



## Of Kwazulu-Natal



**MDUKATSHANI**  
RURAL DEVELOPMENT PROJECT



rural development  
& land reform

Department:  
Rural Development and Land Reform  
REPUBLIC OF SOUTH AFRICA



agriculture  
& rural development

Department:  
agriculture  
& rural development  
PROVINCE OF KWAZULU-NATAL



# Productivity questions

This presentation

1. Msinga as a case study area
2. Goat audits
3. Goat mobility issues
4. Distance, speed and herd size
5. Implications to farmers and projects
6. Productivity of herds
7. Mortality figures
8. Herd composition
9. Conclusion



# Provincial numbers from previous presentation

(Stats SA figures)

- 3 million Agricultural households
- 720 000 Agricultural households in KZN
- Each owning average 4 goats -**2.8 million goats**
- Each owning average of 6 goats -**4.3 million goats**
- Herd productivity of 30 percent –**we should be getting between**
- **840 000 and 1.2 million new goats per year**



# Msinga as a case study area

- Rainfall 450-600 mm
- Poorest municipality in KwaZulu-Natal
- 70 percent of families have some form of stock
- 85% of population dependant on social grants and living below poverty line
- 9.6 percent of population are employed
- 91 percent rural population







**Wet season**



**Dry season**



**Late Dry season**



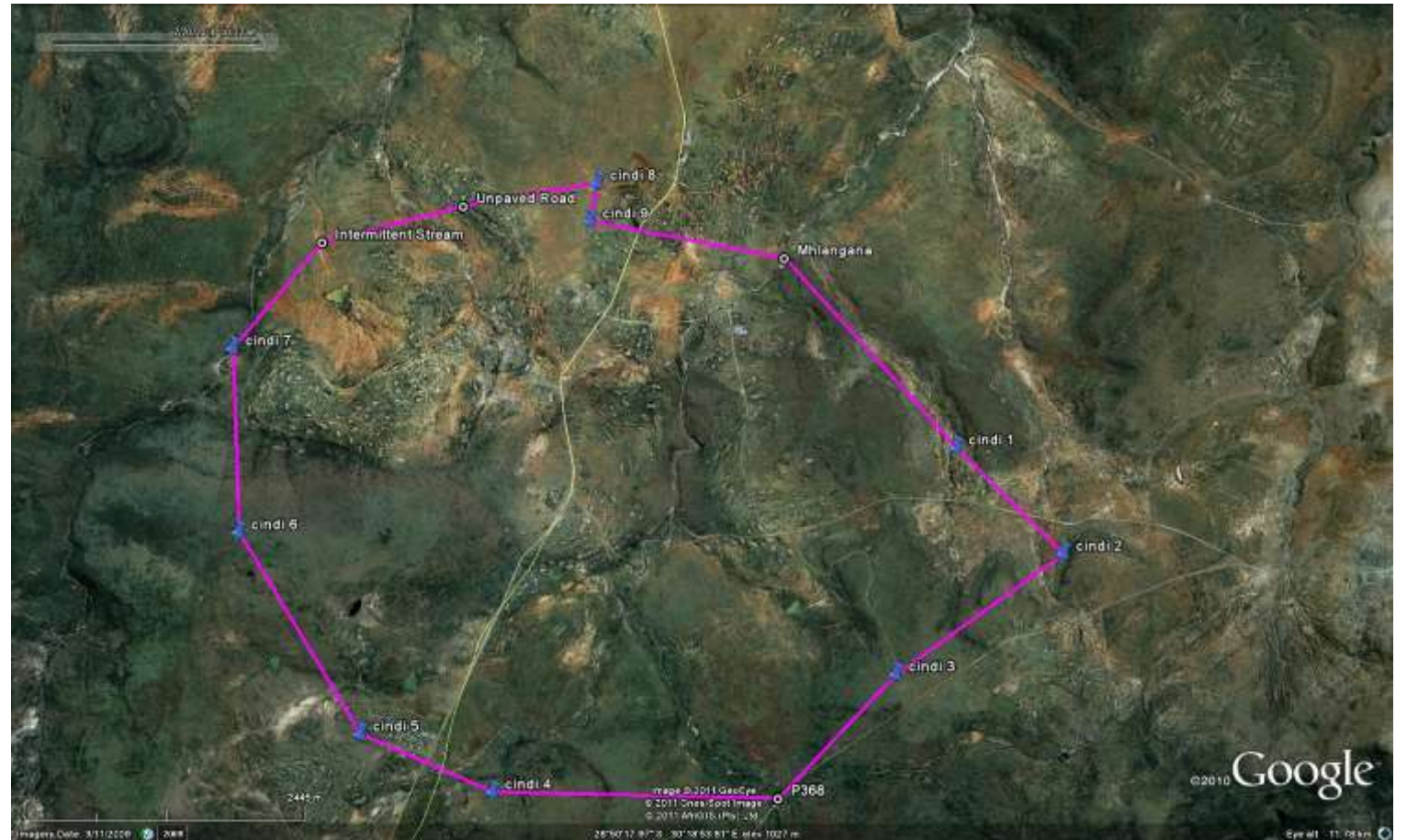
# What's happening with goats in Msinga

- Estimate that Msinga has 290 000 goats
- But as in most areas goat productivity is unknown
- No formal goat sales happen in Msinga –is it low productivity?
- Research supporting students who are answering some of these questions is ongoing



# Goat audits

The outer limits of  
dip tank communities are GPS'd  
The community inside these  
outside markers fills in a census  
that is followed up annually to  
track change and makro  
mortalities.





# Goat mobility

Goat movements tracked in September 2012

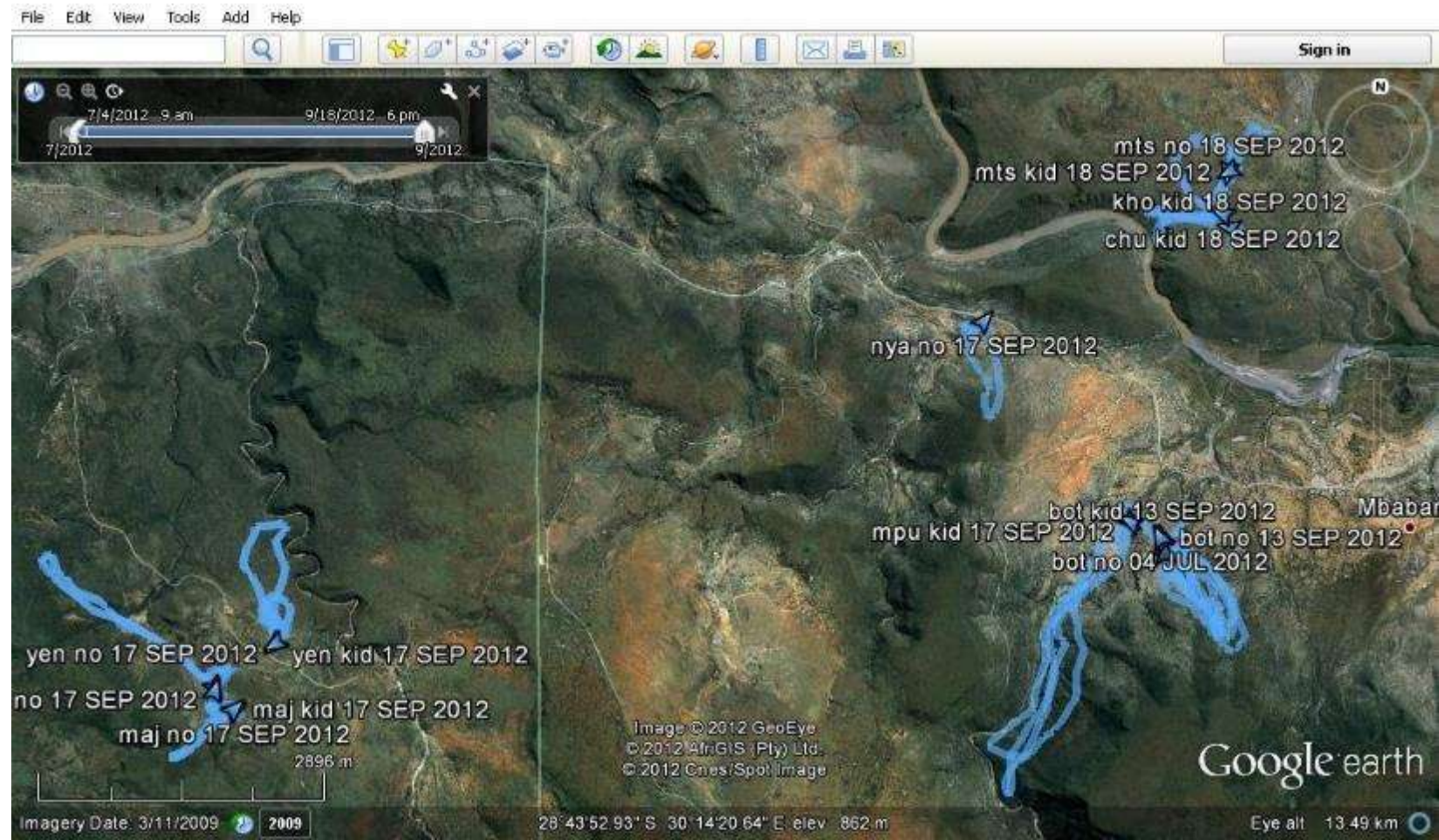
A: At Ngubo; Maximum distance from the kraal was approx. **600m**

B: At Ncunjane, Maximum distance from the kraal was approx. **2200m**

C: At Jolwayo, Maximum distance from the kraal was approx. **2800m**.

Note: This is not the actual distance travelled in a day. But the furthest point from the kraal that the goats reach while out foraging.

***Information from to Brigid Letty***

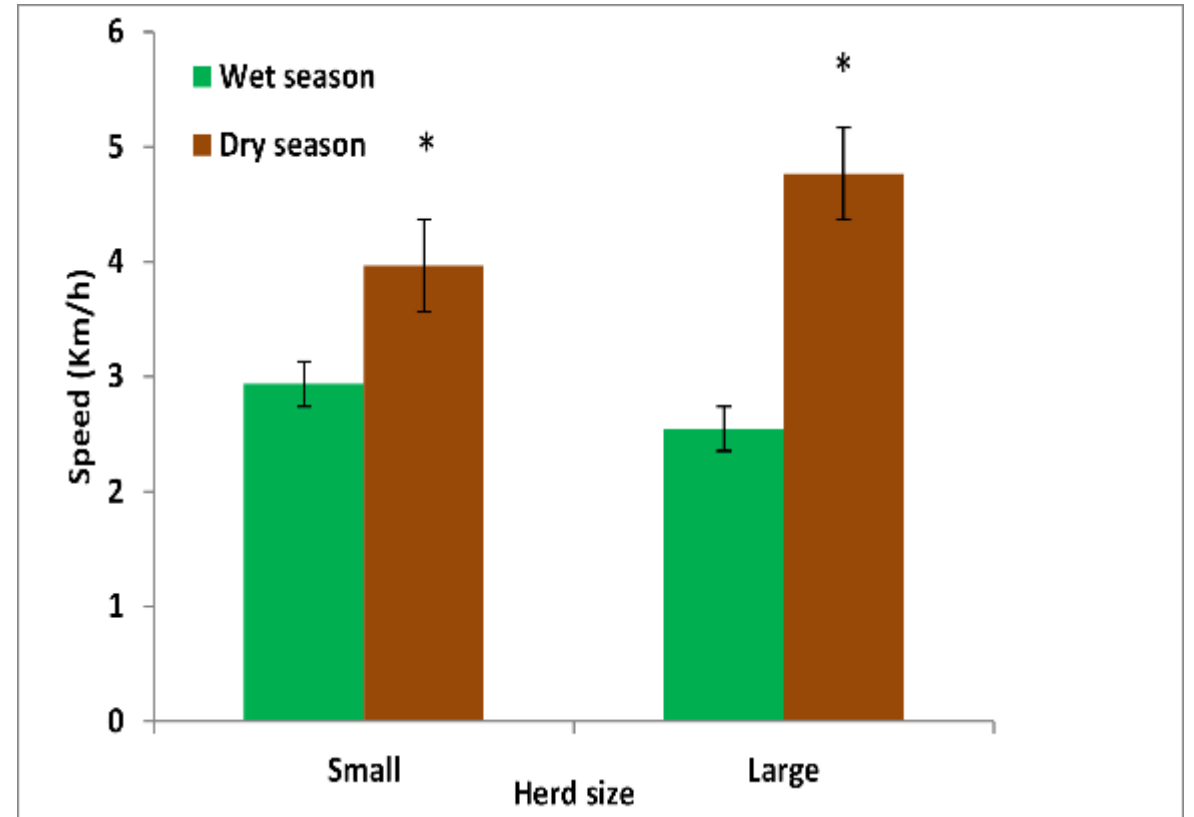
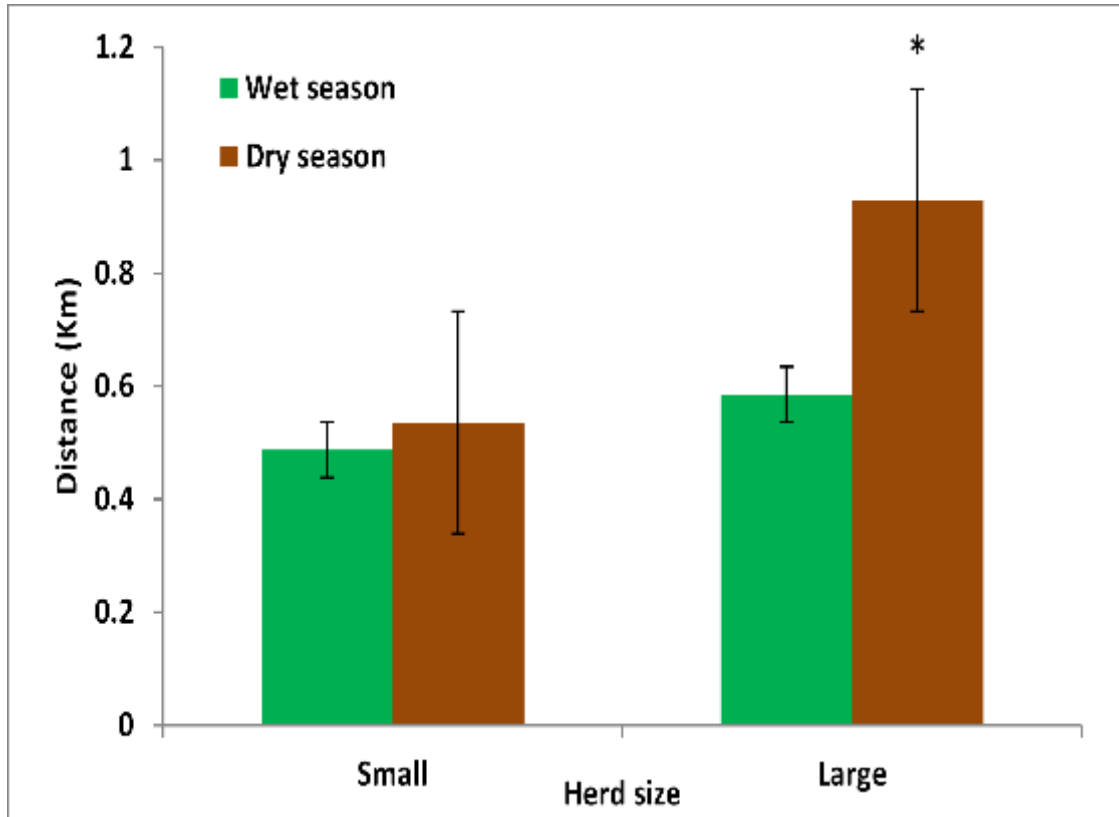




Mobility  
continued...



# Distance, speed and herd size



## Conclusion

...large herds made greater behavioural adjustments compared to smaller herds (i.e. feeding farther away from the kraal and travelling faster). This suggests greater costs to individuals living in human created large herds.

*Information Manqhai Kraai*



# What this means to projects and farmers

- Goats walk up to 6 kilometres a day – first out to graze circle back pick up kids and do smaller loop
- The bigger the herd the faster and further they all have to walk to get food – this is worse in winter
- Goat numbers are large and widespread but few big kraal numbers

**This means –**

- **don't fence them off**
- **Don't keep herds of more than 80 in a single place**
- **Smaller more numerous herds seem to have a better chance at efficiency**



## Productivity in Msinga goats

- Goat herds in three areas tracked with 12 individual farmers
- Differing vegetation and homestead density

Sites	Goats per area	Total females	Total kids	Female productivity (%)	Herd productivity (%)
Ncunjana	194	83	77	92.8	45.3
Jolwayo	366	197	159	83.8	46.2
Ngubo	195	58	18	31.0	9.3



## Productivity continued...

- Female reproductivity between 31-92%
- Theoretical goal for female productivity in a commercial system 160-180%
- Farmers aren't managing their herds and aren't strategically selling for an optimal herd (e.g. castrating certain numbers, culling, etc.)
- Interviews with farms blame too few rams, slow recovery from hunger spells and abortion
- **But...Huge potential for growth**



# Mortality

- Research by B Letty over two and a half years
- Kid mortalities are very high
- Including missing kids, losses are higher than 50%
- Mortalities expected in a commercial herd 10 -15 %

Mdukatshani/Letty records						
Days	Years	Kids born	Kid deaths	Kids missing	Tot kid losses	% Mortality
Total	Avg 2.65	984	394	55	449	45.6



## Herd composition

- African goat herds are complicated
- There is no modelling of productivity and herd composition if you breeding for castrates sold in year three which is where most farmers are aiming for

	Total AF Productivity (%)	Total Herd Productivity (%)	Kid mortality (%)
<b>Msinga</b>	<b>75</b>	<b>33</b>	<b>46 -50</b>
<b>Commercial</b>	<b>150- 180</b>	<b>150</b>	<b>10</b>

# Herd composition continued...the eish!!! part

Herd Composition Goal of 60 Average														
	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
Bucks	2		2		2		2		2		2		2	
Young uncastrated r	10		9		8		8		7		6		7	
Castrates	13		22		27		20		17		24		29	
Reproducing Female	27		26		26		25		25		24		24	
<b>Total (not including</b>	<b>60</b>		<b>59</b>		<b>63</b>		<b>55</b>		<b>52</b>		<b>57</b>		<b>61</b>	
Kids Male	19		19		19		18		18		18		17	
Kids Female	19		19		19		18		18		18		17	
<b>Total Including kids</b>	<b>99</b>		<b>97</b>		<b>100</b>		<b>91</b>		<b>87</b>		<b>92</b>		<b>96</b>	
<b>Sales</b>														
Bucks	0	R -	0	R -	0		0		0		2	R 3,000	0	
Young uncastrated r	4	R 4,800	4	R 4,272	3	R 3,951	3	R 3,744	3	R 3,599	2	R 2,743	3	R 3,158
Castrates	4	R 6,435	7	R 10,809	20	R 29,763	7	R 9,775	6	R 8,578	8	R 12,117	10	R 14,356
Culled Females	5	R 4,320	5	R 800	5	R 4,142	5	R 4,056	5	R 3,972	5	R 3,889	5	R 3,808
Kids Male	0	R -	0	R -	0	R -	0	R -	0	R -	0	R -	0	R -
Kids Female (1 year c	12	R 10,498	11	R 10,279	11	R 10,065	11	R 9,856	11	R 9,651	11	R 9,450	10	R 9,254
<b>Total Sales</b>	<b>25</b>	<b>R 26,053</b>	<b>27</b>	<b>R 26,160</b>	<b>39</b>	<b>R 47,922</b>	<b>26</b>	<b>R 27,432</b>	<b>24</b>	<b>R 25,799</b>	<b>28</b>	<b>R 31,200</b>	<b>27</b>	<b>R 30,576</b>



## In conclusion

- We have a huge goat population in our province
- If it was more productive we wouldn't need to import
- If it was even more productive we could start exporting
- There a lot of interesting questions out there
- The answers could change goat productivity for the province
- **Can we spark a market and trigger investment by farmers towards productivity**

**The market beckons...**

