



# Impact Pathway Strategy

## Deliverable No. 11.7

# SUSFANS DELIVERABLES

**Thom Achterbosch (WECR),  
Karin Zimmermann (WECR)**

In this deliverable impact pathways are defined for each of the three impacts that SUSFANS aims to achieve, specifying the approach for how to achieve the impact with the target groups or audiences connected to each impact. The deliverable will distinguish impact instruments from impact outcomes for each pathway. It guides the communication activities and provides a framework for evaluating if and how SUSFANS has achieved the expected societal impact.



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## INTRODUCTION

SUSFANS has defined its mission as “contributing to food systems that work for health, environment, equity and viable enterprise, by delivering high-quality research on metrics, models and foresight for sustainable European food and nutrition security.”

The SUSFANS consortium aspires to achieve the following three overall outcomes in terms of impact for society:

1. An analytical framework for a comprehensive assessment of food and nutrition security (FNS) in Europe, centred around the implications of the current diet for the sustainability of agro-food production and consumption in the EU, supports standardised monitoring of FNS in EU;
2. Strengthened capacity of policy makers to formulate longer term policies on the basis of advanced quantitative tools;
3. High-level foresight on the challenges for FNS in the EU in the near future (up to 5 years) and on the longer term (one or more decades ahead).

(Source: SUSFANS Grant agreement)

These impacts reveal that the ambitions of SUSFANS are to inform and change a discourse on sustainable food systems and diets. Rather than providing clear-cut future policy and business solutions in the government sector and the food chain, SUSFANS aims to contribute to a process of social innovation and behaviour change by engaging with government, private sector, civil society and practitioners.

While impact pathways for social innovation are long and complex, the results of the project will, in time, allow the European Commission (EC), policy-makers in the Member States and stakeholders in the private sector and civil society to develop more appropriate strategies at the intersection of FNS-related domains. SUSFANS does not aim specifically at impact on SMEs.

The objective of this report, is to define the SUSFANS impact pathways. The approach is as follows.

First, generic assumptions on the impact pathways are defined on the basis of the concept of the SUSFANS project (section 2), and a stock-taking on the dissemination and impact tools and processes that are employed in the project

(section 3). Three key routes for impact are identified: dialogue in the public and scientific community; policy change; innovation throughout the food chain.

Second, these routes are specified for each of the three impacts that SUSFANS aims to achieve, by specifying the main target groups or audiences connected to each impact, and the specific approach for how to achieve impact (section 4).

The strategy that we will develop in this report distinguishes impact instruments (i.e. routes) from impact outcomes for each pathway. It guides the communication activities and provides a framework for evaluating if and how SUSFANS has achieved the expected societal impact.

We will report on outcome case studies for each impact pathway in the project progress report. These case studies will describe:

- What has been the interaction with groups in and beyond the stakeholder core group around results and insight from SUSFANS: materials used, process of engagement, feedback?
- How have these interactions resulted in a measurable outcome towards our aspired impact?
- What have we learned from this process as a project, for strengthening the impact?

## ASSUMPTIONS: PATHWAYS FOR SOCIAL AND ECONOMIC IMPACT

Impact pathways for social innovation and policy change are long and complex. In order to contribute to these processes with research and innovation action requires specific engagement with audiences that have the potential to become “user” of the results. This is part of the SUSFANS design.<sup>a</sup>

### Project design

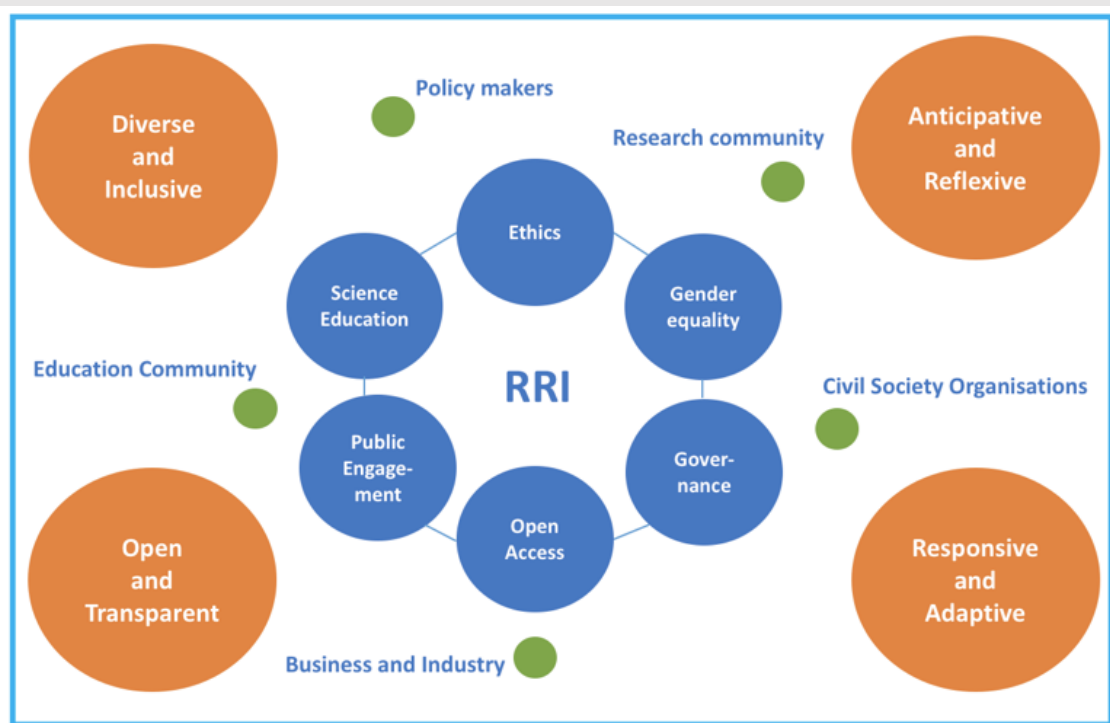
Several principles from responsible research and innovation (RRI) have been implemented in the SUSFANS design in order to ensure that the research is defined in a way that makes it most useful to the end users. Note that RRI was not rigorously imposed in the project. It merely provides a useful and topical lens for reviewing the impact assumptions.

*Diversity & inclusion:* It is important to organize within the initial steps of research design the discussions with key stakeholders, including representatives from community groups and local government officials, as well as a range of other partners from donors to potential implementers.

While the project pays special attention to EU and national policies and the relevant policy makers, decision makers in terms of the SUSFANS project are not only EU and other public bodies. They also include NGOs, different types of aid agencies, commercial enterprises and the general public.

Box 1. Responsible Research and Innovation (RRI)

To make R&I more responsive to the needs and values of society the term Responsible Research and Innovation (RRI) emerged in the European Union's Framework Programmes for Research and Technological Development. A transition towards RRI can be described as 'from science in society to science for society, with society'.



**Figure 1.** Responsible Research and Innovation (RRI). Model retrieved and adapted from RRI Tools (<https://www.rri-tools.eu>), published in FIT4FOOD2030 policy brief 1.<sup>b</sup>

R&I is perceived as responsible if it aims at specific outcomes and certain process criteria are met.<sup>c</sup> With regard to outcomes it is argued that RRI aims for both learning and R&I outcomes that contribute to solving societal challenges. The process requirements for RRI are: diversity & inclusion, openness & transparency, anticipation & reflection, and responsiveness & adaptive change. In Figure 6 in the centre the main RRI fields of ethics, gender equality, governance, open access, public engagement and science education are listed. The orange circles in the corners list the process requirements that are explained below.

Diversity & inclusion is met by involving a variety of stakeholder groups/ relevant voices early in the development R&I. Openness & transparency is important for accountability / liability and for the sharing of insights and information with the public, for example through education. Anticipation is about thinking about the future and how current and upcoming R&I shapes the future. Reflection is needed to examine the plausibility and desirability of expectations of the future and to examine the current issues, practices, values and assumption. Responsiveness and adaptive change are about the ability to change practise and structure to accommodate changed circumstances. It includes flexible process management and monitoring/evaluation during the development and implementation (Kupper et al., 2016).



Furthermore, not only do the stakeholders directly involved in FNS matters have an effect on FNS; nature conservation, energy production and many other activities play a major role in FNS. Special care is taken that in addition to the usual stakeholders, these other relevant parties are also involved in the project.

*Responsive and adaptive:* Thinking about the ultimate applications of the research in the early stages of the research programme is critical.

SUSFANS was not designed as a multi-actor project because of its complexity in going across scientific disciplines. It was considered that the substantial challenges in achieving multidisciplinary would not benefit from a full joint ownership of the project result with stakeholders. The co-creation and joint learning required within the consortium is an impact in itself and consequently shared at multidisciplinary platforms. The learning from the research process is shared with the wider society through targeted communication and engagement.

*Anticipative & reflexive:* a main contribution of SUSFANS is to strengthen foresight perspective in considering the sustainability of the EU food systems.

The project seeks to make available scenario tools for thinking about the future, and in itself aims to provide an example how an R&I project can help shape the future. There is specific attention for the reflection on the assumptions embedded in quantitative modelling and foresight approaches and the communication of results from such exercises in view of values and assumptions.

*Openness & transparency:*

Openness on the research process and its outcomes lies at the heart of the impact strategy. The project focuses its communication on a diverse European stakeholder group, and on targeted EU and global audiences in policy, business and academia. Contribution to multidisciplinary education modules in academia and consultancies for groups of practitioners are the pillars for the enabling of the learning agenda on food systems and diets. Also, transparency on the research process and outcomes has been provided to a general public, with the project website as main media.

## **Three generic routes to achieve impact: science & general public, policy, food chain**

As conceptualized in the SUSFANS impact pathway, there are three routes of working with policies, institutions, and/or markets that will transform the research results into social and economic impact.

In summary, the impact of SUSFANS on science and society originates from the integration of the multifaceted challenge of sustainable FNS into a common evidence base and toolbox that can incorporate future developments and is made available for uptake by users. This will set a new scientific standard for future research & innovation on sustainable EU food systems and diets. Scenarios and foresight that accounts for today's mutual and diverging interests of policymakers and societal stakeholders, for short- and long-term time horizons, will be made available to users as examples of the type of integrated thinking that will inspire future policy and business solutions in the government sector and the food chain.

### ***Route: advancing science & public dialogue***

SUSFANS aims to develop the conceptual framework, the evidence base and analytical tools for underpinning EU-wide food policies with respect to their impact on consumer diet and their implications for nutrition and public health in the EU, the environment, the competitiveness of the EU agri-food sectors, and global food and nutrition security.

SUSFANS strengthens the analytical capacity on FNS in the EU by revisiting and advancing theory, recasting and testing evidence, rigorous analyses, systems modelling, and stakeholder participation. The project extends the state-of-the-art in food sustainability science, public health nutrition, consumer behaviour and marketing, agricultural economics, and food systems research. The findings are disseminated to academic through peer-reviewed papers, well-documented technical reports, and academic conferences.

Much of the research in SUSFANS is of a multidisciplinary kind, which is important to unlock to young researchers and researchers and professionals with disciplinary expertise. Through the development of student education (PhD degrees) in SUSFANS, and contribution to courses aimed at teaching food systems research and practices the knowledge base is shared.

There is a wide-ranging public discourse on the sustainability of food, and healthy and sustainable diets. While SUSFANS is essentially a project that delivers conceptual development and proof-of-concept, the data and framework have

direct relevance for this public dialogue. The project has limited ambitions to take position in the discourse, with several exceptions; the communication strategy will be targeted towards a widespread dissemination of the following messages to the public:

- Unpacking what are different meanings of sustainable food in an attractive visual format
- Indicating how food consumption and food production are part of one complex system
- Presenting the barriers and opportunities of integrating both perspectives in considering solutions and options for transformation
- Making available an evidence base for informed decision-making on plausible future visions of the EU and member states on sustainable food systems.

#### **Advancing science & public dialogue: routes for impact**

Dialogue-1: Publish scientific evidence

Dialogue-2: Multidisciplinary learning on food systems and diets

Dialogue-3: Contribute to public dialogue on sustainable food

Possible results for society of the impact on science – in addition to all innovations mentioned before - are a definition of key knowledge and research priorities for research and innovation towards sustainable food systems and healthier diets. Impact on research programming is sought at the EU and national member states, as well as in international platforms such as the CGIAR.

To general public the project will contribute new arguments and more compelling evidence on the sustainable and healthy food, including choice options for own action.

#### ***Route: impact on policy change***

SUSFANS aims to deliver a long-term impact on improved policy-making on sustainable food systems and diets in the public sector in Europe, at the level of the European Union institutions and in the EU member states, primarily at national levels of governance.

In the policy impact pathway, distinction is made between two types of influence. Indirect impact is considered to be delivered when SUSFANS outcomes are presented in the policy arena, which can take the form of policy messages based on outcomes. Direct impact is delivered by engaging policy stakeholders –

decision-makers and influencers – in processes where SUSFANS is invited to engage on an agenda that is driven by potential users. Here, the potential impact on society stems from the interest that the user has revealed in SUSFANS. Also, SUSFANS operates itself as a platform for science-policy debate. The dialogues that the project facilitates are places of exchange. The impact of these dialogues on stakeholder decisions is traced by reporting from the meetings, loyalty to the project and its events, and follow-up activities. Frameworks for strengthening evidence-based policies and decision-making appear in all.

**Policy change : routes for direct and indirect impact**

Policy-1. Engage with stakeholder groups involved in the policy process

Policy-2: Provide a platform for science-policy debate

Policy-3. Deliver policy messages based on science-for-impact translations

The impact of these forms of engagement on decision-making are difficult to trace. Examples of potential results include:

The improved capacity of policy research units in analysing FNS in EU and national economic bodies; in ministries of agriculture, environment and health; and agriculture and food research organizations;

The more effective use of research-based knowledge in policy processes, indicated by the use of research-based studies in different stages of policy-making and by providing this research-based information to all relevant stakeholders in the public and private sectors including civil society;

Policy reforms that lead to a better alignment of policies in the field of agriculture, fisheries, environmental protection, food consumption and nutrition (national and international) and better resource allocation to increase the probability of sustainable FNS and the transition towards sustainable food systems.

On a European level, project results strengthen the evidence for evidence-based decision-making that can in general be used to:

- improve coordination actions of EU member states;
- take into account FNS effects in the EU external trade policy, CAP and other relevant policies;
- give the EU a clear expert status and more power in international forums.

### ***Route: impact on innovation throughout the food chain***

While SUSFANS is targeting to improve decision-making and policy formulation in the public sector, there are also co-benefits expected in the area of innovation throughout the food chain. In the vision of SUSFANS, food chain actors are key players whose drivers for and barriers to food systems transformation need to be well understood – involving them as partners in change processes. The project develops the framework for a European standard for the analysis of healthy and sustainable diets for consumers, chains and products, with endorsement from stakeholders in business and government. The aim is to design an analytical framework that guides national and European food policies and strategies, including food-based dietary guidelines, consumer policy and the CAP in the future. These policies have direct impact on business practices in the food chain.

Given the rising importance of sustainability and health through the food systems lens as a guiding principle in policy and regulation, it is relevant for food chain actors to understand, support and participate in the development of credible frameworks. SUSFANS organises this engagement mainly through the Stakeholder Core Group (SCG), which acts as a network for mutual learning. While retailers and key trading houses are unfortunately missing in the SCG, a variety of food chain actors and activities is represented and engaging in the dialogue. This mechanism is captured under the pathway “Provide a platform for science-policy dialogue”.

A specific contribution to innovation strategies stems from the exploration of feasible options for consumer choice towards sustainable and healthy eating patterns. A dedicated process of modelling such options and linking these to consumer drivers provides a state-of-the-art insight into potentially effective innovation strategies. This is made available to several audiences through several channels.

A shared understanding and endorsement of the SUSFANS concepts is most likely an insufficient instrument to deliver impact on innovation strategies of food chain actors. Therefore, SUSFANS seeks to engage in a process of precompetitive engagement with specific audiences in the private sector to understand how the sustainability framework and modeling toolbox can be given maximum impact for this audience. This is foreseen to take a case study approach and is an exercise to translate into user-oriented tools. The verification of this pathway for impact is at the level of inputs and activities, as the completion of such processes is not covered under the SUSFANS grant agreement.

**Innovation throughout the food chain: routes for impact**

Innovation-1. Modelling and exploring feasible options for shifts towards sustainable, healthy consumption

Innovation-2. Engage with food chain actors on scenarios and assessment instruments to turn sustainability trade-offs into business opportunities

In terms of possible results of the innovation process in the business community, the model provides insights for positioning and innovation towards sustainable production, and for options for effectively influencing consumer behaviour and choices regarding food.

(a) SUSFANS will improve the insight into how a consumer orientation can be strengthened in innovation strategies for sustainable FNS by delivering insights in the potential options for more nutritious, affordable and environmentally friendly diets that match with the consumer's age, sex, socioeconomic status and cultural norms; insight in the development of private certification and labelling schemes of foods for sustainability indicators to enable informed choices by consumers.

(b) SUSFANS outputs will also improve the catalytic function of food chain actors (food industry and retailers) in business solutions for more sustainable FNS in the EU and worldwide, through raised awareness of the private sector and directions for adaptation strategies in the agro-food sector in the face of future climate risks, difficulties of sourcing imported raw material, etc. The SUSFANS framework can support advancement of whole-diet perspectives in decision-making on ways that food innovation can provide consumers with options for a diet that is sustainable in the sense of supporting human health, and is environmentally friendly, economically affordable and preferred, and by accounting for these factors in one model. Case studies in SUSFANS support the strategic innovation towards capture methods in fisheries, agricultural management practices, post-harvest handling, product formulation, insurance systems, standard- setting and certification, sustainable marketing and other private-sector contributions towards strengthening sustainable FNS.

## Summary of the SUSFANS Impact pathways

In the preceding sections, the typical routes SUSFANS for social and economic impact pathways have been identified as follows:

### **Advance the scientific frontier and stimulate public dialogue & learning**

Dialogue-1: Publish scientific evidence

Dialogue-2: Multidisciplinary learning on food systems and diets

Dialogue-3: Contribute to public dialogue on sustainable food

### **Direct and indirect impact on policy change**

Policy-1. Engage with stakeholder groups involved in the policy process

Policy-2: Provide a platform for science-policy debate

Policy-3. Deliver policy messages based on science-for-impact translations

### **Innovation throughout the food chain**

Innovation-1. Modelling and exploring feasible options for shifts towards sustainable, healthy consumption

Innovation-2. Engage with food chain actors on scenarios and assessment instruments to turn sustainability trade-offs into business opportunities

In the next section we present the set of dissemination and impact tools that are applied in SUSFANS. In section 4 the framework on routes for impact is applied to the three major impact outcomes that SUSFANS aims to achieve, and combined with the dissemination & impact tools. This results in the project's foreseen impact pathways.

## DISSEMINATION & IMPACT TOOLS

Table 1. Tools, contribution and verification

Dissemination Tool	Target group	Contribution to project objectives	Verification of success
Project web site and social media	Science, policy, public	“Passive” and “interactive” presentation of the project objectives, progress and outputs	Counting visitors and downloads, requests for information
Electronic Newsletters	Science, policy, public	“Active” presentation of the project objectives, progress and outputs	Feedback received, requests for information
Papers in scientific journals	Science	Presentation of project results and evaluation of scientific quality through feedback from scientific community	Feedback from reviewers and readers, citations
Contributions to scientific conferences	Science	Presentation of project results, methodology, evaluation of scientific quality through feedback from scientific community	Number of meetings, invitations, feedback and information requests
Conferences organised by existing networks	Science	Discuss fundamentally the SUSFANS achievements, confronting them with results of parallel projects	Feedback by international scientific community
International user workshops	International policy makers, civil servants, business, NGO	Inviting feedback to improve quality and relevance of the SUSFANS t, e.g. through inclusion of regional models, databases, scenarios, expert knowledge	Number and type of participants, feedback for platform/methodology improvements
Contributions to policy meetings	Executives of food, nutrition , CAP & CFP, environment, climate, trade policies	Presentation of platform, methodology, evaluation of policy relevance through feedback from policy community; Presentation and discussion of preliminary Visualiser & its Implementation Plan	Number of meetings, invitations, feedback and information requests
Policy Brief	Policy makers, decision takers	Disseminating results to Policy makers and Decision takers	Feedback received, requests for information



<b>Dissemination Tool</b>	<b>Target group</b>	<b>Contribution to project objectives</b>	<b>Verification of success</b>
Local language summary in journals for practitioners	Food sustainability managers (EC, International)	Disseminating results to Practitioners	Number of local language articles published
SUSFANS stakeholder workshops & Europe Toolbox Tour	International policy makers, civil servants, business, NGO	Dissemination of project results, including User Toolbox interface	Number of participants from various stakeholder groups.

## **DEFINITION OF IMPACT PATHWAYS FOR MAXIMUM IMPACT**

In this section the framework on routes for impact is combined with the dissemination & impact tools. This results in the project's foreseen impact pathways for the three major impact outcomes that SUSFANS aims to achieve.

### **Towards aspired impact 1: Strengthening the analytical capacity for assessing the state of EU FNS at sub-regional level (including the implications of fisheries and aquaculture)**

A framework for an integrated assessment and monitoring of EU sustainable food and nutrition security (FNS) is missing. Where the integral policy-making of agricultural production and environmental dimensions has made substantial progress, scientific guidance is needed for connecting the indicators and policy discourse on agri-food (including fisheries and aquaculture) and nutrition-health. SUSFANS aims to position its set of analytical methods as a standardised scientific framework for monitoring the state of FNS in terms of the composition and quality of EU diets and sustainability of EU agri-food production in the context of global drivers of change. The purpose of the standard framework is to support more effective decisions and dietary recommendations to improve the health of EU consumers, in the context of environmental and economic consequences.

The SUSFANS assessment framework is a major scientific innovation. It is intended to be available for use by a non-technical audience as a discussion or learning tool. The depth of the framework and its ability to reveal sustainability trade-offs make it particularly useful for audiences that seek to manage these.

In the policy realm, one key audience are (national) authorities for nutrition surveillance and policy departments that manage develop food-based dietary guidelines which strike balance between health and sustainability objectives. The standardisation ambition that SUSFANS has affects this audience directly.

Also, SUSFANS contributes to the Expert Panel on Nitrogen and Food (EPNF), which is an official task force aiming "to create a better understanding of the relationship between human diets and the impact of the N-cycle on the environment". The panel can support the implementation of SUSFANS tools for assembling policy information on the sustainability performance in the EU.



The FReSH (Food Reform for Sustainability and Health) program of the World Business Council for Sustainable Development (WBCSD) program brings together a group of industry leaders on systems innovation. Its working group on protein supports the diversification of sustainable protein sources in the global diet. The group is exploring the value of the SUSFANS framework to define precompetitive business strategies

See Table 2a for the impact pathways related to this impact outcome.

## **Towards aspired impact 2: Strengthened capacity of policy makers to formulate longer term policies on the basis of advanced quantitative tools**

The strengthening of sustainable FNS requires a long-term strategy because the lead time for several solutions are long (think of diet change and other social innovations, or developing new breeds). In addition, to effectively monitor the developments in S-FNS over time, forward-looking (ex ante analysis) is needed to provide a benchmark for assessing performance against business as usual, or for evaluating the impact of a policy intervention.

Improving the capacity of policy makers to formulate appropriate policies for FNS in EU, requires, therefore a credible, scientific evidence base, in particular quantitative perspectives on plausible future developments in FNS in the EU.

SUSFANS delivers the toolbox for science-based decision making by policy makers regarding sustainable nutrition security in the future. The toolbox of different models serves as the software for processing information flows according to the needs of the policy makers. The toolbox delivers predictive power on price shocks in the short term (several months). For predictive power in the long term, up to 2050, the toolbox includes foresight methods on the performance of a sustainable food system and FNS.

For the general audience, the interest in the SUSFANS modeling toolbox is limited, as it is too technical. However, for the scientific audience, an understanding of the toolbox is critical component of reviewing the innovative merits of SUSFANS.

The toolbox is an advanced framework that cannot be easily transferred to policy makers and decision makers. Rather, however, the direct audience for the toolbox are policy analysts who themselves makes use of modelling tools. In this regard, the Organisation for Economic Cooperation and Development (OECD) is a particularly interesting audience. OECD is an effective think tank for preparing innovations in policy reform in the area of environmental services, public health systems and agricultural policy. Its work program has political impact. OECD Secretariat has been a member of the Stakeholder Core Group since the start of the project. SUSFANS is considered an exemplary study and methodology for its integration of policy analysis across domains.



The foresight capacity embedded in the toolbox may be applied by the WBSCD/FReSH to explore precompetitive business innovation strategies.

See Table 2b for the impact pathways related to this impact outcome.

## **Towards aspired impact 3: High-level foresight on the challenges for FNS in the EU in the near future (up to 5 years) and on the longer term (one or more decades ahead)**

National and international policies are important drivers for sustainable FNS in the EU. Stronger livestock density regulations, for example, lower the demand for feedstock, which affects food prices. Competition policies for the food industry may affect mark-ups within food value chains, which may create (dis)incentives for innovations. More consumption in line with current nutrition recommendations (e.g. more fish or fruit consumption) may lead to more environmental pressure in the production.

SUSFANS identifies four main societal goals within the challenge of strengthening sustainable FNS, which interlinks several core domains of policy-making at the EU-level into a single integrated concept. The domains are agriculture and rural development, including trade and innovation policy; consumer health and protection; environmental protection, including resource efficiency and climate change; and international cooperation, including development.

SUSFANS will inform policy-making with based on a solid conceptual underpinning, a sound evidence-base, advanced and interconnected modelling tools, to account for future developments in science and policy and designed to flexibly incorporate future metrics and data when appropriate.

### **Main areas of policy engagement:**

Food-based dietary guidelines and sustainable consumption

Agriculture and food policy including environmental policy

Food systems approaches in research & innovation

There are several key audiences that SUSFANS engages with for maximum achievement on this aspired impact.

Having condensed and salient policy messages will greatly facilitate the communication with the general public, and non-scientific audiences.

As channels for dissemination of key policy messages, beyond creating our own platform with the Stakeholder Core Group, SUSFANS is visible at policy events in the areas of agricultural outlook and climate change action. In addition, the



project is pursuing to effectively channel research evidence into the research and innovation (R&I) policy processes in the EU. This is managed through membership of FIT4FOOD2030. Also the project is contributing to FOOD2030 and DG Agriculture's research strategy. Further R&I orientation comes from an exploration of SUSFANS in relation to an emerging Food, Nutrition and Health – Research Infrastructure.

For a dissemination of the SUSFANS research methods to international audiences in Africa and Asia, APEC and CGIAR are selected as channels given their wide reach in Asia-Pacific (APEC) and Africa and South Asia (CGIAR).

See Table 2c for for the impact pathways related to this impact outcome.

Table 2. Impact pathways

a) Impact 1 - Strengthening the analytical capacity for assessing the state of EU FNS at sub-regional level (including the implications of fisheries and aquaculture)

Route	No.	Route item		Target Group	Tool	Verification
Dialogue	1.D.1	Publish scientific evidence		<b>Academic</b>	Paper in scientific journals	Feedback from reviewers and readers, citations
	1.D.2	Multidisciplinary learning on food systems and diets		<b>Students (Msc) &amp; professionals</b>	Courses & trainings	Number of courses, feedback from students
	1.D.3	Contribute to public dialogue on sustainable food		<b>General public</b>	Project web site, social media, blogs on specialised platforms	Counting visitors and downloads, requests
Policy	1.P.1	Engage with stakeholder groups involved in the policy process		<b>European Panel on Nitrogen in Food</b>	Contributions to scientific conferences	Number of meetings, invitations, feedback and information requests
	1.P.2	Provide a platform for science-policy interaction		<b>International policy makers, civil servants, business, NGO</b>	SUSFANS stakeholder workshops & Europe Toolbox Tour; local language summaries	Number of participants from various stakeholder groups
	1.P.3	Deliver policy messages based on science-for-impact translations	A B	<b>Nutrition authorities and departments</b> <b>Milan Urban Food Policy Pact</b>	Presentation of platform, methodology, evaluation of policy relevance through feedback from policy community; Presentation and discussion of preliminary Visualiser	Number of meetings, invitations, feedback and information request
Innovation	1.I.1	Modelling and exploring feasible options for shifts towards sustainable, healthy consumption		<b>n/a</b>	Contributions to policy meetings	Number of meetings, invitations, feedback and information requests
	1.I.2	Engage with food chain actors, turning sustainability trade-offs into new business opportunities		<b>WBSCD: Food Reform for a Sustainable and Healthy Food System (FReSH)</b>	International user workshops	Number of meetings, invitations, feedback and information requests



Table 2. Impact pathways (continued)

b) Impact 2: Strengthened capacity of policy makers to formulate longer term policies on the basis of advanced quantitative tools

Route	No.	Route item		Target Group	Tool	Verification
Dialogue	2.D.1	Publish scientific evidence		<b>Academic</b>	Paper in scientific journals	Feedback from reviewers and readers, citations
	2.D.2	Multidisciplinary learning on food systems and diets		<b>Students (PhD)</b>	Courses & trainings	Number of courses, feedback from students
	2.D.3	Contribute to public dialogue on sustainable food		<b>General public</b>	Project web site, social media, blogs on specialised platforms	Counting visitors and downloads, requests
Policy	2.P.1	Engage with stakeholder groups involved in the policy process	A B	<b>RIVM, PBL EC-JRC</b>	Contributions to scientific conferences	Number of meetings, invitations, feedback and information requests
	2.P.2	Provide a platform for science-policy interaction		<b>International policy makers, civil servants, business, NGO</b>	International user workshops	Number of meetings, invitations, feedback and information request
	2.P.3	Deliver policy messages based on science-for-impact translations		<b>OECD trade &amp; agriculture directorate: food systems program</b>	International user workshops	Number of meetings, invitations, feedback and information request
Innovation	2.I.1	Modelling and exploring feasible options for shifts towards sustainable, healthy consumption		<b>Scientific advisors in/for private sector</b>	Contributions to policy meetings	Number of meetings, invitations, feedback and information requests
	2.I.2	Engage with food chain actors, turning sustainability trade-offs into new business opportunities		<b>WBSCD: Food Reform for a Sustainable and Healthy Food System (FRSH) working group</b>	International user workshops	Number of meetings, invitations, feedback and information requests

Table 2. Impact pathways (continued)

c) Impact 3: High-level foresight on the challenges for FNS in the EU in the near future (up to 5 years) and on the longer term (one or more decades ahead).

Route	No.	Route item		Target Group	Tool	Verification
Dialogue	3.D.1	Publish scientific evidence		<b>Academic</b>	Paper in scientific journals	Feedback from reviewers and readers, citations
	3.D.2	Multidisciplinary learning on food systems and diets		<b>Students, Professionals</b>	Courses & trainings	Number of courses, feedback from students
	3.D.3	Contribute to public dialogue on sustainable food		<b>General public</b>	Project web site, social media, blogs on specialised platforms	Counting visitors and downloads, requests
Policy	3.P.1	Engage with stakeholder groups involved in the policy process		<b>EU, National and city-level policy makers in the framework of FIT4FOOD2030</b>	International user workshops	Number of meetings, invitations, feedback and information request
	3.P.2	Provide a platform for science-policy interaction		<b>International policy makers, civil servants, business, NGO</b>	SUSFANS stakeholder workshops & Europe Toolbox Tour; local language summaries	Number of participants from various stakeholder groups
	3.P.3	Deliver policy messages based on science-for-impact translations	A B C	<b>DG AGRI, Agri-Outlook DG Climate Action, mitigation strategy plan APEC &amp; CGIAR international audiences in Africa and Asia</b>	International user workshops	Number of meetings, invitations, feedback and information request
Innovation	3.I.1	Modelling and exploring feasible options for shifts towards sustainable, healthy consumption		<b>Food, Nutrition and Health – Research Infrastructure</b>	Contributions to policy meetings	Number of meetings, invitations, feedback and information requests
	3.I.2	Engage with food chain actors, turning sustainability trade-offs into new business opportunities		<b>SME impact translation</b>	International user workshops	Number of meetings, invitations, feedback and information requests

## CONCLUSIONS

SUSFANS has defined its mission as “contributing to food systems that work for health, environment, equity and viable enterprise, by delivering high-quality research on metrics, models and foresight for sustainable European food and nutrition security.” The SUSFANS consortium aspires to achieve the following three overall impacts:

1. An analytical framework for a comprehensive assessment of food and nutrition security (FNS) in Europe, centred around the implications of the current diet for the sustainability of agro-food production and consumption in the EU, supports standardised monitoring of FNS in EU;
2. Strengthened capacity of policy makers to formulate longer term policies on the basis of advanced quantitative tools;
3. High-level foresight on the challenges for FNS in the EU in the near future (up to 5 years) and on the longer term (one or more decades ahead).

The realization of this mission and ambition requires partnership and other forms of engagement with partners and co-workers in the food systems activities, food systems policy and academia.

We will report on outcome case studies for each impact pathway in the project progress report. These case studies will describe:

- What has been the interaction with groups in and beyond the stakeholder core group around results and insight from SUSFANS: materials used, process of engagement, feedback?
- How have these interactions resulted in a measurable outcome towards our aspired impact?
- What have we learned from this process as a project, for strengthening the impact?

## REFERENCES

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<sup>c</sup> Kupper, F., Klaassen, P. Rijnen, M. Vermeulen S. Broerse J (2015) Report on the quality criteria of Good Practice Standards in RRI. RRI Tools, 2015 [cited 18 July 2016]; Available from: [https://www.rri-tools.eu/documents/10184/107098/D1.3\\_QualityCriteriaGoodPracticeStandards.pdf/ca4efe26-6fb2-4990-8dde-fe3b4aed1676](https://www.rri-tools.eu/documents/10184/107098/D1.3_QualityCriteriaGoodPracticeStandards.pdf/ca4efe26-6fb2-4990-8dde-fe3b4aed1676) 50p.