

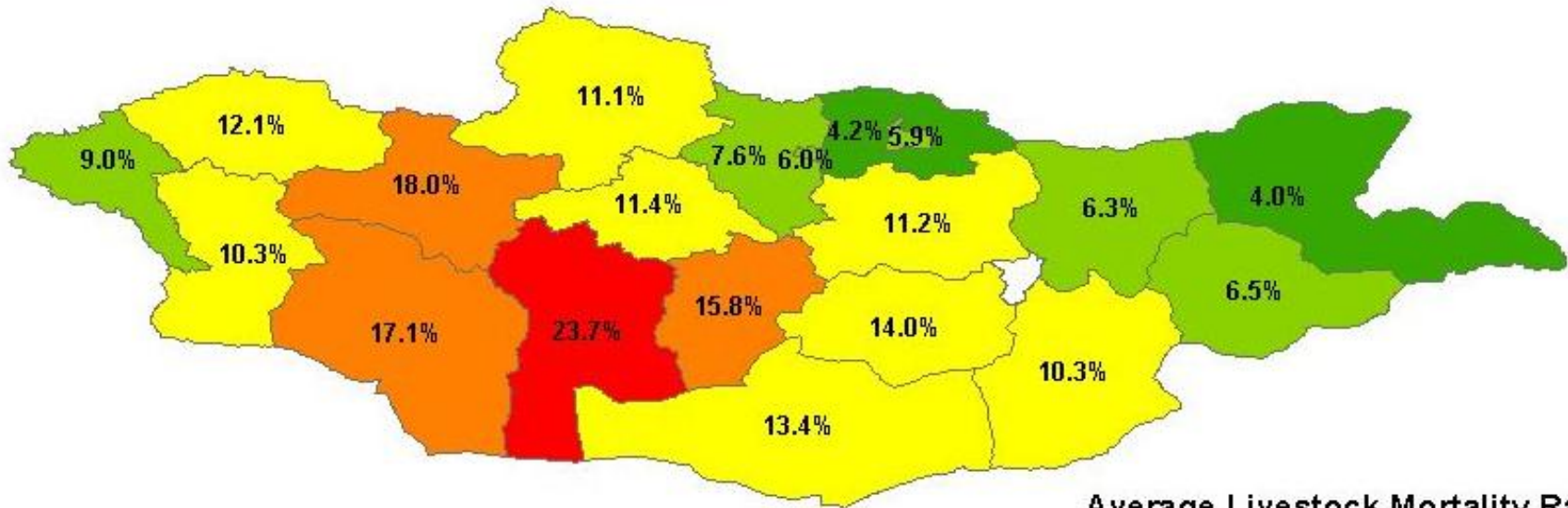
# Policy Proposals for Financing Livestock Risk in Mongolia

Prepared by GlobalAgRisk, Inc. under contract with FIRST Initiative  
and The World Bank:

# Livestock Losses in Mongolia have been a significant problem

- Major impact on rural livelihoods
- Disrupted both local and national economies
- 11 million adult animals lost between the years 2000-2002
- Nearly 50% of all cattle and yak died
- Economic losses exceeded US\$200 million during this period

# Average Mortality Rates 2000-2002



Average Livestock Mortality Rate, 2000-2002, by Aimag

percent mortality



# Potential Benefits of Financing Risk Before the Event

- GDP in Mongolia is roughly US \$ 1 Billion
- Losses for livestock over 3 years represented about 7% of the annual GDP.
- It is likely that the growth path on GDP was significantly negatively impacted by the events of 2000-2002.
- Getting structured cash to those who are damaged can mitigate some of these losses in the macro economy.

# Policy Goals

- A social solution for extreme and catastrophic livestock losses.
- A risk management solution for large livestock losses.
- Structured plans to finance large losses before they occur.
- Policies that promote good management practices for herders.

# Proposed Scheme: Risk Management Solution

- Base Insurance Product (BIP)
  - Sold by commercial insurance providers
  - Regulated by GoM (Government of Mongolia)
  - Index insurance based on sum-level animal mortality rates
  - Voluntary participation
  - Herders pay premiums to finance losses
- Maximum probable cost (a repeat of 2001) approaches 67 billion MNT with full participation. Given likely participation of 10%, these maximum probable cost approach 6.7 billion MNT

# Proposed Scheme: Social Solution

- Disaster Relief Program (DRP)
  - Free to herders who register their animals
  - Provides monetary compensation to herders when sum losses reach catastrophic level
  - Funded by GoM and international donors
- Maximum probable cost (repeat of 2001) approach 22 billion MNT if the losses could be fully paid and if there were 100 percent sign up for the benefit. Likely sign up is 50 percent; making the cost more affordable.

# The Technical Issues

- Why not traditional Insurance?
- What is the proposal for layering the risk?
- What is the role for government and the role for the market?
- How would the Base Insurance Product (BIP) work to pay herder losses?
- How would the Disaster Insurance Product be financed for the social risk?



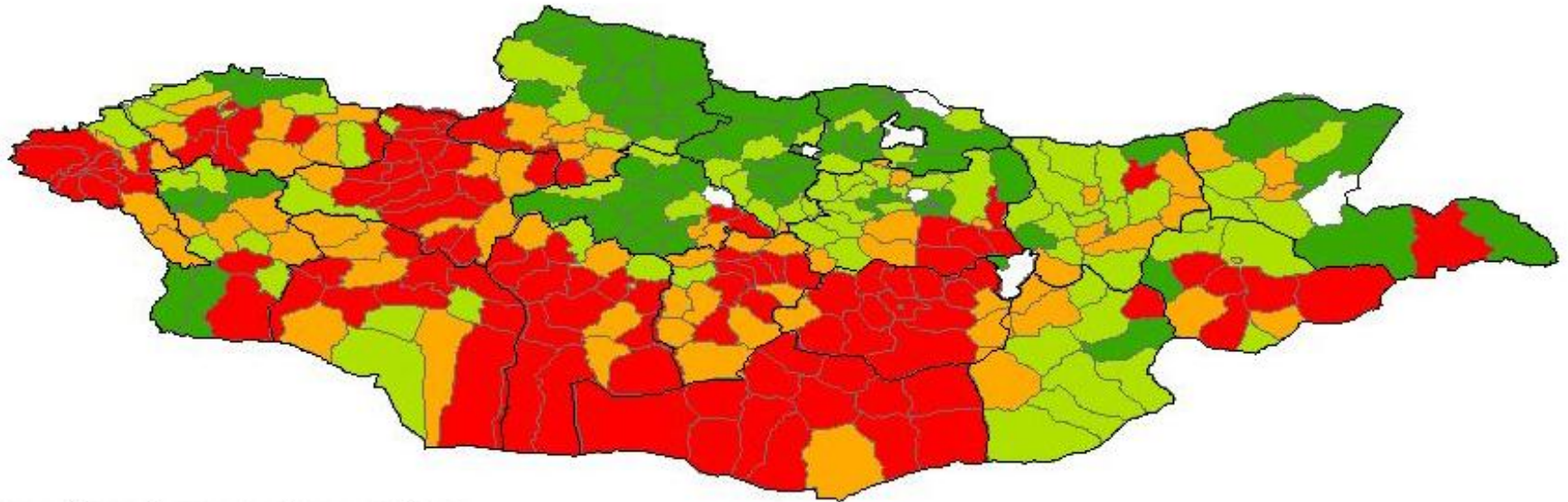
# Traditional Livestock Insurance is NOT the Solution for these problems

- Losses are highly correlated; financing these losses requires new thinking!
- Frequency/severity of risk is uncertain.
- Monitoring herders and giving the right incentives for mitigation of risk is critical.
  - High administrative costs for traditional insurance
  - Difficult to monitor individual behavior

# Index-Based Insurance is Recommended for the Unique Mongolian Setting

- Payments are based on a localized loss estimate, e.g. sum level livestock mortality rates
- Low administrative costs
- Encourages good management
- Facilitates expansion of financial services
- Supports dual objectives of *disaster mitigation* and *disaster financing*

# Sample of Different Premium Rates for Cattle and Yak



sum level premium rates

for cattle



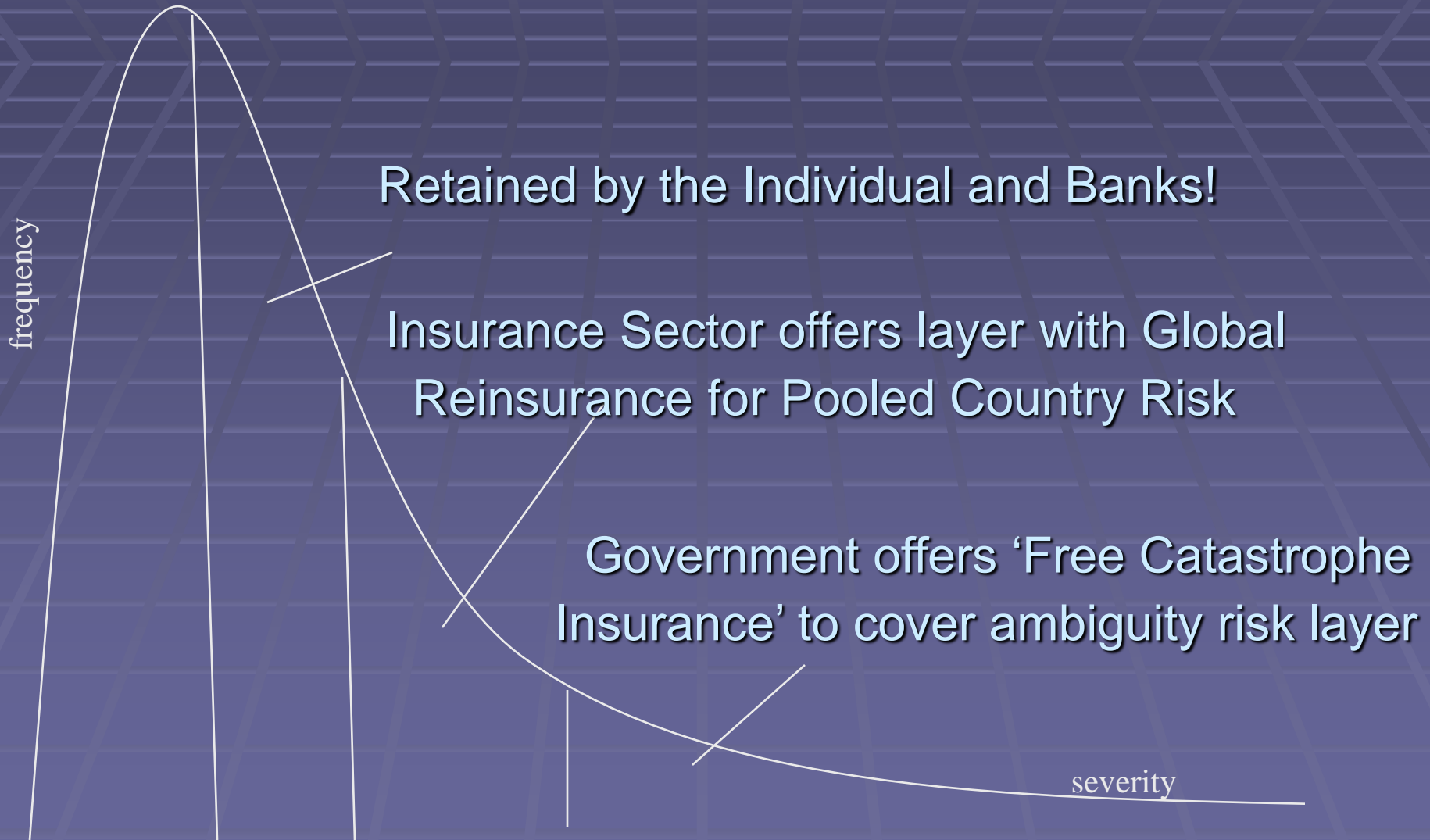
# Livestock Index Insurance Proposal

- Establishes a link between risk financing and mitigation
- Structure allows for ex ante disaster planning for improved disaster preparedness and response
- Complements work being done in areas of pasture/livestock management and rural finance

# Proposed Structure: Layers the Risk

- Losses  $< 10\%$  in sum: Retained by herders and banking activity of herders
- Losses  $\geq 10\%$  and  $\leq 30\%$  in sum: Paid by commercial sector based on premiums from herders and support from Government and international donors for extreme losses.
- Losses  $> 30\%$  in sum: Paid by government and broader international donor community

# Layering Risk for Effective Policy



# Proposed Scheme: Layers the Risk

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# Base Insurance Product (BIP)

- BIP would offer insurance coverage for species mortality rates between 10% and 30% by sum.
- BIP could be sold by insurance providers or banks
- Risk pool made up of Consortium of Market Providers.
- In the short term, extreme losses would be financed by the government with contingent loans from the World Bank and a share of premiums from the herders.



# Base Insurance Product (BIP)

- Payout = 0  
When mortality is less than 10%
- Payout rate = Actual mortality – 5%  
When mortality is between 10% -30%
- Payout rate = 30% - 5% , or 25% max  
When mortality is greater or equal to 30%
- Payout = Sum insured x payout rate

# Base Insurance Product (BIP)

## Example:

- Herder has 37 sheep valued at 27,000 Tg each. Value insured = 1,000,000 Tg
- If the mortality rate on adult sheep in his sum is 20 percent, the payout rate = 20 - 5 or 15 percent
- Payment = 15% x 1,000,000 = 150,000 Tg

# Disaster Relief Program (DRP)

- Losses covered by the BIP will stop at 30% to limit catastrophe exposure for the commercial sector.
- Government disaster program would begin making payments whenever sum losses exceed the cap
- If mortality rate  $>30\%$
- Payout rate = Mortality Rate – 25%

# Disaster Relief Program (DRP)

- Amount of payment would depend on available funds
- Distribution of payments would follow pre-determined guidelines
- Provides a system for structured, efficient disaster relief
- Funding for the DRP would come from GoM and International donors/charities

# Role of the Mongolian Govt.

- Livestock insurance regulation
- A sub agency within the agency responsible for financing the scheme would:
  - ✓ Maintain, report livestock statistics
  - ✓ Oversee implementation of BIP
  - ✓ Provide reinsurance coverage to consortium of market providers (CMP)
  - ✓ Structure, maintain and implement DRP

# Issues & Considerations

- Maintaining the integrity of reporting livestock mortality data and developing the Census of animals.
- Organizing ways that the design can facilitate new product development by insurance companies in Mongolia.
- Organizing the financing for major losses
- Developing enabling legislation that is flexible and letting regulations spell out details.