

SKOV Seminar: How to feed the  
megacities in Sub-Saharan Africa? 8  
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## **RECENT AND FUTURE POPULATION GROWTH, URBANIZATION, AND HINTERLAND AGRICULTURAL TRANSFORMATION IN AFRICA**

Ton Dietz

African Studies Centre Leiden

[www.ascleiden.nl](http://www.ascleiden.nl)

<http://countryportal.ascleiden.nl>

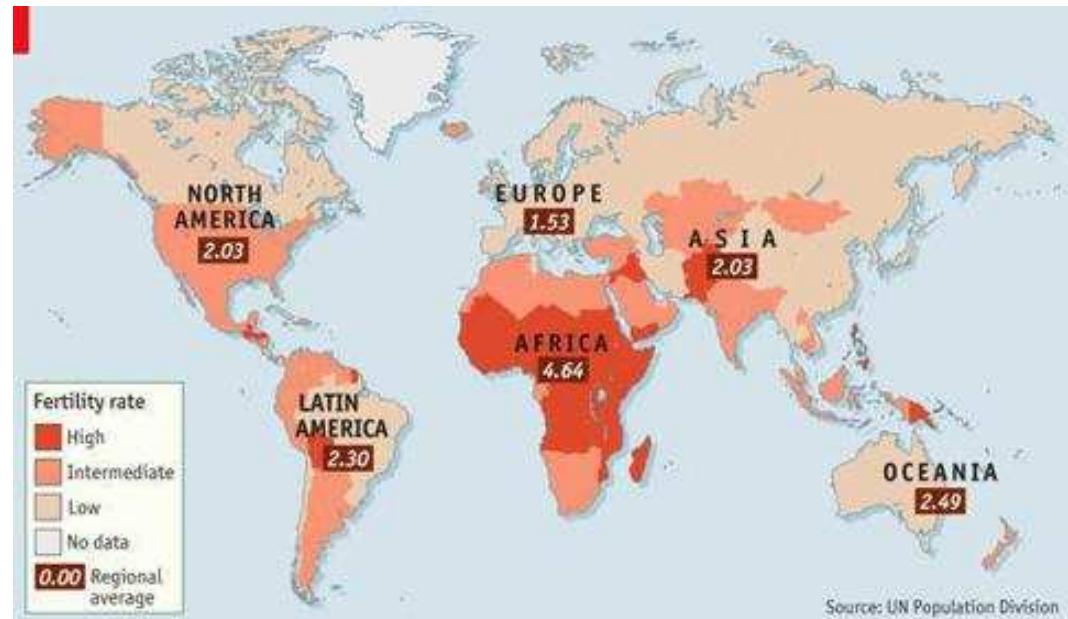


# First: what are the population and fertility data?

Year	Europe	Africa
1650	100m = 17%	80-100m = 16%
1900	650m = 25%	100-150m = 5%
2015	750m = 11%	1166m = 16%

## Current Fertility: Africa leads, by far

<http://static.cdn-seekingalpha.com/uploads/2012/9/19/668145-13480896190968738-Jan-Schalkwijk.jpg>



Africa 2016 =

Very young population (with many girls who will get many children)

+

High fertility (far above 'replacement rate' now 4.64)

+

Growing life expectancy

=

**For many decades to come: (very) high population growth**

**BIG difference with Europe!**

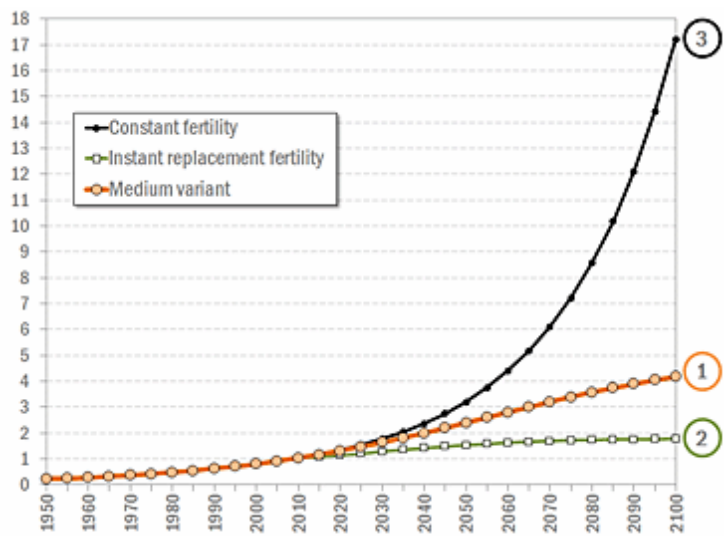
## Demographic predictions:

	People in millions	
	Europe	Africa
2015	740m	1080-1170m
2030	720-750m	1700-1900m
2050	700-800m	2000-2400m
2100	650-850m	3400-4400m

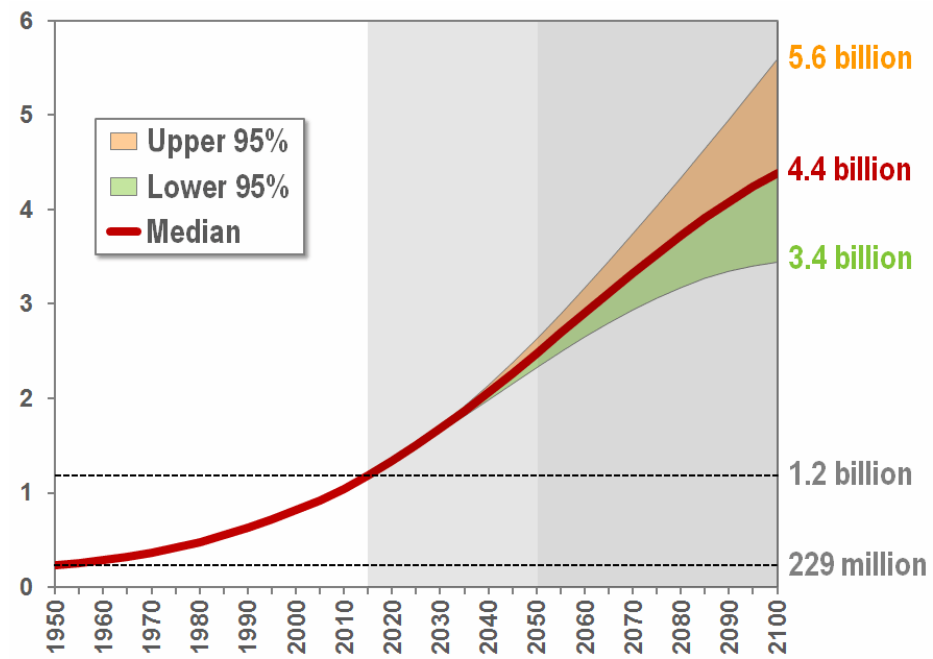
Estimate 2030 on the basis of [http://www.demographics.at/Growth-Decline/images/fig\\_tot-pop\\_africa\\_variants\\_1950-2100\\_wpp2012\\_s.gif](http://www.demographics.at/Growth-Decline/images/fig_tot-pop_africa_variants_1950-2100_wpp2012_s.gif)

Estimates 2050 and 2100 for Africa: [http://www.demographics.at/Growth-Decline/images/PPP2015\\_Africa\\_Tot-Pop\\_1950-2100.gif](http://www.demographics.at/Growth-Decline/images/PPP2015_Africa_Tot-Pop_1950-2100.gif)

Europa: [http://www.demographics.at/Growth-Decline/fig\\_ppp2015\\_africa-europe\\_tot-pop.htm](http://www.demographics.at/Growth-Decline/fig_ppp2015_africa-europe_tot-pop.htm)

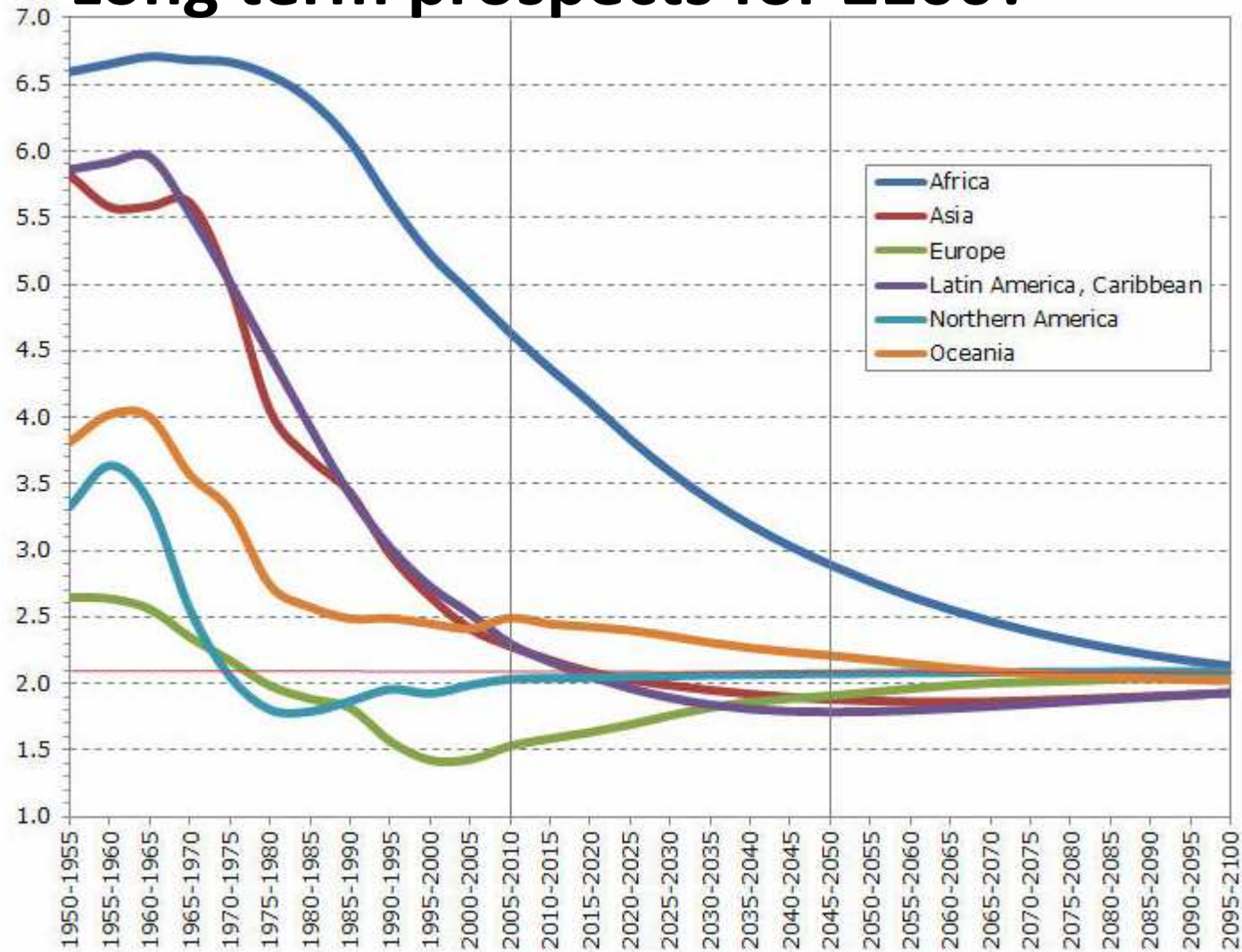


[http://www.demographics.at/Growth-Divide/images/fig\\_tot-pop\\_africa\\_variants\\_1950-2100\\_wpp2012\\_s.gif](http://www.demographics.at/Growth-Divide/images/fig_tot-pop_africa_variants_1950-2100_wpp2012_s.gif)



[http://www.demographics.at/Growth-Divide/images/PPP2015\\_Africa\\_Tot-Pop\\_1950-2100.gif](http://www.demographics.at/Growth-Divide/images/PPP2015_Africa_Tot-Pop_1950-2100.gif)

# Long term prospects for 2100?



<http://explainingprogress.com/wp-content/uploads/2013/05/UN-Estimates-and-Forecasts-Total-fertility-by-major-regions-1950-2100-children-per-woman-UN.png>

And MAJOR Further Urbanisation to be expected in Africa.

Year	urban %	urban people
1600	10	10m
1900	15	15m
1960	20	65m
2015	45	480m
2050	60	1200-1440m
2100	70	2400-3100m

## Predictions for some major metropolitan zones in West Africa

(From Scoping report Regional Trade etc West Africa for Food and Business Platform, 2016)

City	Million people	
	2016	2050
Lagos	17.1	43.8
Abidjan	5.1	12.8
Accra	4.6	9.9
Dakar	3.3	9.2
Ouagadougou	2.1	5.8
Bamako	3.0	9.0



## What will this mean for Africa's natural resources?



It is obvious (is it?):

Major intensification and expansion of crop cultivation, animal husbandry, horticulture and forestry (already happening) + expanding cityscapes.

=

An even higher pressure on land and water + threats to remaining forests and wildlife.

+

Geographical expansion of pressure on land, water and minerals

+

High chances of conflicts over natural resources and between people with different identities.

And at the expense of nature, biodiversity and climate stability.

In terms of food production catching up with population growth:  
so far so good.

See: 'Comparing the Agricultural Performance of Africa and Southeast Asia over the last fifty years' Ch 4 of "Asian Tigers, African Lions" (Berendsen et al, 2013 Leiden: Brill)

Summary:

For Africa as a whole; 1961-2009:

Population:	x 3.46
Cereals production	x 3.49
Roots and tubers	x 4.82
Chickens	x 5.37
Livestock	x 2.48
Food energy value/capita/yr	x 1.12

## Composition of Agricultural growth in Africa as a whole, 1961-2009

Cereals cropping area:	x 1.91
Cereals yield:	x 1.81
Roots & Tubers area:	x 2.00
Roots & Tubers yield:	x 1.61
Total crops area:	x 2.07

### Cereal area and yield

Specific countries	1961	2009	2014
Nigeria area (m ha)	10.6	13.7	16.2
Tanzania area	1.3	5.1	6.4
Kenya area	1.1	2.3	2.7
Nigeria yield (kg/ha)	700	1500	1600
Tanzania yield	800	1100	1700
Kenya yield	1200	1200	1600
But			
Indonesia yield	1500	4800	5100
Vietnam yield	1900	5100	5600

Also in terms of health improvements:

so far so good

See: Wijnand Klaver in “Digging Deeper”, Akinyoade et al, 2014 Leiden: Brill

FAO Food Balance Sheet data on food consumption and WHO data on child (0-5) health/malnutrition: steady improvements across the board in many African countries. Although still worrisome in some, and compared to world averages.

## Example: Burkina Faso

	2000	2013
Population	11.6m	16.3m
Kcal/day available	2318	2720
Of animal origin	145 = 6%	159 = 5%
Of cereal origin	1537 = 66%	1740 = 64%



### Composition of cereal availability:

Production	2252 kmt	4768 kmt
Imports	343 kmt	703 kmt
Exports	59 kmt	34 kmt
Stock variation	+387 kmt	-528 kmt
Available	2923 kmt	4908 kmt
Direct	2273	3677
Agro-processing	379	693
Feed	0	34
Seed	55	74
Wasted	216	431
Available per capita	252 kg	301 kg

## Burkina Faso WHO DHS data

Children 0-5 Acute malnutrition: down from 16% in 1993 to 8% in 2013

Stunting (chronic malnutrition): down from 41% in 1993 to 31% in 2013.

However (as usual): urban better than rural (20% vs 33%)

And some marginal areas problematic: e.g. Burkina Faso's Sahel Region in the North: 46%.

See: <http://www.irinnews.org/feature/2014/03/11/gains-and-losses-burkina-faso-fights-child-hunger>; via the WHO website.

## The positive message:

Africa's food situation has improved, and food production (area as well as yields) have expanded/improved and probably will continue to do so.

Triggered by a massive urbanization, and demand from urban food consumers that will create a demand-oriented hinterland.

Major changes in diet and food consumption styles already going on, mainly in the cities: more vegetables, more fruit, and among middle class: more dairy, meat and fish.

# The worried message

Yes, yields have been improving, but still far below Asian levels

Yes: areas have been expanding (and will continue to expand), but towards more marginal lands (> yield stress), and competing with other land use (> conflicts).

Yes: urban demand will revolutionize food production, but large-scale at the expense of small-scale? How inclusive will hinterland agriculture be?

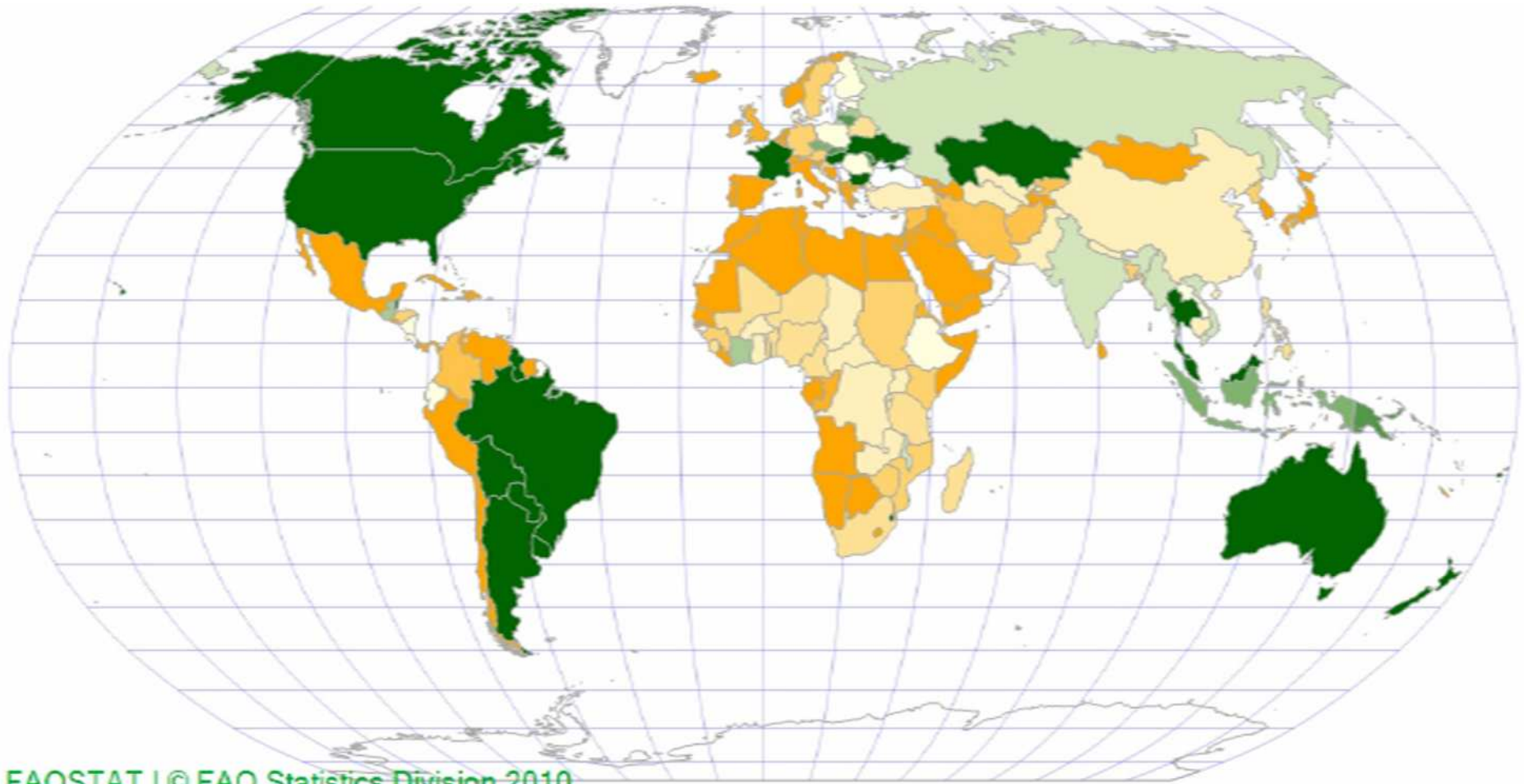
And: imports grow, and become more important. But can Africa compete?

And: what about climate change?



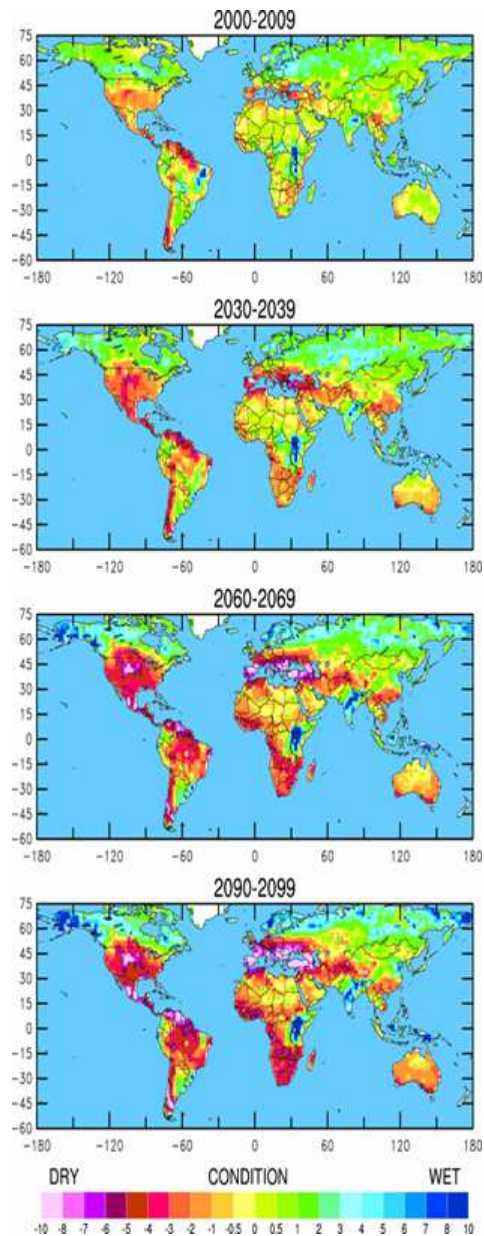
# Long-term worries about Africa's food supply

## Current food deficit and food surplus countries



FAOSTAT | © FAO Statistics Division 2010

Percent (Imports-Exports) / Consumption, in calories



And long-term worries about climate change

Regionalised Climate change (rainfall) predictions.

Look at:

USA and Canada

Eastern South America

Australia and south-east Asia

France, Ukraine and Kazakhstan

Also look at Russia

And what about Africa????

e.g. the Nile Basin?

And where in Africa will droughts NOT

become a problem???

„Drought under global warming“ Augio Dai, 2012