African Risk Capacity Insurance Company Limited

Covering 150m Africans by 2025
Building resilience of the agri-food supply chain
Closing the protection gap in Africa

PART 1
Background

- About ARC Ltd : developmental insurer

About ARC Ltd

Developmental Insurer

Developmental (re)insurance company of the African Risk Capacity, a specialized agency of the African Union

ARC Ltd is a Class 2 Bermuda Insurance Company owned by Class A Members (African states with an active policy) and Class C Member (DFID and KfW).

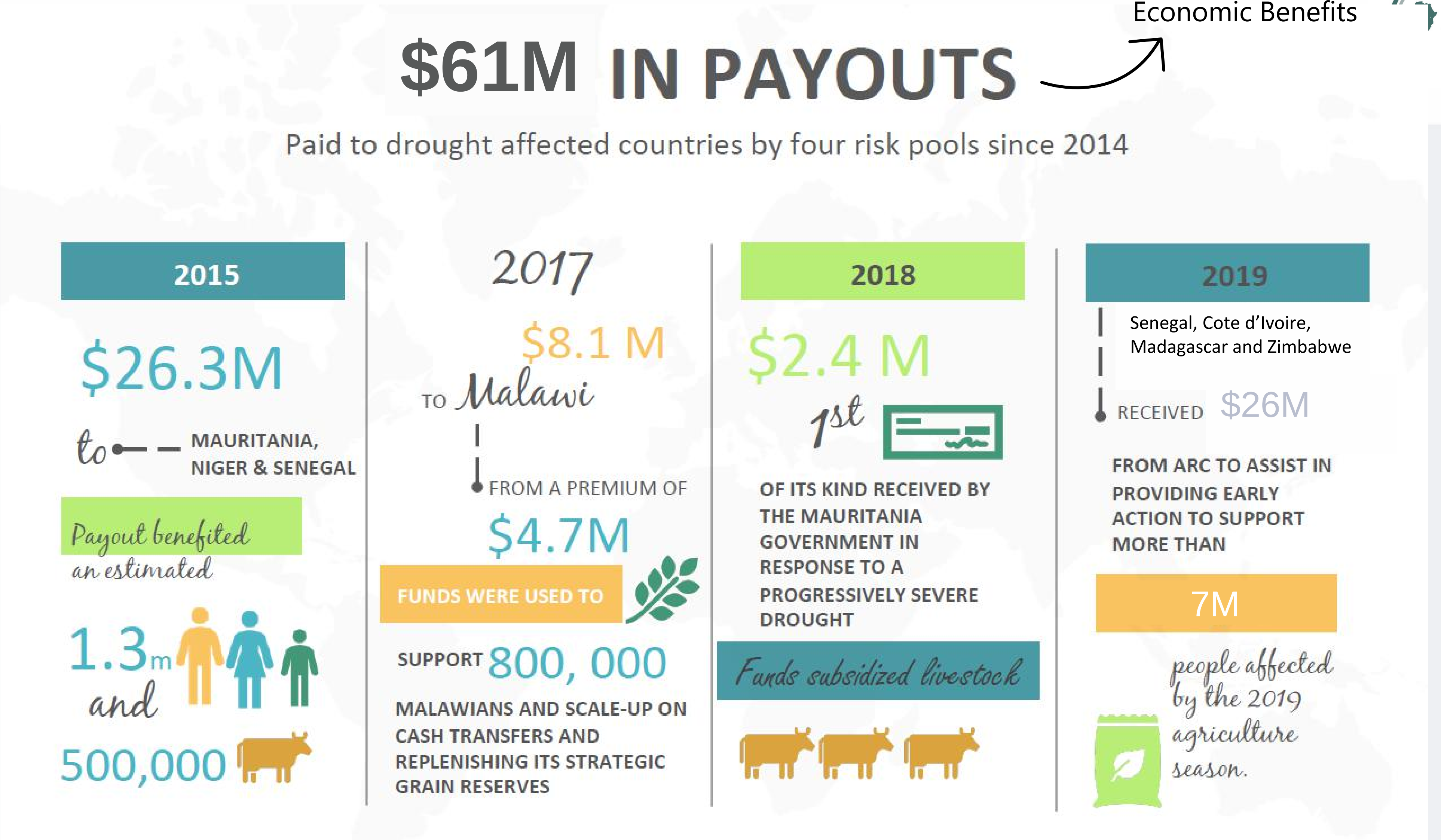
Established in 2014, it acts as a mutual (re)insurer whose with impact-driven KPIs include highly competitive premium pricing and effective payout mechanisms.

ARC paid to date, $61mn in claims to 7 countries in Africa resulting in estimated economic benefit of $250m due to the multiplying effect of early payout.

ARC Ltd operates in 34 African States with offices in Johannesburg

Fitch credit rating of BBB+

~$240m of
Economic Benefits



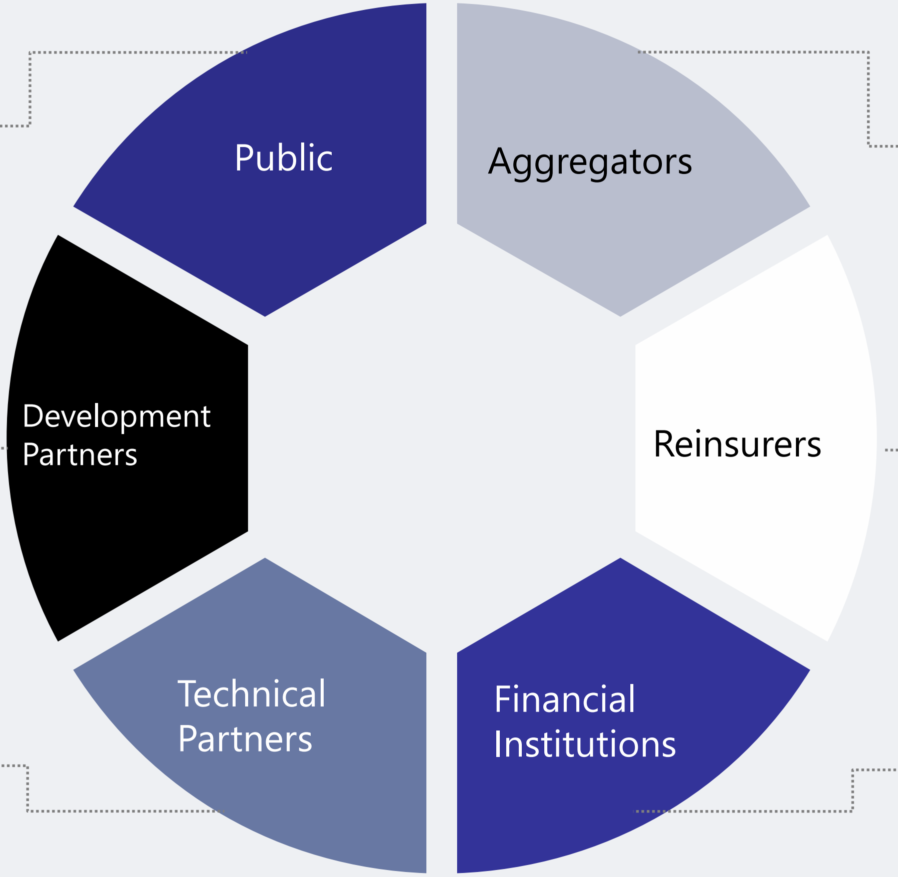
Partnerships

Our inclusive growth strategy

Promoting DRM and favorable regulatory environments by leveraging African Union links

Capitalising on political, financial and technical support from development partners

Developing and promoting parametric insurance



Expanding coverage through commercial and technical partnerships.

Developing contingent credit products and collateralisation.

PART 2

The problem

The Problem: Amplified Climatic Hazards adversely impacting Africa's Agricultural eco-systems

Increased climatic hazards

Driven by increased tendency of climatic hazards, African agricultural value chains (smallholder and commercial farmers) are highly vulnerable to such scenarios.

Adverse impact on agricultural productivity

Significant financial losses

Food insecurity

Technology usage

Agricultural protection gap

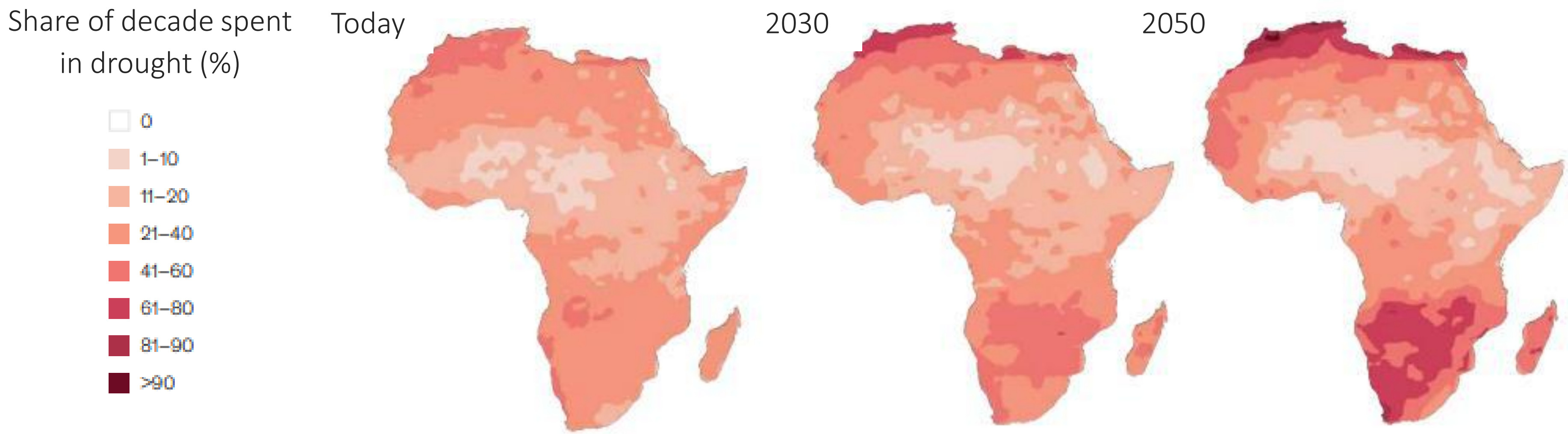
Lack of financial risk protection mechanisms and severe underinsurance, as Agricultural Insurance features negligible penetration levels.

Cost of Insurance and availability

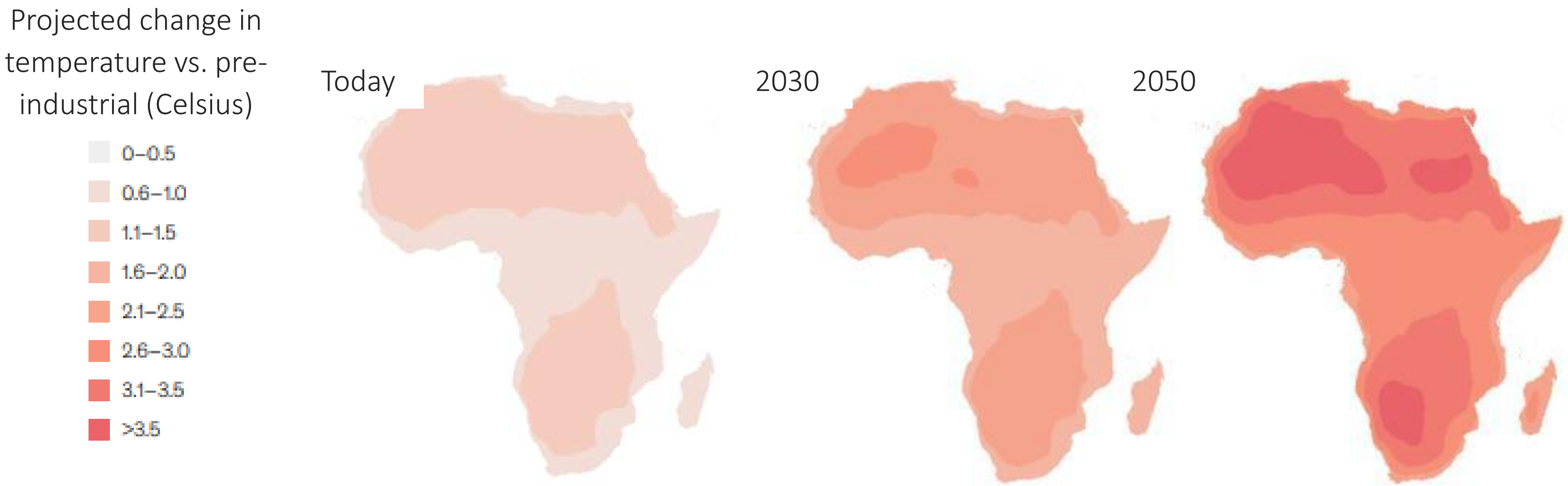
Insufficient availability of insurance products and inadequate pricing leaving

Severe Climate Variability in Africa

Higher chance of drought



Higher average temperature

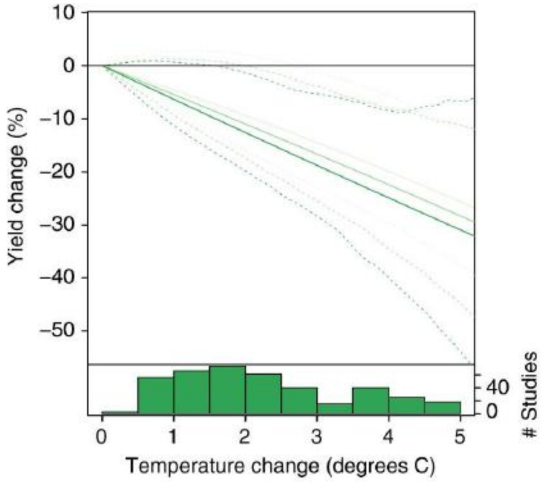


Source: McKinsey Global Institute, "Climate risk and response Physical hazards and socioeconomic impacts," January 2020.

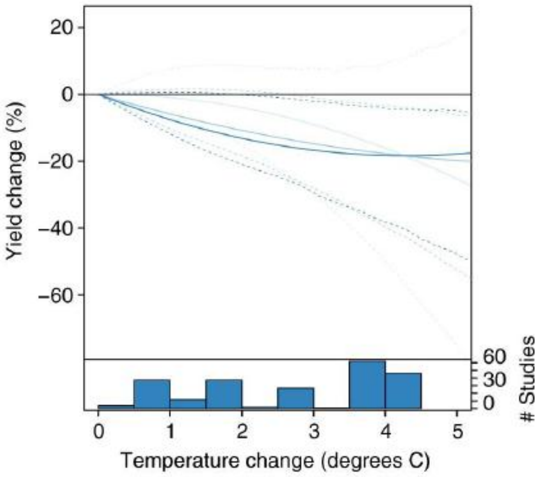
Climatic Hazards expect to Impair Crop Production in Africa

For all major staple crops – potential yield decline at 5 Celsius temperature change

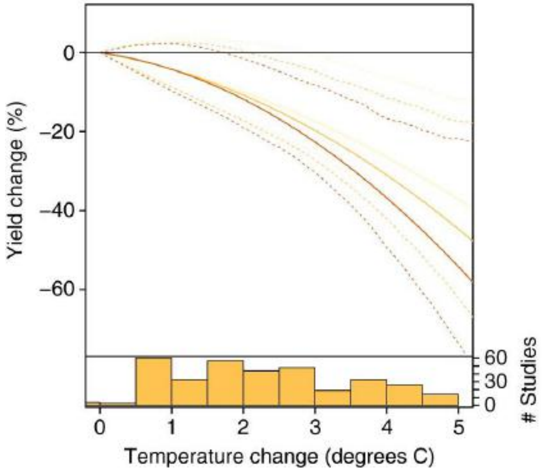
Maize: -30%



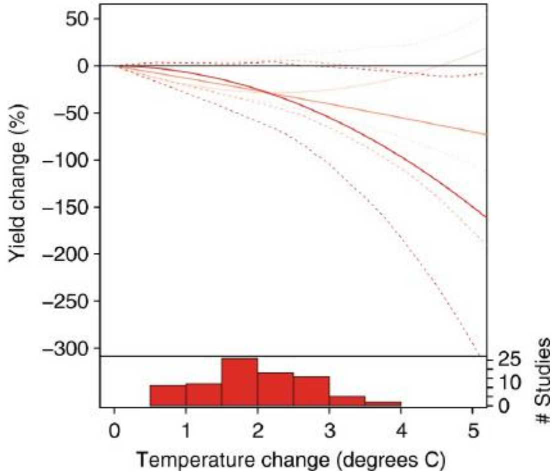
Rice: -20%



Wheat: -60%



Soy: -150%



Source: Nature Communications, “New science of climate change impacts on agriculture implies higher social cost of carbon,” November 2017.

Agri + insurance in Africa

Contributes 1/3 of GDP of continent

Source of Livelihood for around 770 Million people (2/3 of total population)

Employs 70% of the Africa’s total labor force.

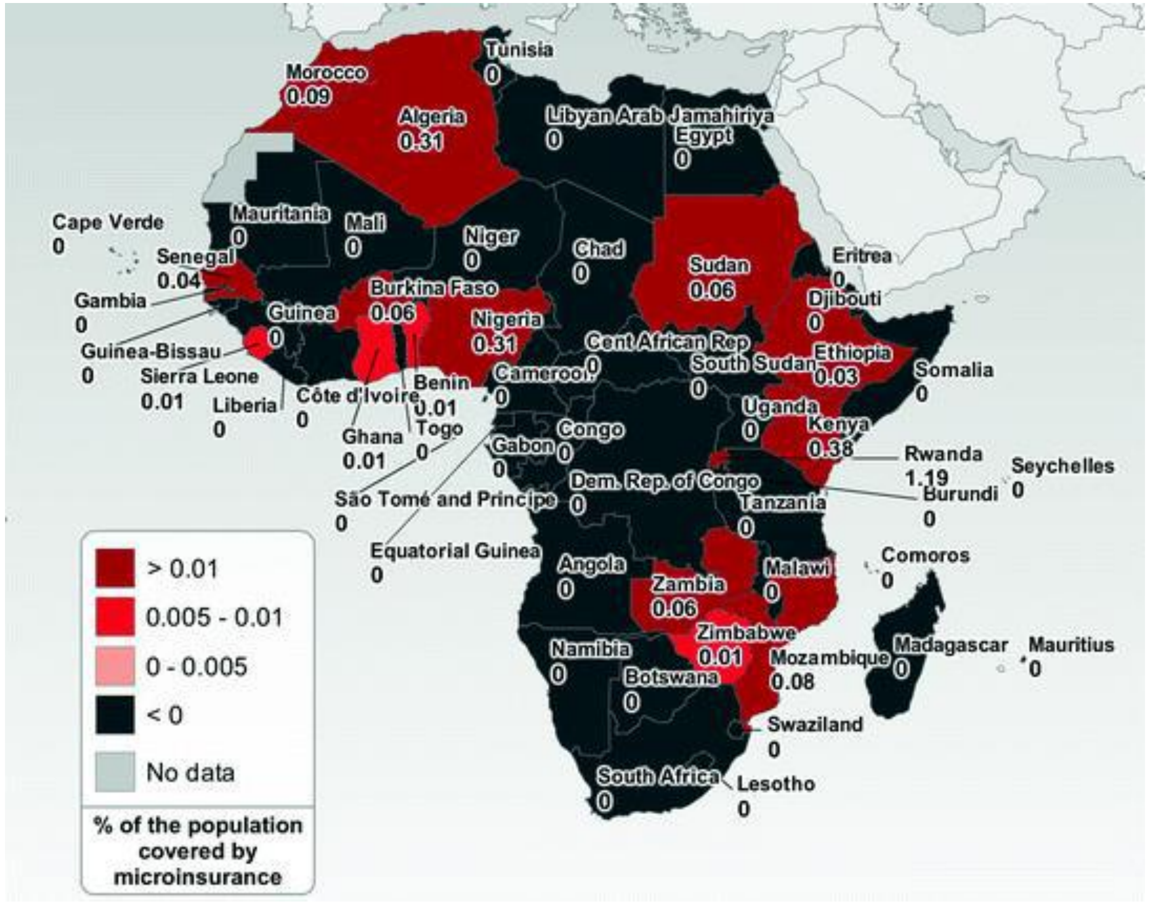
90% of output is from small-scale farmers.

Limited access to quality seeds and other inputs.

Bulk of sector rain-fed.

In Sub-Saharan Africa the number of small-holder farmers with insurance is less than 3%.

Africa has a potential of collection above US$ 1 billion.



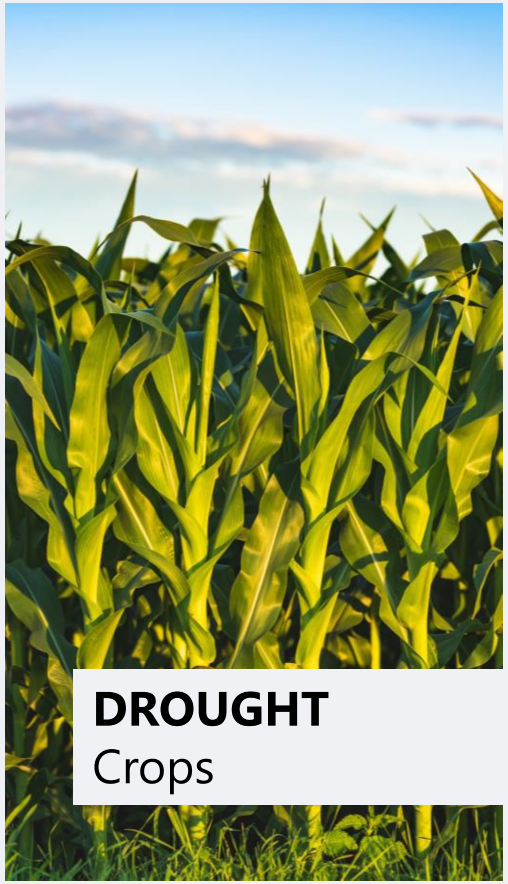
Source: Federica Di Marcantonio, “Review of Pilot Projects on Index-Based Insurance in Africa: Insights and Lessons Learned”, July 2017

PART 3
Our solutions

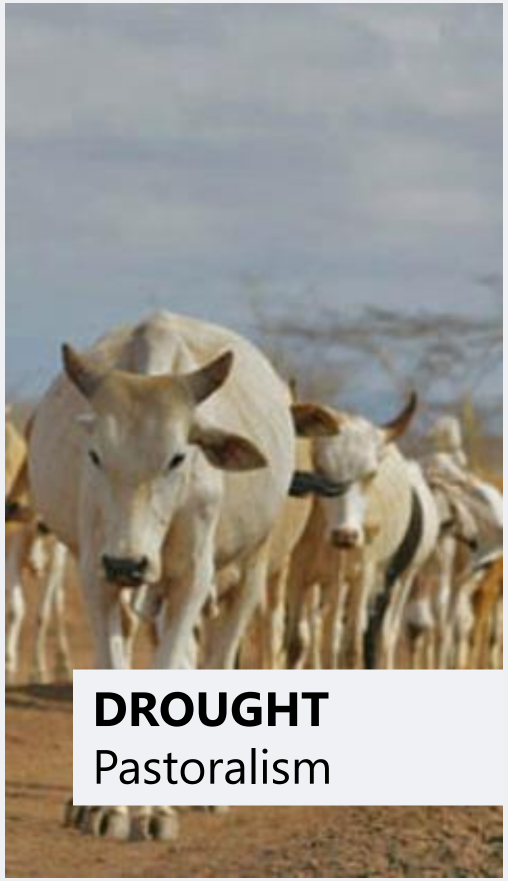
- Risks covered: weather based indices
- Macro level : Disaster Risk Management (DRM) with (sub)sovereigns
- Meso & Micro levels: working with risk aggregators
- Reinsurance & retrocession

Risks covered

Weather Based Indices

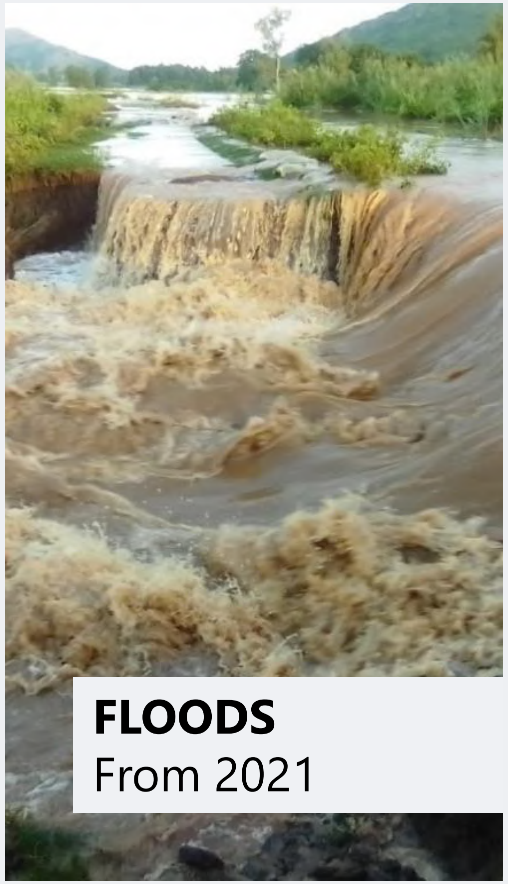


DROUGHT
Crops



DROUGHT
Pastoralism

TROPICAL CYCLONES



FLOODS
From 2021

Parametric Insurance
Characterized by;

Parametric Insurance is a type of insurance product where pay-outs are based on:

- **Characteristic of an event i.e. triggering event**
- **Certain pre-defined thresholds i.e. index**
- **Pre- agreed payout**

Parametric insurance

How does it work?

- Transparent and objective insurance that allows for better planning and budgeting
- Speedy payout provides additional time related benefits
- Low cost insurance for expansive market coverage

Phase 01
Define a coverage based on predefined parameter and pre-agreed payout

Phase 02
Monitor the parameter and whether it triggers a claim

Phase 03
If triggered by the parameter, a payout is made within a few days

ARC Parametric insurance
Before the season starts

Define an index

Index defined by ARC.

Define the risk-transfer parameters

Risk Transfer Parameters chosen by the client

Close the model

Policy signature
Premium payment

ARC Parametric insurance
During and at the end of the season

ARC Parametric Product
The Index

- ARC product based on a Water Requirement Satisfaction Index (WSRI), Developed by FAO

Rainfall data applied to reference crop characteristics as decided during customisation by Technical Working Groups in countries.

1. WRSI
2. Population affected
3. MDRC

ARC Parametric Product
The Index

2. Population Affected

WRSI is applied to socio-economic layers across the insured regions of the country to determine the amount of population affected.

3. MDRC: Modeled Drought Response Cost

Using Operations Plan developed by the country within the Contingency Planning requirements of ARC, the number of people affected is multiplied by the amount of Average Response Cost per Person to determine the MDRC.

WRSI — 2 Population affected — 3 MDRC

African Risk Capacity Insurance Company Limited

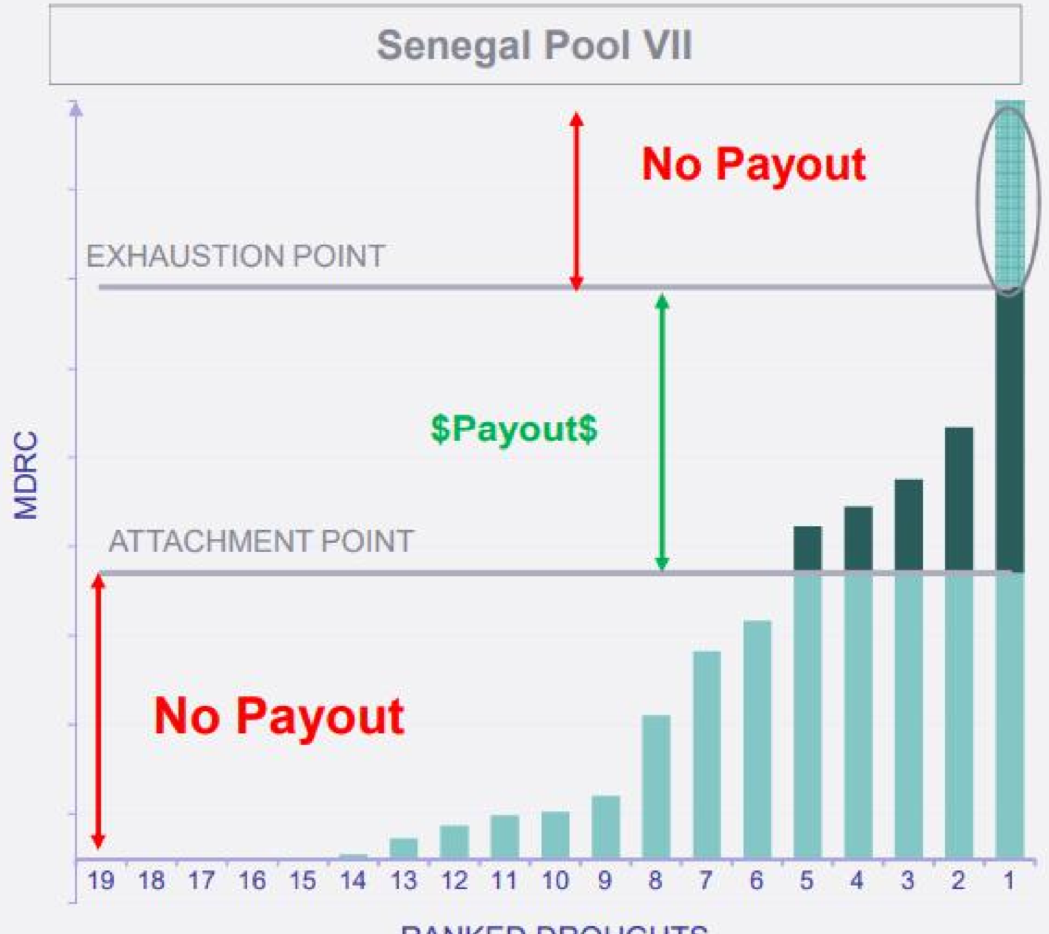
ARC Parametric Product
Risk Transfer Parameters

- The Attachment Point is the is the loss value at which the insurance policy begins to pay-out.

- It functions like a deductible/excess in a standard insurance policy. Losses below the attachment point would be absorbed by the country.

- The Exhaustion Point is the level at which the maximum pay-out under the policy is paid.

- Losses above the exhaustion point would be retained or absorbed by the respective Government.



Traditional Insurance vs Parametric Insurance

	Traditional Insurance	Parametric Insurance
Payment Trigger	Payment triggered by actual loss of or damage to a physical asset. *For example, a fire causing physical damage to your property resulting in a physical damage and business interruption loss.*	Payment triggered by event occurrence exceeding parametric threshold. *For example, an earthquake of minimum magnitude of 7.0 within a defined area.*
Recovery	Reimbursement of actual loss sustained. *For example, the assessment and claims investigation of actual loss sustained due to a fire.*	Pre-agreed payment structure based on event parameter or index value. *For example, increasing pay-out amounts with increasing earthquake magnitude.*
Term	Usually annual	Deals can be less than a year, annual or multi-year

Traditional Insurance vs Parametric Insurance

	Traditional Insurance	Parametric Insurance
Claims process – loss assessment and payment	Complex and based on loss adjuster assessment. *This can take months to several years depending on the complexity of the loss.*	Transparent, predictable, based on a parameter or index, quick settlement. There is no need for loss adjustment. *The only thing we need to establish or measure is the index we are covering. This is typically done by a third party agent – ARC agency is the third party agent*
Structure	Standard products and contract wordings; some customization *The level of customization for a traditional indemnity solution is usually limited as the insurer will still be working off of a standard industry wording.*	Customized product with high structuring flexibility. *A general "standard" wording does not exist as each of the structures will have a uniquely tailored index and pay-out structure. This is bespoke to each product.*

Traditional Insurance vs Parametric Insurance

	Traditional Insurance	Parametric Insurance
Basis Risk	Policy conditions, deductibles and exclusions. *Traditional policies often include significant deductibles and exclusions, which are an efficient instrument in conventional covers to align the interests of the insured and the insurer.* *This can however leave the insured party with a significant amount of retained risk.*	Correlation of chosen index, the pay-out, and the loss sustained. ***What is basis risk?*** *Basis risk is the risk that the trigger index does not perfectly correlate with the underlying risk exposure resulting in the client suffering a loss but the parametric insurance not being triggered.* *Whilst basis risk can never be fully eliminated when it comes to index based insurance, it can minimized by more sophisticated structures such as double trigger events or staggered pay-out structures.* *e.g. - tropical cyclone, having a partial pay out for lower category storms and progressively increasing pay out for stronger storms.*

PART 4

How we work with partners

Sovereign & sub-sovereigns

Public Disaster Risk Management

Sovereign
Sub-sovereign → ARC Ltd → Reinsurers

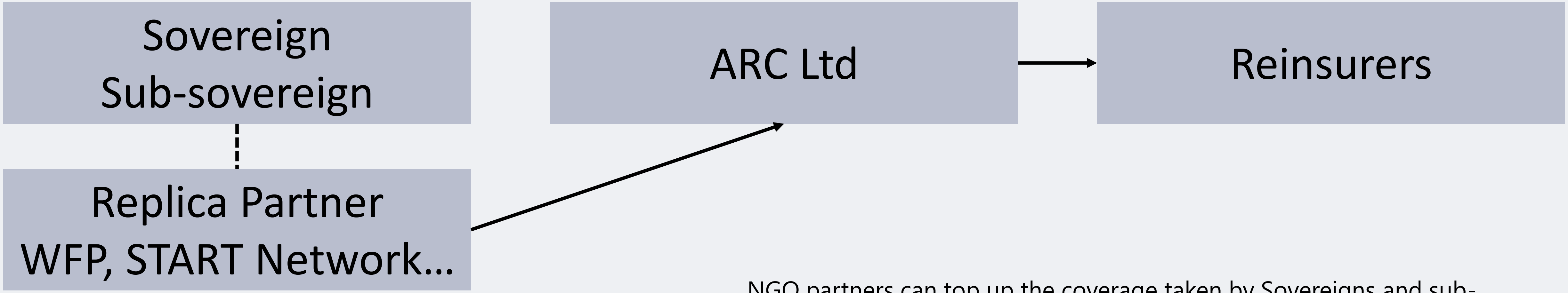
(sub)sovereigns customise risk models and choose risk-transfer parameters
in line with holistic Disaster Risk Management frameworks

Capacity building programme

Early warning use

Linked to contingency planning for speedy use of payouts

Integrating NGO funding

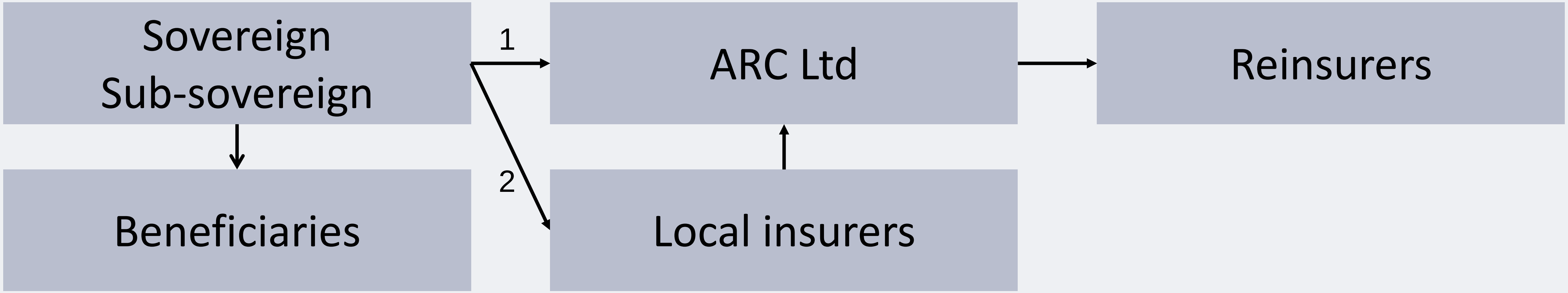


NGO partners can top up the coverage taken by Sovereigns and sub-sovereigns

Additional coverage based on the same risk-transfer parameters as the replicated policy

Contingency plans coordinated with (sub)sovereigns replicated

National Agriculture Insurance Schemes
Supporting local insurance growth

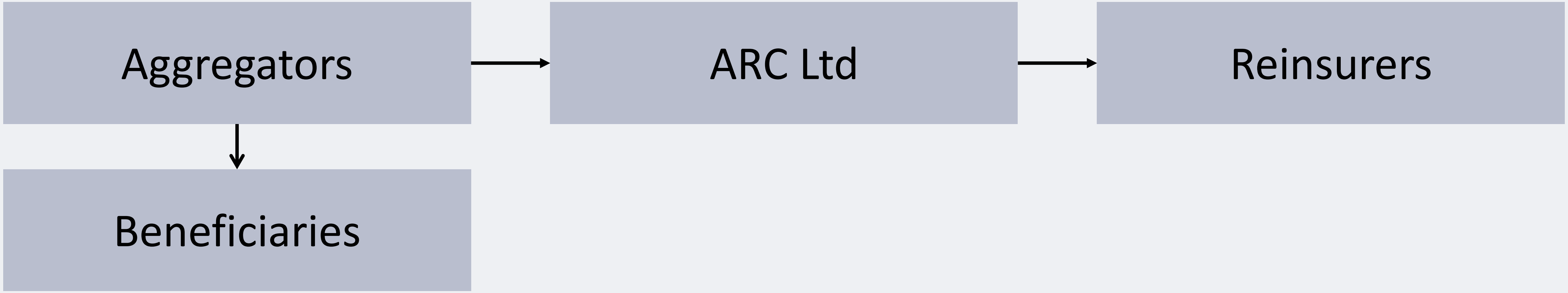


Technical advisory role

Risk transfer capacity as an insurer (1) or reinsurer of local insurers (2)

Aggregators

Providing access through the agri value chain



Increasing capacity of aggregators

Technical and technological collaboration for better service

Public Private Partnership opportunities

Beneficiaries may include:

- Smallholder farmers
- Seed companies
- Fertiliser companies
- Agricultural finance providers
- Government farmer input subsidy programmes
- NGOs

Reinsurance and retrocession

Leveraging strategic alliances

Underwriting on a basis of co-reinsurance and retrocession

Technical and commercial alliances with regional, continental and global reinsurers.

Holistic approach (values)

ARC Ltd has a Fitch credit rating of BBB+