



International
Rangeland
Congress

Pastoralism and Rangelands:
People and Institutions
a Glossary of Terms

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Introduction

The aim of this glossary is to provide guidance for understanding socio-institutional terms – i.e. about people and their institutions – commonly used when talking and writing about rangelands and pastoralists. It is intended to reduce confusion and misinterpretation of expressions used by researchers and advisory service staff, by policymakers and politicians, by people in governmental and nongovernmental organisations, by pastoralists and their organisations, by teachers and students in universities and colleges, as well as by journalists, filmmakers and other storytellers around the world who are working in the English language – often not their mother tongue. Such a glossary is particularly important as a reference in preparation for the International Year of Rangelands and Pastoralists (IYRP) proclaimed by the United Nations to be celebrated in 2026.

Pastoralists gain their livelihoods within very complex systems of resource tenure and use. It is of utmost importance that their rights of access to the natural resources needed for raising livestock be understood worldwide. This is why this glossary gives particular attention to issues of resource tenure and rights. All pastoralists depend on their relationships with non-pastoralists, e.g. to trade or market their products, to gain access to seasonal grazing and water in crop-farming areas, to negotiate resource use with other rangeland users and to negotiate regulations that affect their livelihoods. The glossary tries to shed light on these social relationships. The contexts in which pastoralists operate are changing with increasing climate variability, additional demands on the use of land and its above-ground and below-ground resources – and often also strong political pressures on mobile peoples. These changes will mean that new relationships and institutions and therefore new terms will emerge and the meaning of existing terms may evolve. We therefore regard this glossary as reflecting an understanding of these terms in a moment in time.

We bring out Version 1 of the glossary now, more than a year before the IYRP commences, in the hopes that – in the run-up to the Year – this will stimulate reflection and discussion about the use of these terms and thus generate better understanding. We invite readers to comment on the definitions in this glossary; contact the Glossary Team (glossary.iyrp2026@gmail.com), who will give you the link to the online platform for proposing changes. Version 2 will be published in January 2026, the first month of the IYRP, focussed on “What are rangelands? Who are pastoralists?”.

Selection of terms and definitions

We deliberately developed this glossary to complement existing glossaries focused on rangelands, above all, the terminology for grazing lands and grazing animals by Vivien Allen and her colleagues (Allen *et al.* 2011). Their work covers numerous technical terms related to rangelands, including grasslands, but very few terms related to people and institutions in the rangelands. Our glossary also complements the definitions of technical rangeland terms maintained by the Rangelands Gateway (<https://rangelandsgateway.org/glossary>), largely based on the glossary developed by the American Society for Range Management in 1964 and periodically revised (see 4th edition, 1998), before it was placed fully online. On the rare occasions when – for the overall understanding of the reader – we have included a technical term (e.g. “rangelands”), we referred only to the definitions already given in these other glossaries and did not expand on the terms in this glossary.

The current glossary of socio-institutional terms was inspired by the collection of key concepts about people and policy in the rangelands coordinated by Irene Bain, then with Ford Foundation (IGC/IRC 2008) – an excellent collection that is unfortunately not available online. It also draws on other existing glossaries of terms related to agriculture and land such as the ABC of Land Tenure brought out by FAO (2021) and the FAO terminology portal (www.fao.org/faoterm/terminology-at-fao/en/), although these two are not focused on rangelands and pastoralists.

The terms included in our glossary are those that are commonly used in international English, when referring to rangelands and pastoralists in most continents and countries in the world. Terms specific to particular countries or regions are best included in national or regional glossaries – ideally, in the languages spoken in those regions. Such glossaries will hopefully be developed by regional entities such as the Regional IYRP Support Groups (RISGs), and more detailed glossaries on specific themes may be developed by the IYRP thematic Working Groups.

Where a term is included that is used more widely than only in connection with rangelands and pastoralists, we added to the basic definition an explanation of the term's connection with rangelands and/or pastoralists. We did not include more general sociological terms that are not specific to people of the rangelands, such as "gender", "power relationships" or "nested institutions", nor did we include terms that are not specific to the rangelands even though they could be applied in this context, e.g. "ecotourism".

Although we tried to be as objective as possible, the definitions in this glossary are doubtless influenced by the perspectives of the members of the core glossary team, who come from Australia, Canada, Kenya, Mongolia, Norway and the USA, and also because this work is in the English language – which already suggests a Western bias. However, the team members have lived and worked in the rangelands of many other countries than their native ones. They have been active in governmental, non-governmental and international organisations, and have links to academia, which proved useful in learning how terms are used in different contexts and types of institutions. The glossary was peer-reviewed by a wider group of people from several countries in Africa, Asia, Australia, Europe and North America who have worked closely with pastoralists in research and development.

On the whole, we have given descriptive rather than prescriptive definitions, i.e. we have tried to capture how the terms are currently being used rather than how they should be used. Related terms are included within a definition to show the diversity of terms with similar meanings and, in some cases, we point to differences in use between countries or continents. We also sometimes give examples with the definitions, usually based on the lived experience of the core team members or reviewers. In the definitions, we draw attention to some problematic terms and highlight the need for their careful use. One example is the word "nomad", which is used by some people who proudly call themselves nomads, but is sometimes used by others in a derogatory sense.

Format of the glossary

The format of this socio-institutional glossary is similar to that of the technical glossary by Allen *et al.* (2011) to make it possible to combine the two lists in future. We have arranged the terms in **clusters** according to key aspects of local people's use of the rangelands, how they manage resources to gain their livelihood and how they organise themselves to this end. The seven clusters are:

1. People
2. Land tenure
3. Rights to resources
4. Social organisation
5. Land use and management
6. Labour management
7. Mobility management

Within each cluster, the terms are not in alphabetical order, as is often found in printed glossaries, because we have designed this glossary to be used in digital form and online, where specific terms can easily be found using a Search function. However, on the following page, we list all the defined terms in the glossary in alphabetical order and indicate the page where the definition of each term can be found.

Five boxes are used to explain in more detail some general terms that may not be specific to pastoralists and rangelands but are important for understanding how pastoralists and pastoralism relate to these broader concepts. These terms are: "Indigenous peoples", "Traditional knowledge", "Land tenure", "Ecosystem services" and "Mobility".

References are included in the text only where we quoted the definition directly word for word. In most cases, we formulated the definitions after considering several definitions in the literature plus our own understanding of the terms. The key literature to which we referred in this process is included in the list of references at the end of this glossary.

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We give tribute to the late Jim O'Rourke, the first chair of the IYRP International Support Group, who was involved already in the preparation of the IGC/IRC (2008) glossary and encouraged us to develop this more comprehensive glossary of socio-institutional terms for the IYRP2026.

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Pastoralism and rangelands: people and institutions – a glossary of terms

1. People

<p>Pastoralists</p>	<p>People who gain their livelihoods primarily from livestock (domesticated and semi-domesticated animals) that graze predominantly on natural or semi-natural rangelands including grasslands. The size of pastoralists' herds, their management strategies (such as mobility) and forms of land tenure vary considerably. Pastoralists live in highly variable environments (e.g. arid, mountainous, tundra), an activity that requires considerable knowledge, skills and social organisation. Pastoral mobility takes advantage of variability. Movements can be for many reasons, e.g. climatic and/or seasonal conditions, access to markets, attending festivities, minimising risk of diseases, avoiding conflict. Not all pastoralists follow a mobile lifestyle; they may move their animals without moving their families; in some countries, they move their animals between and within large, fenced areas.</p> <p>The livestock species kept by pastoralists include usually local breeds of buffalo, bison, cattle, camels, donkeys, ducks, goats, horses, llamas, reindeer, sheep and yak, among others. The livestock produce milk, meat, fibre, manure and other products and services. Pastoralists depend on their livestock for cultural, social and economic continuity.</p>
<p>Mobile indigenous peoples</p>	<p>Mobile indigenous peoples, such as pastoralists, hunter-gatherers, shifting farmers and mobile fishers, are a subset of indigenous peoples whose livelihoods depend on common property use of natural resources and whose mobility is both a management strategy for sustainable resource use and conservation and a distinctive source of cultural identity (WAMIP 2007). However, not all mobile pastoralists regard themselves as indigenous peoples.</p> <p>The core elements of pastoral governance – including territory, collective identity, and customary institutions, leadership and law – are protected under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP 2007). UNDRIP Articles 25–30 directly recognise their collective rights to land, territory and natural resources for mobile livelihoods.</p>
<p>Ranchers</p>	<p>People who raise livestock as a commercial enterprise as their primary source of livelihood. The land may be fenced, and livestock may be moved from one fenced area to another. Usually, the people do not stay with the animals. This term can refer to the owner or the manager of a ranch. The common Australian term for this is “graziers”, referring to owners of stations or properties (Australian for ranches), although the terms “producers” (in eastern Australia) and “pastoralists” (in northern and western Australia) are also used. These terms refer to both family-owned and -operated properties and corporate-owned properties run by managers.</p>
<p>Transhumant pastoralists</p>	<p>People who move herds of livestock between seasonal pastures, either horizontally (from one climatic zone to another, e.g. between semiarid and subhumid areas) or vertically (from one altitude to another, i.e. between highland and lowland areas). The herders may be the livestock owners or may be hired herders or village herders who care for animals belonging to several families.</p>
<p>Agropastoralists</p>	<p>People who gain their livelihood primarily from both growing arable crops (agronomy) and grazing livestock (pastoralism). They typically have at least one permanent residence where they practise cropping and keep at least some of their livestock but may have also one or more other settlements used during seasonal transhumance with their livestock.</p>

Absentee pastoralists	Livestock owners who manage their grazing animals from a distance (often from urban areas) as their primary source of income. The animals are usually in the care of family members, neighbours, hired herders or hired managers. Absentee pastoralists may or may not be pastoralist in origin. The term “absentee herd owners” is used when the herds are not the owners’ primary source of income.
Ethnic pastoralists	People who come from an ethnic group that traditionally practised or practises pastoralism, do not derive their livelihood primarily from grazing livestock but still identify themselves as pastoralists.
Nomadic pastoralists	Members of a community of people who move with their livestock in a well-defined territory that they regard as “home” but have no fixed residence. Movement is usually seasonal and often follows traditional migration routes; the pastoralists decide about timing and direction of movement according to the state of pasture or food supply. The term is sometimes used in a negative sense by those who regard nomads as wandering aimlessly and who do not appreciate nomads’ skills and flexibility in deriving a livelihood from making use of variability.
Hunter-gatherers	People who rely primarily on hunting wild animals, fishing and foraging for wild plants and invertebrates for their subsistence, in contrast to people who grow crops or people who raise domesticated livestock, e.g. pastoralists. Hunter-gatherers may be nomadic.
Peasants	Rural men and women who produce food or other agricultural products; they are primarily subsistence farmers/gatherers/pastoralists with limited market engagement. They care for local landscapes and are embedded in their local communities. Peasants rely mainly on family labour and reciprocal group labour within the community. The term can be applied to all people engaged in small-scale cropping, livestock-keeping, hunting or gathering, and includes indigenous peoples, pastoralists and the landless, i.e. farm labourers and non-farming people in rural areas engaged in artisanal fishery, handicrafts or service provision.
Farmers	People who own or operate an agricultural enterprise, either commercially or to sustain their families. Farmers include peasants, indigenous peoples, traditional communities, fishers, mountain farmers, forest users and pastoralists. In family farming, family members are the main source of labour (FAO & IFAD 2019). Crop farmers have crops as their primary source of livelihood; livestock farmers have domestic animals as their primary source of livelihood. Crop farmers may have animals, and livestock farmers may grow crops for consumption by humans or animals. The term “livestock farmers” often refers to sedentary producers, while the term “pastoralists” suggests greater mobility of the livestock and people.

Box A: Indigenous peoples (IPs)

Communities and nations who self-identify as indigenous, i.e. related to the earliest known people in a given area. IPs have a collective identity and a distinct culture, knowledge, language, religion and traditions. Their identity and culture are closely entwined with their natural environment; their traditional knowledge reflects and embodies a spiritual relationship with this environment. Their traditional livelihoods rely on the natural resources in their territory. They may be settled in a certain place, or may be mobile across the territory.

IPs are usually descended from the pre-colonial or pre-invasion populations of a territory. However, dominant societies may also descend from indigenous populations. The term is often used to refer to minority and marginalised populations whose social, cultural and political characteristics differ from those of the dominant societies in which they live. As minority populations, indigenous peoples are vulnerable to discrimination, dispossession and inequitable access to resources, services and decision-making.

Globally, there is increasing recognition of IPs' rights. An important milestone was the International Labour Organization (ILO) Convention 169 on the Rights of Indigenous and Tribal Peoples (1989), which recognises IPs' rights to exercise control over their own development and to participate in decision-making processes that affect their lives. Yet by 2024, only 24 countries have ratified the Convention.

Many, but not all, IPs are pastoralists, and not all pastoralists identify themselves as indigenous. Some pastoralist groups may do so for political purposes, e.g. to engage in international organisations and agreements supporting IPs (Hodgson 2011). No single definition of IPs has been agreed upon by all countries in the world, but the term is popular in international fora, notably those of the United Nations. Some international organisations and governments use other English terms instead of "IPs" on account of historical and political considerations, e.g.:

- indigenous minorities (e.g. Europe, Africa, Asia)
- indigenous small-numbered peoples (Russia)
- ethnic minorities (e.g. China, Vietnam)
- native peoples (e.g. North America)
- Aboriginal peoples (e.g. Australia)
- First Nations (e.g. Canada)
- tribal peoples (e.g. India).

Box B: Traditional knowledge

A cumulative body of knowledge, practice and belief about the relationship of humans, other living beings and their environment generated through cultural practices and lived experiences, informed by specific worldviews and handed down through generations. A substantial proportion of this knowledge is tacit, i.e. is understood without being expressed directly, and is learned through practice. Pastoralists who have long-term association with specific territories and the other people living there are likely to have extensive traditional knowledge. Traditional knowledge (TK) is sometimes referred to as indigenous knowledge (IK), indigenous technical knowledge (ITK), local indigenous knowledge and technology (LIKT) or traditional ecological knowledge (TEK).

2. Land tenure

Box C: Land tenure

The relationships, whether defined by statutory or customary law, of people as individuals or groups with land and associated natural resources. Rules of tenure define how land-use arrangements or rights are allocated within a society: how persons or groups are allowed to use specific pieces of land and associated resources (e.g. water, grass, trees) in a certain period of time for particular purposes and under what conditions (FAO 2003). In addition to rights of use, land tenure can include control rights that allow the holder(s) to manage, make decisions, transform and ban the use of the land by others. The table below shows the relationship between land-tenure types (vertical axis) and different types of rights of access and use (horizontal axis).

Tenure is not synonymous with *land ownership* and does not include the right to sell the land. In the 21st century, the prevailing types of land tenure are private land, state land, common land and open access. Some countries have many more land-tenure types. In some pastoral systems, a complex mosaic regime may provide a better explanation of land tenure (Robinson 2019).

LAND-TENURE TYPES	TYPES OF RIGHTS TO ACCESS AND USE					
	Access	Traverse	Manage	Extract	Exclude	Alienate (sell/give)
Private	✓	✓	✓	✓	✓	✓
State	✓	✓	✓	✓	✓	✓
Common	✓	✓	✓	<i>sometimes</i>	<i>sometimes</i>	<i>no</i>
Complex mosaic regime	✓	✓	✓	<i>sometimes</i>	<i>no</i>	<i>no</i>
Open access	No rules, rights or enforcement; everyone can exploit the resource as they wish.					

Customary tenure	<p>Set of rules and norms that govern community allocation, use, access to and transfer of land and other natural resources, usually associated with indigenous communities and administered in accordance with local community customs. They are usually not written down, but have gained social legitimacy over time (FAO 2002) from local traditional or historical practice. Customary tenure is sometimes known as “indigenous tenure” (Alden Wily 2011).</p> <p>In customary tenure systems in rangelands, groups of pastoralists have collective use rights to pastures and forests; pastoralists and crop farmers may have exclusive rights to parcels of land for specific use, such as residence and cultivation. Some countries now give statutory (legal) status to land with customary tenure (Alden Wily 2018), which may exclude some users who formally had traditional rights in that area.</p>
Statutory tenure	<p>Set of regulations and norms of tenure derived from and maintained by the State according to State law. Statutory law governs formally titled/registered properties. Statutory or de jure tenure may diverge from de facto tenure, i.e. legally recognised tenure may diverge from what is actually practised in reality.</p>
Legal pluralism	<p>The coexistence and interaction of multiple legal orders within a social setting or domain of social life (Meinzen-Dick & Pradhan 2002). This concept recognises that statutory and customary tenure systems may exist side by side or be intertwined as a complex mix, a situation often found in areas used by pastoralists.</p>
Tenure	<p>A situation in which several parties have different rights to the same parcel of land,</p>

overlap	e.g. one party may have lease rights, another passage rights and another rights of usufruct, e.g. to harvest trees on the land. Pastoral tenure systems are often a complex mix of different kinds of overlapping private and group rights – including rights of use, management, exclusion etc. – that are held by different and often fuzzily defined groups, rather than being purely private, state or common property.
Open property regime	A governance system in which norms and rules explicitly establish that everyone has equal rights to access the resources as and when needed, e.g. all livestock owners have equal rights to forage resources. In pastoralism, open property regimes function as complex adaptive systems in which independent decision-making by highly mobile households results in an efficient distribution of the grazing pressure over available resources (Moritz 2016). Many customary pastoral systems operate according to some form of open property regime, allowing regulated access to forage, water and markets, i.e. they are not “open access”.
Open access	In rangelands, a situation in which there are no rules governing the access and use of land or other resource. This may occur where customary laws have broken down, e.g. because of colonialism. Open access can lead to the “tragedy of the commons”: the idea that, if many people enjoy unfettered access to a finite valuable resource, they will tend to overuse it and may destroy its value altogether.
Complex mosaic regime / tenure	Property rights over different pastoral resources have a gradation in strengths and clarity of rights, and rights are often unbundled and allocated among various institutions and governance actors. Social processes and governance mechanisms, but not property rights, play a prominent role in land and resource governance. Complex mosaics better describe some pastoral systems than conventional commons or open property regimes (Robinson 2019).
Land registration / certification	Official recording of legally recognised interests in land in a public register, including information on location, rights and their holders. This may refer to freehold or leasehold land, including cases in which the government is the keeper of all land and title records, and a land title serves as a certificate of full ownership. Some pastoralist groups are registering land in order to secure their customary rights to it, including corridors for moving livestock from one place to another.
Common property resources	Resources (e.g. land, water) collectively owned by all members of a community or group who share the right to use the resources and are equally responsible for maintaining them. The community or group controls the use of the resources and can exclude non-members from using them. It governs the resources by making rules and arrangements for their enforcement. The term “commons” is widely used to describe land held as common property. Mobile pastoral systems often operate on such common land.
Common pool resources (CPRs)	Natural or human-made resource systems in which exclusion of potential beneficiaries is difficult but not impossible and exploitation by one user may reduce resource availability for others. Typical CPRs include large areas of land (e.g. rangeland), water (e.g. lake, river, ocean, groundwater basin), forest and migratory wildlife as well as irrigation systems. Without regulation, the system can become open access.
Common pasture	Area where there is a reciprocal customary right to graze held by two or more communities; also applies to seasonal pastures used by mobile herders, including harvested, unfenced cropland until a new crop is sown.
Home grazing territory	Geographic area in which (agro)pastoralists reside for part of the year and to which they return after transhumance. In West Africa, this is a legally defined area, e.g. Niger’s Rural Code refers to the “ <i>terroir d’attache</i> ”, an area where mobile pastoralists may maintain part of their families and livestock and have access to animal watering points, pasture and cropland. In some areas, colonial administrations introduced this concept. Several user groups may have non-exclusive rights to the territory and may need to negotiate with each other about access to the resources.
Grazing	Clearly defined area of rangeland designated by government for use by pastoral

reserve	herds and intended to be a focus of livestock development. The herd owners usually do not have statutory rights to the land. Some governments set up grazing reserves to protect grazing land from cropping and may offer security of land tenure and access to permanent water as inducements for mobile pastoralists to settle. To be distinguished from “reserved pasture/grazing”.
Reserved pasture / grazing	Rangeland areas that are reserved for grazing during specific periods, such as extreme dry seasons or harsh winters, when ice and hard snow restrict grazing, and are regulated by traditional or local institutions. Access to forage and water in these areas is allowed only when they are opened up for grazing, which is regulated during the open period. Extreme dry-season (drought) reserves usually have better water availability than other rangeland areas and are crucial elements of the entire mobile pastoral system. Reserved pastures differ from seasonal grazing areas in that they are not used regularly every year. In recent decades, some reserved pastures have been lost because of acquisition by other groups, encroachment by other activities or interventions to settle pastoralists in rangeland areas with better water availability.
Private land	Land owned by an individual, family or group, or a corporate body such as a commercial entity or non-profit organisation. In rangelands, privatisation of land has often disrupted customary systems and led to less adaptable use of land in increasingly variable climatic conditions.
State land	Land owned by the national, regional or local government, often assigned to an authority in the public sector. Rangelands are often seen as state land by national governments. However, many traditional users and inhabitants still have customary institutions to manage the land. This is an example of tenure overlap.
Communal land	Land used and managed by a self-defined and identifiable group of people according to rules agreed by the group, which collectively controls a bundle of rights to the land and can decide whether or not to exclude non-members from using it, e.g. for grazing or watering livestock. Rights to communal land are often passed on by birth or marriage. Individual members of the group may or may not have the right to transfer their rights to others outside of the family.
Conservation area	An area where rules limit what can and cannot be done with the natural resources. Conservation areas may be designated by a local community or by a government or created by a private entity or NGO. The aim is to protect the area, its environmental features, plant and animal species, and sometimes cultural and historical features. Also known as “protected areas”. The International Union for Conservation of Nature (IUCN) designates seven categories of protected areas (Day <i>et al.</i> 2019) with different layers of protection and objectives. Some categories limit “human disturbance”, which excludes use by pastoralist communities. Other categories permit some traditional management practices; thus, many pastoralists can still graze livestock there under certain regulations.
Community protected area	An area set aside by a community that holds common property rights for the specific purposes of conserving biodiversity and other values, and sustainably managing natural resources. The community often integrates wildlife conservation and livestock management, with tourism as the primary focus.
Community conservancy	Enterprise that manages areas to integrate wildlife, livestock and human needs, with varying foci and goals. Conservancy management groups work with local landholders, communities, tourist enterprises and wildlife managers. Rangeland community conservancies are set up by, or for, pastoralist communities, and often aim to integrate livestock grazing with wildlife conservation. Different terminology is used in different countries, e.g. Kenya – community wildlife conservancy; Namibia – communal conservancy; Tanzania – wildlife management area. The IUCN refers to such areas as “Indigenous Peoples’ and Community Conserved Territories and Areas” (ICCAs) (Borrini-Feyerabend <i>et al.</i> 2013).
Group ranch	A form of communal land tenure established in Kenya in the 1960s, in which a group of pastoralists jointly held the rights to and collectively managed a defined

	<p>area, to achieve the economic and social objectives of the group. Membership was usually based on kinship and traditional land rights, and the collectively managed animals were usually owned individually. Group ranch members gained collective freehold title to land under national law and thus theoretically had stronger control over the land and natural resources than on “Trust Land” (common pool land held in trust by the State). With the passage of the Community Land Act of 2016, both group ranches and Trust Land in Kenya are being converted to the category of “community land”. The group ranch was thus a precursor to the concept of community conservancy also in other parts of Africa.</p>
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3. Rights to resources

Land rights	The power or privilege held by a person or group to land and its associated natural resources on the basis of customary or statutory law, which allows them to occupy, use, lease and enjoy – among other things – the resources.
Pastoral land rights	Rights to use the key land and associated natural resources in rangelands, harvested cropland, forest, water sources, migration routes linking seasonal grazing areas, and pastoral settlements or encampments to maintain mobile livestock production. Specific features of pastoral resource-use rights include fuzzy access rights (socially and territorially), flexibility in arrangements and their adaptive/changing nature.
Grazing rights	Rights to bring in livestock to graze a land area that several different individuals or groups of livestock keepers – both sedentary crop-livestock farmers/ agropastoralists and mobile herders – may also use land for grazing. Grazing rights can be to land used for other purposes at other times of the year, e.g. on cropland, or used for other purposes at the same time, e.g. in forests.
Customary land rights	Rights to use land that arises through customary tenure or unwritten practice, administered in accordance with locally agreed customs rather than through statutory law. These rights are context-specific and would qualify as legitimate tenure rights.
Common property rights	A social arrangement regulating the management and use of a common property, defined by customary rules of a community or group with respect to a bundle of rights held by a specific community. In some countries, these rights have been formalised by statutory law.
Legitimate tenure rights	Context-specific tenure rights (often common property rights) grounded in traditional social practice in undocumented and customary systems of resource use; rights that local actors perceive to be socially legitimate, particularly rights of poorer and marginalised groups.
Bundle of rights	The analogy that the various rights associated with a particular land parcel can be likened to a bundle of sticks: separate “sticks” in the bundle are held by different agents (persons, communities, organisations, governments etc.) and “sticks” can be acquired in different ways and held for different periods (FAO 2003). These include, e.g. right of access, right of usufruct, right of withdrawal, right of management, right of alienation and right of exclusion.
Right of access	Right to enter a defined area of land; operational right enjoyed simultaneously by a legal owner, authorised users and people not authorised to use but nevertheless having right of way over the land.
Right of usufruct	Right to use the land and enjoy its fruits/resources, provided this use does not interfere with the legal rights of others and does not alter or damage the land.
Right of withdrawal	Right to remove a resource or harvest the product of a resource on the land, such as rangeland or forest products, and to benefit from them for subsistence, cultural or commercial purposes.
Right of management	Right to regulate land-use patterns and transform the resource by making improvements; this allows defining potential beneficiaries of other rights related to the land and the conditions under which these rights may be acquired, lost or transferred. A management right can be collective when several rights-holders take part in collective decision-making. This right is enjoyed by the legitimate owners, de facto owners or claimants, but not by mere users (Schlager & Ostrom 1992).
Right of alienation	Legally defined as the right to dispose of the land by transferring the ownership of property rights – most commonly selling – to whomever the owner wishes.

Right of exclusion	The right to prevent others from accessing the resources by various means including physical barriers such as fencing, customs, formalised rules or statutory laws.
Fuzzy access rights	Access rights that are not clearly and precisely defined. In situations of pastoral mobility and common use of communal pastures, the fuzzy nature of traditional grazing rights may be socially preferable to privatisation, open access or clearly defined community rights (Goodhue & McCarthy 1998).
Secondary use rights	Rights to certain uses of land belonging to a primary rights holder; the secondary rights may be granted by the primary rights holder according to mutually agreed terms and conditions or may be part of a customary tenure system, e.g. wives may have secondary rights to grow crops or harvest fruits or fuel from land belonging to a man.
Land expropriation	The act of a government to deprive local land-rights holders, including private owners, of their rights to land, so as to make it available for public or private use or benefit, e.g. for a national park. Sometimes, land is expropriated without consent of all affected people, even by force; some of them may be compensated for moving from or ceasing to use the area. Often used synonymously with “land appropriation”, a term that refers to setting apart land for a particular purpose, to the exclusion of all other uses, such as land appropriation for large-scale irrigation schemes, whereas “expropriation” emphasises the deprivation of rights of others.
Land alienation	In legal terms, using the right of alienation, i.e. to transfer land (by sale or inheritance) from one owner to another. In sociological terms, “land alienation” refers to the act of a Government to take land away from customary users in order to use it for other purposes, including private development by settlers or large-scale investors. In rangelands, the State often refers to the alienated land as “unproductive” or “empty” land, i.e. does not recognise that local people have long used and shaped the land and have customary rights to it. This is one form of land expropriation.
Land grabbing	Capturing of control of relatively vast tracts of land and other natural resources through a variety of mechanisms and forms that involve large-scale capital that often shifts resource-use orientation into an extractive character, whether for international or domestic purposes (Borras & Franco 2012). A related term, “green grabbing” (Fairhead <i>et al.</i> 2012), is the expropriation of land and resources for environmental purposes, such as biodiversity conservation or carbon storage. Land grabbing usually results in the displacement of local land users. This term is often used in advocacy to describe an extreme version of land expropriation.
Land privatisation	Transfer of land from government ownership or from customary tenure (e.g. commons) to full ownership by a private, non-governmental individual or group, including permanent or long-term rights of possession, freedom to decide on land use, and freedom to sell, lease, bequeath or conduct other transactions with the land.
Rangeland enclosure	Creating a physical boundary (e.g. fence, wall) around a piece of land to claim exclusive use by an individual or group of pastoralists, usually for grazing but sometimes also for growing crops. This barrier can protect livestock from predators and prevent others from using the land, e.g. to graze their animals or harvest other rangeland resources. The land may be enclosed only on a seasonal basis or may be permanently enclosed, in which case this becomes a form of de facto land privatisation.
Rangeland exclosure	Excluding animals from grazing a rangeland area for a specified period of time, often by erecting temporary fencing, in order to let the vegetation regenerate. Although grazing or browsing animals (wild and domesticated) are kept out, other uses of the land, e.g. cutting and carrying grass or collecting wood, may still be allowed. Exclosures made for scientific purposes seek to determine how vegetation will develop, if left undisturbed.

4. Social organisation

Pastoral institutions	The formal or informal rules, norms, customs, behaviours, laws and policies that guide pastoralists' interactions with natural resources, livestock and other people. Pastoral institutions influence who has access to and control over which resources and, in the case of conflict over resources, may mediate and create space for negotiation and agreement, e.g. through customary leaders. Pastoral institutions guide all aspects of pastoral life, not only human interactions with natural resources. This is a subset of customary/traditional institutions.
Pastoralist organisations	Groups of pastoralists who organise themselves to act together to facilitate or improve the lives of the members, e.g. by arranging their access to resources, information and/or markets and/or by advocating for pastoralists' rights. An organisation may be registered (formal) or not (informal) and may be at any level from local to international. An example of a formal local organisation is a registered resource-user group with legally binding rules and agreements among members and/or with local authorities. Informal pastoralist organisations operate according to norms and customs (institutions) and/or mutual, commonly verbal agreements and are usually self-initiated. They are to be distinguished from "pastoralist support organisations", which are nongovernmental or governmental groups of people who support pastoralists in their development and advocacy, but most of the members do not practise pastoralism themselves.
Customary / traditional institutions	Institutions that have evolved over time as codes of conduct and behavioural norms for the interaction between people and with the resources they use. Customary institutions are informed by traditional knowledge and worldviews. They are set by people who have used the same resources over a long period of time, have built shared norms and reciprocal relationships, and know whom to trust. Customary institutions are often called "informal" in the sense that they are not recorded in written law.
Customary / traditional leaders	Individuals – men or women – whose legitimacy of leadership, authority or power comes from tradition, customs and/or spirituality. Traditional leaders tend to be seen as the true representatives of their people, especially in Africa, where they are not usually the same as elected leaders (Logan 2008). However, formal recognition of traditional leaders by colonialists and nation builders often led to a transformation of their role and co-option into "indirect rule" by the State. Traditional leaders hold specific knowledge, often related to their role within ceremony, ritual and kinship groups. In some cultures, they have conditional authority, which must be constantly earned. Traditional leaders are sometimes called community leaders, informal leaders, chiefs or elders. Traditional leaders include migrating-group leaders, who have good knowledge of migration routes and animals' needs and good communication skills to negotiate access to pasture, water and other resources needed by the group.
Ethnic group	A group of people who identify with each other because they share a common culture (beliefs, values, traditions), language and history on the basis of which they distinguish themselves from other culturally distinct groups. An ethnic group may or may not identify with a particular territory, e.g. mobile pastoralist ethnic groups are less likely to do so than sedentary groups who live primarily from crop farming. Sometimes equated with tribe, although this term can also refer to one of several social groups that form cohesive social and political entities within an ethnic group. A tribe can include several clans; each clan is united by actual or perceived kinship and descent from a common ancestor or founding member several generations before.

Age set	A social group within a community that consists of people of similar age who jointly pass through a series of age-related social and economic functions. The group forms part of an age system within which individuals in the same age group acquire different knowledge and are assigned different responsibilities and roles, as the individuals mature and graduate to the next tier. The roles of a pastoralist age set may include fulfilling community activities such as managing grazing and deciding on use and management of natural resources.
Herding collective	A system of cooperative herding in Russia and former Soviet bloc countries in which several pastoralist households were assigned to large herding units, e.g. <i>negdel</i> in Mongolia, <i>kolkhoz</i> (private entity) or <i>sovkhoz</i> (State-owned) in Russia. The term refers to both an administrative unit and a geographic area. Members of herding collectives are employed salary workers or receive a share of the production.

5. Land use and management

Pastoralism	<p>A land-use and livestock-production system in which the animals are grazed and watered using primarily natural resources. The people practising pastoralism depend primarily on these animals for their livelihood; they organise their socio-economic activities to make productive and sustainable use of highly variable and dispersed resources (pasture, water, natural minerals) over a wide area of land by moving their animals. Pastoralism tends to avoid the use of external inputs, e.g. fossil fuels, synthetic chemicals (IPES-Food 2016).</p> <p>Pastoralism also may include activities that link livestock production, crop farming and forest farming in a complementary or synergetic way, i.e. through agropastoralism, silvopastoralism or agrosilvopastoralism. As a form of sustainable agriculture in tune with nature, optimising the use of biological processes and ecosystem functions, and relying primarily on using and recycling local resources, pastoralism is an example of agroecology in dry areas.</p>
Rangeland	<p>“Land on which the indigenous vegetation ... is predominantly grasses, grass-like plants, forbs or shrubs that are grazed or have the potential to be grazed, and which is used as a natural ecosystem for the production of grazing livestock and wildlife” (Allen <i>et al.</i> 2011, p5).</p>
Rangeland management	<p>The activities associated with making informed decisions about the allocation, use and development of rangeland resources, including resource management, land administration, land policy and land information management. The values and priorities of the decision-makers may concern preserving culture and societal norms, protecting ecosystems and biodiversity, and/or short- or long-term value creation and profitability. Also called “range management”.</p>
Land use	<p>Human activities directly related to the land, making use of its resources or having a positive or negative impact on it. The given land use may take place on one piece of land or more, uses may be renewable or not, and several land uses may occur on the same piece of land.</p>
Land administration	<p>The process of determining, surveying, adjudicating, recording and disseminating information about land ownership, value and use in a market-based system. Land administration includes the set of systems and processes for making land-tenure rules operational.</p>
Local resource management agreement	<p>The contract between one or several villages and/or the government administration to regulate use of land and other natural resources within a given area and according to agreed bylaws on access and use. Village/pastoralist representatives and/or administrative entities may sign the agreements.</p>
Participatory Rangeland Management (PRM)	<p>A step-by-step approach for the planning, management and sustainable use of an identified rangeland area, led by community members who use the area, usually with the support of governmental or nongovernmental organisations. It involves the joint development and implementation of a rangeland management plan, strengthening of governance structures, capacity building and effective monitoring. The plan is endorsed by all relevant stakeholders and is, in some cases, legally binding (Flintan & Cullis 2010).</p>

Box D: Ecosystem services provided by pastoralists

Pastoralism is a form of coupled human–nature system where grazing and manuring by livestock helps provide ecosystem services, particularly through protecting, enhancing and restoring biodiversity and favouring carbon storage in the rangelands. Pastoralists thus help to provide ecosystem services, i.e. the benefits that natural ecosystems generate for society. Ecosystem services are commonly categorised in four groups (MEA 2005), here referring specifically to rangelands:

- Provisioning services – benefits that can be extracted from nature, such as fresh water for drinking, forage, firewood, wild game, natural fibres and medicinal plants;
- Regulating services that make life possible, such as pollination, carbon storage and climate regulation; rangelands hold 30% of terrestrial soil organic carbon (Sala *et al.* 2017);
- Cultural services – the non-material benefits that contribute to the development and cultural advancement of people, e.g. concerning the ecosystems’ role in pastoral cultures, practices and art;
- Supporting services – the underlying natural processes that sustain all other ecosystem services, such as photosynthesis, nutrient cycling, creating soils and water cycle and – in the case of rangelands – providing habitats for a large diversity of genetic species (Sala *et al.* 2017).

<p>Buffer zone</p>	<p>A term with several meanings;</p> <ul style="list-style-type: none"> • Pasture preserved by herders as a reserve for when grazing conditions are poor, also referred to “reserved pasture/grazing”; this differs from a seasonal grazing area, as a buffer zone is not regularly used in all years; • An area between two pastoral territories to which both groups claim access rights, commonly seen between pastoralist groups with a long history of conflict and designed to minimise risk of unplanned conflicts; these buffer zones can be used for grazing on a first-come, first-served basis or by reciprocal arrangement, depending on ecological conditions; • An area of land that separates two other areas intended to be used for different purposes and that functions to reduce negative interactions between them, e.g. between a wildlife reserve and a pastoral grazing area; these buffer zones can safeguard connectivity between conservation areas for movement of wild animals.
<p>Key pastoral resource areas</p>	<p>Areas that mobile pastoralists prefer to include within the migration route/cycle because of specific benefits to health and reproduction of the animals, e.g. mineral licks or areas with medicinal herbs, or for specific market, social and cultural practices related to livestock.</p>
<p>Community-based natural resource management (CBNRM)</p>	<p>An approach to the management of land resources that recognises, legitimises, upholds and empowers local resource users and other stakeholders as primary decision-makers over the protection and sustainable management of communal natural resources. Local institutions are strengthened so that the traditional institutions and customary practices can be merged with knowledge from formal regulatory processes. CBNRM usually involves some degree of co-management of resources by local communities and government authorities. It may also refer to devolved management entirely by the local community or to traditional community management of indigenous lands. It can relate to common property land or private land. CBNRM that involves specifically rangeland areas is also called community-based rangeland management, which includes the concept of community-based rangeland conservation or restoration, i.e. maintaining or improving the condition of the rangeland.</p>

6. Labour management

Risk pooling	An informal social-insurance strategy used by pastoralists, in which livestock are exchanged between households belonging to a social network. The individual households often occupy completely different landscapes and use un-associated resources. This distributes the livestock production risk. If a household or community suffers loss of livestock because of severe drought or other calamity, the households or communities that are better off support the ones that are more adversely affected.
Labour pooling	Drawing on the labour capacities of one or more households to contribute to herding or watering livestock or providing other services, also practised by former pastoralists who ask relatives or friends to care for their animals or who participate during labour-intensive periods. This can free up labour for other (possibly but not necessarily non-pastoral) activities but can also allow specific types of experience or skills to be shared by others in the same group. Labour pooling can also refer to combining the labour from several households cooperating in herding groups, or mutual assistance with potential reciprocity.
Reciprocal herding	A form of labour saving among pastoralists, where households with small herds share responsibility for herding. Typically, each household takes the responsibility to herd the animals of all participating households on a rotational basis, e.g. a different household each day. Also called “reciprocal grazing”.
Hired herder	Person paid to herd the animals of another, usually wealthier, pastoralist household or absentee owner. The hired herder may be paid in kind (e.g. food, clothing, animals) or in cash. Hired herding provides an opportunity to generate additional income and/or (re)build an own herd and an opportunity for aspiring herders to learn from experienced herders, facilitating knowledge transfer. In commoditised systems, a salary is paid to professional men and women who are experienced in herding and, in some cases, have been formally trained in it.
Herding contract	An arrangement between a livestock owner and a hired herder to care for a certain number of animals over a given period, in exchange for payment in cash or kind. In a labour contract, the owner pays a monthly wage and provides herding equipment. In a leasing contract, the owner entrusts animals to a herder who has rights to use the milk and manure from the animals.
Herd splitting	Practice of dividing the livestock of one or several households into separate groups of animals depending on their age, sex, type, productivity or other characteristic, each sub-herd usually being cared for by one or more different herders and often reared in distinct locations. In pastoralist systems, this is primarily a risk-spreading strategy.

7. Mobility management

Box E: Mobility of livestock & people

Mobility in pastoralism can refer to movement of livestock and/or people, with or without other family members. The main purposes of pastoral mobility are: to enhance livestock nutrition, reproduction, health and safety; to access sufficient water for the herd; to maximise on emerging market opportunities; to avoid harmful insects and predators; to increase resilience of the production system; and to sustain productivity over a long time. Biodiversity and conservation of wild plant and animal species can be enhanced by herd mobility.

In an environment characterised by important but unpredictable and short-lived opportunities for livestock production, pastoral mobility enables the herd to be in the right place at the right time. When pastoralists have sufficient freedom to move strategically, they can achieve relatively low variability in outputs (despite high variability in inputs from the rangelands) and overall resilience. Mobility is an important dimension of the practice of managing livestock grazing itineraries at various scales; this distinguishes pastoralism from other grazing systems.

Livestock mobility involves proactive guidance of animals by people to take advantage of spatial and temporal variation in resources. The frequency of visiting the same patch of land is determined on a daily and/or seasonal basis or as opportunity allows. Pastoralists base their decisions to move their herds on their findings from tracking ecological and climate variability, predators, presence of other herds, incidence of disease or disease carriers (e.g. tsetse flies), traditional customs and arrangements (including routes, reserves, buffer zones and borders), legal regulations and security considerations.

Pastoralists' management of livestock mobility includes herd splitting for the purpose of reducing risk, maximising production and protecting ecosystems. This can involve adjusting herd diversity by mixing species and separating animals by sex and age. Herders sometimes use placement of permanent or temporary fences, closing and opening gates, and inducements such as salt licks, feed supplements and access to water to manage herd movements. In some countries, herders use dogs to help manage herd movements and/or to guard herds.

Pastoral mobility can take the following forms, among others:

- **Opportunistic movements**, which do not involve a fixed pattern across time or across the landscape (i.e. no temporal or spatial pattern) but rather depend on the availability of grazing resources, occurrence of disease and/or socio-economic factors;
- **Seasonal transhumance/rotation**, which involves a relatively regular temporal and spatial pattern of movement that can be altered depending on natural factors such as droughts, floods, fire or changes in the onset of seasons, or socio-economic factors such as markets or cultural events; transhumance normally covers longer distances than does rotational grazing;
- **Semi-settled movements**, which are made in pastoral systems where the main household and some of the livestock stay in one location and only the herders move with part of the herds on an opportunistic or transhumant/rotational basis.

<p>Transhumance</p>	<p>Regular movement of livestock between well-defined, usually seasonal, grazing areas, led by herders and often accompanied by some or all of the pastoralist family unit. The practice of transhumance can vary in terms of space, time and herd segment involved:</p> <ul style="list-style-type: none"> • Spatial variations include linear distance covered, degree of verticality between different altitudes, and circularity (e.g. gravitating around a water point). Typically, transhumance is latitudinal (e.g. from north to south and back) or altitudinal (e.g. from lowlands to highlands and back). It may involve movement across borders between countries. • Temporal variations can be influenced by seasonal or annual conditions. Some movements may be for the entire season, others of shorter duration.
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	<ul style="list-style-type: none"> • Pastoralists may also move different segments of their herds at different times or to different places. Typically, milking animals and their young are kept closer to the camp, while the other animals are moved farther away for a longer time.
Migration	<p>Pertaining to pastoralism, the seasonal migration of people and animals in transhumance or a gradual geographic shift – over many years or decades – in the area used by a pastoralist group, e.g. the gradual southern migration of Fulani pastoralists from drier to more humid parts of West Africa to practise semi-sedentary agropastoralism. Also called “mobility”, “nomadic pastoralism” or “transhumance.”</p> <p>The term “migration” is also used to refer to movements of people away from their usual residence, whether within a country (e.g. rural-to-urban migration) or from one country to another (e.g. emigrants or refugees) to stay there temporarily or permanently. Pastoralist migrants are usually youth who move to towns or other countries to work for several months or years to acquire skills/ knowledge and/or capital for setting up an independent household in their place of origin, or they may permanently leave pastoral areas (out-migration).</p>
Livestock migration route	<p>The geographic route, including grazing areas, along which people and their animals move seasonally in transhumance from one area to another in a country or from one country to another. The routes may be traditionally or formally agreed between pastoralists and local sedentary inhabitants. They are now sometimes demarcated by governments and provided with livestock infrastructure, e.g. water reservoirs. In some contexts, pastoralists prefer to choose from different routes depending on the prevailing conditions (climatic, disease, insecurity, etc). State-demarcated routes tend to be more restrictive for mobility, as the exact path, stock numbers and movement schedules are specified. Also called “(live)stock route”, “livestock corridor”, “transhumance route”, “pastoral corridor” or “seasonal migratory route”.</p>
Camp	<p>Place where livestock keepers stay for short or long periods of time. Travel camps or encampments are for short stays of 2–3 days, usually along a migration route, while destination camps are for longer stays (Bellot 1980). Camps may have physical shelter, but not necessarily. Some travel camps are temporary (e.g. in Africa) while others are permanent (e.g. Alps); some destination camps are temporary (e.g. Mongolia) while others are permanent (e.g. southern Sudan).</p>
Sedentarisation	<p>Process by which nomadic or transhumant pastoralists become settled in one location. This may entail gradual settlement of pastoralists as a result of inducements or incentives provided by government policy, such as settlement schemes, or of evictions and other forceful interventions, and/or of market forces, internal drivers (e.g. poverty), service availability, extreme weather events or loss of rights of access to grazing land and other pastoral resources. Also called “settlement” of pastoralists.</p>

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