Analysis to Action:
An Executive Education Program on Disaster Risk Finance in Africa

2 – 6 September 2019
Stellenbosch University
AGENDA

• Regional Risk Pools
• ARC Case Study
• Lessons for Policymakers
• Q&A
WHAT: Regional collaboration - cat risk pools

3 existing regional sovereign catastrophe risk pools
1 being established

WHY: Benefits of risk pools

1. Financial Products
2. Political Coordination
3. Public Goods
WHY: Benefits of risk pools

1. Financial Products
2. Political Coordination
3. Public Goods
WHAT NEXT: Regional facilities - Sharing more than risk

PCRAFI—Private Sector Window
helping domestic insurers access international reinsurance markets

CCRIF—New Insurance Products
excess rainfall insurance, fisheries insurance

SEADRIF— Different products for different countries
Household coping mechanisms

- Eat less preferred food
- Do other work
- Use savings and borrow
- Sell non-productive assets
- Reduce food intake
- Sell productive assets
- Climate-related migration (in-country, regional and international)

Risk Pools provide solutions to speed the response to natural disasters.
Risk Pools

Risk Pools provide solutions to speed the response to natural disasters.

**Through:** Innovative risk modelling and risk pooling and financing

**Provides:** Disbursing quick funds to government

**Allows:** Stability in social protection and focus on investments in agriculture for increased productivity and diversification
RISK POOLS SUPPORTING FINANCIAL RESILIENCE
How Risk Pools Are Structured

Country Ownership

Key Functions:
1. Capacity Building
2. Risk Taking

ARC Agency

Specialized Agency of the African Union
- Managed by Member States
- Provides Guidelines & Oversight
- Political Engagement
- Capacity Building
- Operational Monitoring

ARC Insurance Company Ltd

- Carries our ARC’s risk pooling and insurance functions
- Transfers risk to markets
- Other financial & asset management functions
- Established in Bermuda on an interim basis
Risk pools offer more services than just risk finance

ARC provides a three-pronged approach to management of climate risk by its Members:

**Early Warning** delivered through Africa RiskView, ARC’s inhouse early warning and modelling platform for drought risk

**Contingency Planning** through capacity building, peer review and standard setting, to drive effective preparedness for climate disasters

Access to Financing through **parametric insurance** which unlocks the liquidity necessary to implement early response (countries can elect not to purchase insurance but still benefit from Early Warning and Contingency Planning)
Engagement requirements

What does a country need to do to benefit from Disaster Risk Management from ARC?

- Ministry of *Foreign Affairs* signs a Memorandum of Understanding with ARC Agency (free of charge)

- Form multidisciplinary technical working groups (Finance, Social Welfare, Meteorological, Agriculture…) to:
  
    - Participate in training workshops
    - Identify and quantify the risk
    - Facilitate model customisation and prepare contingency planning.

- Access to *Africa RiskView* modelling and early warning platform
RISK POOLS
PROVIDING RISK FINANCING
Parametric / index insurance
Before the season starts

1. Define an index
2. Define the risk-transfer parameters (RTP)
3. Close the model

Policy signature
Premium payment
Parametric insurance during and at the end of the season

4
Season follow-up

5
Proceed to payout if index above trigger level

6a
Operations deployed in country

6b
Model performance review
Drought Index

WRSI:

WRSI: Water Requirement Satisfaction Index
Developed by FAO

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

1

WRSI

Population affected

MDRC
Drought Index Population Affected

WRSI is applied to socio-economic layers across the insured regions of the country to determine the amount of population affected.
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.
Drought timeline
Example in East and Southern Africa

Step 1.1 – RTP Workshops
Step 1.2 – Underwriting
Step 1.3 – Policy & invoice

Policy design & Issuance

Season monitoring

Payout & review
Step 3.1 – MDRC Report
Step 3.2 – Payout (?)
Step 3.3 – Season Review

Model Review

(Chart showing timeline with months from June to May)
Risk transfer parameters

WHAT ARE THE KEY PARAMETERS THAT NEED TO BE DETERMINED FOR AN INSURANCE POLICY?

- When would the insurance policy trigger a payout?
- What is the maximum payout possible?
- When would the policy trigger the maximum payout?
- How is the payout calculated?
- How much would the premium be?
Risk transfer parameters

Extreme Risk: High impact, low frequency
- Cat bond, World Bank
- CAT DDO, other?

Moderate Risk: Medium impact, medium frequency
- Donors, other?

Low impact, high frequency
- Contingency funds, budget reallocation, other?

No additional Payout

$Payout$

No Payout

EXHAUSTION POINT

ATTACHMENT POINT
ARC EXPERIENCE

Over $600m of coverage in 13 countries since 2014

- **$85m** Premiums
- **$36.8m** Payouts
- **2.2m** People assisted
- **900k** Livestock

**Coverage by Country**

<table>
<thead>
<tr>
<th>Country</th>
<th>Coverage Value USD</th>
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<tbody>
<tr>
<td>Senegal</td>
<td>$16.5m</td>
</tr>
<tr>
<td>Mauritania</td>
<td>$8.7m</td>
</tr>
<tr>
<td>Niger</td>
<td>$3.5m</td>
</tr>
<tr>
<td>Malawi</td>
<td>$8.1m</td>
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**Beneficiaries**

<table>
<thead>
<tr>
<th>Country</th>
<th>People</th>
<th>Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senegal</td>
<td>927,416</td>
<td>900,000</td>
</tr>
<tr>
<td>Mauritania</td>
<td>350,000</td>
<td></td>
</tr>
<tr>
<td>Niger</td>
<td>157,000</td>
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</tr>
<tr>
<td>Malawi</td>
<td>808,834</td>
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</tr>
</tbody>
</table>

- Targeted food distribution
- Subsidized sales of cattle feed
- Cash Transfer
- Conditional cash transfer and food distribution in drought-affected regions
HOW: Sovereign Risk Pools

10 Lessons for Policymakers on Risk Pools

Sovereign Climate and Disaster Risk Pooling World Bank Technical Contribution to the G20, 2017

1. Pools can only succeed with strong political commitment at the national and international level.

2. Pools often rely on strong donor support.

3. Pools strengthen disaster preparedness and crisis response.

4. Pools foster policy dialogue on risk management and risk ownership.

5. Pools can maximize impact by developing pre-agreed contingency plans.
HOW: Sovereign Risk Pools

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Sovereign Climate and Disaster Risk Pooling World Bank Technical Contribution to the G20, 2017

06
Pools create public goods

07
Pools offer cost-effective insurance solutions

08
Pools are part of a comprehensive financial protection strategy

09
Pools require upfront payment of an insurance premium, facilitating a shift towards proactive risk management

10
Pools can only be sustainable with more formal and permanent approaches to premium financing
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