

CELC seminar on *Technologies for
Crop Estimates and Condition
Reporting in Agriculture*

Centurion Country Club in Pretoria
on Thursday, 21 April 2016

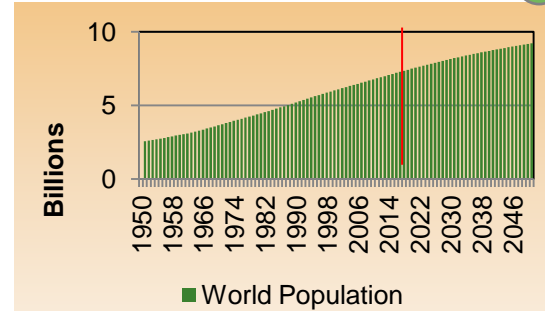
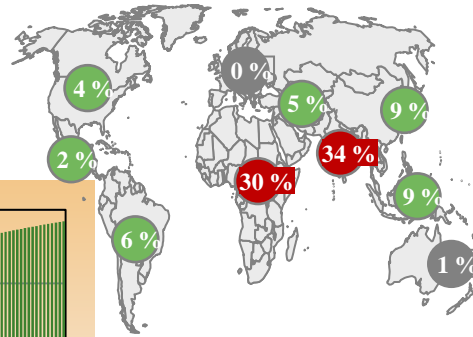
Purpose

- Showcase some of the technologies used for crop estimates and condition reporting, and
- To demonstrate how various technologies are integrated to produce **quantitative** crop estimation systems that are accurate, cost effective, timely and reliable.

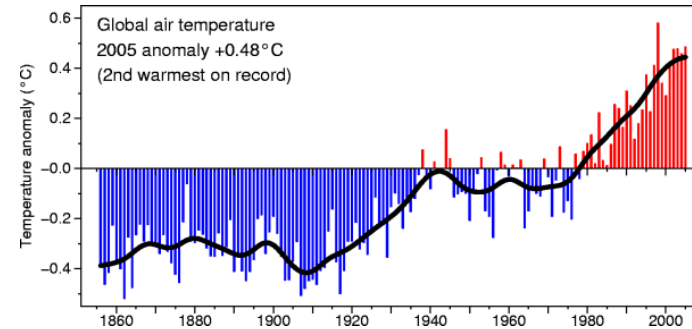
What will be discussed

- Learn more about the activities of the South African Crop Estimates Consortium and Liaison Committee.
- What are latest technologies used by the Crop Estimates Consortium?
- How are these technologies integrated to produce quantitative crop estimation systems?
- Are the crop estimates accurate, cost effective, timely and reliable?
- Find out what the future holds for quantitative agricultural crop estimation and food security in South Africa.

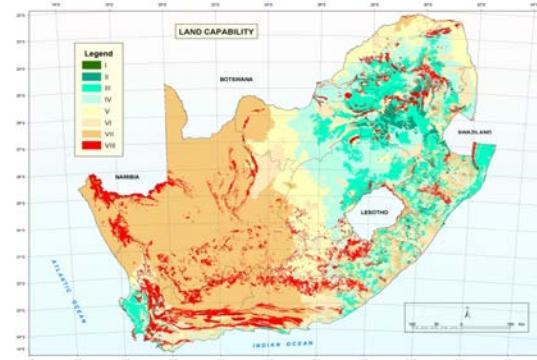
The global realities



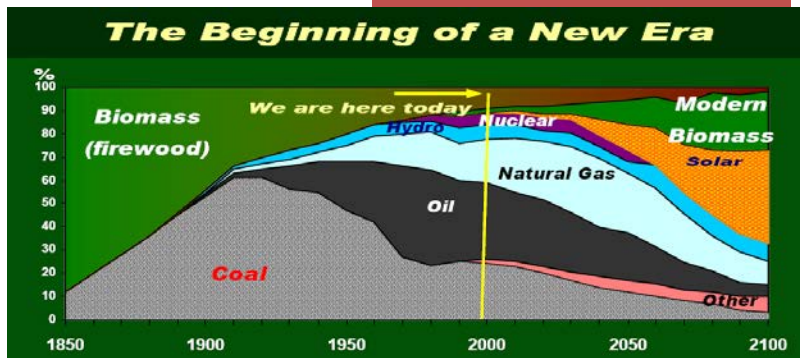
U.S Census Bureau (International Data Base), 2010



<http://www.cru.uea.ac.uk/cru/info/warming/>



- Population, income growth and the changing consumer base
- Climate change
- Energy availability
- Global economic problems
- Available resources



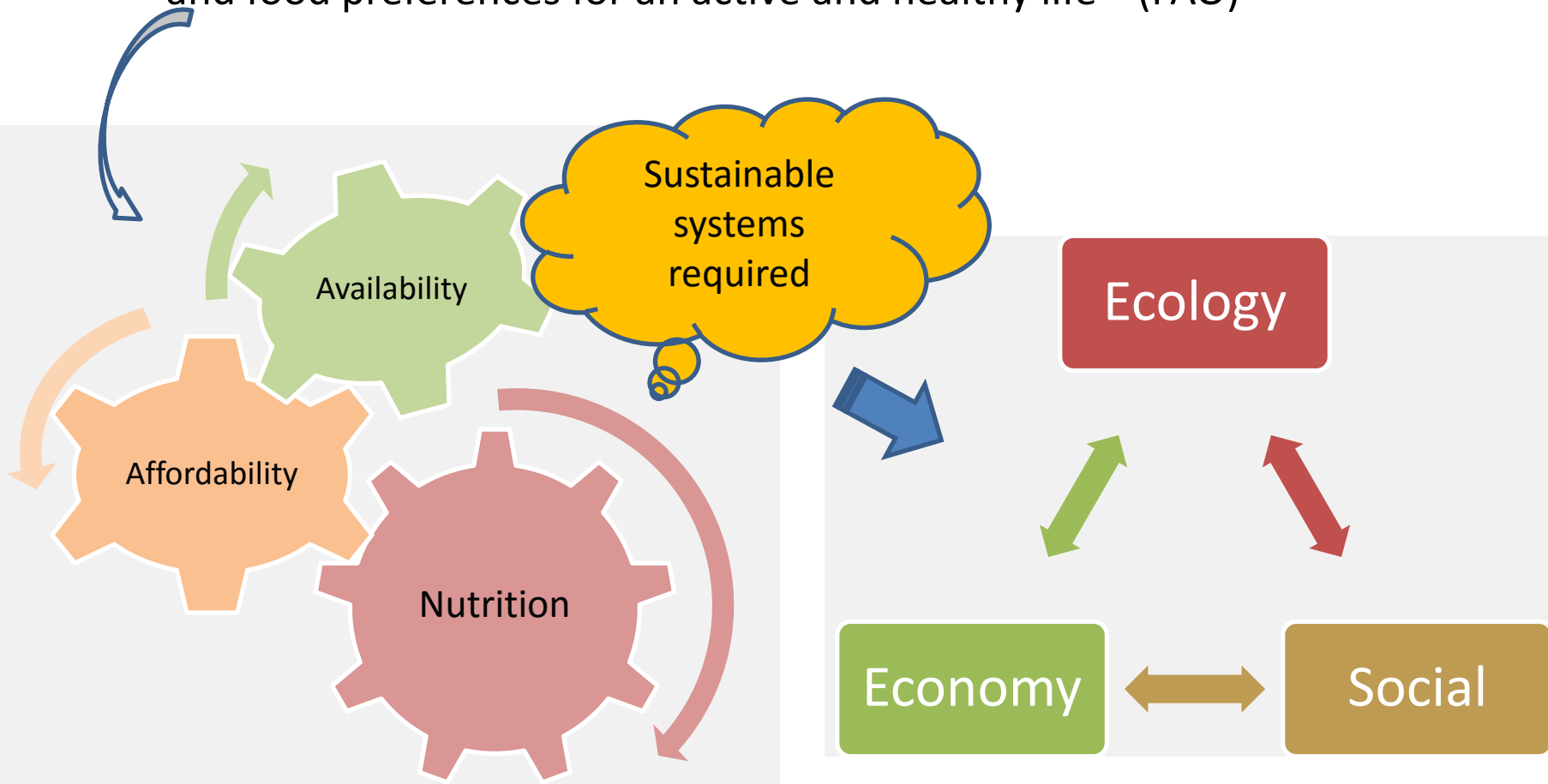
Source: Nakícenovic, Grübler and McDonald, 1998

If you do not believe in Global Warming –
there is actually evidence of it



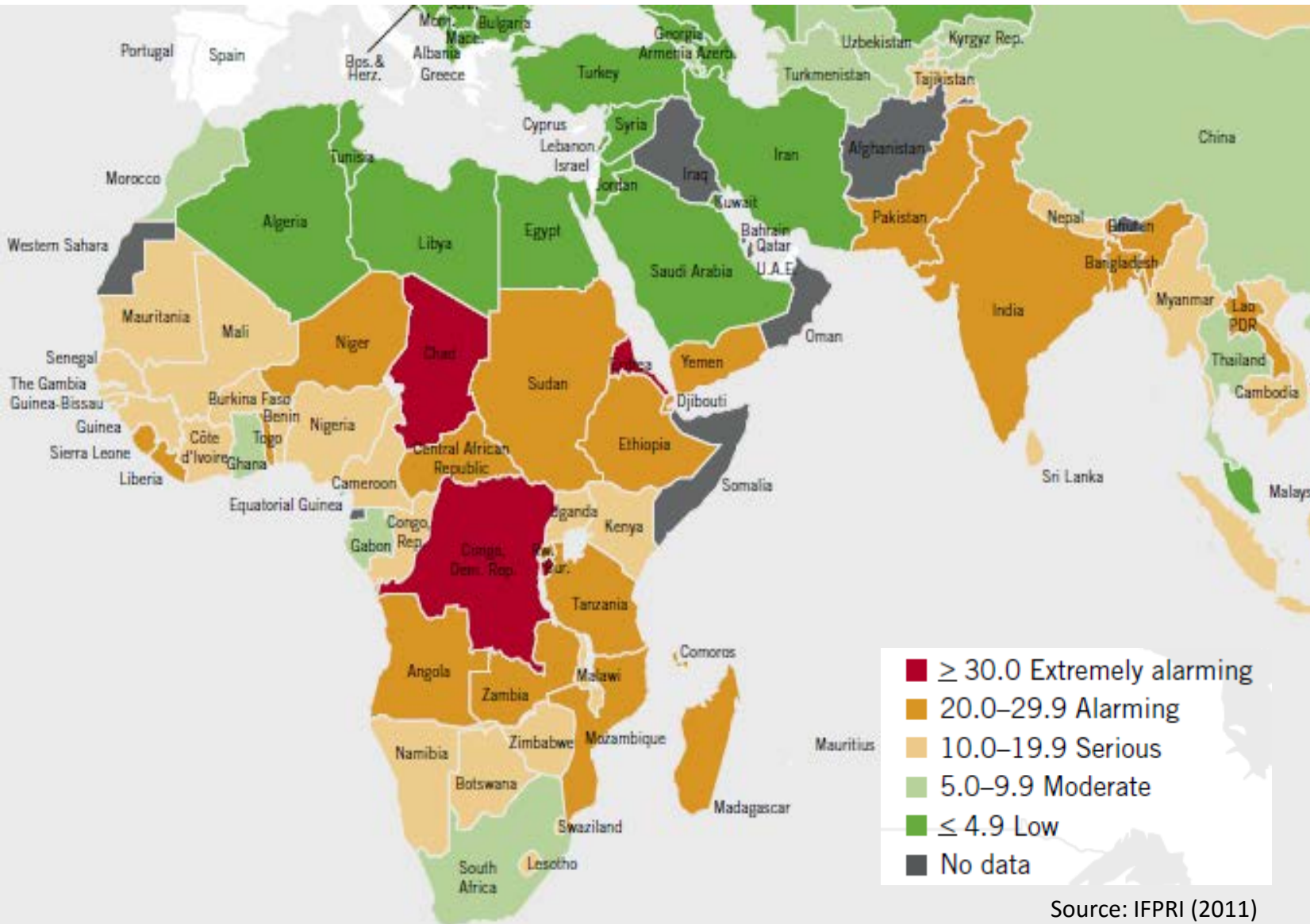
Importance for food security

- What is food security?
 - “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (FAO)



Global hunger situation

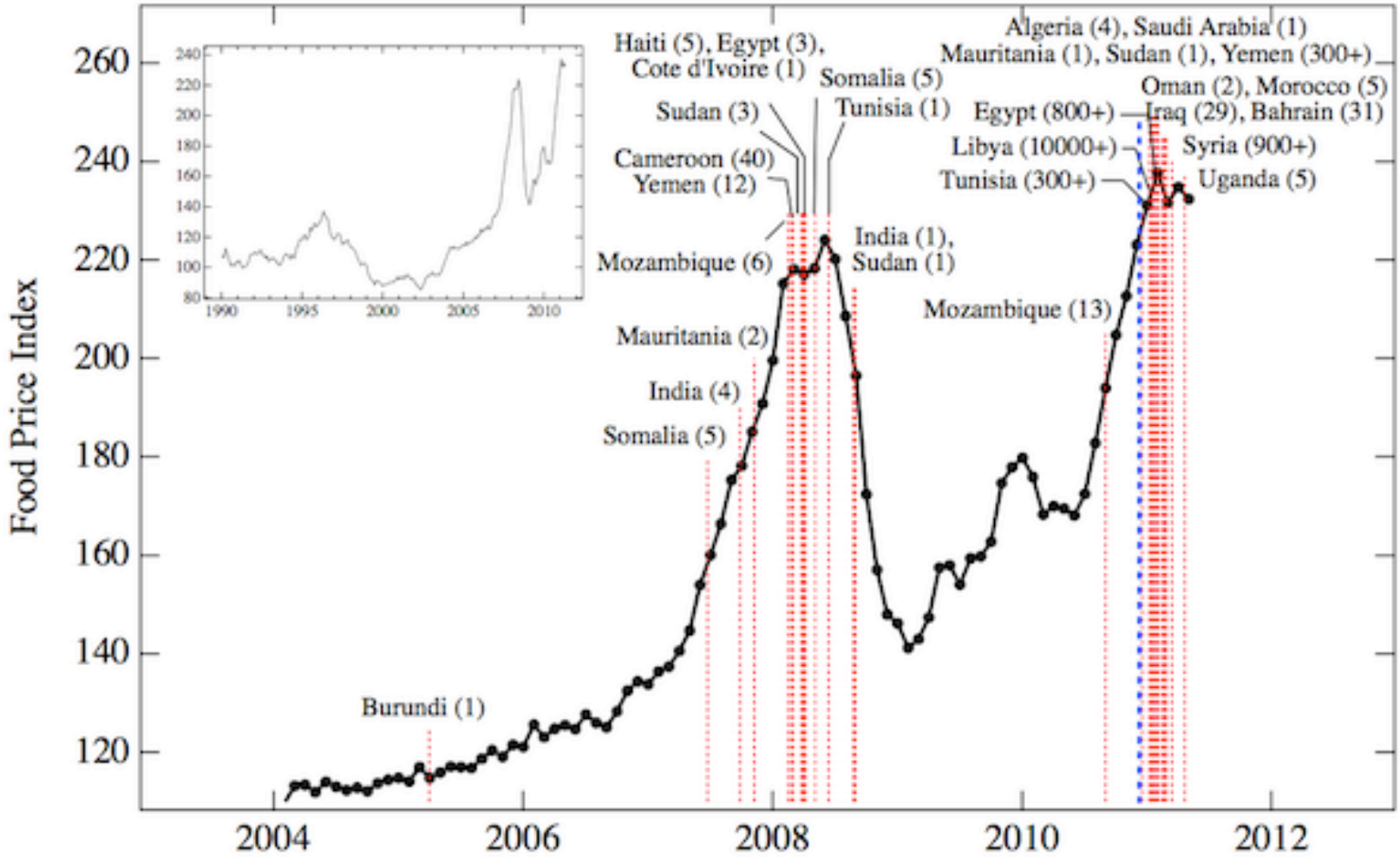
Africa Hunger Map 2011



FOOD RIOTS



FOOD PRICES, POVERTY AND FOOD SECURITY



The cost of knowing is nothing compared to the cost of not knowing

We can't afford such uncertainties



- Earth observation satellites
 - disaster management,
 - information about climatic events and impact
- Remote sensing and GIS technologies
 - managing and finding mitigation measures for soil erosion
 - surveying water resources and quality monitoring.

A special word of welcome to our 3 international speakers:

1. Dr Francois Waldner - UC Leuven, Belgium & GEOGLAM*
2. Dave Johnson - NASS, USA & GEOGLAM*
3. Dave Halbert - Project Manager, Airbus Defence & Space, UK

*The main objective of GEOGLAM is to reinforce the international community's capacity to produce and disseminate relevant, timely and accurate forecasts of agricultural production at national, regional, and global scales by using Earth Observation data.

A special word of thanks to our sponsors:

1. Monsanto
2. GeoGlam (Global Agricultural Monitoring)
3. SA Geo (South African Group on Earth Observations)
4. Agbiz Grain
5. Agricultural Research Council
6. South African National Space Agency
7. SiQ - Spatial Intelligence
8. Geo Terra Image
9. Groot Constantia Winery Estate

“Well-fed people have many
problems, hungry people only have
one”

Traditional Chinese proverb