

10th  
International  
Dialogue on  
Population  
and  
Sustainable  
Development  
2012

WG  
Population  
Dynamics  
and Food  
and  
Nutrition  
Security

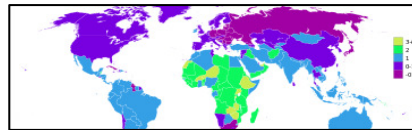


# WG „POPULATION DYNAMICS AND FOOD AND NUTRITION SECURITY“

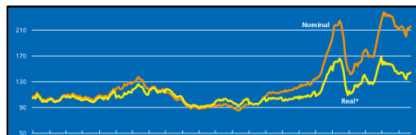
## STRUCTURE



1. Picturing Food and Nutrition Security:  
Hunger/ Obesity/ Energy Availability



2. Picturing Population Growth and  
Demographic Change

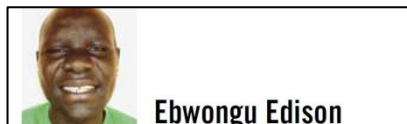


3. Food Price Developments and Food  
and Nutrition Security Trends



Fulmani Mandi

4. Linking Food and Nutrition Security  
Trends and Population Dynamics:  
Challenges and Opportunities

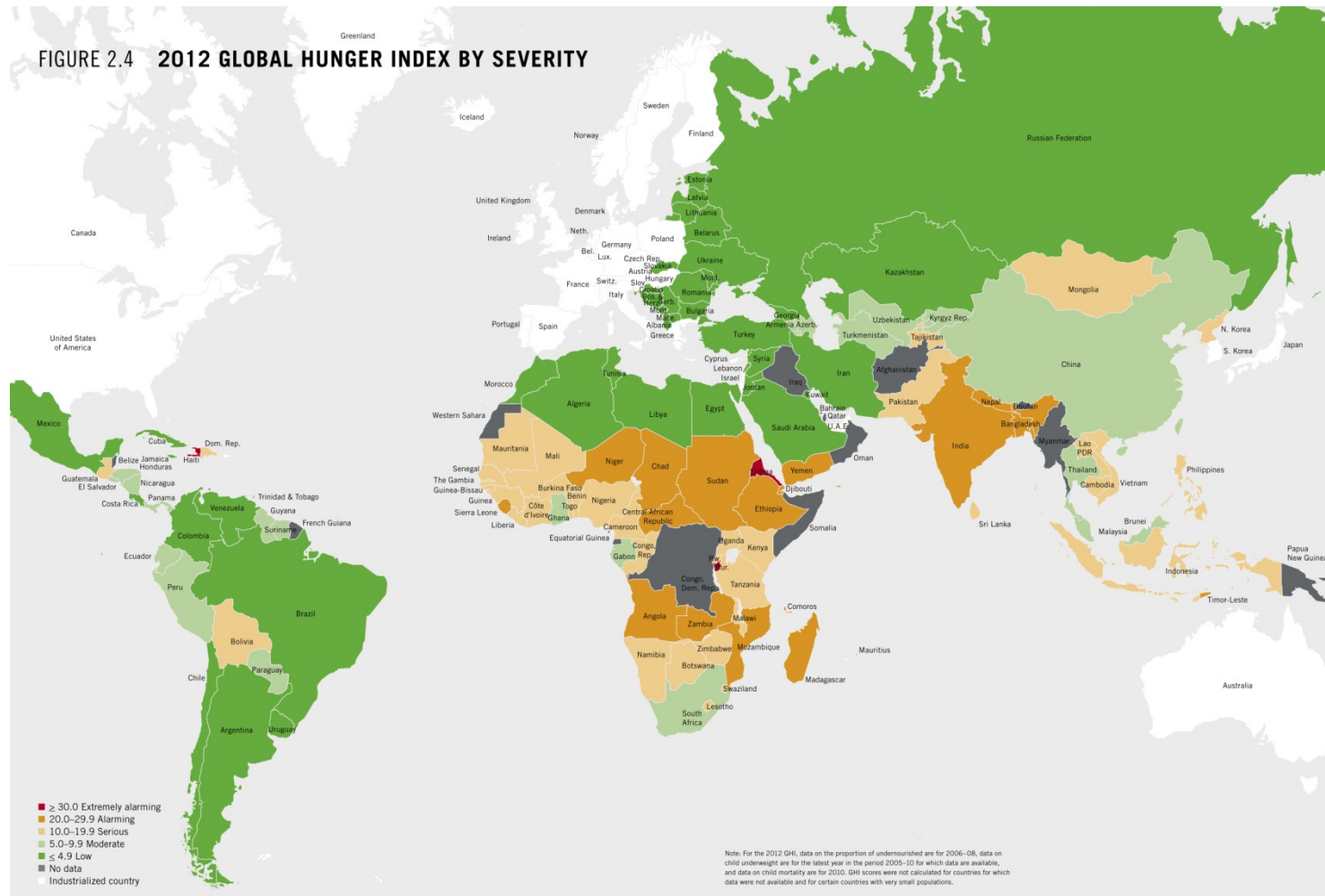


Ebwongu Edison

5. Way Forward: Suggestions

# 1. PICTURING FOOD AND NUTRITION SECURITY

## 1.1 EXTENT AND PREVALENCE OF HUNGER



- 2005 UN Hunger Task Force: **hotspots in rural areas**, mostly farming families
- But: hunger increasingly migrating to urban areas
- 2012 SOFI: **868 million** undernourished
- Additionally: up to 2 billion „hidden hungry“

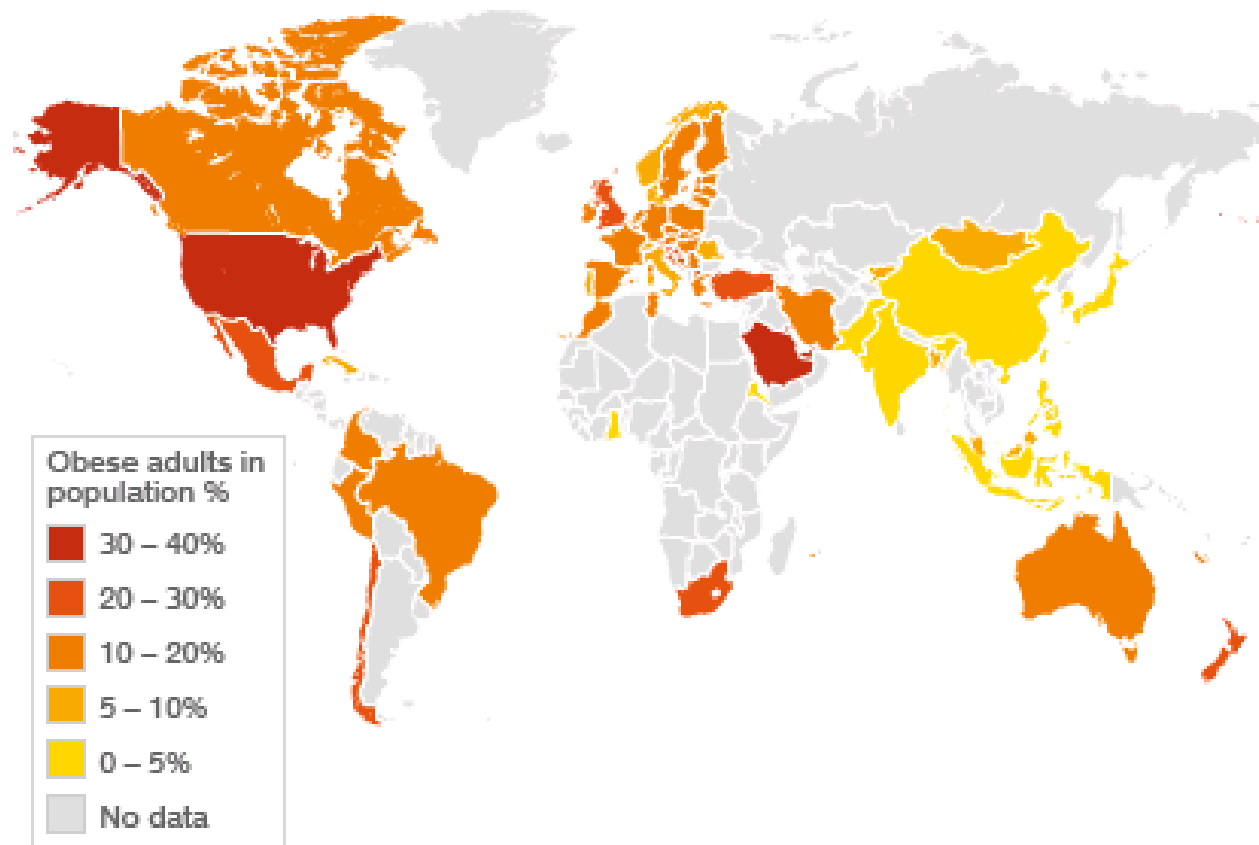


# 1. PICTURING FOOD AND NUTRITION SECURITY

## 1.2 EXTENT AND PREVALENCE OF OBESITY



### THE GLOBAL OBESITY PROBLEM



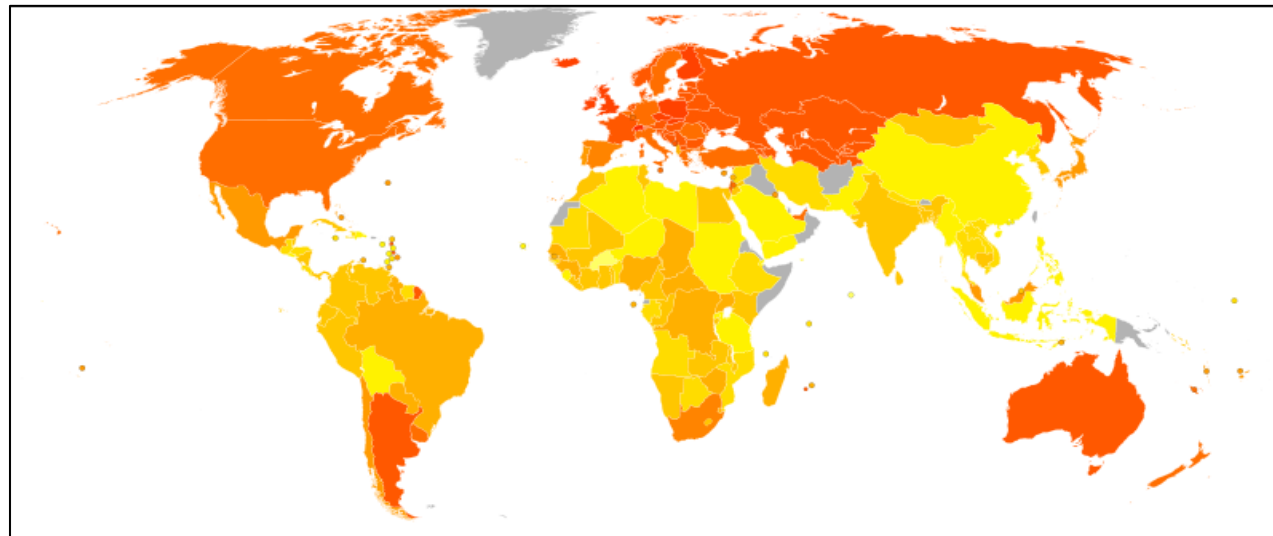
An obese adult is classified as having a Body Mass Index equal to or greater than 30

SOURCE: World Health Organization, 2006

- 2008 WHO: more than 1.4 billion adults overweight and approximately 700 million obese
- Developing countries: rapid **nutrition transition**, “Westernization” of diets, urban areas?
- preliminary studies indicate: some of the same nutrient deficiencies in the underfed also afflict the overfed (e.g. Vitamine A)

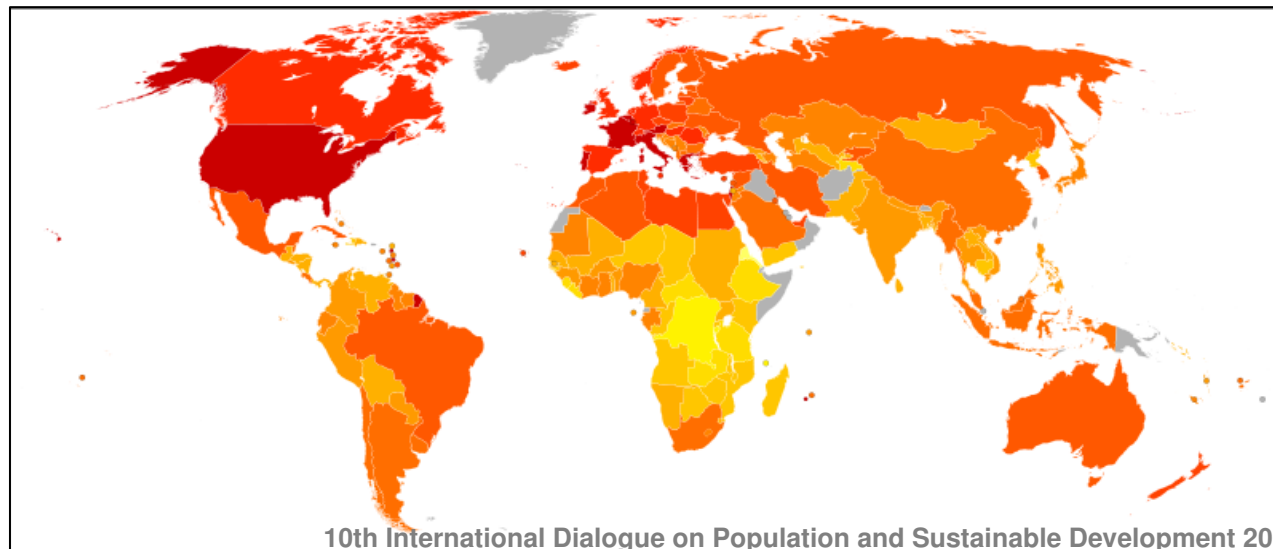
# 1. PICTURING FOOD AND NUTRITION SECURITY

## 1.3 AVAILABLE DIETARY ENERGY



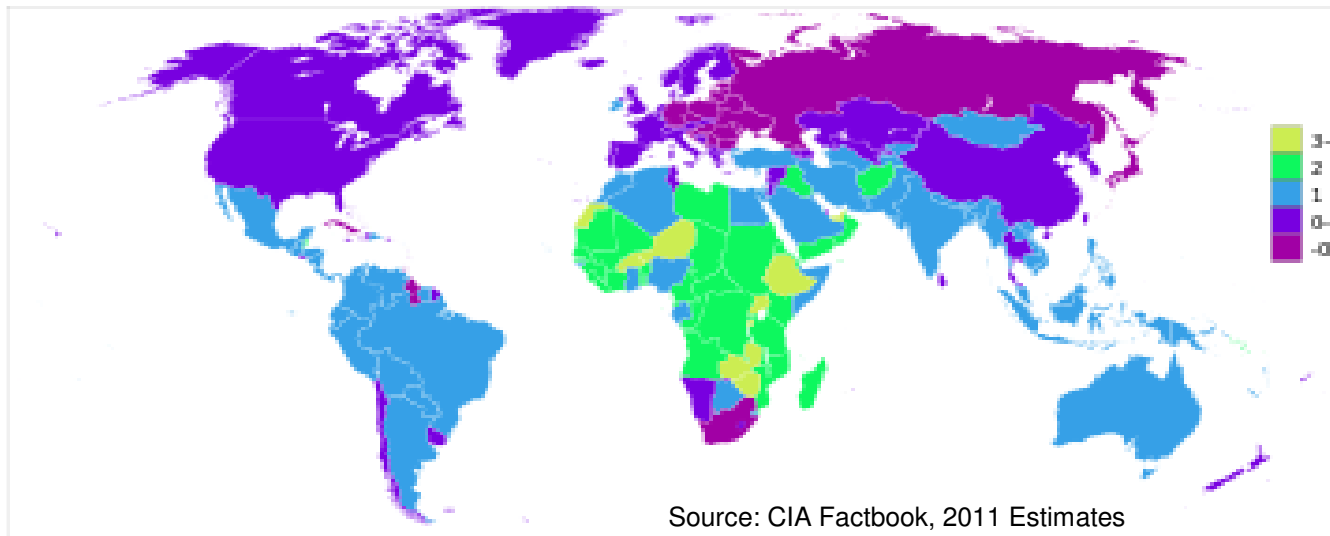
Map of dietary energy  
availability per person  
per day  
(kcal/person/day)

1961

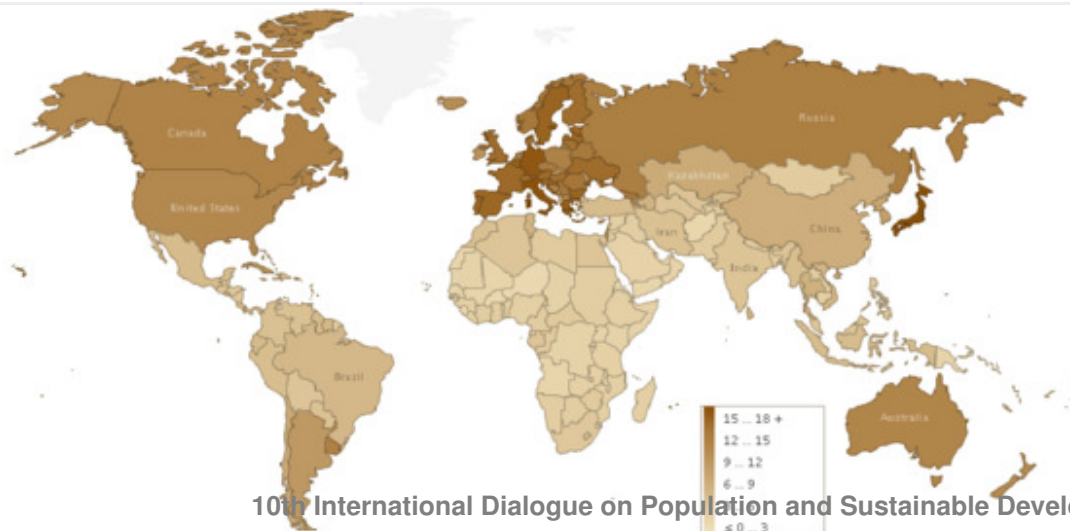


2001-03

## 2. PICTURING POPULATION DYNAMICS GROWTH AND DEMOGRAPHIC CHANGE

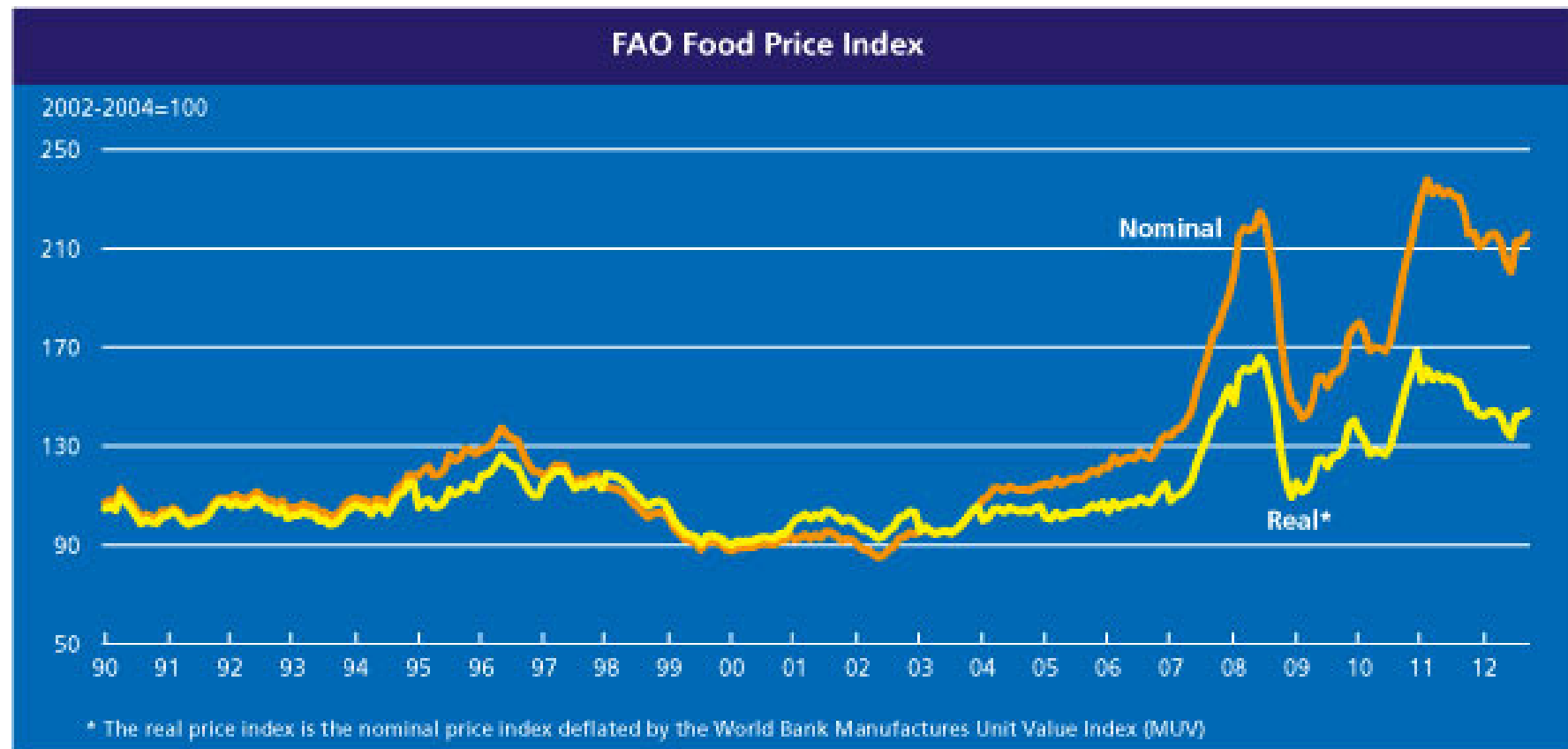


- mid-2012: 7.06 billion
- 2050 projection: 9.15 billion
- **nearly all growth in developing countries;**  
poorest countries: greatest percentage increase
- mid-2012: 52% urban, **1950 67% urban**
- Developing countries: aging



### 3. FOOD PRICE DEVELOPMENTS AND FOOD AND NUTRITION SECURITY TRENDS

#### 3.1 FOOD PRICES 1990-2012



### 3. FOOD PRICE DEVELOPMENTS AND FOOD AND NUTRITION SECURITY TRENDS

#### 3.2 TRENDS AFFECTING FOOD SUPPLY AND DEMAND



##### Trends on Supply Side:

- Degradation**, sealing/ urbanization
- Loss of arable lands due to **climate change** (in particular SSA, SA); loss of production due to extreme weather events (major exporting regions)
- Declining growth in agricultural productivity

##### Trends on Demand Side:

##### -Population growth

- Spreading of better, more **resource-intensive** diets (in particular meat, milk products)
- Utilization of agricultural products for **non-food uses** (feed, fuel, fiber)
- Acceleration of financial sector interest (food speculation, „land grabbing“)

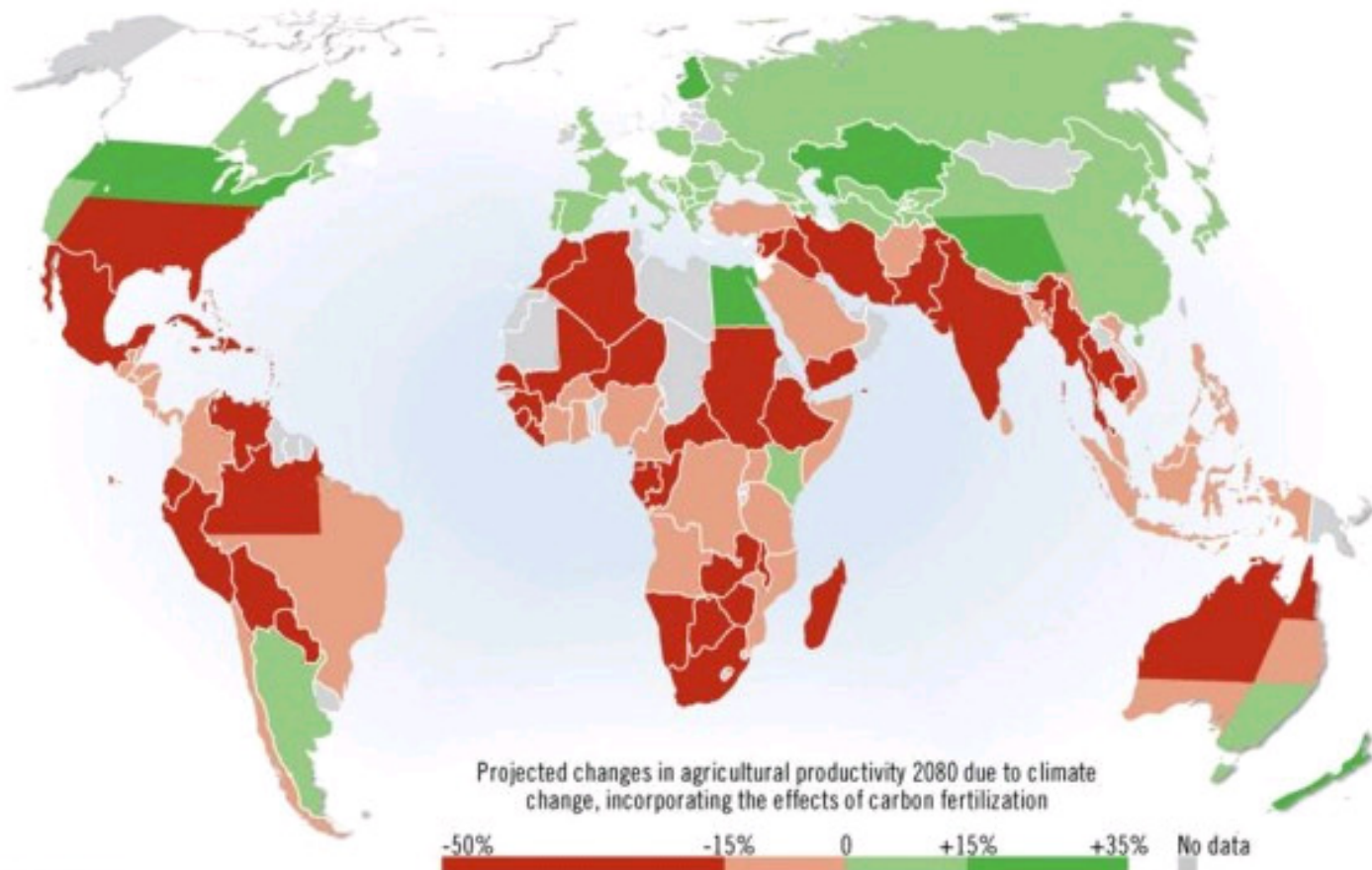




### 3. FOOD PRICE DEVELOPMENTS AND FOOD AND NUTRITION SECURITY TRENDS

#### 3.3 IMPACT OF CLIMATE CHANGE ON AVAILABILITY

##### PROJECTED CHANGES IN AGRICULTURE IN 2080 DUE TO CLIMATE CHANGE



Source: Cline 2007

## 4. LINKING FOOD AND NUTRITION SECURITY TRENDS AND POPULATION DYNAMICS

### 4.1 CHALLENGES - 1



- Population growth is **particularly pronounced where food insecurity is already high**, leading to further stress on natural resources, increased vulnerability to effects of climate change, accelerated migration pressure
- Multiple challenges connected with population growth (e.g. infrastructure, housing, health, water) will it make more difficult for governments
  - to invest more in agricultural production, research
  - to invest more in health services/drinking water as essential components for adequate nutrition (in urban catchment areas: competition for water for household/industrial/agricultural uses)
  - in general: more difficult to create an enabling environment that allows all people to realize Right to adequate Food (e.g. access to resources, overburdening of social welfare systems; in particular in LIFDCs)



**Fulmani Mandi**

Jharkhand, India

“I am very worried about my children’s future. Now we have 2.5 acres of land. I have three sons. When they divide the land, each one of them will get only 0.8 acre, which is of no use. I don’t know how they will survive.”

## 4. LINKING FOOD AND NUTRITION SECURITY TRENDS AND POPULATION DYNAMICS

### 4.1 CHALLENGES - 2



- Quality and quantity of food consumed directly impact on demographic factors, such as life expectancy, mortality and thus on longer-term population trends
- Short birth intervalls and heavy reproductive burden aggravate maternal malnutrition making it **more difficult to break intergenerational cycle of under- and malnutrition** („1,000 days“); also: maternal overweight and obesity in pregnancy influence disease risk among offspring
- malnourishment weakens the immune system (e.g. of those with HIV/AIDS), making it succumb more quickly to disease and hampering the ability to grow food and earn an income ⇔ illness raises energy requirements (e.g. HIV: + 10-30% energy requirements by adults and + 50-100% among children losing weight)

## 4. LINKING FOOD AND NUTRITION SECURITY TRENDS AND POPULATION DYNAMICS

### 4.1 CHALLENGES - 3



- Increased rural to urban migration:
  - **migration of hunger to urban areas**
  - change of population structure in rural areas (aging, feminization), **impacting on agricultural productivity** (e.g. Tajikistan)
  - **change in consumption patterns** (i.a. increased threat of obesity)
  - further „**disassociation**“ of **production and consumption**: increased **vulnerability to food price increases and price volatility**
    - food riots 2007/08 => danger: concentration of interventions on urban populations, e.g. Tajikistan
    - GHI 2011: e.g. LA, while rising food prices caused reduction in kcal intake in poor households, more affluent, already over-consuming population groups increased kcal by 10% following price shock (obesity)
  - Food production becoming a „black box“ (e.g. lack of knowledge about functioning of food supply chains, „de-politicization“ of food and nutrition security policy): inability to participate effectively in decisions about what we eat and what kind of food systems we want

## 4. LINKING FOOD AND NUTRITION SECURITY TRENDS AND POPULATION DYNAMICS

### 4.2 OPPORTUNITIES



- Different countries, different scenarios: **tailoring** of interventions
- **Re-valuation of food and agriculture** due to increasing scarcity (e.g. waste-debate in Germany), rising political attention/ funding (but: divide between scarcity scenarios and political power)
- Growing **urban populations better „accessible“** in terms of education, nutrition supplementation, social protection measures (e.g. GHI 2009: education of women key to breaking intergenerational cycle of undernutrition)
- Increased migration: **rising flow of remittances** into neglected rural areas enabling access (but: social costs, economic fragility)
- Production surpluses in „shrinking societies“ supplementing availability shortages in countries with rapidly growing populations (but: biomass increasingly used for other purposes, trade regulations, transportation in times of increasing energy costs, complexity of combatting food and nutrition insecurity)



## 5. WAY FORWARD SUGGESTIONS - 1



- Increase **access to education, productive resources and (reproductive) health services** for women, raise women's status and decision-making power
- Strengthen and **prioritize interventions during 1,000 days**; educate consumers on adequate, diverse diets and child feed/care practices (e.g. Welthungerhilfe Mali, India)
- Strengthen climate-resilient, agro-ecological agriculture to **raise production sustainably** and to increase resilience (gender sensitive!)
- Generate income opportunities in rural areas, support small-scale producers to move up the value chain („**step out or step up**“), e.g. through increased support to cooperatives, access to financial services, insurance systems (e.g. extreme weather events), tenure security



**Ebwongu Edison**

Kaberamaido district, Uganda

“I foresee my children not having sufficient water in the future. This is because currently we are already facing a safe water shortage (something that never used to happen in our village). Additionally, with the rapidly increasing population, there will be continuously growing contamination of the underground water wells due to human activities. This will render most of the water sources unfit for human consumption.”

“To counteract the scarcity of land, there is a need to sensitize the community to practice family planning to check the rapidly growing population.”

## 5. WAY FORWARD SUGGESTIONS - 2



- **Alleviate pressure on natural resources** from more affluent population groups (in particular industrial countries): reducing ineffective and wasteful use of land, water and energy; abolishing harmful policies (e.g. biofuel quota); and providing incentives/introduce regulation to adjust unsustainable lifestyles  
urgent need to address **questions of equity** regarding distribution of energy, land, water and other resources
- Strengthen **governance system** based on transparency, participation, accountability, rule of law and human rights



Thank you for your attention!