



# Analysis to Action:

## An Executive Education Program on Disaster Risk Finance in Africa

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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

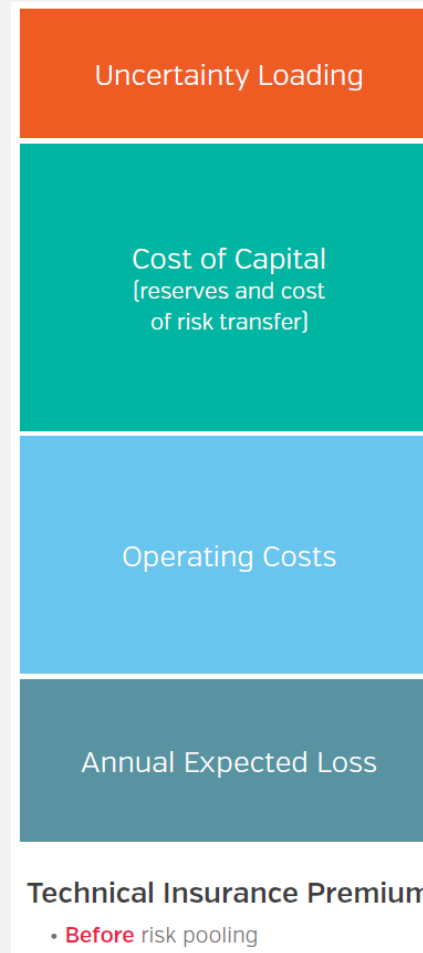


Source: Authors and World Bank. 2017. "Sovereign Catastrophe Risk Pools." Technical Contribution to the G20.

# WHY: Benefits of risk pools



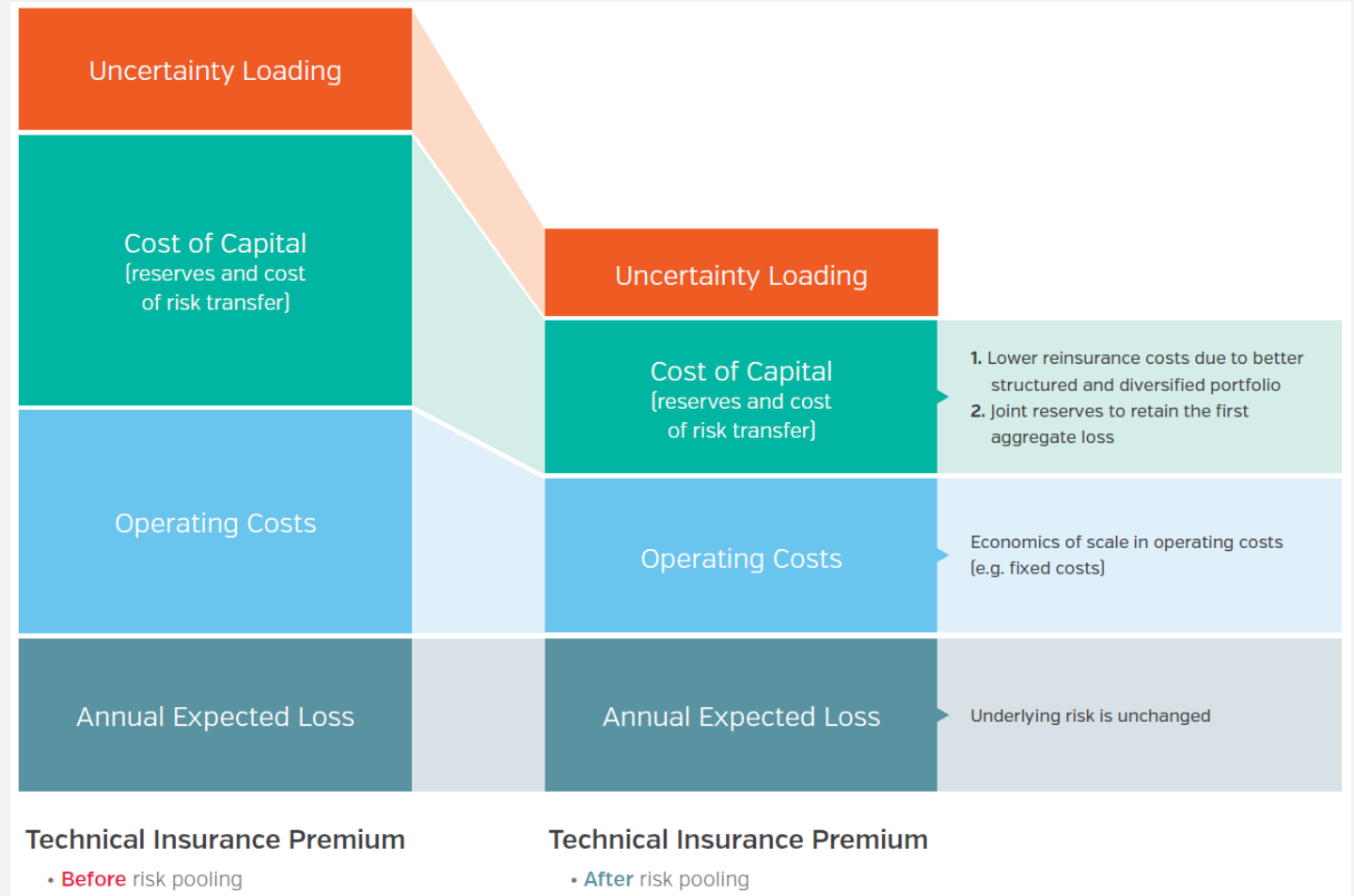
1. Financial Products
2. Political Coordination
3. Public Goods



# 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

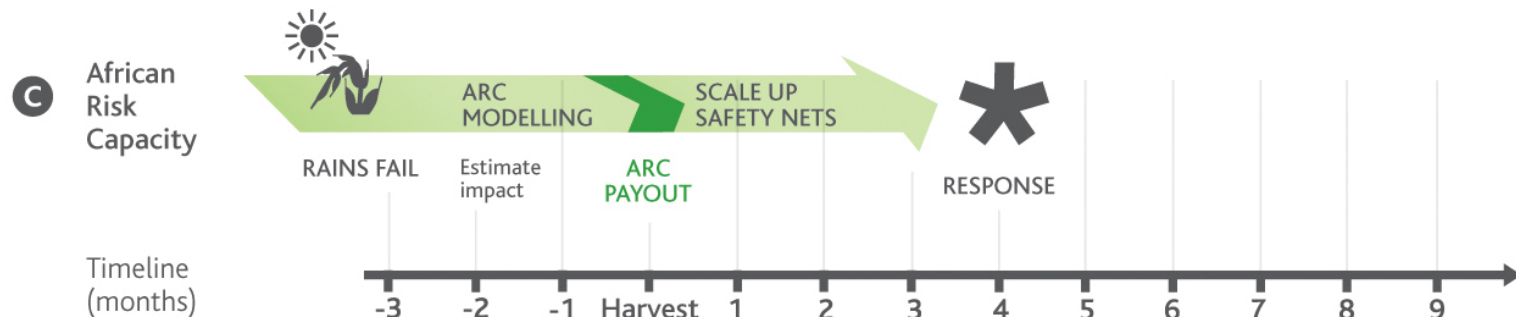
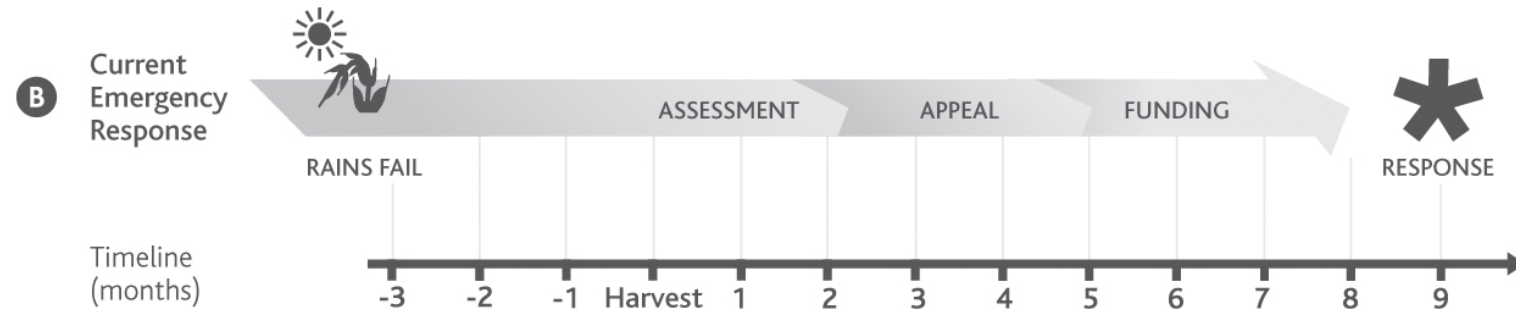
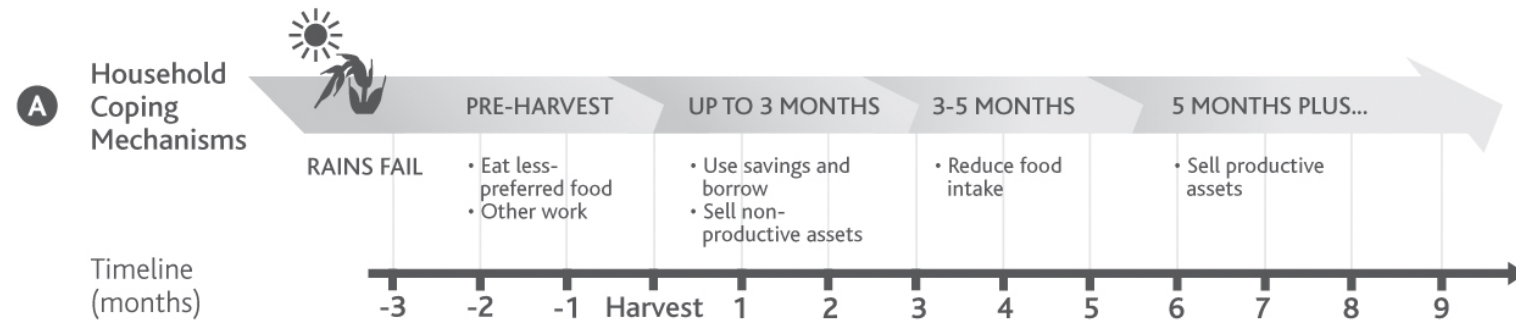


**SOVEREIGN  
RISK POOLS CASE  
STUDY: AFRICAN  
RISK CAPACITY**

# 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 out 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

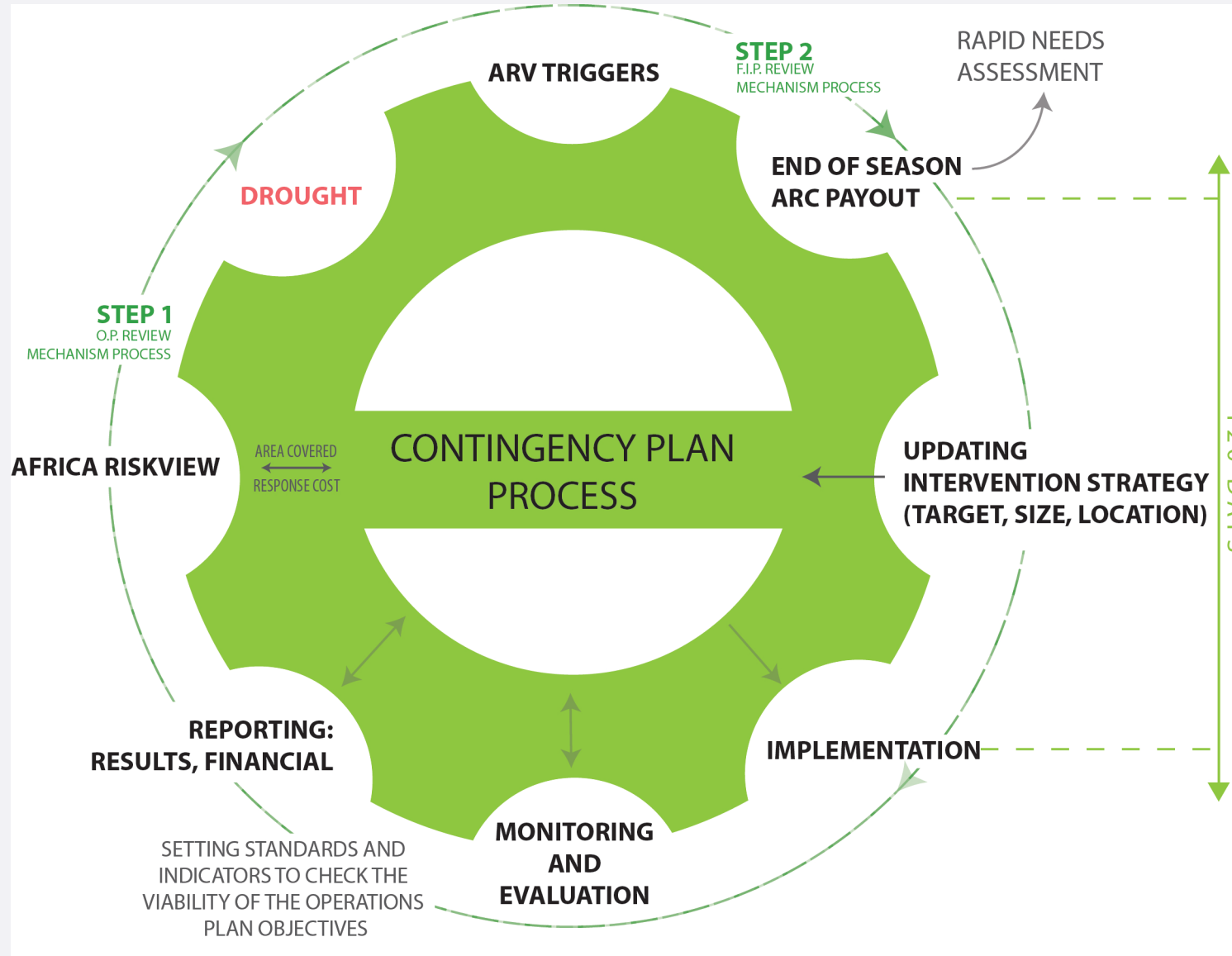


**Contingency Planning** through capacity building, peer review and standard setting, to drive effective preparedness for climate disasters



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)

# 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**

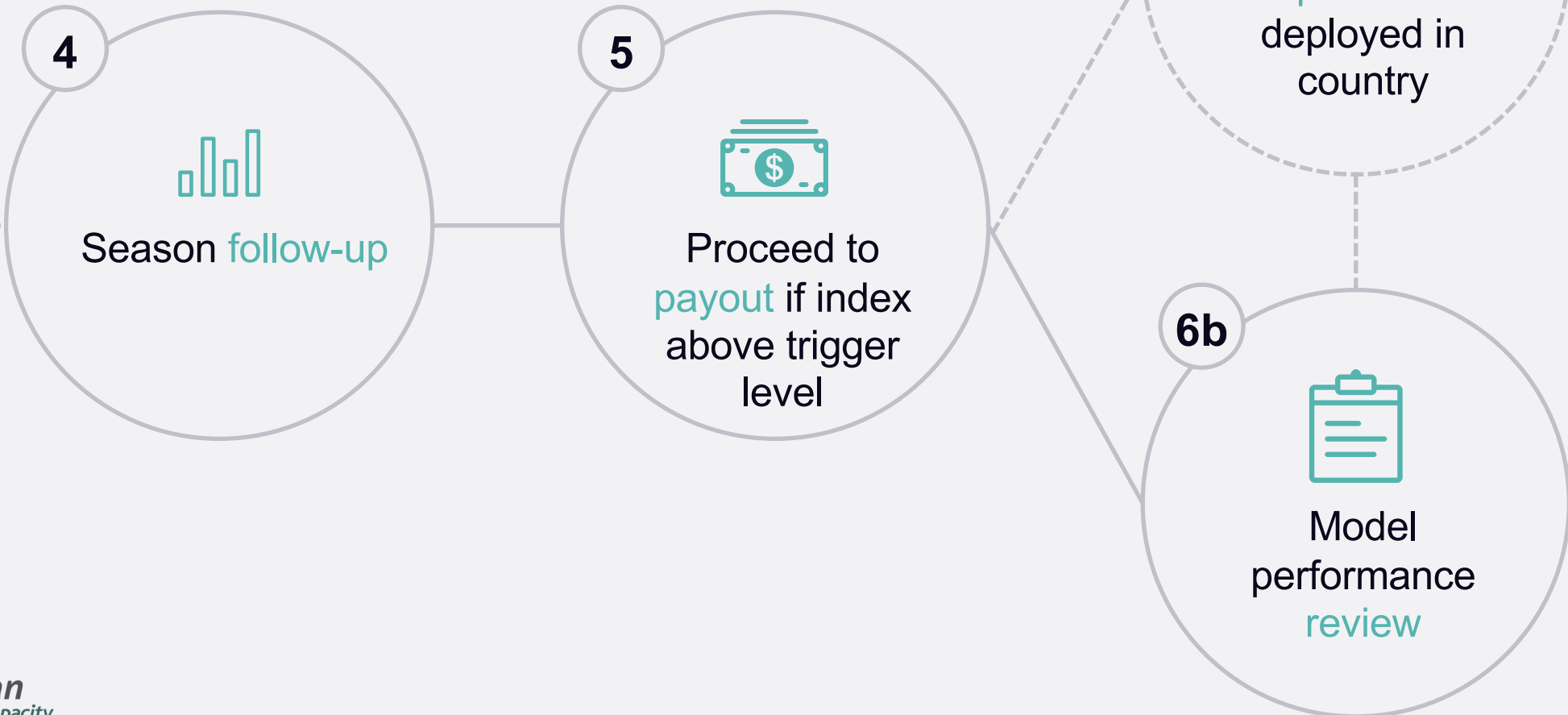
# Parametric / index insurance

## Before the season starts





# Parametric insurance during and at the end of the season



# 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.



# Drought Index Population Affected



## Population Affected

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



# Drought Index MDRC



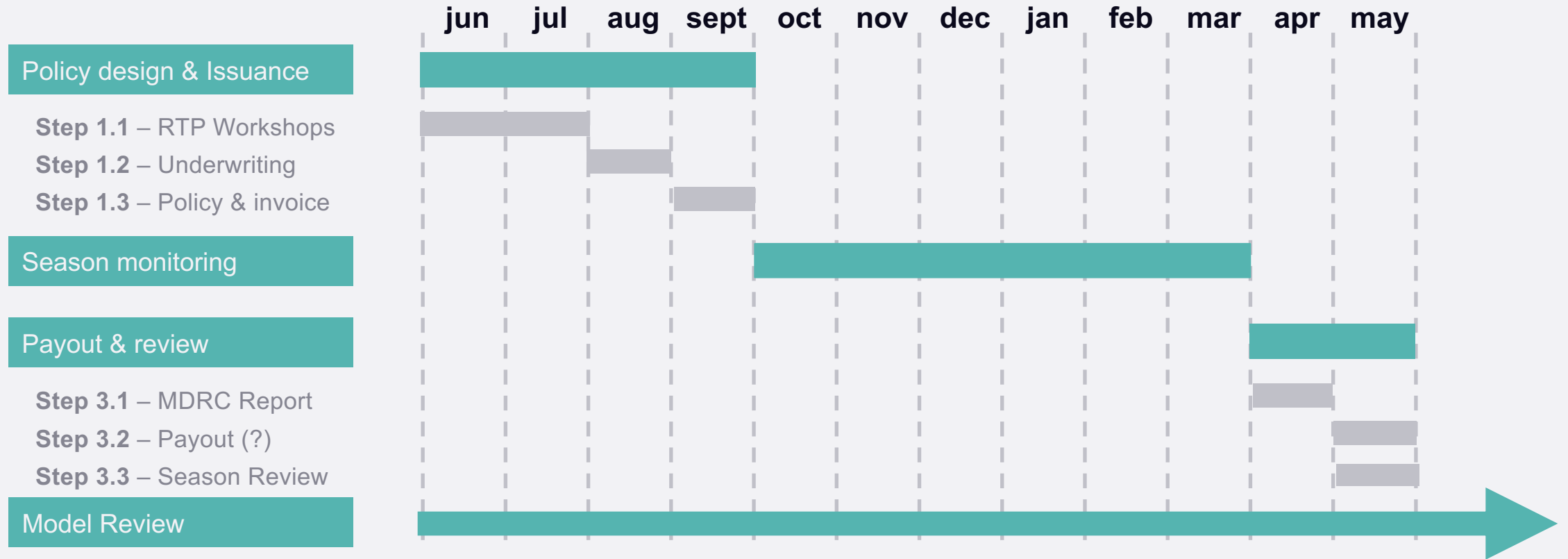
## MDRC: Modeled Drought Response Cost

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.



# Drought timeline

## Example in East and Southern Africa

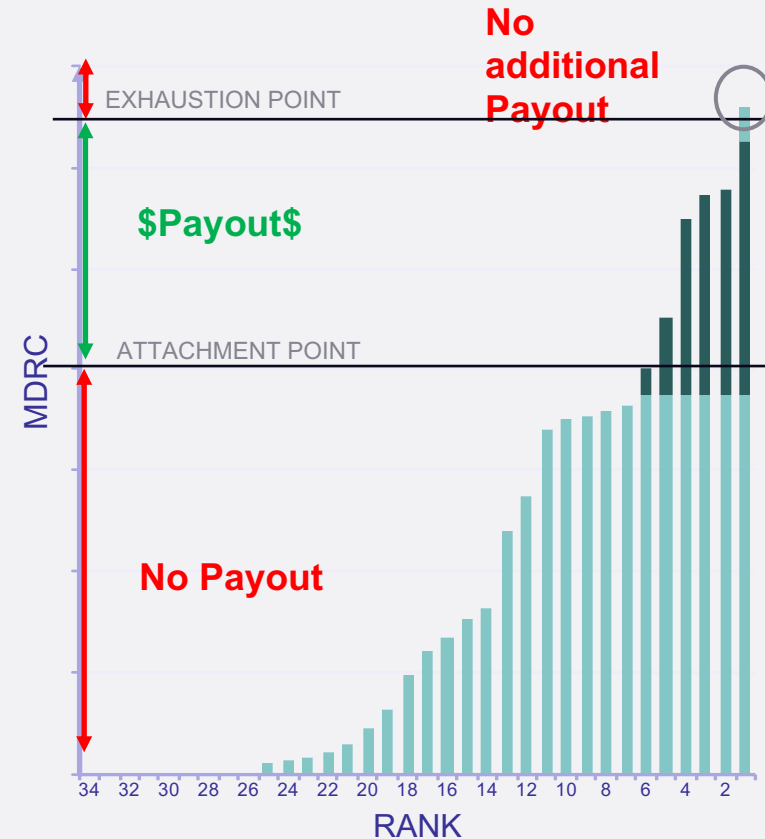
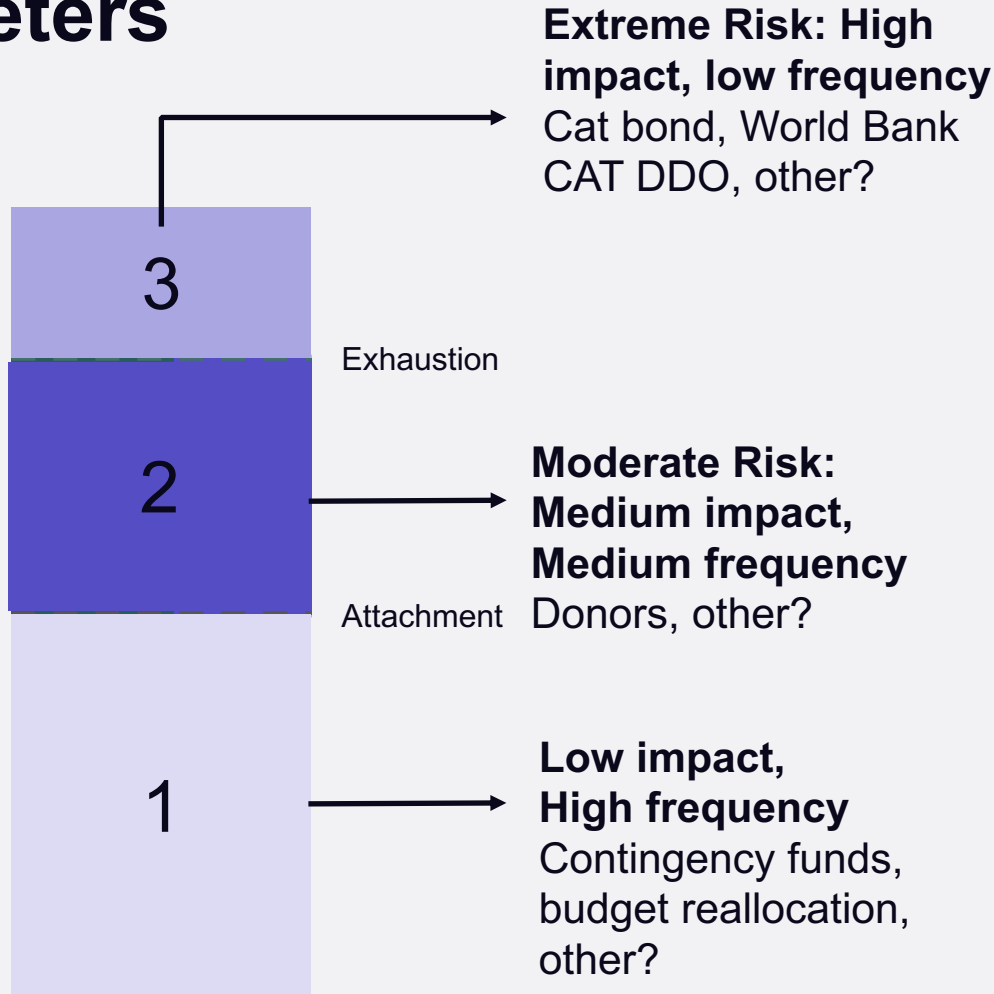


# Risk transfer parameters

## 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



# Season Review

MDRC Report

Final Implementation Plan

Certificate of Loss & Banking details

Payout

Review & Evaluation









# ARC EXPERIENCE

Over \$600m of coverage in 13 countries since 2014

<b>\$85m</b> Premiums	<b>\$36.8m</b> Payouts	<b>2.2m</b> People assisted	<b>900k</b> Livestock
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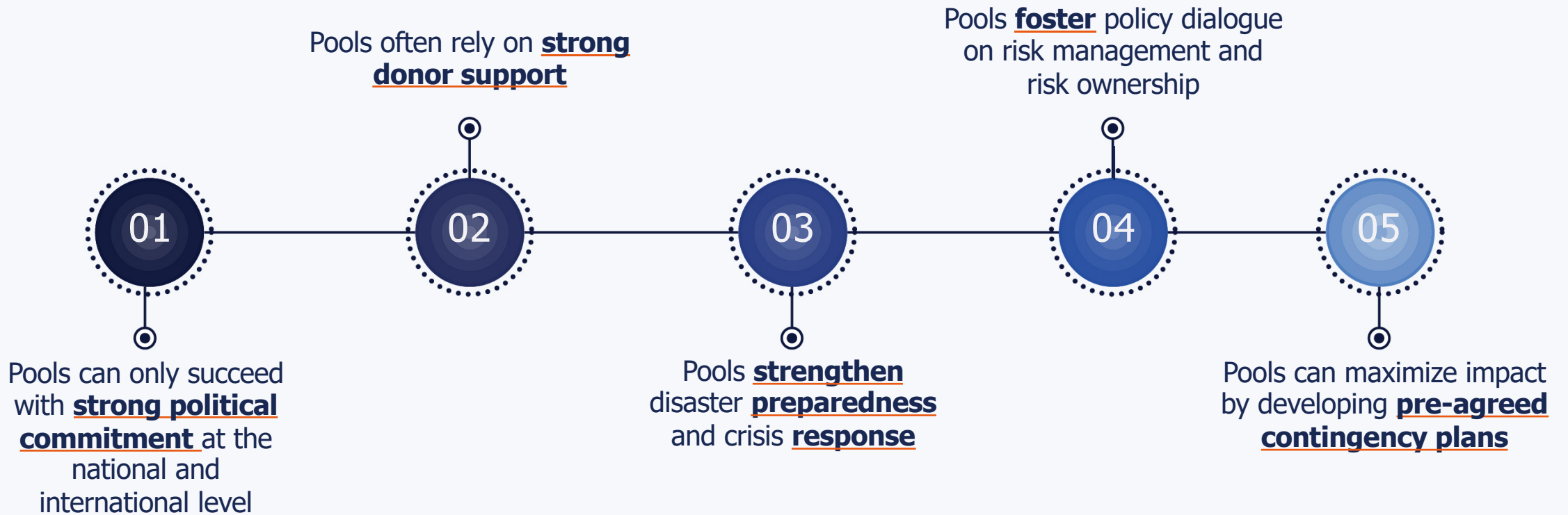
	 <b>SENEGAL</b> USD \$16.5m	 <b>MAURITANIA</b> USD \$8.7m	 <b>NIGER</b> USD \$3.5m	 <b>MALAWI</b> USD \$8.1m
Targeted food distribution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Subsidized sales of cattle feed	<input checked="" type="checkbox"/>			
Cash Transfer				<input checked="" type="checkbox"/>
Conditional cash transfer and food distribution in drought-affected regions			<input checked="" type="checkbox"/>	
<b>Beneficiaries</b>	927,416 people 900,000 animals	350,000 people	157,000 people	808,834 people



# HOW: Sovereign Risk Pools

## 10 Lessons for Policymakers on Risk Pools

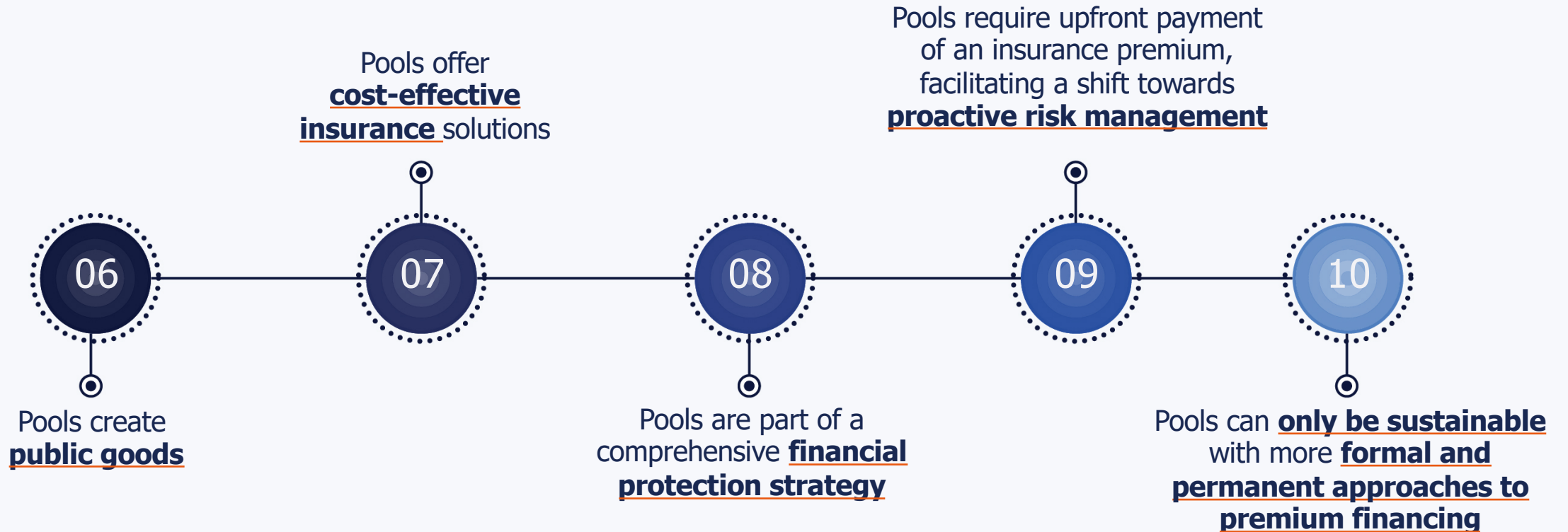
*Sovereign Climate and Disaster Risk Pooling* World Bank Technical Contribution to the G20, 2017



# HOW: Sovereign Risk Pools

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# Disaster Risk Financing & Insurance Program



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