Wageningen University & Research: Two Partners

Fundamental & Applied research for public & private sector

"To explore the potential of nature to improve the quality of life"

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UNIVERSITY & RESEARCH

100years
1918 — 2018

WORKSHOP

REGIONAL DEVELOPMENT STRATEGIES FOR SUSTAINABLE AGRICULTRURE, RURAL AND URBAN REGIONS

Theme: Agro-Food Chains and Market Outlooks

13 May 2019, Moscow

Author: Irina Verweij-Novikova, PhD

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Introduction:
Wageningen Economic Research

- Focus Research Areas:
  - International and Dutch markets
  - Data
- Focus Education programmes:
  only applied or within projects & top-sectors
- Collaborations:
  - Business (Public Private Partnerships)
  - Governments (incl. international)

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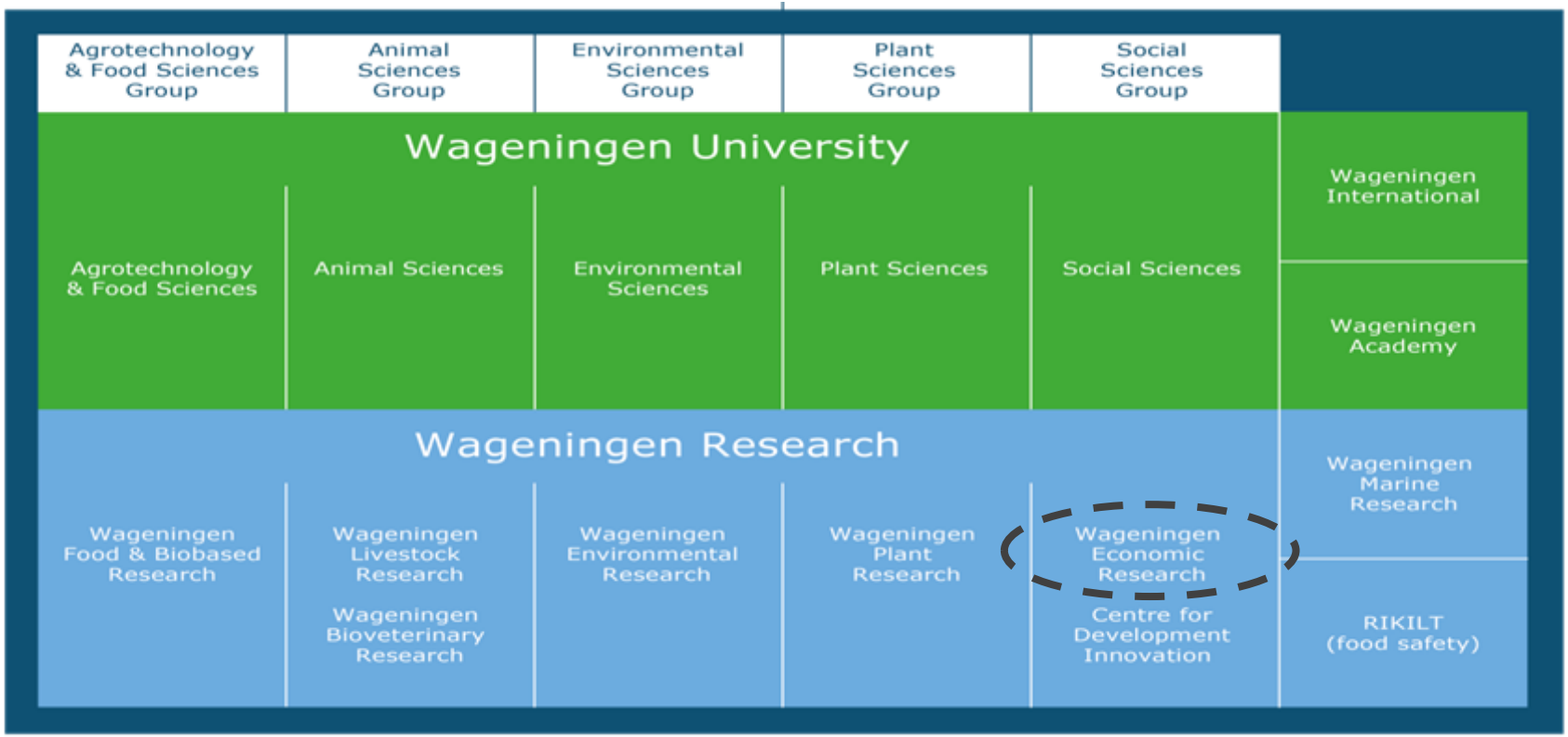

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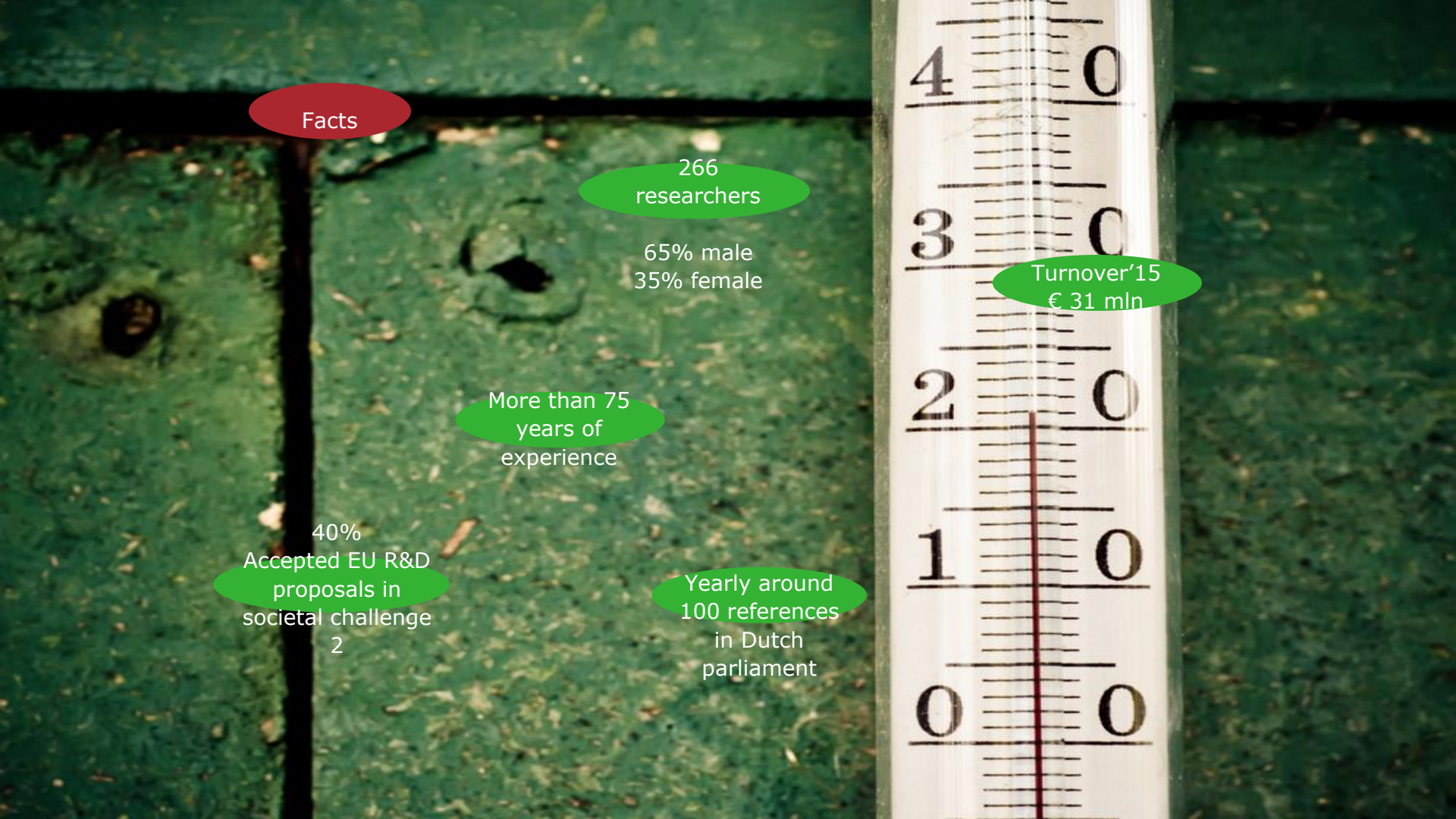

Facts
266 researchers
65% male
35% female
Turnover'15
€ 31 mln
More than 75 years of experience
40%
Accepted EU R&D proposals in societal challenge 2
Yearly around 100 references in Dutch parliament

Economic research areas and clients

Public sector

Ministerie van Landbouw, Natuur en Voedselkwaliteit

CGIAR

European Commission

Bill & Melinda Gates foundation

idh the sustainable trade initiative

Research areas

Market Intelligence

Market Potential & Outlook

Consumer Behaviour

Marketing Impact

Sustainability Management

Impact strategy & Review

Metrics & Measure

Monitor & Improve

Food System Design

Feeding the cities

Business Services

Peri-urban Farming

Circular Sourcing

Risk Management

Digital Enabling

Value Chain Design

Private sector

Cargill

DANONE ONE PLANET. ONE HEALTH

Vion FOOD GROUP

ELANCO ANIMAL HEALTH

ABN·AMRO

Annually involved in 800 different projects, with socio-economic research in the bio-based economy, water, energy, climate, sustainable food and food security clusters.

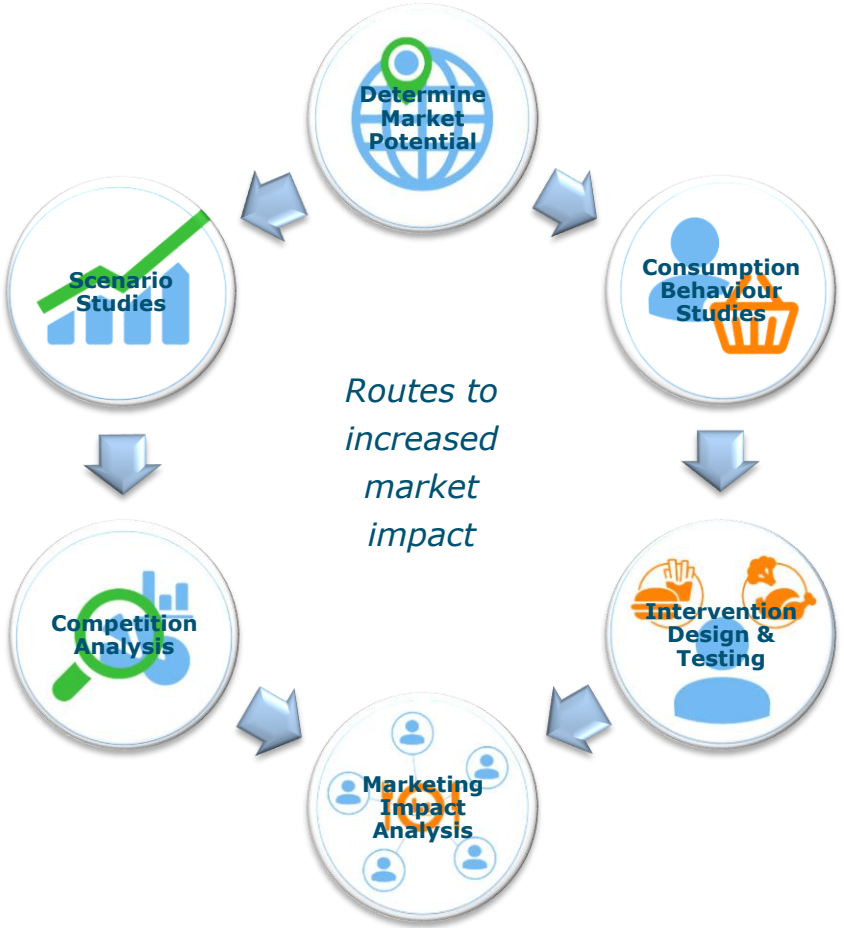
Market Intelligence in Agri & Food Sector

Market focus:

- Fresh Food Trade
- Out of Home & Retail

...with strong focus on international (year-round) sourcing, perishable logistics and B2C marketing.

www.wur.eu/marketintelligence



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https://www.wur.nl/en/Research-Results/Research-Inst

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100years

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Insights in food consumption:

Personalised Nutrition

We contribute to a society in which every individual will benefit from a personalised sustainable and healthy consumption pattern.

Behavioural interventions

We achieve specific behavioural change by designing intervention strategies and measuring impact.

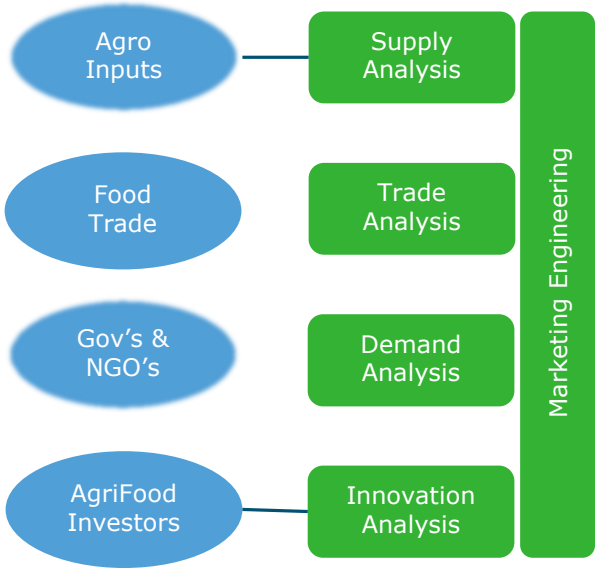
Consumer insights

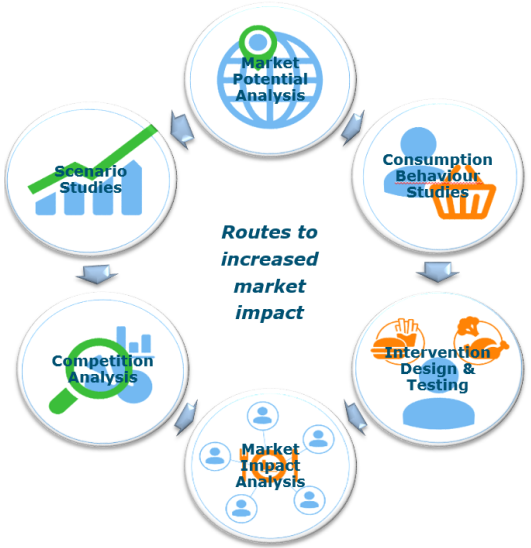
We deliver insights into the purchasing behaviour and dietary patterns of consumers, both individually and collectively, and in specific contexts.

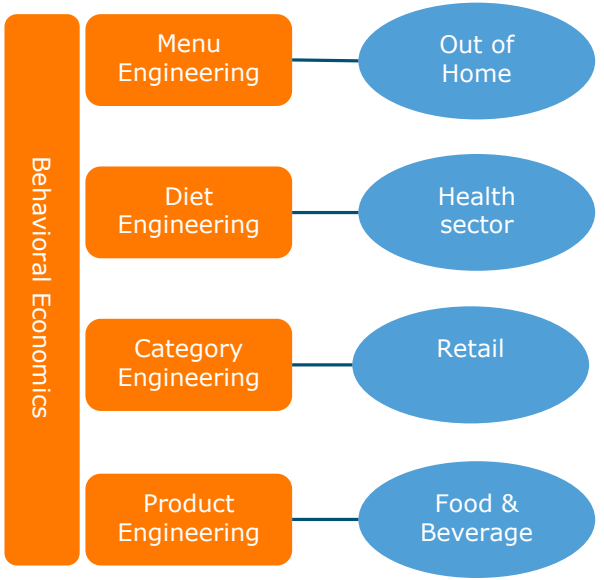
https://www.wur.nl/en/About-Wageningen/100years.htm

www.wur.eu/marketintelligence

Market Impact overview

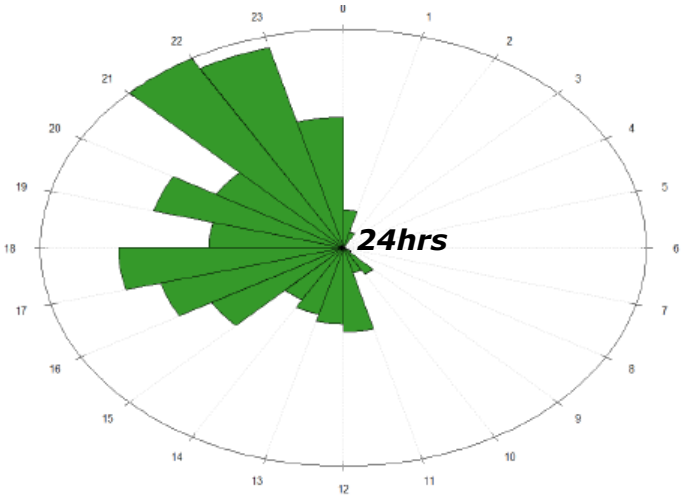






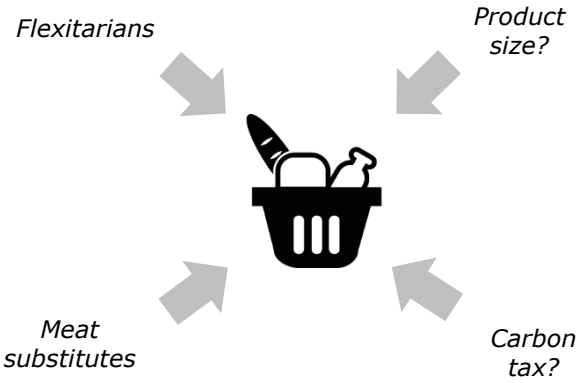
Food profiler & shifting consumption

Food Profiler:
Track consumption patterns



It also tracks gender & age of consumers, and motive of consumption

What interventions and trends are shifting consumption?



How will the consumer respond?
Consequences for the supply chain?

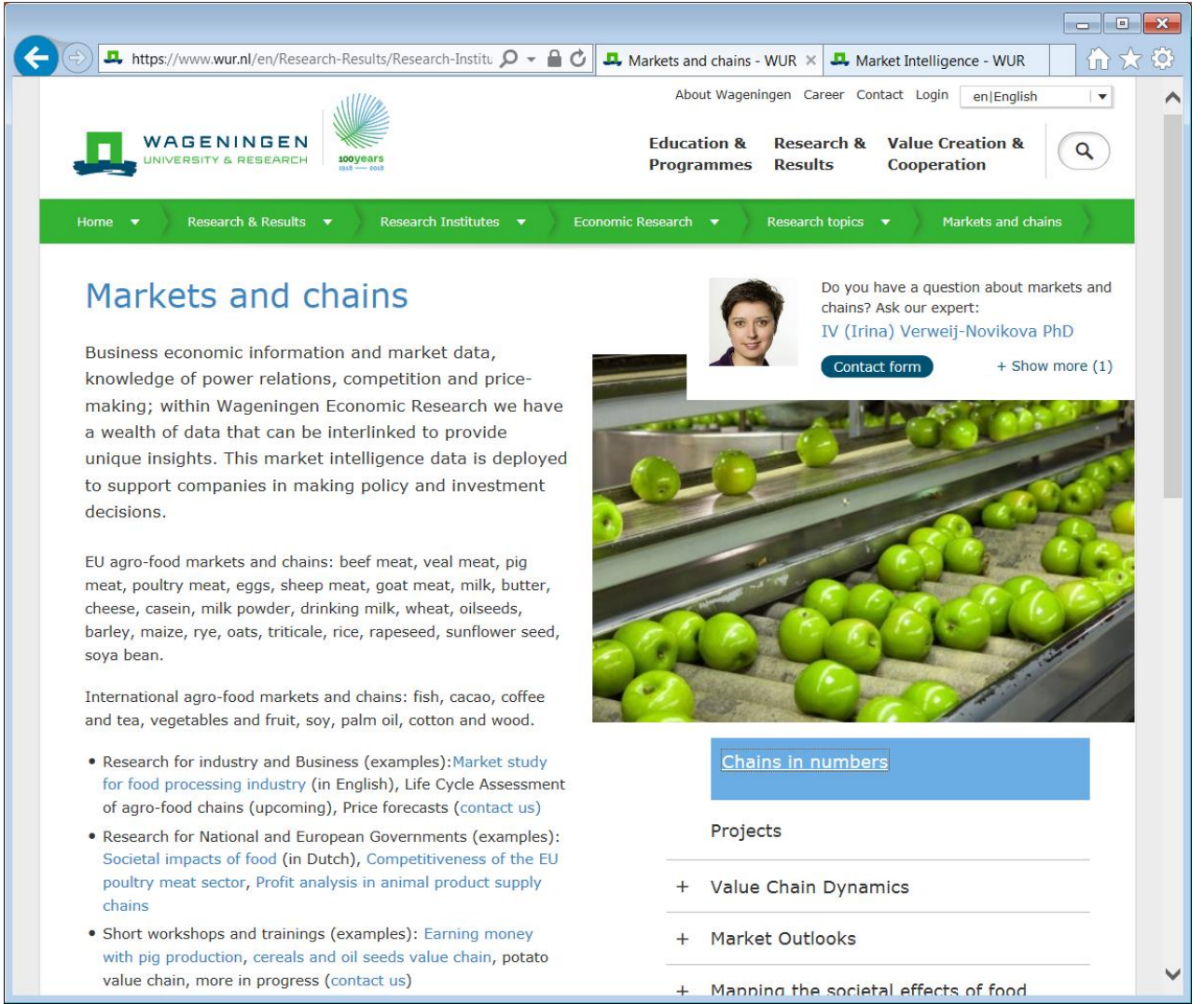
We track food consumption, and assess the consequences of trends and interventions

Virtual supermarket

-Data

-Research for industry business

-Applied knowledge workshops



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Spotting market opportunities:

Market outlooks

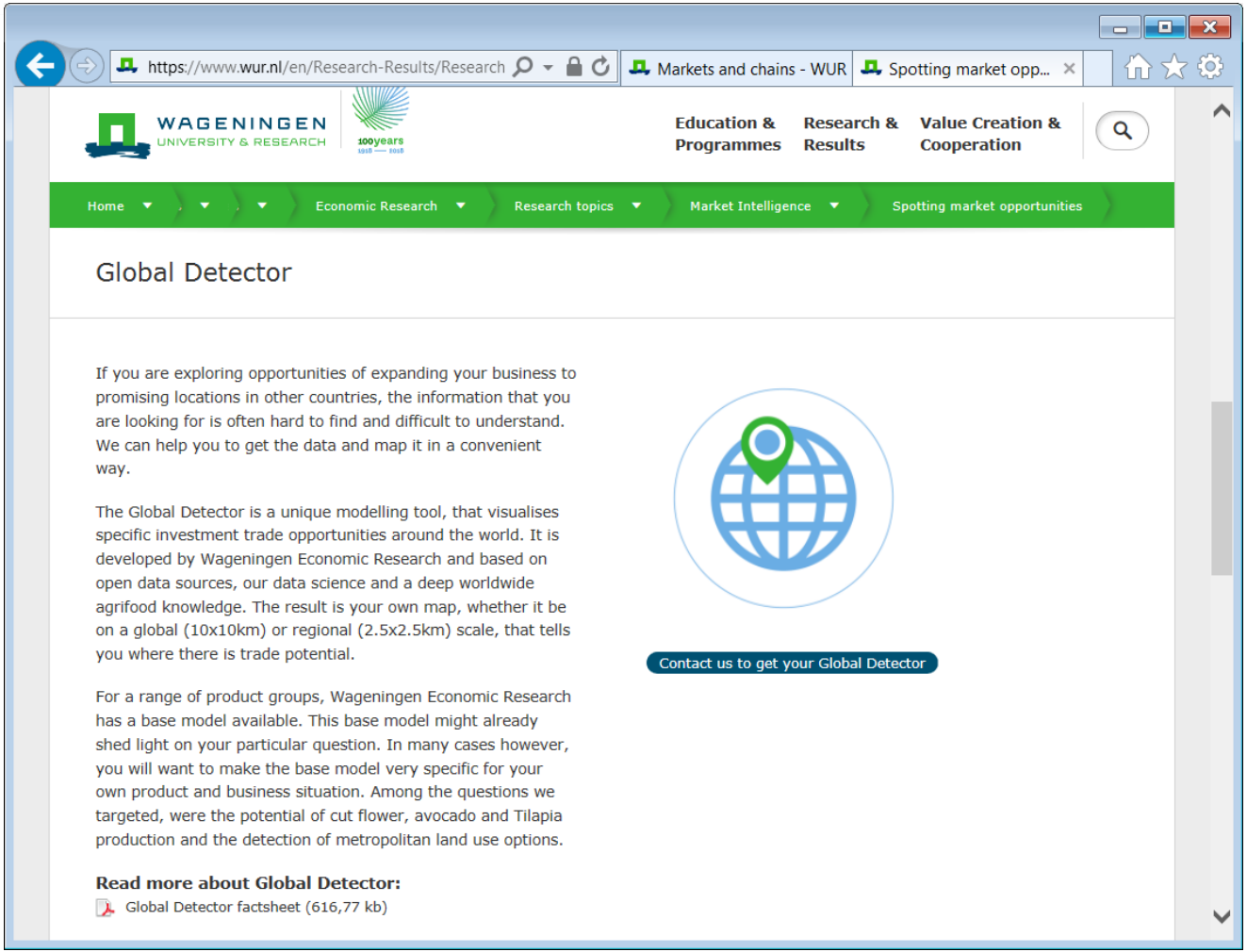
We analyse market scenarios by combining quantitative modelling and qualitative research, determining future trends.

Global Detector

We detect and geographically visualise potential investment and trade opportunities around the world, using our unique production and demand modelling tool.

Marketing Impact Analysis

We increase the impact of marketing and sales in agrifood based on quantitative analyses, resulting in reshaped price tactics and trade promotions.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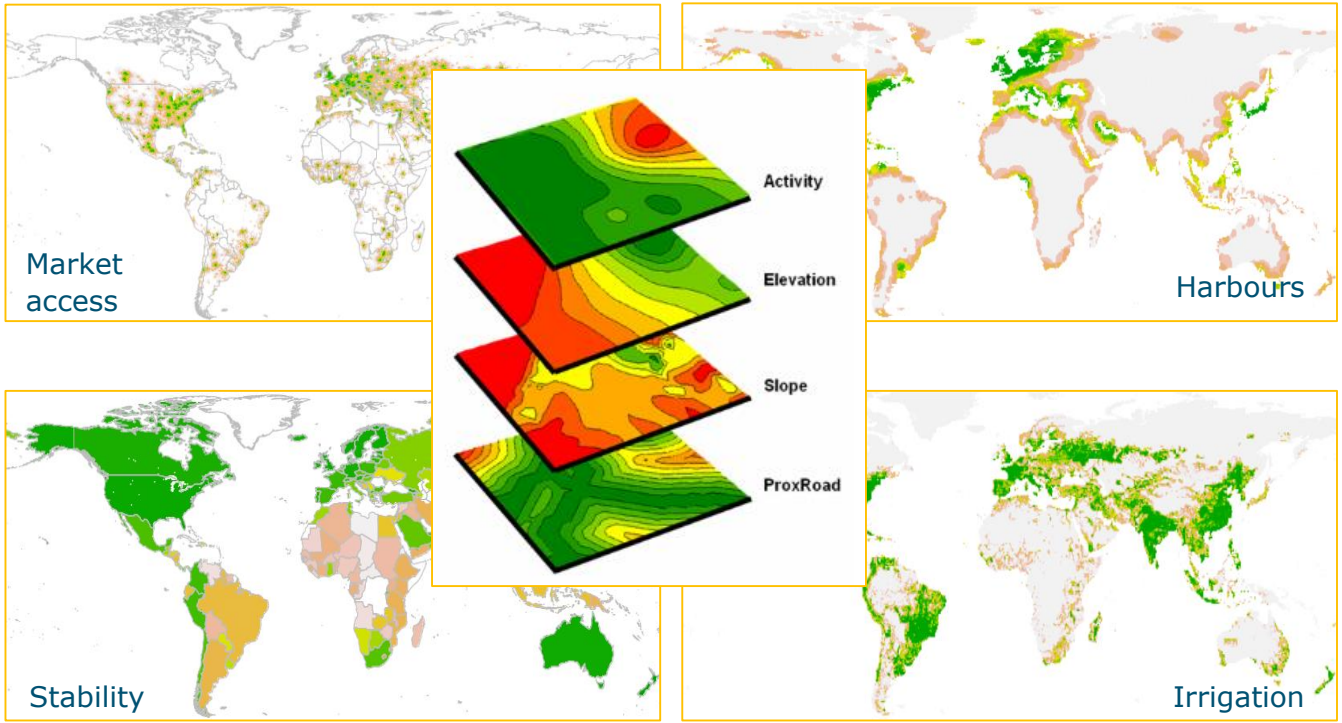
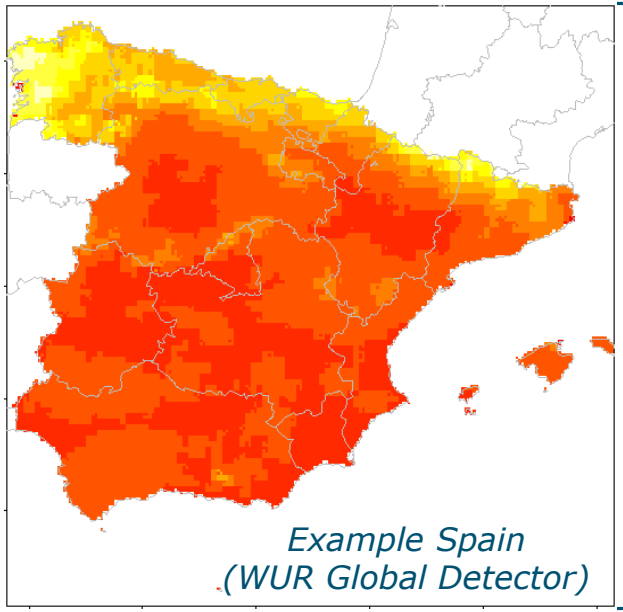
Spotting market opportunities
Global Detector
If you are exploring opportunities of expanding your business to promising locations in other countries, the information that you are looking for is often hard to find and difficult to understand. We can help you to get the data and map it in a convenient way.
The Global Detector is a unique modelling tool, that visualises specific investment trade opportunities around the world. It is developed by Wageningen Economic Research and based on open data sources, our data science and a deep worldwide agrifood knowledge. The result is your own map, whether it be on a global (10x10km) or regional (2.5x2.5km) scale, that tells you where there is trade potential.
For a range of product groups, Wageningen Economic Research has a base model available. This base model might already shed light on your particular question. In many cases however, you will want to make the base model very specific for your own product and business situation. Among the questions we targeted, were the potential of cut flower, avocado and Tilapia production and the detection of metropolitan land use options.
Contact us to get your Global Detector
Read more about Global Detector:
Global Detector factsheet (616,77 kb)

Global Detector: visualization of open data



Global Detector to assess risks & opportunities

Risk severe drought (red),
(based on driest 10% of yrs)



Example Spain
(WUR Global Detector)

<u>Complemented with (historical) info of:</u>

Crop production

Soil health

Productivity

Irrigation infrastructure

...

Global Detector could run climate scenarios to examine effects on farm production

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Markets and chains - WUR

Spotting market opp...

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Market outlooks

Reliable information about current and future developments is essential for your strategic decisions. Our studies make combined use of our in-depth expertise in agrofood supply chains and markets and our databases and models. We are involved in the preparation of global market forecasts for milk, meat, grain and oil seeds. Our estimates contribute to the provision of insights into developments in major food markets.

Contact us for market outlooks for your organisation

Examples of market outlooks:

- Widespread availability of oilseeds contributes to low feed prices
- Increase in Dutch production and export of beef and downward trend in per capita consumption of pork
- Slow recovery in milk prices and environmental constraints inhibit milk production down in Netherlands
- Good harvests create downward pressure on prices

Read more about market outlooks:

- Implications of a UK exit from the EU for British agriculture
- Brexit and Trade-agreements

http://edepot.wur.nl/377860

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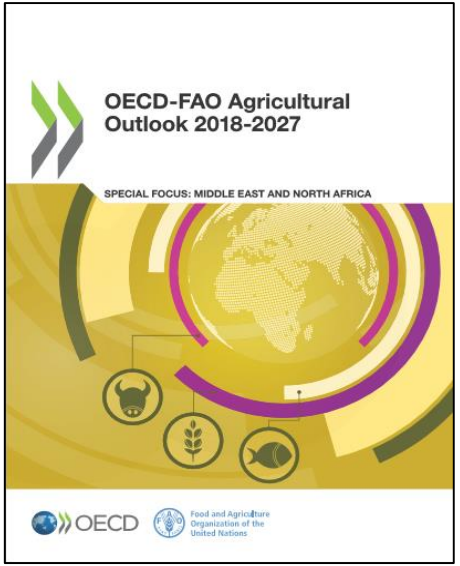
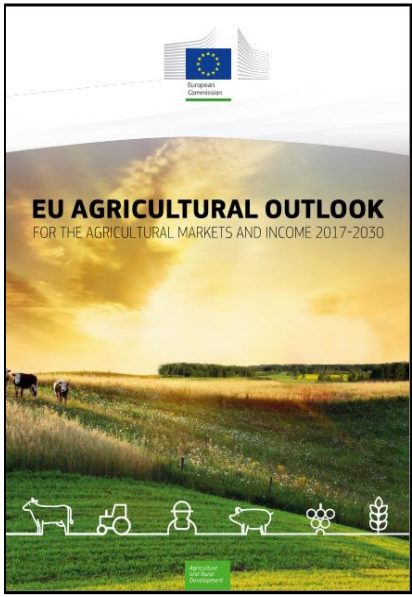
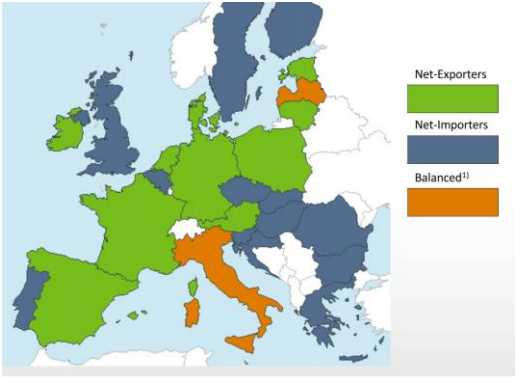
Market Outlooks are available for free from EU website for all commodities, but only at aggregated levels of EU28 (or EU13, EU15)







Why WECR and not OECD? forecasts available for each country of the EU28; tailored scenario's

Countries & Time-series

- Countries: 28 countries of the EU (Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK)
- Countries ++: Ukraine, Russia, Kazakhstan, Turkey

- Years: 2000 – 2013 (14 points, historical), 2014-2025 (12 points, forecast) => 26 observations
- Indicators : available for each year (26) x country (28++) x commodity (40++)

- Model
- Commodities
- Countries
- Indicators
- Time period
- Driving factors
- Model documentation

Countries in the model:
28 countries of the EU (Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta,

AT	BE	DE	DK	ES	FR
FI	GR	IT	IE	NL	PT
SE	VK	BG	CZ	EE	HU
LT	LV	PL	RO	SI	SK
HR	MK	TR	RU	UA	KZ

Sectors: commodities

- Meat: beef meat, veal meat, pig meat, poultry meat
- Pig sector: pig meat
- Poultry: pultry meat, eggs
- Sheep & Goat: sheep meat, goat meat
- Dairy: drinking milk, butter, cheese, casein, skimmed milk powder, whole milk powder, cream
- Cereals: soft wheat, durum wheat, barley, maize, rye, oats, triticale, rice, other grains
- Oil seeds: rapeseeds, sunflower seeds, soya bean, rapeseed oil, sunflower seed oil, soya oil, rapeseed meal, sunflower meal, soya meal
- Horticulture (in progress): tomato, apples
- Acquaculture: Cephalopods, Crustaceans, Demersal Fish, Freshwater Fish, Other Marine Fish, Other Molluscs, Pelagic Fish and Plaice Fish

Indicators (example for soft wheat) Country x Year

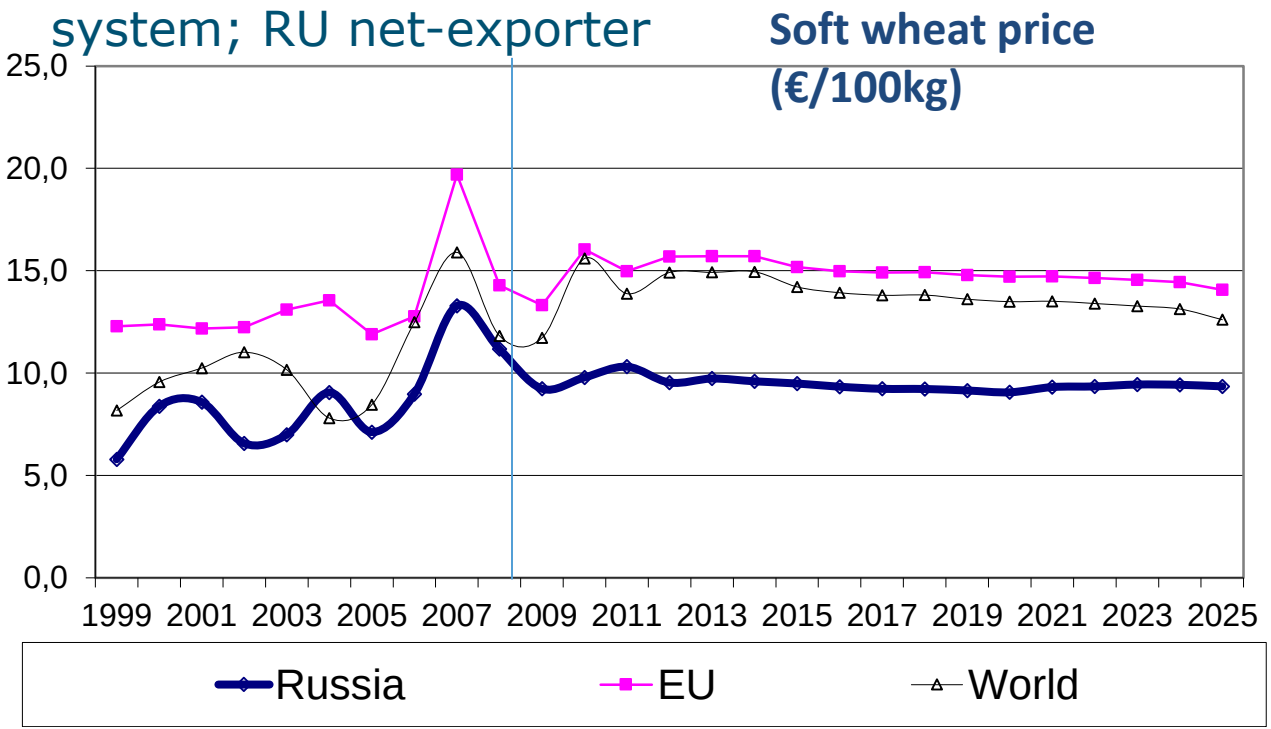
- Macroeconomic (country-specific): Population growth 2015-2025 (% per year), Real GDP per capita growth (UNIT), GDP deflator (UNIT), Exchange rate NC/EURO (UNIT), Exchange rate (EUR/USD)
- Other country-specific: Usable agricultural area (ha), population (mln persons), income per person (euro)
- Indicators (commodity-specific): Soft wheat price (euro/100 kg), Production (mln ton), area (ha), yield (UNIT), Consumption soft wheat total (mln ton), Consumption soft wheat for food (mln ton), Consumption soft wheat for feed (mln ton), Consumption soft wheat for processing (mln ton), Consumption soft wheat for bio-energy (mln ton), consumption soft wheat for food per capita (kg), Net exports (mln ton), Ending stocks (mln ton) , Stocks to use ratio (mln ton), EU28total for each indicator, EU28average for each indicator.

RU baseline outlook

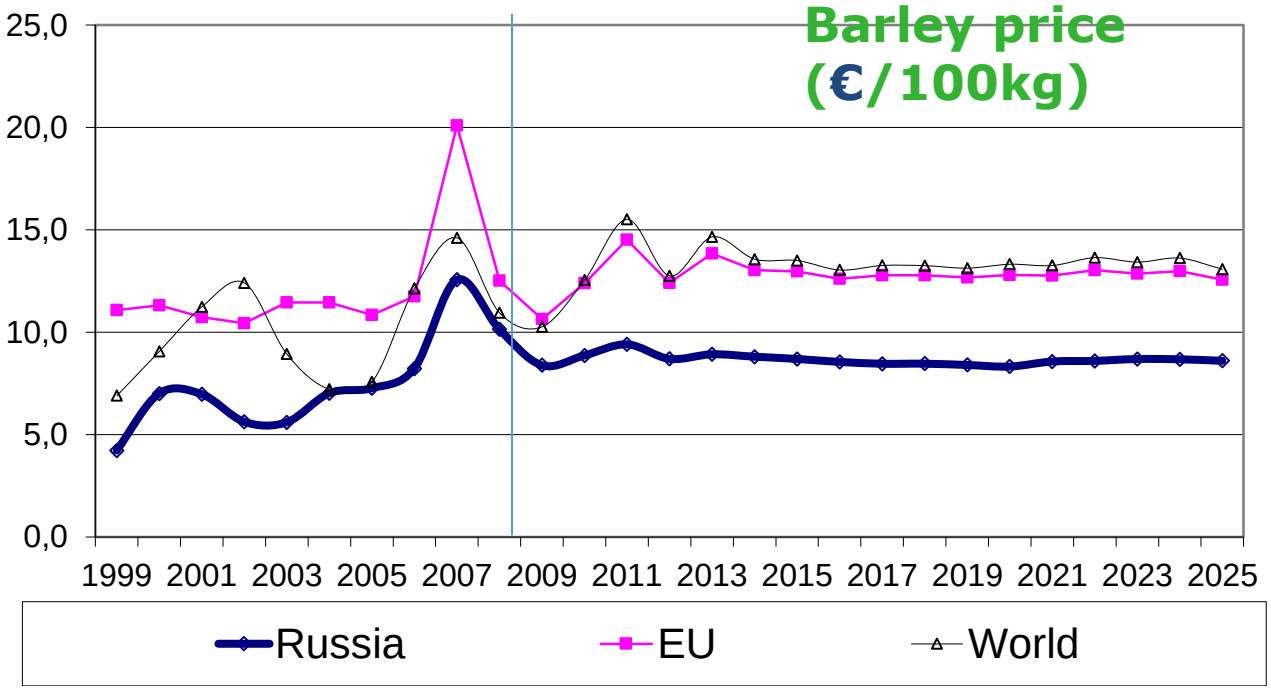
e.g. Grains and oilseeds

- Outdated results

Soft wheat: RU price is lower than world and EU price mostly due to trade tariffs and intervention system; RU net-exporter



Barley: RU price below world and EU price; RU net-exporter



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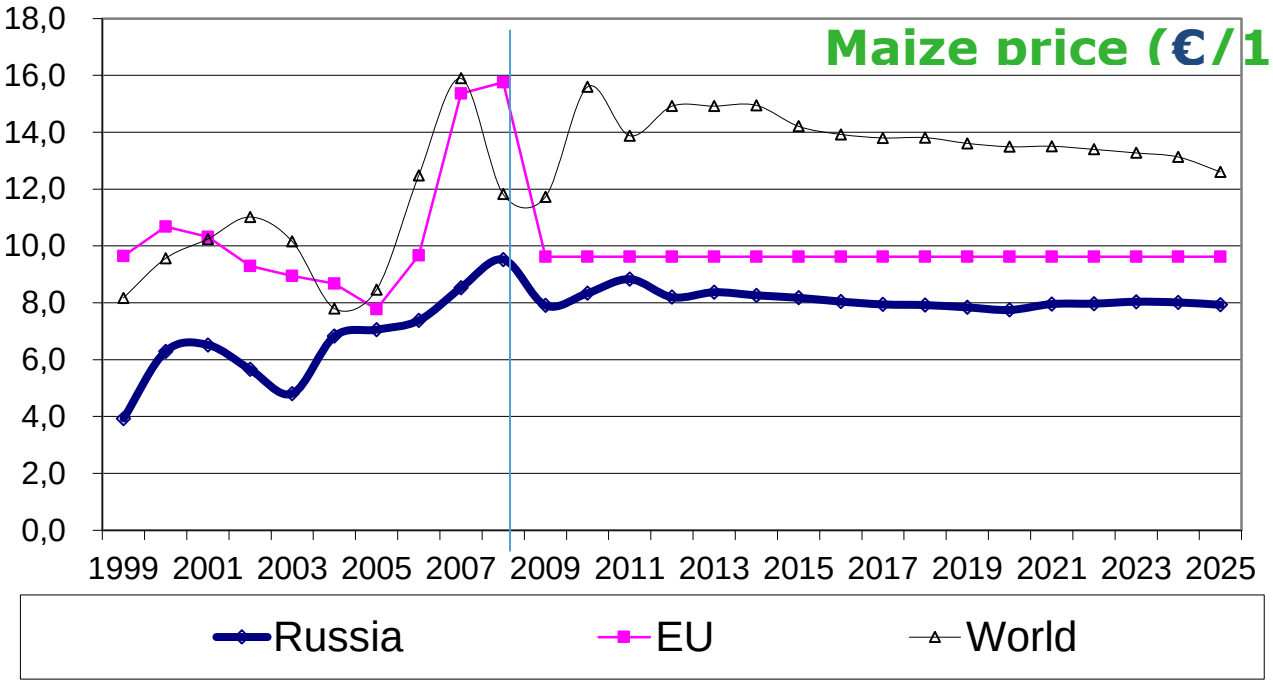
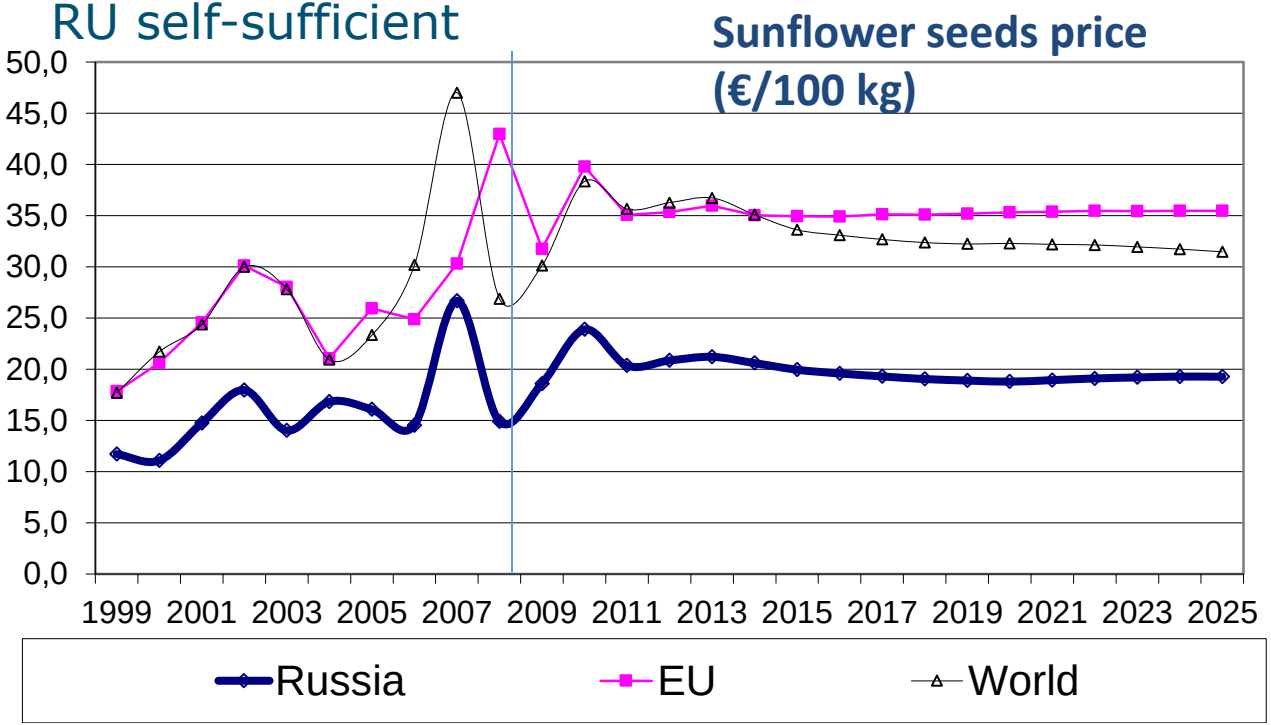
Oats: RU price below to world and EU price; RU net-exporter

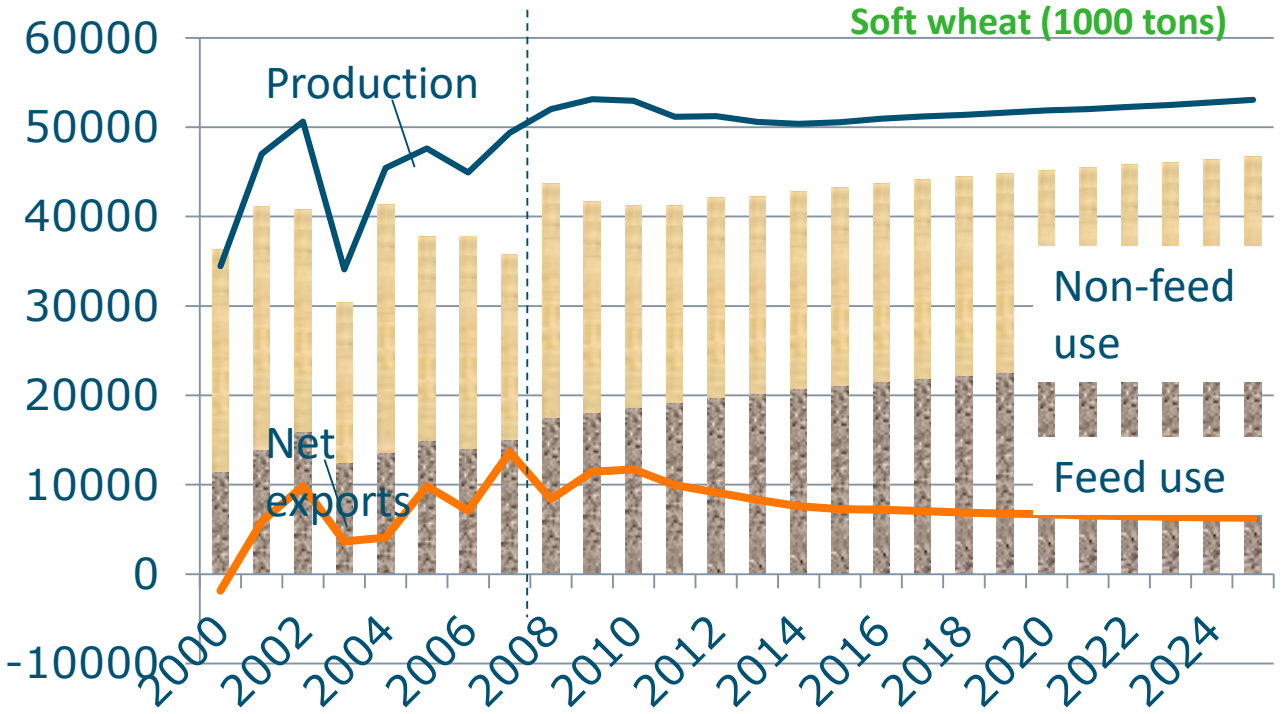


Sunflower seeds: RU price below world and EU price;

RU self-sufficient



Soft wheat: RU net-exporter; production driven by yield growth

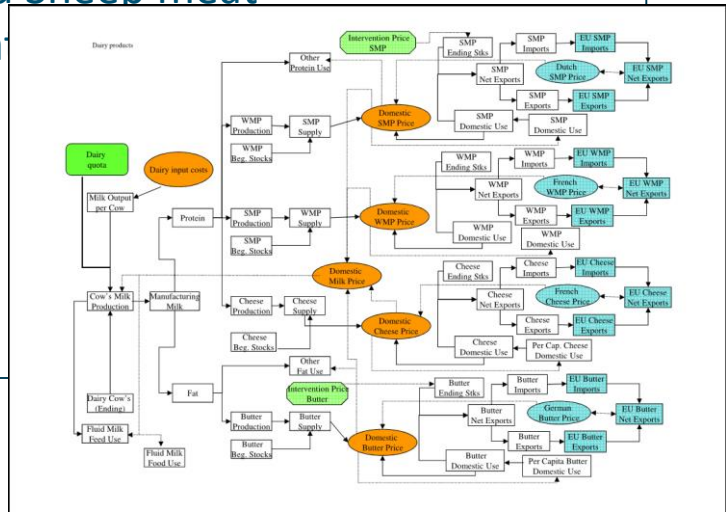


- Model
- Sectors
- Countries
- Indicators
- Time period
- Assumptions
- Model documentation

JRC report

Commodity Charts

Dairy products
Pig and Pig meat
Poultry
Sheep and Sheep meat
Soft wheat
Barley
Rapeseed
Sugar
Potatoes



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Market Outlooks

Base your business strategic decisions on our market insights

"We provide facts to support your strategic gut feeling"

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In need of a better understanding of current agricultural markets and EU policies

Reliable information about current and future developments is essential for your strategic decisions. What should the Dutch agriculture expect in the future? We can explain why and how the coming 10 years the Dutch sector will have to prove its position on the EU market under the growing environmental regulations and growing competition from the neighbours. We know a lot about the Dutch markets but also about all EU Member states. How often did your Market Intelligence unit try to find the reliable data on market trends, on changes in the EU policy? We have the data and stay in close contact with the policy-makers and can bring you the story on market developments, among which the impact of Brexit.

You receive data-based insights on market developments 2018-2028

Our solid modelling approach already gained recognition at the European Commission and the Dutch government. We use the same assumptions as does the DG-Agri regarding the world markets and the EU policies in the EU Agricultural Outlook for Markets and Income 2018-2030 (released 7 December 2018). Our results provide further details on each EU country that are not available through the DG-Agri.
The model that we engage is primarily designed for (trade) policy scenarios into 2028, where the following (trade) policy measures are taken into account: direct support per agricultural products (support prices or input subsidies), intervention prices, import tariffs, import tariff rates, export quotas.

Quick scan or customised in-depth analysis to help you determining your strategy

You will receive data and explanation of our quick-scan analysis of the markets that interest you. We start with a session at your location with our sector specialists to provide you our story and respond to your questions. At the spot we are able to identify what type of analysis you should be looking for and will tell what it takes to get there.

Key features

Excel: Immediate insights in volumes, prices of traded commodities for the situation of no shocks in the currently followed policies (Business as usual scenario, 2018-2030)

Board meeting: Immediate insights by our sector specialists in a working session with the Board of your company. Sector specialists: arable, dairy, poultry, pig, fish.

- **Light modelling**: Tailored to your company scenarios by changing e.g. exchange rate assumptions (1.13€/dollar in 2021); changing oil prices ($80 per barrel in 2025)
- **Advanced modelling**: Tailored to your company scenarios for any changes in for example trade and policy measures for selected commodities and countries.

Commodities:

beef meat, veal meat, pig meat, poultry meat, eggs, sheep meat, goat meat, drinking milk, butter, cheese, casein, skimmed milk powder, whole milk powder, cream, sugar beet, sugar, soft wheat, durum wheat, barley, maize, rye, oats, triticale, rice, other grains, rapeseeds, sunflower seeds, soya bean, rapeseed oil, sunflower seed oil, soya oil, rapeseed meal, sunflower meal, soya meal, tomato, apples, potatoes, fish (8 types).

"What to do if the commodities my company is interested in are not on the list?" - In this case we engage our econometric data specialists and modellers to identify the relationships for your specific wishes. This is only possible on the basis of a 3-month project.

Why choose Wageningen Economic Research

- Refreshing insights
- Domain & sector knowledge
- Interactive & integrated approach
- Internationally leading
- One-stop shop

Contact us

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Team AGMEMOD

- Roel Jongeneel
- Myrna van Leeuwen

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Further reading (links)

- Implications of a UK exit from the EU for British agriculture
- Brexit and Trade-agreements

- Increase in Dutch production and export of beef and downward trend in per capita consumption of pork
- Widespread availability of oilseeds contributes to low feed prices
- Slow recovery in milk prices and environmental constraints inhibit milk production down in Netherlands
- Good harvests create downward pressure on prices

Supporting Member States in negotiations with the EU on Future CAP (Common Agricultural Policy)

Challenge:	Approach:	Results:
Member states are to perform Impact Assessments of Future CAP by themselves: - Define MS level targets (approval by EU) - Identify instruments - Establish control	IA **project** MS & WECR Existing Model of EU markets (AGMEMOD) Joint effort to implement new CAP issues for your countryin to the model	WECR: Country specific impact assessment Report WECR: Assisting in approval of results by the EU MS: Learning for future assessments

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2 ideas

Market Outlooks : Policy Analysis Instrument (also used by the EU)

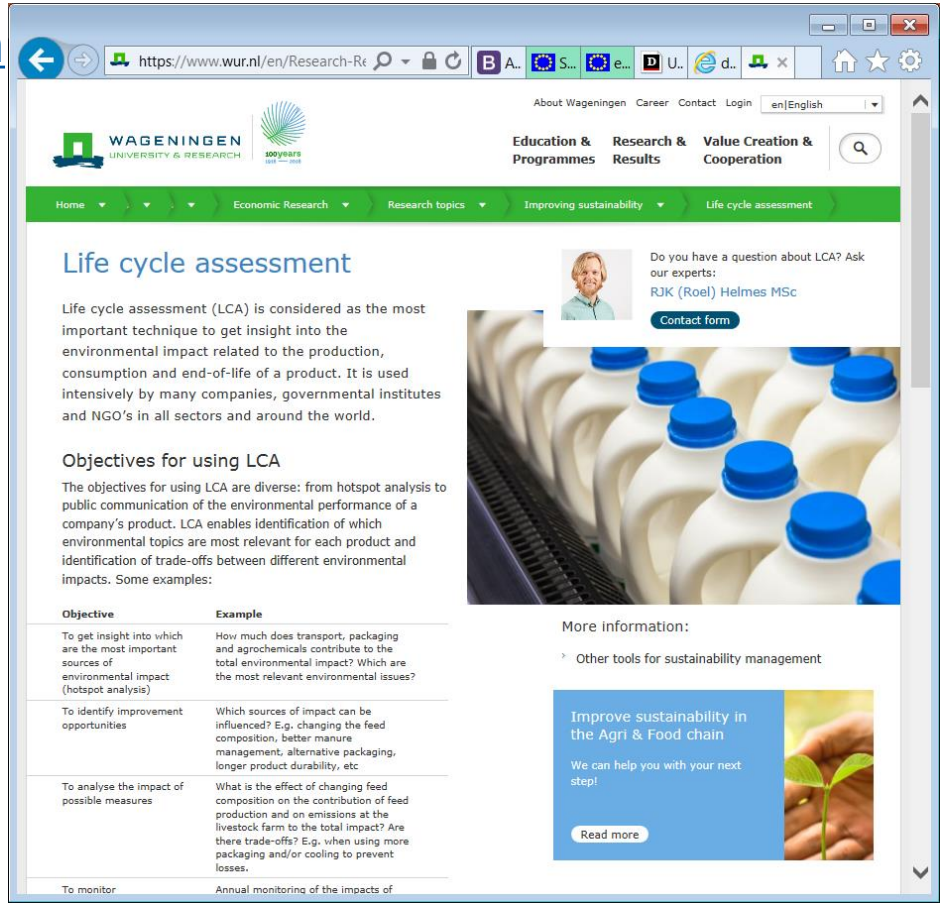
- interesting for research units / government

Life Cycle Assessment

About 460 labels providing environmental information

Life Cycle Assessment

- https://www.wur.nl/en/Research-Results/Research-Institutes/Economic-Research/Research-topics-1/Improving-sustainability-1/Life-cycle-assessment.htm



Life cycle assessment

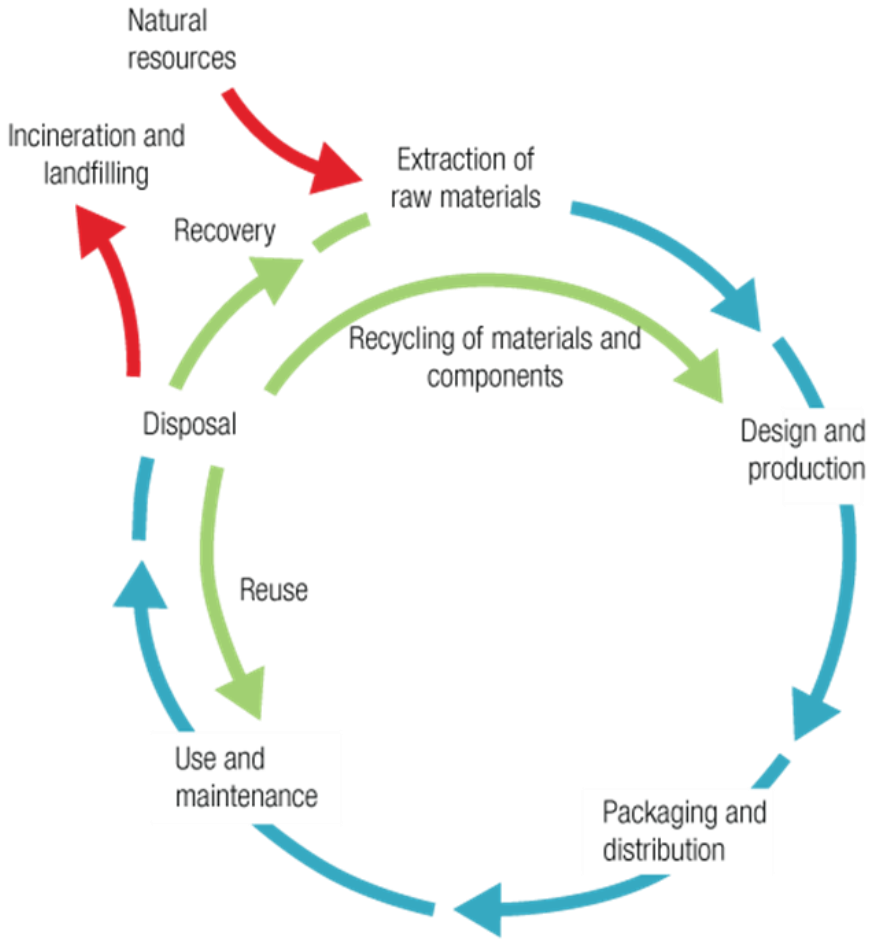


Table grapes: Data collection and modelling

- *Data was collected from growers in Egypt, Italy and Peru and information about the supply chain was gathered from an importing company in the Netherlands. Various scenarios were defined based on literature, an expert workshop and input from the growers and importing company (Table 1).*

Stage	Peruvian farm	Egyptian farm	Italian farm
Cultivation	Low efficiency	Medium efficiency	High efficiency
Packaging	Punnets or loose		
Transport	Maritime or air	Maritime/road or air	Road or maritime
Distribution/retail	With or without cooling (punnets or loose, resp.)		
Consumption	Reduced or average losses (punnets or loose, resp.)		
End-of-life	Dutch average disposal		

- *Table 1: Description of the table grapes cases and scenarios*

Table Grapes: kg CO2 eq per kg for 4 scenarios

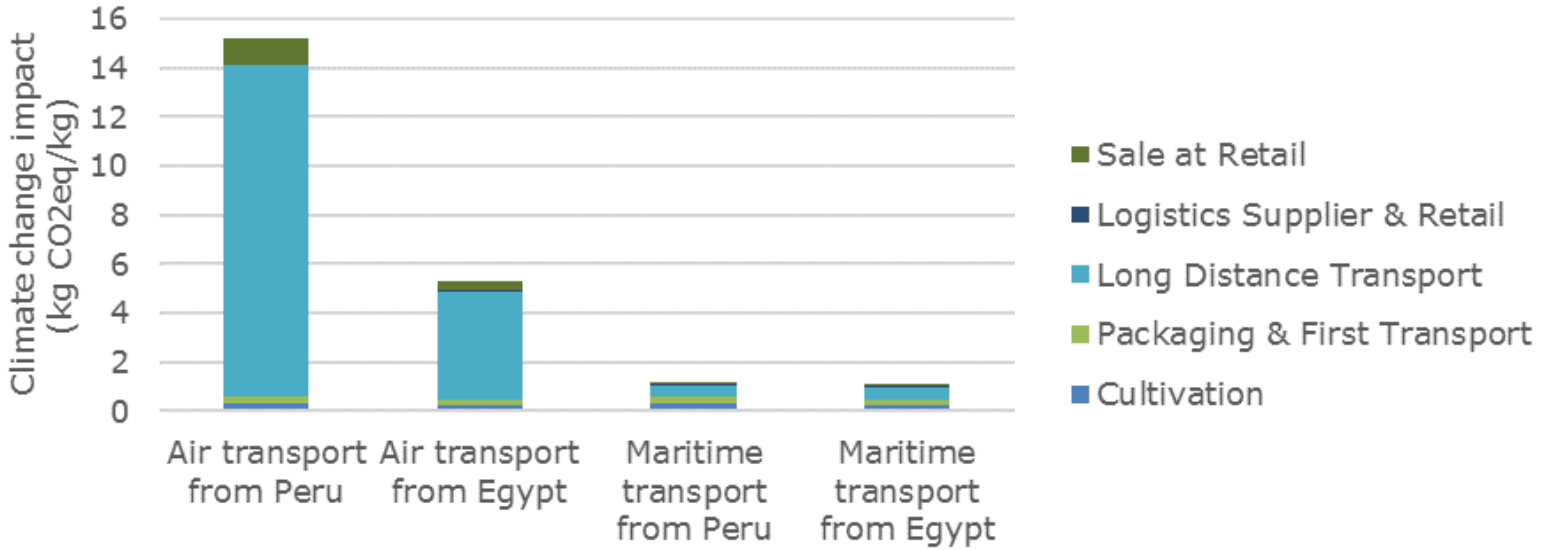
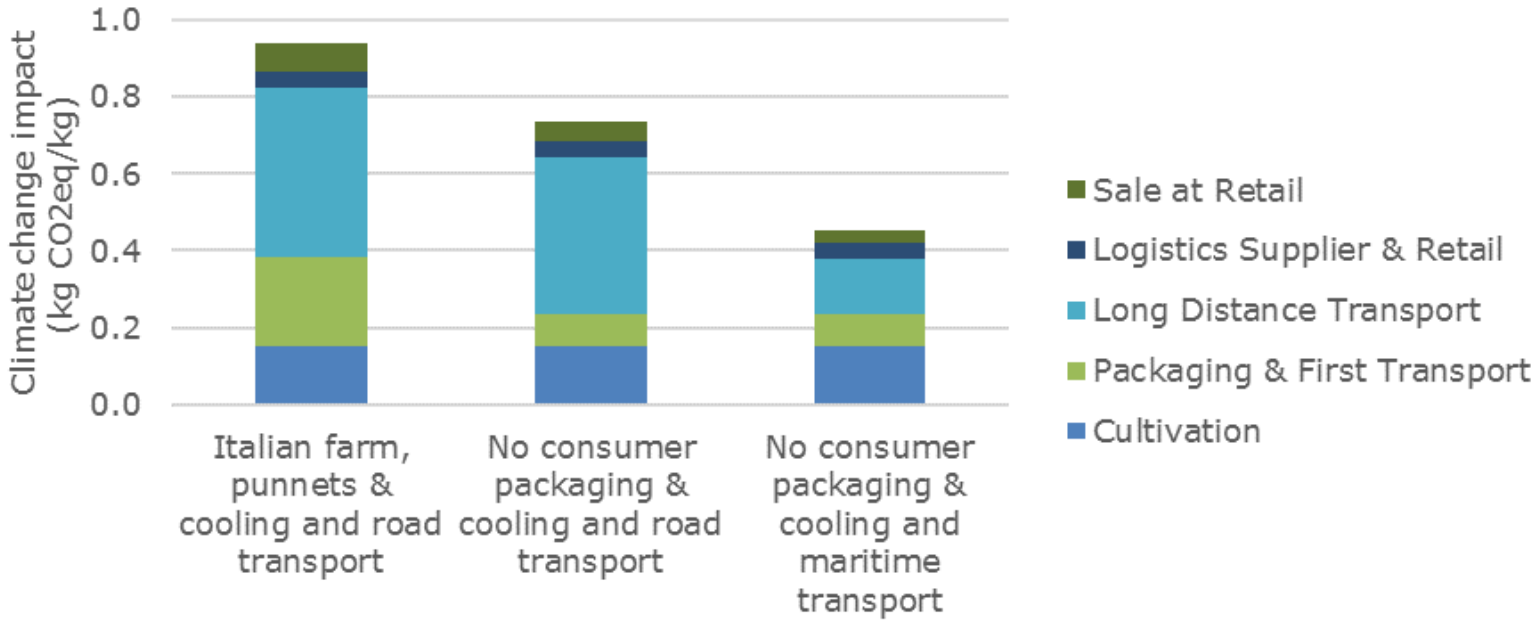
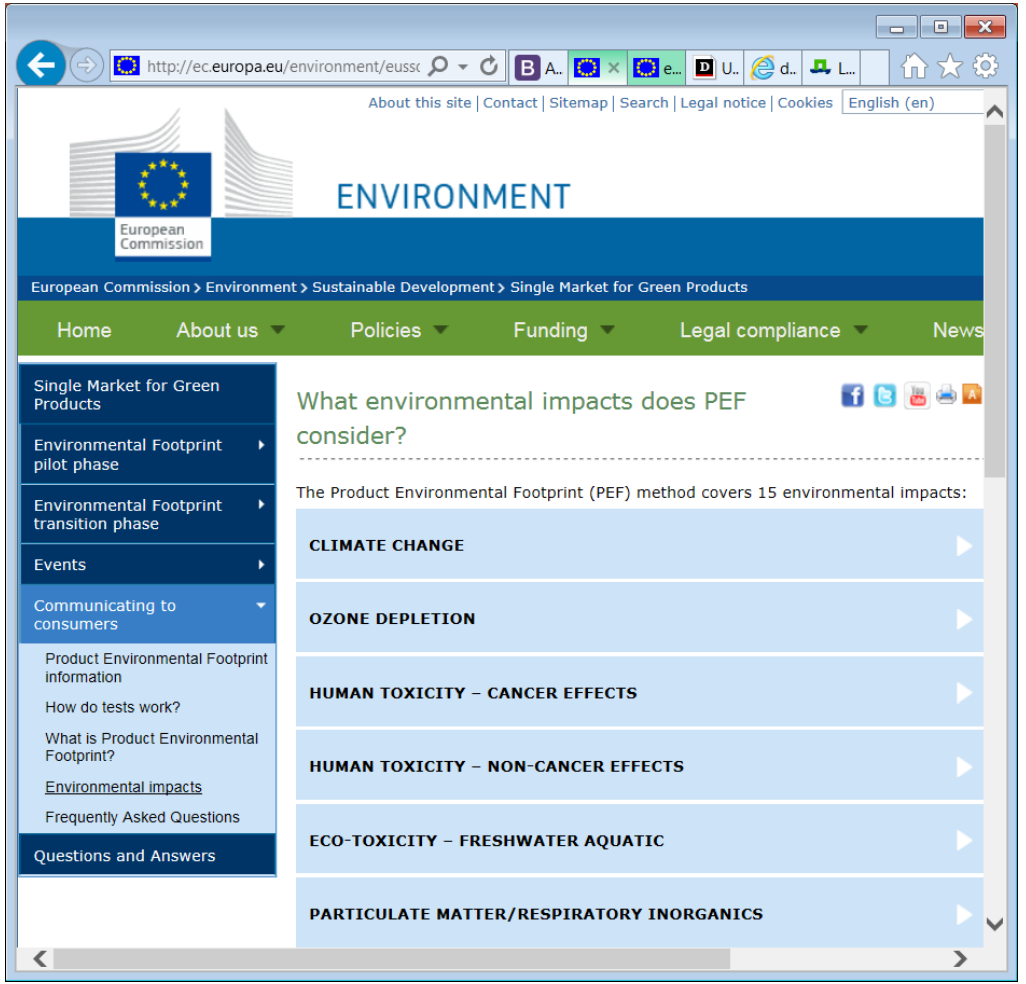


Figure 2: climate change impact of table grapes transported by air or sea/ocean

Comparing *Italian farm with different packaging/cooling and transport scenarios*

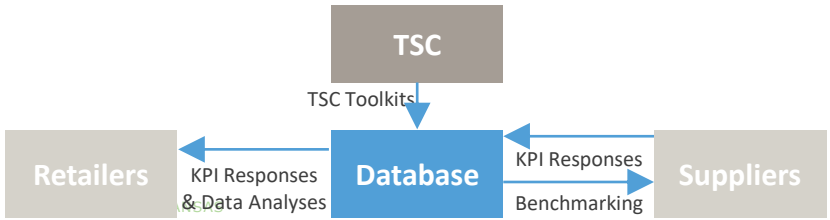


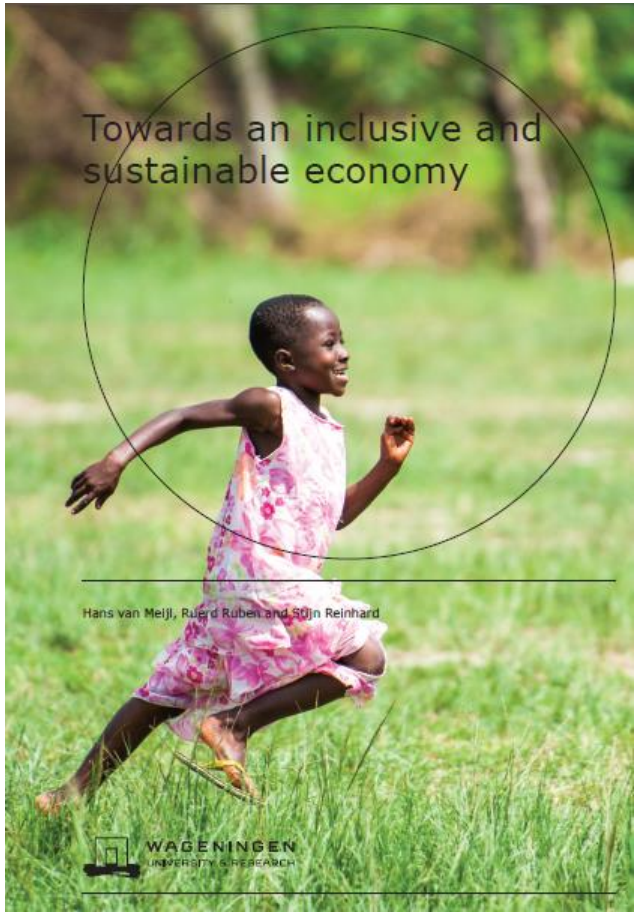
Methodolgy PEF

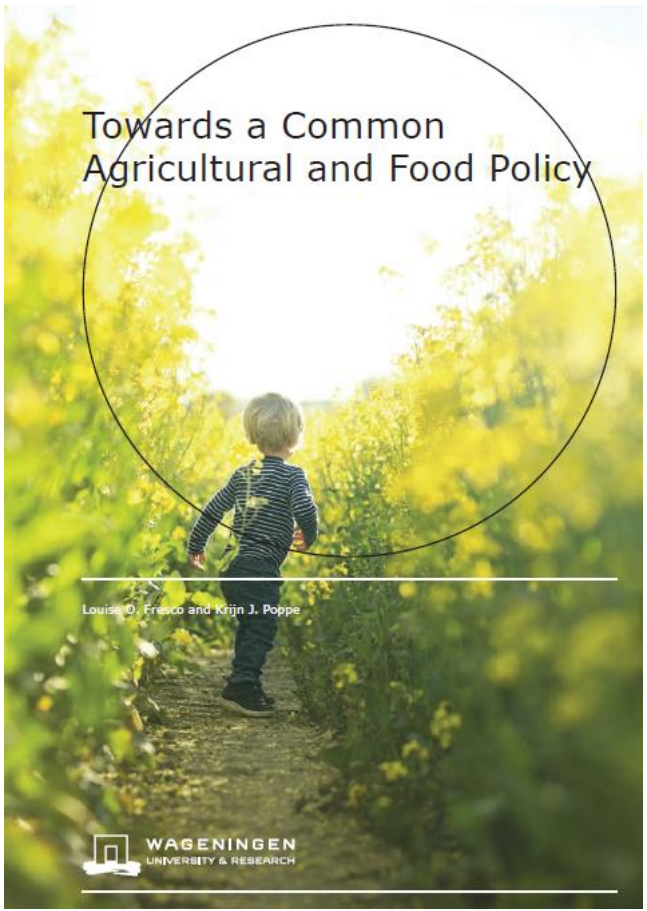


The TSC approach

- Global multi-stakeholder non-profit organization
- Nearly **100** company and NGO **members**
- **Practical** and **science-based** measurement and reporting systems
- **One stop shop solution** with toolkits for all (128) consumer product categories: Hotspots, improvement opportunities and 10-15 Indicators
- Integral: **Full life cycle, all sustainability themes** and **global**
- Stimulating **innovation and continuous improvement**
- **Minimize cost** by alignment with leading initiatives and scale







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More info?

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