

# GROWL Conference

## FOOD (LAND) POLICIES IN DE-GROWTH ECONOMY

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**Ladislav Jelinek**

Department of Agricultural, Food and Environmental  
Policies, Martin-Luther University Halle



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# Personal background

- Research areas: agricultural policy, institutional economics, sustainability, renewable energies
- Affiliation:
  - Martin Luther Uni. in Halle (Dept. of Agricultural, Environmental and Food Policy, Professorin F. Insa Theesfeld)
    - in 2013 at IAMO, before at UZEI in Prague
- Current project – Sustainable land use in Siberia, Russia (Kulunda)



# Content

- Few initial broader ideas.
- Modern agriculture (expensive success).
- Agricultural policy in EU (CAP).
- Practical part (policy preparation).

# Before we start...

- Agricultural growth as a central principle how to ensure food supply
- Google search results:
  - “Agricultural growth” - **264 000 000** results
  - “Agricultural de-growth” - **64 000** results
- Google Scholar: **2 360 000** vs. **2 650** results  
 → *much work is in front of us*



**Real-estate sales finally recovering**

Real-estate sales finally recovering after a long period of stagnation. Higher mortgage rates had put a freeze on activity.

**Mortgages with competitive rates and community roots. 3.04%**

VanCity

Standard definition of Economic Growth  
 Amount of Goods and Services (= GDP) must be increasing



**QUARTERLY GDP GROWTH (FY12 AND FY13)**

ITEM	2011-12			2012-13		
	Q1	Q2	Q3	Q1	Q2	Q3
■ Agriculture, Forestry & Fishing	5.4	3.2	4.1	2.9	1.2	1.1
■ Mining & Quarrying	-0.4	-5.3	-2.6	0.3	1.9	-1.4
■ Manufacturing	7.4	3.1	0.7	0.2	0.8	2.5
■ Electricity, Gas & Water Supply	6.6	8.4	7.7	6.3	3.4	4.5
■ Construction	3.8	6.5	6.9	10.9	6.7	5.8
■ Trade, Hotels, Transport & Communication	9.5	7	6.9	4	5.5	5.1
■ Financing, Ins., Real Estate & Business Services	11.6	12.3	11.4	10.8	9.4	7.9
■ Community, Social & Personal Services	3.5	6.5	6.8	7.9	7.5	5.4

Overall yearly GDP Growth FY12: 6.5

Source: Ministry of Statistics and Programme Implementation (February 28, 2013)

## Rüdriger Dahlke:

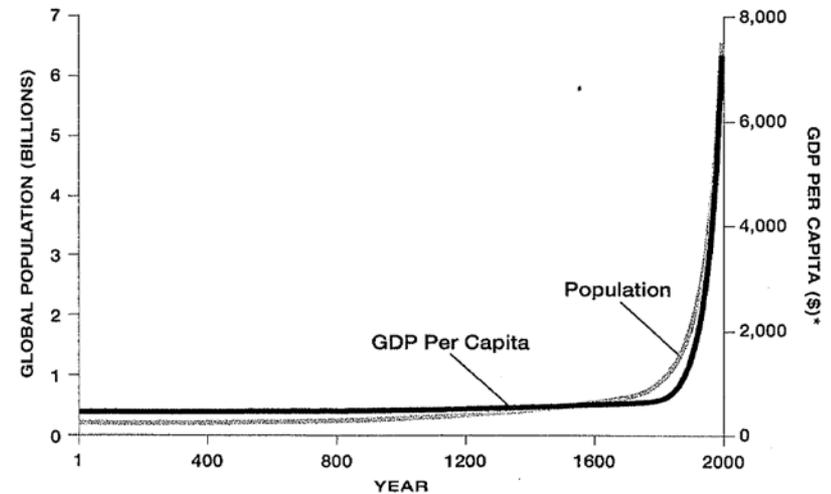
*If your growth is only on the material level, the economic level, you may develop a **growth problem** in your body, a cancer, because you're missing the opportunities at the consciousness level. We choose where the growth occurs: on the material level or in our consciousness.*

*Rüdriger Dahlke, Austrian Psychosomatic Doctor, Psychotherapeut, Writer*



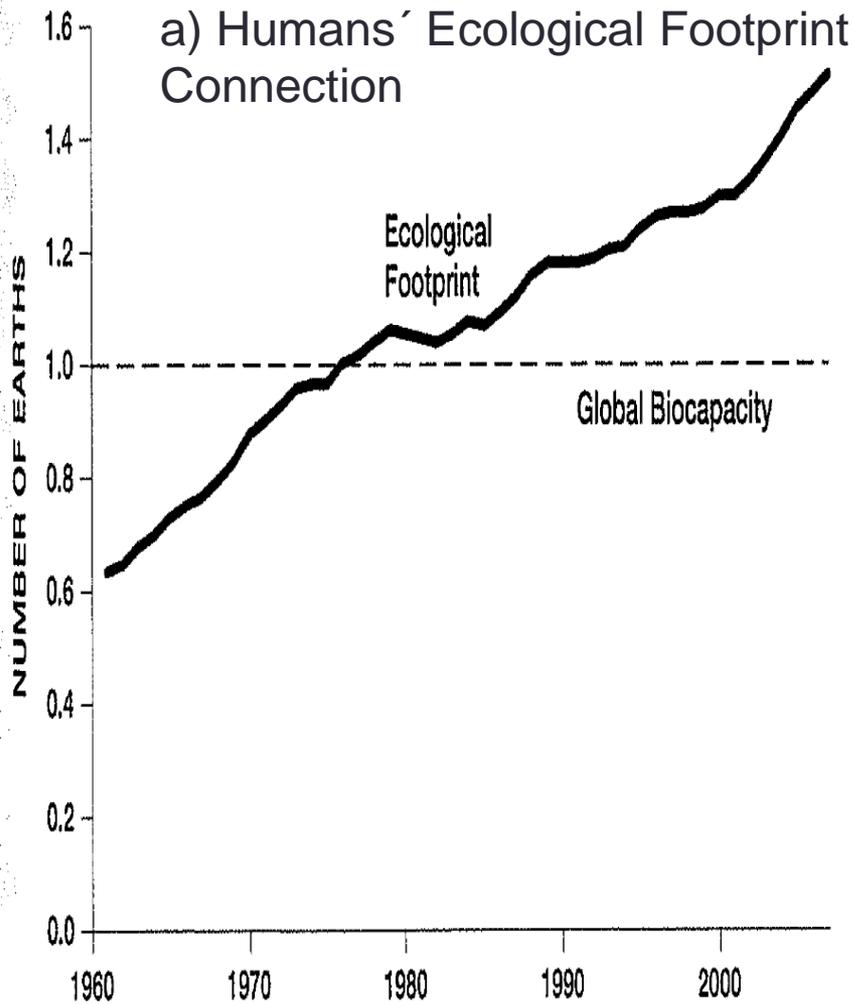
# Basic notions

- What does (agricultural) growth mean?
- What is it exponential growth?
- Link btw. growth and productivity in the sector?
- What is uneconomic growth?
- What are planetary bound.?



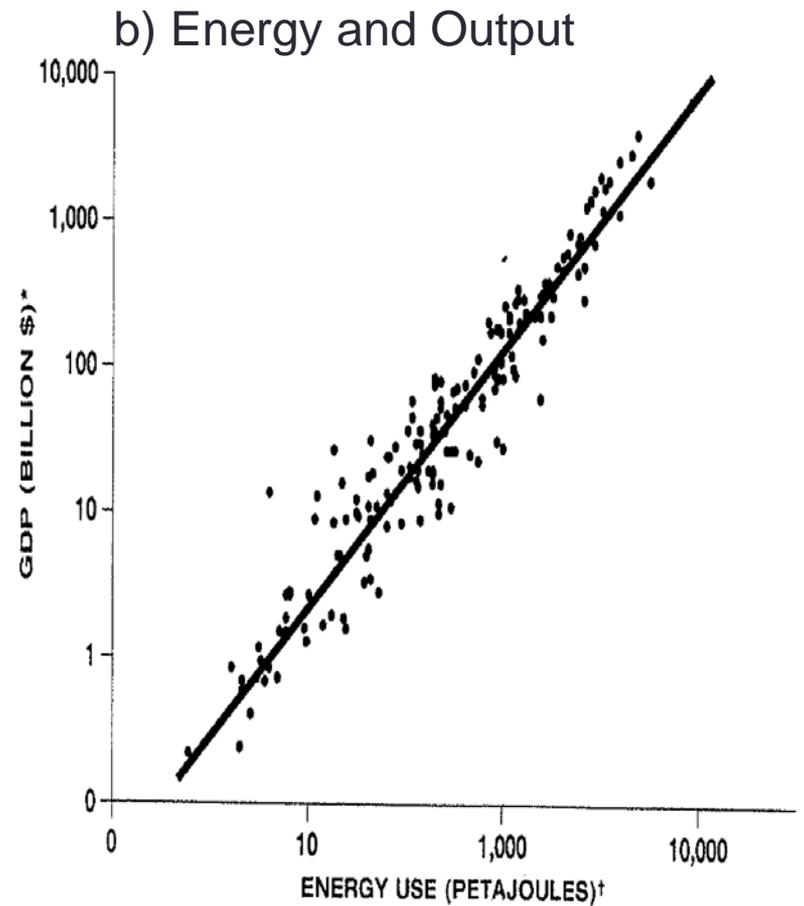
\*GDP per capita is adjusted for inflation and expressed in 1990 dollars.

FIG. 2.1. Global population and GDP per capita have both grown exponentially, with the fastest growth occurring over the last two hundred years. SOURCE: see note 4.



**FIG. 2.4.** Humanity's ecological footprint surpassed the capacity of global ecosystems to regenerate resources and absorb wastes in the mid-1970s. Since then, we have been living in "ecological overshoot."

SOURCE: see note 9.



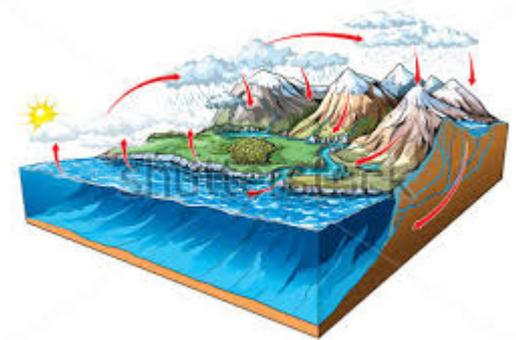
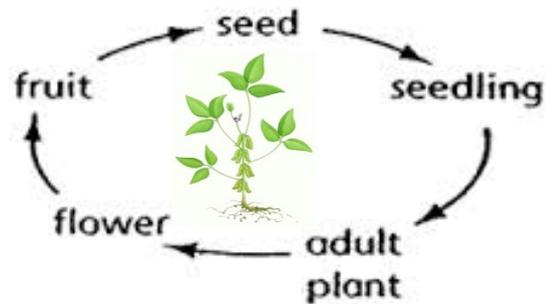
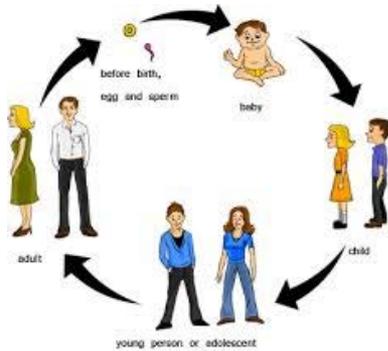
\*GDP is expressed in purchasing power parity (PPP) dollars for the year 2005. Purchasing power parity is a technique used to calculate exchange rates between countries based on how much money would be needed to purchase the same goods and services in each country.

†One petajoule is the amount of energy contained in about 163,400 barrels of oil.

**FIG. 2.5.** Economic output (as expressed by GDP) and energy use are highly correlated. The data shown are for 175 countries in the year 2007. Exponential scales are used on both the x- and y-axes because GDP and energy use vary considerably across countries. SOURCE: see note 16.

# Circuits on the Earth

- Humans, animals, plants, climate streams, annual seasons, ...



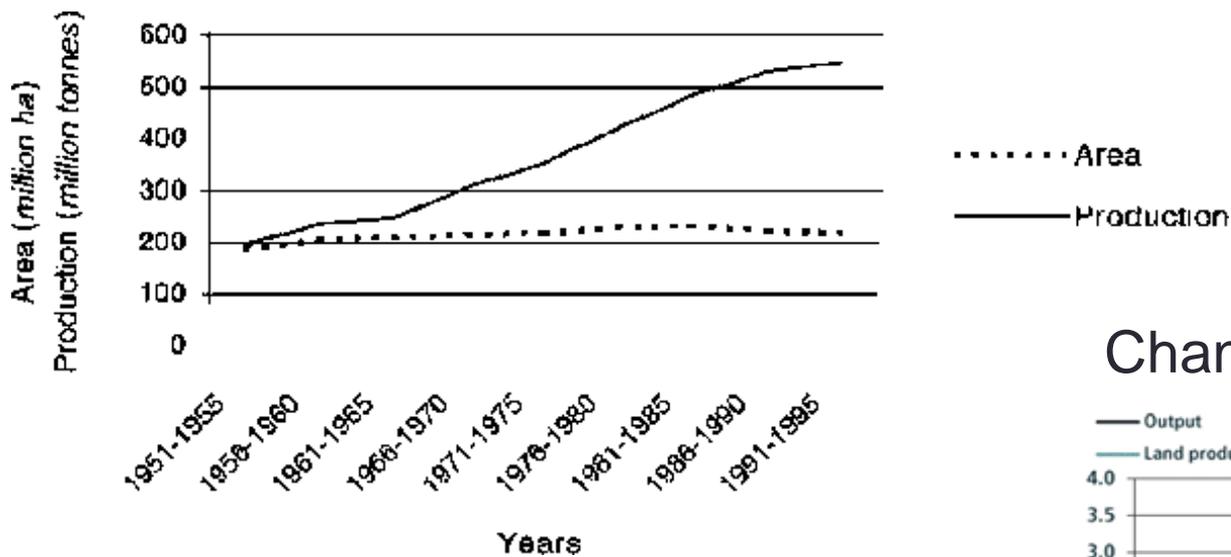
www.shutterstock.com - 246630049

# Modern agriculture (and food industry) has succeeded in...

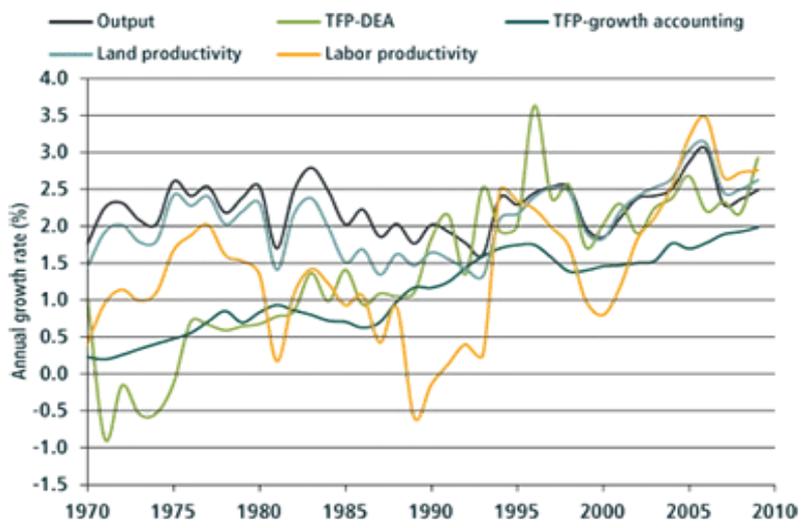
- ...supplying the biomass (“food security”),
- ...private efficiency,
- ...high productivity,
- ...(flexible) food deliveries to consumers,
- ...food appearances (food quality),
- ...relatively few idle lands.

→ *economic side of production above all.*

# World-wide wheat area and production



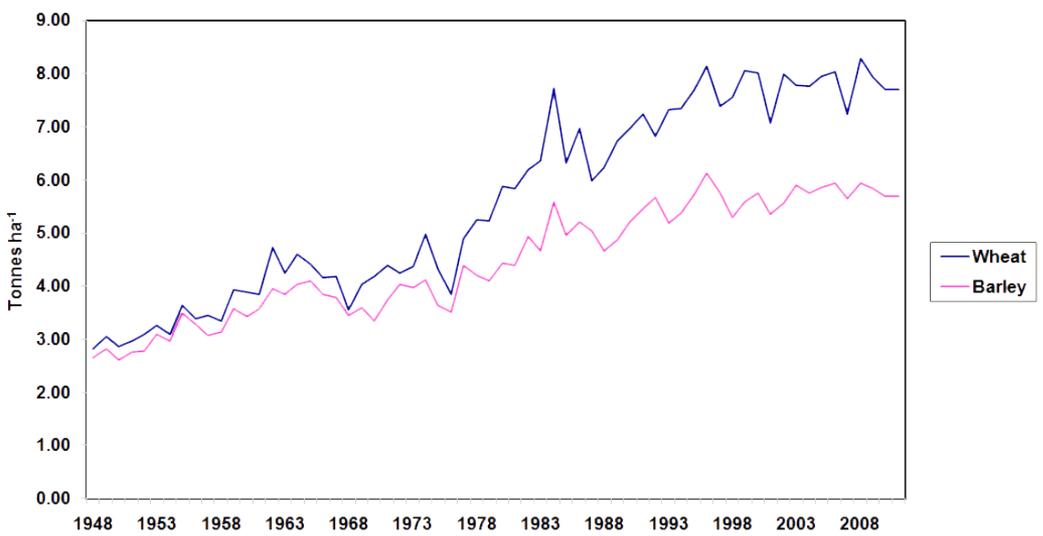
# Changes in factor productivity



Source: Int. Food Policy Research Institute

# UK cereal yields

UK Cereal Yields 1948 - 2011



# Costs for the success are high...

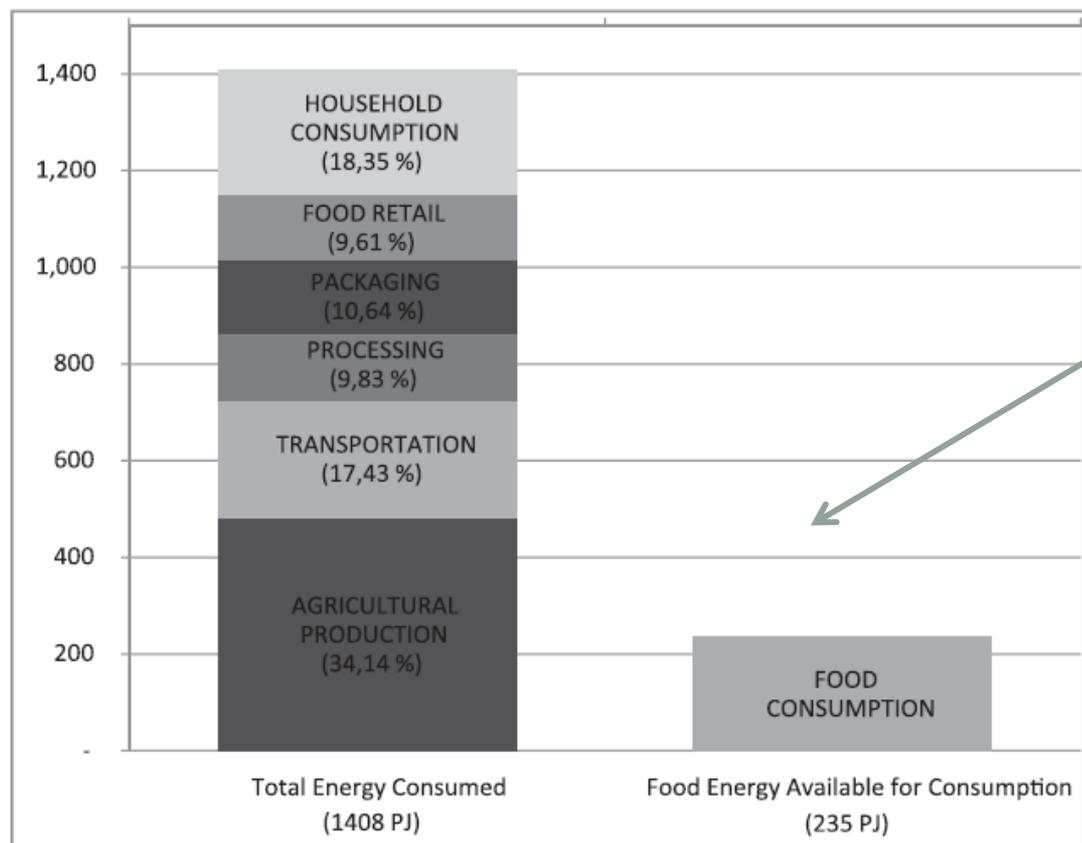
1. Environmental
  2. Food processing
  3. Rural structures and livelihood
  4. Labor conditions
  5. Animal protection
- *Public costs (bads) are not internalized.*
  - *The policies are often not addressing the roots of the problems, but the effects.*
  - *Focus on the technical (materialistic) solution.*



# Environmental cause and effects

- Intensification of production (land, labor, capital) →
- Dependence on the external inputs – shift from closed farming system to the external inputs, energy and water
- Concentration of production – livestock, simplified crop rotations, large farms
- Monocultures dominance
- Countryside and biodiversity
- Erosion
- Species reduction and extension,
- Loss of (multi)functions of the natural components
- Salinization and acidification of soils
- ...

# Spanish study on energy balances in agriculture



*For each **unit** of energy available in the form of food, **6 units** of energy have been consumed in its **production, distribution, transportation and preparation.***

**Fig. 2.** The first column shows the total energy consumption of the Spanish agri-food sector in the year 2000 by type of activity and the different percentages. The second shows the amount of food available in Spain measured in energy (nutritional values). Source: see methodology annex.

Source: Juan Infante Amate, Manuel González de Molina: 'Sustainable de-growth' in agriculture and food: an agro-ecological perspective on Spain's agri-food system (year 2000), *J. of Cleaner Production* 38 (2013)

# Food

- Quality
  - Nutrient content in the intensively cultivated crops vs. alternative practices
  - “...organic varieties do provide significantly greater levels of vitamin C, iron, magnesium, and phosphorus than non-organic varieties of the same foods.” (*Alternative Medicine Review, Crinion WJ, 2010*)
  - Residuals (chemicals)
- Quantity
  - Unequal distribution
- Food miles
  - The distance on which food is transported has been increasing

## The Validity of Food Miles as an Indicator of Sustainable Development

Final Report produced for DEFRA



# Role of food for humans (two perspectives)

## ECONOMIC

- Food as (bio)mass to reduce hunger
- Price to quantity ratio
- Budget restrictions

## HUMAN PERSPECTIVE

- source of energy
- source of nutrient
- source of pleasure (taste, appearance, ...)
- health influencing factor (incl. food radioactivity)
- mood stimulating factor

# Labor

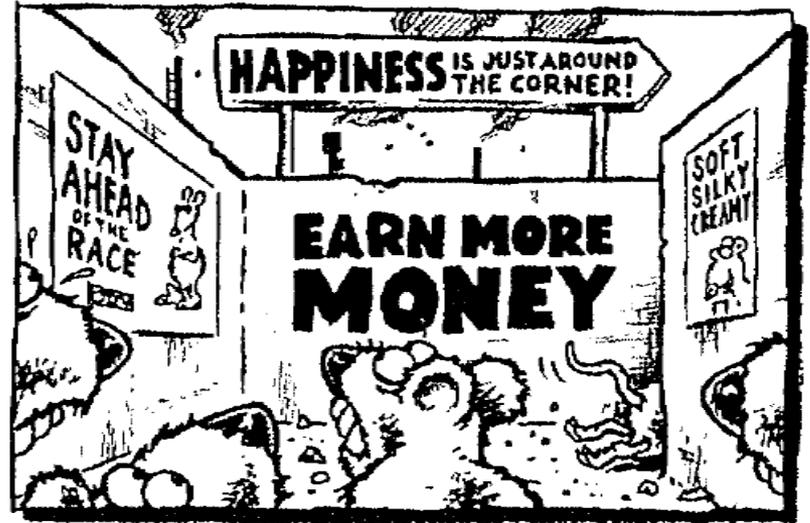
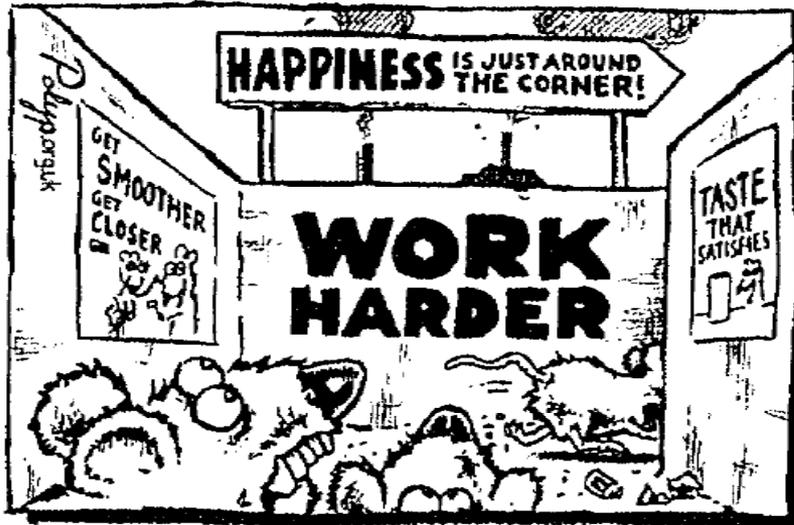
- Labor conditions
- Labor opportunities (loss of traditional job opportunities in rural areas)
- Type of work

*“Instead of seeking to maximize productivity, the economic system should work toward optimizing it.” (Dietz, O’neil, 2013: Enough is enough)*

# Animal protection

- Concentration of animals.
- Reduction of the traditional grazing.
- Transportation and slaughtering.
- Medical treatment (antibiotics).

# Questions?



# EU Agricultural Policy (CAP) – basic facts

- Budget (2014-2020): **408 bil. €**
- Population: **550 mio consumers.**
- **77%** of the territory as **rural**.
- **12 mio full** time farmers, 15 mio farm and food businesses, 46 mio jobs.
- Shift from market regulations towards targeted direct payments, agro-environmental provision and territorial development.
- Focus on the joint provision of private and public goods (landscape, biodiversity, soil protection,...).

# Structure of CAP

- **Income support and assistance** (direct payments, 70% of the budget)
- **Market support**
- **Rural development** (budget for the EU 95 bil. €, national co-financing)

# Direct payments in the EU 2014-2020

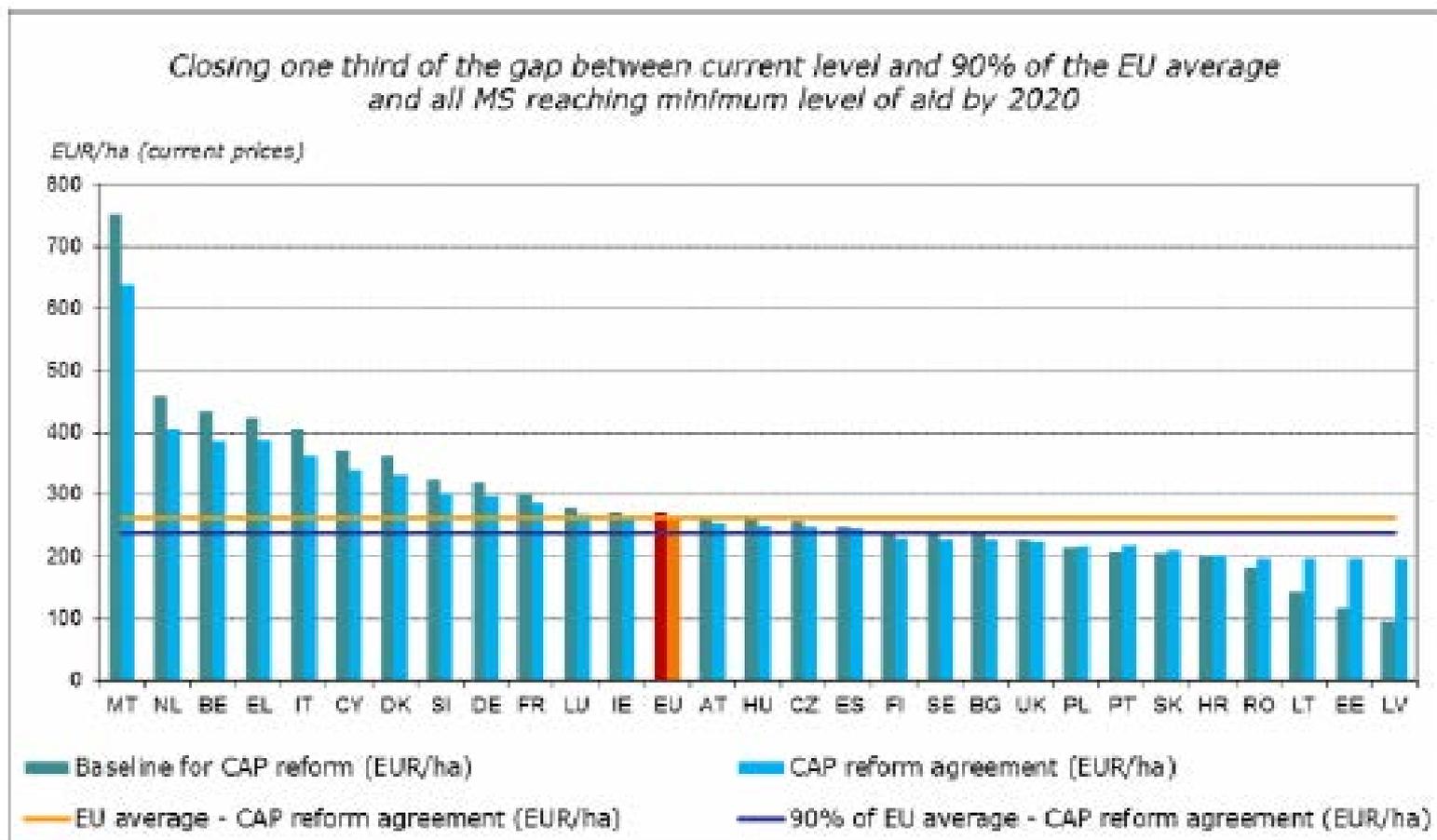
<b>Cross Compliance</b>	<b>**Coupled Support</b>	<b>**Natural constraint support</b>	<b>O R</b> ↑	<b>**Small Farmer Scheme</b>  up to 10%  max. 1250 EUR  simplified
	up to 10% or 15%	up to 5%		
	<b>**Redistributive Payment</b>			
	<ul style="list-style-type: none"> <li>○ up to 30%</li> <li>○ max 65% of average direct payments (first ha)</li> </ul>			
	<b>*Young Farmers Scheme</b>			
	<ul style="list-style-type: none"> <li>○ up to 2%</li> <li>○ +25% payments (max 5 years)</li> </ul>			
	<b>*Green Payment</b>			
	<ul style="list-style-type: none"> <li>○ mandatory 30%</li> <li>○ greening practices or equivalent</li> </ul>			
<b>*Basic Payment Scheme</b>				
<ul style="list-style-type: none"> <li>○ no fixed percentage</li> <li>○ 5% degressivity over 150 000 EUR</li> </ul>				

**\* Compulsory    \*\* Voluntary**

Source: DG Agriculture and Rural Development.



# Changes in the distribution of DP



Source: DG Agriculture and Rural Development.

# Critiques of CAP

- Real beneficiaries from the CAP measures.+
- Expensive governance of CAP.
- Flexibility.
- Prioritizing some structures against others.
- Increasing market and price volatility.
- The enforcement of high standards in the food imports from the third countries.

Thank you.