



Algemene gegevens	
TKI-projectnummer	AF-EU-13015
Titel	FUSIONS
Topsector en innovatiethema	A&F 7&9 Duurzame Technologie
Projectleider (onderzoek)	Hilke Bos-Brouwers
Werkelijke startdatum	1 augustus 2012
Werkelijke einddatum	31 juli 2016
Korte omschrijving inhoud	<p>FUSIONS – Food Use for Social Innovation by Optimising waste preventioN Strategies richt zich op het voorkomen en verminderen van voedselverspilling in de keten, bijdragend aan duurzame voedselsystemen in NL en Europa. Door het ontwikkelen en toepassen van geharmoniseerde kwantificeringsmethodieken en selectiecriteria, uitvoeringsplannen, evaluatie- en replicatiemodellen voor innovatieve pilots in de voedselketen, wordt nieuwe kennis verkregen over een effectieve, grondstof-efficiënte aanpak van voedselverliezen. Een uitgebreide innovation ‘directory’, 7 Innovatieve pilots , evaluatieschema’s die aanvullende initiatieven beoordelen op effectiviteit en ‘lessons’ learned verzamelen en delen zijn het hart van het project. EU-FUSIONS deelt en ontwikkelt kennis niet vanuit een ivoren – onderzoekerstoren, maar juist in consultatie met stakeholders uit de praktijk: 200 organisaties vanuit verschillende stakeholdergroepen hebben zich verenigd in de FUSIONS multi-stakeholderplatforms, die regionaal en op Europees niveau elkaar jaarlijks ontmoeten en invulling geven aan de ambities van FUSIONS. De inzichten worden gecombineerd in aanbevelingen voor overheidsbeleid op Europees en Lidstaten-niveau.</p>

Uitvoerende partijen	
Betrokken kennisinstellingen	<ul style="list-style-type: none"> - WRAP - Universiteit van Bologna - SP Swedisch Technical Research Institute - INRA - Deloitte Sustainability - Ostfold Research - Universität für Bodenkultur Vienna - IVL Swedisch Environmental Research Institute - LUKE Finland - Universiteit van Hacettepe - Universiteit van Hohenheim
Overige partijen	<ul style="list-style-type: none"> - Stop Wasting Food Denmark - FAO - Hungarian Foodbank Association - Anatoliki Development Agency of Thessaloniki - Last Minute Market

	<ul style="list-style-type: none"> - Koninklijke Ahold - Communiqué - Global Feedback
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Resultaten en deliverables	
1. Welke deliverables zijn opgeleverd, en is dit conform het projectplan? (geef een korte beschrijving per deliverable uit het projectplan)	Alle deliverables zijn behaald conform projectplan

FUSIONS Deliverables

D1.1	Main definitional choices for the food and drink waste produced within Europe.
D1.2	Standard approach on quantitative techniques to be used to estimate food waste levels
D1.3	Report on food waste drivers for reducing food waste and barriers and opportunities to reduce food waste by technical development and social innovations
D1.4	Report on criteria for and baseline assessment of environmental and socio-economic impacts of food waste
D1.5	Food waste quantification manual to monitor food waste amounts and progression in food waste reduction and prevention
D1.6	Report on estimates of European food waste levels and analysis of food waste drivers
D2.1	Report on existing networks that can contribute to and support FUSIONS' activities to prevent and reduce food waste through social innovation in EU27.
D2.2	Establishment of the EU FUSIONS Multi-stakeholder Platform with 3 European level meetings and 16 regional Working group meetings.
D3.1	Report on legislation and policies impacting food waste generation in the EU with a scenario analysis on current trends.
D3.2	Social Innovation Camp and comprehensive set of measures on which to build policy strategies.
D3.3	Report on new policies and improved legislation challenging food waste through social innovation.
D3.4	Report on the Evaluation Framework for food waste prevention and reduction measures and policies.
D3.5	Report on recommendations and guidelines for a Common European Food Waste Policy promoting social actions and innovation.
D4.1	Summary report on categorised and catalogued examples of social innovation.
D4.2	Report presenting the selection criteria, evidence base etc. behind the consortium's agreement on the social innovation initiatives to be studied, partners leading the implementation and the location of the study concerned.
D4.3	Evaluation report detailing the results and impacts of the implemented feasibility studies.
D5.1	FUSIONS communication and dissemination strategy and terms of reference for communication activities approval process.
D5.2	Annual report consolidating results and impact of dissemination activities.
D5.3.1	Dissemination activity: 3 dissemination workshop sessions during the EU FUSIONS Multi-stakeholder Platform meetings
D5.3.10	Dissemination activity: 100+ presentations on the FUSIONS project results

	during targeted specialty forums/conferences/events.
D5.3.2	Dissemination activity: 4 dissemination workshop sessions during the Regional FUSIONS working groups meetings
D5.3.3	Dissemination activity: 1 FUSIONS Website (with open access and a 'members only entry point')
D5.3.4	Dissemination activity: FUSIONS quarterly digital newsletter (16 editions in total)
D5.3.5	Dissemination activity: Minimum of 4 European wide press releases announcing the publication of deliverables of the FUSIONS project
D5.3.6	Dissemination activity: FUSIONS Facebook page, Twitter account and LinkedIn group.
D5.3.7	Dissemination activity: Contribute to and update the Wikipedia page on food waste in different languages covered by the FUSIONS consortium
D5.3.8	Dissemination activity: Publication of FUSIONS project results and updates on partner and committed stakeholder websites (minimum of 50 websites).
D5.3.9	Dissemination activity: At least 4 awareness raising events, of which at least 2 co-organised within Feeding the 5000 concept by TRISTRAM
D6.1	Management reports containing details on the contract and working plan.
D6.2	Periodic reports and final report in accordance with the agreed reporting periods and corresponding reporting requirements under FP7.

2. Indien bepaalde deliverables niet gehaald zijn, wat was daarvoor de reden?	n.v.t.
3. Heeft het project onverwachte (neven)uitkomsten opgeleverd, die vooraf niet waren voorzien? Zo ja, benoem deze.	Nee
4. Op welke wijze is over het project en de resultaten gecommuniceerd	Via website, presentaties, flyers, nieuwsbrieven, rapporten
5. In hoeverre heeft het project bijgedragen aan de ontwikkeling van de betrokken kennisinstelling(en)? (bijv. wetenschappelijk track record, nieuwe technologie, nieuwe samenwerkingen)	FUSIONS heeft significant bijgedragen aan de wetenschappelijke trackrecord op het gebied van voedselverspilling en innovatie voor FBR en LEI (WEcR) door inhoudelijke rapportages op het gebied van kwantificatie en monitoring, (Europees) beleid en sociale innovatieve pilots. Door de ontwikkeling van het Europese multistakeholderplatform is WFBR nu verbonden met ruim 185 organisaties doorheen Europa die spil zijn in het verminderen van voedselverspilling in de keten
6. Krijgt het project een vervolg in de vorm van een nieuw project of een nieuwe samenwerking? Zo ja, geef een toelichting.	Ja, specifieke kennisvragen rondom consumenten, valorisatie en innovatie hebben een vervolg gekregen in het EC H2020 project REFRESH. De opgebouwde kennis heeft ook bijgedragen aan het acquireren van andere onderzoeksprojecten binnen WFBR.

Highlights

From the start of FUSIONS the overall aim of the project has been to contribute significantly to the harmonisation of food waste monitoring, validate the feasibility of social innovative measures for optimised food use in the food chain and contribute to the development of a Common Food Waste Policy for EU28. Utilising the policy and behavioural change recommendations from the delivery of the key objectives, the FUSIONS European multi-stakeholder platform will enable, encourage, engage and support key actors across Europe in delivering a 50% reduction in food waste and a 20% reduction in the food chains resource inputs by 2020.

To achieve this aim a structured action plan has been designed and executed, and all major milestones and deliverables have been met at the end. With a central role for the very active FUSIONS community of over 185 committed members and stakeholders. Over 100 people from the 21 partners contributed to the delivery of the outputs and impacts of the project. Over 15 main deliverable reports have been published, that have been used by several stakeholders across the EU and in other parts of the globe. An impressive number of awareness raising events, over 300 external presentations and enormous media attention connected to events, reaching over 100 million views, has contributed to an increased level of awareness among the general public and civil society across the EU28 countries.

The FUSIONS model and way of working has been used as a major reference and partly replicated in other countries outside the EU, showing that the model and approach is a mechanism for tackling food waste in early stages of maturity. To reach increased understanding of the topic, contributing to harmonisation of methodologies, and supporting collaborative multistakeholder developments, across different actors of the food supply chain. By being a co-creator in the development of the global Food Loss & Waste Accounting and Reporting Standard, FUSIONS has contributed to setting global standards. With the new SDG12.3 target as a common aim for a growing number of stakeholders across the world. The ministers of Agriculture of the EU also stresses the this need in the recently adopted EU council conclusions on food on 28 June 2016, including multiple references to FUSIONS outcomes and recommendations.

FUSIONS has published in March 2016 updated food waste estimates for the EU-28 and a Food Waste Quantification Manual to support EU Member States in establishing more reliable monitoring and reporting of national food waste data at each stage in the food supply chain. This research has shown that there are still some major data gaps preventing more comprehensive and reliable assessments of food waste levels in the EU. The Food Waste Quantification Manual can be used as a reference by researchers and Member State authorities to develop coherent methods for acquiring food waste data in order to fill in data gaps more effectively. The Manual has been produced through an extensive consultation process with MS experts and stakeholders and has benefitted from the practical experience of pilot programmes carried out in six EU MS and Norway.

In close collaboration with EUROSTAT a review was carried out including a review of the background work on the food waste plug in initiative as well as a review of quality reports on waste statistics made available by EUROSTAT. This evaluation of the Eurostat system has showed that there are formal and methodological elements that make it difficult to use the statistics for generating reliable food waste statistics to be used for creating reliable time series.

A harmonised approach for food waste quantification has been suggested, as called for in the EU Action Plan for the Circular Economy. This will allow better prioritisation and targeting of prevention efforts, as well as the tracking of progress in food waste reduction over time and will facilitate data sharing across Europe. These guidelines cover three main activities:

- Quantifying food waste in each sector (i.e. stage) of the food chain;
- Combining sectorial quantifications by using a common framework at the

- national level; and,
- Reporting the results of the national food waste quantification study at the national level in a consistent and comparable manner.

The FUSIONS European Multi-stakeholder Platform (EMP) is a voluntary, member-based consultation and networking function created at the heart of the FUSIONS project. Its main objective was to facilitate discussion between key stakeholders in the food supply chain, to build consensus and to develop recommendations for the EC. Guided by the main consultation topics of Quantification of food waste, Social Innovation for prevention and reduction and Food Waste Policy, which represent the core work of the FUSIONS project, Wageningen Food & Biobased Research coordinated the EMP activities. These include the inventory of stakeholders, establishment of the EMP with an appropriate tiered management structure and to organise platform meetings at regional and European level to facilitate and encourage the exchange of knowledge, ideas, best practices to reduce food waste.

In total, 185 organisations became voluntary members to the FUSIONS EMP, upon signing a Letter of Interest. With this LoI, the Members were committed to:

1. Participating actively in FUSIONS Platform activities, to improve cooperation to reduce food waste in the food supply chain.
2. Contributing to knowledge and experience sharing within the Platform.
3. Giving the project visibility in your networks and contributing actively in dissemination activities.
4. Identifying and supporting pilot projects for food use optimization through waste prevention strategies.

FUSIONS aim was to understand and test the concept of social innovation in reducing food waste.

An inventory of existing initiatives and activities were compiled, with details, in a searchable database on the FUSIONS website. Projects were identified in 30 European countries. There are around 200 projects now live on the FUSIONS website at

<http://www.eu-fusions.org/index.php/social-innovations/social-innovation-inventory>

Having compiled an inventory of current social innovation activities, WP4 set out to find and support new ideas which could be tested in a series of feasibility studies with a view to evaluating, replicating and scaling up these new activities once tested. A survey was launched in the first FUSIONS e-newsletter (Feb '13) which called on social innovators across Europe to propose ideas. The survey was promoted at each of the four Regional Platform Meetings (May – Jun '13), WP4 ran a session at the second Governing Council meeting (Oct '13) to further promote the survey and call. Ideas received were evaluated against criteria agreed by the GC, including level of innovation, potential impact, and the nature of partners involved. The aim was to select 4 feasibility pilot projects. In fact 7 were selected covering a wide range of innovation. These were:

CrEATive in Greece: Develop a series of engaging materials for Kindergarten children in Thessaloniki to understand food waste and influence the behaviour of their parents to reduce food waste.

Disco Bôcô in France: Bringing communities together to cook up preserves and sauces in a music-filled, fun environment. This brought social benefits and skills to disadvantaged groups, such as immigrant families and women who were victims of domestic abuse. The produce was distributed to charities and groups in need.

HORECA redistribution in Hungary: Developed new relationships between food service & hospitality companies (hotels, restaurants, catering companies) and food banks by providing hot-hot and hot-cold redistribution of cooked but

uneaten meals from Horeca kitchens to food banks.

Gleaning, Belgium, Spain, France and Greece: Gleaning Networks pair volunteers with farmers who have leftover crop at the end of a harvest. Volunteers, from groups like Feedback in the UK and Espigoladors in Spain collect unwanted crops and redistribute through a series of routes including food banks and preparing anti food waste catering for events.

Social Supermarkets, pan Europe: Social Supermarkets provide a service similar to food banks but help to improve the social and economic skills as well as the self-esteem of users by setting out food as in a supermarket and allowing greater choice by 'clients', sometimes charging a nominal price, whilst often providing career and life skill advice as part of the experience. This project reviewed the social supermarkets in Europe and provided guidance and analysis to assist the wider development of these facilities.

Order Cook Pay, Sweden: OCP aimed to use technology develop closer links between parents and schools, allowing parents to pre-order meals for their children so that schools provided only the exact amount of food required to feed their pupils instead of preparing excess amounts in order to cater for the children's choice on the day.

Surplus Food, Denmark: An IT system to match the producers of food surplus to organisations who could use it in Denmark.

Two Policy Briefs on *Social Innovation projects to reduce food waste, key recommendations for the private sector and for policy makers* have been published to support and encourage others to support implementing social innovation solutions across EU. Tackling food waste should be placed high on governmental agendas in order to create a favourable climate for practical on-the-ground projects such as those tested through these feasibility studies. Moreover, there should be pressure from government on commercial organisations to reduce food waste levels and furthermore to enhance food surplus management via partnerships with entrepreneurs of socially innovative projects, by:

- Creating a favourable EU and national legislative framework
- Developing tools to identify appropriate funding
- Building and expanding a food surplus social innovation network
- Encouraging dialogue around food reduction and redistribution

Aantal opgeleverde producten			
Wetenschappelijke artikelen	Rapporten	Artikelen in vakbladen	Inleidingen/ workshops/ invited lectures
-	14	-	150+

Bijlage: Titels van de producten of een link naar de producten op een openbare website

Alle rapporten zijn gepubliceerd op de openbare website www.eu-fusions.org

Titels van rapporten:

1. Main definitional choices for the food and drink waste produced within Europe.
2. Standard approach on quantitative techniques to be used to estimate food waste levels
3. Report on food waste drivers for reducing food waste and barriers and opportunities to reduce food waste by technical development and social innovations
4. Report on criteria for and baseline assessment of environmental and socio-economic impacts of food waste

5. Food waste quantification manual to monitor food waste amounts and progression in food waste reduction and prevention
6. Report on estimates of European food waste levels and analysis of food waste drivers
7. Report on legislation and policies impacting food waste generation in the EU with a scenario analysis on current trends.
8. Social Innovation Camp and comprehensive set of measures on which to build policy strategies.
9. Report on new policies and improved legislation challenging food waste through social innovation.
10. Report on the Evaluation Framework for food waste prevention and reduction measures and policies.
11. Report on recommendations and guidelines for a Common European Food Waste Policy promoting social actions and innovation.
12. Summary report on categorised and catalogued examples of social innovation.
13. Report presenting the selection criteria, evidence base etc. behind the consortium's agreement on the social innovation initiatives to be studied, partners leading the implementation and the location of the study concerned.
14. Evaluation report detailing the results and impacts of the implemented feasibility studies.

FUSIONS op KennisOnline: <http://www.wageningenur.nl/nl/project/EU-Fusions-AFEU13015-.htm>