DRF for Agriculture and Climate Resilient Livelihoods

March 7th, 2024
Muldersdrift, South Africa

Session 13:

Institutional Arrangements for Agriculture Insurance

Mongolia Index Based Livestock Insurance Program – Case Study and lessons learned

Disaster Risk Financing & Insurance Program

SUPPORTED BY WORLD BANK GROUP

Mongolia’s livestock is a key part of the economy and highly vulnerable to winter storms (dzuds)

- Agricultural contribution to GDP was significant, but shifted due to economic diversification:
  - 13% of its GDP (2022), down from ~40% at its peak (1995)
- Livestock subsector dominates agriculture sector (87% of agriculture GDP):
  - employs 1 in 4 Mongolian workforce and supports half the population (3.5 m.)
- 5 species (number of animals as of 2023):
  - sheep (29.4 m.), goat (24.6 m.), horse (4.8 m.), cattle (5.3 m.), and camel (0.5 m.)
- Livestock vulnerable to a dzud (a Mongolian term for a severe winter marked by the huge loss of livestock)

Dzuds disasters in Mongolia

1944-45
8.76 m. animals, or **32.2% of national herd died**

1967–68
2.6 m. animals, or **11.9%** of the national herd died

1999–2002 successive
11 m. - one third of the national herd was lost, costing $200 m.

Increase in the **poverty rate** from approximately **30%** in 2000 to over **40%** in 2004

2010
Over 50% of herders affected by extreme weather, 75,000 herders lost more than half their livestock

Disaster Risk Financing & Insurance Program
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Source: World Bank ICR P088816; IMF Country Country Focus (2019), World Bank Development data, CDKN Global - Index-Based Mortality Livestock Insurance in Mongolia (2013)

The World Bank and Mongolia designed and piloted IBLI program to help herders cope with livestock mortality

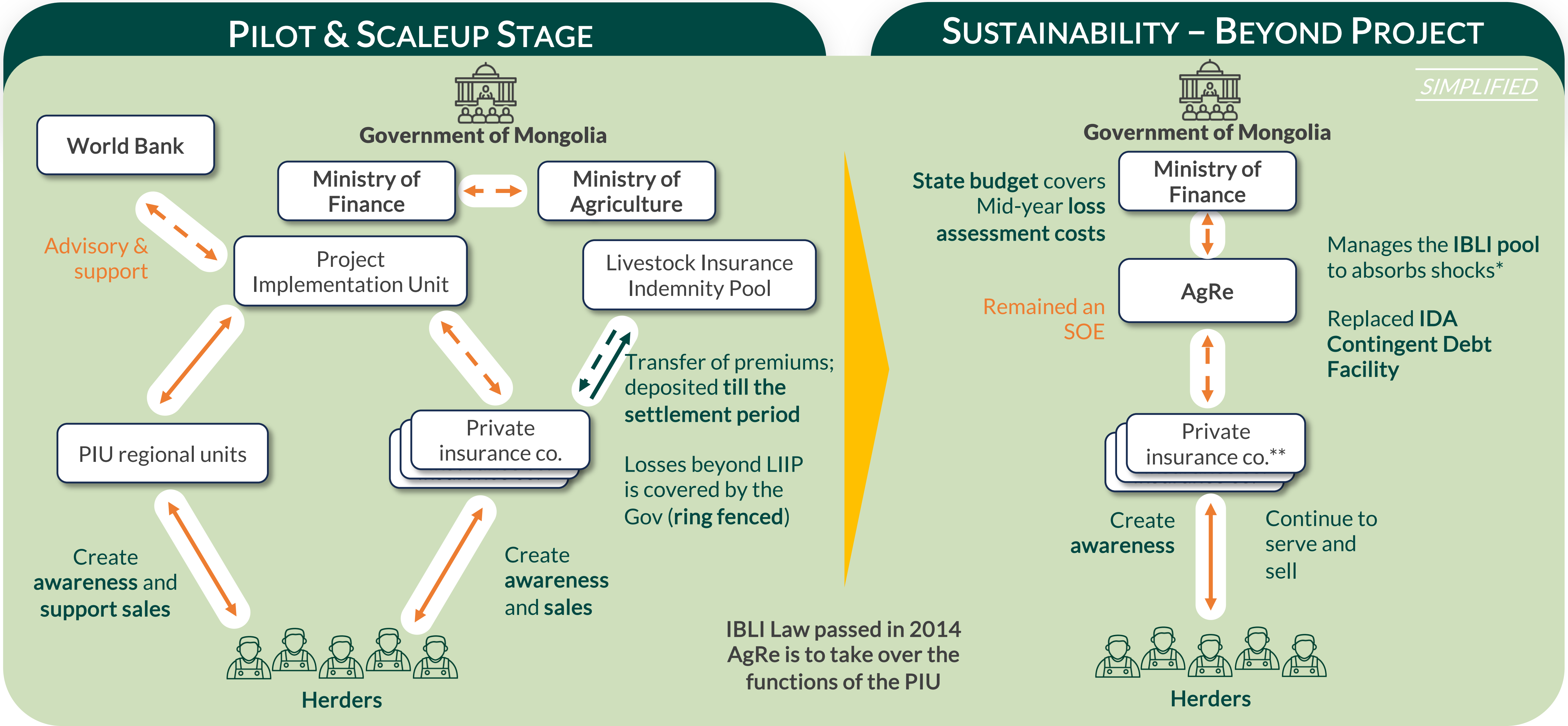
Challenge/ Problem

- **To create a market** that is substantial to adequately **pool risk** across a **small, sparsely populated population**
- Even where insurance is available, usually only **wealthier population segments can afford it**, increasing income disparity
- Insurance historically **faced** challenges including **moral hazard**, herders **lacked incentive** to minimize the impacts of dzuds due to government payouts based on their individual losses
- Government faced **significant contingent liability**

Solution / Intervention

- **Pilot and scale-up** the **Index-Based Livestock Insurance** (IBLI) Program
- Build **institutional capacity**, and legal framework **for** a **sustainable** Index-Based Livestock Insurance **Program**."
- Limit moral hazard through index-based livestock insurance, as **losses based not on** the **individual herder's losses** but **region's** (area = county called "soum") **livestock mortality**.
- **Balance risk retention and risk transfer** for affordability; Herders retain small losses that do not affect the viability of their livelihoods, while large losses are transferred to the private insurance industry, and only the **final layer** of **catastrophic losses** is **borne** by the **Government.**

Institutional arrangements



Note: *broadened its business scope in 2018 to include additional reinsurance lines of business such as property, motor, aviation, liability and personal accident, ** Two National Banks also offer the product

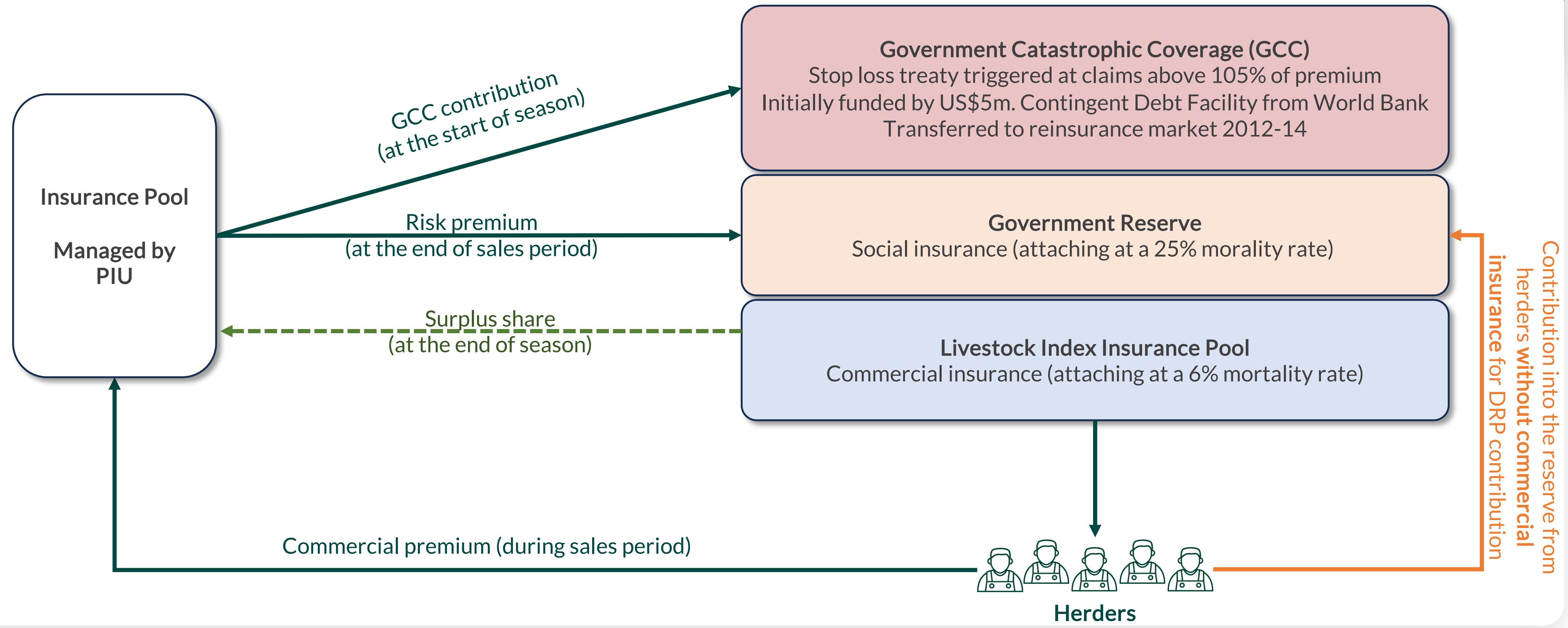
Product design and trigger mechanisms

Livestock loss	Type of response	Function
Below the trigger point (approximately < 6 %)	None	**Herders retain** livestock losses below the trigger point, which do not affect viability of their livelihoods
Trigger point (approximately +6%)	Livestock Risk Insurance (LRI) (replaced the Base Insurance Product (BIP))	• Herders **purchase** LRI for a premium **from private insurance** companies • Insurers pay claims when mortality rates meet the trigger point, • Trigger point is **viable financially** for **insurance companies**. • Premium is based on the risk, which depends on the species and location
Exhaustion point met (approximately > 30%)	Disaster Response Product (DRP) (replaced by the GCC during the 2009/2010 insurance cycle)	• **Government provided coverage to herders who purchased** the **BIP** or who just **purchased** the **DRP** and covered 100% of livestock losses greater than the exhaustion point • DRP was too **complex** and fiscally **unsustainable** hence discontinued
	Government Catastrophic Coverage (GCC)	• **GCC stops/caps losses** incurred by insurers at 105% of premiums, keeping the cost of insurance low • Demonstration effect created appetite and crowded in private international reinsurance market • **Only herders** who **purchased LRI policy** are covered • **GoM prearranged a Contingent Debt Facility** (CDF) from WB to finance this layer.

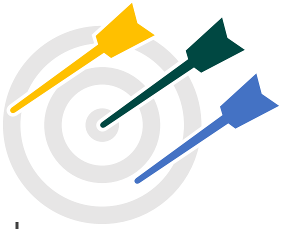
Source: Kate DeAngelis, World Resources Institute (2013)

IBLIP risk pooling to minimize the risk of insolvency among insurers, and risk layering to cost-effectively meet the cost of claims

RISK LAYERING APPROACH UNDER IBLIP



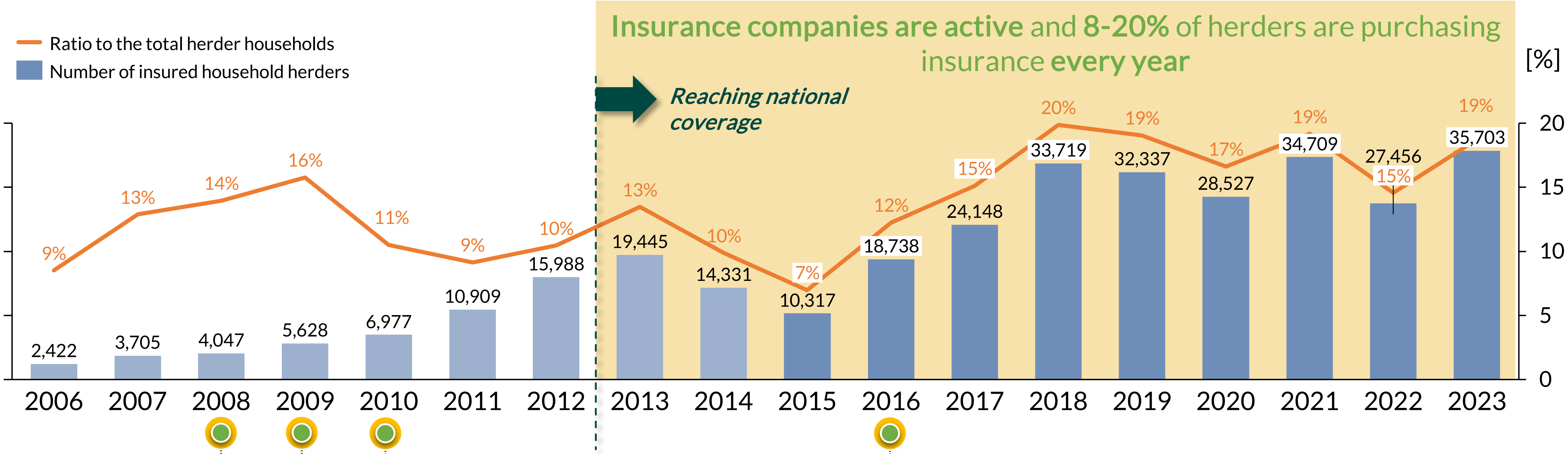
Project implementation had two phases, engaging diverse stakeholders, to ensure sustainable long-term success



	Developing and testing a pilot scale- up IBLI Program	Finalize and Scaling up nationwide Building institutional capacity & legal framework for sustainability of IBLIP
Government	• Livestock data collection • Program definition and pricing • PIU setup • Government commitment to disaster response product (DRP)	• Develop the legal and regulatory framework, IBLI Law, to foster scale-up • Replace disaster risk product to GCC and shift to a national program • Established AgRe, reinsurance company to replace PIU • Government committed to continue the DRP after the project
Insurance companies	• Seven insurance companies sold the base insurance product (BIP), contacted 68% of the herders in the pilot area • Provided 100% of the contractual payments to the Livestock Insurance Indemnity Pool and into the LRI reserves	• All seven insurance companies continued to sell BIP post-pilot • Two national banks also sell BIP
Herders	• The herders could make informed decisions on purchasing the BIP and DRP • 83% of herders were aware of product offering (50% face-to-face engagement) • 14% purchase of BIP	• 46% of herders were in contact with insurance agents (2010 start of the Nationwide program) • Some 8 - 20 % of herders now purchase IBLI products every year, according to monitoring reports

Source: World Bank ICR P088816

IBLIP helped the herders to respond to shocks better and faster



Payout of US$**340 k** to **1,783 herders**

Payout of **US$275 k** to **2,117 herders**

After insurance payouts herders who received a payout restocked a **larger number of livestock and more rapidly** than those without

Cumulatively, in 10 insurance cycles over 10 years, a total **93,700 herders** purchased index-based insurance, paying **US$405 m**. in premiums, and a total **16,545 herders** received payout of **US$160 m.**

Source: World Bank ICR P088816, AgRe Sales Report 2017; Data provided by Mongolian Re

IBLIP enhanced income levels and good behavior … + impact

Household level impact

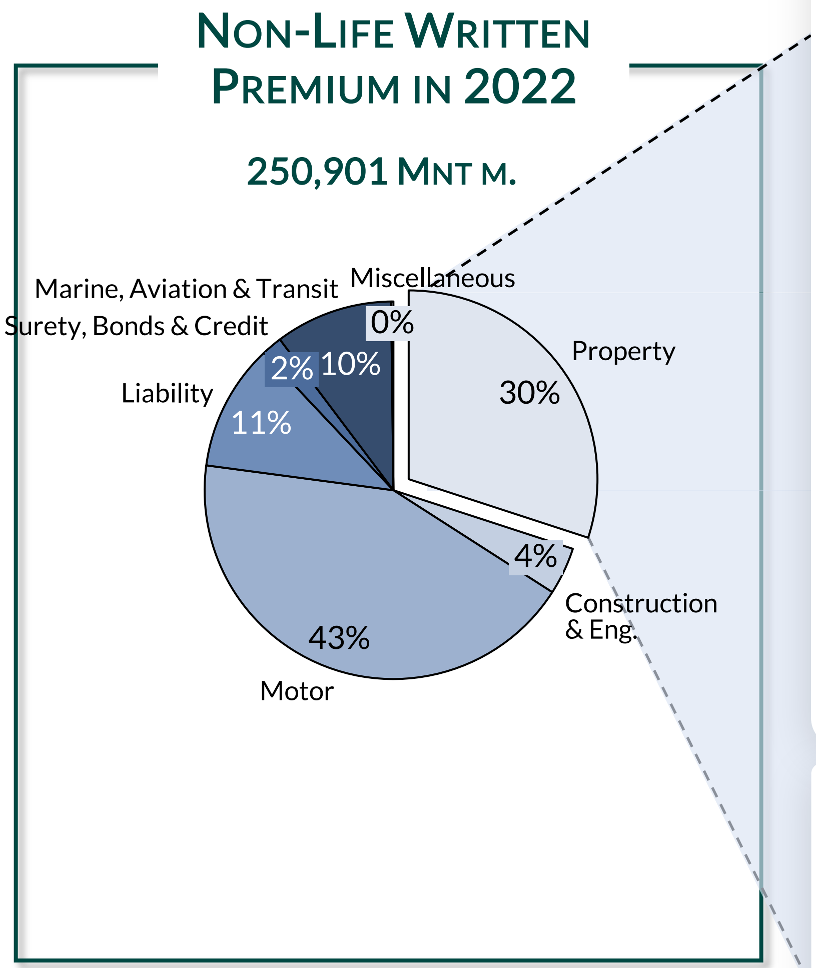
- **Net income increased** for insured herder between 7% to 4% in two assessed soums[1]
- **Improved risk management (reduced impact of livestock loss) and productivity;**
  - **Herd value is higher for** the **insured harder** than for the **uninsured herder** (i.e., 12-19% higher in Jargalant soum)
- The **benefits of** IBLI **payouts increase** with the **amount of coverage** herders choose for their livestock
- The **insured herder is less exposed to low incomes** than the uninsured herder[2], when 100% of the livestock value is insured

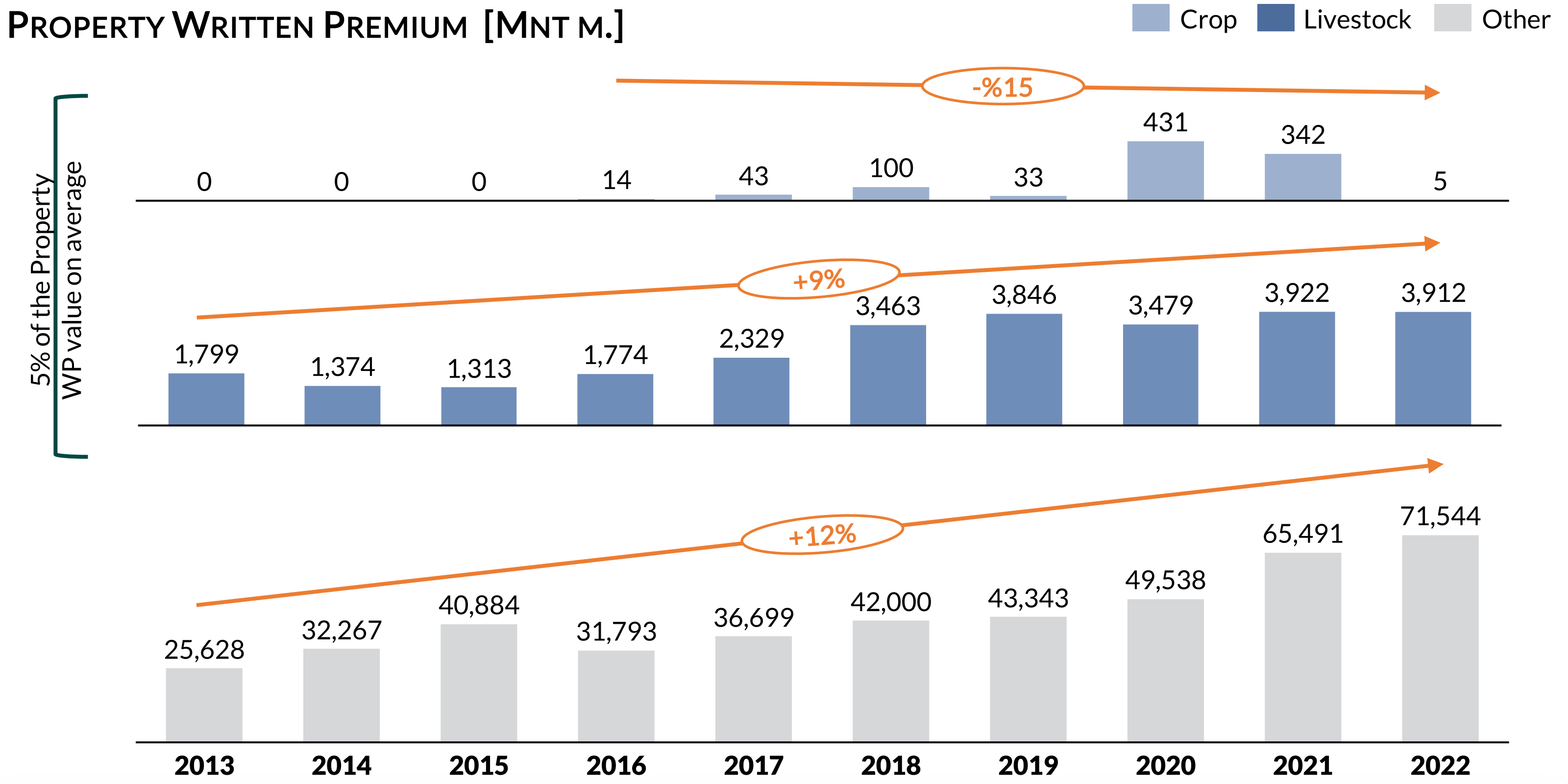
Insurance market development impact

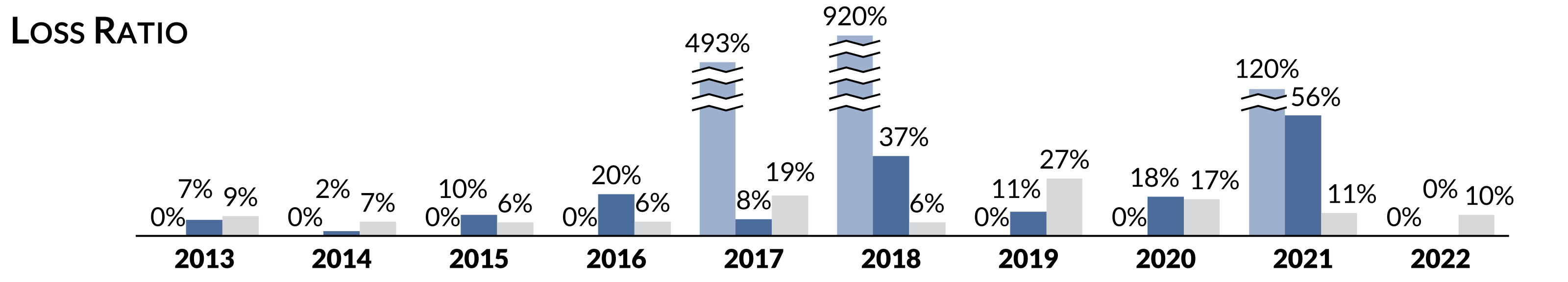
- **Sustainable non-subsidized national insurance market**
- **Agriculture Reinsurance** (**AgRe**) **Co. evolved into a sustainable** multi-line reinsurer
- Mongolian Re (AgRe) assets have grown by **128% (43% in $US value),** reaching MNT 60.3 billion ($US ~19 m.) **in 2022**, from MNT 26.4 billion ($US 13 m.) in 2015
- IBLI **total premium revenue** has grown for **25% in CAGR**[3] from 2006 to 2023, reaching MNT 4.9 billion ($US 1.4 m.)

Source: World Bank ICR P088816; Mongolian Re Annual Report 2022 , Mongolian Re shared data on IBLI, World Bank staff interview with Mongolia Re representatives
Note: 1) 7%, 6%, and 4% for a 30%, 50%, and 100% animal value coverage level in Jargalant and 5%, 6%, and 7% in Bumbugur soum; 2) 95-90% confidence level 3) Compound Annual Growth Rate

Mongolia's livestock insurance has grown into a stable market







CAGR

Lessons learned

Awareness of Consumers

Investing in IBLIP **promotion activities** as a **public good increased understanding, awareness** and **trust** by **herders** and was **essential for take-up** and achievement **of development objectives**

- **Failure to maintain awareness** and promotion due **to budget cuts** since end of the WB funded project has compromised uptake
- **Kazakh populations** in the western provinces effectively reached through relevant project materials **translated into Kazakh**
- **Use of local newspapers** and the **Governor's office** to **communicate effectively** and **monitor** progress

Domestic Market Development

- Project supported insurers **in building sales and distribution channel**
- Insurance regulator key **member of steering committee** and **licensed insurance agents** in the **countryside**
- **Productive study tours** to **create reinsurers' awareness** and **appetite** (Swiss Re and Scor, Hannover Re – including general reinsurance for other product lines)
- **Enabling environment through a quality assurance** mechanism, investment in **reliable time-series data system;** agriculture and national census offices capacitated to conduct national livestock survey, which was used more broadly for effective accounting and risk management
- Establishing a **legal** and **institutional framework** for the IBLIP to generate **trust in the IBLI products among herders and investment by the private insurance industry**

Lessons learned

Cost Management at different aspects

Risk layering helped ensure cost effective and sustainable solution

- **An IDA Contingent Credit Facility (CDF) provided catastrophe protection**. In 2005, a major dzud that led to the loss of 30 percent of the national herd triggered the payment of US$1.1 million. The CDF maintained the viability of the program when it was tested most severely
- **Retention** of low layer of risk **by herders** helped **ensure affordability**
- Implementation of risk reduction mechanism to prevent fund misuse: highly prescriptive development credit agreement that aimed to **contain the risk of any misuse of the project funds**
- **Loss assessment costs** are managed by the **National Statistical Office** and is covered through the **state budget**

Monitoring & Evaluation, and improvements

Robust M&E was implemented to **track progress** as well as **address implementation challenges and revision of product**

- The **baseline survey revealed** that **experienced herders were more reluctant** to alter their risk management strategies, and therefore less willing to buy IBLI products, resulting in **altering promotion strategy based on age**
- Low offtake among some minorities resulted in **using a different communication channel strategies** through the aimag's local newspaper, with **additional monitoring on performance** to the PIU

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Thank You

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5-8 March 2024
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