Space for Food Security: The Geodata for Agriculture and Water programme (G4AW)

Joanna Ruiter
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G4AW
GEODATA FOR AGRICULTURE AND WATER

Netherlands Space Office

Ministry of Foreign Affairs

Since 2013, the Geodata for Agriculture and Water (G4AW) has improved food security in developing countries by promoting the creation of digital advisory and/or financial services based on use of satellite data.

- 4,5 mio farmers and (agro-)pastoralists farmers

- 25 projects & innovations

- 15 countries

- Commissioned by Netherlands Ministry of Foreign Affairs

NUMBER OF FOOD PRODUCERS

4,051,800 Participating and trained in using G4AW services

30% Female users

43% Young (<35y) users

1,970,400 With improved livelihoods

Contributing to:

1 NO POVERTY
2 ZERO HUNGER
8 DECENT WORK AND ECONOMIC GROWTH
13 CLIMATE ACTION
15 LIFE ON LAND
17 PARTNERSHIPS FOR THE GOALS

129 Partners ···· in **25** Projects ···· in **15** Countries

2021

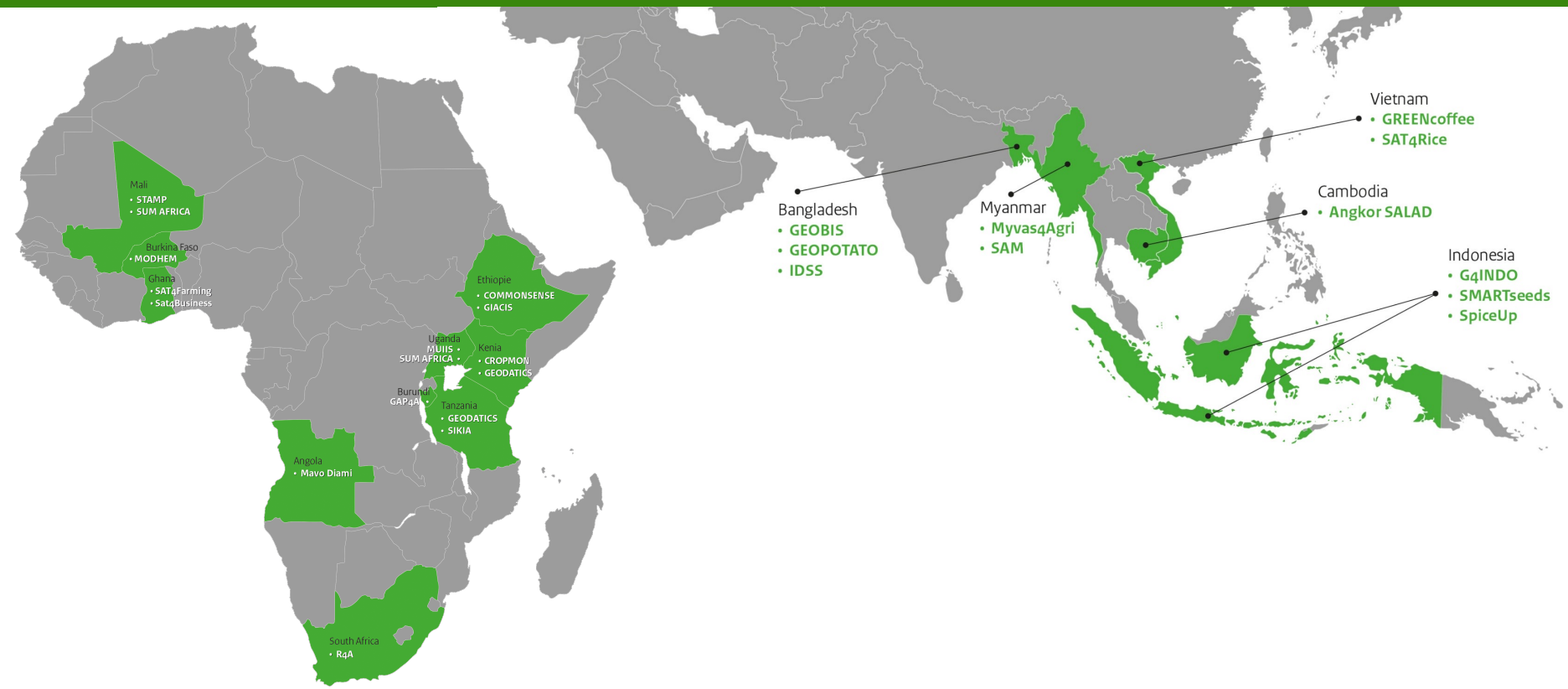**1,193,000** Users of G4AW services

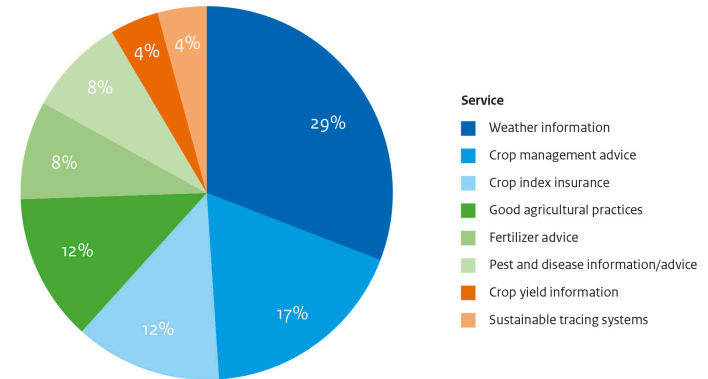**4,690,900** ha Land managed by reached farmers

Mali
• STAMP
• SUM AFRICA

Burkina Faso
• MODHEM

Ghana
• SAT4Farming
• Sat4Business

Ethiopie
• COMMONSENSE
• GIACIS

Uganda
MUIIS •
SUM AFRICA •

Kenia
• CROPMON
• GEODATICS

Burundi
GAP4A

Tanzania
• GEODATICS
• SIKIA

Angola
• Mavo Diami

South Africa
• R4A

Bangladesh
• **GEOBIS**
• **GEOPOTATO**
• **IDSS**

Myanmar
• **Myvas4Agri**
• **SAM**

Vietnam
• **GREENcoffee**
• **SAT4Rice**

Cambodia
• **Angkor SALAD**

Indonesia
• **G4INDO**
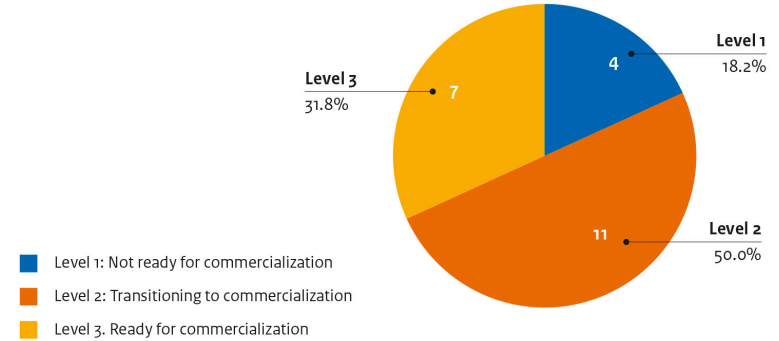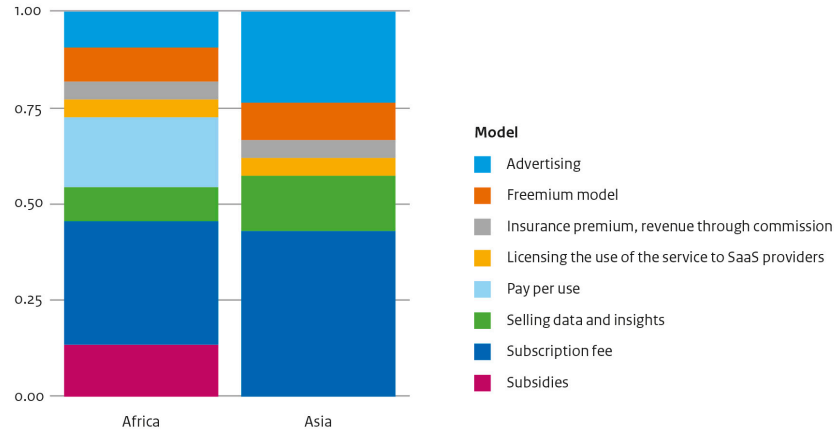• **SMARTseeds**
• **SpiceUp**

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Examples of agtech/fintech services in G4AW

- More localized weather forecasts
- Yield forecasts / growth stages
- Pest & disease warnings
- Drought and flood warnings
- Index insurance
- Risk profiling supporting insurance and credits

Service

- 29% Weather information
- 17% Crop management advice
- 12% Crop index insurance
- 12% Good agricultural practices
- 8% Fertilizer advice
- 8% Pest and disease information/advice
- 4% Crop yield information
- 4% Sustainable tracing systems

Model
- ■ Advertising
- ■ Freemium model
- ■ Insurance premium, revenue through commission
- ■ Licensing the use of the service to SaaS providers
- ■ Pay per use
- ■ Selling data and insights
- ■ Subscription fee
- ■ Subsidies

Level 1
18.2%

Level 3
31.8%

Level 2
50.0%

- ■ Level 1: Not ready for commercialization
- ■ Level 2: Transitioning to commercialization
- ■ Level 3. Ready for commercialization

Services:
Routing of herds
(avoiding agri zones)
Market information

Channels:
Call center (Orange)

Results:
STAMP (2019):
>75k pastoralists
MODHEM (2020):
>65k pastoralists

Scaling to Niger
(since June 2021)

Impact STAMP
Lower mortality rates for cows (23.9%)
Less herd loss: 160 euro (saving)

SNV

HSS
Hoefsloot
Spatial
Solutions

STAMP (Mali) / MODHEM (Burkina Faso)

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STAMP (Mali) / MODHEM (Burkina Faso)

Services:
Drought insurance (localized)

Channels:
Local insurance companies
Farmers cooperatives
AIC, Planet Gaurantee

Results:
farmers insured
67,000 (2018)
289,000 (2021)

Insured versus Uninsured
Less selling assets at distress before drought windows (4% / 21%)
Leaving farm for other work (4% / 15%)
Lower own consumption (16% / 35%)

Uganda Risk Rates (Generic Product)

Low Risk Areas (Average loss below 5%)
Medium Risk Areas (Average loss 5% to 10%)
High Risk Areas (Average loss above 10%)
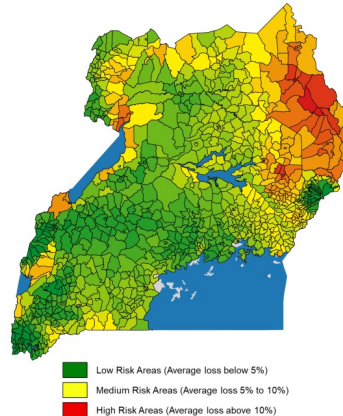
SumAfrica (Uganda, Mali)

Services:
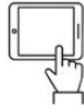AgriCoach, Nutrition Coach, Online fertilizer and seeds savings, payment and credit, HealthCoach (Covid-19)

Channels:
G50 'Extension officers' Mobile device app

Results:
~170,000 smallholder families in Burundi 2021: scaling to 400,000 (2.3 mio people)

Impact:

Farmers rating on AgriCoach
9.3 out of 10

227%
Bean productivity (double)

65%
increase in application of GAP's

AUXFIN

Weather Impact

eleaf
FEED THE WORLD

GAP4A (Burundi)

G4AW and the SDGs?

Theory of Change

- SDG-2: Zero hunger
- SDG-6: Clean water and sanitation
- SDG-12: Responsible consumption and production
- SDG-13: Climate action
- SDG-15: Life on land
- SDG 17: Partnerships for the goals

Lessons Learned G4AW

- Two stage project

- Implement user-centered approach & digital inclusion using active M&E

- Bundling of services provide benefits (e.g. free advisory with buying inputs)

- Education & trust remain crucial success factor (e.g. farmers are more risk taking rather than to pay for insurance)

Stimulating smallholders' access to emerging AgTech and FinTech markets, Part 1: Users and Services, Summary Report 2021

Space for Food Security
Stimulating smallholders' access to emerging AgTech and FinTech markets
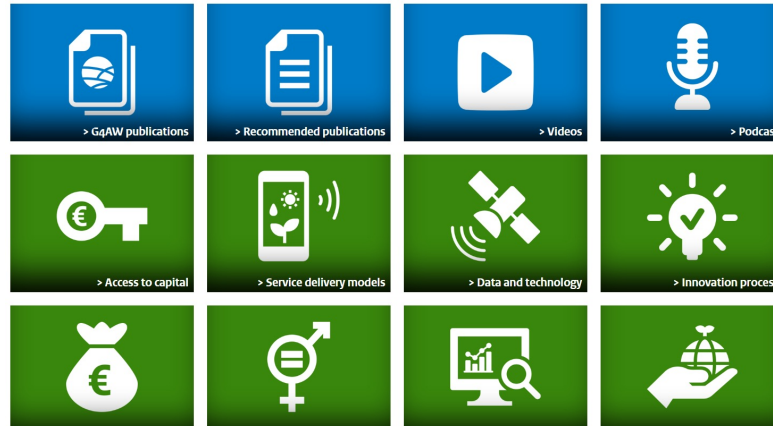
Part 1: Users and Services (Summary Report)

- Weather information and forecast crucial

- Better soil data needed for good fertilizer advice

- Develop service delivery to be flexible for adaptions and scaling

Inform and inspire a wide audience:

- (International) policy makers
- Providers of satellite data & services
- Financial institutions / impact investors
- NGOs
- More…

Find G4AW resources

SAVE THE DATE

Space for Food Security

G4AW Conference, 3-6 October 2022

Location: Utrecht, NL

Joanna Ruiter, Advisor Satellite Applications

j.ruiter@spaceoffice.nl

www.g4aw.spaceoffice.nl