Yak Dung: Circularity in the Material Culture of Tibet

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Contrary to a linear economy, extraction, production, use, and consumption of materials, components and products (MCPs)[2] based on circular economy (CE) allows to keep them in use for an optimised period of time and to extend the period until they become waste (Iacovidou, Hahladakis and Purnell 2021: 24786). Matters like resource efficiency and waste prevention are in the focus of the CE-concept (ibid.) and both materials and processes of use are attributed with certain values and value changes. A widely used definition of CE covers its meaning by "reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes […] with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations" (Kirchherr, Reike and Hekkert 2017: 229).

Animal dung in the Tibetan cultural area and resulting products give an example of an intrinsic relation of a socioeconomic optimisation of use and in everyday live anchored value attribution. In this context, circular economy may appear less as a concept rather than a socioeconomically contextualised *conditio sine qua non* in the respective cul-

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[2] Terminology and abbreviations following Iacovidou et al. 2021: 24786.

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tural area where attributed values stand in a contextualist exchange with the natural environment and the associated socioeconomic dynamics. Animal dung is a world phenomenon in being used for a wide range of purposes in many cultures. A restriction to the Tibetan cultural region necessitates a focus on certain animals, in particular *drong* (*'brong*),[3] yak (*g.yag*), *dri* (*'bri,* female yak), *dzo* (*mdzo,* yak-cow hybrid), and cow (*ba phyug*) and thus on highland animals. Yaks can be found at altitudes above appr. 3,000 m, where they find their ideal habitat. Reasons for this are their high adaptability to high altitudes, their calmness even in extreme topographical situations or their ability to swim with luggage. According to the regional natural conditions, their diet is restricted to a certain vegetation area. Yaks exist as wild animals (commonly known as *drong*) and in domesticated form with nomads or farmers (commonly known as yak). The type and quality of the fodder is determined by the animal husbandry and the available grazing area. This in turn determines the consistency of the patty and the type and quantity of organic components.

The relationship of people to the use of animal dung is diverse – especially in the case of personal contact, whereby the social and cultural imprint of the people confronted with animal dung can have a significant influence on the acceptance of the same. Excrement and urine play a central role, both in agricultural and domestic use, but also for medicinal or ritual applications. Different types of animal husbandry such as grazing and stable animal husbandry, but also increasing urbanisation and the distance of non-farming society from farm animals contribute to the changing significance of animal dung. Their social, economic and technical importance in everyday life can change over time and, as can be seen in the example of Europe, fade into widespread insignificance. As a result, animal dung may become associated with something "dirty", unhygienic or smelly as meanings change. This article deals with the dung of yak and *'dri* in the Tibetan cultural area and its socioeconomic interconnectivity in everyday life, looking at its cyclic values beyond a simplified economic-environmental meaning of CE.

[3] Conventions for using Tibetan terms: Common local terms are presented in phonetic transcription. At the first mentioning of Tibetan terms, these have been given in brackets when first noted, transliterated according to the system of Turrel V. Wylie (1959). Source references in the text are placed directly following the concerned text passage. In cases where the given source refers to more than one successive sentence, the source reference is given after the punctuation character of the last concerned sentence.

1. The research region

The research region consists of those areas where highland cattle, in particular *drong*, yak, *dri*, *dzo*, bull and cow are part of the production of excreta patties. This is to a large extent the Tibetan cultural area and the nomadic and peasant cultivated highlands in the Himalayas, which extend from India (Ladakh) in the west through western, central and eastern Tibet in the east and in the south to the northern flanks of Arunachal Pradesh (eastern India), Nepal and Bhutan.

2. Animals and animal husbandry

Yak and *dri* live in high altitude regions and are commonly known as the animals of Himalayan nomads' culture, while bulls and cows commonly live at lower altitudes (Huang et al. 2012: 7) and are the animals of the sedentary people, the farmers. This partially stereotypical allocation of animals to nomads or farmers needs a certain correction since we may also find yak and *dri* used on the fields by farmers and in some cases also cows in high altitude regions, like in Dingri (Shigatse region) at altitudes of up to about 5,000 m.

The restriction of the research region to the Tibetan cultural area necessitates a focus on certain animals that are viable at high altitudes. As ruminants, these are in particular yak, *dri*, *dzo* (crossing of cow and yak), bull and cow. Yaks are owned by nomads or farmers and are considered strong and powerful, but also more stubborn and difficult to domesticate than cows. *Dzo* prove to be a high-altitude cross between a yak and a cow, mainly used by farmers. Its advantages over cows are that it is easier to adapt to high altitudes and its physical performance is higher. Cows, on the other hand, require less grass than yaks. The vast grasslands on the Tibetan plateau are an ideal habitat for highland grazing animals.

Commonly a yak leads a rather free life, during the day on the meadows and returning back to nomads or farmers after dawn. On the farm, yaks are rounded up for several weeks of work each spring and autumn, and after the working weeks they return to the pastures where they can roam freely. During the working weeks on the farm, yaks spend the time after work in the meadows in close proximity to the farmhouse, but usually not together with the cows. At the farm, yaks usually spend the night in the stable. Among the nomads, yaks are rarely housed in a stable at night.

Cows, on the other hand, live mainly on the farm, where most days they are taken to pasture in the morning and back to the farmhouse in the evening. They are usually milked twice, in the morning and in the

evening. It can also happen that cows stay at the farm for the whole day. In this case, they are milked three times a day. Usually, they spend the night in a stable on the farm. In rare cases, cows are also kept by nomads, but they do not go along on migrations but stay close to the nomads' base camp. It is also common for farmers to share a stable (Information Tsering Drongshar).

Sheep and goats are found with both farmers and nomads and usually spend the nights in sheds. All grazing animals leave their patties scattered over the pastures. Farmers and nomads know the areas where the animals prefer to stay and collect the patties from these places (Information Tsering Drongshar).

Cows give more milk than *dri*, ultimately with more yield in butter. An animal similar to the yak but not domesticated is the *drong*. *Drong* are wild animals and do not live by the tent or on the farm, but their patties are also collected for further use. The latter live freely without reference to human shelters. *Drong* (the term refers to both males and females) live at altitudes between about 3,000 m and 6,000 m, and slightly higher in summer at about 5,000 m to 6,000 m (Gargyelse 2018). In overall proportion, their legs are slightly shorter compared to yaks and their bodies are slightly larger. *Drong* stay together in larger groups. Gargyelse speaks of about 30,000 to 50,000 *drong* living in Tibet.[4] Another source gives a population of wild yaks for Tibet of 8,500 animals, for Qinghai of 3,700 yaks and for Xinjiang of 2,500 yaks (Yak und Alpakahof). The same source also gives an approximate population of domestic yaks at about 15 million, with 12.7 million living in Central Asia.

With the nomads, yak and *dri* either stay near the tent at night in groups, but can move freely without property boundaries. Where nomads also have *dzo* (for example in Kham region), the same applies to them. Horses, in comparison, stay next to the tent or in the immediate vicinity, while sheep are housed in a stable near the tent. In contrast, for farmers, for example in Lhoka Prefecture, there are two possibilities for the arrangement of a stable: either it is situated on the lower floor in the farmhouse, where yak, *dri*, bull, cow, sheep and goat are housed next to each other, or the animals are housed in separate stables for each animal species as separate buildings near the main house (Information Tsering Drongshar).

The keeping of cows is related to natural conditions such as altitude or climate and social and economic circumstances, which are causally linked to land use by farmers or nomads. This in turn is reflected in the type of highland cattle involved in the economic cycle – while

[4] Their thick skin is also used as a cutting board, which can last for over 30 years. On the tongue of the *drong* are tooth-like projections, which are of such a size that they are mainly used by women for combing (Gargyelse 2018).



Fig. 1 – Nomads using their yaks and dri *during migration. Yak/*dri *patties are lying on the pasture from where they are collected by the nomads (© Bhatar 2023).*

farmers primarily keep cows, the yak plays an important role in the life cycle of nomads. This socio-economic precondition is reflected in the way the animals are kept. Both animals can move freely on the pastures to graze, but are tied to the accommodation differently depending on the type of animal keeper, whether farmer or nomad.

Yaks are used by farmers for agricultural work such as pulling the plough in spring, threshing (treading out the grain in a circular motion) in autumn, and by nomads for carrying loads during their migration (Fig. 1).[5] In the village of Yamdrog (Yar 'brog), Lhoka Prefecture, for example, yaks are used twice a year for work, once in spring, for instance for ploughing, and once in autumn for threshing. Therefore, the yaks are rounded up and collected in spring and autumn for the work to be done. After this work, the yak is again free on the mountain and not tied to the farm. If it is at the farm for work, it is put in the stable after work.

[5] Daily distances of 20 km to 30 km with loads of 100 kg to 150 kg can be covered by a yak (Yak und Alpakahof).

3. Food and food intake

According to the altitude and the available vegetation, the animals' diet is restricted to a certain range of vegetation. The highland cattles and the *lura* (*lug ra*, sheep and goat) addressed here are ruminants and feed mainly on grass. Depending on the season and location, different qualities of grass are available. The best grass is found in swampy areas. This grass, which is rich green, is called *nakha* (*na kha*), which differs from the *pangkha* (*spang kha*, *spang* meaning "meadow, pasture grass"), which is of average quality (Feiglstorfer, Pfeifer and Drongshar 2024). Certain qualities of grass are found on certain pastures. In Dhamzung region (an almost completely nomadic area), for example, the *pangkha* is found on the spring/summer pastures, while the *nakha* grows on the autumn/winter pastures (ibid.). In winter, when snow falls, the animals' supply can become critically poor due to a blanket of snow, and in the worst case, the animals become severely malnourished and as a result they can die.

Regarding the type of feed, the animals are bound to the available pastures, and in relatively general terms, highland cattle eat more or less the same (Interview Tashi Wanggrag 2022). As ruminants, on the pasture, they chew little and swallow immediately, while at night they ruminate while lying on the ground. *Drong*, on the contrary, usually graze in the evening into the morning, while they ruminate and sleep during the day. In particular cases, they may also not eat for up to two or three days (Tenzin Namgyal and Dawa Tsering 2004: 70–74).

In terms of nutrition, one difference between bull/cow and yak/*dri* is the amount they eat. A cow usually needs less grass than a yak. The type of grass and the amount available also determine the quality and quantity of the milk and the products made from it, especially butter and cheese. The butter of the *dri* is widely considered in Tibet to be of particularly high quality. In terms of quantity, the cow gives more milk than the *dri*, while from the milk of the *dri* a bigger amount and a slightly more yellowish butter can be expected than that from cow's milk (Information Tsering Drongshar).

4. Digestion and excretion

Highland cattle, but also sheep and goats, are ruminants. Their digestive tract consists of several successive stomachs, *rumen*, *omasum*, *reticulum*, and *abomasum*. Food intake is followed by rapid chewing and swallowing. In the *rumen*, microorganisms become active, fermentation starts and food is moved between the *rumen* and *reticulum* for further comminution. The food is regurgitated, rumi-

nated and swallowed. Enzymes are produced in the *abonasum* for enzymatic digestion, similar to mammals without a ruminating stomach. Grass-eaters (e.g., cattle) in contrast to eaters of e.g., leaves, fruits, etc. (e.g., deer, giraffes, etc.) have larger fore-stomachs, the latter being poorer in cellulose (Spektrum.de). In principle, the digestive process is similar between ruminants, yet there are differences in the



Fig. 2 – Nagcho, *partially being eaten by insects (© Pema Tashi 2022).*

nature of the stomachs, for example in the microbial ecosystem of the *rumen* between that of the yak and the cow, even when both receive the same diet (Huang et al. 2012: 8).

There are different Tibetan terms for dung according to the type of animals: the dung of yak and *dri*, *dzo*, bull and cow is in many places in Tibet called *chiwa* (*lci ba*, also known as *ong* in Amdo), and there are different terms for summer and winter dung. *Nagcho* (*nag lco*) is the dung produced in winter (*nag* can be translated as "black" and *lco* as "dung") (Fig. 2). Winter dung is rather soft and is considered to be lower quality. At the end of autumn and in winter, the colour of the grass is no longer green but rather whitish. At this time, the animals lick more than they eat when grazing. The quality of the grass is also related to the quality and colour of the butter, which is more white and not yellow in winter (Interview Bhatar 2022). The yellow summer butter sells better in the market. Generally, the quality of dung varies and depends on the season and the quality of the grass. Additionally, among animal manures, yak dung is considered superior. Dung is used as a general term. It comes from animals like cows, bulls, yaks,



Fig. 3 – Basket to collect yak/dri *patties (© Pema Tashi 2022).*

dri and *dzo*, of which the quality of their dung is the same, while for winter and for summer dung, the latter being known of better quality. However, the difference is that in medical texts and religious ritual books, the term cow dung (*ba lci*) is mainly used and is described as equal in quality (Interview Tashi Wanggrag 2022). The dung of sheep and goats is called *rilma* (*ril ma*), of donkeys it is called *ongril* (*ong ril*), and of horses it is called *tabang* (*rta sbangs*). The dung of both is of different quality compared to cows, bulls, yaks, *dri* and *dzo*, and this dung is mainly used as fertilizer (Information Tsering Drongshar).

The term *nyowa* (*myo ba*?) which is known from Damzhung region, refers to a slightly more liquid dung (Interview Bhatar 2022). *Serkam* (*ser skam*) is a term commonly used by farmers and nomads to refer to the yellowish-grey dried dung of highland cattle produced in the summer (*ser* meaning "yellow", *skam* meaning "dry"). *Serkam* is considered good quality, especially as heating material and results from grass that has been bitten off rather than just licked. To achieve high quality, *serkam* is left to dry for about three to four months (Interview Tashi Wanggrag 2022).

5. Collecting and storing

Loose patties lie on the pastures or in the stables where some of the animals are tied up overnight and from where the patties are collected by the nomads, farmers or herders. In winter, drying *chiwa* is difficult because it freezes. Drying is therefore mainly done in summer and autumn. Fresh *chiwa* is mixed with hay or straw by farmers and then

dried. At nomads, it is not mixed, but just the pure patty is used. When yaks are not being used for agricultural purposes by farmers, they remain on the pastures (Information Tsering Drongshar). Once a year, dung is collected before Losar (Tibetan New Year). In some areas, such as Yamdrog in Lhoka Prefecture, it is customary for groups of people from several households or several family members to go together once a year in autumn or winter to the mountain pastures to collect patties. They stay on the mountain for about two to three days and transport *chiwa* home on the back of the yak in two or three large bags (Interview Tashi Wanggrag 2022). In other areas, for example in Gongar (also located in Lhoka Prefecture) in Tsering Drongshar's place of origin, such a collection campaign lasting several days is not common (Information Tsering Drongshar). One reason for this may be that there are fewer yaks owned by the farmers in Yamdrog in Lhoka Prefecture (Interview Tashi Wanggrag 2022). Apart from this collection, which takes several days, in order to acquire a large quantity of patties in one go, patties are collected almost daily all year round in the vicinity of the shelter. In Yamdrog, the patties originate from yak and *dri* which stay near the shelter (Interview Tashi Wanggrag 2022).

For the collection of *chiwa*, farmers do not have uniform times for going to the mountain. While among farmers in Yamdog, autumn as well as winter are possible times for moving to the mountain, in Tsenyul (bTsan yul) village in Tanang (Gra nang) District in Lhoka Prefecture, autumn is considered the best time for this (Khedrub 1993: 96). Somewhat far away from Tsenyul (exact place is not described in literature) they go to two different places to collect, on the one hand to a place near a nomadic animal stable and on the other hand to



Fig. 4 – Telpa *at nomads being placed on the ground for drying (© Pema Tashi 2022).*

meadows on a mountain. From there, the patties are transported back home with donkeys (ibid.). To keep the donkey strong, special care is taken for its welfare, especially for male donkeys. As beasts of burden, there are about four to five donkeys in each family. The donkeys from Tsenyul in Lhoka, for example, are considered very powerful (ibid.).

To transport patties with one's own body, *lepo* (*sle po*, back containers) are used, whose form varies regionally. After being picked up from the ground, the patties are thrown backwards into these containers over the shoulder (Fig. 3). Picked up patties can be soft and fresh, but also hard and dry. The still fresh patties are tipped onto a pile to dry. From the *lepo*, the patties are emptied by bending forward and to the side, tilting the stretcher to the side. The patties, tilted on top of each other, are placed on the floor by hand to dry (Fig. 4), not against a wall for the nomads, as there is no such wall, unlike in farmhouses where the patties are glued to the wall (the patties in this state are known as *talpa*) (Fig. 5) (Information Tsering Drongshar).



Fig. 5 – Telpa *at farmers stuck to the wall for drying (© Pema Tashi 2022).*

Nomads bring small pieces of *chiwa* to the tent where it is stored next to the tent entrance inside or next to the stove (*thab*) in the middle of the tent as fuel (Fig. 6). Also in the farmhouse, the patties are stored next to the *thab*. Either the patties are stacked as a heap or stored in a small low container, for example made of bricks. An opening may also be made adjacent to the patty storage area towards the *thab* to make it easier to lift the patties to the oven. This pile of patties is called *bükung*

(*bud khung*). This is where the patties of yaks, but also other animals like sheep or goat, or small pieces of wood are placed (Interview Bhatar 2022; Information Tsering Drongshar).

In the pasture, the patty remains as such at the place of excretion, from where it is collected. In the stable, where the animals are tethered, the patty is trampled together and a homogeneous mass of dung and urine, known as *bigpa* (*big pa*), in Tsang also known as *drigpa* (*brig pa*), is formed (Interview Tsangdrub Toblag 2023). The trampling makes this mixture hard. As at nomads, yaks spend only a limited time in the year or not at all in the stable. In the latter case the *bigpa* originates mainly from other animals staying in the stable (Fig. 7). On the farm, however, *bigpa* can also be produced by yak and *dri* in the stable. *Bigpa* in general is considered a high-quality fuel. Generally speaking, all animals in the stable produce *bigpa* (Information Tsering Drongshar).



Fig. 6 – Chiwa *in the stove for firing (© Pema Tashi 2023).*

Bigpa is not only produced in the stable, but also in the pasture by yak and *dri*. When they have finished their field work, yak and *dri* are taken to the mountains, where many of them gather and a big amount of *bigpa* will be produced. After being trampled down, *bigpa* is very hard and has to be beaten out with a *togtse* (*tog tse*, cramp). *Bigpa* is cut out at least once a year, but there is no specific season for this. The time when *bigpa* is cut depends on the number of animals and the amount of dung they produce (Interview Chen Sögyam 2023).

Bigpa is not commonly used everywhere in Tibet. Its use is known from Kham, as well as from Lhoka, Tsang, Phenpo, in the surroundings of Tsongön (mTsho sngon) Province in Amdo (today also in Kham), Damzhung or Ladakh, but not, for example, in Tehor Dhargye (Tre hor dar rgyas) and its surroundings in Sichuan. In Tsongön, *bigpa* is called *raging* (*ra 'gying*). In this area, *raging* is mainly used for making

fire in winter. In other areas, *bigpa* is used at different times of the year, depending on when it is cut out (Interview Chen Sögyam 2023).

A yak eats every day and if it does not eat for a few hours, it stays still and farmers and nomads may fear that it might be sick.[6] The amount of available yak dung varies. Basically, a yak poops on average twice a day, once in the morning and once in the evening (Interview Bhatar 2022). One yak *chiwa* weighs about 1.5 kg. Yak *chiwa* are larger than *dri chiwa* (Interview Damchö Pälsang 2023). If little water and fodder is available, this reduces the amount of excretion.



Fig. 7– Bigpa *at a farmhouse in Phari (© Pema Tashi 2023).*



Fig. 8 – Patties modelled in a rectangular shaped brick, laid on the ground for drying (© Pema Tashi 2022).

[6] The yak's state of health is checked with several hand tests: (1) by sticking a finger into the yak's nose. If it feels cold, this is an indication of a disease, as well as if (2) a lot of saliva drips out of the mouth, or if (3) it breathes heavily and sticks his tongue out far (Interview Bhatar 2022). A cow should show more than 50 chewing strokes per minute (Hünnies 2019). According to Hünnies, the food ration of the cow has not been sufficiently digested, if feed components remain in a 2 mm sieve.

The patty is either taken directly to the tent or house or stacked in piles near the shelter to dry. The method of piling varies greatly from region to region. The patties are either stored as they are without changing their original shape or pressed into a specific shape before being stored. This is done with tools, especially wooden moulds and a wooden stamp, or by hand. Moulds can be square or round (Fig. 8). The round, flat shape is called *trogleb* (*khrog leb*; *leb* meaning "flat") (Information Tsering Drongshar).

The piles of flat cakes are called *chipung* (*lci spung*), which exist all over Tibet, but in the various regions they appear with different shape and size. However, most places where *chiwa* is piled need to be kept as they are. Some *chipung* are rather tall and long, while others are rather simple and small piles with no particular shape. (*lci* derives from *lco ba*; *spung* meaning "collecting in one place"). In some local dialects, it is called *choba*, another term for *lci ba*. There is no common rule for the size of a patty (Information Tsering Drongshar). The patties, which are used, mainly as fuel originate from yak, *dri*, *dzo*, bull and cow. Among nomads in Damzhung, for example, each family has on average about three to four *chipung*. Some have more, for example eight heaps, although the size of the *chipung* is not fixed. Sometimes the yak patties are formed into bricks, which are also used to build a *chipung* (Interview Bhatar 2022).

One possibility in the construction of a *chipung* is to make a surrounding wall of *chiwa* and fill the remaining cavity with yak/*dri* patties. This type of *chipung* is made in Damzhung only in summer (around June/July) and autumn (around September/October)[7] and is used up over the period of about a year (Interview Bhatar 2022). A mixture of dung and water is applied to plaster the *chipung* to protect it from rain. Otherwise, this wall would weather faster. Finally, the pile is smeared either with water only or with humid *chiwa* by hand. This is similar to a plaster and is called *nyongwa jug* (*myong ba byug*) (Interview Bhatar 2022), *myong* meaning "liquid", of a consistency as in diarrhoea (hypothetical interpretation). Laying the *nyongwa* onto the wall (in the sense of smearing or spreading it onto the wall) is called *jug* (*byug*). *Jug* means "to brush on" or "to paint", also by simply using the hands. In winter, to smooth the clay surface of a wall, ice floes are coated over the building parts made of a mixture of clay and dung (see Lanzhe 2016).

[7] Months are given according to the Tibetan calendar.

The need for stacking and storage is also associated with utility buildings like storage buildings or stables. The construction of walls for stables or dog kennels is a common way of using the stacked piles (Fig. 9). It is also common to store them on the top of walls or on the attics of buildings (Fig. 10). At these positions, the patties take on the function of thermal insulation and are taken from there for heating when needed. Another way of drying is to stick yak patties to the outside of walls when they are not yet completely dry and let them dry by wind and sun, and collect the dried patties when needed. These patties stuck to the wall are called *chiwa gorgor* (*lci ba sgor sgor; sgor* meaning "round") in Damzhung (Interview Bhatar 2022), *telpa* (*tal pa*) in southern Tibet and *kholeb* (*khol leb*) in Amdo. (Information Tsering Drongshar). Their size varies, but can be assumed to be about 30 cm in diameter per piece.



Fig. 9 – Dog kennel made of yak/dri *patties, also using stones and* lamak *(© Pema Tashi 2023).*



Fig. 10 – Patties placed on top of the wall in Khang dmar district in Shigatse (© Pema Tashi 2023).

When nomads make round patties, they do not stick them to the wall as farmers do, but lay them on the ground on a bed of ash, deriving from yak dung. This ash protects against worms and insects. Especially in autumn, certain insects eat the patties (Interview Bhatar 2022). The term for ashes is *telbung* (*thal spung*). In Damzhung, for example, there are two meanings of the term *telpung*, referring to a white and a black *telpung*, with the black one having different use, while the white one has no further use (Interview Bhatar 2022).

1. *Telbung karpo* (*thal spung dkar po*) describes a white ash from yak dung. *Telbung karpo* is used in different ways, for example for snuffing (Fig. 11). Therefore, *telbung karpo*[8] is mixed with tobacco leaves and the mixture is finely grained with a stone. The ash is mixed with water in a consistency like a dough, which is formed into a round platelet with a diameter of about 5 cm to 10 cm. When dried, this platelet is called *thela karpo* (*thal la dkar po*). In a further step, *thela karpo* is mixed with tobacco leaves and this mixture is ground to a flour-like consistency on a *metün* (*mas gtun*, stone-board), by using a *yetün* (*yas gtun*, the stone fitting in one's hand used for graining). The upper and lower grinding stones are tools used for grinding. This refers to the two stone slabs on the top and bottom. The top one is called *yetün* stone and the bottom one is called *metün* stone. These are also known as *rang thag* or *chig* (*rang 'thag* or *mchig*). In nomadic areas, *tsampa (rtsam pa)* and other grains are ground with these hand mills. In farmer regions, *tsampa* is often ground by using water mills (*chu 'khor*). For grinding snuff, the upper millstone is not flat like the lower one. Instead of a flat upper millstone, an oblong stone that fits in one hand is used. This is also called an upper *yetün* or *yegyag* (*yas rgyag*).



Fig. 11 – Thela karpo, *a platelet made of white ash mixed with tobacco leaves (© Tsering Drongshar 2025).*

[8] It is often used by elder people, for example for the treatment of sinus colds.

The flour-like mixture, being ready to be snuffed, is known as *natha* (*sna tha*).[9] Therefore, it is filled into a *naru* (*sna ru*, snuff bottle) (Fig. 12). In Tibetan, the process of snuffing is called "smoking" because the ash is blown out through the mouth after snuffing, a process similar to smoking a cigarette or pipe. Since there is no term for snuffing in Tibetan, snuffing is referred to as smoking. This snuff is stored and transported in containers made of animal horn or wood, known by the name *naru* (*na ru*, *na* meaning "nose"; *ru* meaning "horn") because this snuff box was mostly made of animal horn. Through a small hole on the underside of the *naru*, *natha* is placed on the backside of the hand or on the thumb and snuffed from there, commonly about two to three times a day. Also known is, that dried yak dung is ground between the hands and smoked (not snuffed) in a clay pipe, which is done more by young people in a joking manner, not by adults, as this smoke is said to taste pungent.



Fig. 12 – Snuffbox using tobacco and yak/dri *dung; Tibet Museum, Beijing (© H. Feiglstorfer 2025).*

Other uses of *telbung karpo*: For drawing straight lines on a board, e.g., on a school board, *telbung karpo* is filled in cloth bags to which a string is attached. Similar to a chalk line, with the string, lines are made on a board as base lines for writing exercises. At farmers this kind of chalk line is called *thigkhug* (*thig khug; thig* meaning "line"; *khug* meaning "bag"), while they use white clay inside the bag instead of ashes (Interview Bhatar 2022). *Telbung karpo* is also used to wash pots. Ash is also sprinkled over human faeces. After one to two months, the dung has rotted. After that, it develops into a good fertiliser for the field. Ash is also used on animal wounds related to flushed and itchy skin, to treat skin diseases or against lice and louse eggs, e.g., for yak/*dri*, sheep or goat) (Interview Bhatar 2022).

2. *Telbung nagpo* describes an ordinary dust, for example house dust, but not ash. *Telbung nagpo* has no further use, it is collected in certain places outside the dwelling.

[9] Best quality ash for *natha* is from the trunk of a certain shrub, the rosehip (*sel ba*).

6. Costs, daily need and trade

The price of a yak depends on a variety of criteria, including size or strength and it is correspondingly wide-ranging. Accordingly, the price of a yak ranges from 7,000 to 13,000 Yuan (c. 800 to 1,630 €)[10] (Interview Bhatar 2022), while yaks are slightly more expensive than *dri*. In comparison, a bull or cow costs about 7,000 Yuan, and a *dzo* about 6,000 Yuan.

In some Tibetan areas, the cow patties are in great demand as heating material and are sold by the producers as far they have enough of them for their own daily and annual needs. In Damzhung, for example, tractor-drawn trailers full of yak pie are delivered. People pick up patties from the nomads or farmers by car or they are sold directly at the farm. Here, buyers come mainly from Nagchu, Lhasa and the surrounding areas. Fresh yak patties are more appreciated than old ones (Interview Bhatar 2022).

In the towns of Phari (Shigatse region on the border with Bhutan) and Gromo (Shigatse region), for example, 1 sack filled with yak patties costs about 14 to 15 Yuan (equivalent to about 1.77 € to 1.9 €). The sack (*sgye mo*), which is commonly made of *tsipa* (*rtsid pa*) and sheep's wool is about 1 m in height and 50 cm to 60 cm in diameter. *Tsipa* is found on many parts of the yak body. However, there is a difference in the quality of the *tsipa*, keeping in mind that the goat also delivers *tsipa*.

In and around Lhasa, yak patties are more expensive compared to rural areas: here 1 sack costs about 18 Yuan (equivalent to 2.28 €). Generally speaking, 1 sack costs between 14 and 20 Yuan (equivalent to 1.77 € to 2.28 €) (Interview Pema Tashi 2022). Usually these patties are bought for heating, but they are also purchased for other purposes, for example by monasteries, which use them as fuel for fire rituals known as *jinseg* (*sbyin sreg*). For this purpose, farmers often give the patties voluntarily and free of charge (Information Tsering Drongshar).

In a household, about 30 to 50 pieces of patties are consumed daily in the kitchen for cooking.[11] Calculating with 365 days in a year, a household requires about 11,000 to 18,300 pieces of round patties per year for a family with 5 to 6 adult members. Therefore, patties are collected about twice a day. This number of patties refers to exclusive use

[10] The conversion from Yuan to Euro is based on the exchange rate in August 2023. The given amounts are approximate and rounded numbers.

[11] The primary intention when using yak patties as firing material is to heat food. In the course of this, the area around the *thab* (the fireplace) is also warmed up. The radiant heat of the stoves is rather low and also the ambient temperature remains low, so that heating up one's body around the stove is only possible for a short time, just at cooking times.

of patties for cooking. The effective amount depends on the habitus of fire making, also on the outside temperatures and the temperature difference between winter and summer. Fire making is conducted all year round, at least three times a day. In addition, it is needed in a household to cook grains for making *chang* (*chang*, Tibetan beer), biscuits, butter or cheese, to roast *tsampa* (*rtsam pa*, it is barley washed, dried, roasted and ground into flour) or to dye clothes.[12] For *tsampa* or biscuit making, for example, heating is used throughout the day. However, the number of patties consumed changes when gas or wood is also used for cooking. Today, gas is supplied in containers. In Lhasa, for example, less patties are used than by nomads and farmers because gas is easier available in the city (Interview Phubu Tsering 2023).

7. Types of chiwa

In his book, Gulog Damchö Pelsang (2020) discusses a common use of yak dung. In his *Great Tibetan-Chinese Dictionary*, Krang dbyi sun (1985: 766–767) gives different names for the common use of cow dung, with a brief description, as follows. The terms follow a rudimentary categorisation, predominantly with reference to the application, processing and places of origin and storage of *chiwa*.

lCi rnyang is a general term for *chiwa*, in dialect also known as *yul skad*. *lCi thang* describes a particular place where *chiwa* is collected. *lCi thal* describes a fertilizer, based on chiwa. *lCi* means dung, and *thal* means dust. *Chithal* (*lci thal*) has many uses. It can be used as a substitute for fertilizer in fields, and especially in nomadic areas, if spread on the floor of dog kennels, it keeps them very warm in winter.

lCi 'dag describes a mixture of *chiwa* and water, of a similar consistency like clay, *'dag* means mud or paste. *lCi 'dag* also has many uses. *lCi 'dag* is used for plastering floors, walls and *chipung*.

lCi phag describes a brick based on *chiwa*, for example for making walls. *lCi ra* has two meanings, (1) an animal stable, (2) a particular place to collect *chiwa*. *lCi leb* describes *chiwa* placed on the floor or stuck on the wall for drying.

Lhamo Kyab (2015) describes in an online article ten different terms related to *chiwa*. It is the most detailed categorisation of this material's different properties and use, which we could find. *Chiwa* is an umbrella term, and can be categorised into subspecies according to the characteristics and certain qualities of dung and according to certain

[12] Clothes in an uncoloured state are known as *nambu* (*snam bu* describing clothes made from sheep wool). First the *nambu* is white or black (i.e., the original colour of the sheep hair), then the clothes are dyed with mineral, plant and root dyes. Therefore, white *nambu* is boiled with water together with colour pigments in it.

modes of use. The naming of these subspecies follows local designations. The following categorisation of *chiwa* species in ten subcategories is based on the article written in Tibetan by Lhamo Kyab (2015), mainly referring to yak and *dri* in the nomadic culture, with a reference to Amdo region. According to the interviews conducted by Tsering Drongshar with Bhatar (2022) and Damchö Pälsang (2023), this type of categorisation is widely common in nomadic areas of Tibet, but locally using different terms.[13]

1. *Kholeb* (*khol leb;* Amdo: *khol leb*; Lhoka; *tal pa*; information by Tsering Drongshar) refers to a round patty, preferably of yak and *dri* (but not of their calf), which is commonly made from one to two patties. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), while in Damzhung the term *smyong leb* is common (Interview Bhatar 2022). These patties are stuck to the wall to dry, with fingers pressed into the patty when sticking it on (Interview Bhatar 2022). In Amdo, most *khol leb* are made by the nomads in winter, as the dung is slightly harder at this time of the year, which allows a more even shape. In the farmhouse, on the other hand, they are made all year round. This type of dung has several favourable properties: they do not get eaten by insects and they remain in the fire for a relatively long period of time.

2. *Kholshog* (*khol shog; shog meaning* "paper").[14] The term *shog* can be traced back to the fact that this type of patty (among nomads, added by Tsering Drongshar) is spread thinly on the ground, which is usually made in summer. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), while in Damzhung the term *smyong shog* is common (Interview Bhatar 2022). Fresh cow patties next to animal stalls are used as the raw material for preparing *kholshog*. After drying, these patties are cut into small pieces for easy fire making.

[13] The text by Lhamo Kyab (2015) on the ten types of *chiwa* was translated from Tibetan into German by Tsering Drongshar and thereafter into English by the author. The translation is given in an interpretative mode, not literally. The text is supplemented with knowledge from other regions, mainly connected to regionally different terms. Sources of text additions, not originating from the source text by Lhamo Kyab are given in brackets.

[14] The meaning of the term *khol* remains unclear.

3. *Chipung* (*lci spung*) refers to the piling of the freshly collected patties in a heap (Fig. 13). This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), same as in Damzhung (Interview Bhatar 2022). Such heaps of patties are built during summer. The patties remain on the same place throughout the year, until they are collected, e.g., for fire-making. During nomads' migration, at the time of their absence from the place where the *chipung*



Fig. 13 – Chipung *in Limi/Nepal erected beside nomads' tents (© Tsewang Ngodup 2023).*



Fig. 14 – Ongpung chiwa *(© Bhatar 2022).*

is installed, it remains untouched, and after return pieces of patties are collected for fire-making.

4. *Ongpung* (*ong spung; ong* giving another term *for chiwa*; *spung* meaning "gathering in one place") refers to a pile of yak patties made with dried *chiwa*, and the surface of which has been smoothed by smearing in a humid state (Fig. 14). This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), same as in Damzhung (Interview Bhatar 2022). Therefore, the patties are collected all year round to make a pile of them and smear its surface evenly. A rectangular (also elongated) or round wall is built with patties, also possible in a stupa-like shape, and the hollow space left inside is filled with new patties throughout the year by throwing them in. Among families, the *ongpung* can also be a sign of a busy occupation (mainly of the women), depending on how many *chiwa* are piled up next to the tent throughout the year. Working on the *ongpung* is not considered easy, and depending on who makes the "nicer" pile of patties, a small competition can arise among the women. When a woman gets married and comes to the husband's tent, she is given advice on how to make an *ongpung* properly.

Ongpung chiwa is known for different positive properties: on the one hand it is well suited for making fire, since it allows a strong and long-lasting fire, and on the other hand after firing it is used in the form of an ash as an ingredient to make medicine.[15]

5. *Chirug* (*lci rug* meaning "dung")[16] refers to the dung of a calf. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), same as in Damzhung (Interview Bhatar 2022). These patties are neither mixed with other dung nor shaped into any other form. They are simply dried for a long time, after which they are suitable for making fire.

6. *Onglü* (*ong lud*; *ong* meaning "dung", same as *lci ba*; *lud* meaning "fertilizer/manure"), denotes a fine, crushed material from the patty in several ways of manufacture. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), while in Damzhung the term *chilu* (*lci lud*) is common (Interview Bhatar 2022). It is known to be used in different ways: (a) the patty is spread on the field. When it is removed from the field afterwards, a fine dust-like material is left behind in the field. Insects help to break up the dung; (b) rubbing patties together also produces a dust-like residue;

[15] The text does not specify the type of medicine.
[16] The meaning of the term *rug* remains unclear.

(c) also, when the patty is taken out of the fire, *onglü* is wiped aside and piled up on a mound, which in turn is used to make fire (Interview Bhatar 2022). *Onglü* is dry and soft, it is considered pure and moisture-absorbing, and it is said to have a disinfectant effect against poisons. For these reasons, at nomads it is a preferred lying surface. For example, at the time of childbirth, *onglü* is known to be used in the stable as a suitable surface for the woman to give birth. Also, for animals, for example for dogs, it is a preferred lying surface.

7. *Ongkya* (*ong skya*; *skya* meaning "grey") describes a type of yak dung that dries in the meadow and remains there throughout the summer and winter. Sun and air temperature contribute to the speed of drying and to the colour formation. In the village of Gulog in the Amdo region the term *marsül* (*mar sul*) is used instead (Interview Damchö Pälsang 2023), while in Damzhung and Lhoka the term *serkam* (*lci ba ser skam*) is common (Interview Bhatar 2022; information by Tsering Drong-shar). This type of patty is also characterised by its strong and long-lasting fire. *Chiwa serkam* is left to dry in the wind, rain, and sun for a long time. Its color is slightly grey. However, it is very good for fire making, and it is considered the best kind of dung. The term *lci ba ser skam* also appears in medical texts and ritual texts.

8. *Chilön* (*lci rlon*; *rlon* meaning "wet") refers to a fresh patty of yak, *dri*, and also of their calf. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), while in Damzhung the term *myowa* (*smyo ba*) is common (Interview Bhatar 2022). There are different *chilön* depending on which animal it is derived from. This damp dung is also used by the nomads to make toys, especially small cars, aeroplanes and sledges for children (Lanzhe 2016). The saddle-shaped sledges have the shape of a yak (ibid.). They are made exclusively from yak dung, without the addition of clay or fibres (ibid.). After hardening, the children can toboggan down the icy slope on these toys, which are about 20 cm to 40 cm long. Even if the children often fall and the toboggans are thrown against the ice, even their modelled horns break off with difficulty (ibid.).

Apart from the stability of the objects made from it, *chilön* also has a lust-inhibiting effect on yaks and a suction-inhibiting effect on calves. If *chilön* is smeared on the back of the *dri*, the yak is prevented from tubbing the *dri*. If the brest of the *dri* is smeared with *chilön*, the calf is prevented from sucking. When dry, *chilön* usually turns slightly black and is then good for making fire.

9. *Chigong* (*lci sgong*)[17] refers to a patty of yak and *dri* frozen in winter, which are usually relatively large patties. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), while the term *myongkhing* (*smyong khying*; *smyong* is another term for moist *chiwa*) is common in Damzhung (Interview Bhatar 2022). Often, when building the *chipung*, the *chigong* are used for the *chipung* wall, which is also known as *ongra* (*ong ra* in Amdo, used inside and outside the dwelling structure) or *bükhung* (*bud khung*) used in the kitchen area, known in other areas such as Lhasa and Lhoka (information by Tsering Drongshar). After drying (in spring and summer), the space inside the surrounding wall is filled up with new dung, since in its dried state it is good as fire material and also for lighting the fire. For certain religious festivals such as Losar, nomads go up to the hills, taking *chigong* with them for lighting, for example, incense.

10. *Chikhang* (*lci khang*) describes a small building structure made of yak/*dri* dung. This name is also known in the village of Gulog in the Amdo region (Interview Damchö Pälsang 2023), same as in Damzhung (Interview Bhatar 2022). In earlier days such buildings were used for storing meat or as dog kennels. Also, its use to collect otters is mentioned.

8. Different ways of using chiwa

8.1 Use of patties for heating

The most important use of yak and *dri* patties is as a heating material, both in nomadic culture, where there is largely no alternative material for heating throughout the year, but also in farming culture, where wood as a fuel is very limited, depending on altitude and vegetation. In the past, farmers mostly used *chiwa*, but today they also use wood and gas.

As fuel, patties from all highland cattle, also from sheep, goats, donkeys and horses are used. *Bigpa* is considered a high-quality fuel among them. Highland cattle patties contain a relatively high amount of oxygen (hypothesis Feiglstorfer). As fuel for cooking, patties are used all year round, but increasingly in winter. In winter, the nomadic family spends a lot of time in the tent, sitting around the fire, which in this season burns most of the day. In winter, about three *chipung* are used for a family of about eight people to make a fire. To start the fire

[17] The meaning of the term *sgong* is unclear.

a *mechag* (*me lcags*, flint stone, worn around the waist by nomadic boys and girls), a mixture of *chiwa* and a certain grass is used. This grass (known as *dra*) is relatively soft and is brought from higher altitudes (Interview Tashi Wanggrag 2022).

In the evening, when the fire is extinguished in the stove, ash is placed on the patty. At the nomads, this piece of patty placed on the ash is called *mesonyel* (*me gso bsnyal*; *me* meaning "fire", *gso* meaning "reuse", *nyal* meaning "to lay something down"). At the farm it is also called *menyel* (*me nyal*). This piece is relatively easy to light the next morning. If *lamak* (*la mag*, grassy sods) is available, it can be used together with yak/*dri* patties to make fire. The fire based on *lamak* lasts longer than that based on pure patties (Khedrub 1993: 96).

The season in which the patty is produced also plays a role in fire making. The patty produced by highland cattle in summer is known as *kerchi* (*dkar lci*)[18] (ibid.). Its colour is white/grey and it is considered the best fuel among the patties. In autumn, the colour of the patties is more yellowish and in winter it changes to black. Winter *chiwa* is not considered a good fuel (ibid.). This may have to do with a different proportion of organics and number of pores (hypothesis Feiglstorfer).

In contrast to dismantled earth walls, which are used for thermal insulation in tents (Feiglstorfer, Pfeifer and Drongshar 2024), the clay used to build stable walls is reused for heating after dismantling the stable walls. The problem with yak patties that are stored for a longer period of time is that they tend to smoke strongly when lit and they are therefore no longer suitable for making fire (Interview Bhatar 2022). In this regard, old patties are similar to *lamak* in terms of their use as fuel, caused by the fact that both, *chiwa* and *lamak* have a relatively large organic content (hypothesis Feiglstorfer).

The choice of fuel varies from region to region and it is difficult to establish a normative uniform use. With regard to wood as heating material, there are different sources of supply: some households buy it, others have wood resources available in their locality, and still others have their own orchard where branches and bushes are available. The change from a subsistence economy by marketing farm products or by creating other sources of income in addition to agriculture has different implications for the use of *chiwa* as heating material: collecting *chiwa* requires a certain amount of time and a corresponding division of labour on the farm. On the other hand, an income in addition to subsistence farming enables the purchase of heating materials such as wood or gas.

[18] *dKar lci* refers to white dung left over during the rainy season in summer. It is considered the best type of fuel because it burns most effectively. This term is used in the Lhokha Dranang (Grwa nang) region. It is also a type of dung.

In Lhasa, for example, one gas cylinder of 10 kg costs between 120 and 140 Yuan (this is about 15 to 18 €). This is enough for a family of about seven people for appr. 20 to 25 days, calculated with cooking three times a day. This amounts to gas costs of c. 1,800 to 2,500 Yuan (c. 230 to 320 €) per year. These are heating costs when only gas is used for cooking.

For the relevance of these costs for a farming household, the monthly income of a household has to be considered. This is difficult to generalise and depends on a number of factors, such as the economic region, regional employment and earning opportunities, the size of the farm and the number of family members. As a rule, all family members work into a common financial pot within the household. The family members engage in different labour activities. In a household of five family members, for example, three of them may work on the farm and two of them may work full time all year round in a completely different job outside the farm. Of the three who work on the farm, for example, one person may work full time on the farm all year round, while the other two may work part time off the farm in other jobs and work on the farm just during the main field work in spring and autumn. For the festivities such as Losar (the New Year festival), the *'ong skor* (end of summer festival before the start of the harvest season), or weddings, each household member usually returns to the farm.

In Lhasa and the surrounding area, as an example, a construction worker earns c. 200 to 260 Yuan (c. 26 to 33 €) per day. For example, if we calculate that a worker works 2/3 of the year, i.e., c. 240 days, this results in annual earnings of c. 48,000 to 62,400 Yuan (c. 6,140 to 7,980 €). In contrast, a master carpenter or stonemason earns about 300 to 400 Yuan (c. 39 to 51 €) a day with an annual earnings equivalent, calculated at 2/3 annual employment of 72,000 to 96,000 (c. 9,200 to 12,300 €) per year. Many of the construction workers in Lhasa and the surrounding area are farmers who earn money either full-time off-farm or in addition to their farming. A farmer who works about 50% of the year in a second job would earn about 36,000 to 46,800 Yuan (c. 4,570 to 5,950 €) per year as a construction worker. Calculated with two full time earners (according to the above calculation) with 2 x 48,000 to 62,400 Yuan (c. 6,140 to 7,980 €) this results in a total annual income of 96,000 to 124,800 Yuan (12,280 to 15,960 €) per year. Calculated with two part-time earners (according to the above calculation) with 2 x 36,000 to 46,800 Yuan (c. 4,570 to 5,950 €) this results in a total income of 72,000 to 93,600 (9,140 to 11,900 €) per year.

In the apartments in Lhasa mainly gas is used, while in larger houses mixed fuel is used – gas, wood and yak/*dri* dung. Products made on the farm, such as milk and dairy products, are consumed on

the farm itself, and tools and household appliances made here do not create additional costs. A larger item in the household budget is construction work, such as the erection of a new building. People from the farm helping with the work in the neighbourhood used to be a natural part of neighbourly help, but this custom is vanishing and today such work is usually also paid.

Without taking into account tax levies, health insurance contributions and other incidental expenses, and without taking into account income from farming, such as from the sale of grain and potatoes, and without taking into account acquisition costs for the farm, this results in a roughly annual income of:

2 full-time workers: 96,000 to 124,800 Yuan (c. 12,280 to 15,960 €)
2 part-time workers: 72,000 to 93,600 Yuan (c. 9,140 to 11,900 €)
Annual total income: 168,000 to 218,400 Yuan (c. 21,420 to 27,860 €)

If we contrast this sum with the gas costs for one year of c. 1,800 to 2,500 Yuan (c. 230 to 320 €), they seem extremely low. With this cost ratio, there seems to be no particular economic incentive to do without fossil fuels and biomass as fuel. For consumers, the costs for gas lie in a low burden on the household budget according to the calculation presented above. The associated CO_2 emissions seem to be subordinate to the economic benefits in this view. Yak/*dri* patties are, according to this observation, difficult to compete in the market against gas as a fossil fuel. A major reason for using patties seems to be their availability rather than an economic or environmental reason. (Interview Tashi 2023; calculations conducted by Feiglstorfer based on the basic data given by Tashi).

8.2 Use of yak/dri *patties for building construction*

In the past, animal sheds at nomads were often made of yak/*dri* patties. *Norra* (*nor ra*), for example, describes a yak barn that was also made from patties, which were also used to build doghouses or stables for small lambs or goats.

The heat-insulating property of the patties, due to the pore content of the organic components, is not only an advantage for stables. They are also used in nomad tents. In some nomad tents there are knee-high walls inside the tent, the use of patties known as *trogleb* (*khrog leb*), which are erected between the tent canvas and the seating area in the tent to protect against wind and to provide insulation in winter (Fig. 15). First, a stone base is erected on which the patties are placed. The top is used as a shelf, known as *bangtri* (*bang khri*). These patty-walls remain for several years. The patties processed in them are no longer used for making fire (see mentioning before). *Trogleb* can be placed on top of each other to build the wall, but can also be preproduced on the



Fig. 15 – Insulating wall in the tent made of yak/dri *patties (© Bhatar 2023).*

ground in round or square form. This involves mixing fresh yak dung with water and hay and placing the mixture on the floor to dry. Afterwards, this brick-like piece can be used like a brick, also to build a stable wall.

The insulating property of yak dung is also evident in the storage of meat in storage rooms, known as *shakhang* (*sha khang*). For nomads, these are free-standing small huts next to the tent. For farmers, this storage room is located in the house. Grain, *tsampa*, flour, butter, meat, etc. are stored there. In free-standing storage buildings, which are used to store meat, even the door frame and the door leaf may be made of yak patties, while the roof is made with small wooden rafters, which are covered with frozen pieces of a mixture of clay and dung (Lanzhe 2016).

Today, plastering walls with a clay mortar in the form of a plaster, as opposed to applying a clay slurry, has largely been displaced from the local building tradition by the use of cementitious building materials. Until about thirty years ago, it was common practice to apply clay mixed with cow dung and to plaster by hand, known for example from Lhoka Province. In Lhoka, *chiwa*, clay and grain husks from wheat (not barley) used to be mixed (Interview Trasang 2023). The three parts are placed on the floor and mixed by treading with the foot. The plaster was applied by hand. Thereafter, a mixture of yak dung and water was smeared over the plaster (ibid.).

In contrast to the decrease of using clay mortar as plaster, the use of a slurry, mixed of clay and yak dung is still widespread. Surfaces of facades are painted over with it, either by hand or with a rag, or the



Fig. 16 – Wall in Golog in Amdo made of chiwa*, which is on its top plastered with a slurry of yak/*dri *dung (© Kuntang Gyaltsen 2022).*

slurry is poured over it (Fig. 16). In this way, it is still common to slurry walls of sheds for lambs and baby goats or of dog kennels with yak dung on the outside.

An amateur film, made in Amdo Province, shows a yak dung-clay mixture as a coating material on a pyramid-shaped roof made of twigs (Lanzhe 2016). The diameter of this structure is appr. 1 m. In this film, arrangements for tying the yak are also shown (Lanzhe 2016). Two small piles with a diameter of appr. 30 cm are formed of yak dung on the ground and these are connected with a curved yak horn, which is inserted into both piles. The horn is stuck in such a way that the yak can be tied to it.

A yak dung-clay mixture is also used to repair surfaces of *thab* (stoves), especially to lubricate the inner chambers when they break or become uneven (Lanzhe 2016). In rural areas in India and Nepal, floors and walls in farm houses are commonly painted with a mixture of cow (instead of yak) dung and water. This method of protecting and cleaning floor and wall surfaces is rarely practised in Tibet while it is commonly practised in India in advance of certain religious festivals.

8.3 Symbolic meaning of chiwa *and related use*

In Tibetan culture, *chiwa* has an auspicious symbolic meaning as a good omen. This is expressed in everyday actions, for example in spring when the nomads migrate. If they meet someone bringing or

carrying *chiwa*, it is an auspicious sign. Also, if one sees a heap of dung in the morning, it means good luck (*grogs*).

Also, at a wedding, among nomads as well as farmers, *chiwa* (but not *rima* (*ri ma*) describing the goats' and sheep's dung) is considered an auspicious symbol (Yeshe Kelsang 2002: 57). When leaving their homes, it is customary for children as well as for adults to place a sack filled with cow dung (this sack is called *gyemo* (*sgye mo*)) next to the path on which the wedding party is walking (Tsewang 1999: 221). The sack is commonly made of *tsipa* (*rtsid pa*) and wool and is in everyday use to carry grains. At weddings, *chiwa* is placed in a full sack, also, for example, next to the door of the wedding partners, whereby the sack must be fully filled, while sacks that are not fully filled would mean a bad omen. Water is also brought and placed for this purpose. It is carried in a vessel made of metal, wood or clay (*chu ban* or *chu zom*). This vessel is used in everyday life to transport water, for example from the well to the home, but also to transport milk (Tsewang 1999: 221). This wedding culture is similar among farmers and nomads.

Another custom in which yak dung is associated with a symbolic meaning of good fortune is a specific ritual at Losar, the Tibetan New Year (Interview Pema Tashi 2022). *Guthuk* (*dgu thug)* refers to the noodle soup (*dgu* meaning "nine", *thug* meaning "noodle") eaten on the evening of the 29 December according to the Tibetan calendar. It is customary to place various symbolic ingredients inside the dough (dumpling) of this soup. Notably, in the regions of Tsang and Lhokha Lhuntse, it is common to include dung (of cow or yak) inside the wheat small dough. If someone receives a small wheat dough (dumpling) with dung in their soup, it is traditionally believed auspicious for good luck.

It is not just dung that is put into the dough (dumpling) of *guthuk*; various other symbolic ingredients are also included. On that day, an important religious ritual called *gutor (dgu gtor; dgu* means the date of that day; *gtor* refers to *gtor ma*) is held in Tibetan monasteries. The purpose of holding this ritual is to prevent obstacles in the New Year. This custom follows a process of domestic purification and the holding of fireworks. Therefore, small pieces of dough are formed and filled with one of different specific ingredients. In some cases, the name of the ingredients is written on a piece of paper and this paper is placed inside the dough. These ingredients include salt, chilli, charcoal, a paper with a picture of a symbol (depicting sun and moon), sheep's wool, etc., and also yak dung. Each guest receives one of these stuffed noodles in his or her bowl filled with *tugpa*. The stuffed noodle is slightly larger in size to recognise it among the other noodles. The guest opens the particular noodle assigned to him/her and looks for the type of ingredient. The ingredients have certain positive symbolic meanings. For example, sheep wool stands for a good and patient

person, paper for white heart (white as symbolic expression of a good person), and cow dung expresses good luck (Interview Pema Tashi 2022). Pema Tashi reports this custom for farmers, while in Damzhung it is not practiced (Interview Bhatar 2022).

8.4 The use of chiwa *for fire offerings*

There are different uses of yak patties as firing material during fire offering rituals. One of these is mainly conducted at specific days in monasteries, known as fire offering *puja* (*sbyin sreg*) (Jamgön Kongdrül Lodrö Thaye 2007–2008: 17). This fire ritual is started with the fire made with yak patties. Its use for fire rituals is not exclusive to the Tibetan cultural area. Cow patties are also commonly used for this purpose in India.

In contrast, nomads and farmers also use fire rituals in their homes and daily lives. Therefore, a particular type of stove is built, for which a distinction can be made between two types, either used at nomads or at farmers: *Sangthi* (*bsang khri*; *khri* meaning "throne") is the name of the smoking place used by nomads (Fig. 17). The shape of a *thi* is either square or round, made of yak patties, *lamak* or stone. It is a type of plateau built near the tent entrance. Especially for the preparations for Losar, various *sangthi* are made. In summer *sangthi* are also made from *lamak*, as it can be cut at that time. Darpaṇārcārya (1994–2008) describes the making of a platform in mandalic geometry for holding a mandala ritual or a fire ritual. The platform is coated with cow dung on the sides and top, whereby the cow dung must not come into contact with the ground.



Fig. 17 – Sangthi *made of stone and* lamak *but may also be made of* chiwa *(© Pema Tashi 2021).*

Farmers, in contrast, use *sangkhung* (*bsang khung*),[19] which is a type of stove, which vaguely appears similar to a barbecue oven. It is usually placed on the roof, often at a corner of the building. The fire remains at night and is said to protect against wolves and thieves and to have a positive effect on health. In principle, yak and cow patties are considered a long-lasting fuel.

8.5 The use of chiwa *for medicine*

Yak dung also plays a role in Tibetan medicine. In the medical texts translated from India, there is mention of *bamarser* (*ba dmar ser*, yellowish-red cow [dung]). In Tibetan medical texts, it refers to the dung of cattle such as cows and *dzo* (yak-cow hybrids) as *chugki chiwa* (*phyugs kyi lci ba*, domestic animal dung). Although yak dung is not directly mentioned, the texts refer to *bachug dang dzo sogpa* (*ba phyugs dang mdzo sogs pa*, cows, domestic animals, *dzo*, etc.), and the term *sogpa* (etc.) includes yaks and *'bri* (female yak) (Interview Menrampa Dawa 2025).

One medicine in which yak dung is used is *sman mar* (*sman* meaning "medicine"; *mar* meaning "butter"), which is known as a vitamin donor (*stobs skyes sman*, vitamin medicine; *stobs* meaning "strong"; *skyes* meaning "come again" or "come anew"; *sman* (see above). Five ingredients (*ba yi rnam lnga'i sman mar*) are used to make the medicine; *ba* meaning "cow";[20] *rnam lnga* meaning "Five things" [of the cow]; *sman mar* (see above). First, dung including urine are mixed in a bowl, then sieved with a cloth and pieces of wood and hay (etc.) are separated. For sieving, water is mixed and pressed by hand. Then the other ingredients are added and the whole mixture is cooked. This produces a soft porridge from which the medicine is made, which has the consistency of butter (Interview Memba Dawa 2022; Yuthog Yönten Gönpo 2005).

Some texts describe dung as being used in the production of Tibetan medicine. The use of cow dung as a medicine is already found in Dunhuang texts (Sönam Kyi 1983). Another text mentions, for example, the use of cow dung against leprosy (Phaköl 1994–2008). Khyungdrül Jigme Namkha (2013) mentions yak and cow dung as a medicine when arms and legs have become stiff and immobile for

[19] Most incense burners are built on the roof of the house. Otherwise, they are built high up in a corner at any side of the house. It is not customary to install them inside the house.

[20] The Tibetan term for the specified five ingredients *ba yi rnam lnga'i sman mar* is connected to the cow, but our Tibetan interview partners know it in practical connection with yak and *dri*.

some reason. In Deumar Tenzin Phüntsog (1986) describes the medical use of cow dung against poisons and for respiratory problems and as a relief for itchy skin. An important aspect when collecting the dung for medical purpose is keeping the cow dung "clean", and it must not touch the ground when leaving the cow and must be caught beforehand.

8.6 The use of chiwa *for physical and ritual cleaning*

The slurry made of a mixture of cow dung, clay and water applied daily in the morning in rural areas in the far west of Nepal can be seen as a ritual cleaning in a functional context. The dust that accumulates after sweeping is bound to the surface of the floor and walls. After slurring, the surface appears shiny and wet and, when dry, it appears as a homogeneous, intact surface on which one sits and also places the plates and glasses during meals. If something falls off the plate while eating, it is eaten anyway (Fig. 18). In rural areas, especially where an earthen floor is laid in the house, this tradition can still be found today.

The slurring of building facades is also a form of a combination of a ritual cleansing, again in a technical-functional context. Yak/*dri* and bull/cow dung mixed with clay closes cracks on the wall surface and reduces the possibility of water getting into the masonry. This slime layer is open to diffusion and the yak/cow dung content is said to have



Fig. 18 – Preparing food on the floor after cleaning the floor by adding a slurry of cow dung, clay and water; near Hikla village in far western Nepal (© H. Feiglstorfer 2022).

a hydrophobic effect. In India, too, cleaning a building is important at certain times, such as when a religious festival or New Year is approaching (Interview Apna Shakya 2022).

Chödrag Yeshe (2009) mentions the use of cow dung for ritual purification in a general description. The use of yak dung for tanning leather is not a purification process per se, but should nevertheless be mentioned here as a form of refining a material (Tsering Döndrub 2009: 17).

8.7 The use of chiwa *in the process of making clay sculptures*

Yak dung is also used in the production of religious sculptures for ritual purification. There is a ritual for this, called *zungbül laglen* (*gzungs 'bul lag len*), which involves the design and consecration of sacred images (Jamgön Kongdrül Lodrö Thaye 1975–1976: 6A-1). In particular, it is about the opening, usually at the bottom or top of the statue, which allows the cavity inside the statue to be filled with precious goods (Fig. 19). First, after the statue has come out of the workshop, it is cleaned inside. Then it is brushed with *bachung* (*ba byung*) on the inner surface (Interview Ngawang Lodoe 2022). For



Fig. 19 – Clay sculpture, which is hollow has a hole on top of its head where precious goods are filled inside the statue in a workshop in Lhasa (© H. Feiglstorfer 2015).



Fig. 20a – Bachung *from the Dalai Lama temple in Dharamsala (© Ngawang Lodoe 2023).*



Fig. 20b – Bachung *from the Gyumed Dratsang in Lhasa (© Ngawang Lodoe 2023).*

example, a mixture of saffron (*dri bzang*) and water is brushed around the opening and inside the sculpture. Turmeric (as is mentioned in the manuscript)[21] is expensive, it has a pleasant smell and is considered a medicine in Tibet. After brushing it over, a religious ritual is performed. When this ritual is completed, the sculpture is filled with text scrolls with mantras (*gzungs 'bul*; *gzungs* meaning "mantra scroll"; *'bul* meaning "to give", or "to make") together with valuable things, such as silver, gold or medicine. These objects are called *rinchen nanga* (*rin chen sna lnga*, *rin chen* meaning "precious (things)", *sna lnga* meaning "five different", for example, gold, silver, turquoise, coral, and pearl) (Interview Ngawang Lodoe 2022).

Saffron (*dri bzang*) and yak dung can also be applied as a mixture. Turmeric is mixed with water and the mixture turns yellow. Then balls made of yak dung are added to this watery mixture. These balls are called *bachung* (*ba byung*; ba meaning "cow", *byung* meaning "it comes", literally meaning that "what comes from the cow" (Interview Ngawang Lodoe 2022). *Bachung* is composed of five products from the cow: cow dung, milk, yoghurt, butter and cow urine, and it is mostly animals from farmers that are

[21] Refering to the manuscript by Jamgön Kongdrül Lodrö Thaye 1975–1976: 6A-1.



Fig. 20c – Bachung *from Drebung monastery in Tibet (© Ngawang Lodoe 2023).*

used for this purpose, which is why the cow is predominantly referred to in this context (Fig. 20a–c).

These photographs show *bachung*, each containing the five products, but produced at different places and looking different in colour and form. Before using the cow products, the cow is observed and let out to those meadows where it can eat very clean food, at certain places that the farmers know. In this way, the cow consumes medicinal herbs. For further use of the dung, it must be clean. Both dung and urine are used. This tradition is known in the Tibetan cultural area, but its origin is probably India (hypothesis) (Interview Ngawang Lodoe 2022).

After that, precious goods such as jewellery and mantra/tantra texts are added to the sculpture. For larger sculptures and *chörten* (*mchod rten*, form of a stupa in Tibetan culture), *tsatsa* (*tsha tsha*, votive tablets) or religious texts such as Kangyur and Tangyur are also placed in the hollow space inside the sculpture (Interview Ngawang Lodoe 2022). The meaning of turmeric water for ritual cleaning is also incorporated in the use of a mixture of turmeric water, *tsenden* (*tsan dan*, sandalwood water) and yak dung, which is sprayed beforehand to clean the place where a new *tsatsa* is to be placed (ibid.).

8.8 The use of chiwa *to make ink*

To make ink from *chiwa*, dry *serkam* is burned until it turns red, then placed in water. After removing it from the water, a small amount of dried dough that has been burned and then put in water is added. This mixture is then ground in a mortar. This process results in a very good, dark black ink (Könchog Tenzin, Thinley Gyaltsen and Pema Yudön 2010).

9. Conclusion

The relationship between yak dung and its environment is diverse and has been shaped by the coexistence of humans and yak for an indeterminate period of time. Different factors for the interplay between dung and humans, but also in the material interaction of dung and the materiality of objects, give a vivid overall picture of dung in a cultural context. On the one hand, a utilitarian need for yak dung is obvious, for example, as fuel, as a toy or as medicine. On the other hand, yak dung appears as a cultic object, for example as a good luck charm, whereby it is accorded a certain esteem like water, salt or other basic necessities of life. In addition to the thing-human relationship, there is also the thing-thing relationship, for example in the interplay of dung with clay and water as a building material, of dung mixed with tobacco as a snuff material or of dung mixed with turmeric as a material for symbolic purification.

Yak dung may lie in the pasture or stable as a single object, but it is not isolated in its utilitarian and symbolic context, but anchored in different contexts. We can see the yak patty as a single thing, but especially as part of an interaction in a particular cultural context. The patty itself, however, is a single product, and its production is carried out by animals, a process that can only be slightly controlled by humans, for example through the care of the animals. In the case of yak dung or yak patties, we are talking about anonymous things, with a primary reference through vernacular and non-elite use. The use is manifold, with the use as fire material being by far the most widespread and life-sustaining use in the culture of the Tibetan nomads.

The knowledge about the use of yak dung brings out its meaning in a particular utilitarian and habitual context. It is particularly tradition that stores the knowledge about its use. The use as medicine or as a purifying element on religious objects is written down in Tibetan texts, not primarily to document the use of yak dung per se, but the materiality of an object that is of particular representative importance to society, particularly the use as a medicine or as a sculpture, which implicates the mentioning of dung. In the case of vernacular uses, such as for a facade plaster or for the construction of a dog kennel, the path of oblivion of local knowledge seems to be more obvious. In this context, ethnographic documentation creates a bridge of remembrance even after a tradition has dried up. Nevertheless, memory is linked to certain distinctive characteristics of the material or to certain behaviours, but remains decoupled from the intrinsic quality of the moment of an everyday process.

The use of dung is not directed towards preservation but implies decay and disappearance. Forgetness (see Hodder 2012: 6f.) of yak dung in the construction is affected by a loss of tradition. It becomes obvious to those who are shifting outside the particular community of tradition, and it may remain invisible and difficult to perceive in its overall context for following generations.

As yak patty as such being an object among thousands of similar patties, its particular properties and related uses make it belong to classes of things, such as the class used for making fire, used for medicine or for wall plaster. To speak of classes requires a classification of properties according to use. In the ten types of *chiwa*, such a classification is made, which could even be further refined. Use and reuse, particularly in the context of an economic cycle, a reduction of material input and a long-term use, play a fundamental role in the use of yak patties in nomads' culture. The lack of firewood or other alternatives of fuel is one reason for the dependence of the Tibetan nomads on the yak, which as such are in a domesticated form in a living community with the nomads. Dung is besides a variety of products originating from the yak/*dri* and a part of an extensive production and utilisation chain that shapes the socioeconomic connection between humans and yak.

In an ecological context, the yak patty is a product resulting from the digestion process of the pasture grass. It gets eaten, digested, excreted and in a next step it acts as fertiliser for further grass. As an intermediate stage, the yak dung can be burnt as fire material and the resulting ash is again used for various purposes, as a snuff, on wounds, etc. When used as masonry or as plaster, it weathers after some time and may be taken off and placed on the pasture where it becomes part of the soil again. As medicine, it is ingested by people and excreted by them, again becoming part of an ecological circle.

Certain properties of yak patties enable certain uses, which in turn are based on craft developments and skills. Their use embodies knowledge and influence particular human behaviour. Yak patties have different lifespans depending on how they are processed and used. In buildings, it is used for wall plastering and prolongs the life of the wall. On the other hand, this plaster is also applied to yak patty walls, again to prolong the life of patties. As a medicine or for ritual cleansing, its lifespan is tied to the particular use. As fuel, it can be used for a long time, but loses its good burning properties after some time. Old masonry can also only be used as fuel to a limited extent, which means that its own temporality depends on the respective use and that the yak patty per se does not have a generally equal useful life.

Symbolic meaning of the material and functional are closely related to each other. Processing and use are part of the meaning of the dung

in everyday life – a meaning, which may be subject of processes of change. The use of a bed, for example, made of yak dung as an ideal lying surface during childbirth changes with certain social changes, for example, when nomads abandon their sedentariness and move to the city. Changes in the life cycle are reflected in changes in meaning.

An operational chain is fixed in traditional processing procedures. Times and use of processing follow social practices, a gender-specific division of labour and the needs of everyday life, for cleaning, cooking, healing or for symbolic-ritual practices. Yak patties are a basis of nomad's life, particularly as heating material, although the reduction to this utilitarian use seems to be a reductionist simplified approach, since the yak patty would not exist without yak and the latter contributes in various ways to the survival of Tibetan nomads. In this context the existence of a patty in Tibetan nomads' areas implicates the existence of a yak. Yak patty enables a particular use but does not constrain versus environmental preconditions, while the latter are according to their nature, an enablement and a constraint at the same time of humans' life and the yak patty allows to bridge this dualism.

Yak patties are a type of thing whose affordance, especially for nomads, is not in a dominant extent linked to money but to their animals and to their time and effort. This is different, e.g., for those whose living is not based on a subsistence economy like city dwellers who may not have the animals and time to collect yak patties and who are relying on their availability for heating their houses. They buy yak patties and a certain trade on this basis is started.

There must be a continuous supply chain of yak patties to maintain the cooking facilities for nomads. This supply chain must not be interrupted, which is ensured by appropriate collecting and storing. The stockpiling of patties in the form of stacks in turn represents a visual marker of, for example, places of dwelling, the size of the household's economy, and of a certain social status.

If we look at certain things, like the children's toboggan, it is purely made of yak dung. Other things, such as sculptures are made of other basic materials, for example clay, and, as in the case of statues, they are smeared with dung for ritual purification. The latter thus becomes a part of the statue, whose totality for the user in a spiritual sense is only given after the process of consecration, which again would not be possible without the yak dung for ritual purification before consecration.

The relationships between yak dung and its material and immaterial environment are numerous and of different kinds – ecological, economic, technical, medical or social. We may categorically differentiate between these different relationship patterns, for example ecological as the relationship of yak dung with its natural environment or as a renewable resource, as economic through its integration into a local

and trans-regional economic structure, for example through the sale of yak dung, or technically through its processability into children's sledges or its use as a building material. An essential part in the linking of the meanings can be called the social relationship component, which ultimately connects the individual components in different ways, in everyday life as well as through customs and rituals.

The examples of embedding yak dung in Tibetan culture show a tendency to optimise various parameters relevant to the circular economy. With reference to characteristic properties according to Kirchherr, Reike and Hekkert (2017: 229), parameters such as "reducing" the use of raw materials when using yak dung become evident, for example as a heating material or as a building material, or "recycling" or "upcycling" when using it as a children's toy. Processes of "reducing", "reusing", "recycling" and "upcycling" can be found in the extraction of raw materials, in the production of various everyday objects or in frugal, sufficiency-oriented consumption.

In this context, the energy efficiency of yak dung as a heating material and the expected release of greenhouse gases into the atmosphere should be questioned. Compared to wood (approx. 4 to 4.4 kWh/kg; see: Holzquelle) or gas (L-gas 8.4 to 11.2 kWh/m3 and H-gas 10 to 13.1 kWh/m3; see Bundesagentur 2024), the heating energy value of cow dung is at 3,066 Kcal/kg (Anwar et al. 2024: 4).[22] Although the methane emissions from yak manure are lower than those from cow manure (Weiwei Wang et al. 2024: 1), this should not obscure the fact that these greenhouse gas emissions exist. The emission of nitrous oxide (N_2O) and methane (CH_4) from yak dung is a major issue in terms of greenhouse-induced climate change, which affects both Tibetan nomadic and farming culture. In certain regions of Tibet, for example in Damzhung (Feiglstorfer, Pfeifer and Drongshar 2024), yaks and their excrements are an essential part of the existence of the nomadic culture. An intervention in the yak population, as well as the use of animal dung for the production of biogas, which would be more efficient in terms of energy yield considering the relatively low calorific value of yak dung, would require a socio-economic restructuring that would possibly jeopardize the existence of affected nomadic cultures.

The potential outcomes or goals of a circular economy process mentioned by Kirchherr, Reike and Hekkert (2017: 229), such as "creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations", can be confirmed for the most part, but not unconditionally, with yak dung

[22] Due to data availability, for this comparison data for cow dung were used. Conversion factor from kWh to kcal used: 1 kWh = 860 kcal; 1 kcal = 0.001163 kWh; 3,066 kcal/kg (see Anwar 2024) x 0.001163 = 3.566 kWh/kg.

in Tibet. Environmental quality, for example, can be found in yak dung with the least possible interference in the natural environment, with the most sufficient use of the natural raw material and the possibility of returning the raw material to the natural environment, for example as fertilizer or as ashes after being burnt in the oven.

One of the main advantages of a circular economic process could be to limit the extraction of resources from the natural environment to such an extent that the amount available as a raw material is not exceeded and thus a livelihood is found in everyday life. A non-disproportionate exploitation of renewable resources and non-damage to the natural environment could already be interpreted as essential intergenerational benefits of a circular economic process. Accordingly, as a socioeconomic dynamic in the everyday use of raw materials, the available quantity of yak dung is portioned in the nomadic and farming culture of Tibet.

In connection with the use of yak dung in Tibetan nomadic and farming culture, economic prosperity might lead to a dichotomous view as soon as economic prosperity depends on economic growth. Economic prosperity, which goes beyond subsistence farming, is based on production and trade that goes beyond subsistence needs. Yak dung plays a role here when it comes to the production of yak cheese, for example, where dung is used as fuel to heat the milk. The sale of yak dung is also linked to trade, whereby the resulting sales volume is generally limited by the availability of yak dung used for own consumption. If economic prosperity is categorised in the context of the utilisation of surplus yak dung from nomadic and peasant life, this additional income might contribute to economic prosperity, provided that economic prosperity is not seen as the result of economic growth.

Yak dung is involved in various everyday activities, customs and rituals and can contribute directly and indirectly to social equity. As a symbol of good luck, for example, dung is important across different social classes, as is its use as medicine, as a building material or as fuel. Apart from these values anchored in traditional Tibetan culture, dung is a medium through which social inequalities can be communicated and differences in social status can be conveyed, for example as fuel for ordinary people. Socially representative factors of modernisation in the context of rural-urban, of different income strata or of social status are reflected in the use or non-use of yak dung. Consequently, use, trade or consumption of yak dung are not necessarily linked to social equity. Rather, this circumstance is dependent on a contextualist exchange with the associated socioeconomic as well as natural environment dynamics.

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Interview partner

Information Tsering Drongshar: Tsering Drongshar is specialised on Buddhist philosophy and is a native Tibetan speaker. He grew up in Lhoka, was monk in Tibet, and studied Buddhist philosophy, literature and history in India and lives today in Austria.

Interview Apna Shakya (2022): Interview conducted by Tsering Drongshar with Apna Shakya in September 2022. Apna Shakya is originally from India and today he lives as a monk in the Palbung Sherabling Monastery in Bir in India.

Interview Bhatar 2022: Interview conducted by Tsering Drongshar with Bhatar Tsering Wangdü in November 2022. Bhatar Tsering Wangdü (sBa thar tshe ring dbang 'dus) grew up in a Damzhung nomadic community. He migrated to Austria as an adult and acted as the main informant concerning Damzhung for the present research.

Interview Chen Sögyam 2023: Interview conducted by Tsering Drongshar with Chen Sögyam (gChan bzod rgyam) in April 2023. Chen Sögyam is originally from Amdo and now lives in Dharamsala where he is working as a scientist at the Hindu University in Varanasi.

Interview Damchö Pälsang 2023: Interview conducted by Tsering Drongshar with Damchö Pälsang (Dam chos lPal bzang) in April 2023. Damchö Pälsang is originally from Amdo and now lives as a monk in Dharamsala, where he worked in the Tibetan Library. He is the author of several books.

Interview Memba Dawa 2022: Interview conducted by Tsering Drongshar with Memba Dawa in September 2022. Memba lives in Himachal Pradesh in the sMan rtsis khang where he is doctor for Tibetan medicine.

Interview Menrampa Dawa (sMan rams pa zla ba) 2025: Interview conducted by Tsering Drongshar with Menrampa Dawa in May 2025. Menrampa Dawa lives in India where he is doctor for Tibetan medicine.

Interview Ngawang Lodoe 2022: Interview conducted by Tsering Drongshar with Ngawang Lodoe in April 2022. Ngawang Lodoe lives in Vienna today. Before, he was a monk in the Namgyal Monastery in Dharamsala.

Interview Pema Tashi 2022: Interview conducted by Tsering Drongshar with Pema Tashi (Pad ma bKra shis) in November 2022. Pema Tashi lives in Lhokha where he is working as a tourist guide.

Interview Phubu Tsering 2023: Interview conducted by Tsering Drongshar with Phubu Tsering. Phubu Tsering is originally from Tibet and now lives in India.

Interview Tashi 2023: Interview conducted by Tsering Drongshar with Tashi (bKra shis) in August 2023. Tashi is originally from Lhoka and now lives in Lhasa where he is a tailor.

Interview Tashi Wanggrag 2022: Interview conducted by Tsering Drongshar with Tashi Wanggrag (bKra shis dBang grags) in November 2022. Tashi Wanggrag is originally from Yamdrog (Lhoka Prefecture) in Tibet and now lives in Australia. He used to be a farmer and is now about 60 years old.

Interview Trasang 2023: Interview conducted by Tsering Drongshar with Trasang in April 2023. Trasang lives in Lhoka where she is a farmer.

Interview Tsangdrub Toblag 2023: Interview conducted by Tsering Drongshar with Tsangdrug Toblag (gTsang 'phrug stobs lags) in March 2023. Tsangdrub Toblag is originally from Tsang in Tibet and now lives in Dharamsala where he is working as a teacher, lecturer and researcher.