



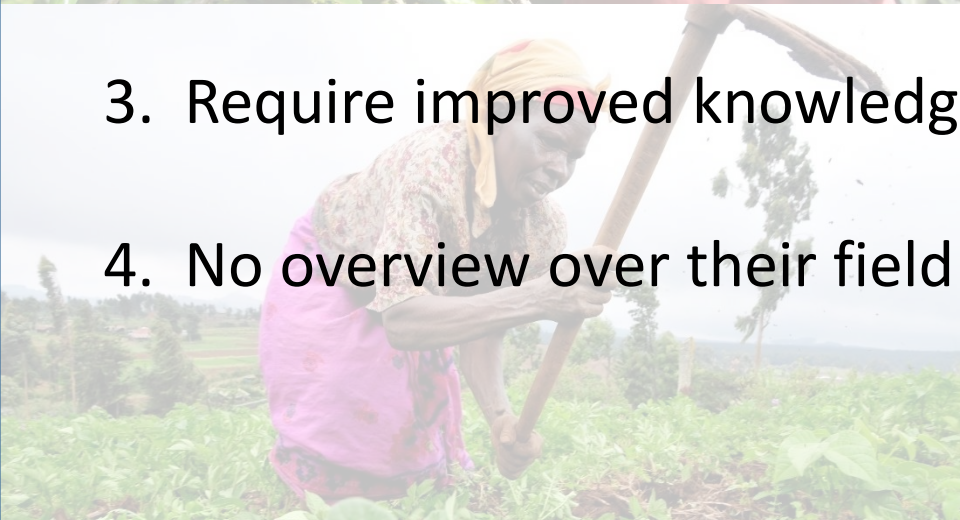

ThirdEye: Flying Sensors to Support Farmers' Decision Making



Amsterdam, 31 October 2017

Martijn de Klerk (FutureWater, the Netherlands)

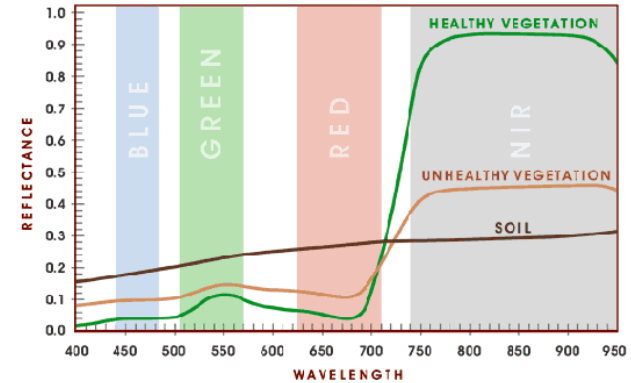
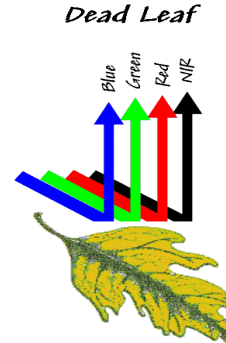
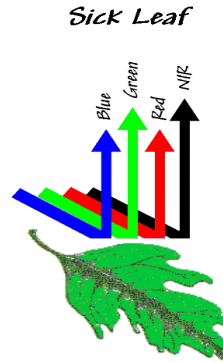
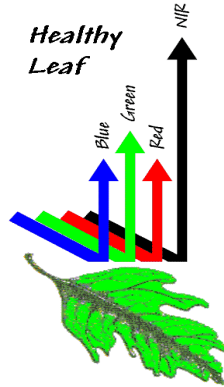
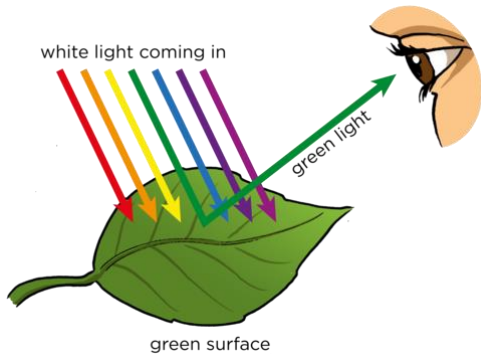
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- 
1. Limited resources, such as water, seeds and fertilizer
 2. Too late in detecting crop stress observation

- 
- 
3. Require improved knowledge to boost productivity
 4. No overview over their field





How does it work?

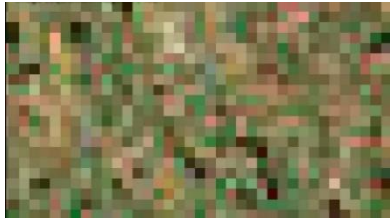


- Normalized Difference Vegetation Index (NDVI) values give an indication of crop stress
- NDVI shows status of the crop 10 days earlier than what can be seen by the human eye

Comparison with satellites



Fixed overpass times

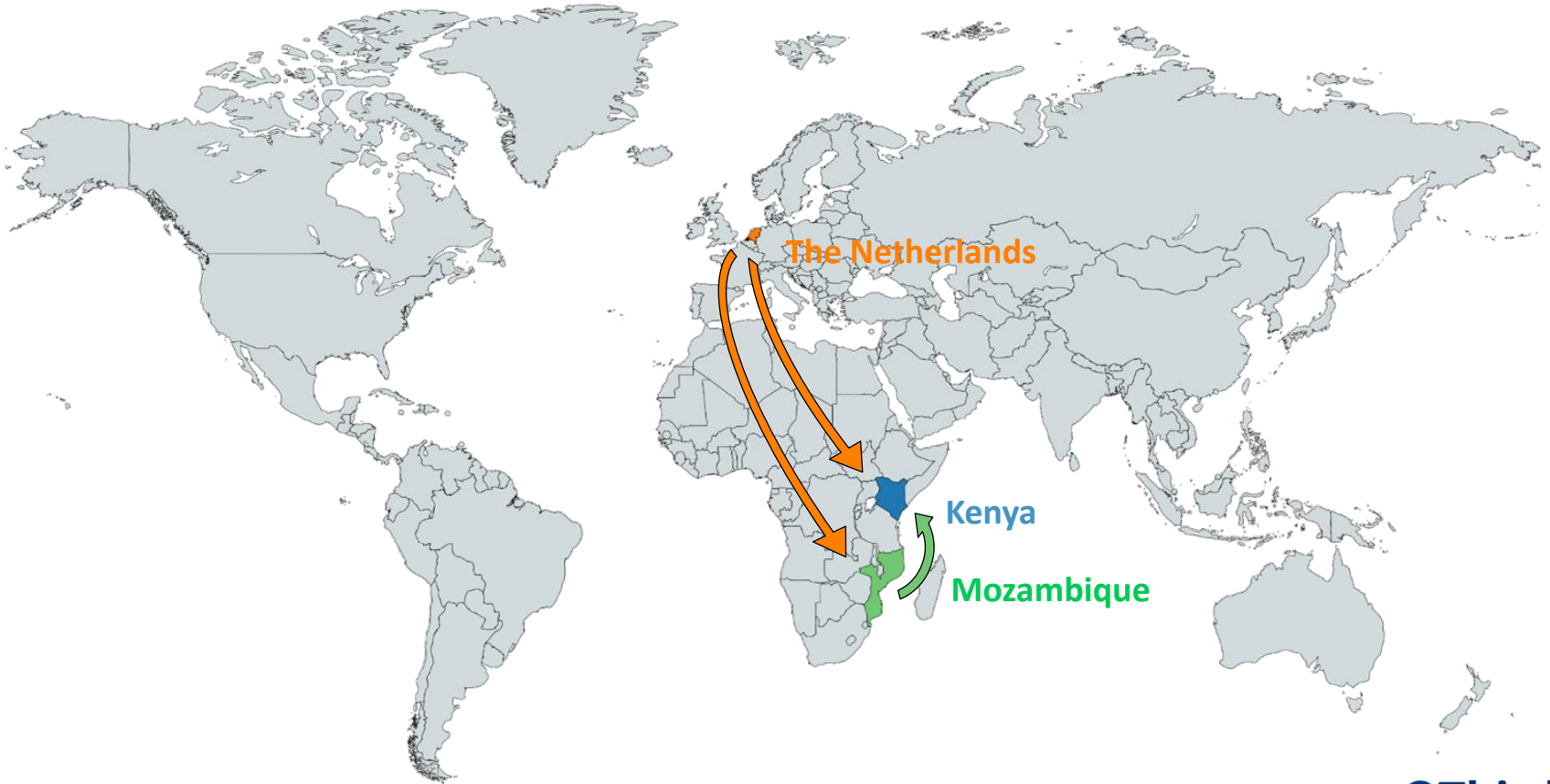


Low spatial resolution



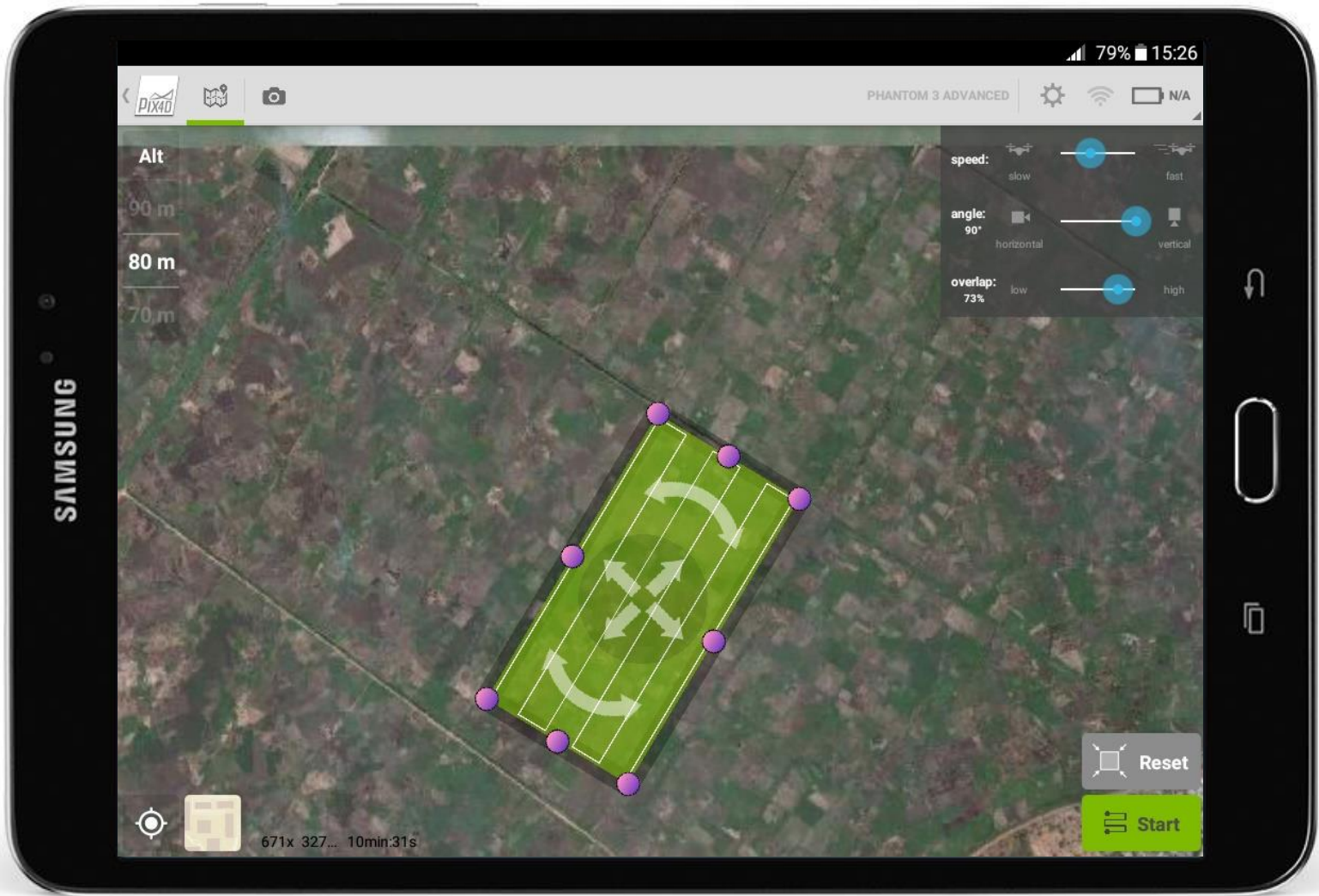
Unable to acquire information when clouds are present

Development of ThirdEye









79% 15:26



PHANTOM 3 ADVANCED



Alt

90 m

80 m

70 m

speed:



slow

fast

angle:

90°

horizontal



vertical

overlap:

73%

low



high

SAMSUNG

Reset

Start



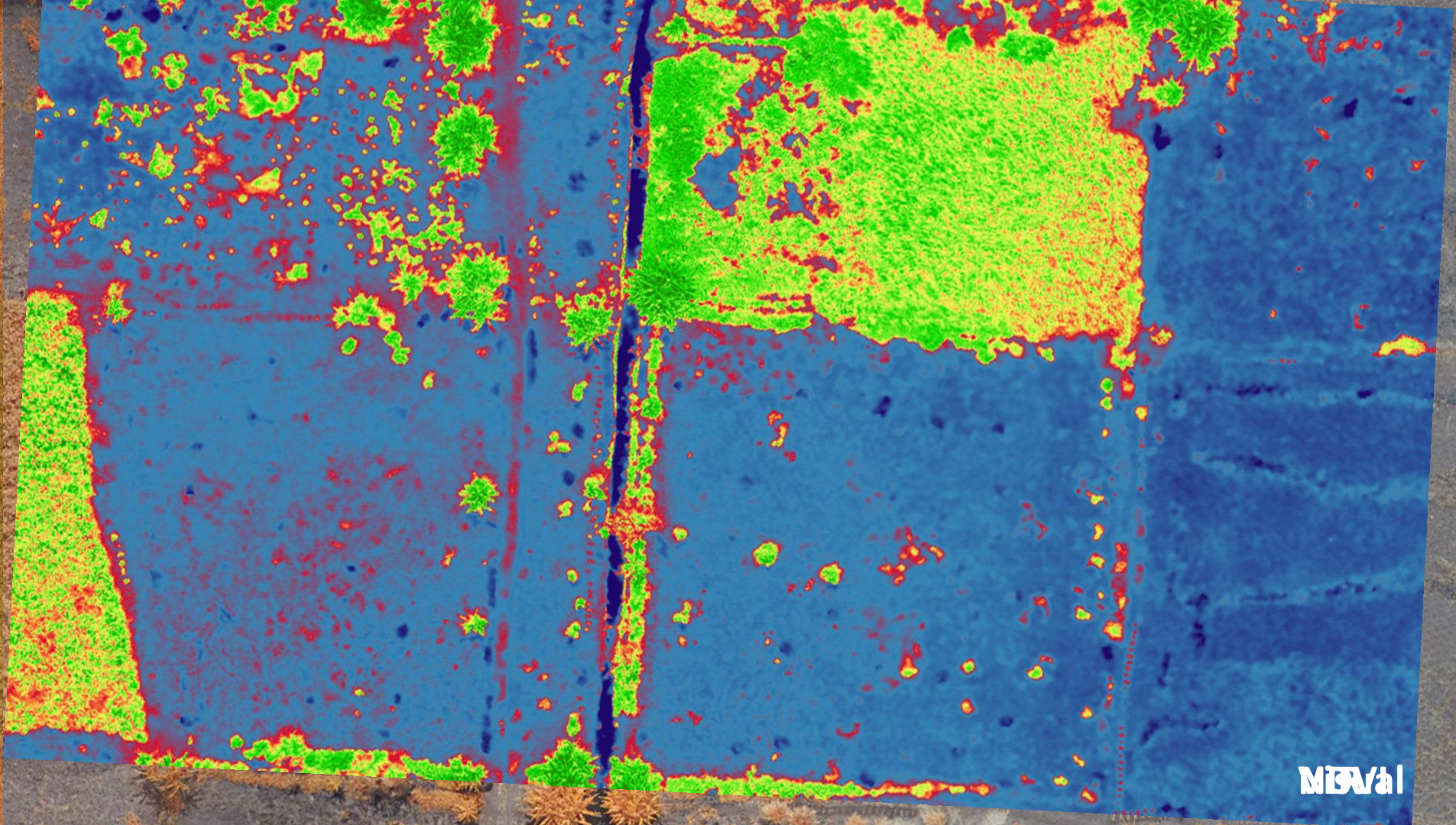
671x 327... 10min:31s



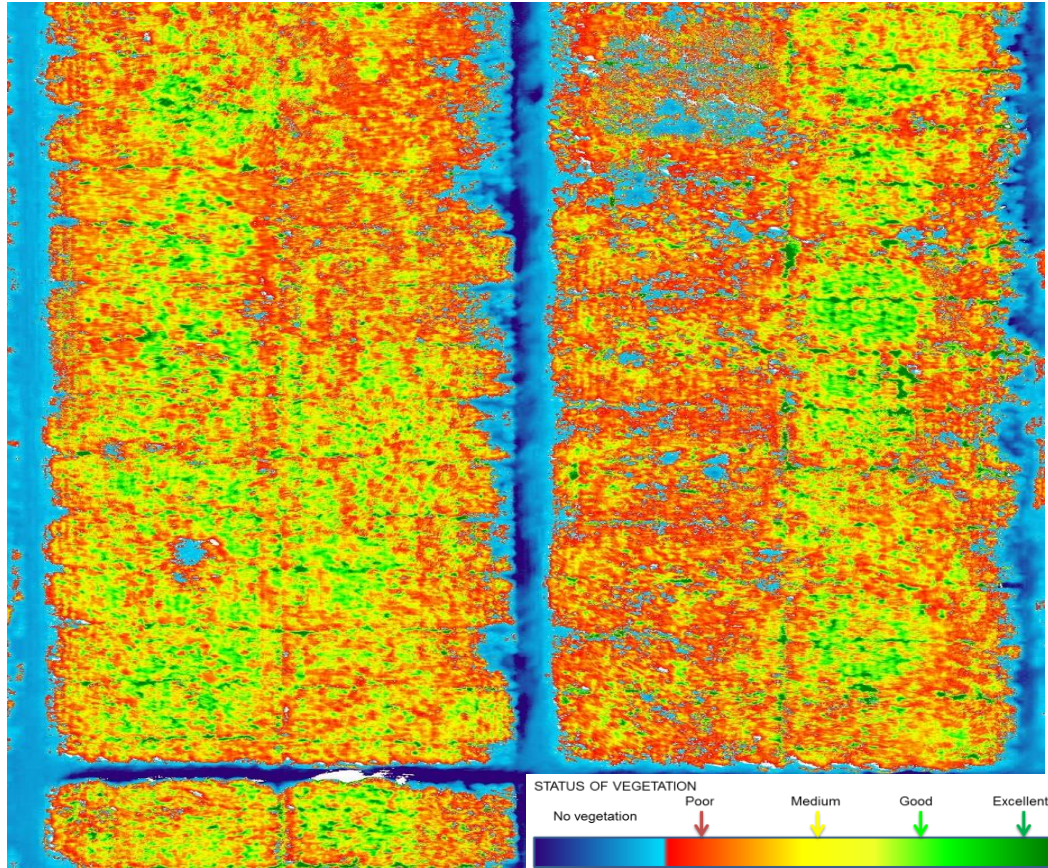




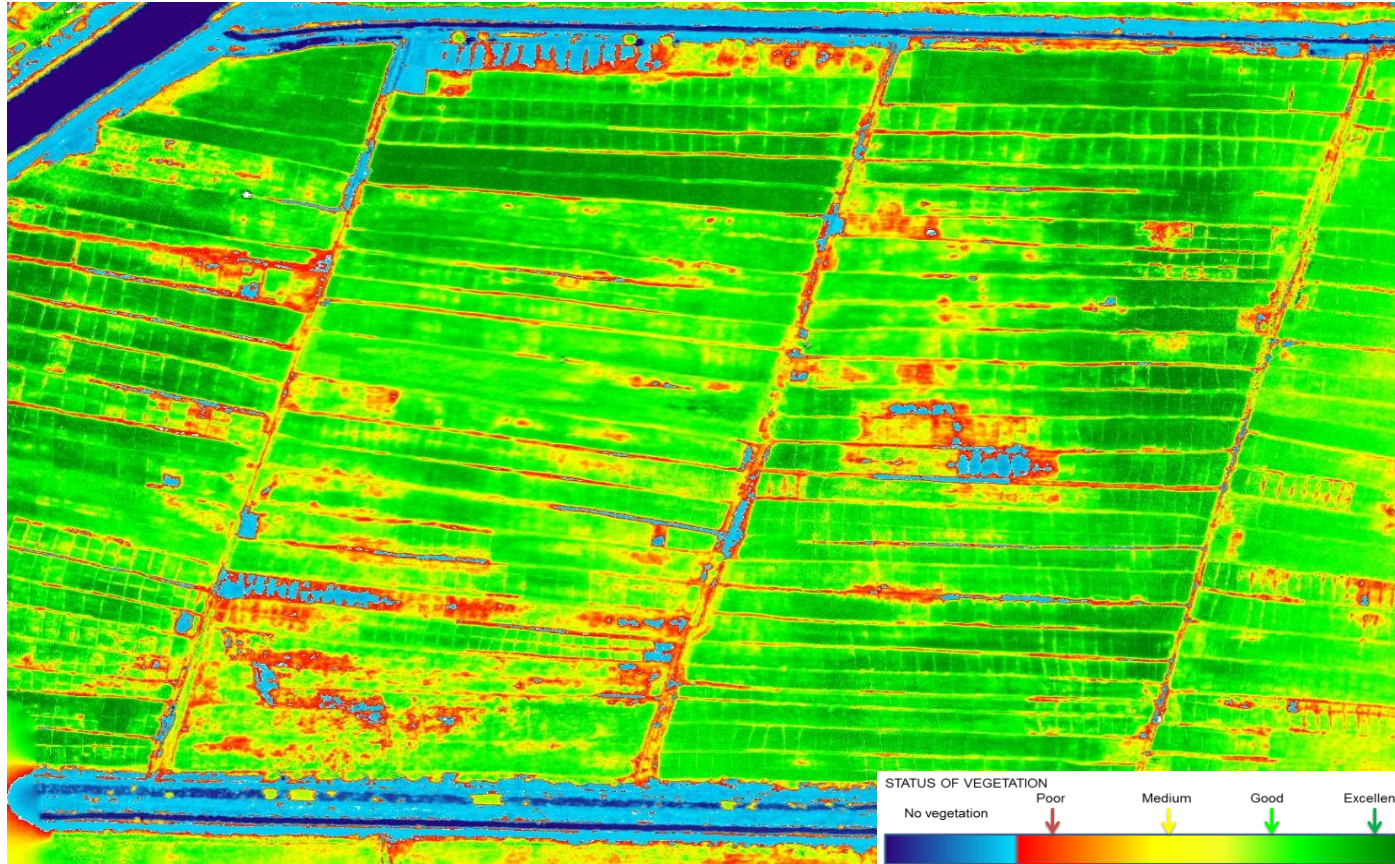




NDVI of sugarcane fields



NDVI of rice fields

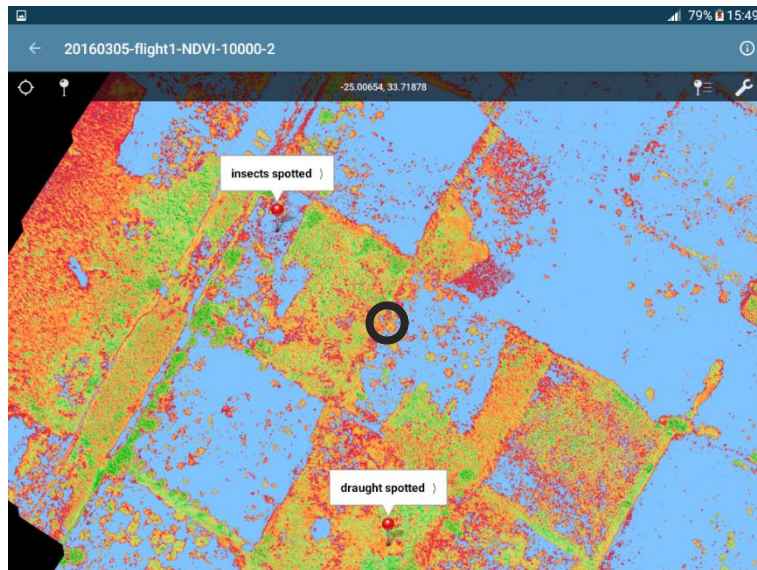
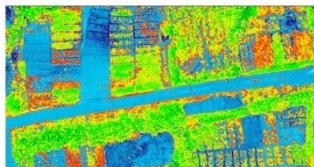


Advisory to farmers



ThirdEye

DATE	2-Apri-2015
LOCATION	Kan-Ko Farmers II
OPERATOR	+ telephone Peter Drangos 00-48794729



https://www.youtube.com/watch?v=_UyNjGZRLII



Training local operators...

14 local Flying Sensor operators have been trained and obtained their certificate. 11 Flying Sensors are now operational.



To help farmers in Mozambique...

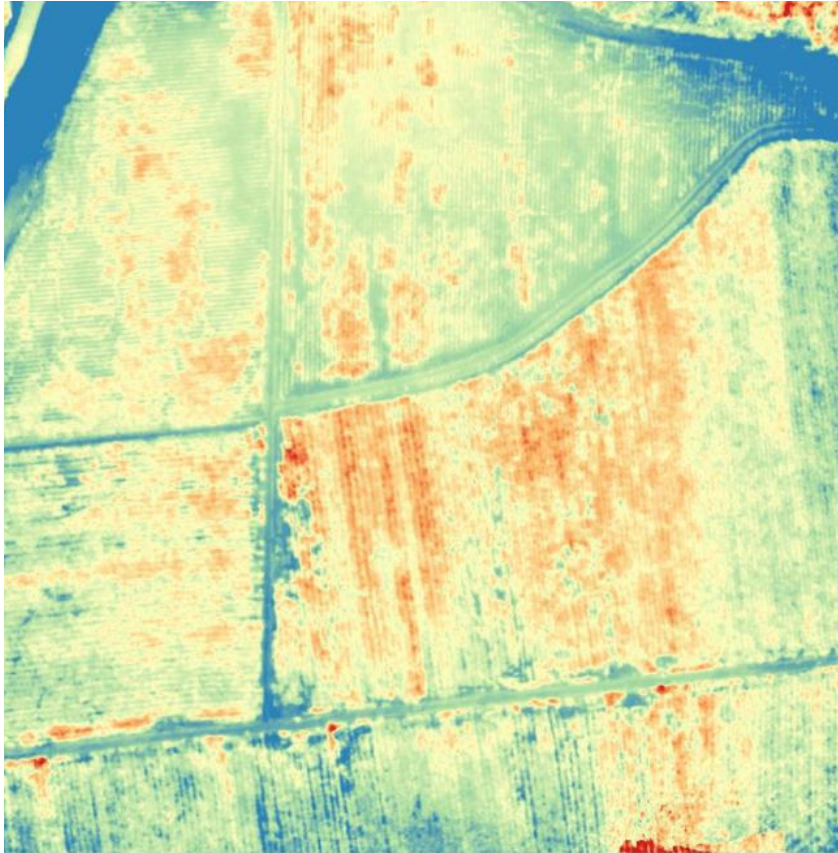
Over 3,500 farmers receive our service, of which 71% is female. Total beneficiaries is over 17,000.



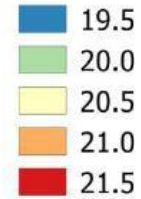
Get more crop per drop!

ThirdEye's service area in Mozambique is over 1,600 ha, resulting in a water productivity increase of 55%.

Alternative application: Digital Elevation Model



MafambisseF2-2-DemDense



Application:
land levelling or
crop height



Asante sana!