# Resilience of agro-pastoralist systems

## (in India)

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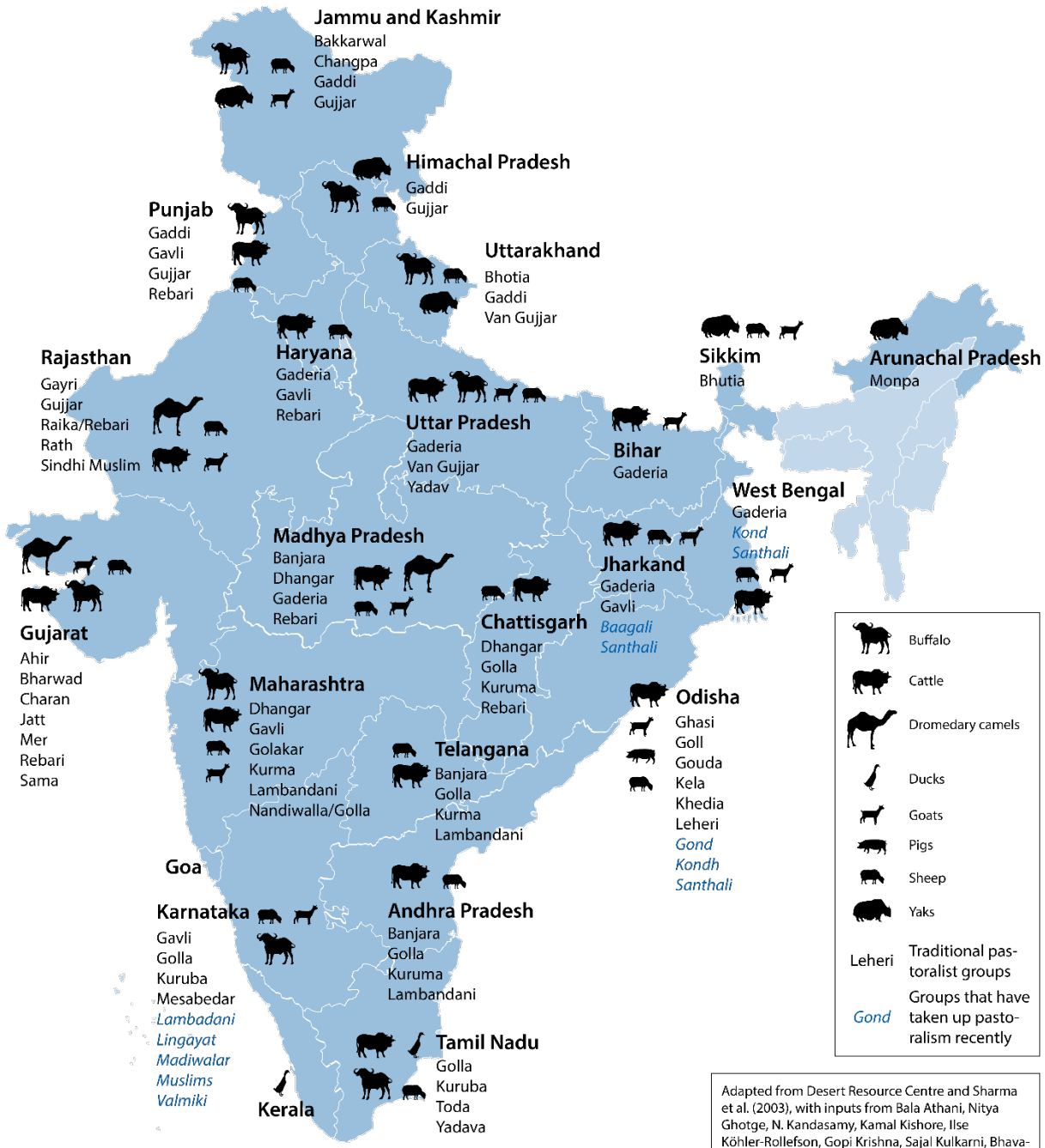
GASL Resilience Seminar, 17 Feb 2021

LEAGUE FOR PASTORAL PEOPLES AND ENDOGENOUS LIVESTOCK DEVELOPMENT

camel charisma

THE MAGIC OF RAJASTHAN

# India is a collage of pastoralist cultures, most of them agro-pastoralists




Prevailing perception:
„India is land of ‚farmers‘.“


Agro-pastoralism is India‘s dominant livestock production system

Despite being densely populated, and having comparatively small land mass,

# India is the world‘s

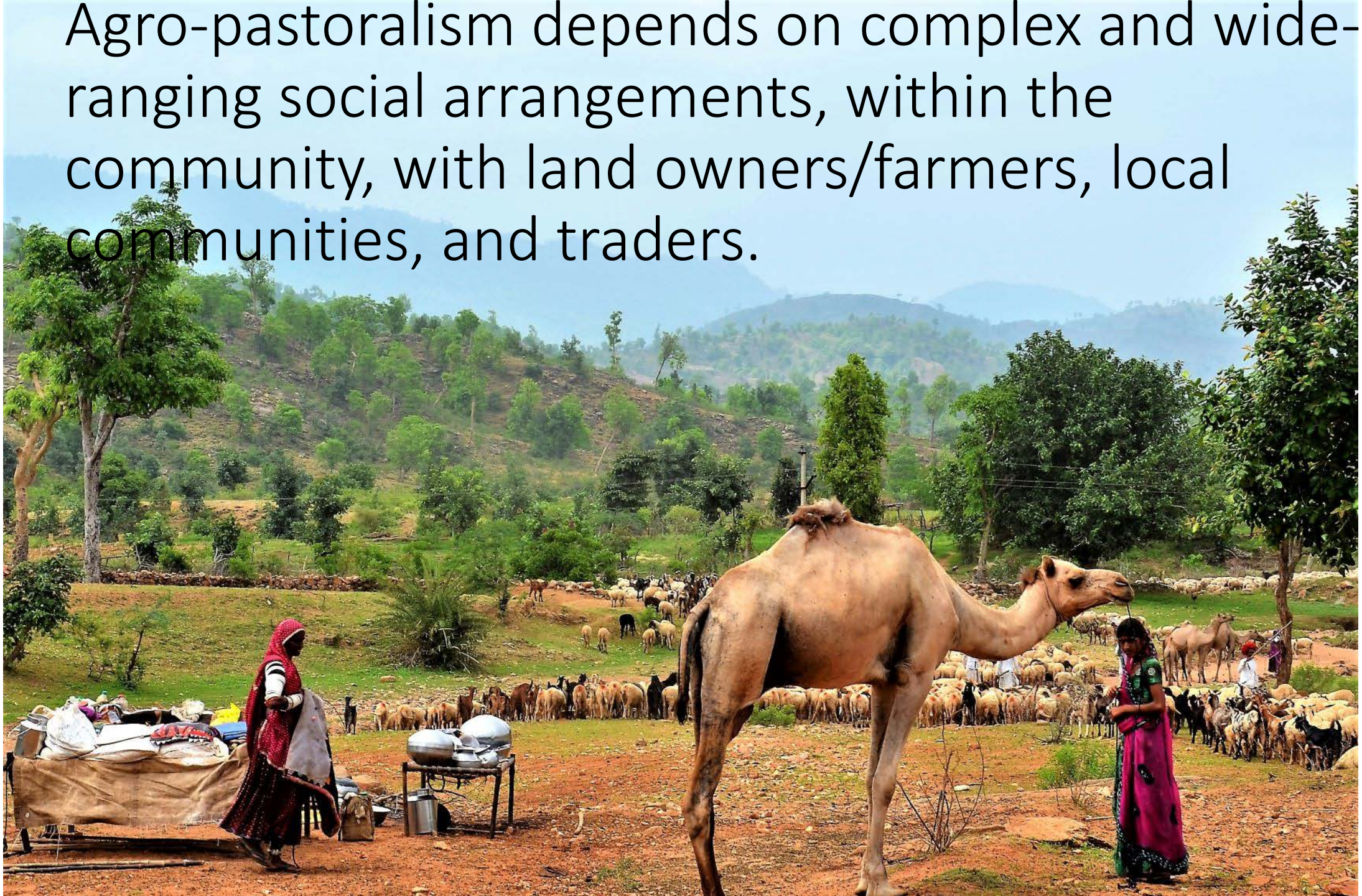
- largest exporter of sheep and goat meat
- largest exporter of ‚beef‘ (buffalo meat)
- largest milk producer,

It is estimated that more than 70% of its meat and more than 50% of its milk is produced on common pool resources in ‚traditional systems‘.

# Agro-pastoralism

- utilizes mosaic of grazing resources, incl. crop aftermath, natural vegetation, loppings-
- generates a ‚second crop‘ out of a field, while also fertilizing it.
- provides de-weeding and germination services.
- utilizes any kind of biomass.
- often sylvi-agro-pastoral systems.

Agro-pastoralism depends on complex and wide-ranging social arrangements, within the community, with land owners/farmers, local communities, and traders.

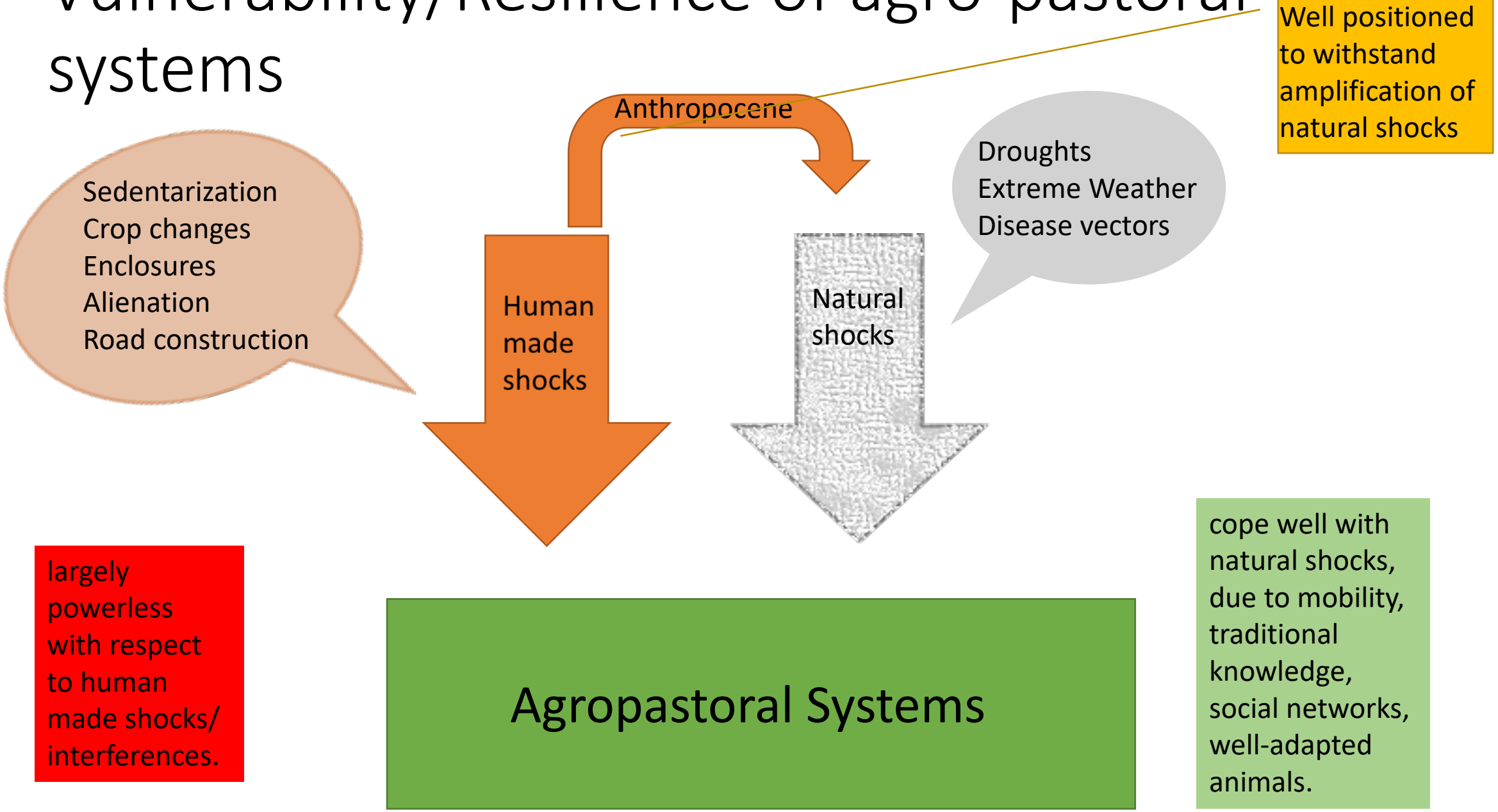


# ‚Pathway Diversity‘ is the key to resilience of agro-pastoralism

- Mobility – can move whereever rain falls or where new areas open up
- Ability of animals (animal genetic resources) to adapt metabolic rate – eat very little or eat in excess
- Ability of herders to influence gene pool on the spot (breeding decisions)
- Ability to contract or disperse
- Ability to absorb labour during economic shocks

**Strengths: not dependent on imported feed or large processing facilities, basically autonomous. High protein efficiency!**

# Vulnerability/Resilience of agro-pastoral systems



# Considering the benefits of agro-pastoralism, why are there so many human-made shocks and no support systems?

- Mental map „*India is land of ‚farmers‘ and nomads are unproductive , inefficent and backward*“
- ‚*Output per sheep is low…growth rates do not compare to western countries‘*
- Lack of recognition of value of (agro-)pastoralism. The fact that it provides organic manure, supports biodiversity, requires no fossil fuels (solar-powered), is animal welfare friendly, and can deal with climate shocks does not enter into the equation.

CONVENTIONAL ‚EFFICIENCY THINKING‘ DOES NOT CAPTURE THE BENEFITS OF AGROPASTORALISM

# Efficiency versus resilience

Can they be compared? Or are they apples and oranges?

EFFICIENCY

- measured by output versus input; typically amount of feed versus body weight or milk yield
- rather one-dimensional (reductive?)
- is based on *uniformity and stability*
- can only be applied to controlled systems in which humans have created artificial environment, as it leaves out possibility of shocks

RESILIENCE

- measured by continuity of output (?)
- has temporal dimension – must be **measured over time**
- variability (shocks) is integral part of equation
- **more realistic** in an unstable scenario such as climate change and fluctuating weather patterns.

The fact that ‚efficiency‘ and output/yield per animal is the ‚mantra‘ of livestock development, and by which livestock is judged, prevents us from getting the whole picture.

In order to get a real-life picture, we need to figure in the ability of livestock **systems** to withstand both short-term and long-term shocks, i.e. resilience (as well as positive and negative externalities)

# Conclusion

- We need to re-evaluate our approach of taking an individual animal‘s performance under **controlled** conditions as yardstick for gauging the value of livestock production systems (,***portrait approach‘***).

- If we want to achieve livestock systems sustainability, resilience and **acceptability**, we need to expand the prevailing criteria of efficiency and productivity by other criteria for evaluating and judging the worth and value of livestock systems.

- The solution would be a ,***landscape approach‘*** that seeks to optimally deploy livestock to utilize the variable biomass of a given area, with the minimum of external inputs (incl. fossil fuels, antibiotics, etc) and maximum of positive side-effects.

# Thank you

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