



# WINTER PREPARATION FOR LIVESTOCK HUSBANDRY BASED ON WINTER OUTLOOK

**Dr. MUNKHNASAN, Tsevegmed**

Officer

Ministry of Food, Agriculture and Light Industry /MoFALI/

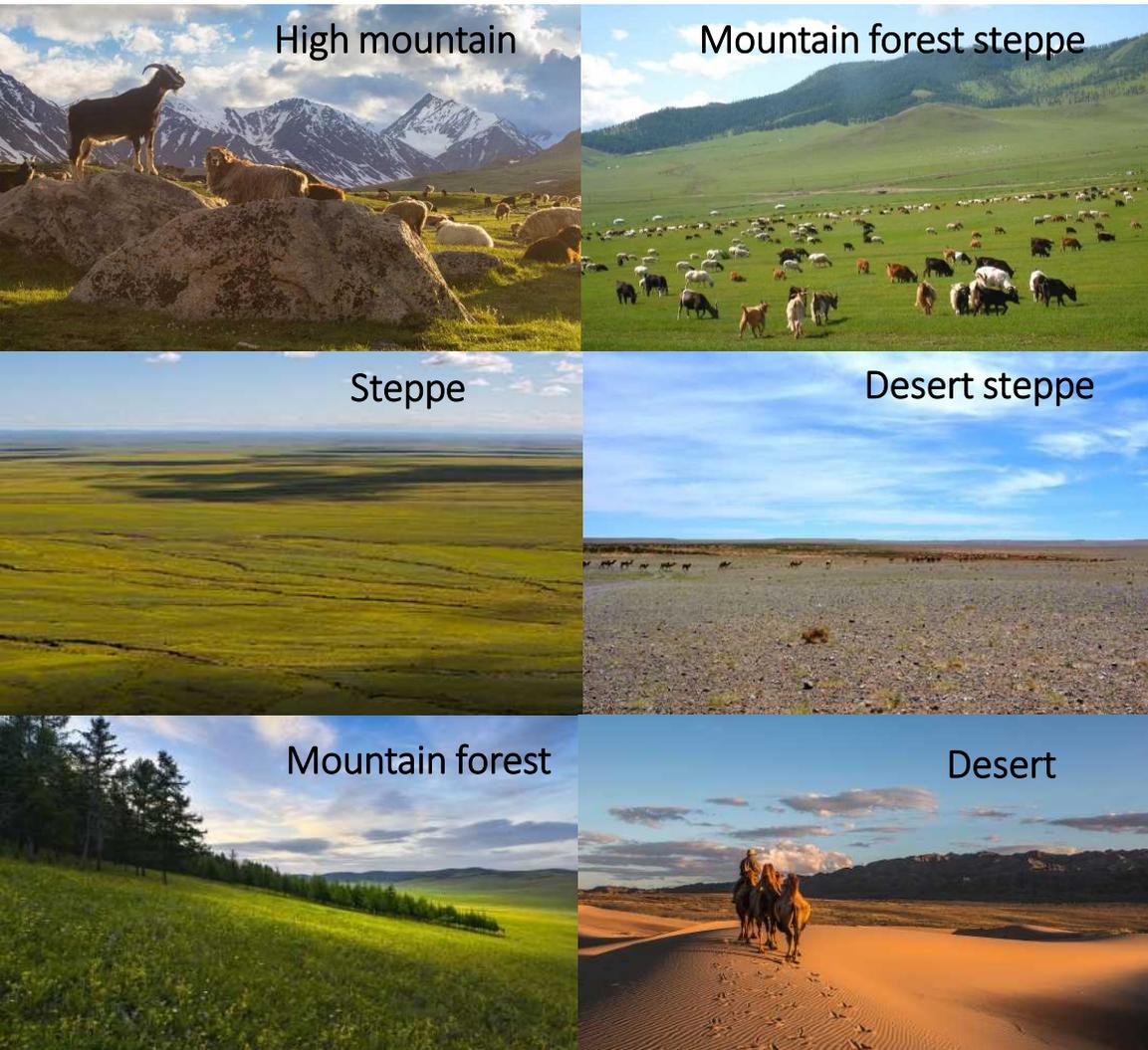
**Event:**

The Seventh Session of East Asia winter climate outlook  
forum, 5-7 Nov 2019, Ulaanbaatar, Mongolia



**MINISTRY OF FOOD,  
AGRICULTURE AND LIGHT INDUSTRY**

# One Look is Worth A Thousand Words (Mongolian Proverb)



Mongolian rangelands encompass a variety of ecosystems, including above (Undarmaa, 2018).



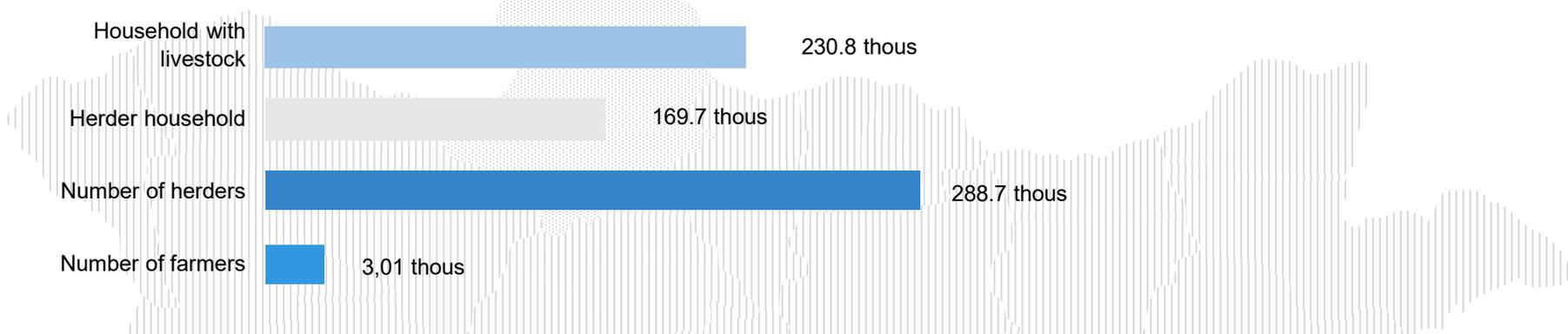
<http://dx.doi.org/10.2305/IUCN.UK.2017-2.RLTS.T22732A50664030.en>



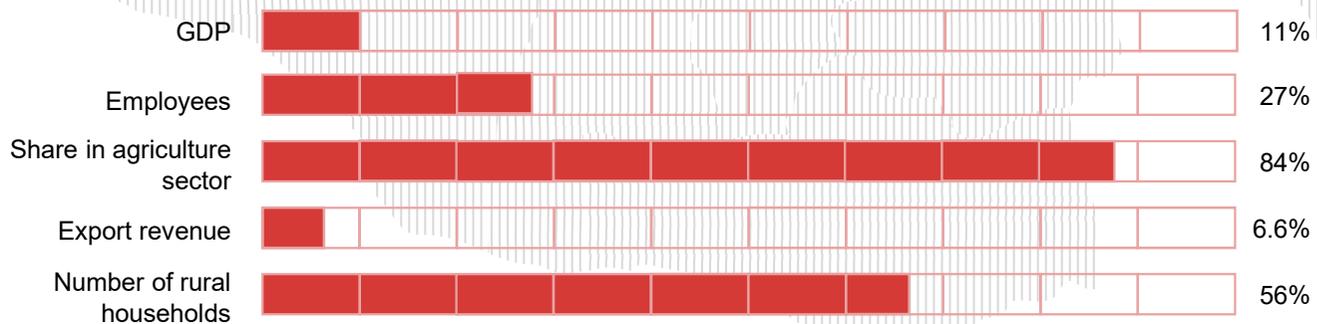
<http://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T41763A45172856.en>

# 1. Situation of Livestock Sector in Mongolia

**27 % of total labor force of Mongolia is in livestock sector**



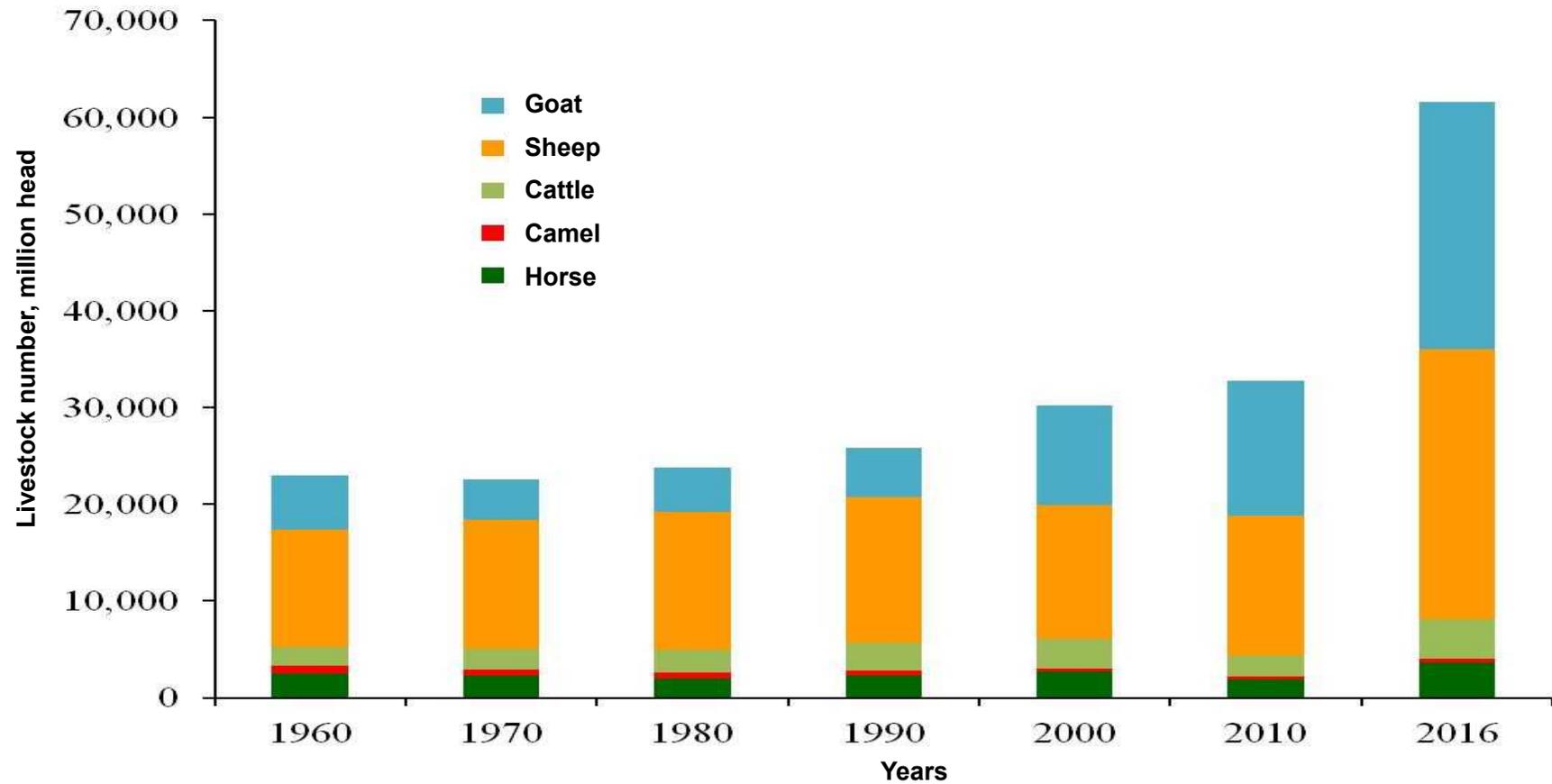
**Livestock sector, by 2018**



Source: National statistical office., 2018

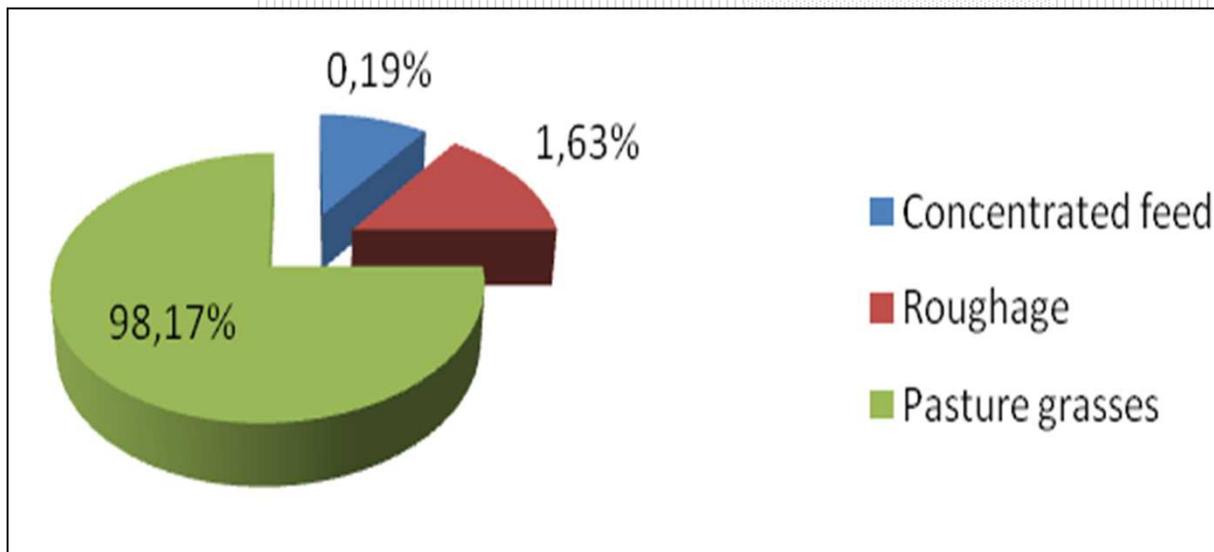


## DYNAMIC OF LIVESTOCK NUMBERS AND SPECIES RATIO



Source: National statistical office., 2017

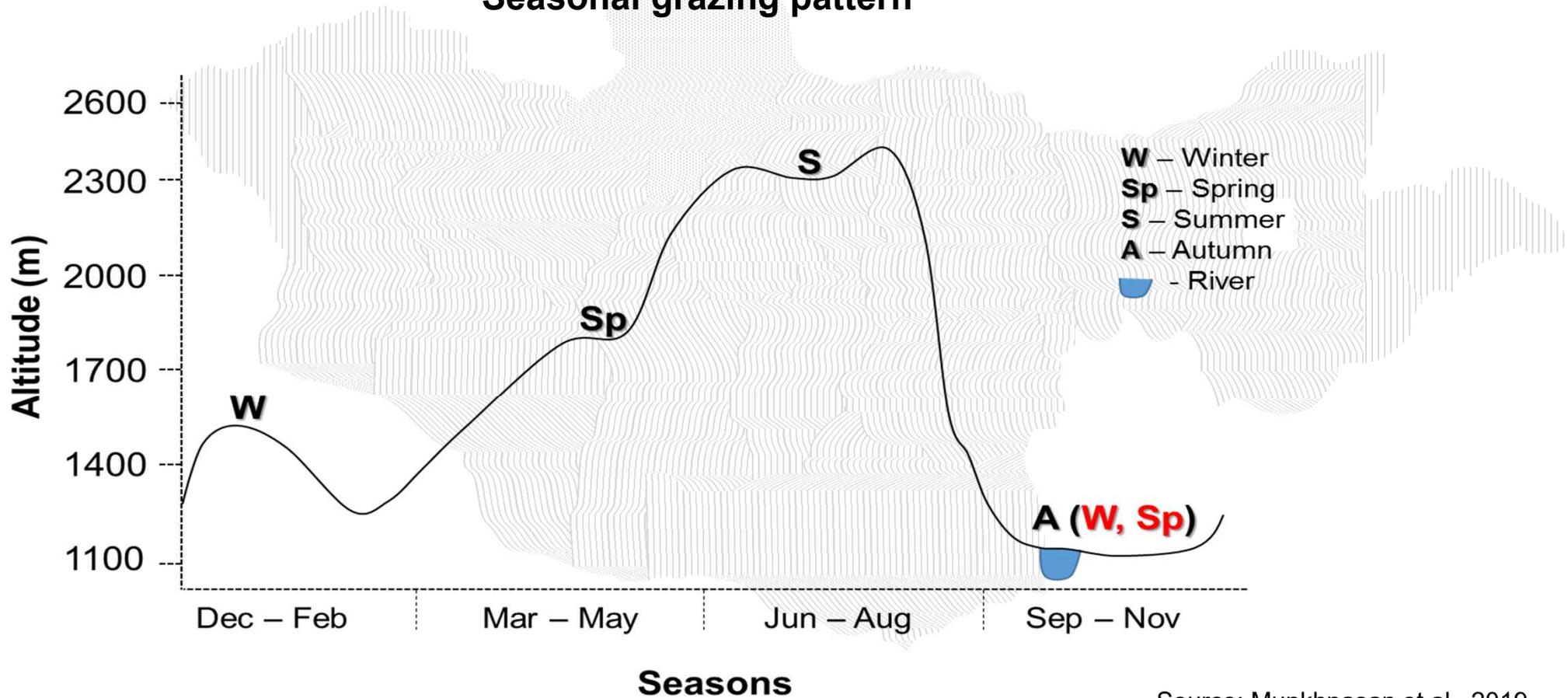
## ANIMAL FEED RESOURCES AND FEEDING MANAGEMENT



- The livestock husbandry itself relies on native pasture vegetation as the basic source of feed for all types of herbivores throughout the year
- The growing season ranging from 60 to 180 days
- Rest of time, animals rely on dry grasses
- In a normal year pasture dry matter (DM) yield reaches maxima during the last months of summer season (June to August), from when it reduces by 27-35%, 60-63% and 65-70% in autumn (September to November), winter (December to February) and spring (March to May)

# Livestock grazing management

## Seasonal grazing pattern



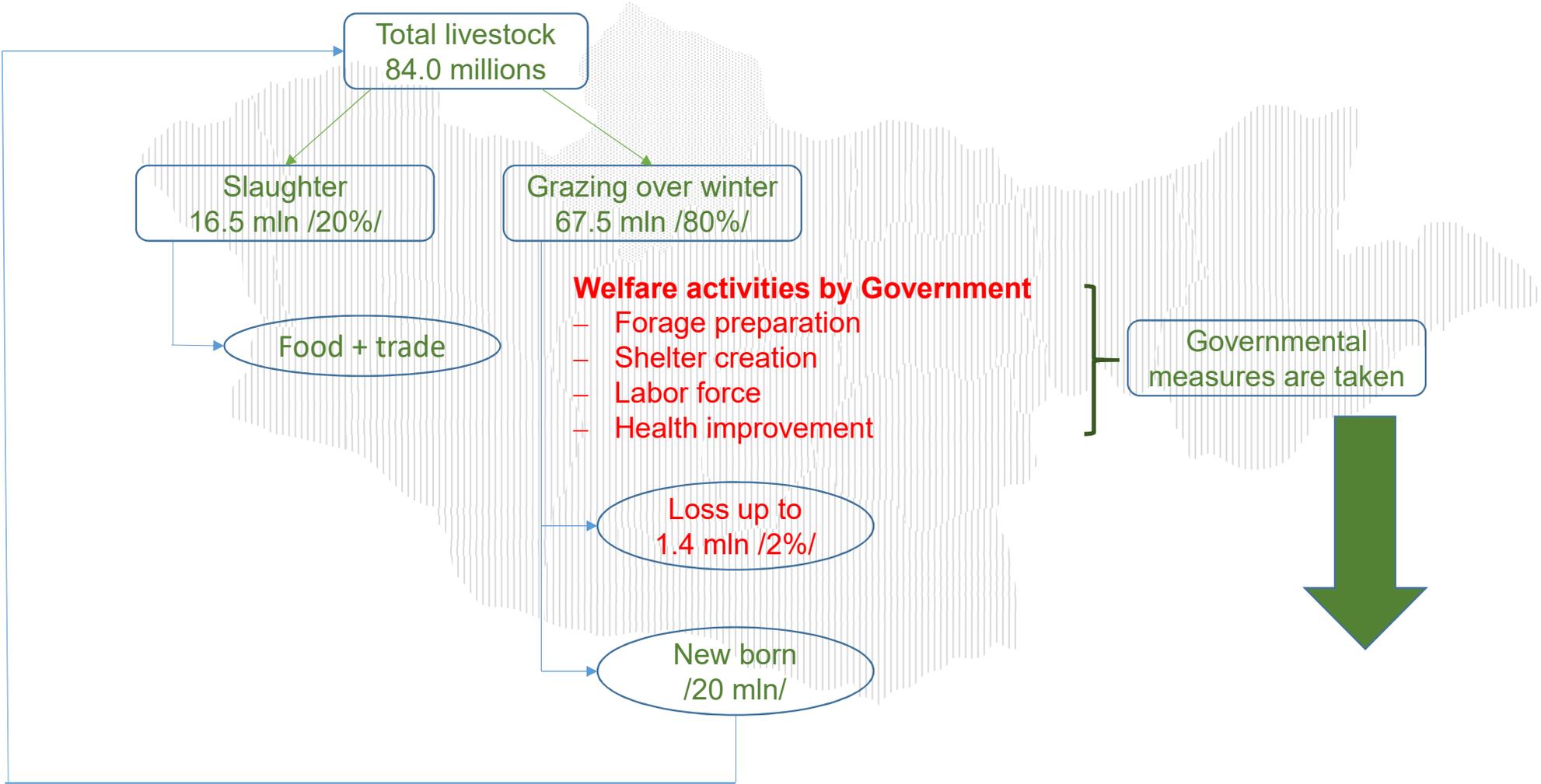
Source: Munkhnasan et al., 2019

## Feed balance in Mongolia, thousand tons

Parameters	Dry matter content	Crude protein	Metabolizable energy, MJ
Feed availability	66360.2	5030.58	488005.5
Feed requirement	77587.9	7740.3	611581.4
Feed balance	-11227.7	-2709.72	-123575.9
Balance in %	-14.47	-35.01	-20.21

Source: Togtokhbayar et al., 2019

# Livestock management



## Governmental measures for over wintering livestock

- Cabinet resolution for agricultural winter preparation
- Ministerial assignment for all provinces

### Feed and forage preparation for over wintering livestock

Feed types	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Livestock numbers /SU/ ↑	67.9	69.4	54.8	60.2	67.3	74.7	86.2	93.7	102.8	110.8	111.1
Prepared hay-grass ↓	1030.9	912.3	1137.3	1195.2	1175.1	1169.3	1178.7	1028.7	1100	935.7	1200
Straw	11.1	8.5	8.3	7.9	4.6	3.1	7.9	8.5	35.7	15.2	16
Hand made forage	34.4	25.8	32.7	46.7	39.1	36.6	40.3	39.9	38.1	41.2	104
Silage	0.9	0.5	4	8.5	2.1	3.9	4	1.6	7.9	9.3	10
Minerals	53.8	44.4	48	40.4	36.6	31.8	29.7	61.3	105.6	105.8	154.7
Concentrated feed /	555.11	482.99	595.56	629.04	606.17	596.34	603.39	566.64	649.6	574.2	805.2

Source: MoFALI, 2018

## Meteorological data for livestock sector

- Summer and autumn pasture carrying capacity mapping
- Winter and spring pasture carrying capacity mapping
- Air temperature and snow coverage
- Predictive evaluation of drought and Dzud /disaster/
- Dzud risk evaluation map
- If dzud occurs, list of soums where dzud occurs heavily, moderately and lightly by every ten days
- Agro-recommendation for spring cultivation

## Future collaboration

Firstly, we as responsible ministry for livestock welfare, we need more detailed long term data on pasture yields by at least provinces. These long term data will help us to monitor pasture condition shortly.

Secondly all data and information needs to be compared with previous year and long term of period. They will bring some more opportunities to work on them and our own analysis.

Lastly, if technically possible pasture yield and carrying capacity data needs to be detailed in bag level. This has advantage to make annual pasture utilization management plan at soum level and monitor this at ministerial level.



© Bayar Balgantsuren 2018

# *THANK YOU FOR YOUR ATTENTION*

---



Ministry of Food, Agriculture and Light Industry



+976 51 263247



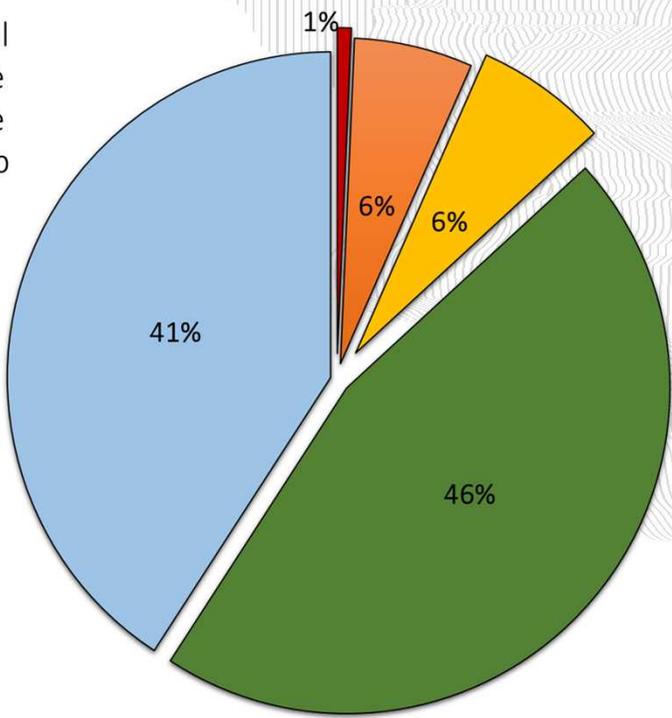
<http://www.mofa.gov.mn>



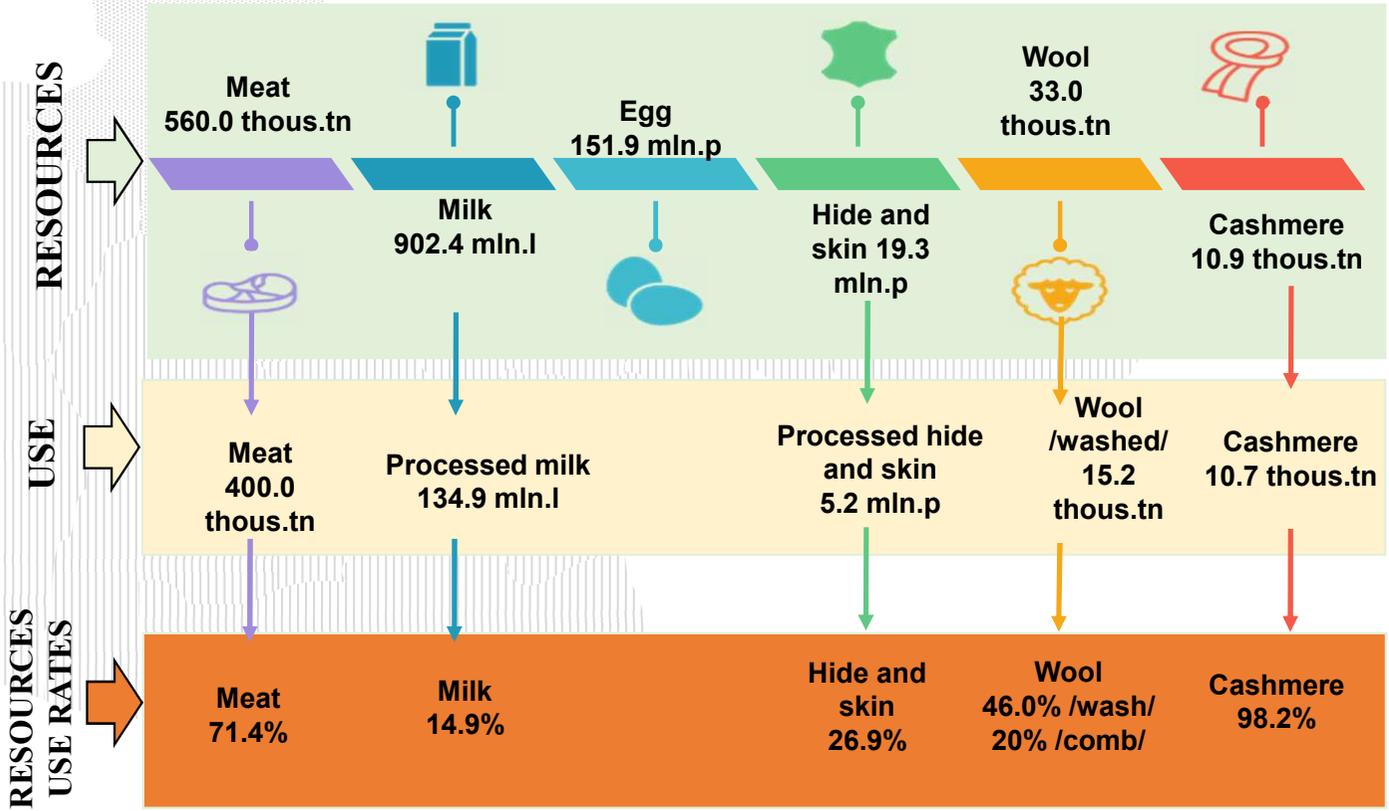
# 1. Situation of Livestock Sector in Mongolia

Total number of livestock is 66.46 million heads (2018)

- camel
- horse
- cattle
- sheep
- goat



Raw material resources of livestock sector and their use rates



Source: NSOM, 2018 and own calculation