a problem as companies selling 100% yak wool products will inevitably lose its competitive edge to customers who will most likely settle for a low-priced pair of socks. The value and quality of two different pairs of socks are different but just the same even if customers knew, 12,000 mnt is quite a disparity in price. The vice director explained that if the government put weight and support for this industry by drawing up policies that favor Mongolian companies and its citizens, and tax Chinese imports the price of 100% yak wool socks will become lower as a result of this kind of products dominating the domestic market. Mongolian citizens will be able to have both low priced and high quality yak wool products without sacrificing either. It remains to be seen if the government will act upon this in the interest of these companies.
The Mongolian Yak Society works with low-income, middle-income, and high-income households. If a household owns between 500 to 1000 livestock, it is considered to be a high-income household. Contrary to what I had envisioned the kind of ger a high income household would live in, one family I visited during my trip lived very frugally with little to no furnishings inside the ger. The ger was nearly bare and the furniture was worn down. Interestingly enough, it was commented by several people that the mindset of these high income households was one-tracked- to increase their herd with little regard to quality. They said it was problematic in that high income households usually owned more goats, sheep and horses than yaks, and that their indifference to overgrazing was harming the land in that area. It is difficult for me to imagine how these families would relinquish their prized cashmere goats and instead shift the ratio of their livestock to favor yaks. If reaping environmental benefits of raising yaks do not have much weight in persuasion, what would be the incentive for high-income households to reduce the number of goats in exchange for yaks when clearly there is more money to be made with cashmere? 1kg of Cashmere can be sold for anywhere between 50,000 mnt to 70,000 mnt. While the market price of yak wool has significantly increased in the last few years, the average market price of this year is around 6,000 mnt which barely makes a dent in what can be gained in profits with cashmere.

China’s example of yaks is a cautionary tale and one that people who are part of the yak wool value chain should recognize and take heed. Yes,
choosing to raise yaks is a better alternative as they survive well in the extreme climates of Mongolia, minimizing the impact of loss for herders. There is no waste as every part of the animal can used around the household or sold for profit. According to the Mercy Corps report, “many of them (herders) just use for domestic purposes like making some household items including show pad, belly support belt, bags, mattresses and blankets. Almost all herder families use yak wool for making ropes for their ger dwelling using the yak wool fleece and belly wool.” Yak, it seems are all-purpose, infallible creatures. A failure-proof investment. However, due to an increased number of yaks in China in the past few years, surpassing and consequently declining the number of sheep, overgrazing is once again an issue for some yak-populated regions. It is said that the “resulting increase in stock numbers has put increasing pressure on the pastures, particularly the winter grazing lands. The winter pastures cover a smaller area than the summer pastures but also have sustain a larger number of animals, because numbers are always at their highest after the calf crop of that year. The winter pastures in particular, therefore, tend to be increasingly often overgrazed. Income from sheep meat and wool has declined and that from yak milk and meat has increased.” Unfortunately, these situations cannot be dismissed as if to say it is a merely pattern of a particular country and that is the extent of it. Although it may seem as though the danger of an overpopulation of yaks here is premature, it can happen anywhere even in Mongolia. There needs to be restraint and a policy drafted to ensure overstocking does not continue to occur and a more
balanced ratio of different kinds of livestock is maintained for the healthy condition of the land.

While there are some challenges in the development of the yak wool value chain, it does not mean that these are impossible hurdles. However, it will require foresight, patience, and slight adjustments at a national level to promote policies that is in the best interests of its citizens and its land.

Marking the Gains

More than the dissemination of technical knowledge, marketing intelligence, training and providing a direct linkage between herds and processors, there are three things that have resulted from the efforts of the Mongolian Yak Society. First, it is the sense of community that have become rooted in places where people have started to learn and work together on how they are able to obtain a better return for their yak products. One herder from my Arkhangai trip noted this change. He said, “Before the Mongolian Yak Society was here, people used to cheat each other but now people work together to reap good results and benefits. Every herder lived and worked separately, did not really know his/her neighbor. However, now there is an increase in dependency and women work together as well.”

Another herder remarked, “Previously, I rarely saw anyone during springtime but now everyone cooperates and help each other. Everyone would go to one family to help comb yak wool for the day and go to another family the
next day. Every family operated individually but now, it is different.” If it were self guided and self-serving before, now it is a collaborative effort to reap the benefits of the activities together.

Secondly, individuals gained inspiration from the idea of a cooperative and started to take initiatives with their neighbors to develop creative improvement strategies on the basis of their indigenous knowledge. For example, last year the abovementioned herder gathered a group of people to collect halgah (a native vegetation in the area that is known for its nutritious properties – rich in Vitamin C- that benefit both humans and animals) in the mountains. They opted to harvest, chop and salt it and store it away in the bag center to use as a supplemental feed for the yaks during the winter and spring. This innovative idea was developed as he drew from the advantages of working in a group, sharing information and securing the well-being of all yaks, his own and his neighbors. In Mercy Corps’ 2008 report on “Yak Wool Sub-Sector Value Chain Analyses,” it stated that based on its survey “none of the herders feed yaks with additive feed in order to add up weight and milk yields and none of them practiced the feeding ever. Some herders say young yaks of age 1-2 are occasionally fed during harsh winters but adult yaks never get fed with additive feed. In case that herders start feeding yaks with additive feed, there is a potential that fodder makers could reach to herders to supply their products. So far, no single fodder maker has provided their products for herders.” Instead of relying on outside help and support, this herder used indigenous knowledge to develop an idea on how his community
would be able to sustain the health of their yaks. This is a clear example of self-help - decreasing dependency on external factors and entities to resolve situations and issues.

And lastly, the herders that I have met throughout my trip to the countryside repeatedly expressed that they were optimistic and felt empowered. This optimistic attitude is the product of their successes and accomplishments assisted by the MYS. One particular herder said that MYS frequent visits gave him mental support and an energy boost that they were not left on the fringes of this program. MYS proved itself to be deeply committed to the communities that they work for and represent. For women, they felt empowered that they had the ability to contribute even more to the family income with the supplemental profit gained from handcrafted goods sold at the market and trade shows.

Nearly all my interviewees from the cashmere factories in Ulaanbaatar mentioned that the demand for yak wool products was definitely on the incline and that there was more interest from abroad as well. Currently, the Goyo company is preparing an order of yak wool products to ship to America this year. Moreover, the interviewees acknowledged that the work of many organizations such as AVSF (a French NGO), Mercy Corps, and the Mongolian Yak Society was paying off since the quality of combed yak wool was getting better. Also, the average market price for yak wool is on the rise; and yak herders are feeling the benefits of it. A herder asserted that
during the Soviet era, there was no value in selling sheared yak wool but now with a better approach and technology she is able to sell it more than 10 times the original price. “Now that, is a huge gain,” she said. Processing and manufacturing companies such as Mongol Nekmel has begun working directly with herders as their technical engineer travels to the countryside to make purchases of the raw material and works with herders to ensure high quality of yak wool.

In another instance, Aaron Pattillo, one of the Khunu co-founders, came with our group to go to Arkhangai, meet the herders and possibly establish a link through the Mongolian Yak Society to obtain raw material from this particular bag. Khunu is an adventure-wear company that uses yak wool from the Himalayas and donates 2% of every item back to the source for community development and other practical necessities. On this trip, Aaron made a purchase for 180 meters of yarn, (1 meter each for 180 items) to wrap it around a pilot product for a finishing decorative touch. He requested if it would be possible to supply him with 180 pieces of 1 meter yarn after seeing a herder known for her special skills in spinning and twisting yarn from yak’s coarse hair gave us a demonstration. This transaction quickly made an impression on the herder, her family, and neighbors that there was indeed a growing interest and market out there for yak wool products.

Last year in March, a lab was co-established in Arvaikheer, Ovorkhangai by the Ovorkhangai Department of Agriculture and Light
Industry, World Bank, and VSO Mongolia. This lab opened to allow herders to assess the quality of their cashmere, camel and yak wool, certify it with the lab’s stamp of approval to sell it at a good price where they are less likely to be shortchanged by traders. This would prevent traders who have been buying raw material based on the overall weight rather than the quality to be more cautious and upfront about their prices with herders. Ovorkhangai aimag is one of the poorer provinces in Mongolia but they are aiming to pave the road for capital to come in through the establishment of this lab institution. Conveniently located in the reaches of the capital city, it would encourage herders, traders, and processing & manufacturing companies to work through the lab and improve market linkages between the two areas. Additionally, this project “also intends to work with soum level traders, building their capacity to grading and sorting; thus providing some additional jobs for soum residents in the animal fiber sorting process.” These gains are indicative of the positive growth and impacts the yak wool value chain is having on the countryside.

**Sustainable Operations**

Sustainable management practices

Sustainable livelihoods

Sustainable natural resources
Sustainable management practices create sustainable livelihoods and sustainable natural resources. Therefore, it is recommended to:

- Maintain the level of quality and expectations from every stratum of the value chain
- Ethics- don’t shortchange the vulnerable or the consumers
- Cooperation and partnerships
- Development of human resources
- Understand the market and marketing outside the traditional and conventional ways

Online is a great way to interact and connect with communities and people who are interested in becoming potential buyers of a certain product. Online marketplace is becoming increasingly popular and a quick, convenient way to link individual or communities who live far away from each other. Therefore, with the Mongolian Yak Society’s participation, it can function as the point entity for the Women Herders’ Union handcrafted goods and oversee the technical arrangements as they do now but on a much bigger scale.

For example, a great website that they can use is etsy.com. Etsy is an e-commerce website catered towards women in their twenties and thirties who are interested in purchasing handmade or vintage items as well as arts and craft supplies. Many members of this website create their own products,
and do the marketing themselves by posting pictures of their items and writing blurbs or interesting anecdotes about each one. The appeal of this website is that nearly items are one-of-a-kinds because it is not mass-produced. With each item one sells, the buyer reviews or rates the credibility of product, of its shipping time, of timely money transaction and of quality. And vice versa. This allows the next buyer to check one’s credibility and make a quicker purchase on an item or no purchase at all.

The second website which is called the Global Goods Partner is a fair-trade website where one has to apply to become an artisan partner. They have beautiful handmade items created by women cooperatives from many different developing countries. They aim to alleviate opportunity and create a space and an opportunity for women to earn supplemental income through their eco-friendly, handmade goods. For now, they are unable to bring in new partners but they encourage applicants to fill out pre-qualification and survey form for future contact.

And lastly, another great resource is Facebook, an online social networking site that allows users to join, and promote a certain cause and invite friends to learn more about an issue. In addition, it is a great way to spread the word and raise awareness especially to friends and family members who are willing to help and create a second wave of awareness through their initiatives. Also, because the ‘like’ button has become so pervasive, it is now a marketing tool as well. Certain ads get more hits when
friends have clicked the ‘like’ button to show that the source of an ad is credible or legitimate. It may pique the curiosity of others and indirectly encourage people to try new things because there is someone he/she knows who have already ‘liked’ it. Online has become a new way to interact and socialize for the younger generation that marketing had shifted to accommodate this change. It would be great if the Mongolian Yak Society takes advantage of this!

In a Nutshell

Yaks are indigenous to Mongolia, are populated in the mountainous regions, and are well adapted to the extreme climates of this country. And for herders, combed yak wool is proving itself to be an unexpected gain. The growth of spinoffs from the yak wool value chain is transforming the countryside, especially soums and aimag centers as an alternate place of residence and employment. It may possibly stem the influx of migrants relocating to Ulaanbaatar in search of restitution from the calamitous effects of the dzud. The Mongolian Yak Society is dedicated to providing necessary services and support to yak herders in Mongolia. In addition to establishing a direct linkage between herders and processors, the transfer of new techniques, information and technology will allow herders to negotiate on improved terms and get better deals on their goods. In response to the expanding yak market, there are more employment opportunities for locals and non-herders as the value chain continues to develop. Also, they hope to
alleviate the population concentration in Ulaanbaatar by promoting development and investment in the countryside and allow for the rehabilitation of the pasturelands from overgrazing through a gradual shift of emphasis from cashmere to wool. The rapid deterioration for the pastureland is raising concerns for herders as the demand for cashmere remains high. Increasing the number of yaks in areas and climates that are suitable environments for their growth and well-being may very well alleviate some of the pressure and dependency on goats. It is highly possible that an increase in the consumption of yak products by raising awareness among consumers of their value and outputs, these issues can be effectively addressed. If caution and restraint are exercised in the wake of this emerging venture by noting China’s examples, then Mongolia will undoubtedly see great success in terms of environmental preservation and economic returns.
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aimag</td>
<td>Mongolia is divided administratively into 21 aimags (provinces) and the capital city, Ulaanbaatar</td>
</tr>
<tr>
<td>Soum</td>
<td>Aimags are further divided into soums. Equivalent to counties</td>
</tr>
<tr>
<td>Bag</td>
<td>Soums are then divided into bags, the smallest administrative unit. Equivalent to sub-counties</td>
</tr>
<tr>
<td>Ger</td>
<td>A Mongolian round traditional dwelling made of felt and wood</td>
</tr>
<tr>
<td>Dzud</td>
<td>A term for harsh winter causing serious losses in livestock. Many different kinds, most notably: black, white, and ice.</td>
</tr>
</tbody>
</table>

### The Process: Yak Hair to Yarn!

1. **Combed down hair instead of Sheared**
2. **Grading (classifying it by colors & age of the yak combed)**
3. **Dehairing: Removing dandruffs and coarse hair from the down fiber**
4. **Scouring: Washing to remove dust**
5. **Spinning**
6. **Twisting to create 2ply, 4ply (thicker/durable) yarns**
The Journey - it goes a little something like this...

Familiarizing myself with the process

Touring the Gobi factory
Yak herder- a minor celebrity in town (40+ years as an educator, retired and now a herder)

Looking dashing in a deel- Handicrafts from the Women Herders’ Union
Aaron from Khunu (SIT alum!) & the executive director of the Mongolian Yak Society

Quaint yak wool processing factory in Ikh Tamir Soum, Arkhangai
1 Batbeleg. Interview. Caroline Kang. Trans. Baganaa 110603
organization of the United Nations, Regional Office for Asia and the Pacific: Bangkok, 2003
5 “Superior Properties” Retrieved from www.khunu.com
7 “Cashmere: Sustainable Fiber or Environmental Disaster” Retrieved from treehugger.com
8 Osnos, E. “Your Cheap Sweater’s Real Cost” Retrieved from chicagotribune.com
9 “Humbu, Yuriy. “Mongolia Seeks Balanced Growth to avoid ‘Dutch Disease’ from Mining
Nations Development Programme
12 Herman, Grant. Reforming Higher Education in Vietnam: Challenges and Priorities. New
York: Springer, 2010
13 Participatory Poverty Assessment in Mongolia 2006- National Statistics Office
Nations Development Programme
15 Reichert, J. Email interview
Nations Development Programme
17 Smith, Richard. The Problem of Mongolia: From Socialism to the Millennium Development
Goals
18 Sumiyabazav, Ch. “Dzud Situation” Retrieved from www.ubpost.com
Nations Development Programme

"AFP: Poverty Still Stalks Resource-Rich Mongolia
Participatory Poverty Assessment in Mongolia 2006- National Statistics Office
United Nations Development Programme
Tsedev, Khishigjargal. Interview. Caroline Kang. 110526
"