

LIVESTOCK BIODIVERSITY,  
INDIGENOUS KNOWLEDGE AND  
INTELLECTUAL PROPERTY RIGHTS

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**EXPERIENCES OF TRYING  
TO UNDERSTAND  
BREEDERS' KNOWLEDGE**

# Project Sponsor

- -“Improving the Livelihoods of Poor Livestock-keepers in Africa through Community-Based Management of Indigenous Farm Animal Genetic Resources”- International Livestock Research/BMZ/Göttingen/Hohenheim Project

# Research Projects

- Mr. Mbuku: “Characterisation of the Breeding Practices of Sheep and Goat Keepers in Northern Kenya”.– Department of Animal Sciences, Egerton University
- Mr. Isacko Tura: “Herd History & Social Neteworsk” - Egerton University
- Immaculate OMONDI and Gentrix JUMA: “Market Organization and Consumer Preferences”
- Other work: “Kosgey, I.S., Rowlands, G.J., van Arendonk, J.A.M., Baker, R.L., 2006. Small ruminant production in the tropics: a study of smallholder and pastoral/extensive farming systems in Kenya. *Small Ruminant Research*. (Accepted).
- Ms. Else Verbeek: “Factors Influencing Small Ruminant Breeding and the Design of Sustainable Community-based Small Ruminant Breeding Programs in Kenya”. (Animal Breeding and Genetics Group, Wageningen University, Wageningen, The Netherlands)
- Isaac Sanga Kosgey, 2004. Breeding Objectives and Breeding Strategies for Small Ruminants in the Tropics. *Ph.D. Thesis*, Wageningen University, The Netherlands, 272 pp. (ISBN: 90-5808-990-8).

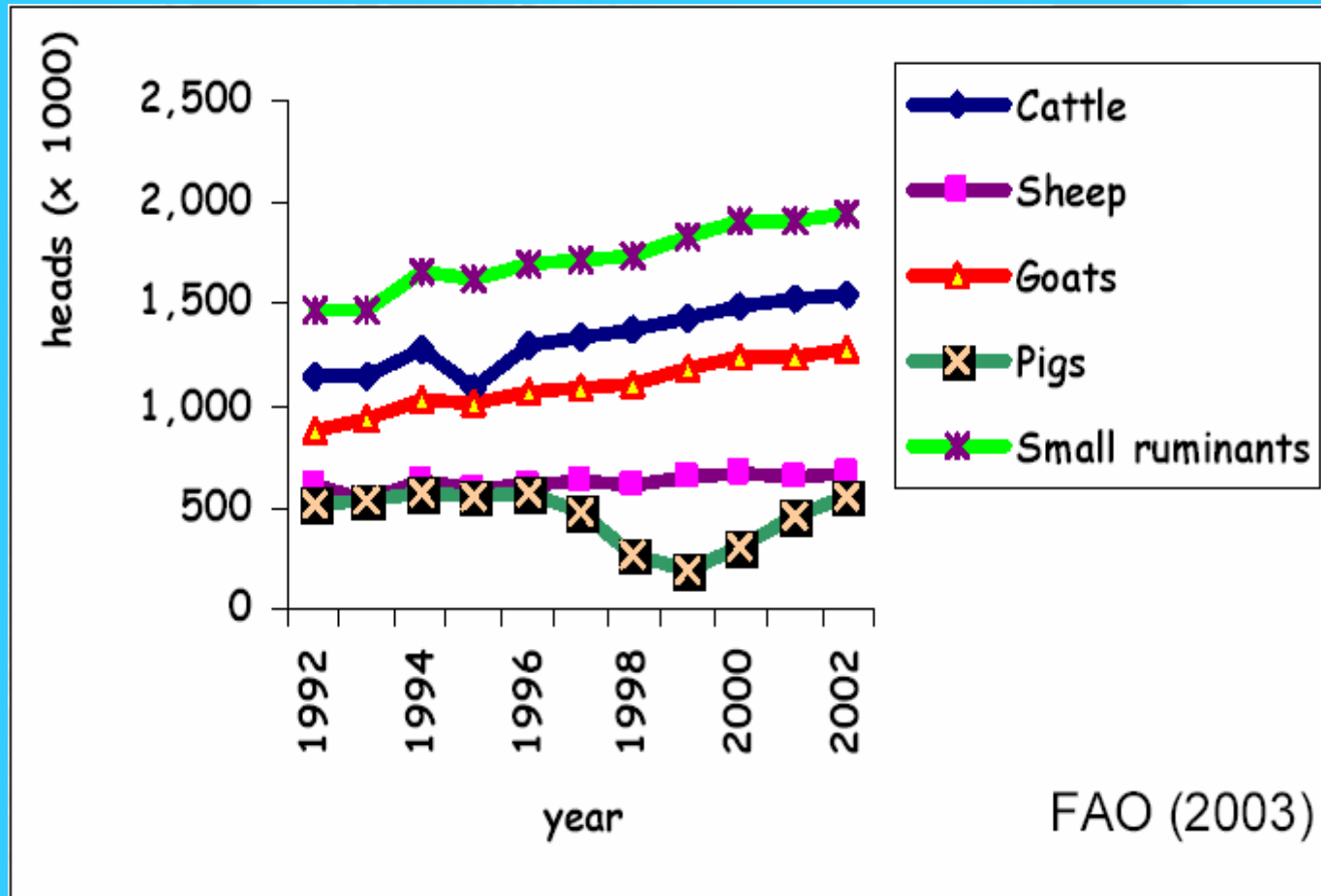
# Herding and the Naming System of Small Ruminants by the Pastoralist Rendille Community of Northern Kenya



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# Real livestock numbers are probably underestimated



# Small ruminants belong to different household members (non-pooled resource)



Kosgey, 2004

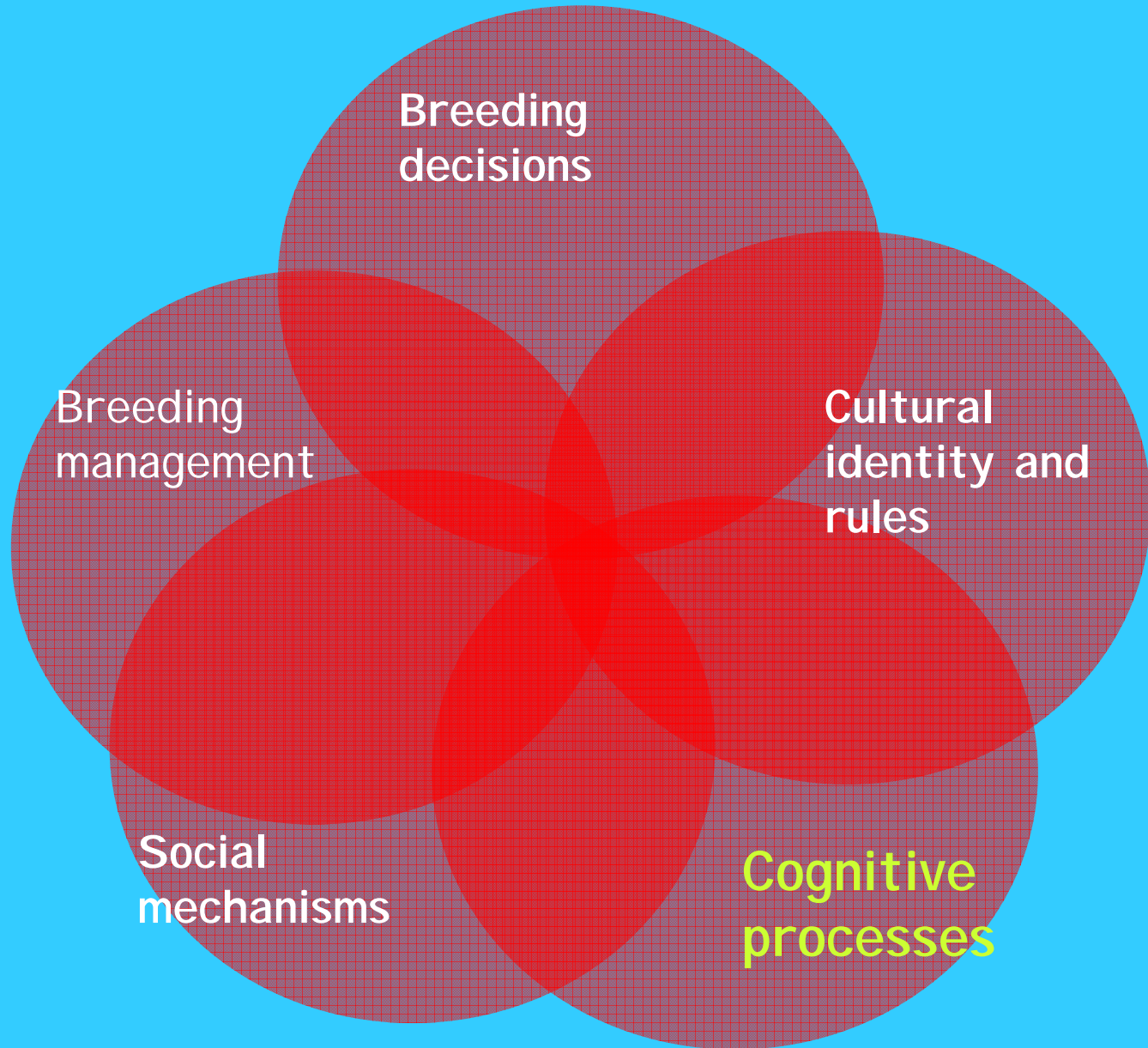
Kiwuwa, 1992



# Potential threats to local breeds

- Poor characterisation of breeds
- No breeding programme for local breeds
- Poor implementation of livestock related policies
- Diseases and parasites
- Insecurity
- Cognitive process

# Justification



Breeding  
decisions

Breeding  
management

Cultural  
identity and  
rules

Social  
mechanisms

Cognitive  
processes

# Objective

The overall objective of this study was to analyse the pastoral Rendille small ruminant management and goat naming system

- Material and methods

# Study area

- Research site: Marsabit (Rendille)
- Location was selected on the basis of:
  - Predominance of sheep and goats.
  - Accessibility.
  - Effective village authority system.
  - Sheep and goats are seen as priority species by farmers.

# Variables

- ❖ Detailed survey using a set of questionnaires.
- ❖ Selected 30 herders & randomly sample 574 animals from them for the work.
- marks and features used to differentiate between and within populations
- Flock size and structures
- Breeds and trait preferences
- Age and sex classes

# Analysis

- Information gathered through survey analysed
- Immediate feedback workshop to farmers contacted
- Statistical analysis (excel, access and SPSS statistical software)

# Results



Mixed flock herding technique

Animal Class	Rendille Sheep	Rendille Goats
Very young pre-weaned	Lukuo Kunini	Lukuo Kunini
Middle aged pre-weaned	Lukuo Puusi	Kotiti
Old pre-weaners	Lukuo Botoro	Lukuo Botoro
Weaners	Guus	Karat
Sub-adult female	Sipen/Leeker	Sipen/Lekinne
Mature females	Riiyo	Onno
Sub-adult males (Uncastrated)	Lepukutorege	Lepukutorege
Castrates/ Wethers	1st Grade: Loro Lentare I Iarecha	Uni Loro lentare
	2nd Grade: Lorolesipen	Lorolesipen
	3rd Grade: Loro lentare tare	Loro lentare tare
Bucks/Rams	Lmerigesh	Orgei

# Cognitive processes

- Classificatory and descriptive naming system
- Branding
- Ear notching



Branding in progress

# Conclusion

- The mixed herding technique is effective and well adapted to the fragile environments.
- Pastoralists able to identify their animals fully (>90% chance)!
- HNS facilitates exchange of information about goats- essential in setting up community-based breeding organizations (CBO's)

# Acknowledgements

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Thank you for  
your attention

