

# Digital solutions for small holders @ risk of floods and drought

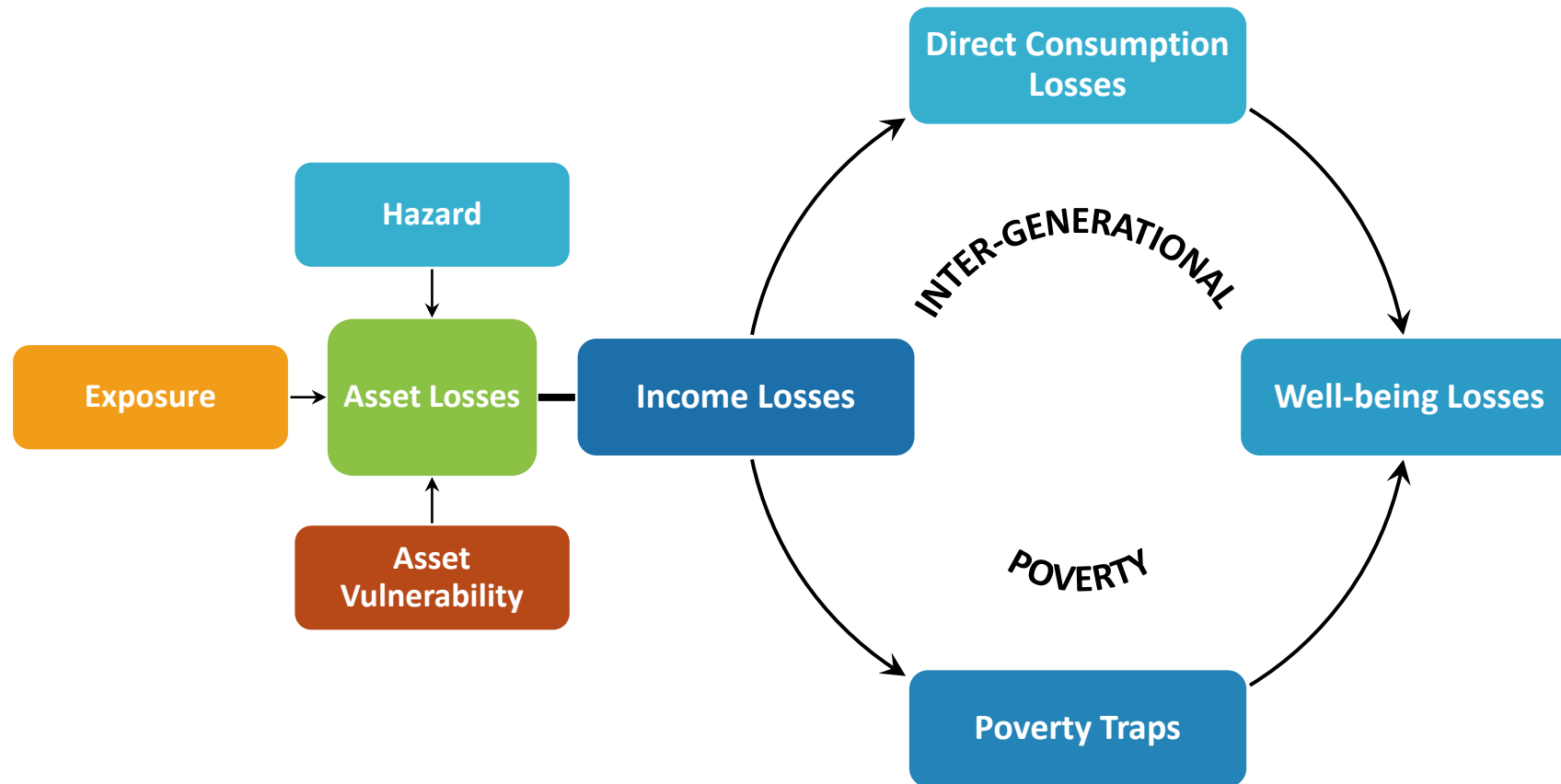
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**FAO-ITU Digital agricultural solutions Forum 2020  
for Asia and the Pacific  
30 Nov-3 Dec 2020**



# Why disaster losses matter so much for small holders

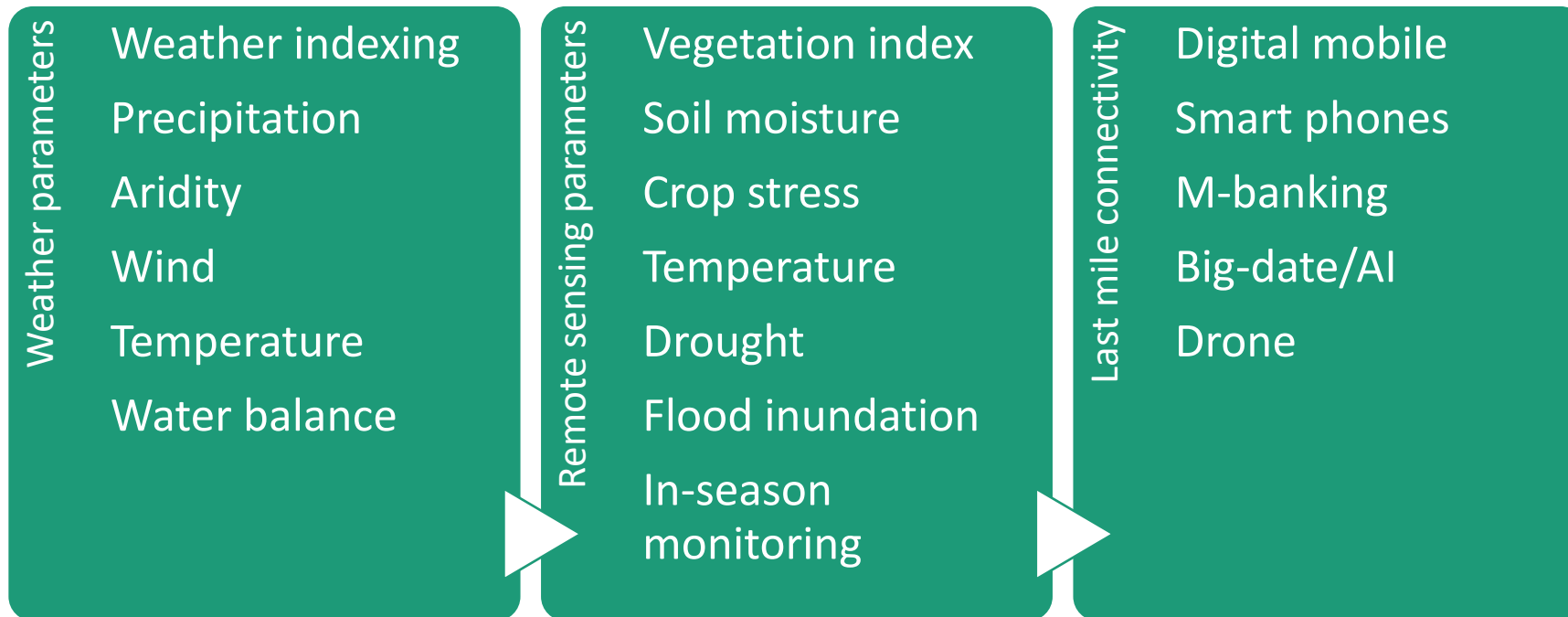
#1 \$ disaster loss to a non-poor is equivalent to \$ 4-7 to a poor



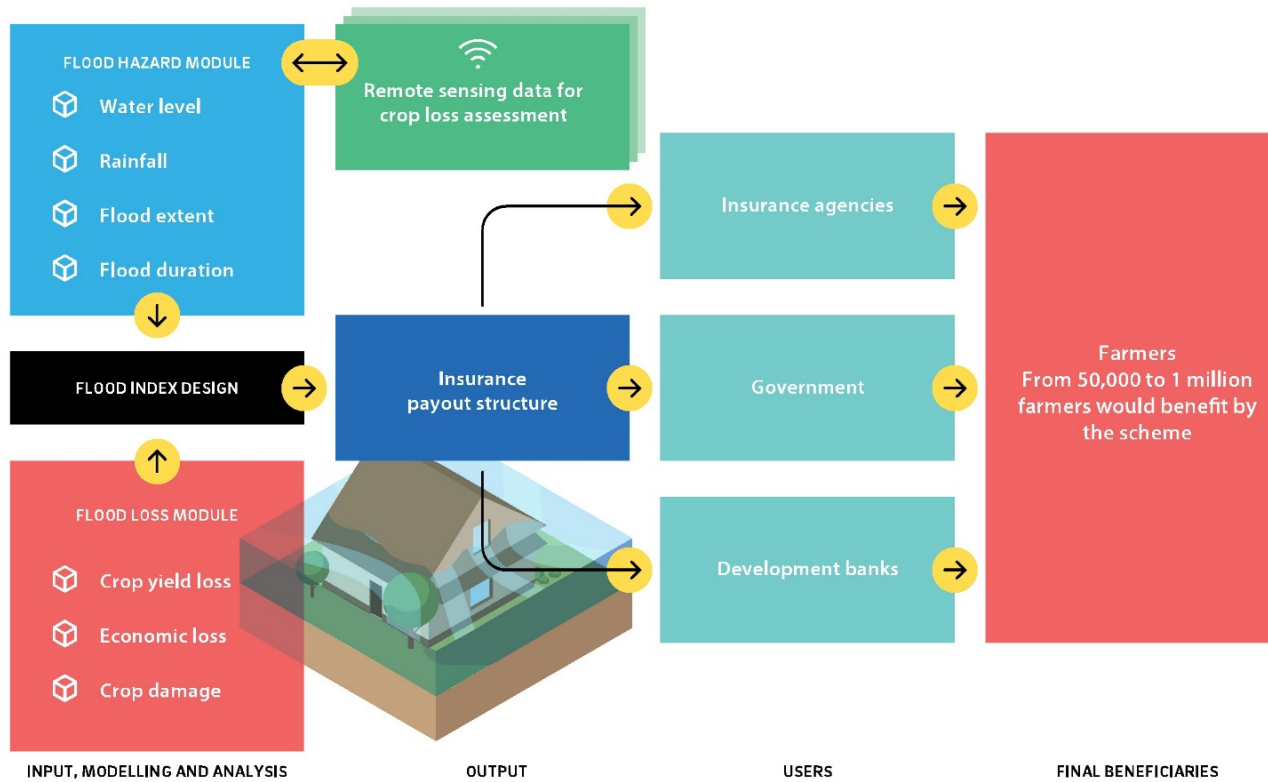
## Message #1

**Digital solutions do benefit flood affected small holders through index-based parametric insurance**

# Index-based parametric agriculture insurance: key drivers

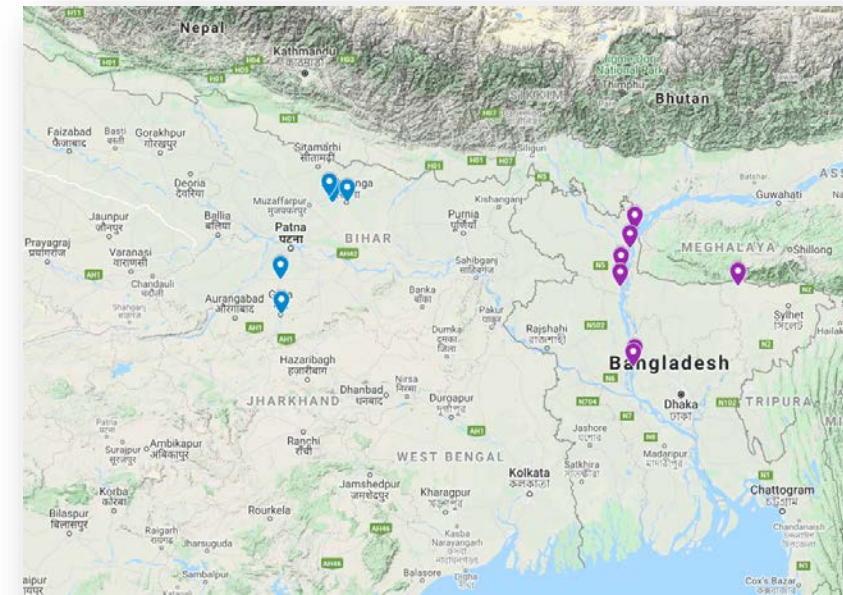


# IBFI – Flood proofing communities and agriculture resilience



Source: Amarnath, 2017.

## Index Insurance program in Bangladesh and India



- ✓ Bangladesh IBFI
  - Individual styles
  - Jatrapur (Kurigram District)
  - Chilmari Upazila (Gaibandha District)
  - Fulchhari Upazila (Gaibandha District)
  - Saghata Upazila (Gaibandha District)
  - Tahirpur Upazila (Sunamganj District)
  - Sthal Char (Sirajganj District)
  - Gharjan (Sirajganj District)
- ✓ India IBFI
  - Individual styles
  - Gaihat, Muzaffarpur District
  - Katra, Muzaffarpur District
  - Darbhangha District
  - Gaya District
  - Jahanabad District

<https://www.youtube.com/watch?v=YVQ0soREjmM>

<https://www.iwmi.cgiar.org/success-stories/how-hi-tech-insurance-is-helping-farmers-survive-floods/>

# Index based flood insurance (IBFI)

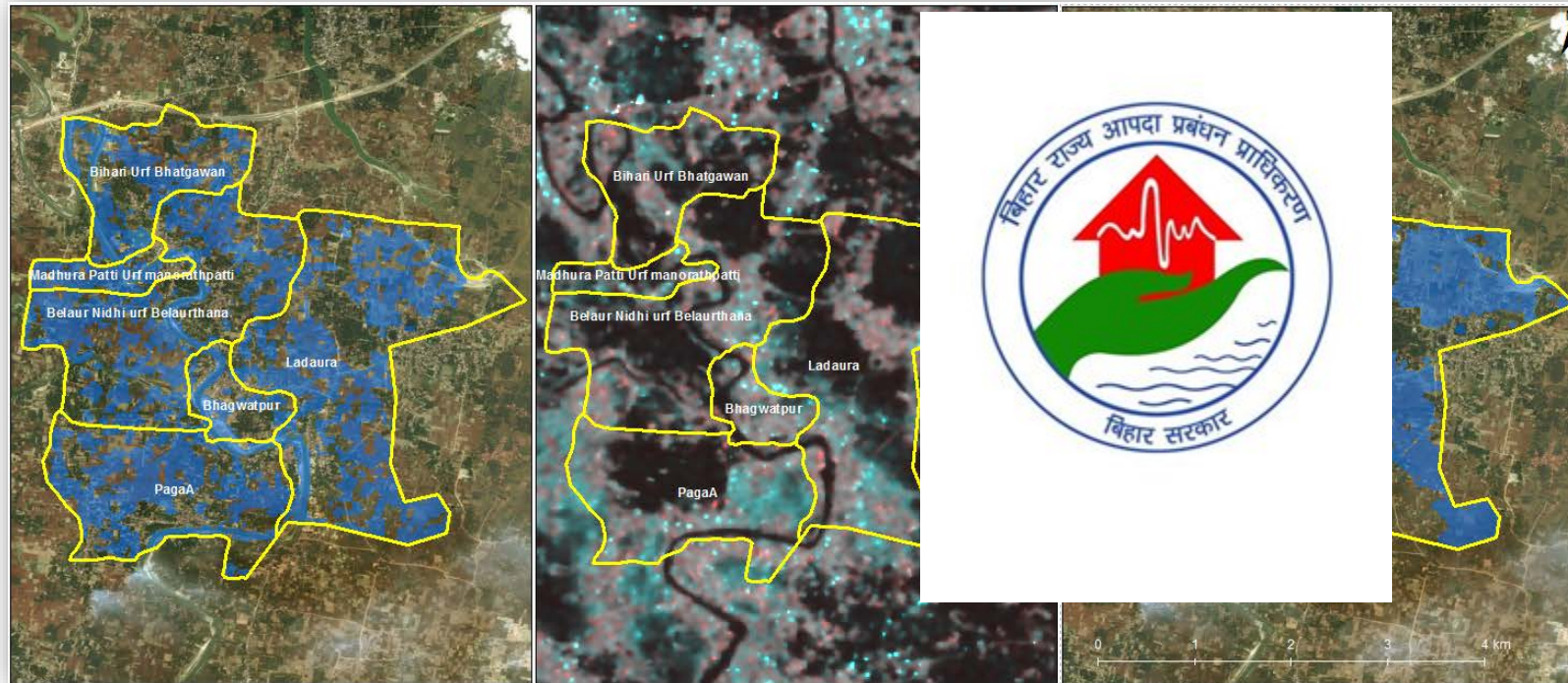
Earth observation data and modeling tools strengthen scaling risk solutions in protecting poor and vulnerable people in developing countries



RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security



RESEARCH PROGRAM ON  
Water, Land and  
Ecosystems



- Since 2017 pilot trials in India and Bangladesh over 7,000 households with total payout of \$150,000 USD
- Insurance solutions could help bolster farming livelihoods, reduce post-disaster costs for governments and contribute to reducing poverty, achieving gender equality and underpinning food security.



Aadhar+ satellite based index+ crowd sourcing:  
Insurance for small and marginal farmers  
No adverse selection and moral hazard

*Aadhar is now making a difference.  
I have an identity and a bank account now. Flood relief,  
insurance and all benefits directly get transferred to my  
account...Said Shweta a victim of 2017 floods, Bihar,  
India*

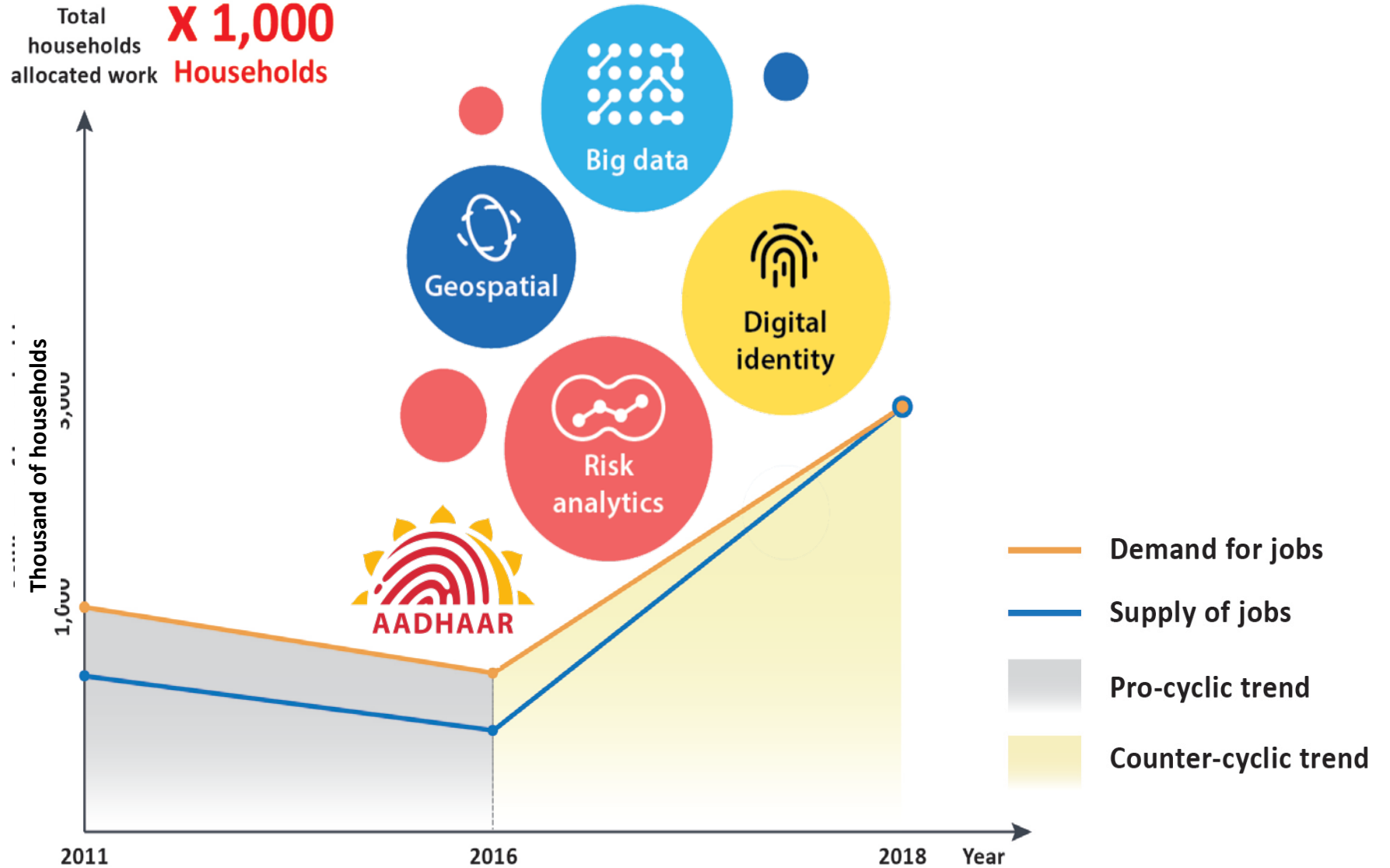


## Message #2

**Digital solutions do benefit drought affected small holders  
through targeted, risk informed social protection**



- Digital solutions enable transformative the policy response.
- Innovations turned a pro-cyclic into counter cyclic policy interventions
- Benefited millions of drought affected poor and vulnerable famers/landless laborers in India



Sources: ESCAP based on data from Prasad, and others 2018.

## Message #3

**COVID-19 pandemic accelerated digital reset to  
benefit small holders**

# Digital solutions for COVID-19 affected small holders

- A robust digital payments infrastructure has enabled cash transfer
- Since the beginning of its COVID-19 lockdown in late March, India has distributed around \$5 billion in cash benefits to its citizens who need assistance the most, entirely through payments made via digital platforms.
- The use of digital technology led to savings of nearly \$23 billion, 98% of this by eliminating erroneous beneficiaries.
- A robust digital payments infrastructure has enabled cash transfer of INR. 28,256 crore to more than 31 crore beneficiaries under the financial assistance scheme Pradhan Mantri Garib Kalyan Yojana (PMGKY).
- 6.93 crore farmers were benefited through the Pradhan Mantri Kisan Santman Nidhi (PM-KISAN) to help farmers tide over the COVID-19 crisis. Under the scheme, the government transfers cash directly to the farmers' bank accounts through direct benefit transfer (DBT).
- 19.86 crore women Jan Dhan account holders received Rs. 500 each in their account. The total disbursement under the head was 9,930 crore.

**ESCAP's  
Asia-Pacific  
Disaster Resilience  
Network  
[APDRN]**

1

**DISCUSSION**

Product owner meets with sales team

2

**ANALYSIS**

Requirements are analyzed

3

**STRATEGY**

Strategies are set

4

**EXECUTION**

Execution of the plan

5

**QA & TESTING**

Quality checking