

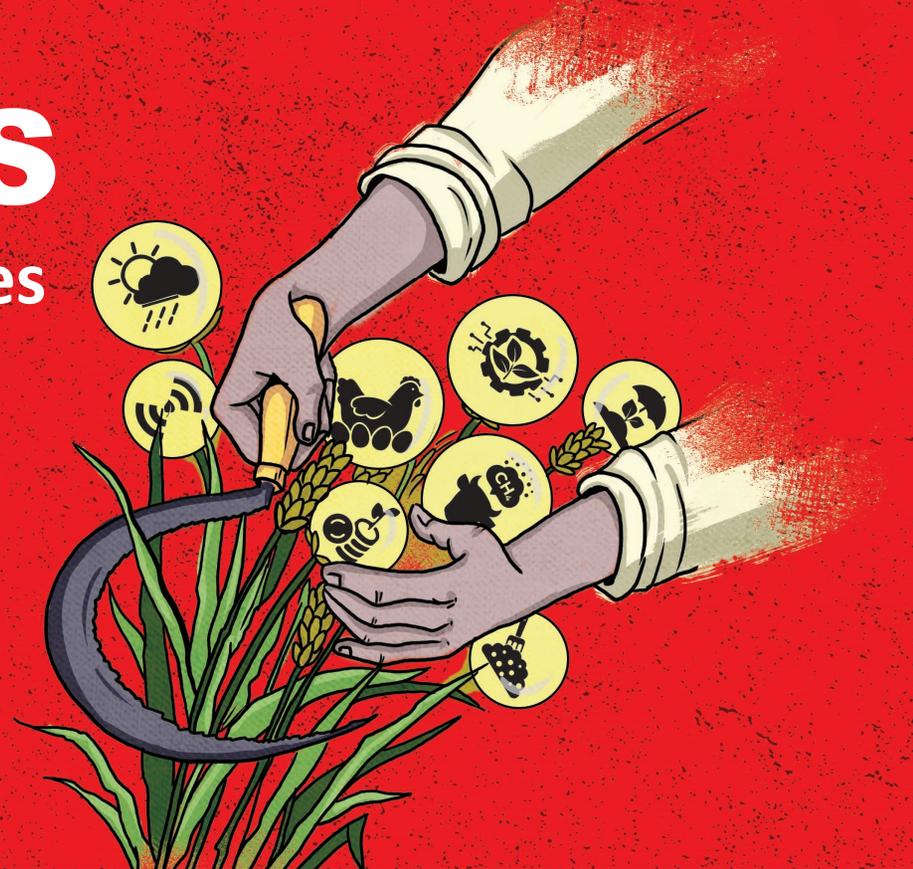


SUSTAINABLE FOOD SYSTEMS

An Agenda for Climate-risked Times

Crop Insurance Industry: Role in PMFBY
implementation and challenges faced

-Subhasheesh Rawat



Journey to PMFBY



2008-2010	2011	2010-14	2015	2016 Onwards
<p>NAIS (National Agricultural Insurance Scheme)</p> <p>Key Highlights</p> <ul style="list-style-type: none"> Area-yield based insurance (Block/District level) Coverage for food crops & oilseeds Premiums actuarial & relatively high 	<p>WBCIS Inception (Weather Based Crop Insurance Scheme)</p> <p>Key Highlights</p> <ul style="list-style-type: none"> Weather index-based triggers (rainfall, temperature) Faster & objective claim settlement No crop cutting experiments 	<p>Yield + Weather Risk MNAIS (Modified NAIS)</p> <p>Key Highlights</p> <ul style="list-style-type: none"> Prevented sowing & added peril coverage Higher premiums (9–15%) Limited pilot-based implementation 	<p>Transition Phase: National Crop Insurance Program</p> <p>Key Highlights</p> <ul style="list-style-type: none"> Platform consolidation National-level rollout approach CSC & bank-led enrolment 	<p>PMFBY (Pradhan Mantri Fasal Bima Yojna):</p> <p>Key Highlights</p> <ul style="list-style-type: none"> Covers food crops, oilseeds, annual commercial & horticultural crops Covers Prevented sowing, mid-season adversity, localized loss, post-harvest loss and yield-based losses



PMFBY Framework

The Mandate & Structure



Unified Framework

A standardized national scheme replacing fragmented legacy policies.

Actuarial Pricing

A shift from the older NAIS scheme to sustainable, risk-based pricing.

All-Risk Approach

Comprehensive coverage structured on seasonal exposure.

Coverage Scope



Lifecycle Protection

Covers risks from pre-sowing (prevented planting) to post-harvest losses.

Yield-Based Settlement

Claims triggered by natural calamities, pests, and diseases.

Granular Protection

Includes add-ons for localized calamities and mid-season adversities.

Technology & Sustainability



Enhanced Affordability Government subsidy increased to 90% (up from 65%).

Tech-Driven Accuracy

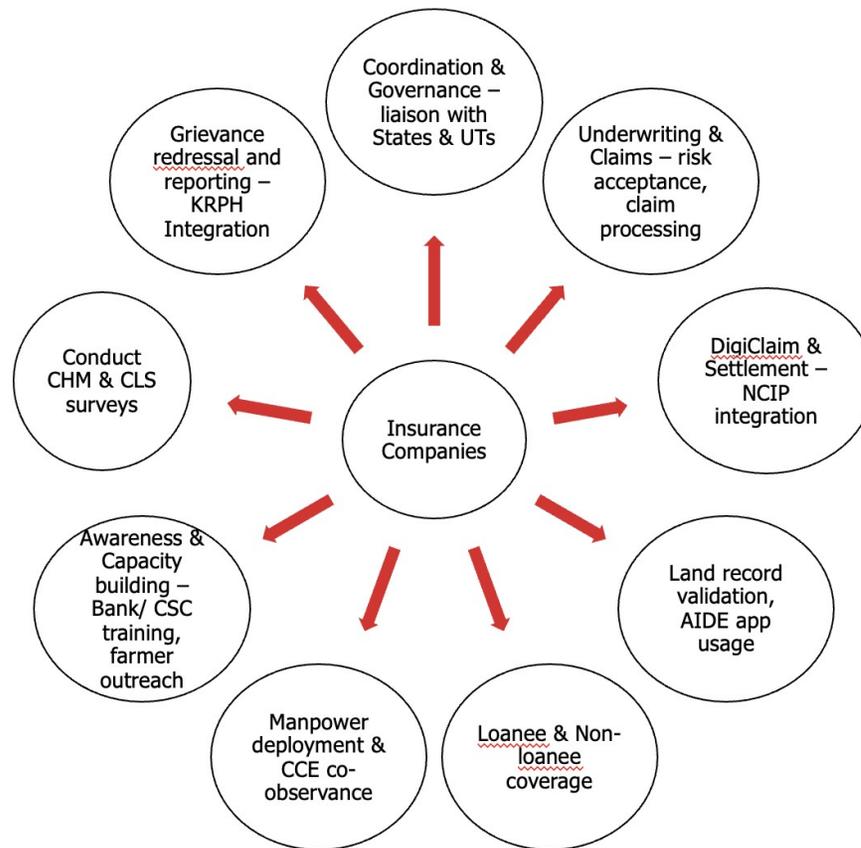
Utilisation of drones, satellite imagery, and mobile data for yield estimation. (YESTECH, Remote Sensing)

Objective Settlement

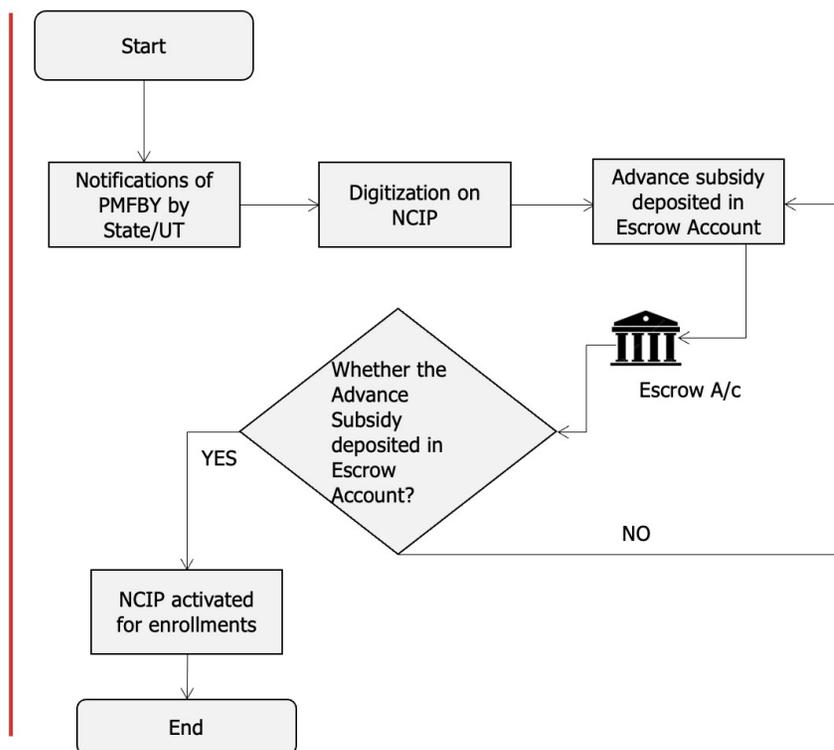
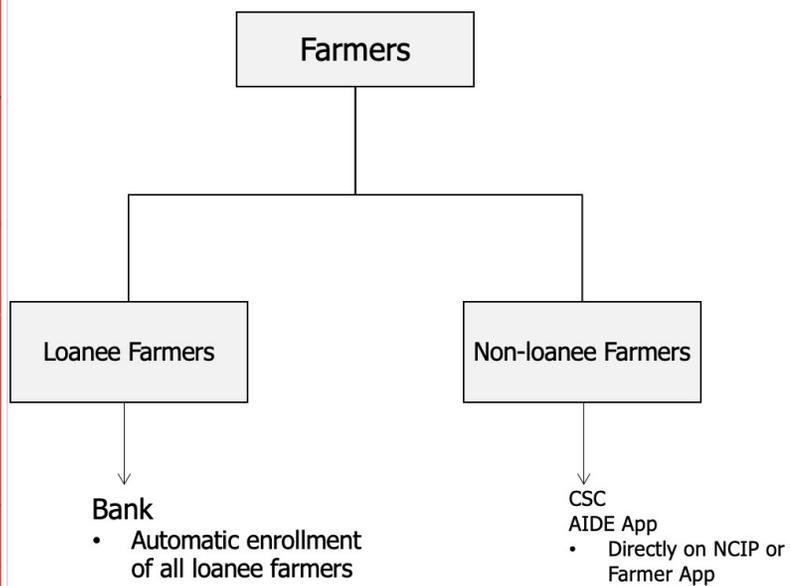
Moving from manual loss assessment to scientific, data-backed claim processing.



Role & Responsibilities of ICs



PMFBY Enrollment Process



PMFBY Implementation - ICs

- **Farmer Awareness Drives**
Village camps | Pre-sowing meetings | Local language IEC
- **Bank & CSC Workshops**
Branch trainings | BC coordination | Digital enrollment support
- **Field-Level Mobilization**
Door-to-door outreach | Panchayat engagement | FPO collaboration
- **Technology-Enabled Enrollment**
Online policy issuance | Geo-tagging | Real-time tracking
- **Loss Intimation & Claim Support**
On-ground assistance | Event-based visits | Grievance camps



Block Level Meeting



School Campaigns



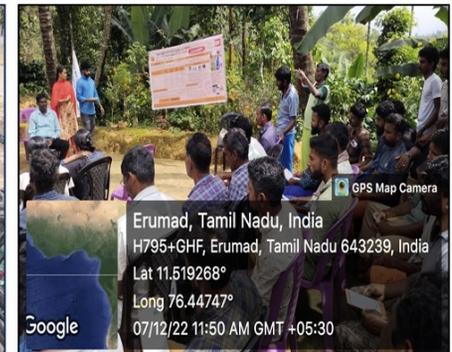
Comic Book Distribution



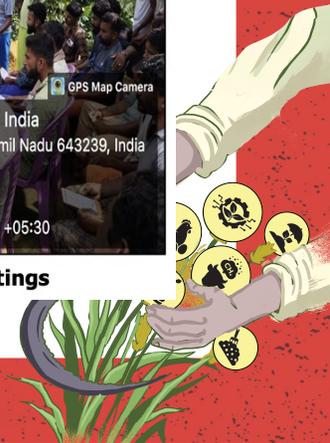
Bus Branding



Women Workshop



Farmer Meetings



PMFBY Models



Yield Index Model

Pays claims based on yield data

- Crop Cutting Experiments & YES-Tech Yield
- Historical yield data
- Plot level add-on covers



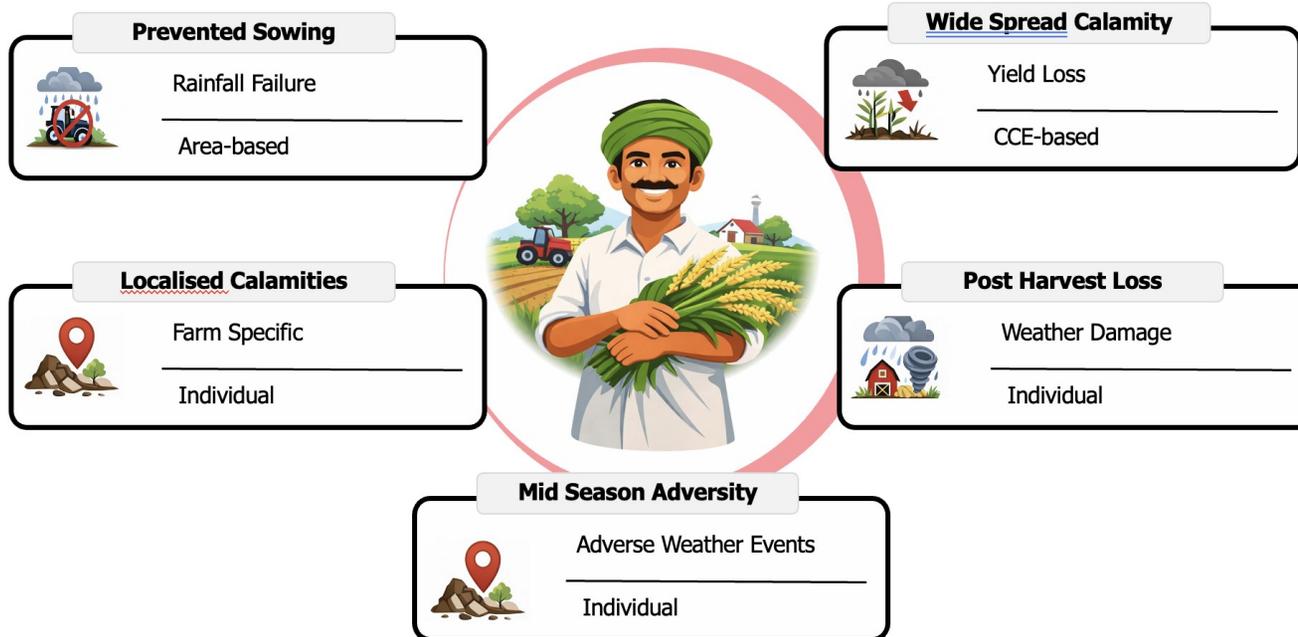
Weather Index Model

Pays claims based on AWS weather data

- Pre-defined weather triggers
- Station based data
- Suitable for Extreme Weather



PMFBY Coverage



WBCIS : Scope of Cover

▪ Scope of cover

- Agricultural activities where deficit/excess rainfall, high/low temperature, high humidity or combination of perils can be covered.
- Any non-agricultural activity like hydro/wind power generation, salt production, brick production etc which are affected by weather parameters like deficit rainfall, excess rainfall, high wind speed etc can be covered.

▪ Basis of sum insured for agricultural activity

- Cost of input.
- Opportunity cost or loss of income due to deviation in weather parameter.
- Increased operational costs due to deviation in weather parameter.

▪ Basis of sum insured for non-agricultural activity

- Loss of income due to deviation in weather parameter.
- Increase in operational costs due to deviation in weather parameter.



Termsheet of Weather Index Insurance

Location	Raipur
Crop	Paddy
Reference Weather Station	IMD: Raipur
Observed Weather Index	Aggregate Rainfall during the cover period
Index Objective	To cover the losses/ prevented sowing of rice crop
Policy Period	1st July - 21st July
Strike Index (mm)	120
Exit Index (mm)	50
Notional payment rate (Rs./ mm/ Ha)	429
Sum Insured (Rs./ Ha)	30000
Premium Amount (Rs./Ha)	3300
Data Source	Independent Third Party



PMFBY – Key developments

KRPH

Centralised grievance system directly connected with IC database



YESTECH

Technology-based yield estimation mandated for crops with certain percentage



CROPIC App

CHM surveys using real-time geo-tagged photos of crop fields



PMFBY – Key developments

WINDS

Enhancing digital weather data infrastructure



CLAP App

Digital survey app for localized damage assessment



CCE Agri App

Integration of CCE data to NCIP Portal & co-observance by ICs

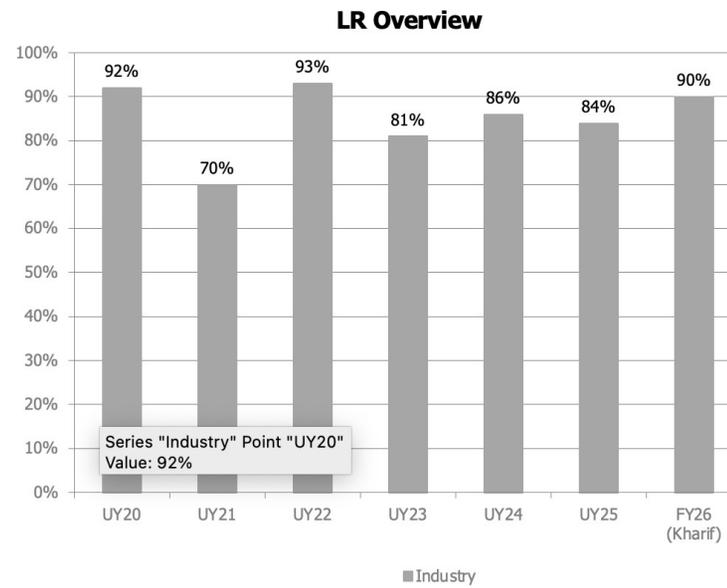
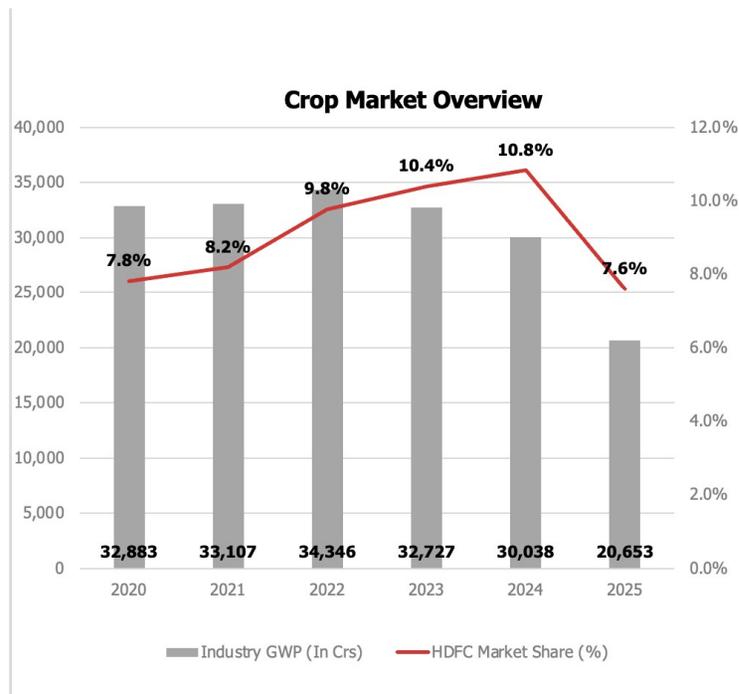


Risk Management Mechanism (ARTM)

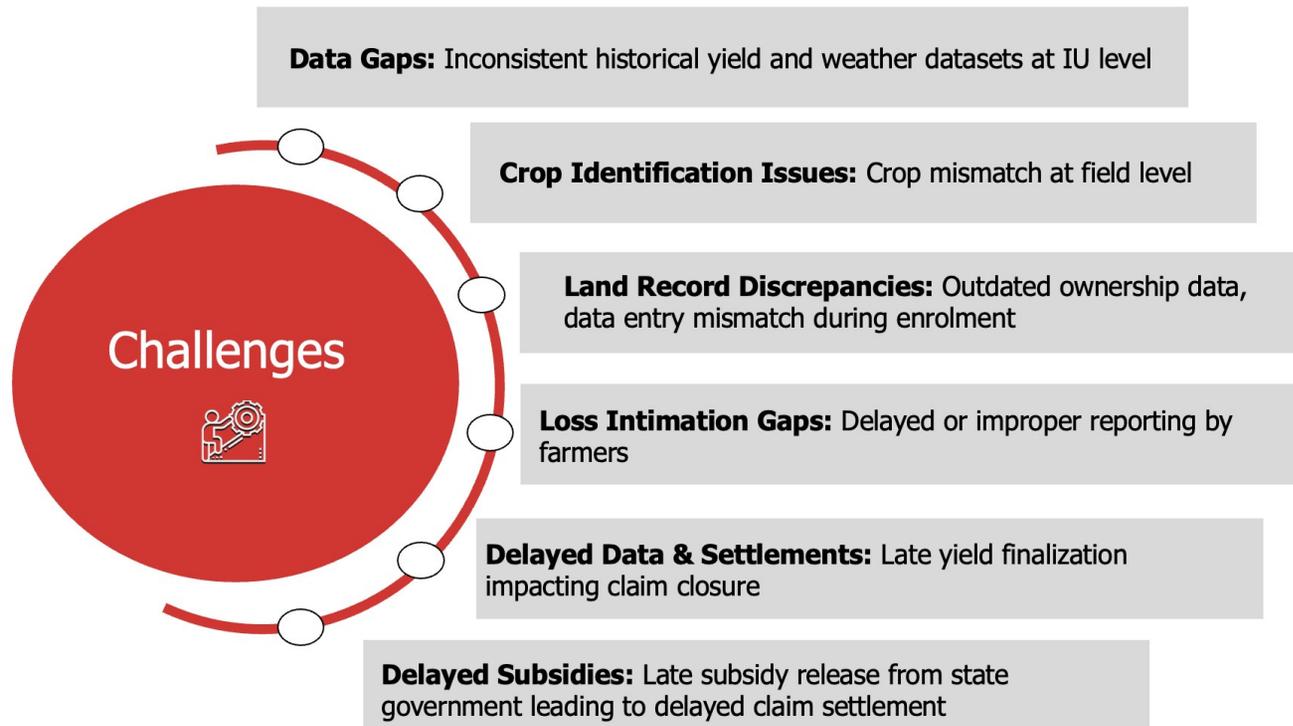
Parameters	Specifications
Profit & Loss Sharing Model	
Risk Sharing	<ul style="list-style-type: none"> Insurance Company – up to loss ratios of 100% Insurance Company & Government (GoI and State Govt.) Risk sharing beyond 100% as per proposed structure
Surplus Sharing	<ul style="list-style-type: none"> Loss ratio between 0%-100%, Insurance Company & Government (GoI and State Govt.) get surplus as per the sharing structure given below.
Cup & Cap Model (60:130)	
Risk Sharing	<ul style="list-style-type: none"> Insurance Company – up to loss ratios of 130% Government (GoI and State Govt. equally) – loss ratio > 130%
Surplus Sharing	<ul style="list-style-type: none"> Loss ratio between 0%-60% - Insurance Company retains 40% & Government (GoI and State Govt. equally) get remaining (60% - Actual LR)
Cup & Cap Model (80:110)	
Risk Sharing	<ul style="list-style-type: none"> Insurance Company – up to loss ratios of 110% State Govt. – loss ratio > 110%
Surplus Sharing	<ul style="list-style-type: none"> Loss ratio between 0%-80% - Insurance Company retains 20% & State Govt. get remaining (80% - Actual LR)



Industry Performance - PMFBY



PMFBY Implementation - ICs



Scheme enhancement

New Additions in the Scheme

- ✓ Paddy Field Inundation & Wild Animals Attack on crops

Recommended Revisions



Premium Structure & Farmer Contribution

Capping of Farmer share to a lower of **25% of premium or 2%/1.5% of Sum Insured** whichever is lower for all crops except Horticulture & Commercial Crops.



Calculation of Threshold Yield

- Change the methodology of TY Calculation
 - Best 3 out of 10 years



Sum Insured & Indemnity Level

- Discontinuation of 70% IL
- **Higher ILs** of 80%, 85%, 90%, 95% & 100% proposed
- Methodology of **SI Calculation**: to provide higher SI values to farmer
 - MSP * Notional Yield
 - Scale of Finance



Alternative Risk Transfer Mechanism (ARTM)

- Claim Liability at the higher of APR & BC
- Add-on mandatory
- Capacity building and training of P&L Model

