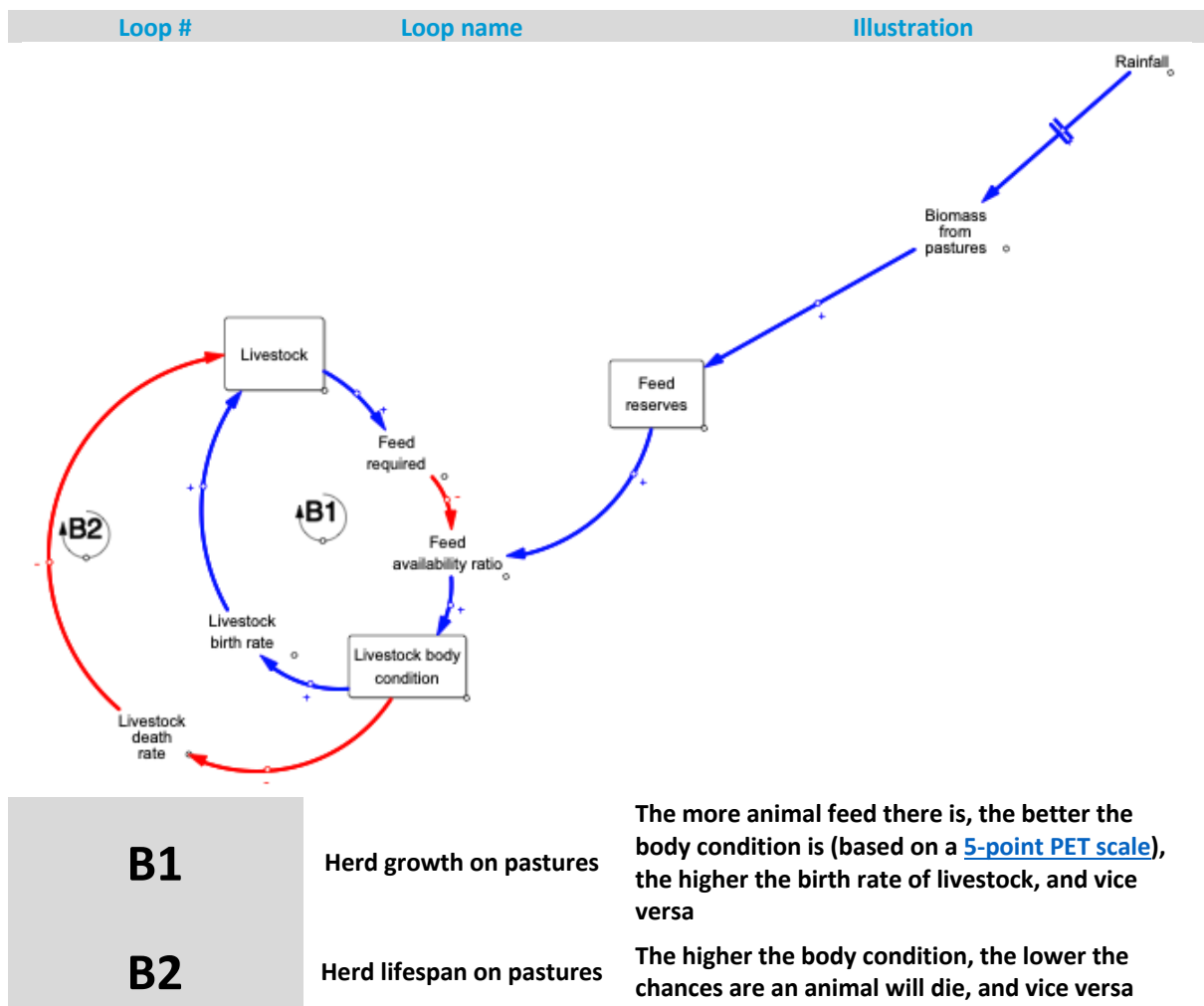
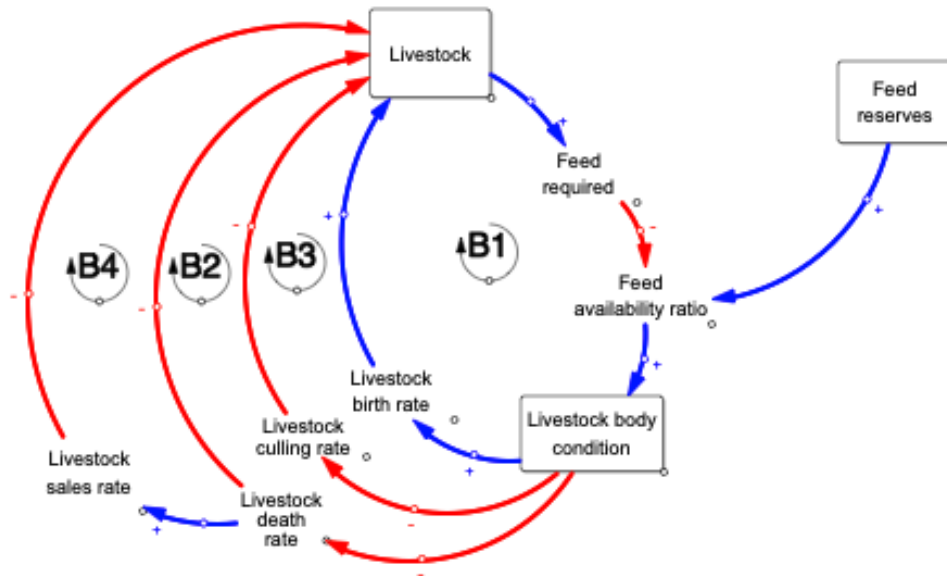


The Agropastoralist Policy Lab (ApPL): analyzing the impacts of drought on rural Somalia and its policy implications

Supplementary Material: CLD description

Keywords: WIP, Humanitarian dynamics, Food security, Resilience, livestock, Small-farmers, Quantitative modelling, Qualitative modelling, Policy analysis, Stochastic optimization





B3

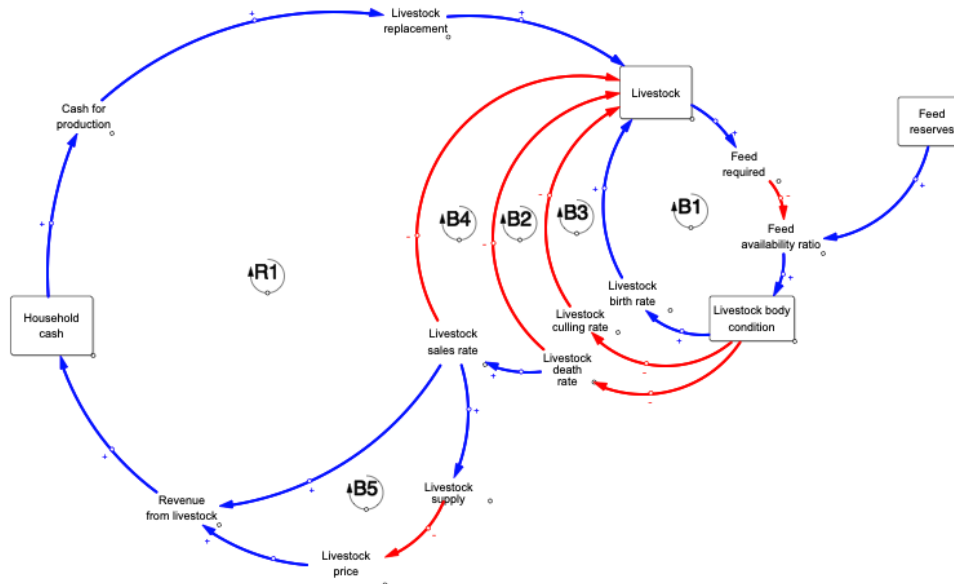
Culling

Households cull their unweaned youngstock when body condition declines. This reduces milk demand from unweaned youngstock, enabling households to sell more milk during drought times.

B4

Destocking

Households stress-sell their livestock when livestock death rate rises. It means households choose to sell more of their livestock rather than wait for them to die



R1

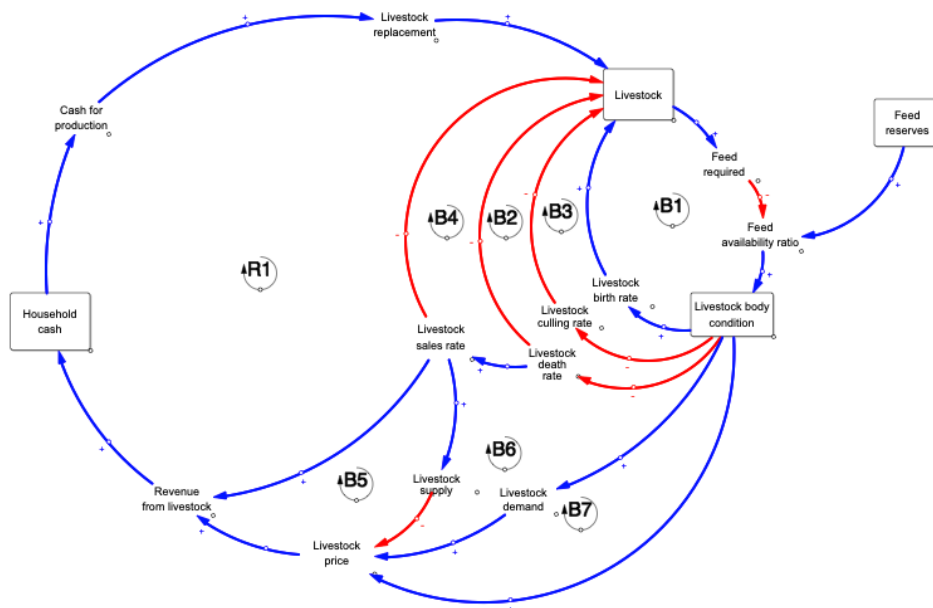
Replacing ageing livestock

This is primarily for buying female livestock to replace any mature females dying

B5

Livestock supply effect on price

The higher the supply of livestock in intermediate markets, the lower the price is, the lower cash for production is available. This reduces the number of livestock in the herd, thus reducing stress sale rate.



B6

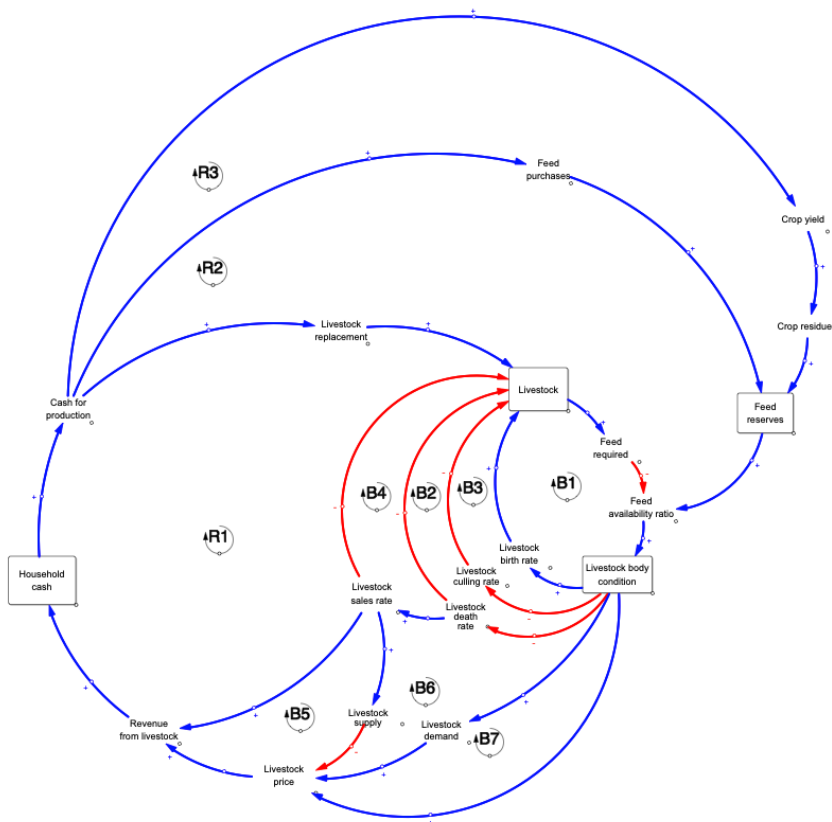
Livestock demand effect on price

B7

Body condition effect on price

Intermediaries are less likely to purchase low body condition livestock, thus demand usually drops when agropastoralists are destocking, and vice versa.

Lower body condition of livestock means it is sold for a lower price, and vice versa



R2

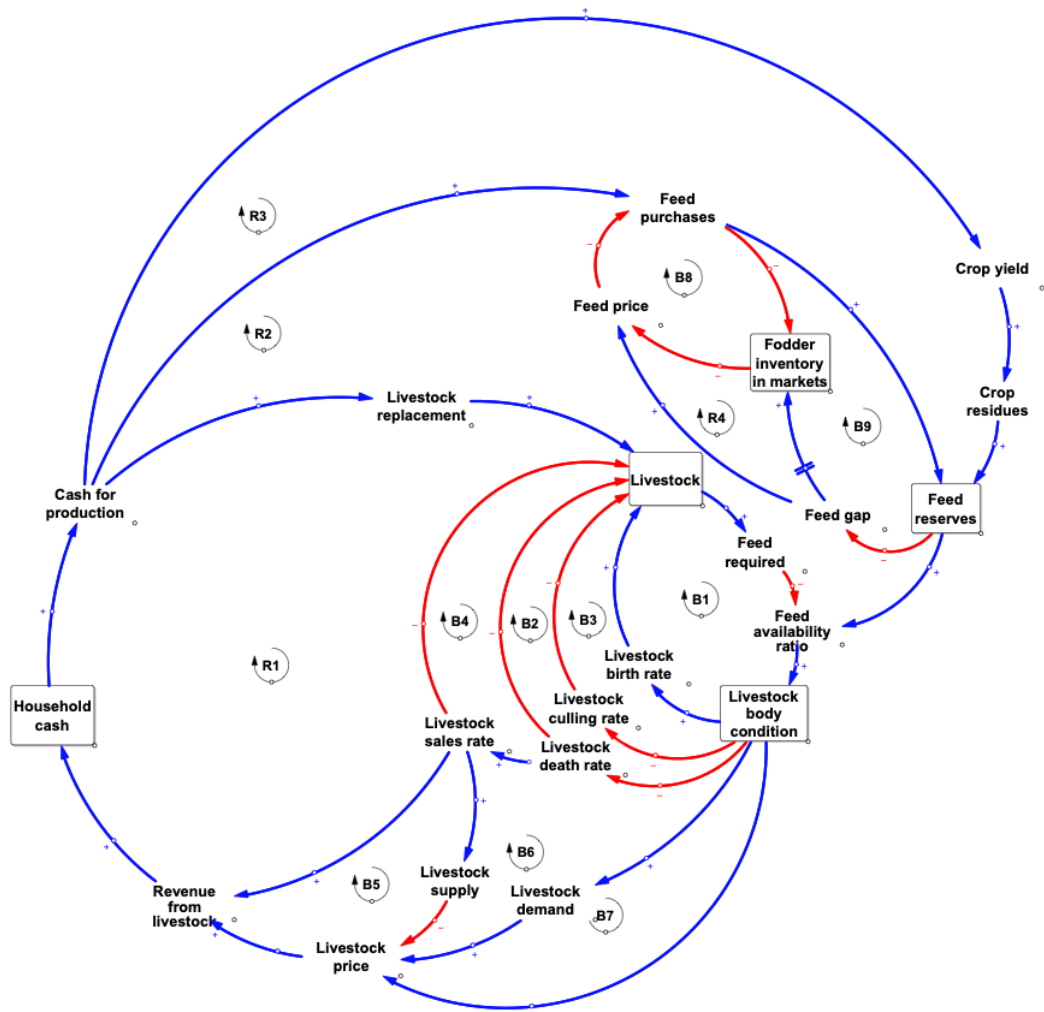
Alternative feed

Households can purchase fodder in the marketplace, subject to household cash resources as well as fodder price during drought (can go up to x5)

R3

Agricultural animal feed

Crop residues can be used to provide a source of animal feed for livestock, complementing rangelands



B8

Price effect on feed demand

The increase in demand for alternative feed results in the price of fodder increasing. This, in turn, reduces the ability of households to purchase feed per unit of cash.

B9

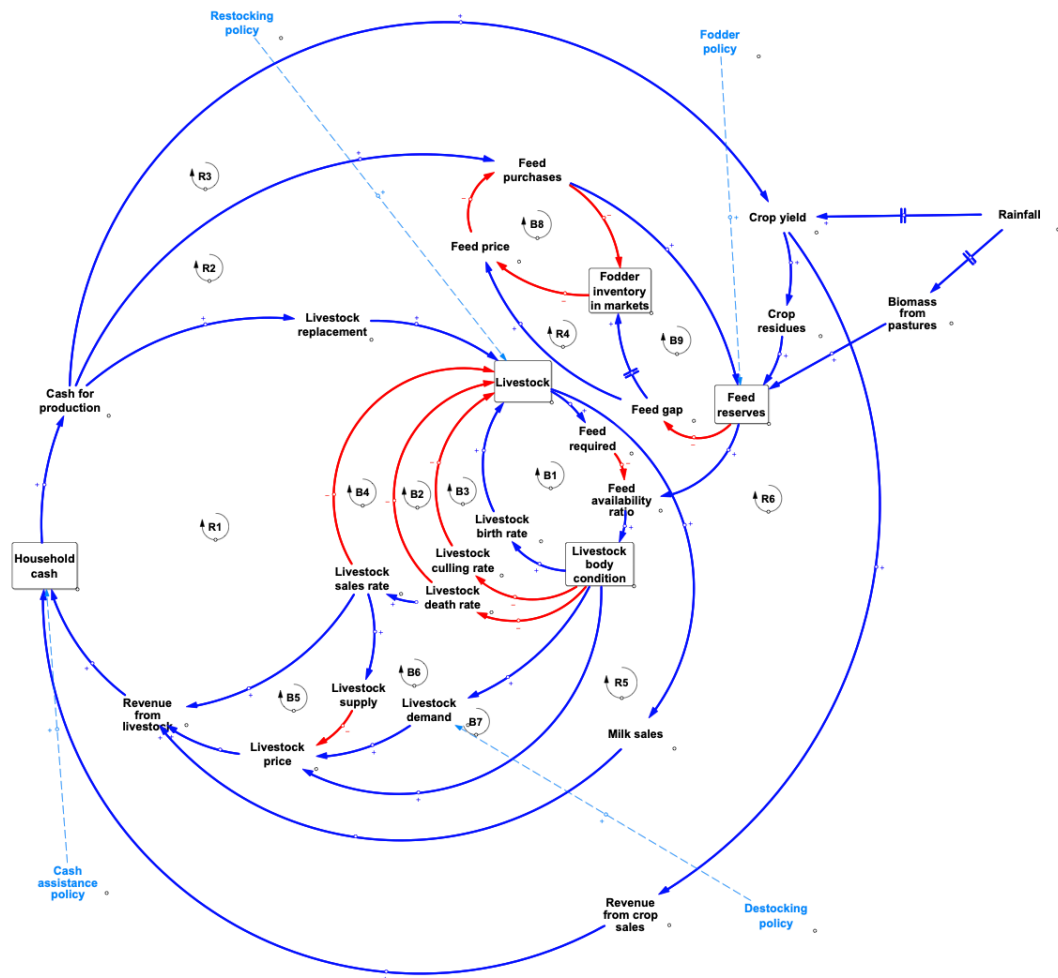
Supply capacity adjustment

The increase in feed reserves increases feed gap, signaling to the markets to adjust their inventories and vice versa.

R4

Effect of feed purchases on price

Markets adjust to changes in demand for fodder but at a delay. Increased supply reduces price which increases the fodder tonnage bought by agropastoralists per unit of cash.



P1

Cash assistance policy

Supporting households directly via cash transfers

P2

Fodder assistance policy

Supporting households directly by purchasing fodder and granting it to agropastoralists

P3

Destocking policy

Supporting households indirectly by providing cash for intermediaries to boost demand for livestock when households are destocking

P4

Restocking policy

Supporting households directly by providing them with livestock with the first rain after a drought season.