

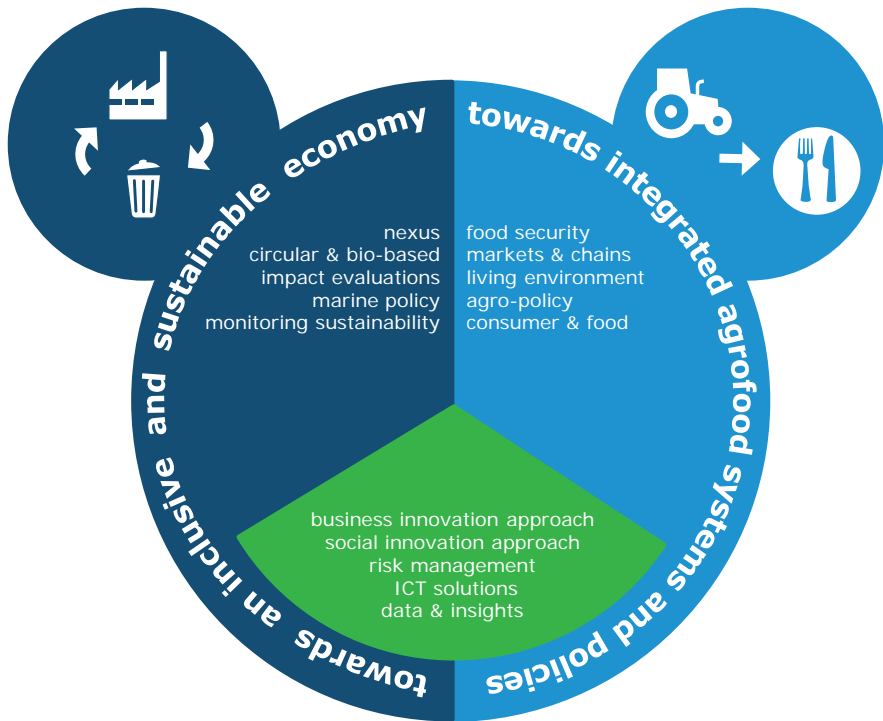
A young couple is running through a lush green field. The woman is in the foreground, wearing a white t-shirt and dark shorts, with her arms outstretched. The man is behind her, wearing a red shirt and brown shorts. In the background, several wind turbines are visible against a clear blue sky. Two large, overlapping white circles are superimposed over the image, framing the text.

Towards a sustainable food economy

Our contribution to the transition



WAGENINGEN
UNIVERSITY & RESEARCH



Wageningen University & Research wants to play a catalytic role in the analysis of urgent issues confronting society. Think of the supply of sufficient and safe food, climate change, the development of a circular economy, the protection and exploitation of biodiversity and poverty reduction. At the same time, it is our goal to contribute to solutions for these issues and to strengthen the debate in these areas.

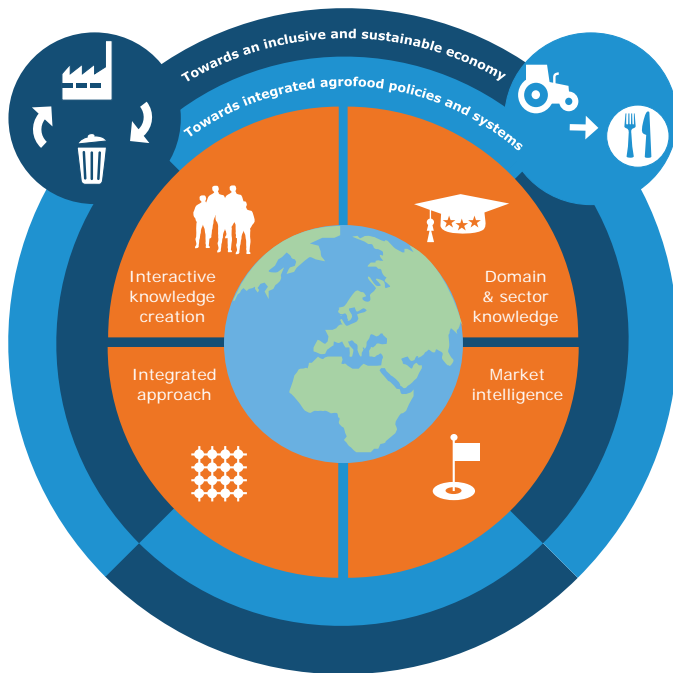
Wageningen Economic Research, our institute for applied social and economic research, contributes to this ambition with sector and domain knowledge, unique data and models. In interaction with stakeholders, we allow for comprehensive considerations. We offer our clients new insights that contribute to sound policy and decision-making. For instance, scenario analyses reveal new options and our evaluation studies improve policy and development programmes.

In this brochure, you will find a selection of our projects for government authorities, businesses and other organisations, ranging from exploratory and explanatory research to food-system improvements and new business opportunities.

I am proud of this diversity of projects and the knowledge and enthusiasm of colleagues to achieve these results. I am looking forward to adding new projects to this series, together with you, in the coming years.



Prof.dr. Jack G.A.J. van der Vorst
General Director Social Sciences Group
Wageningen University & Research



'To improve the quality of life, we analyse and design effective incentives and policies'

Wageningen Economic Research supports the transition to a sustainable food economy. To do this, we focus on changing the agrofood system and its supporting policy, and the development towards an inclusive and sustainable economy.

For a comprehensive agrofood system and policy, we look at all aspects of the agrofood system. We are committed to innovative insights and the possibilities surrounding the effects on the living environment and the dietary choices of consumers, and the role that is played by the food chain, food markets and food policies.

We approach the inclusive and sustainable economy using the 'nexus principle'. In other words, everything affects everything. Our knowledge contributes to the improvement of development programmes, helps us monitor sustainability and analyse the circular and bio-based economy, including the sustainable use of the seas.

Together with our clients, we are continually seeking what makes us stand out, looking at how we can involve stakeholders in achieving real change and teaching our clients to manage risks. We offer intelligent customisations for sound decision-making and organise the application of new technologies to arrive at a sustainable food economy.

www.wur.eu/economic-research

A photograph of a young child with light hair, wearing a dark and light striped long-sleeved shirt and dark trousers, walking away from the camera down a narrow dirt path. The path is flanked by tall, vibrant yellow flowers, likely rapeseed, which fill the frame and create a bokeh effect in the foreground and background. The scene is brightly lit, suggesting a sunny day. A large, thin black circle is superimposed on the left side of the image, partially overlapping the flowers and the text.

Agrofood systems and policies

A major challenge faced by the global food system is to feed a population which may rise to nearly 10.5 billion by 2100. These people will also be comparatively richer on average and the majority will live in an urbanised environment. The demand for (high-quality) food will therefore increase by even more than the growth in population suggests. Resilient high-quality agriculture and food systems are required to provide consumers with healthy and safe food and to ensure they can more easily make healthy choices.

We find it important to develop new insights and solutions around resilient agrofood systems and healthy and safe food. Therefore we support companies, foundations and authorities via food system analysis, market and consumer research, outlooks and forecasts, monitoring and impact evaluation. We look at the preconditions, processes and incentives that motivate companies, countries and consumers to change their behaviour and consumers to adopt healthier diets. This way, we facilitate the transition towards integrated agrofood systems and policies.

www.wur.eu/afsp





Towards a healthy food system

One-sided diets pose the greatest global disease pressure risks. For this reason, the consumption of a healthy diet is essential to food security. The current food systems are inadequate. Solutions for this problem require concerted efforts from all parties involved in food, ranging from farmer to consumer and food industry to policy-maker. We explore and weigh the opportunities for the combination of a healthy diet with sustainable production systems.

Affordable vegetables to combat obesity in Nigeria

The consumption of vegetables is too low in the urban southwest of Nigeria, an area in which obesity is also increasing rapidly. Vegetables are relatively expensive and of poor quality: tomatoes, for example, are supplied by growers one thousand kilometres away. Tremendous losses in the volume, quality and nutritional value are incurred at the informal markets where rich and poor consumers make their purchases. Our studies, with experiments focused on efficient chains for tomatoes and other vegetables, contribute to the reduction of post-harvesting losses and to economic development. In combining these results with those from studies of consumer behaviour and healthier consumption patterns we contribute to combating one-sided diets and obesity.



Healthy *and* sustainable?

Although the food industry and government agencies both attach importance to a good diet and sustainability, it is still too early to bring them together. Food companies would welcome recommendations on what they can do to produce healthier and more sustainable products, whilst the EU would welcome insights for more integral policy. Within the scope of the four-year European SUSFANS project, we are exploring the options for a European dietary pattern based on healthy and sustainably produced food. In cooperation with parties including DSM, Unilever and the *Nederlandse Zuivelorganisatie* (Dutch Dairy Association), we are developing suitable indicators and computation models and carrying out explorations. Our work provides insights into views of the future of the EU food system.





What do consumers eat and why?

What do consumers buy and eat? Why do they make the choices they make? And how can we influence these choices? At Wageningen Economic Research, we are continually at work on business-related and policy issues of this nature. We examine the personal characteristics of consumers and the physical and social environment in which they make their choices. We make use of our knowledge of food purchase and consumption behaviour and our access to unique data to support and encourage our clients in their efforts to provide for more healthy and sustainable consumption.

Substantiation to encourage healthy and sustainable behaviour

We make use of our knowledge of food choice behaviour to assist the various parties in the encouragement of healthy and sustainable consumer behaviour, whereby we put scientifically substantiated approaches in practice. We and the companies in the production chain and the retail and Out-of-Home sectors taking part in the Food, Value and Impact project review the interventions which promote healthier and more sustainable consumption patterns. One specific intervention, for example, is the provision of personalised dietary advice based on health, personal characteristics and the required form of feedback. Alongside their effect, the degree to which the interventions are in line with the needs of the stakeholders making those interventions is of at least equal importance. Is it appealing and feasible for them to implement an intervention?



Unique, real-time consumer insights on call

The many consumer studies we carry out yield a wealth of information and data on consumers and their behaviour. We supplement this knowledge with data from current studies, such as the FoodProfiler app that we use for real-time measurements of consumer behaviour in the Netherlands, Germany and the UK. Linking all this data to our knowledge of consumer trends, macro-economic developments and market models enables us to gain a focused insight into consumers and consumer segments, their purchasing and consumption behaviour and their decision-making processes. We use these insights to study the policy or market interventions and food innovations that have the greatest chance of success.





Towards better performing chains and markets

Ten million European farmers and innumerable farmers all over the world, 230,000 wholesale companies, 260,000 processors and 450,000 retail companies are involved in the production, processing and distribution of food for European consumers. The balance between competition and cooperation is key to the achievement of private and collective profit and sustainability targets. We support companies and policy-makers in the development of strategies to find this balance.

A view into the future

Reliable information about current and future developments is essential for important company and policy 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 (DG AGRI). For each EU Member State we estimate developments in production and consumption during the coming 10 years. Our estimates contribute to the provision of insights into developments in major food markets.



Mapping the societal effects of food

Food production and food consumption have both favourable and unfavourable consequences for incomes, the climate, labour/child labour and human health. In cooperation with True Price, we have mapped the societal consequences of food production and their magnitude. This information assists companies in the improvement of their products and government agencies in their formulation of an agenda for sustainability consultations with industry. Consumers also want to know more about the products in their shopping basket. These studies provide companies and government agencies an insight into what transparency entails, the willingness of consumers to pay and the distribution of costs and benefits in the chain. Our studies contribute to transparency throughout the chain.





Towards a healthy diet in a liveable environment

What is the significance of urbanisation for food supplies and the liveability of metropolises and their surroundings? What are the consequences for water, energy and the climate? And what contribution do nature and the landscape make? Provinces, municipalities, urban metropolises and the business community all need an insight into the consequences of and solutions for food and liveability issues. Wageningen Economic Research has adopted an innovative, interactive approach to the studies of metropolitan solutions for food security and for a healthy, green living environment. Our work contributes to liveable cities and appealing hinterlands.

For sustainable urban development

We are developing the Metropolitan Transition Support System, which offers an insight into food security and the development of greener urban areas: what is working well and what needs to be improved? The system is based on an interactive approach which involves the use of models, scenario analyses and the active involvement of stakeholders. In cooperation with the stakeholders, continual insights are provided into the value of potential urban development paths. We use these insights to formulate broadly-supported, substantiated proposals for action perspectives, new cooperative arrangements and revenue models. Our work contributes to the development of sustainable urban areas.

www.wur.eu/urbanchallenges



Nature as a source of income

By viewing nature from the perspective of the 'green revenue model', new value is added. Nature then becomes an economic cornerstone for the city and its surroundings. We have knowledge about the capitalisation of natural assets. Experience has revealed that the implementation of a new revenue model cannot succeed without attention to the process in the region. For this reason, we supplement the development of this revenue model with process expertise. Our work provides for the successful implementation of revenue models.





Effective and efficient policy for the agricultural sector

The primary agricultural sectors are related to various forms of government policy, such as agricultural policy, manure policy, lease policy and energy policy for greenhouse horticulture. Wageningen Economic Research helps policymakers, the business community and interest groups with policy evaluations and explorations, based on sector knowledge, data, models and research methods. This results in insight into options for effective and efficient policies.

Good foundations for a new Common Agricultural Policy

Discussions regarding the content and set-up of the Common Agricultural Policy (CAP) after 2020 are now well underway. By commission of the Ministry of Economic Affairs, we have performed an exploratory study addressing possible scenarios and policy options for the CAP. In this way, the Netherlands can make a well-founded contribution to the debate. To this end, we first sketched a few objectives for the policy, including new objectives such as public health and food policy. Confronted with a number of environmental scenarios for the coming decade, we then designed a combination of robust policy instruments able to respond to various possible political and social development options for the coming years.



End of derogation, reduced net added value

If the European Commission's permission to keep more cattle per hectare than the Nitrate Directive allows - the so-called 'derogation' - comes to an end, this will lead to a slight decrease in the livestock population. This, in turn, will lead to loss of income throughout the dairy complex, both for farmers and the upstream and downstream industries. If the extra manure that comes onto the manure market cannot be fully processed due to an inadequate manure processing capacity, the effects will be greater. On the basis of our models and sector knowledge, we can calculate these effects and visualise the scenarios. In this way, we provide insight into the effects of policy and the assessments that have to be made.



Towards an inclusive and
sustainable economy



Another major challenge facing global society today is to change and fill the needs of a growing population in a world characterised by mounting environmental stresses and rising inequality. There is a need for circular and sustainable food systems which close material flow loops in the entire supply chain from farmers to consumers and back. This should be done in a resource-efficient manner that includes all relevant stakeholders.

We make essential contributions to food security, climate and environmental policy through the formulation of future scenarios and the application of integrated assessment methods that unify micro and macro methods, as well as economic, behavioural and biophysical models. We contribute with cutting-edge research and through the monitoring and implementation of sustainability analyses to policy decisions for industry, foundations and government authorities. This way, we facilitate the transition from a linear to a circular economy.

www.wur.eu/ise





Transition to a circular and bio-based economy

One of the paths in the circular economy involves the use of agricultural and forestry raw materials rather than fossil raw materials for the development of new products. Government agencies are conducting an incentive policy and an increasing number of companies are opting for bio-based products due to both the added value they offer to society and consumers and of the opportunities they offer them for their business. Wageningen Economic Research examines the effects of this transition on the environment, social environment, macroeconomics, regional economy and economic performance to provide a total insight into the transition to a circular and bio-based economy. Our work enables government agencies, companies and NGOs to reach substantiated decisions.

Knowing what will happen tomorrow today

The Dutch government holds that the large-scale use of biomass is needed to achieve the emission targets. We used economic models for a variety of scenarios to study the macro-economic effects of this policy. Our studies reveal that the bio-economy can make a positive contribution to the Dutch economy, the achievement of greenhouse gas reduction targets and the reduction of the costs of the reduction of greenhouse gases. This will require both large-scale technological changes and access to global markets. Low fossil energy prices reduce the macro-economic benefits. An incentive policy is required for the achievement of positive macro-economic effects and CO₂ reduction targets. Our models make future-proof policy feasible.



Consumers know too little about bio-based products

We have carried out studies of consumer perception within the context of the EU Open-Bio project. Our studies reveal that consumers have insufficient knowledge of bio-based products. Moreover, they assess each bio-based product in terms of its specific qualities: they weigh the advantages and disadvantages of the bio-based variant against the product based on the use of fossil raw materials that the variant is intended to replace. Our studies help companies in the successful market launch of bio-based products tailored to the consumer expectations.





It all comes together

Water, land, food, energy and climate are interconnected, comprising a coherent system (the 'Nexus') in which the elements influence each other. Think of solar energy, for instance: if this were very cheap, salt water could be converted to fresh water and more food could be produced. Management of this interaction is critical to securing the efficient use of our scarce resources. We support policymakers worldwide in the management of the Nexus with knowledge, impact assessments and scenario models.

Measuring the impact of the transition to the circular economy

The H2020-project CIRCULAR IMPACTS aims to provide European policy makers with the knowledge to guide and foster the transition to a more circular economy. Therefore we are developing an overarching impact assessment of this transition. A challenging assignment because currently a lot of assumptions are made in the evaluation of the circular economy. Calculating environmental and resource use effects of the circular economy seems to be straightforward, although not without problems. Our innovative methodology will relate elements of the circular economy to welfare, growth, European competitiveness and employment in the short and long term and we will derive possible indicators from this framework. This way we support the transition to a circular economy.

www.circular-impacts.eu



Playing around with the Nexus

The H2020-project SIM4NEXUS aims to predict society-wide impacts of resource use and the impact of relevant policies on agriculture, water, energy, biodiversity and ecosystem services. Using the Nexus themes water, land, food, energy and climate, we carry out model-based analyses. The acquired insights are used in the development of a Serious Game: a cloud-based, integrated tool for testing and evaluating alternative policy decisions. This way we stimulate the design of effective policies in innovative ways.

www.sim4nexus.eu





Sustainability in sight

Wageningen Economic Research supports companies and government agencies in monitoring and evaluating progress in the achievement of sustainability targets. We, in interaction with our clients, develop sustainability monitors that enable them to prepare transparent progress reports on their sustainability targets. We combine and interpret data sources, provide input for the specification of sustainability targets and indicators and evaluate the effectiveness of measures. Our strength lies in offering umbrella structures for the transparent weighing of a variety of themes and their presentation.

Making consumer goods more sustainable

Various players in the consumer goods sector, including retailers, manufacturers, NGOs and government agencies, have the ambition to reduce the environmental and social consequences of global production and consumption. The Sustainability Consortium (TSC), a global cooperative arrangement between scientific institutions, NGOs and the business community, strives to improve this sustainability. Thousands of companies all over the world use the new standardised indicators to exchange information about sustainability in the chain. We have information and data about the environmental and social bottlenecks in the life cycle of almost all consumer products. We, together with our Asian and North and South American partners, make a global contribution to more sustainable consumer products.

www.sustainabilityconsortium.org



Future-proof and responsible dairy chain

The *Duurzame Zuivelketen* (Sustainable Dairy Chain) joint initiative between the Dutch Dairy Association (NZO) and dairy farmers (LTO) was taken to develop a future-proof and responsible dairy sector in the Netherlands. The targets for 2020 are climate-neutral development, animal welfare, pasture grazing and increased biodiversity and reduced environmental impact. All dairy companies have set up individual programmes. The annual sector reports review the results, backgrounds and discussions and present progress in the achievement of the targets. The *Duurzame Zuivelketen* uses the information in these reports as input for transparent evaluations and reports for to societal organisations. The reports are of a dynamic form. We, in interaction with the client, incorporate new insights, methods and targets in the reports and offer an up-to-date and accurate account of the dairy sector.





Towards the sustainable use of the seas

The economic importance of the seas is increasing due to their role in energy, transport, the fisheries, aquaculture and recreation. This confronts companies and government agencies with challenges relating to economy, ecology, market and chain and management issues. Our studies, analyses and insights contribute to the creation of solutions. We make use of our knowledge of land and marine food production and of our scientific expertise in sectors, models and entrepreneurship. We examine the national and international policy contexts and build on our national and international databases. Our work contributes to the sustainable utilisation of the seas.

Fisheries sector accommodates climate change

Climate change has an influence on important fish, shellfish and crustacean stocks, such as flatfish, mackerel, herring and mussels and, consequently, on economic activity associated with those stocks. We, within the scope of the international CERES project, are developing potential policy strategies for the accommodation of both the unfavourable and favourable effects of future climate change. We do so on the basis of IPCC climate scenarios and sector socio-economic knowledge and data. Our work contributes to sustainable fisheries.



Towards sustainable revenue models

We encourage fisheries entrepreneurs to make use of their entrepreneurship and the broadening of their operations to develop economically and ecologically sustainable revenue models. How can fishers and groups of fishers who wish to improve the sustainability of their operations be mobilised and facilitated? We have created learning environments in which fishers can develop innovations in cooperation with other stakeholders. We create links between questions from practice and scientific knowledge, education and government agencies. This enables entrepreneurs to design, organise and develop new fisheries chains and food chains and new cooperative arrangements. We jointly carry out experiments and organise bootcamps with the objective of developing new business models in cooperation with Wageningen Marine Research, NGOs and the Research institute for agriculture, fisheries and food research (ILVO). Our work promotes a sustainable fisheries sector.





Active improvement of development programmes

We offer organisations, companies and policy-makers an insight into the impact of development projects and programmes on the productivity, income, well-being and the environment. We carry out evaluations like assessments of the effectiveness of services provided to farmers, for instance training and certification programmes, the granting of credit and the marketing of their produce. We also make comparisons of the profitability of crop cultivation against other activities. We make these comparisons for sectors including tea, cocoa, coffee, cotton, vegetable, fruit, palm oil and soy sectors, with a focus on developing and emerging economies. Parties and organisations ranging from small farmers to multinationals can use our analyses to define or revise their strategy.

Farmer Field Schools further sustainable tea cultivation

Between 2006 and 2016, we evaluated the impact of the various phases in Kenya's sustainable tea programme. The favourable outcome from the evaluation of the pilot trial in 2008 resulted in the decision to scale up the programme. Within the context of this programme, 86,000 farmers received training at a Farmer Field School (FFS) and all the 560,000 farmers affiliated with the Kenya Tea Development Agency (KTDA) came into consideration for Rainforest Alliance certification. During the evaluations, we observe the effects on for instance the adoption of agricultural methods , productivity, incomes, food security and diversity. The farmers' dependence on the small-scale production of tea greatly complicates endeavours to reduce their poverty, even with the diversity of incomes and/or increased yields and prices. The favourable results have also led to the introduction of FFSs in the tea sector in Tanzania and Rwanda.



Real-time insights increase impact

Within the PRIME programme we have designed a powerful, real-time impact monitoring system, together with the Centre for the Promotion of Imports from developing countries (CBI), PUM Netherlands Senior Experts and the Erasmus School of Economics (ESE). We collect information about the effects of the CBI and PUM support to small and medium-sized enterprises in developing countries. Our data collection includes annual online surveys of all companies receiving and expert interviews. These enable us to track the contribution to the knowledge, operations and economic performance of specific companies over time. These results reveal – and to a greater extent than in the past – that the contribution made by the support varies between the two organisations and between result areas. Timely identification makes effective and substantiated adjustments possible.



Transition support



In addition to transition-specific solutions, we offer services that accompany both the transition to an integrated agrofood system and policy and the transition to an inclusive and sustainable economy. We support governments and businesses in risk management, the development of entrepreneurship and the creation of a sound social foundation for often complex technological issues. Also, for both transitions we provide insight into the application of data and ICT, which play a crucial role in successful transitions.



Continual search for unique selling propositions

What are the developments in the world, my sector and my sales markets of relevance to me – and how can I accommodate these developments? Entrepreneurs who are able to answer these questions and then take the necessary action can look to the future with confidence. In-depth insights and market intelligence are of essential importance – and Wageningen Economic Research links the two. We collect and analyse big data and other data and combine this with real-life consumer studies. We, in cooperation with our clients, interpret the results this yields in terms of sustainable business models. Our work contributes to the innovative strength of the agricultural sector and of individual organisations.

Capitalising sustainability

The *CONO Kaasmakers* (CONO cheese makers) and *Keten Duurzaam Varkensvlees* (sustainable pork chain) chain organisations have assigned themselves the task of achieving sustainability and then capitalising this sustainability. We have assisted them in this search by carrying out studies, organising inspiration sessions and acting as a sparring partner. The resultant insights have enabled the chain organisations to improve their internal cooperation, implement specific sustainability campaigns by means such as crowdfunding and initiate a support programme for members of the cooperatives. This in turn enables the cooperatives and their members to meet their customers' needs and to improve their accommodation of the customers' future needs.



Accelerating company innovation

The *Korte Ketens* (short chains) master class provides support to farmers and food manufacturers in the Rotterdam region in their renewal of their business and chain. In this way, provincial and other regional government agencies that intend to enhance the competitive strength of their regional economy and employment in the region gain an insight into the practical challenges confronting the entrepreneurs. A concrete result of this master class was the joint pop-up store Gersvers in the Rotterdam Markthal. We assist entrepreneurs in the structured fulfilment of their ambitions in the form of a healthy and maintainable future. This in turn assists them in their development of a more effective network for their business, with like-minded regional partners, potential cooperation partners *and* potential customers, as well in the formulation of a specific step-by-step plan for the further development of their business.





Social Innovation Approach for real changes

It is important that the food system and the bio-economy innovate in order to address social issues. The Social Innovation Approach allows Wageningen Economic Research to support parties working on step-by-step and groundbreaking modernisation in close interaction with relevant stakeholders such as citizens. We connect idea, practices and parties by means of intelligence, tools, reflection and inspiration. In this way, we increase the impact of initiatives from the business community, European projects, and regional and other government bodies working on changes that are of social value.

Stimulating change

The Dutch dairy industry is working on improving sustainability through the Sustainable Dairy Chain initiative (Duurzame Zuivelketen, DZK). In addition to carrying out the monitor, we have supported the change strategy of the dairy sector since 2012 through the Social Innovation Approach. We set out the perspectives of farmers, advisers and other interested parties, reflect together with the Sustainable Dairy Chain on the change strategy implemented, and organise creative workshops with dairy parties in order to map out new best practices and possible solutions. We do this in close cooperation with colleagues who monitor sustainability performance.



Citizens determine European research agenda

Policymakers and experts often determine the European research agenda. However, it is others - including the general public - who are faced by the outcomes of the research. All the more reason to get these people involved in the development of the agenda and to ensure that the agenda includes topics that are important to them in their everyday lives. We do this within the CIMULACT project. Thirty workshops have been held in various European countries, attended by more than a thousand members of the general public. These workshops resulted in a total of 179 future visions, which have been translated into proposals for research programmes as inputs for the next Horizon 2020 programme.

www.cimulact.eu





Learning to deal with risks

The agricultural sector is full of risks, for instance relating to animal health, plant health and food safety. Attitudes to risk and risk profiles vary from one person or organisation to the next: everyone responds differently to possible risks. Wageningen Economic Research analyses how people and organisations differ in terms of attitudes to risk and risk profiles, and which strategy for risk management is most suitable. Our research focuses on relationships between companies in chains (primary producers, suppliers, buyers, processors and retailers) and between companies and the government. We focus on the national government (in the Netherlands) and international governments (EU, FAO, EBRD, World Bank), and on companies such as abattoirs, dairy processing firms, trading companies and growers' associations for fruit and vegetables.

Monitoring public health

Diseases can be passed from animals to humans through the consumption of meat. Examples include *Toxoplasma gondii* and *Trichinella* spp in pigs, globally-significant parasitic infectious diseases with major consequences for health. Effective control and monitoring measures are therefore required in the pork chain. Together with VION Food Group, the Dutch National Institute for Public Health and the Environment (RIVM) and the Animal Health Service (Gezondheidsdienst voor Dieren, GD), we developed a risk-based monitoring system for the combined control of these infections at pig farms, estimating the benefits to public health, the costs of this system and the measures that pig farmers can take. We also look at how we can effectively advise pig farmers to increase the safety of the pork produced. In this way, we achieve lower costs for a safer product.



Towards socially-desirable choices

The agricultural sector plays an important role where control over infectious animal diseases, the reduction of antibiotics use and the contributions to public health are concerned. How can we make it easier for agricultural entrepreneurs to make socially-desirable choices in these areas? We develop methods to help us understand why agricultural entrepreneurs do or do not participate in disease control programmes, such as for Bovine Viral Diarrhoea (BVD), and how this relates to the extent to which they have an aversion to risks and uncertainty. In this regard, we investigate how livestock farmers respond to a bonus/penalty system, amongst other things. The ultimate objective is to be able to predict the effectiveness of behavioural interventions.





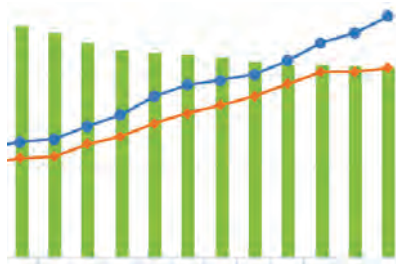
Intelligent customisation for substantiated decisions

Wageningen Economic Research has access to an unparalleled quantity of agricultural, food and health data. We use the latest technology, such as machine learning and advanced computing technologies, and our many years' expertise in the sector to interpret the data in terms of solutions for companies and government agencies. They can then reach substantiated decisions on new production locations and sales markets, or on the impact of policy adjustments.

All available information about the agricultural sector and fisheries

Agrofoodportal.com offers all available information about the Dutch agricultural sector and fisheries. Our portal meets the need of the Ministry of Economic Affairs to arrange for the provision of rapid and simple access to information about these sectors to society. The information presented on our portal includes, for example, information on the primary sector, agricultural structure, prices, national and international trade and sustainability. Visitors select the information they wish to compare. The information originates from a network of some 1,500 entrepreneurs, external data sources and in-house studies. In this way, we offer policy-makers, the business community, researchers and society a unique and comprehensive source of information.

www.agrofoodportal.com



Regional monitoring for the renewal of policy

Regional monitoring offers companies, organisations and government agencies an insight into the regional agricultural structure characteristics and sustainability indicators, in particular in terms of People, Planet and Profit. We also offer customised analyses of international regions, such as federal states, provinces or municipalities. Our regional monitoring includes, for example, estimates of the trade in agricultural produce between the Netherlands and German federal states. An increasing number of Dutch provinces are making use of the regional monitor in the development of their policy. Our work contributes to effective regional policy.





Organising new ICT applications

Data systems and ICT solutions have become indispensable in the agrofood sector. In the optimum deployment of new ICT technologies, the efficient organisation of the innovation is a point of concern and there are also questions about the management of data and the effects on the chain organisation. These include the contribution to be made to the improved sustainability of the sector, the development of new processes and chain management, as well as to the development of new data and IT ecosystems. Wageningen Economic Research has the unique in-house combination of the knowledge and the experience required to answer these questions and to interpret the answers in terms of practical policy, administration and operations solutions.

The added value of Internet of Things

Farmers, suppliers of agricultural machinery and other players in the agricultural sector are making increasing use of the Internet of Things (IoT) equipment to improve their efficiency and sustainability. This is creating a dynamic ecosystem that is beneficial to all partners in the chain. As Food chains have become more transparent consumers, for example, are now better informed. We, within the scope of the Internet of Food & Farm 2020 project and in cooperation with more than 70 international partners, are coordinating the large-scale introduction of IoT technology on the basis of the implementation of nineteen use cases in the livestock, arable farming and fruit and vegetable sectors. The objective of this European €35 million project is to achieve a fundamental improvement in agricultural production and sustainability and to demonstrate the added value offered by an intelligent network of connected devices.

www.iof2020.eu



Simpler access to market intelligence data

We are surrounded by information available from government agencies, companies, the web and the social media. New applications based on open data and social media can assist the horticultural sector in improving its profitability and help government agencies in improving the efficiency and effectiveness of their duties. Social media, for example, offer opportunities to gain an increased insight into consumer trends and marketing campaigns. We, within the BIGt&u top sector project, are developing a platform for the integral provision of data to App developers. This will enable them to develop much more efficient applications for market information. We also place parties in a position to use the increased knowledge available to them in accommodating market changes.



Wageningen Economic Research explores and explains, so that our customers can enhance their policy or strategy, thus laying the foundations for 'earning' more value for their organisation, clients and partners, the environment, citizens and society.

Explore

For businesses and government bodies worldwide we explore the latest trends in nutrition and the living environment. Based on our expertise and data, we provide new insights and opportunities.

Explain

We explain what may happen, what is happening, and what has happened. We measure and monitor effects at the company, sector and macro level, with clear indicators and insight into the how and why.

Enhance

We offer businesses and governments concrete points for improving the impact of policies and strategies. This lets our clients work more efficiently, more effectively and more sustainably.

Earn

Earning by creating value for businesses, governments, the environment, consumers and society. By working on new business models, social acceptance and sustainable policies.

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