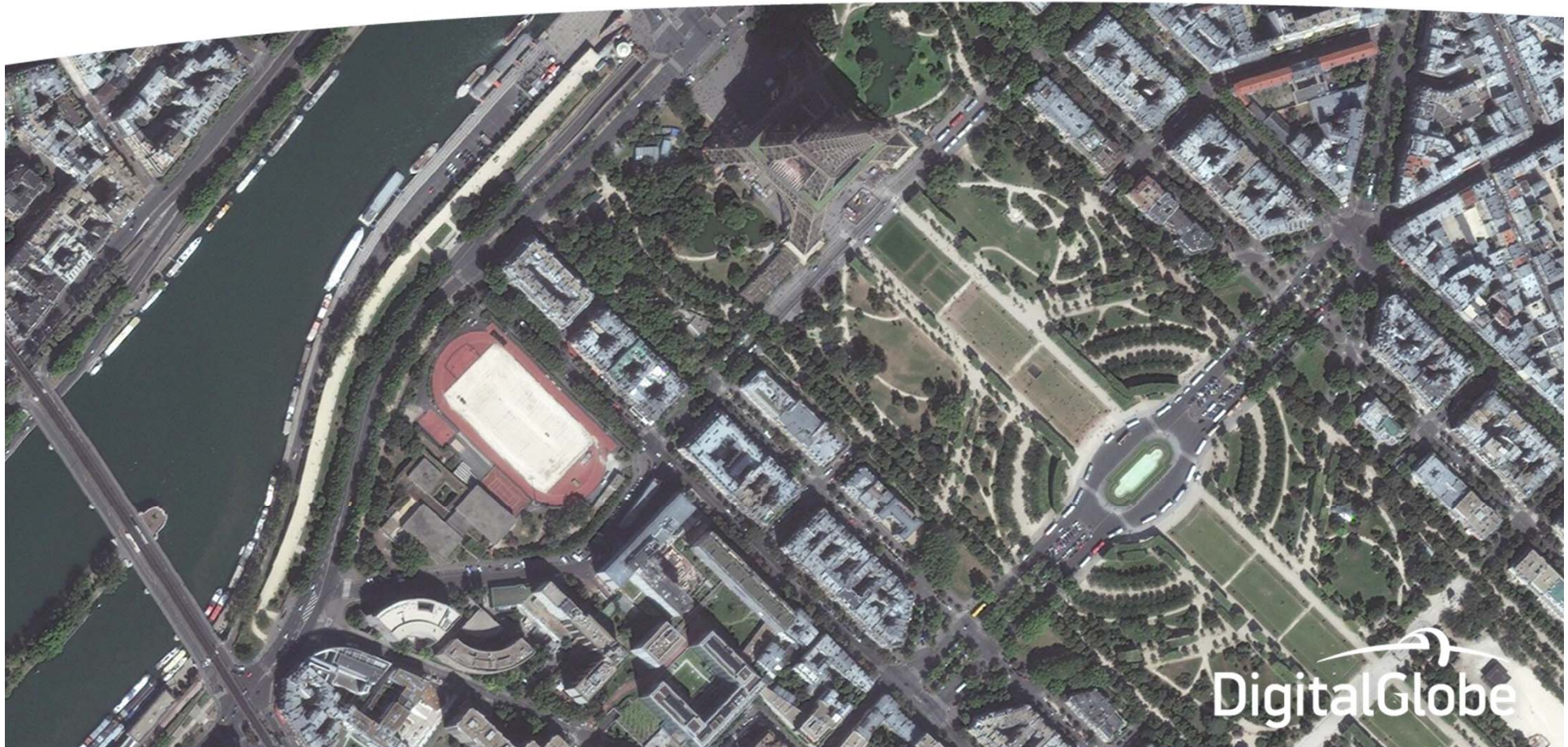


Science, Technology, and Innovation to Measure and Monitor Progress Leveraging the Data Revolution

Kumar Navulur, October 24, 2014



DigitalGlobe

Where are we headed as a society?

Everything happens somewhere, sometime

Digital Map of the World

Living Atlas of the World

Location, Time, and Context as the Organization Principle

Living Planet

Geospatial World

Geography matters

What are the critical technologies in data revolution?



Internet



Remote Sensing



Mobile



GIS



Computing



CAD/BIM



Crowd Sourcing/Social
Media



GPS

How many satellites are there mapping the earth?

EVERY SINGLE SATELLITE ORBITING THE EARTH

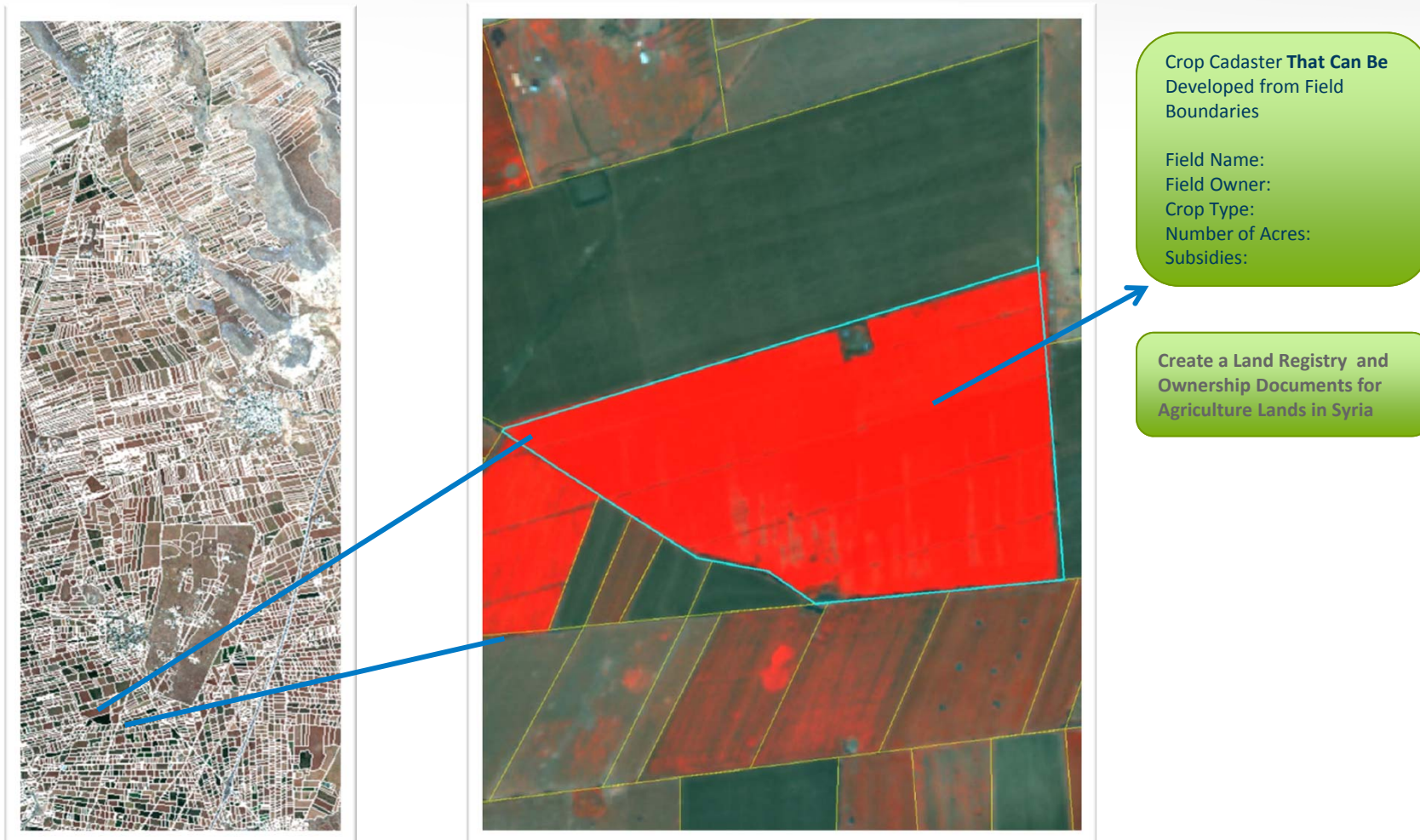


A recommend approach for leveraging data revolution for sustainable development



Evidence Based Decision Making Using Data Revolution

Field Boundaries are the foundation element for crop cadaster, crop statistics calculations



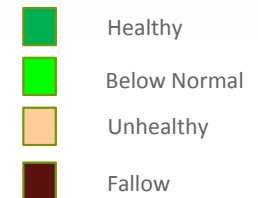
Crop acreage was estimated for years 2011, 2012, and 2013



Cultivated Area Is In Decline In This Area

Year	Cultivated Area (Ha)	% of Crop Area
2011	4432	22%
2012	875	4%
2013	2426	14%

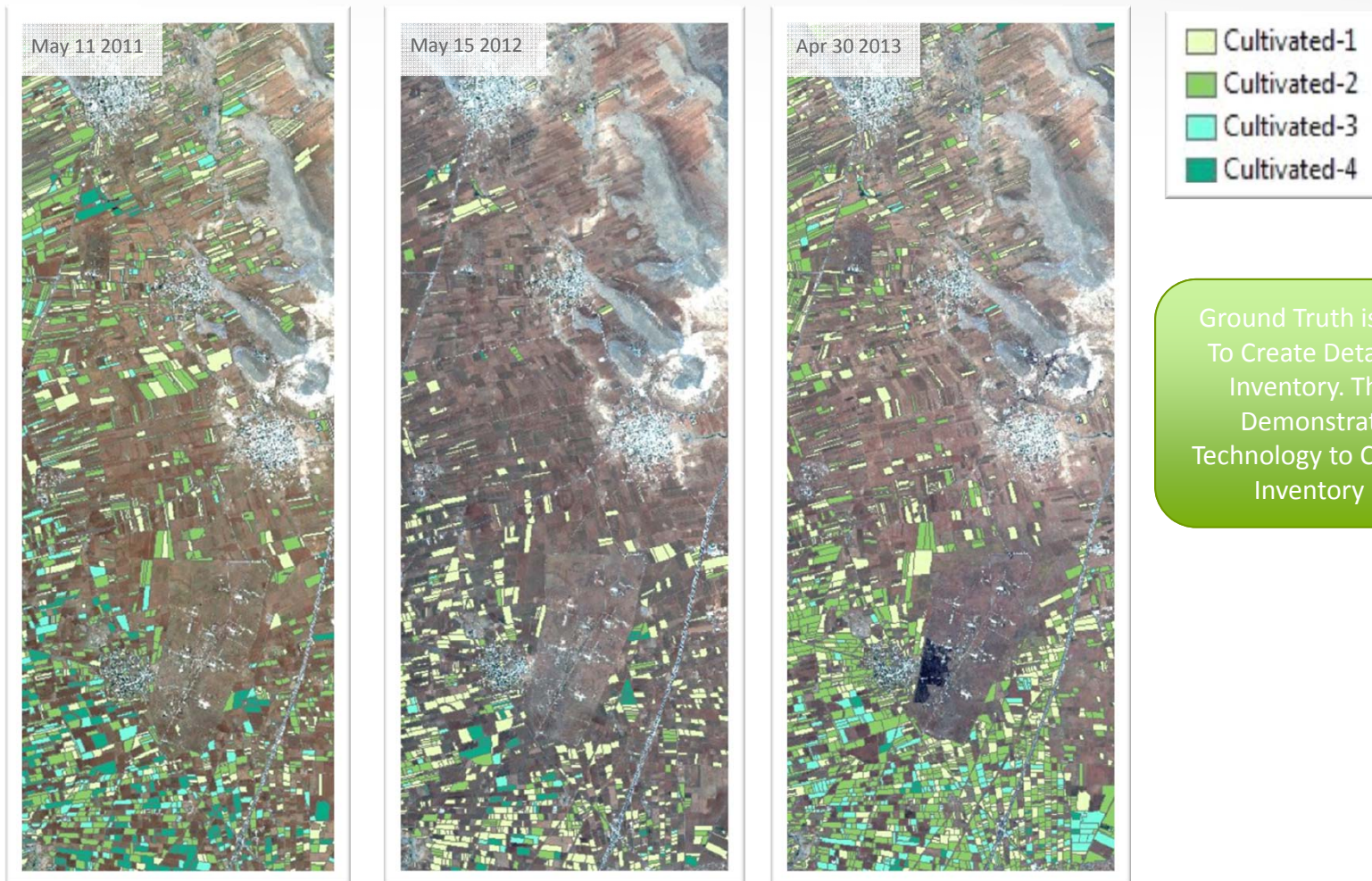
Crop health was estimated for years 2011, 2012, and 2013



Overall
Decline in
Crop Health In
This Area

Year	Crop Health Index
2011	0.38
2012	0.15
2013	0.24

Crop inventory was estimated for years 2011, 2012, and 2013



Ground Truth is Required To Create Detailed Crop Inventory. This Slide Demonstrates the Technology to Create Crop Inventory Maps

gGovernance for Sustainable Development





Old Problems, New Solutions



Location in Guinea

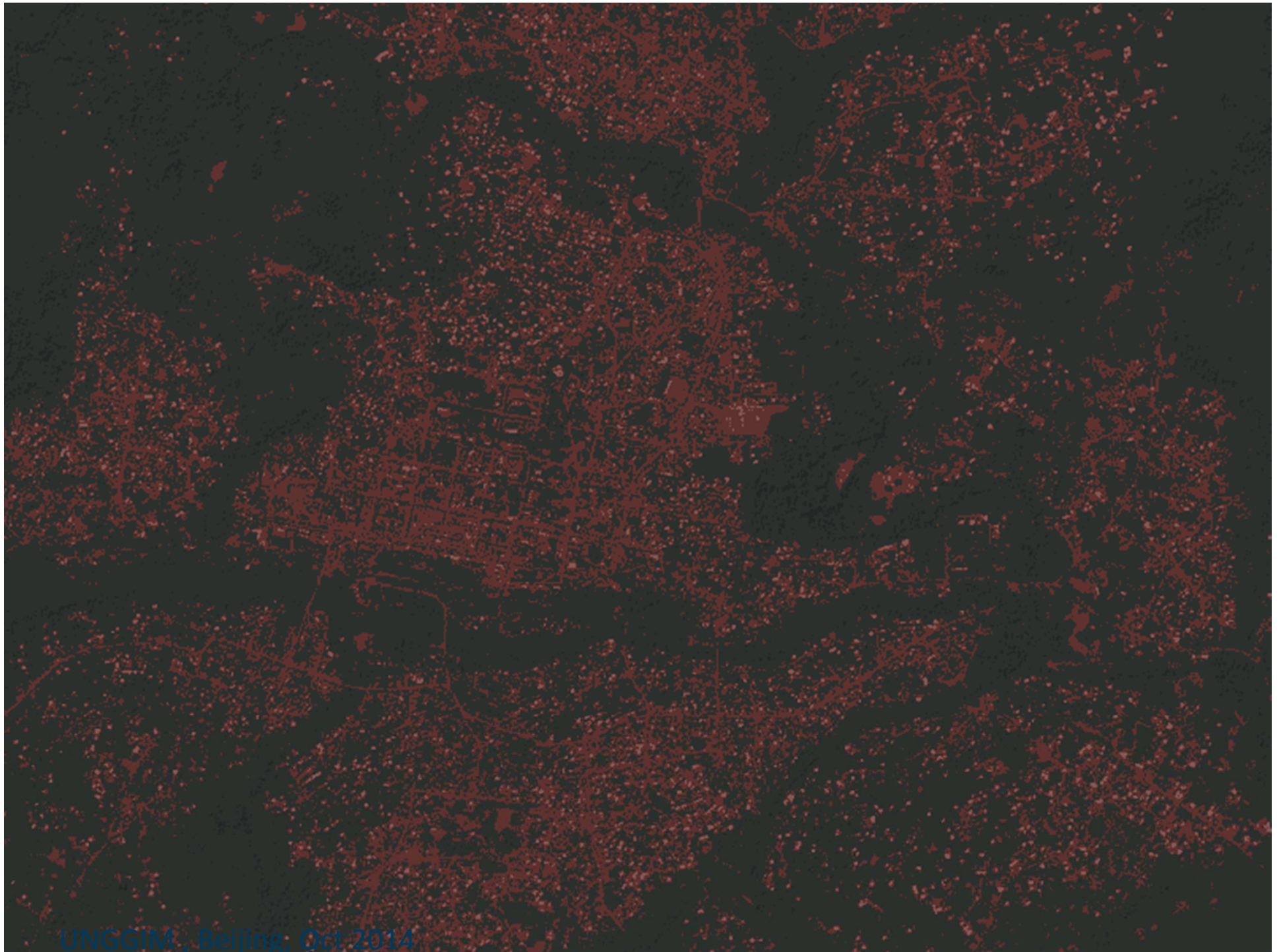
Coordinates:  10°23'N 12°05'W

Country	 Guinea
Region	Mamou Region
Prefecture	Mamou Prefecture
Population (2008)	
• Total	76,269





UNGGIM , Beijing, Oct 2014



UNGGIM, Beijing, Oct 2014

Do we need reconsider traditional mapping scales approach?



Coarse Scale

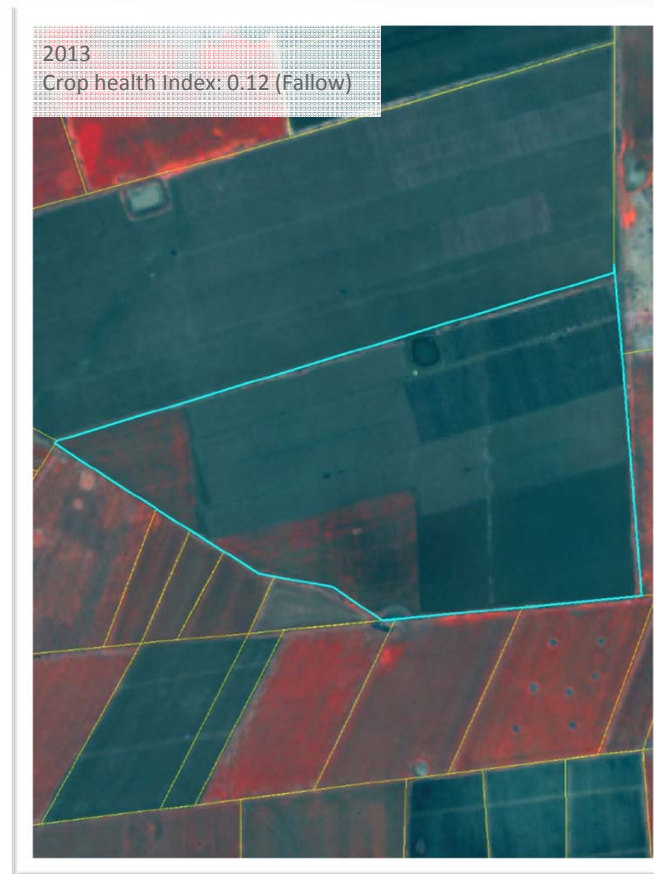


Finer Scale

Do we need reconsider traditional mapping scales approach?

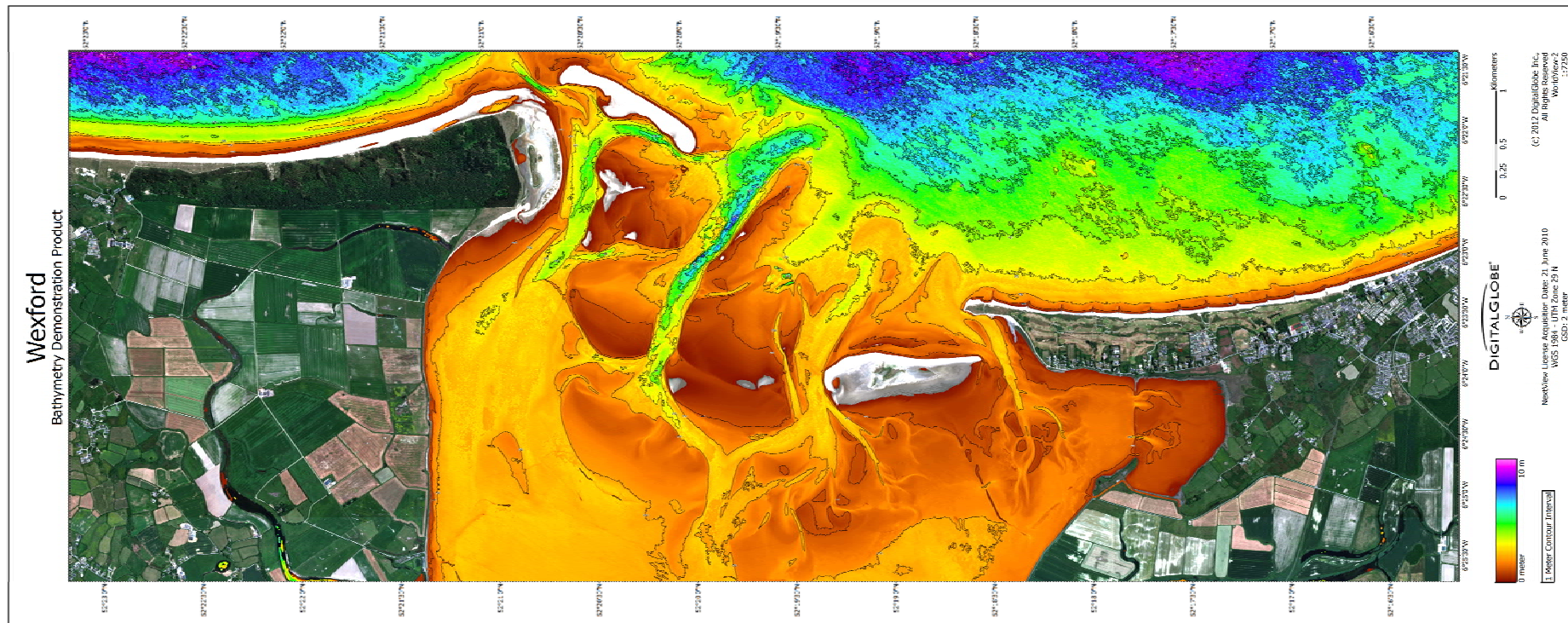


We can do micro analysis at macro/national/regional/global scale

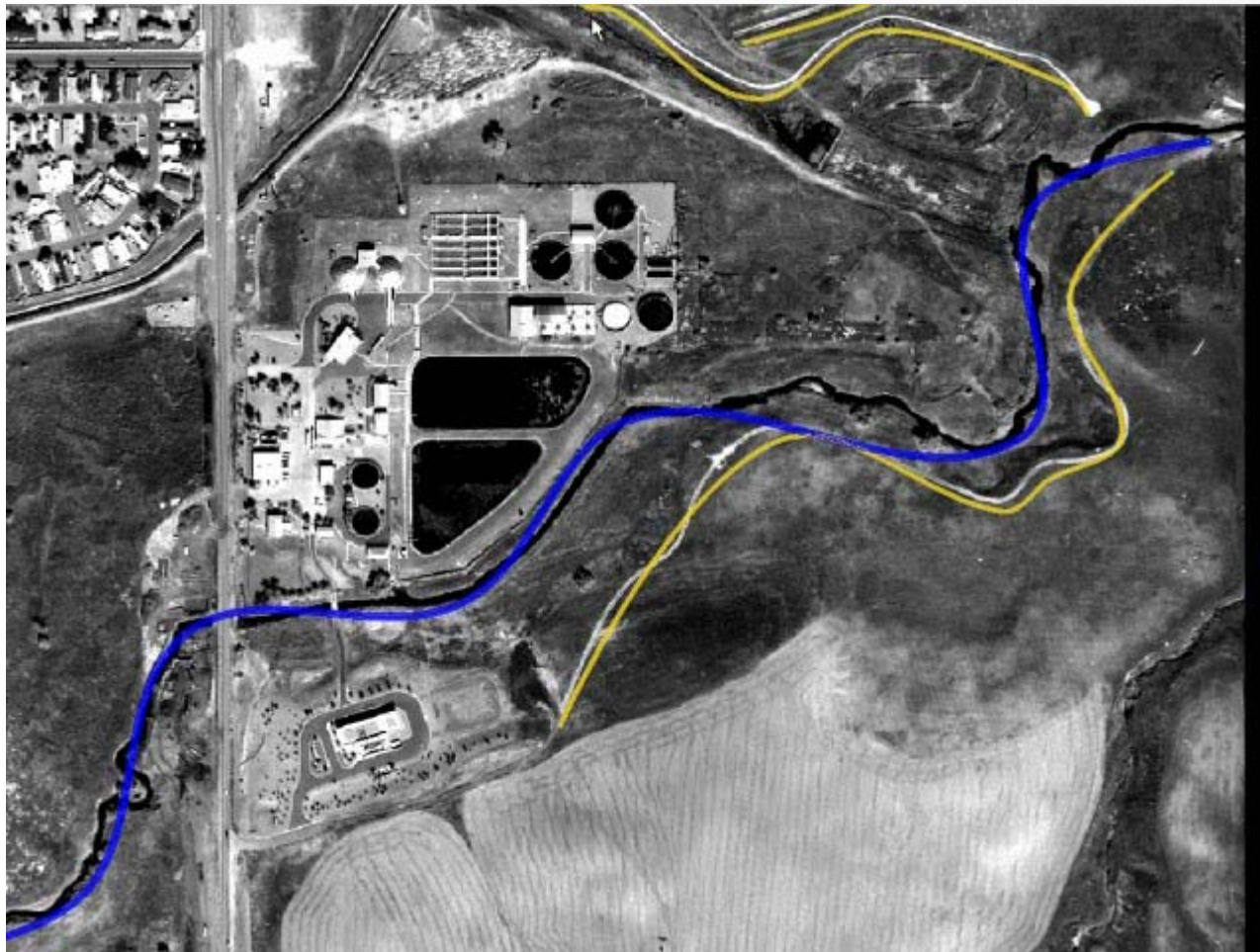


Overall
Decline in
Crop Health
For This Field

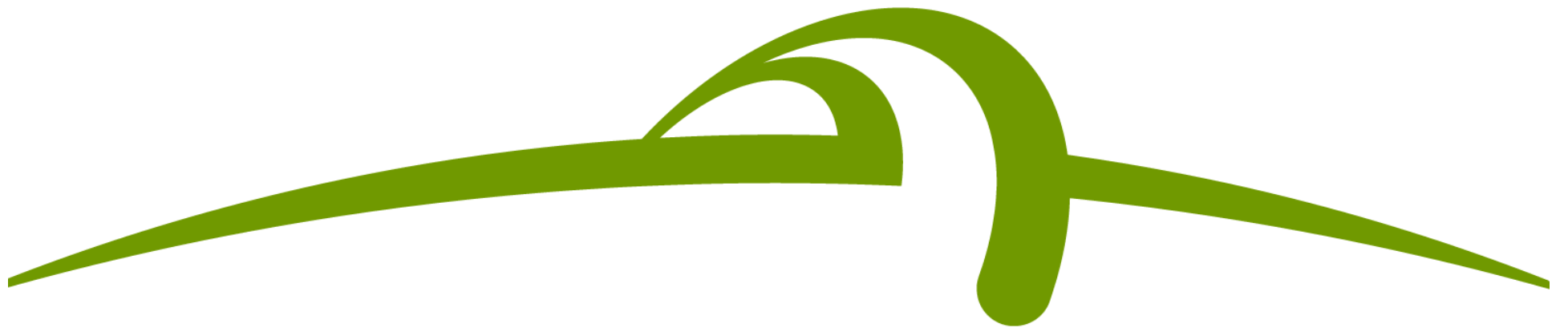
Let us not forget mapping Water-Land Interface (holistic approach)



Keeping in mind multi-year/decade update and maintenance



Critical Mass of Technologies Have
Enabled Data Revolution For
Addressing National Level
Sustainability Programs and
Geospatial Data Allows for Evidence
Based Measuring and Monitoring



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