



European Commission



# AGRI RESEARCH FACTSHEET SUSTAINABLE, CIRCULAR AND INNOVATIVE VALUE CHAINS

## Why do R&I on sustainable, circular and innovative value chains matter?

Sustainable, diverse and resilient value chains are a prerequisite for sustainable rural growth, for food security and for the sustainable use of biological resources. Food and non-food supply chains operate in an increasingly complex and dynamic environment characterised by new consumer demands, new and sometimes game-changing technologies, changing structures and cooperation modes. The use of new and innovative business models can generate higher income for producers while keeping consumer prices affordable and improving the delivery of environmental and social benefits. Research has a role to play in unravelling the links between the complexity of food systems and their

efficiency, resilience and sustainability. It needs to help understanding food chain dynamics and the interaction between them and non-food chains. Farmers and foresters have for a long-time produced non-food products. The need to decarbonise the energy sector to meet climate change goals is compounded with considerations of resource efficiency, and an increasing interest in green chemicals, green growth and circular economy. R&I in this area addresses low-carbon, short-chain or circular delivery systems for innovative bio-based applications, using a systems approach for the provision of biomass for all uses, whilst preserving the delivery of ecosystem services.

## Sustainable, circular and innovative value chains under Horizon 2020 Societal challenge 2 (SC 2)



**69**

Projects or expected grants



**444 M€**

EU contribution 2014-2020



**895**

Participations in selected projects

### Key themes

Valorisation of biomass resources and waste – Integrated biomass logistics – food chain sustainability – food safety/quality/authenticity – short food chains

## Sustainable, circular and innovative value chains under EIP-AGRI activities

Circular and innovation value chains were covered by five focus groups and five workshops. Many operational groups are also working on these issues.

### Focus on EIP-AGRI activities on value chains

#### Focus group examples:

- Agroforestry: wood vegetation
- Forest biomass
- Renewable energy on the farm
- Innovative Short Food Supply Chain management
- Reducing food loss on the farm

[bit.ly/2v9BZ2h](https://bit.ly/2v9BZ2h)  
[bit.ly/2GYw9T1](https://bit.ly/2GYw9T1)  
[bit.ly/2qtS8Ln](https://bit.ly/2qtS8Ln)  
[bit.ly/2qvfcZ7](https://bit.ly/2qvfcZ7)  
[bit.ly/2qw5yj9](https://bit.ly/2qw5yj9)

#### Workshops examples:

- Innovation in the supply chain: creating value together
- Cities and Food – Connecting Consumers and Producers
- New value chains from multifunctional forests
- Opportunities for agriculture and forestry in the circular economy
- Building new biomass supply chains for the bio-based economy

[bit.ly/2Hhgvpf](https://bit.ly/2Hhgvpf)  
[bit.ly/2pSKetP](https://bit.ly/2pSKetP)  
[bit.ly/2IU6JWX](https://bit.ly/2IU6JWX)  
[bit.ly/2vaP37I](https://bit.ly/2vaP37I)  
[bit.ly/2Jlr5K](https://bit.ly/2Jlr5K)

#### Operational groups

Many Operational Groups deal with new value chains, food or non-food.

#### Non-food

- Valorization of wine industry by-products (Emilia-Romagna)
- Vegetable wastes: energetic and reuse opportunities (Emilia-Romagna)
- Recycling of fermentation residues and production of lignin in agriculture (Berlin/Brandenburg)

#### Food

Interesting examples were pooled in a booklet for the EIP-AGRI workshop “innovation in the supply chain”, like:

- Cooperation for the advance in the joint competitiveness of the value chain of Idiazabal cheese
- Improving sustainability through organizational efficiency in agri-food chain
- Melting Popote : A shared food laboratory in the Cluny region



Download the booklet: [bit.ly/2VpypJK](https://bit.ly/2VpypJK)

## Horizon 2020 SC 2 collaborative projects – Non-food value chains

MA = Multi-actor

#### AGRIFORVALOR<sup>MA</sup>

[www.agriforvalor.eu](http://www.agriforvalor.eu)

Total cost: 2 M€

EC contribution: 2 M€

Coordinator: Steinbeis Zi GmbH

Mar. 2016 – Aug. 2018

AGRIFORVALOR aims at closing the research and innovation divide by connecting practitioners from agriculture and forestry with academia, associations and clusters, bio - industry, policy makers, innovation agencies, technology transfer intermediaries, etc., in multi-actor innovation partnership networks, to valorise and exploit side stream biomass resources from agriculture and forestry.

<p><b>AGROCYCLE</b> <sup>MA</sup>  <a href="http://www.agrocycle.eu">www.agrocycle.eu</a>  Total cost: 7,7 M€  EC contribution: 7 M€  Coordinator: Univ. College Dublin  Jun. 2016 – May 2019</p>	<p>Agrocycle takes a holistic approach to understanding and addressing the operational efficiency and how to make best use of the full range of waste streams associated with the agri-food industry. The consortium comprises 26 partners from EU, China and Hong Kong. It will deliver a protocol for reducing food waste according to EU political targets, and to address increasing sustainability requirements in China.</p>
<p><b>NOAW</b> <sup>MA</sup>  <a href="http://noaw2020.eu">noaw2020.eu</a>  Total cost: 7,8 M€  EC contribution: 6,9 M€  Coordinator: INRA  Oct. 2016 – Sep. 2020</p>	<p>NoAW deals with innovative approaches to turn agricultural waste into an asset, in a circular economy approach, on a territorial and seasonal scale. For this purpose, NoAW intends to explore the potential of agro-waste and urban waste to be converted into a portfolio of eco-efficient products. The consortium comprises 26 partners from EU, China, Taiwan and Hong Kong.</p>
<p><b>AGROINLOG</b> <sup>MA</sup>  <a href="http://agroinlog-h2020.eu">agroinlog-h2020.eu</a>  Total cost: 6,4 M€  EC contribution: 5,9 M€  Coordinator: CIRCE  Nov. 2016 – Apr. 2020</p>	<p>AGROinLOG aims at demonstrating Integrated Biomass Logistic Centres (IBLC) for food and non-food products, evaluating their technical, environmental and economic feasibility. The project is based on three agro-industries in the fodder, olive oil and cereal processing sectors that are willing to deploy new business lines in their facilities, to open new markets in the bio-based sector.</p>
<p><b>DIVERFARMING</b> <sup>MA</sup>  <a href="http://www.diverfarming.eu">www.diverfarming.eu</a>  Total cost: 10,5 M€  EC contribution: 10 M€  Coordinator: Universidad politecnica de Cartagena  May 2017 – April. 2022</p>	<p>With the long-term objective to increase diversification and biodiversity in Europe and to foster sustainable development of the bioeconomy, Diverfarming will develop and deploy innovative farming and agribusiness strategies. Diverfarming will increase the long-term resilience, sustainability and economic revenues of agriculture across the EU by assessing the real benefits and minimising the limitations, barriers and drawbacks of diversified cropping systems under low-input agronomic practices, and by adapting and optimising the organisation of downstream value chains.</p>
<p><b>DiverIMPACTS</b> <sup>MA</sup>  <a href="http://www.diverimpacts.net">www.diverimpacts.net</a>  Total cost: 11,2 M€  EC contribution: 10 M€  Coordinator: INRA  June 2017 – May 2022</p>	<p>DiverIMPACTS seeks to achieve the full potential of diversification of cropping systems for improved productivity, delivery of ecosystem services and resource-efficient and sustainable value chains. It will assess the performance of crop diversification through rotation, intercropping and multiple cropping. It will also provide rural actors with key enablers and innovations that will help removing existing barriers and ensure the uptake of crop diversification benefits at farm, value chain and territorial levels.</p>
<p><b>ForestValue</b>  <a href="http://bit.ly/2Gxb2de">bit.ly/2Gxb2de</a>  Total cost: 15,3 M€  EC contribution: 5 M€  Coordinator: Finland's Ministry of agriculture and forestry  Oct. 2017 – Sep. 2022</p>	<p>The ERANET Co-fund Action ForestValue aims to promote increased innovation and competitiveness of the forest-based sector in Europe and support its transformation from a resource-intensive to a knowledge intensive, productive, resource-efficient and resilient sector. It will seek to develop innovative business concepts and production technologies contributing to sustainable and modern forestry systems and downstream value chains.</p>
<p><b>MAGIC</b> <sup>MA</sup>  <a href="http://magic-h2020.eu">magic-h2020.eu</a>  Total cost: 10,5 M€  EC contribution: 10 M€  Coordinator: Centre for renewable energy sources and saving foundation  July 2017 – June 2021</p>	<p>MAGIC aims to promote the sustainable development of resource-efficient and economically profitable industrial crops grown on marginal lands. To achieve this goal, an up-to-date database of existing resource-efficient industrial crops will be developed with information on their agronomic characteristics, input requirements, yield performance and quality traits for end-use applications.</p>
<p><b>COSMOS</b>  <a href="http://cosmos-h2020.eu">cosmos-h2020.eu</a>  Total cost: 10,8 M€  EC contribution: 10,8 M€  Coordinator: Wageningen Research  March 2015 – August 2019</p>	<p>COSMOS aims at reducing the dependence of Europe's oleochemical industry on imported plant oils by turning domestic oil crops camelina and crambe into profitable, sustainable, multipurpose, non-transgenic European oil crops. Work includes plant improvement and large-scale field trials to assess potentials and, cultivation practices, etc.</p>

<p><b>LIVERUR</b> <sup>MA</sup>  <a href="http://liverur.eu">liverur.eu</a>          Total cost: 4.1 M€          EC contribution: 4.1M€          Coordinator: Fundacion Universitaria San Antonio          May 2018 – April 2021</p>	<p>LIVERUR identifies Living Labs as innovative business models that are currently developing in 13 rural piloting areas across Europe, Africa and Asia. The project undertakes a socio-economic analysis to describe and benchmark differences between the new Living Lab methodologies and more traditional entrepreneurial approaches. The basis for the strategic development of a rural Living Lab is to establish an association of stakeholders, users, policy makers, businesses and researchers to ensure sustainability</p>
<p><b>RUBIZMO</b> <sup>MA</sup>  <a href="http://rubizmo.eu/">rubizmo.eu/</a>          Total cost: 4 M€          EC contribution: 4 M€          Coordinator: RISE Research Institutes of Sweden          May 2018 – April 2021</p>	<p>RUBIZMO will identify business models with high potential for empowering rural communities to take advantage of the opportunities arising from innovative business models including for example digitalisation, and the use and conservation of ecosystem services . It will directly support the creation of sustainable jobs and growth in rural economies and contribute to Regional &amp; Rural development in Europe, supporting the Europe 2020 Strategy for Smart, Sustainable and Inclusive Growth.</p>
<p><b>POWER4BIO</b>  <a href="http://www.power4bio.eu">www.power4bio.eu</a>          Total cost: 3 M€          EC contribution: 3 M€          Coordinator: Fundacion circe centro de investigacion de recursos y consumos energeticos          Oct. 2018 – March 2021</p>	<p>POWER4BIO aims at empowering regional stakeholders to boost the transition towards bioeconomy regions in Europe by providing them with the necessary tools, instruments and guidance (Bioregional Strategy Accelerator Toolkit) to develop and implement strategies. Moreover, POWER4BIO fosters mutual learning and intra- and interregional collaboration and networking among regional stakeholders including 10 participant regions from 9 different countries.</p>
<p><b>SCALIBUR</b>  <a href="http://www.scalibur.eu">www.scalibur.eu</a>          Total cost: 12 M€          EC contribution: 10 M€          Coordinator: : Instituto Tecnológico del Embalaje, Transporte y Logística          Nov. 2018 – Oct. 2022</p>	<p>In the SCALIBUR project, leading waste management companies, technology developers and research organisations have teamed up with four European cities to demonstrate new value chains for biowaste recycling. In its pilot cities, SCALIBUR will support the integration of innovative systems for collection, transport, sorting and pre-treatment of biowaste. SCALIBUR will also create new circular economy business opportunities by demonstrating innovative technologies to transform biowaste into high-value industrial products such as bioplastics and biopesticides.</p>
<p><b>VALUEWASTE</b>  <a href="http://www.valuewaste.eu">www.valuewaste.eu</a>          Total cost: 10 M€          EC contribution: 8 M€          Coordinator: CETENMA Asociación Empresarial Centro Tecnológico de la Energía y del Medio Ambiente de la Región de Murcia          Nov. 2018 – Oct. 2022</p>	<p>VALUEWASTE proposes an integrated approach in urban biowaste upcycling for the production of high-value biobased products, developing the first complete solution to fully valorise biowaste that can be replicated across Europe. The project focuses on three new value chains implementing urban biowaste valorisation into high-value products, generating economic, social and environmental benefits: food &amp; feed proteins and other ingredients, and biobased fertilisers.</p>
<p><b>BE-Rural</b>  <a href="http://www.be-rural.eu">www.be-rural.eu</a>          Total cost: 3 M€          EC contribution: 3 M€          Coordinator: Ecologic Institute          April 2019 – March 2022</p>	<p>BE-Rural aims to support the participatory development of regional bioeconomy strategies, roadmaps and bio-based business models. In five European regions, sustainable, small-scale technology options and biomass potentials will be identified. Open Innovation Platforms will kick-start the co-creation process by bringing together key stakeholders and raising awareness of the bioeconomy, while a Network of Knowledge will facilitate exchange at an inter-regional level.</p>
<p><b>LEX4BIO</b> <sup>MA</sup>  <a href="http://bit.ly/2WGWmR2">bit.ly/2WGWmR2</a>          Total cost: 6 M€          EC contribution: 6 M€          Coordinator: LUKE          June 2019 – May 2023</p>	<p>LEX4BIO explores the optimised usage of bio-based fertilisers from side-streams, ensuring their safety and building evidence-based trust in their usage. By developing a legislative framework for their use, it will be possible to reduce dependence upon mineral or fossil-based fertilisers, benefiting the environment and the EU's economy.</p>
<p><b>WaysTUP!</b>  <a href="http://bit.ly/2YWoLQx">bit.ly/2YWoLQx</a>          Total cost: 11 M€          EC contribution: 9 M€          Coordinator: Sociedad anonima agricultores de lavega de Valencia          Sept. 2019 – Feb.2023</p>	<p>WaysTUP! will showcase a portfolio of new 'urban biowaste to bio-based products' processes starting from different feedstocks i.e. fish and meat waste, spent coffee grounds, household source separated biowaste, used cooking oils, cellulosic waste derived from municipal wastewater and waste treatment plants and sewage sludge. The project will also provide guidance for city managers on adopting new organizational models supporting the valorisation of urban biowaste.</p>

The **Bio-Based Industries Joint Undertaking** (BBI-JU) is a 3,7 bio € public-private partnership co-financed by Horizon 2020 SC2, devoted to the development of new biorefining technologies. It supports many projects related to the development of new, non-food value chains such as:

- **NEWFERT:** nutrient recovery from bio-based waste for fertilizer production ([www.newfert.org](http://www.newfert.org), EC contribution: 1,2 M€)
- **FUNGUSCHAIN:** Valorisation of mushroom agrowastes to obtain high value products (<http://funguschain.eu/>, EC contribution: 5,7 M€)
- **AGRIMAX:** agriculture and food waste valorisation co-ops (<http://agrimax-project.eu>, 12,5 M€)
- **FIRST2RUN:** demonstrator integrated biorefinery for dry crops ([www.first2run.eu](http://www.first2run.eu), 17 M€)
- **BIOrescue:** cascading use of agricultural residues (<https://biorescue.eu>, 2,6 M€)

More information on the BBI-JU: [www.bbi-europe.eu](http://www.bbi-europe.eu)



## Horizon 2020 SC 2 collaborative projects – Food value chains

### REFRESH <sup>MA</sup>

[eu-refresh.org](http://eu-refresh.org)

Total cost: 9,4 M€

EC contribution: 9 M€

Coordinator: Stichting

Wageningen Research

Jul. 2015 – Jun. 2019

REFRESH aims to contribute significantly towards the objective of reducing food waste across the EU by 50% by 2030 (SDG12.3) and maximizing the value from unavoidable food waste. It will deliver on this objective through the design and validation of a 'Framework for Action' model that is based on strategic agreements across all stages of the supply chain.

### STRENGTH2FOOD <sup>MA</sup>

[www.strength2food.eu](http://www.strength2food.eu)

Total cost: 6,9 M€

EC contribution: 6,9 M€

Coordinator: University of

Newcastle Upon Tyne

Mar. 2016 – Feb 2021

Strength2Food aims to improve the effectiveness of EU food quality schemes, public sector food procurement and to stimulate Short Food Supply Chains through research, innovation and demonstration activities. The project will identify and implement strategies for: creating new and expanding existing markets for quality food products and fostering the development of an 'economy of quality'.

### My Toolbox <sup>MA</sup>

[www.mytoolbox.eu](http://www.mytoolbox.eu)

Total cost: 5,2 M€

EC contribution: 5 M€

Coordinator: Universitaet Fuer

Bodenkultur Wien

Mar. 2016 – Feb. 2020

My Toolbox aims to develop novel interventions aimed at achieving a 20–90% reduction in crop losses due to fungal and mycotoxin contamination. It will not only pursue a field-to-fork approach but will also consider safe use options of contaminated batches, such as the efficient production of biofuels.

### MycoKey <sup>MA</sup>

[www.mycokey.eu](http://www.mycokey.eu)

Total cost: 6,4 M€

EC contribution: 5 M€

Coordinator: Consiglio

Nazionale Delle Recherche

April 2016 – March 2020

Mycokey aims to generate innovative and integrated solutions that will support stakeholders in effective and sustainable mycotoxin management along food and feed chains. The project will contribute to reducing mycotoxin contamination mainly in Europe and China, where frequent and severe mycotoxin contaminations occur in crops, and where international trade of commodities and contaminated batches are increasing.

### AUTHENT-NET

[www.authent-net.eu](http://www.authent-net.eu)

Total cost: 0,5 M€

EC contribution: 0,5 M€

Coordinator: Fera Science Ltd

Apr. 2016 – Mar. 2018

It is acknowledged that historically anti-food fraud capability within Europe has not been consolidated and lacks the coordination and support structures available to those working in food safety. AUTHENT-NET will address this need by mobilising and coordinating relevant research funders in order to facilitate the eventual development of a transnational European funding vehicle that will allow Members States (MS) to jointly fund anti-fraud research.

### OLEUM

[www.oleumproject.eu](http://www.oleumproject.eu)

Total cost: 5,3 M€

EC contribution: 4,9 M€

Coordinator: UNIBO

Sep. 2016 – Aug. 2020

The overall objective of OLEUM is to better guarantee olive oil quality and authenticity by empowering detection and fostering prevention of olive oil fraud. It will generate innovative, more effective and harmonized analytical solutions to detect and fight the most common and emerging frauds and to verify the overall quality of olive oils.

### SKIN <sup>MA</sup>

[www.shortfoodchain.eu](http://www.shortfoodchain.eu)

Total cost: 2,2 M€

EC contribution: 2 M€

Coordinator: Uni. Foggia

Nov. 2016 – Oct. 2019

SKIN will build and animate a community of about 500 stakeholders, with the strategic objective of setting up, at the conclusion of the project, a European association permanently working for the improvement of short food supply chains' efficiency and for the benefit of stakeholders and growth in the sector.

<p><b>SUSFOOD2</b>  <a href="http://susfood-db-era.net">susfood-db-era.net</a>  Total cost: 15,1 M€  EC contribution: 5 M€  Coordinator:  Forschungszentrum Julich  GMBH  Jan. 2017 – Dec. 2021</p>	<p>The aim of the ERA-NET SUSFOOD2 is to foster research and innovation in the field of sustainable food systems through enhanced cooperation and coordination between EU Member States and Associated Countries. It focusses on sustainability in post-harvest food production, thus covering relevant fields from natural sciences to food engineering and social sciences.</p>
<p><b>VALUMICS</b>  <a href="http://valumics.eu">valumics.eu</a>  Total cost: 6,3 M€  EC contribution: 6 M€  Coordinator: Haskoli Islands  June 2017 – May 2021</p>	<p>VALUMICS aims to provide decision makers throughout food value chains with a comprehensive suite of approaches and tools that will enable them to evaluate the impact of strategic and operational policies, and enhance the resilience, integrity and sustainability of food value chains for European countries.</p>
<p><b>EU-CHINA-SAFE</b>  <a href="http://euchinasafe.eu/">euchinasafe.eu/</a>  Total cost: 11,4 M€  EC contribution: 5 M€  Coordinator: Queen's University  of Belfast  Sep. 2017 – Aug. 2021</p>	<p>EU-China-Safe aims to develop and implement a shared vision of best practice within the EU and China that will enhance food safety, deter food fraud, restore consumer trust, deliver mutual recognition of data and standards and support the flow of agri-food trade between the two trading blocks to promote economic growth. It will build the core components needed for a joint EU-China food safety control system.</p>
<p><b>PROTEIN2FOOD</b>  <a href="http://www.protein2food.eu">www.protein2food.eu</a>  Total cost: 8,8 M€  EC contribution: 8,8 M€  Coordinator: Kopenhagen's  Universitet  Mar. 2015 – Feb. 2020</p>	<p>PROTEIN2FOOD aims to develop innovative, cost-effective and resource-efficient plant proteins –rich food sources with positive impact on human health, the environment and biodiversity. Research is expected to improve the quality of plant proteins, produced in Europe, and the sustainability of their production and processing.</p>
<p><b>SiEUGreen</b> <sup>MA</sup>  <a href="http://sieugreen.eu">sieugreen.eu</a>  Total cost: 8.3 M€  EC contribution: 7 M€  Coordinator: Norges Miljø-og  Biovitenskaplige Univ.  Jan. 2018 – Dec. 2021</p>	<p>SiEUGreen aspires to enhance the EU-China cooperation in promoting urban agriculture for food security, resource efficiency and smart, resilient cities. Building on the model of zero-waste and circular economy, it will demonstrate how technological and societal innovation in urban agriculture can have a positive impact on society and economy.</p>
<p><b>LIVERUR</b> <sup>MA</sup>  <a href="http://liverur.eu">liverur.eu</a>  Total cost: 4.1 M€  EC contribution: 4.1M€  Coordinator: Fundacion  Universitaria San Antonio  May 2018 – April 2021</p>	<p>LIVERUR identifies Living Labs as innovative business models that are currently developing in 13 rural piloting areas across Europe, Africa and Asia. The project undertakes a socio-economic analysis to describe and benchmark differences between the new Living Lab methodology and more traditional entrepreneurial approaches. The basis for the strategic development of a rural Living Lab is to establish an association of stakeholders; users, policy makers, businesses and researchers to ensure sustainability</p>
<p><b>SMARTCHAIN</b> <sup>MA</sup>  <a href="http://smartchain-h2020.eu">smartchain-h2020.eu</a>  Total cost: 6 M€  EC contribution: 6 M€  Coordinator: University  Hohenheim  Sept. 2018 – Aug. 2021</p>	<p>SMARTCHAIN'aims to foster the collaboration between all stakeholders involved in the farming and food chains strengthening the transition of short food supply chains in Europe from a niche to a larger market share. It builds a fertile ecosystem of scientists, entrepreneurs, farmers, short food supply chain practitioners, technology providers, associations, policy makers and knowledge transfer agencies, open to multiple pathways of innovation, rural development, sustainable growth and better performing value chains.</p>
<p><b>SIMBA</b>  <a href="http://simbaproject.eu">simbaproject.eu</a>  Total cost: 10.5 M€  EC contribution: 10 M€  Coordinator: LUKE  Nov.2018 – Oct. 2022</p>	<p>SIMBA aims to gain a better understanding of microbiome structure and function, related to marine and terrestrial food chains and to verify the sustainability of microbial innovations of the food system. Focusing primarily on agriculture and aquaculture, SIMBA will harness complex soil and marine microbial communities for sustainable food production, delivering tangible benefits to society</p>



#### CIRCLES

[circlesproject.eu](https://circlesproject.eu)

Total cost: 11 M€

EC contribution: 10 M€

Coordinator: Università Di Bologna

Nov. 2018 – Oct. 2023

CIRCLES aims to discover and translate innovative microbiome-tailored circular actions into concrete applications that will ultimately enhance EU food system performances and their overall sustainability. The project sets up real-world labs in the field of 6 food systems relevant to the EU market – tomatoes, spinach, poultry, pigs, Atlantic salmon and seabream aquacultures.

#### HoloFood

[bit.ly/2WvB3lp](https://bit.ly/2WvB3lp)

Total cost: 10 M€

EC contribution: 9.8 M€

Coordinator: Københavns Universitet

Jan. 2019 – Dec. 2022

HoloFood explores a holistic approach to improve the efficiency of food production systems by deciphering the molecular and physiological processes triggered by feed additives across animals with different genetic background and grown under different environments. The farmed animal systems –salmon and chicken- will be used as models to characterise their associated microorganisms' genomes and transcriptomes in relation to key performance indices and animal welfare issues.

#### MASTER

[www.master-h2020.eu](https://www.master-h2020.eu)

Total cost: 12.2 M€

EC contribution: 11 M€

Coordinator: TEAGASC

Jan. 2019 – Jan. 2023

MASTER will take a global approach to the development of practical microbiome products, foods/ feeds, services or processes with high commercial potential, which will benefit society by improving the quantity, quality and safety of food, across multiple food chains, to include marine, plant, soil, rumen, meat, brewing, vegetable waste, and fermented foods.

#### FOX<sup>MA</sup>

[bit.ly/2K7Vsq0](https://bit.ly/2K7Vsq0)

Total cost: 7 M€

EC contribution: 7 M€

Coordinator: DIL

June 2019 – Nov 2023

FOX explores small-scale technologies in mobile or flexible processing units for different applications for small and medium enterprises and farmers in the fruit and vegetable sector in Europe. This will stimulate the transition from a centralised industry to regional hubs that employ innovative and sustainable technologies based on seasonality and demand.

**SHEALTHY** <sup>MA</sup>[bit.ly/2Wt5wQT](https://bit.ly/2Wt5wQT)

Total cost: 7 M€

EC contribution: 7 M€

Coordinator: Enco Consulting

May 2019 – April 2023

SHEALTHY aims to assess and develop an optimal combination of non-thermal sanitization, preservation and stabilization methods to improve the safety while preserving the nutritional quality (up to 30%) and prolonging the shelf-life (up to 50%) of minimally processed fruit & vegetable (F&V) products. The project will transfer and adapt flexible processing methods to the need of local fruit & veg small and medium businesses. Novel cooperative business models will improve the traceability of raw materials along the F&V value chain.

## Interesting activities under other Horizon 2020 sections

### Industrial Leadership Pillar - Work Programme Part Innovation in small and medium-sized enterprises (INNOSUP call)

In the scope of Horizon 2020 INNOSUP calls, there is a recurrent call on “**Cluster facilitated projects for new value chains**” (INNOSUP-1). **KATANA** (Emerging industries as key enablers for the adoption of advanced technologies in the agrifood sector) is an example of a project funded under INNOSUP call looking at emerging industries as key enablers for the adoption of advanced technologies in the agrifood sector ([katanaproject.eu](https://katanaproject.eu)).

S3Food (Smart sensor systems for food safety, quality control and resource efficiency in the food processing industry) is another example ([s3food.eu](https://s3food.eu)).

### European Research Council (ERC)

The ERC’s mission is to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the

basis of scientific excellence. The ERC ‘bottom-up’ approach allows researchers to identify new opportunities and directions in any field of research, rather than being led by political priorities.

**FOOD CITIZENS** is a project supported through an ERC call looking at Collective food procurement in European cities: solidarity and diversity, skills and scale.

### Marie Skłodowska-Curie actions (MSCA)

The MSCA enable research-focused organisations (universities, research centres, and companies) to host talented foreign researchers and to create strategic partnerships with leading institutions worldwide. It supports research networks as well as individual fellowships.

An example of a grant supported through MSCA individual fellowships is the **FreshProof** project proposing an innovative systems approach to address existing food supply chain waste and shortcomings in food safety, integrity and traceability ([bit.ly/2GUTa9q](https://bit.ly/2GUTa9q)).

## In the pipeline – 13 projects to start under 2019 H2020 SC2 calls (103 M€)

Innovative and citizen-driven food system approaches in cities	(2 projects, 15 M€)
Integrated approaches to food safety controls across the food chain <sup>MA</sup>	(2 projects, 8 M€)
Closing nutrient cycles- Bio-based fertilisers from animal manure <sup>MA</sup>	(1 project, 8 M€)
Circular bio-based business models for rural communities <sup>MA</sup>	(2 projects, 20 M€)
Sustainable wood value chains - Building with wood	(2 projects, 20 M€)
Alternative proteins for food and feed	(4 projects, 32 M€)

## Funding opportunities - Open H2020 SC2 calls for 2020 (104 M€)

<b>CE-SFS-36-2020 - Diversifying farmers' income through small bio-based concepts</b>	(2 projects, 18 M€)
<b>RUR-05-2020 - Connecting consumers and producers in innovative agri-food supply chains</b> <sup>MA</sup>	(3 projects, 9 M€)
<b>RUR-06-2020 - Innovative agri-food value chains: boosting sustainability- oriented competitiveness</b> <sup>MA</sup>	(3 projects, 21 M€)
<b>RUR-07-2020 - Reducing food losses and waste along the agri-food value chain</b> <sup>MA</sup>	(2 projects, 12 M€)
<b>CE-RUR-08-2018-2019-2020: Closing nutrient cycles</b> C. (2020): Bio-based fertilisers from other by-products of the agro-food, fisheries, aquaculture or forestry sectors <sup>MA</sup>	(2 projects, 16 M€)
<b>LC-RUR-11-2019-2020: Sustainable wood value chains</b> B. (2020): Resilient forest systems	(2 projects, 10 M€)
<b>FNR-03-2020 - A comprehensive vision for urban agriculture</b>	(1 project, 2 M€)
<b>LC-FNR-06-2020 - Defossilising agriculture – solutions and pathways for fossil-energy-free farming</b> A. Pathways for a fossil-energy-free agriculture <sup>MA</sup> B. Close-to-market solutions for fossil-energy-free farming <sup>MA</sup>	(1 project, 2 M€) (1 project, 10 M€)
<b>FNR-08-2020 - Supporting the food safety systems of the future</b>	(1 project, 3 M€)
<b>FNR-10-2020 - Public engagement for the Bioeconomy</b>	(1 project, 1 M€)



## The knowledge and innovation community on food

### EIT FOOD

EIT Food is a European Knowledge and Innovation Community (KIC), part of the European Institute of Innovation and Technology, which was set up to transform our food ecosystem. By connecting consumers with businesses, start-ups, researchers and students from around Europe, EIT Food supports innovative and economically sustaina-

ble initiatives which improve our health, our access to quality food, and our environment.

More information: [www.eitfood.eu](http://www.eitfood.eu)



### *Smart specialisation platform on agri-food*

This platform brings together close to 50 regions that collaborate to jointly invest in agri-food innovation. Five inter-regional partnerships have been formed on high-tech farming, traceability and big data, sensors, consumer involvement and nutritional ingredients.

More: [s3platform.jrc.ec.europa.eu/agri-food](http://s3platform.jrc.ec.europa.eu/agri-food)



