

ESA / PHI-WEEK 2019



Scaling mutual protection using
blockchain and Earth Observation



The pain(s) – *facts from IFAD, 2013*

- / Smallholders provide over **80 per cent** of the food consumed in a large part of the developing world
- / **2.5 billion people** involved in full- or part-time smallholder agriculture, managing 500 million small farms
- / fewer than **3% of the population** in the world's 100 poorest countries had microinsurance coverage in 2006 (*Davos, Intergovernmental Panel for Climate Change, 2010*)



The solution(s) – *facts from PMFBY initiative, India*

<https://pmfby.gov.in/>

- PMFBY is an ambitious crop microinsurance initiative in 2016 by the Indian government, to address all listed barriers to insurance

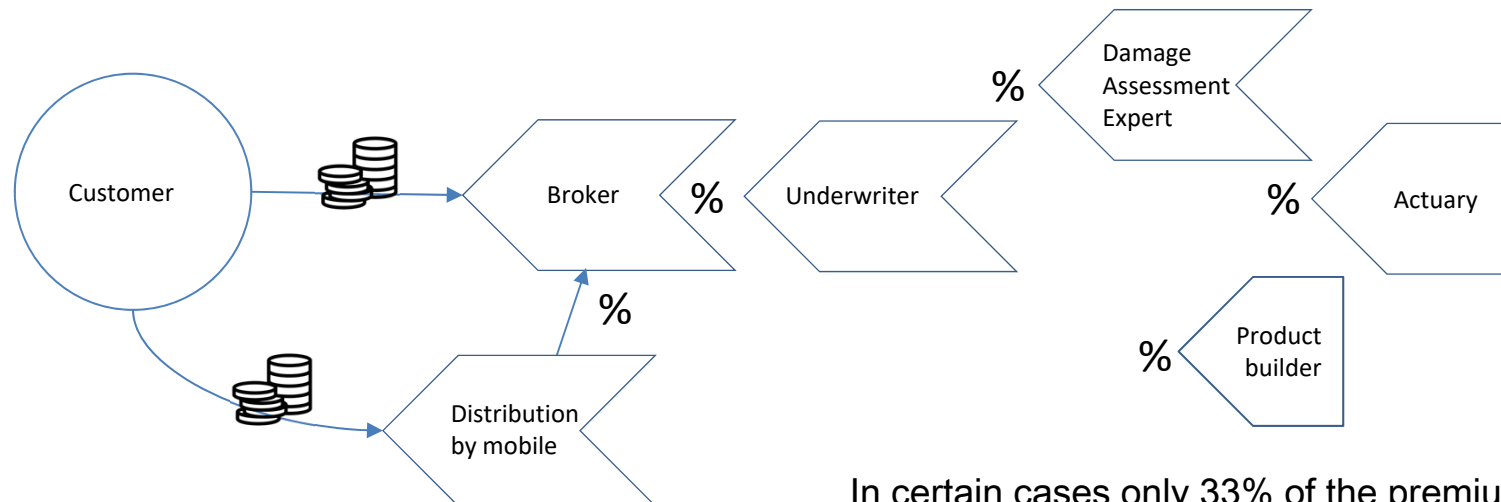
Lack of awareness barrier	Insurance is made mandatory by law to all farmers availing loans for the notified crop(s).
Price barrier	Rate of Insurance Charges payable by the farmer is between 1.5% and 5% of the sum insured. Insurers might justify their higher prices. In such cases the excess is paid by the government.
Terms and conditions barrier	The scheme covers almost all harvest losses. Only losses arising out of war and nuclear risks, malicious damage etc. are excluded.
High basis risks barrier	Damage assessments use innovative technologies such as satellite imagery, vegetation indices etc. coupled with the mandatory usage of smart phones / hand held devices

- During first year (2016-17), the total number of farmers covered was 57 million But the next year (2017-18), the number fell to 48 million
minus 16%, why?



The actual barrier

✓ The current insurance business process does not scale-down well to micro-insurance.



In certain cases only 33% of the premiums are left to cover the actuarial risk (Cole et al., 2013)

<https://www.aeaweb.org/articles?id=10.1257/app.5.1.104>



A Potential Solution

- / *Iddir* in Ethiopia
- / *Habana'i* in sub-Sahel Wodaabe nomads
- / *nujè mèji gbê* in Benin
- / *Mutual aid* everywhere else

➔ No central insurer, no claim management,
overall operating costs lower than 30%

➔ Up to 77-80% national subscription rate

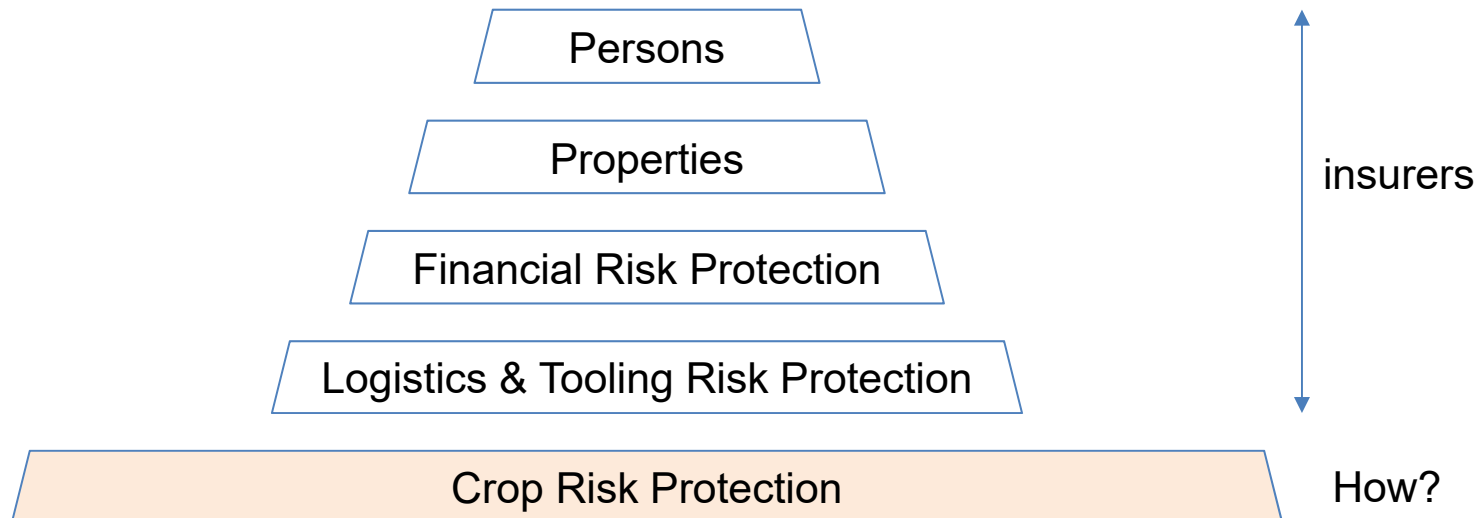


Source photo Soumaré Boubacar



Benefits for General Growth

- Once the crops revenues are protected, the 500M+ smallholders farmers will need other forms of protection, where insurers excel



Introducing IBISA



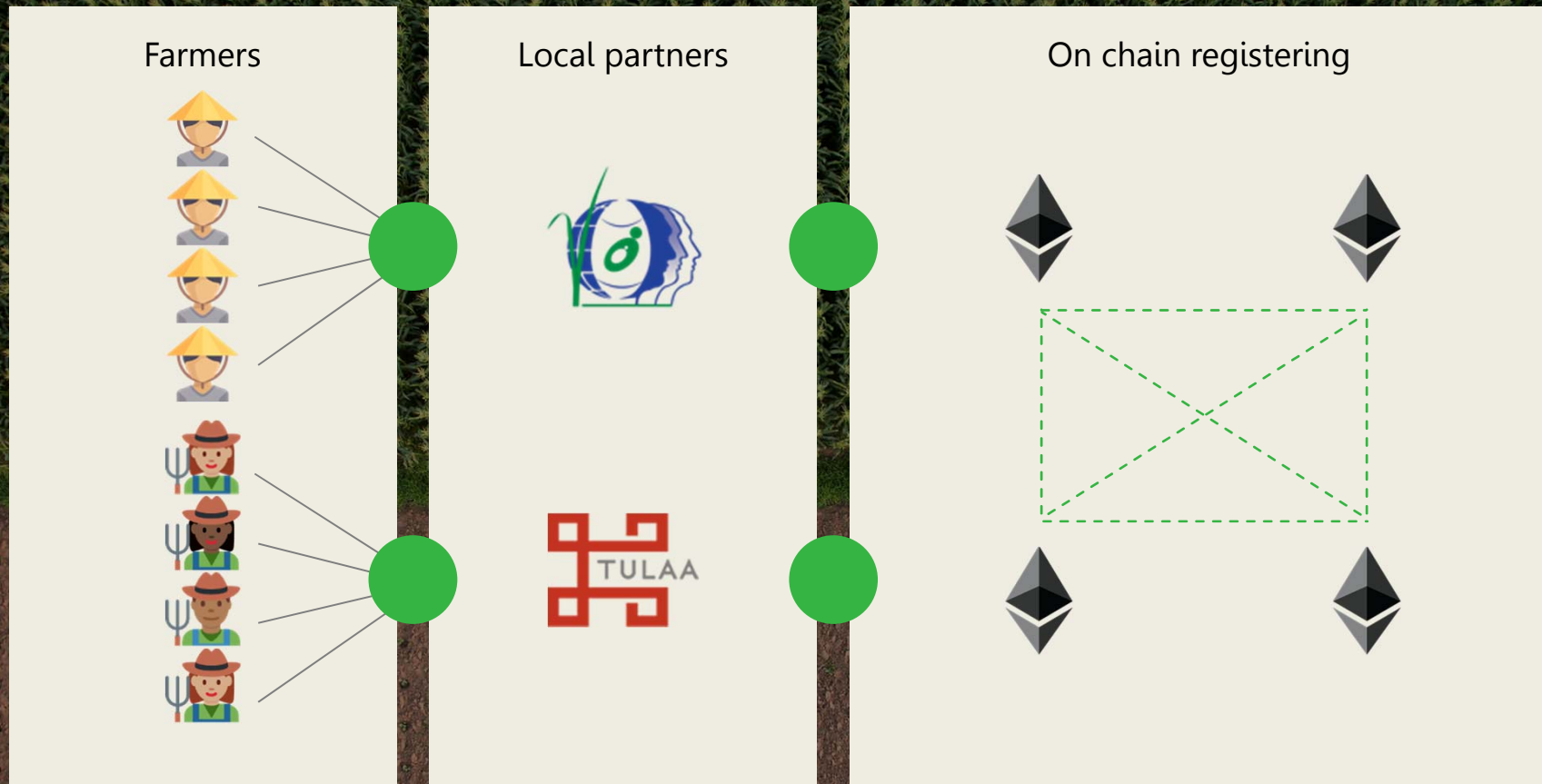
peer-to-peer risk-sharing system supported by **blockchain** and **Earth Observation** technologies

Traditional Mutuality model

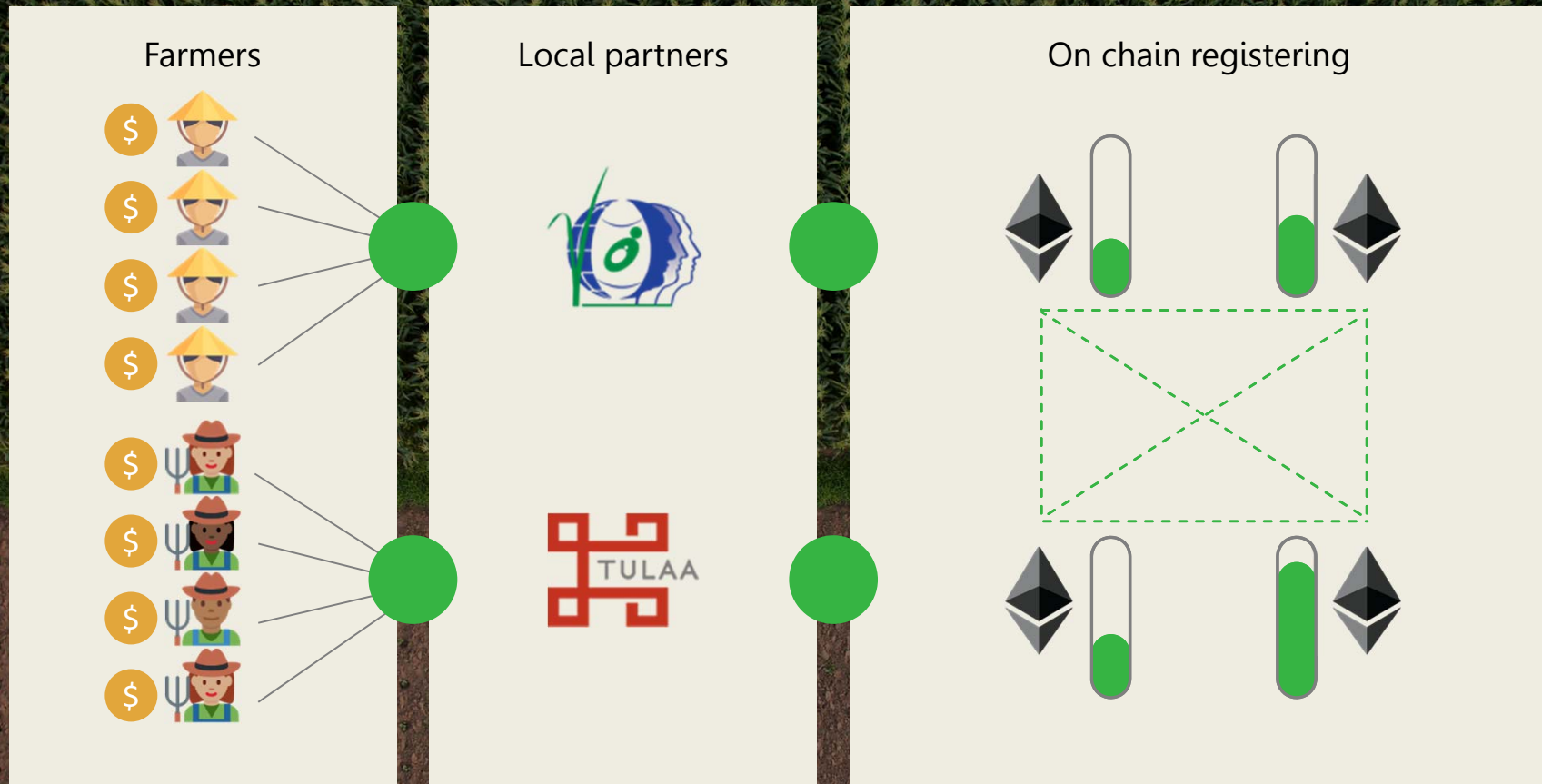
 **10B USD**

Based on \$20 average per farmer

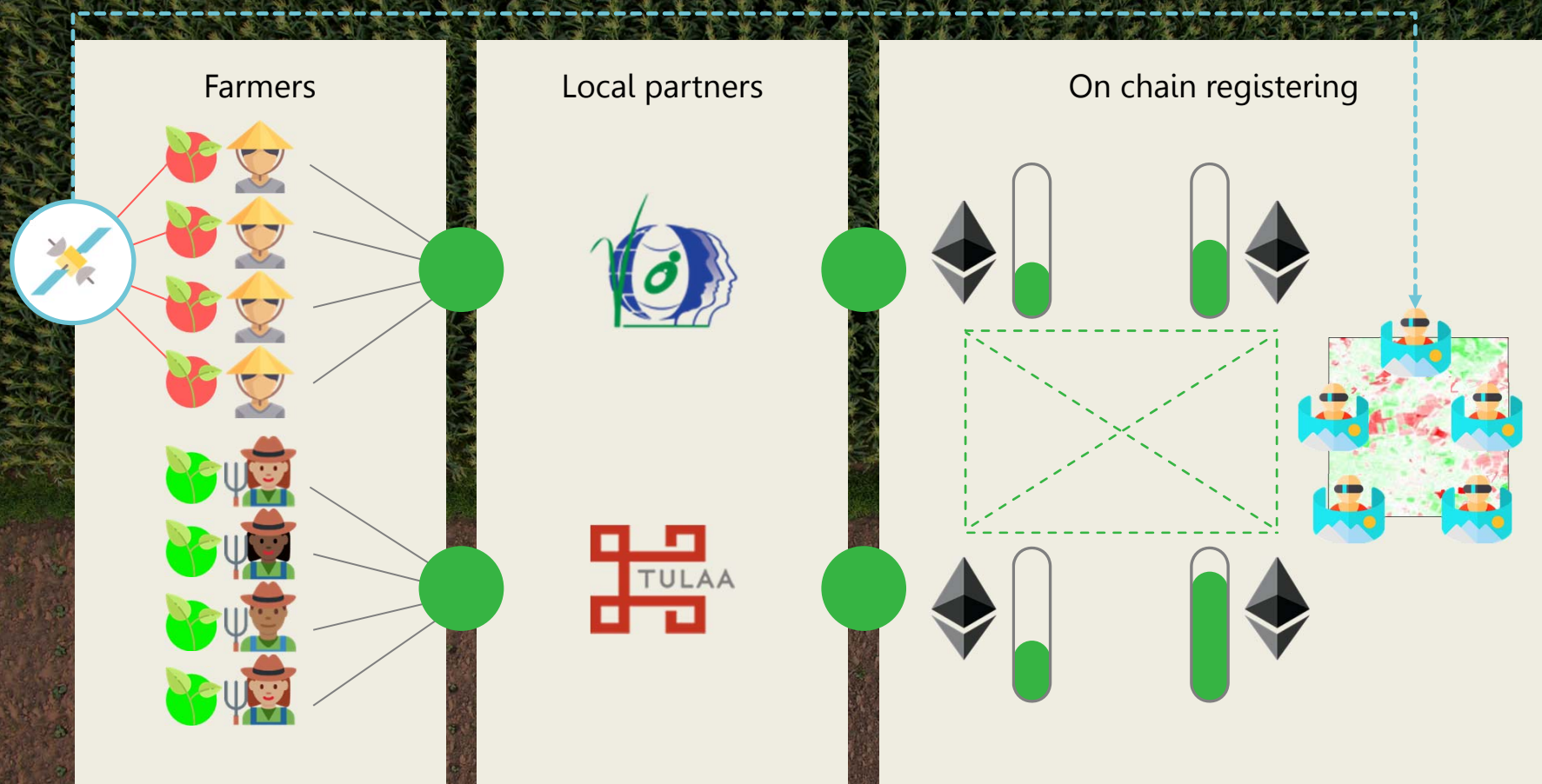
How it works



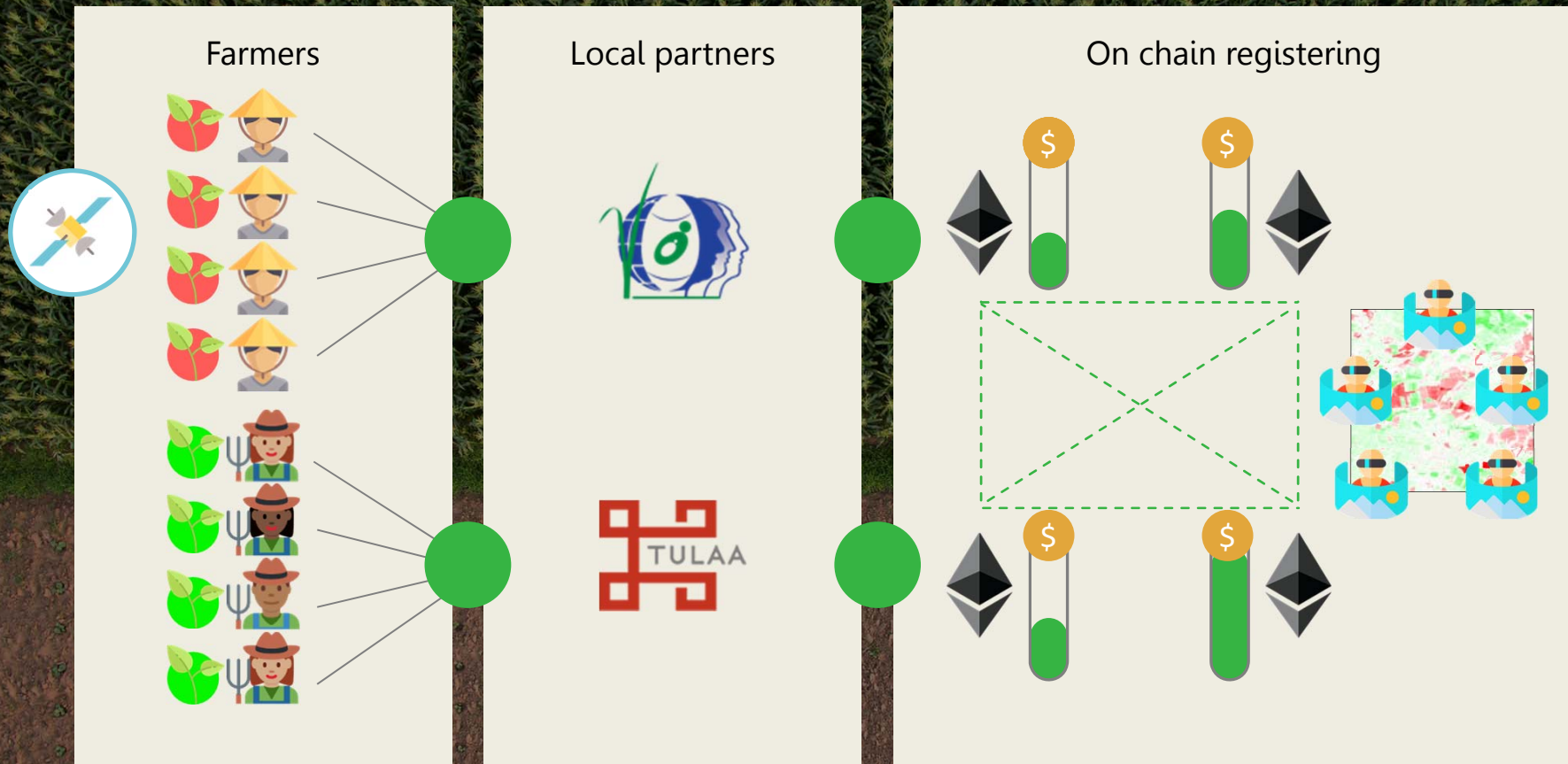
How it works



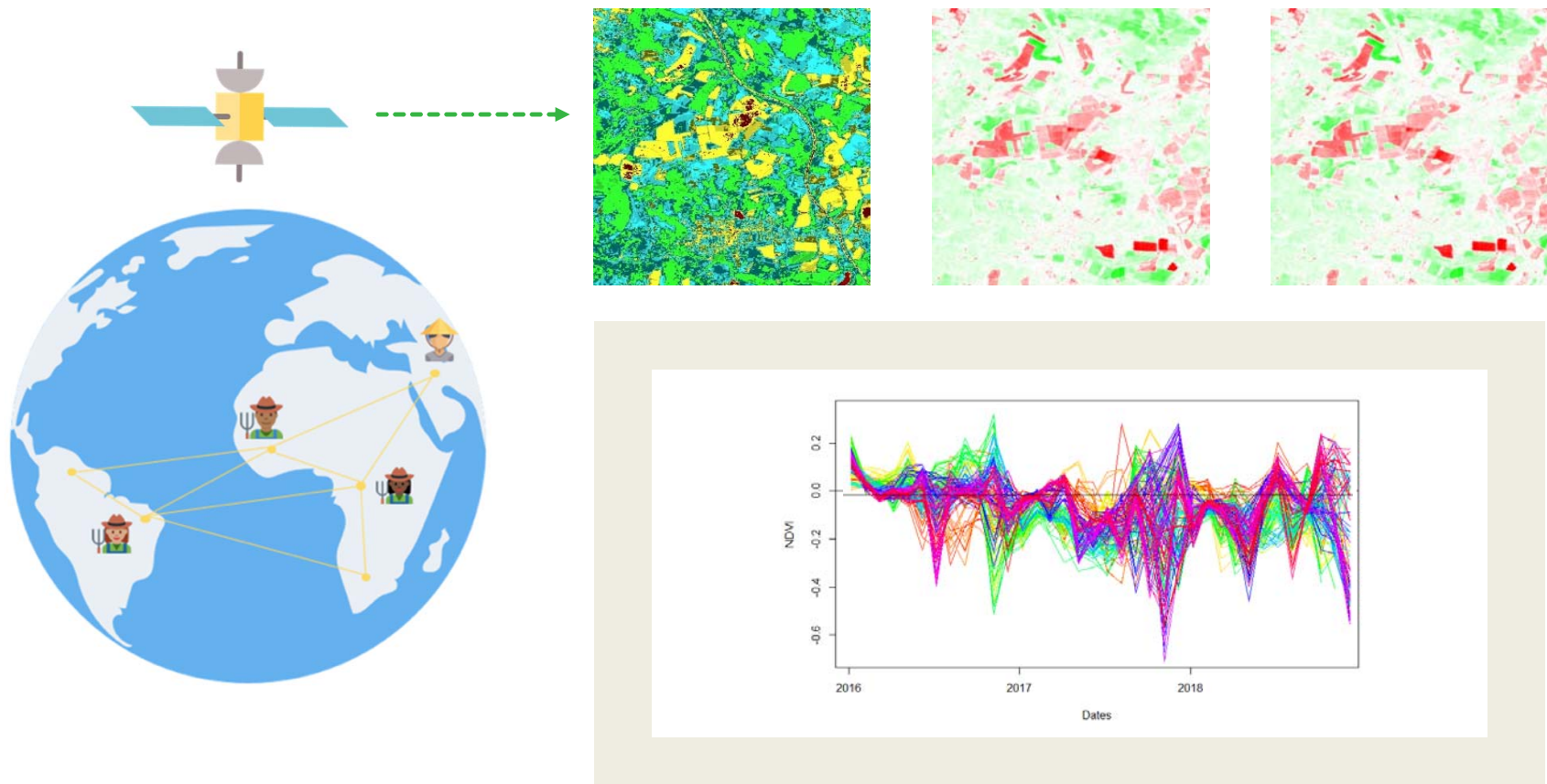
How it works



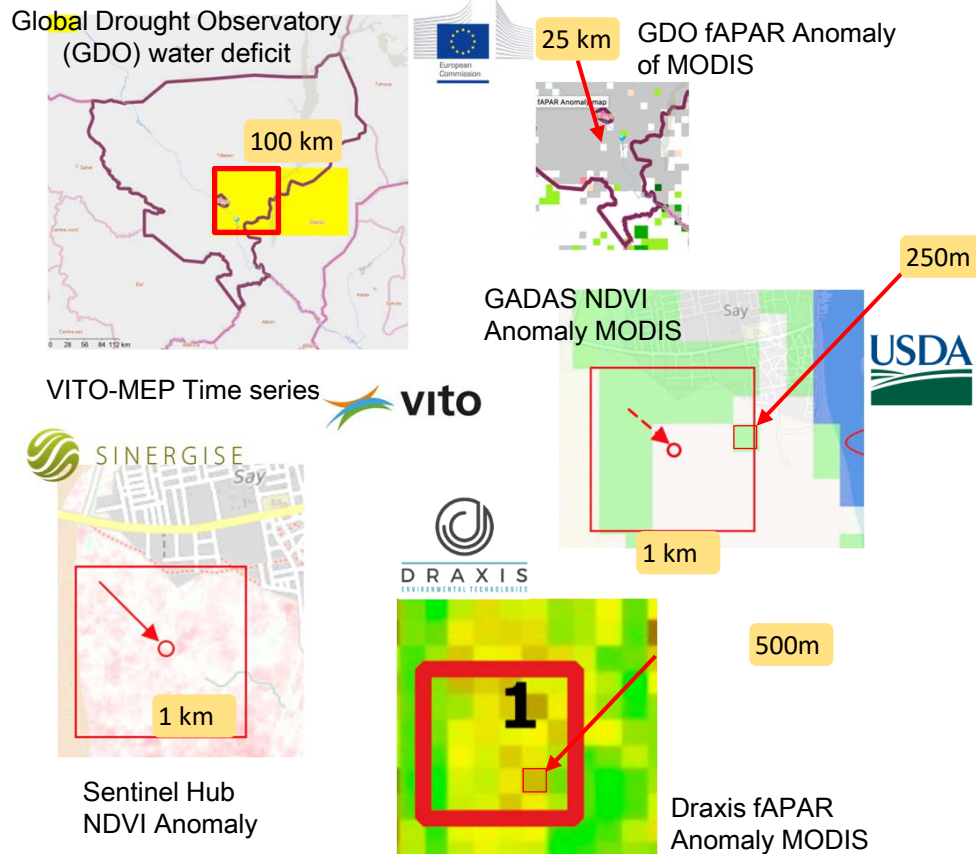
How it works



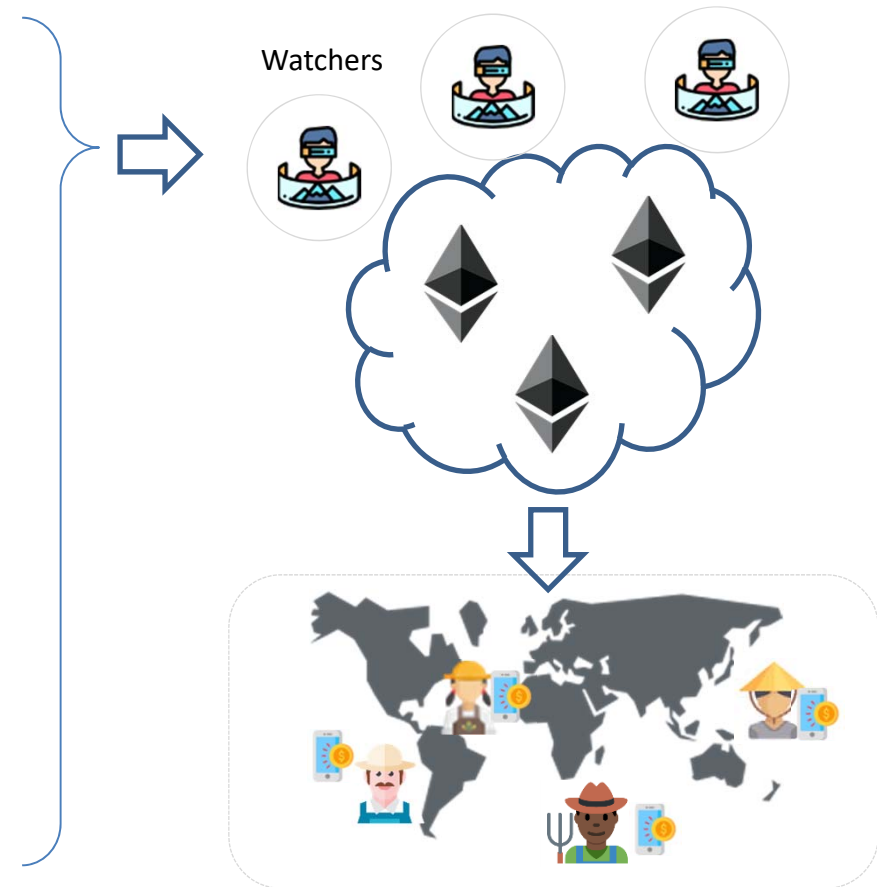
How it works



How it works

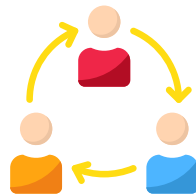


Crowd-watching





TRACTION



16

Strategic Partnerships
signed in 3 months



2600

Customers enrolled
for pilot phase



500,000

EUR Raised
to date



LUXEMBOURG SPACE AGENCY



ConsenSys
Ventures



MARKET ADOPTION



Our channel is through local partners trusted by farming communities

/ India deployment with DHAN

First paid pilot started in March 2019 with 20 farmers.
Q4-19 scaling to 300 and Q1-20 to 1200 farmers.

DHAN is a Development Organization working in India since 1997 with 1,6 million families spread over 14 states in India (audited figures of 2017)



MARKET ADOPTION



Our channel is through local partners trusted by farming communities

/ Niger deployment with RBM

Niger pilot started in January 2019, onboarding first 300 agro-pastoralists in Q4-19.

Niger pilot is co-financed by the Luxembourg Government and it is in partnership with DRAXIS and RBM.

Le *Réseau Billital Maroobé* groups 80 professional organizations with a total membership of 750,000 members and acts on behalf of 2,500,000 beneficiaries.



**Thank you for your
attention...**

Maria Mateo
#Serial entrepreneur
#Space Industry
#Blockchain



**Antoine
Detante**
#Blockchain



**Jean-Baptiste
Pleynet**
#Serial entrepreneur
#Insurance
#Blockchain



Vu Tien Khang
#Space Industry
#Blockchain



**Annette
Houtekamer**
#Inclusive Insurance
and Banking



<https://www.ibisa.network>





<https://www.ibisa.network>



... one last thing!



Thank you for your
attention...

