

# Research Impact Guidance

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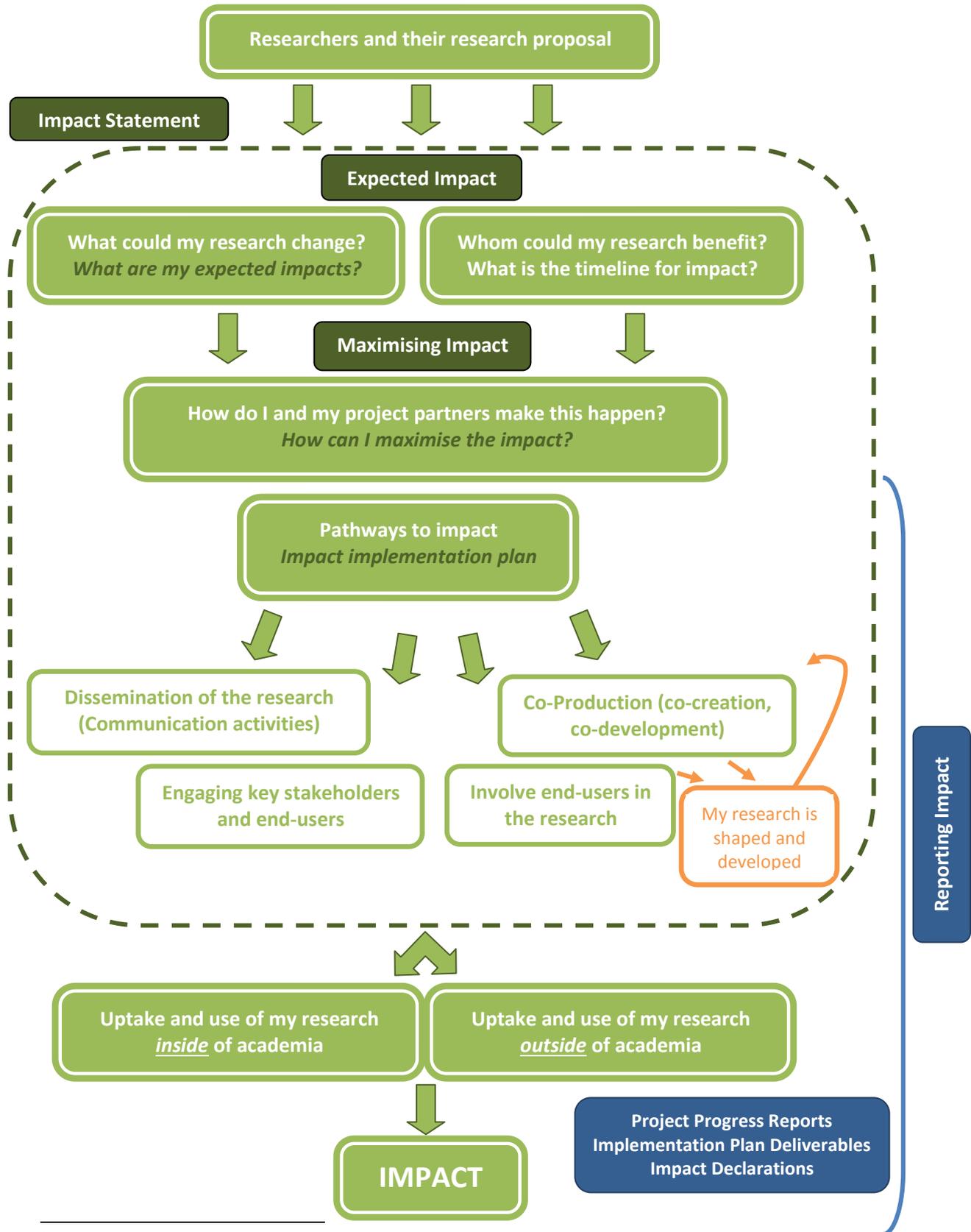
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### Document History

Version	Comment	Date
1.0	First Edition	December 2020

## Impact Summary

The schematic below provides a summary of Impact in the research process and the DAFM Impact Statement as outlined in this document.<sup>1</sup>



<sup>1</sup> Modified from University of York, Infographic: What is Research Impact? (<https://www.york.ac.uk/media/staffhome/research/documents/researchimpact/what-is-research-impact.pdf>)

## 1.0 Introduction

### 1.1 What is Impact?

Impact in research may be defined as 'the demonstrable contribution that excellent research makes to society and the economy'<sup>2</sup>. It may also be described as 'the direct and indirect 'influence' of research or its 'effect on' an individual, a community, or society as a whole, including benefits to our economic, social, human and natural capital'.<sup>3</sup> Impact can be hard to address and it may be helpful to consider impact as something that other people or institutions gain or do,<sup>4</sup> i.e. it is not something that you as a researcher can 'do' rather you can encourage it through impact activities. For example, providing evidence to policy makers, obtaining a patent is not impact, but it becomes impact if the people or organisation(s) involved act, experience or understand something differently as a result of the interaction with the research.

Therefore, impact considered in this document is the diverse ways in which research-related knowledge and skills benefit individuals, groups, organisations and nations in a range of different areas. These areas can involve academic impact and also economic, environmental, health and wellbeing and societal impact and/or a combination of these different areas.

- **Academic impact** is the demonstrable contribution that excellent social, environmental (both physical and life sciences) and economic research makes in shifting understanding and advancing scientific method, theory and application across and within disciplines.
- **Economic, environmental and societal impact** is the demonstrable contribution that social, environmental and economic research makes to the challenges or issues for society, the environment and the economy. It benefits individuals, communities or groups, organisations and/or nations.
- **Other impact that includes health and wellbeing, public policy and service and human capacity** is the demonstrable contribution that research makes to the challenges or issues for health and wellbeing of humans, animals and plants, the formation or debate around public policy and the human capacity and skills. It also benefits individuals, communities or groups, organisations and/or nations.

The impact from research, whether that is academic, economic, environmental or social, can be broadly in relation to: **instrumental** - influencing the development of policy, practice or service provision, shaping legislation, altering behaviour; **conceptual** - contributing to the understanding of policy issues, scientific and technological issues, reframing debates; **capacity and capability building** - through institutional development and technical and personal skill development and; **sectoral consolidation** - add-value to maintain and develop international competitiveness, provide sustainable employment, encourage innovation and address policy concerns.

### 1.2 Links between Impact, Knowledge Transfer and Collaboration

Knowledge Transfer (KT) or exchange whereby there is the enabling of two-way interactive exchanges between researchers, research users and end-user stakeholders to share ideas, research evidence, experiences and skills, is vital to maximizing the potential for impact from research projects. KT is associated with understanding the project outputs and various communication and facilitation activities which can be both planned and costed by researchers for engagement with key stakeholders. KT may include activities such as meetings, seminars and workshops through to placements, networks, project demonstrations, social media interaction and collaborative research.

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<sup>2</sup> UKRC 2011 (now UKRI) <https://esrc.ukri.org/research/impact-toolkit/what-is-impact/>

<sup>3</sup> [Broadening the Scope of Impact](#). Defining, assessing and measuring impact of major public research programmes, with lessons from 6 small advanced economies. Harland, K. and O'Connor H, SAEI, March 2015, v.2.

<sup>4</sup> <https://www.york.ac.uk/staff/research/research-impact/impact-definition/>

Indeed, while this form of research can be challenging, collaborative forms of research (i.e. research undertaken with rather than on people in a co-productive, iterative process of shared learning) that are appropriate to the scope, scale and TRL<sup>5</sup> level of the research proposal can offer the potential for unique impact from research. Working with people in the community, public policy and business settings can prove innovative for undertaking high quality research that may have significant impact. Examples of this undertaking include: people from end-user organisations or communities as co-investigators, reflection and negotiation at key points during your research (e.g. learning events with research partners) or requesting funds to meet the practical costs that research partners incur when they take part in projects in this way.

This means that the scope of actions that can be outlined and included in the Impact Statement in Section 2 should be considered to be wider rather than narrower in nature and include ways of encouraging participation, reflection, conceptual advancement and adjustment amongst the research team as well as end-user stakeholders – in all cases the actions/activities being proposed should be appropriate to the research being undertaken. It should also be linked with the appropriate KT requirements under DAFM's competitive research programmes. These activities of knowledge transfer or exchange during the research project should be described in more detail in the Knowledge Transfer Plan.

Further information for applicants and project coordinators on Knowledge Transfer and the Knowledge Transfer Plan is available in the Knowledge Transfer and Exchange Guidance document on the DAFM website under [Call Documents](#).

### 1.3 Why is Impact Important?

The impact of research can provide positive benefits in a whole range of areas. The Department of Agriculture, Food and the Marine's (DAFM) through its competitive Research Programme have always asked applicants in their proposals and successful project coordinators to provide information on the impact and value of their research project to the agri-food and forestry sectors in Ireland. More than ever there is a greater **focus on publically-funded scientific research to demonstrate the impacts, value and benefits to society, the environment and the economy of investing public money in scientific research**. In this context DAFM is updating the framework to evaluate impact based on the work carried out by the Small Advanced Economies Initiative (SAEI)<sup>6</sup> and Science Foundation Ireland (SFI)<sup>7</sup>.

Impact is difficult to measure and can be complicated. Impact may occur during or after the research project has been completed and in that sense it is non-linear and is interactive. However, it is important for applicants and successful projects to **increase focus and consideration on how to demonstrate and deliver impact from their research proposals and successful projects**. This is especially important for awarding bodies, such as DAFM, in order to demonstrate to government and citizens the importance and value of public funded research.

### 1.4 Purpose of the Document

This document provides guidance on impact for applicants to the DAFM competitive research calls and for annual reporting of successful DAFM-funded research projects, specifically it provides guidance on:

- Describing the potential impact of a research proposal in the application form.

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<sup>5</sup> TRL – Technology Readiness Level

<sup>6</sup> [Broadening the Scope of Impact](#). Defining, assessing and measuring impact of major public research programmes, with lessons from 6 small advanced economies. Harland, K. and O'Connor H, SAEI, March 2015, v.2.

<sup>7</sup> <https://www.sfi.ie/funding/award-management/research-impact/>

- Intended for applicants applying for funding of research proposals through the competitive DAFM research calls.
- Reporting impact over the duration of a research project.
  - Intended for project coordinators of successful research proposals awarded funding by DAFM.

This document covers the following as described in the table below.

Section	
<b>2.1.1</b>	Contains a general outline of the main structure of the Impact Statement required from the application form and the general considerations required in the relevant sections. The characteristics of good impact statements are also provided in this section.
<b>2.1.2</b>	Covers the detailed considerations and requirements for the two sections of the Impact Statement in the application form. <ul style="list-style-type: none"> <li>● The first part on the “Expected Impacts” section of the application form explains what considerations and information are required for detailing the expected impacts of the proposed research project.</li> <li>● The second part on the “Maximizing Impact” section of the application form provides the considerations and information required to detail how impact can be maximised for the project and includes requirements for an implementation plan.</li> </ul>
<b>2.1.3</b>	“Evaluation of Impact” provides an indication of the relevant area and criteria that will be applied by the expert evaluation panel in determining the quality of the proposals submitted in relation to impact.
<b>2.1.4</b>	“Changes to the Impact Statement” provides a brief summary of how project coordinators of successful research proposals may update or change the Impact Statement during the project lifetime.
<b>2.1.5</b>	Contains supporting information that outlines the programme (or project) logic model or framework that can be utilised for identifying impacts and distinguishing between project input, activities, outputs and impact in the application form.
<b>2.1.6</b>	Covers supporting information that describes the broad key beneficiaries or end-user stakeholders that should be included in the impact statement. It also provides examples of sub-groups that need to be distinguished by applicants for each of the relevant key beneficiary.
<b>2.2</b>	Provides an overview of the reporting requirements for impact.
<b>2.2.1</b>	Covers the detailed requirements for annual reporting on impact for research proposals awarded funding. <ul style="list-style-type: none"> <li>● Contains information on the selection of Impact Declarations</li> <li>● Covers the requirement to justify the selection in each declaration’s associated text box.</li> </ul>
<b>2.2.2</b>	Describes each of the 14 Impact Declarations
<b>2.2.3</b>	Contains supporting information on the Impact Areas and examples of types of impact.
<b>Annex A</b>	Provides a template for summarising the Implementation Plan for impact delivery.

## 2.0 Impact Framework

DAFM's Impact Framework requires a consideration of impact from a research project across the lifetime of a research project. However, specifically these need to be described in two stages:

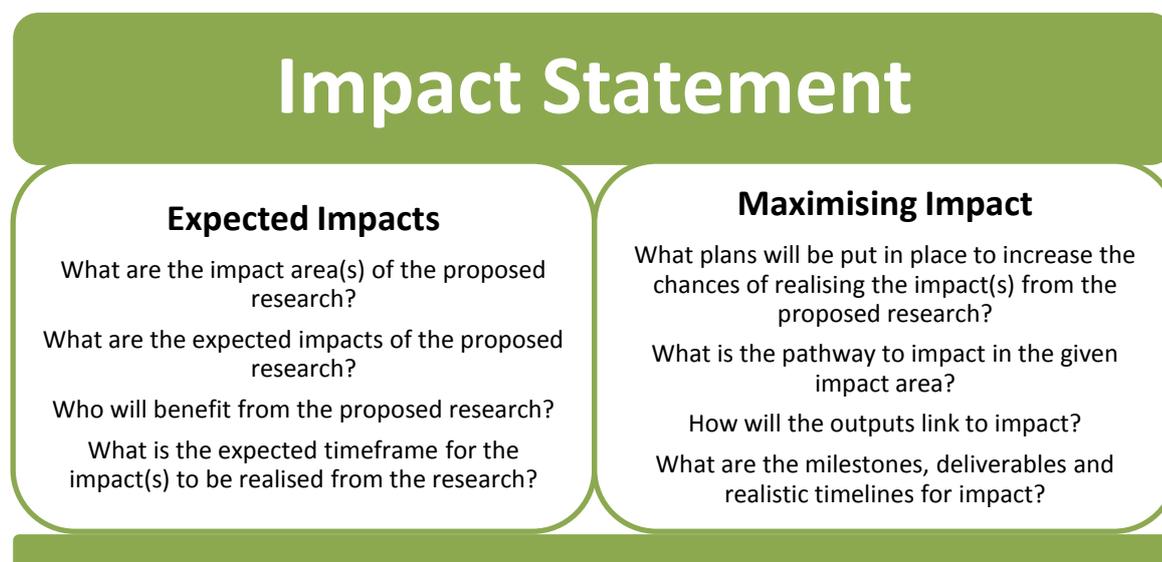
- At the application stage - applicants must prepare an **impact statement** that is relevant and appropriate to the proposed project.
- At the reporting stage - project coordinators, of successful projects, must report on impact through **impact declarations**.

### 2.1 Impact Statement and Application Form

#### 2.1.1 The Impact Statement

The impact statement in the application form for research proposals submitted to a DAFM research call is split into two sections:

- Section one requires a detailed outline and description of the **expected impacts**.
- Section two requires a detailed outline and description of **how impact will be maximised**.



Characteristics of good impact statements include:

- Good knowledge of the relevant beneficiaries of the proposed research and the needs of the sector(s)
- Clear description of how the applicant intends to reach and engage with the beneficiaries of the research, including clear deliverables and milestones
- Genuine inclusion of appropriate collaborators in the research programme, especially in the application area of the research if interdisciplinary in nature.
- Involvement of beneficiaries and end-users from the outset taking this input into the design of the research programme. Industry collaborators may not be a requirement but where appropriate is encouraged.
- Brief description of track record and relevant accomplishments for knowledge exchange and impact-generating activities in the context of the proposed research project
- Good knowledge of national priorities and activities in the relevant areas

- Applicant demonstrates clear commitment to maximising the impact of their research

Guidance on completing the Impact Statement is provided in the next section.

Further supporting information on distinguishing between outputs and impacts, impact beneficiaries and impact areas are provided in Sections 2.1.3, 2.1.4 and 2.2.2, respectively.

### 2.1.2 Research Proposal Application Form

To complete the research proposal application applicants are asked to **provide an Impact Statement in Section 3: “Project Information”**, of the application form in the Flexi® Grant system.

Depending on the nature of the research project, its scope and size, the impact of a research project may be over the short-term, medium-term or longer-term. **Innovative and creative approaches to engaging beneficiaries and creating knowledge dissemination or transfer are strongly encouraged.**

The impact statement should be as specific as possible and provide information that reviewers will find helpful in assessing the potential or expected impact of the proposed research activity. Thought should be given to ways of maximising impact from the research project. It should be written primarily in lay non-technical language. Supporting documents may be appended to the section.

The impact statement in the application form is comprised of:

#### ***Expected Impacts*** (550 words max)

Please **describe the expected impact of the proposed research project**, be as specific and comprehensive as possible and cover potential impacts by considering the following questions:

- What is the ultimate vision/final goal and where does this proposed research fit into this scheme?
- What are the expected impacts of the proposed research project and what is the likely added-value or benefits to areas of impact such as the economy, environment, policy or society?
  - Amongst other aspects, indicate how the project will enhance innovation capacity and integration of new knowledge so as to:
    - Meet the needs of the Irish agri-food, marine, forestry and bioeconomy sectors. The impact of the research on end-users (farmers, agri-food and forestry businesses, regulators, State Agencies and policy makers) is particularly important, consideration of how it will help evidence-based policy formation and/or the legislative/regulatory framework
    - Address consumer, citizen and societal needs (e.g. wider economic development, competitiveness, jobs, growth, investment, health, the environment and climate change)
    - Address industrial and societal engagement in the development of the research and innovation
    - Building and/or maintaining Capacity, Capability, Critical Mass & Collaboration within the Irish Research system. This could include a description of scientific benefits such as the development of critical mass, recognised expertise, contribution to the pool of scientific knowledge, national collaboration, links between research institutions and industry, and dissemination of results
    - Enhance researcher/institution’s potential for involvement in opportunities offered by other funding agencies, transnational programmes and in particular Horizon 2020/Horizon Europe projects. In this regard, it would be instructive, where applicable, to indicate how any funding received under the two most recent rounds of DAFM’s Research Programmes have enhanced the applicant’s potential for involvement in Horizon 2020 or other funding opportunities, where applicable.

- Who will take up the research to deliver change and who will benefit from this research? How will they benefit from this research?
- Over what timeframe the benefits from your proposed research project might be realised?
  - Distinguish the term of the expected impacts of a project and specify the impact(s) that are achievable within the lifetime of the project and those that may occur beyond the lifetime of the project.
- Are there any barriers, obstacles or any framework conditions that may influence whether, or to what extent, the expected impacts will be achieved?
  - (e.g. IP, regulations, standards, public acceptance, workforce considerations, financing of follow up steps, cooperation with other stakeholders/links in the value chain, poor dissemination or knowledge transfer)

### **Maximising Impact** (450 words max)

Please describe **what plans will be put in place by the proposed research project to increase the chances of economic, environmental, policy or societal impact**. A credible implementation plan must contain an outline of the pathways to impact. When completing this section please consider the following:

- Identify an outline of the pathway or road map to impact in the market, in communities, policy or regulatory use, in the environment, both during and beyond this proposal.
- Describe how you intend to progress the outputs of the finished project to the next stage in the impact pathway. Will this be through application to another national or international fund or through engagement with regulatory authorities, industry or policy makers?
- Describe the appropriate milestones, deliverables and realistic timelines for impact.
- Indicate how will the results be utilised and exploited and with whom.
- Provide how the knowledge from the proposed research project will be disseminated/transferred and to whom. Describe what types of communication activities might be used. This can be referenced in the Knowledge Transfer Plan.
- Describe what interactions with ongoing activities in projects and national/international networks in which project partners are involved can contribute to the project development and its impact.
- Identify existing and related intellectual property and indicate if your proposed research is covered by an existing IP licence(s) and how this can contribute to impact.
- Any relevant documentation can be annexed to support your proposal, for example the pathway to impact and its milestones, deliverables and timelines may be provide in tabulated form.

### **2.1.3 Evaluation of Impact**

Project proposal application forms are evaluated for impact by the Expert Evaluation Panel that assesses and reviews the research proposals. The panels established for this purpose will consist of relevant experts from a diversity of backgrounds which may include overseas academia, the agri-food industry and the public service. The proposals at the Expert Evaluation Panel stage will be assessed according to the evaluation criteria. One of the three overarching criteria relates specifically to impact and is given marks out of 10. The criteria are:

- **Relevance & Impact (10 marks);**

- Point 1: “Proposed measures to maximise, inter alia, economic, scientific, environmental, policy and socially important impacts. These measures should also consider:
  - Meeting the needs of the Irish agri-food, forest and bio-based sectors
  - Address the needs of civil society;
  - Address Food Wise 2025 and relevant national, European and International strategic research agendas and policies.
  - Address industry and society collaboration in the development of the research and innovation, including through the co-creation of research with key stakeholders.”
- Scientific Excellence (10 marks);
- Quality & Efficiency of Implementation (10 marks).

More detail on the evaluation criteria, specifically around impact is set out in the relevant sections of the [Call Guidelines](#) for applicants.

#### 2.1.4 Changes to the Impact Statement

Where the **impact statement of a successful research project requires updating or changing**, such as in relation to the implementation plan outlining deliverables and timelines, the proposed changes must be **notified to DAFM by submission of an “initial Request for Change” form** via the Flexi®Grant system.

Depending on the scope of the change made, and assuming the initial request is agreed and accepted with DAFM, a full “Request for Change” form will be issued through the Flexi®Grant system for completion and submission.

All changes must be agreed with DAFM before implementation.

Further information on making changes to the research project may be found in the [Project Management and Progress Reporting Guidance Document](#) on the DAFM website.

#### 2.1.5 Supporting Information: Inputs, Activities, Outputs and Impact – The Programme Logic

Impacts focus on the larger accomplishments of the project. Based on a programme logic model, the intended strategic results of the research project or impacts are required. These strategic impact metrics may be over the short-, medium- or long-term<sup>8</sup> and it is these areas of the research project logic, highlighted in the red box in the figure<sup>9</sup> below, that are central to completing the Impact Statement, and demonstrating and delivering impact.

For example short- or medium-term impacts may be increasing the research awareness of the intended end-user stakeholder or the incorporation of research into the policy cycle and the introduction of a new policy/scheme, or the revision/verification of an existing policy/scheme (from communication of research outputs). Long-term or end impacts may be the reduction in GHG emissions, improved climate change mitigation or the increase in farm level/sectoral competitiveness as a result of the policy (driven by the increased research awareness and integration into policy development).

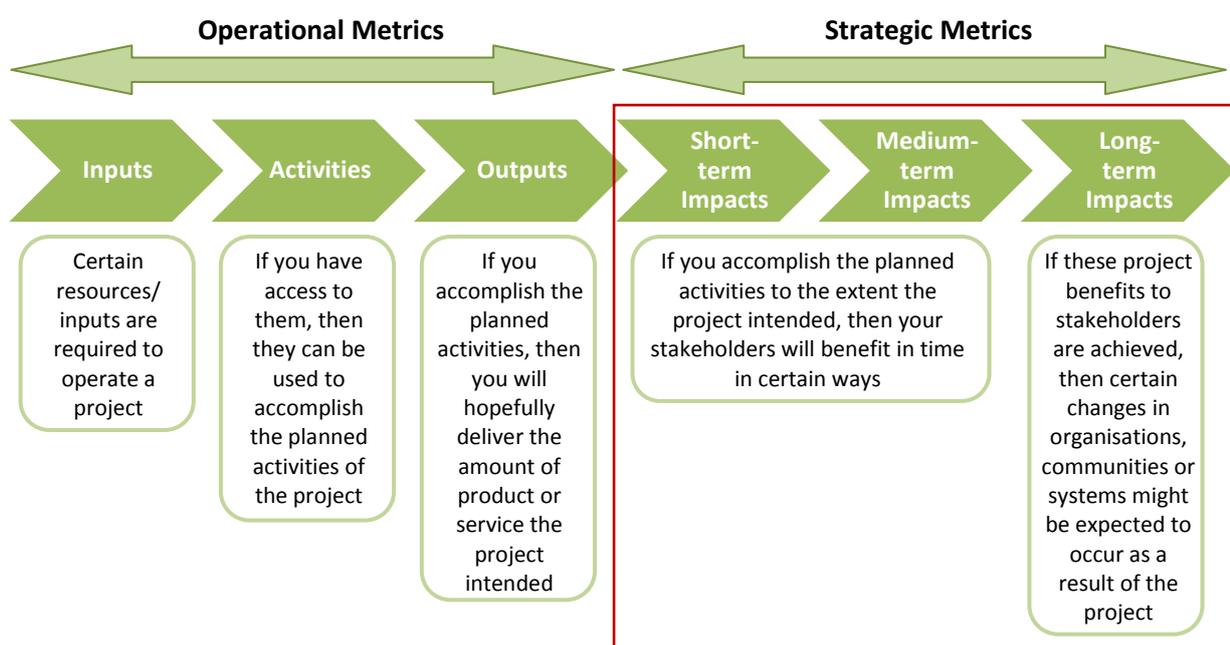
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<sup>8</sup> Short-term ≤2 years; Medium-term 2-5 years; Long-term ≥5 years

<sup>9</sup> Based on a simple logic model by W.K. Kellogg Foundation, 2004

It is important to note that impact(s) of a research project may also be viewed as having a contribution as much as an attribution<sup>10</sup> especially for complex societal, economic or environmental areas that can have significant intricacies related to social and/or physical interactions. The impact may be incremental and change will be accumulative rather than de novo or pioneering shift; or the impact may have a time lag associated with the research, rather than a sudden shift, as ideas or concept gradually gain traction. In this case, for example, the impact on policy for the policy-maker stakeholder based on the research undertaken could be verification of an existing policy, revision of part of an existing policy or a new policy development.

A high quality impact statement will include a credible implementation plan outlining pathways from the inputs, activities and outputs as well as through knowledge dissemination and transfer with stakeholder to impact over realistic timelines.



It is important to note that **research outputs should not be considered as impacts.**

For example the number of peer-review journal articles or the number of conferences/symposiums where the research is presented is an important key performance indicator of output from a perspective of research excellence about the research project, but it is not in and of itself an impact. The dissemination of research to the scientific community and more widely is crucial but for the relevance of impact it is how that publication or conference presentation ensures that potential beneficiaries have the opportunity to engage with the research project, with each other, provide feedback, how these interactions are followed up along the pathway of impact towards change, uptake or adoption.

Similarly, invention disclosures, licenses or patent filings represent important outputs of the research undertaken, but if there is no exploitation by economic, societal or policy stakeholders of the patent the potential for impact is lost. Impact will be more likely where the importance and potential of the intellectual property is properly disseminated and understood to those relevant stakeholders that can subsequently utilise or commercialise the intellectual property resulting from the research project.

<sup>10</sup> The World Bank Agriculture and Rural Development Department (2010) *Designing and Implementing Agricultural Innovation Funds: Lessons from Competitive Research and Matching Grant Projects*

### 2.1.6 Supporting Information: Impact Beneficiaries

Impact beneficiaries (or end-user stakeholders) are the people, groups, communities, organisations (public or private) or nations that will use and benefit from the impact of the research. The impact beneficiaries are categorised into 4 main categories: Economic, Societal, Policy and Academic.

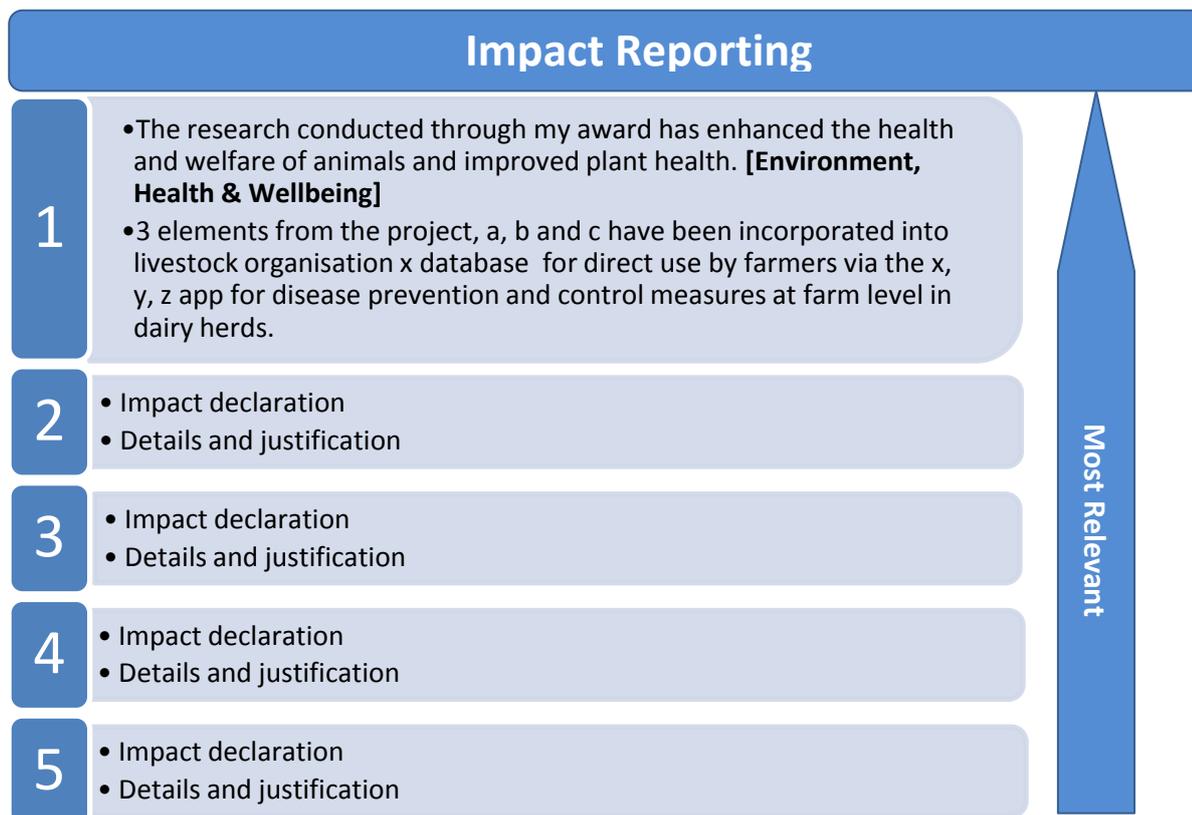
Under the 4 main categories applicants will also need to identify the relevant specific beneficiary(ies) relevant to the project that will benefit from the impact as a result of delivery of change. The two main steps to be considered under project proposals are:

- Identify the beneficiary category or categories – Economic, Societal, Policy or Academic – that would benefit from the proposed change as a result of the expected impacts.
- Under the selected category(ies) identify the relevant, specific beneficiaries that need to be indicated or engaged in order to increase the chances or the likelihood of the potential impact to be realised.



## 2.2 Reporting and Impact Declarations

DAFM's Impact Framework also requires that **successful projects awarded funding** provide a **self-assessment on impact** across the lifetime of the project during the annual Project Progress Reports (PPRs)<sup>11</sup>. The annual PPR contains a section on Impact where the project coordinator is required **to rank up to 5 relevant Impact Declarations** from a list of options (See Section 2.2.2). This approach attempts to broadly quantify the types of impact arising from the funding of the research projects. In addition, to the impact declaration the project coordinators are also required **to provide additional detail on the impact and justify the selected options**.



### 2.2.1 Research Project Reporting

As part of the annual reporting procedure, as well as for the final report, for successful research projects under the DAFM Research Programme, project coordinators are required to report impact within Section 13, of the Project Progress Report (PPR) in the Flexi<sup>®</sup>Grant system.

Impact reporting is not required for the 6-month initial Project Progress Report (iPPR).

A list of the impact declarations and their associated impact area are provided below in the next section.

For the PPRs research project coordinators are required to:

- Select between 1 and up to a maximum of 5 impact declarations depending on the relevance to the Impact Statement in the application form, the scope and objectives of the project, and size of the award.
  - The selection is ranked with impact declaration 1 being the most relevant to the project.

<sup>11</sup> Please note: Research coordinators will also be contacted approx. 12-months following the completion of the project for an update on research impact of the project funded by DAFM (e.g. post-completion staff destination, further leveraging or other impacts)

- Each impact declaration is aligned with one or more impact area – Societal (including International Engagement), Environment, Economic, Health and Wellbeing, Public Policy and Services, Human Capacity and Skills.
- Complete each of the associated text boxes (250 words per box) with a specific and quantifiable example(s) to justify the choice of impact declaration.
  - It is critical that the impact described in the text box is demonstrable and can be quantified.

### 2.2.2 Impact Declarations

There are 14 impact declarations and these declarations in the annual PPRs assist DAFM to quantify the types of impacts coming from the various research projects being conducted under the suite of research strands under the DAFM Research Programme. Each statement can be aligned with at least one of the impact areas. The impact area(s) is listed in brackets after each statement. The full list of impact declarations with some examples of the type of supporting text that is required are provided below.

- 1 The research conducted through my award has improved the agri-environment (water, soil, biodiversity, ecosystems, and air) and/or the sustainable relationship between society, agriculture and the environment. **[Environment]**

**EXAMPLE:** New parameters (x, y, z) resulting from the peer reviewed research demonstrated greater accuracy and improved forecasts. These were incorporated in a beta version of the existing growth modelling software and presented to a working group for rigorous testing. Following this, the beta version was demonstrated to the custodians of the code in DAFM (19/08/2019). These will be included in the next update of the software for application to be used by dairy farmers to change x, y, z practices/inputs to reduce emissions of a, b, c.

- 2 The research conducted through my award has enhanced the mitigation and adaptation of agriculture to climate change (including GHG emissions and carbon dynamics) and/or has improved the sustainable relationship between agriculture and climate. **[Environment]**
- 3 The research conducted through my award has developed the circular/bioeconomy within the market and/or has resulted in new bio-based products or services and valorisation of waste streams. **[Environment, Economic]**
- 4 The research conducted through my award has enhanced the health and welfare of animals and improved plant health. **[Environment, Health & Wellbeing]**
- 5 The research conducted through my award has enhanced the quality of life, health and/or wellbeing of Irish citizens. **[Health & Wellbeing, Societal]**
- 6 The research conducted through my award has increased the knowledge, appreciation and understanding of agriculture, food, forestry and marine amongst the general public and/or public/private sector organisations. **[Societal]**
- 7 The research conducted through my award has developed the country's international reputation. **[International Engagement]**
- 8 The research conducted through my award has attracted national/international scientists and talented people. **[Human Capacity; International Engagement]**
- 9 The research conducted through my award has resulted in the creation of employment through directly influencing and inspiring the future workforce and/or the production of a highly educated and relevant workforce in demand by industry and academia **[Human Capacity, Economic]**

**EXAMPLE:** Of the 7 post-doctoral researchers employed on this project, 2 have permanent lecturing positions in third-level institutions. 2 have management roles in the food processing industry, 1 has a consultancy role to the beverages sector and 2 are continuing as research fellows.

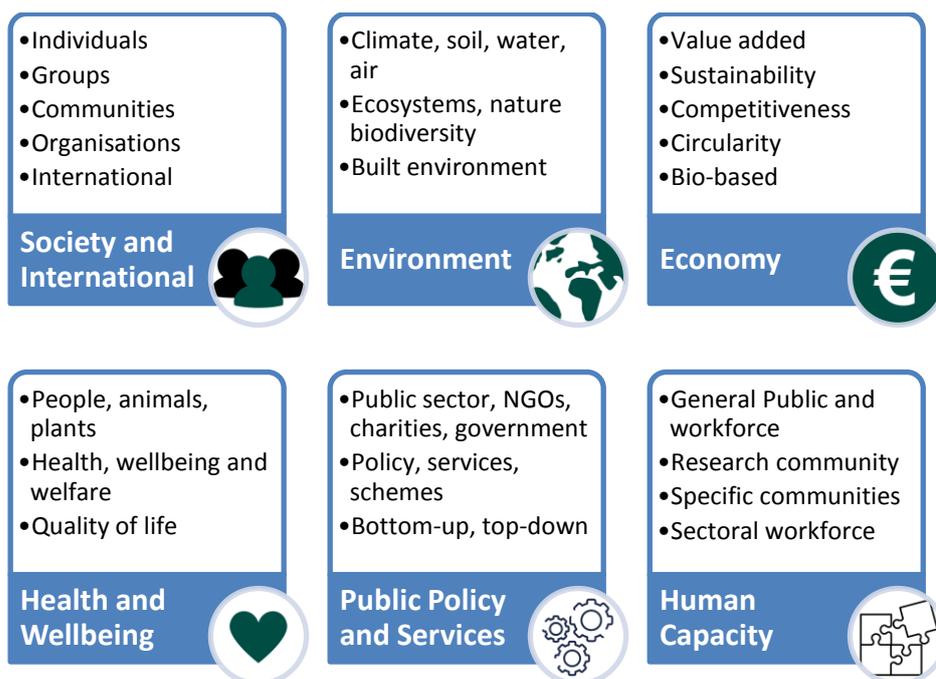
- 10 The research conducted through my award has resulted in a new policy, policy development and/or an improvement to the delivery of a public/agricultural service or scheme. **[Public Policy and Services]**

**EXAMPLE:** The ecosystem services quantified in this project (x, y, z) were presented to policymakers in X Dept/Agency/NGO (01/08/2019) and will be used in further consultation on management practices leading to a new policy/strategy A or revision/verification of the existing policy/strategy B.

- 11 The research conducted through my award has enabled me to leverage other national funding and/or international funding through industry/collaborative research mechanisms **[Economic, International Engagement]**
- 12 The research conducted through my award has resulted in the start or expansion of a company/business area which has resulted in the creation of high value jobs and/or has attracted other economic or commercial entities to develop and nurture the new company/business **[Economic]**
- 13 The research conducted through my award has impacted in other areas not reflected in the choices provided, for example \_\_\_\_\_ **[Environmental, Economic, Societal, Health and Wellbeing, Public Policy, Human capacity, Other]**
- 14 The research conducted through my award has not yet realised any significant Impact

### 2.2.3 Supporting Information: Impact Areas

DAFM has 6 impact areas from research and innovation activities that are relevant to the agri-food, forestry and bio-based sectors. All of the impact areas may be relevant to your research and innovation project, but careful consideration should be made to the impact areas that are most relevant and specific to the project and those areas that show the most impact of the project. Consideration of how the research project outputs (such as a new product, service or database) will focus and drive the route to impact should be made. The Impact areas are outlined below and a full description with examples of general areas of impact are provided in this section.



### ***Societal Impact (including International Engagement)***

Impacts that positively benefit people and communities in society where their activities or practices, their knowledge, quality of life or behaviour have been influenced through the research undertaken. Societal impacts can consider where benefits have an international dimension from increased engagement through the research undertaken. Societal beneficiaries may include:

- an individual (such as a farmer and an individual farm-level) and/or
- groups of individuals (that may be farmers within a defined sector of agriculture) and/or
- communities and/or organisations
- International engagement (organisations and/or individuals)

Some general examples of societal impacts are provided below:

- Quality of life has been improved through research activities, e.g. through access to agricultural, food and forestry amenity facilities
- Awareness, attitudes or understanding of the public has been enhanced through engagement in research activities, such as through improved understanding of diet, food provenance, nutrition and wellbeing.
- Interest and engagement in the science of agriculture, food, forestry and the marine science has been enhanced and/or stimulated through the research and innovation project
- The research project has stimulated or informed public/international debate on relevant agricultural, food or forestry issues, problems or debates that are relevant for society, e.g. increased knowledge of the bio-based products and services, the bioeconomy and economic circularity
- Research and innovation has contributed to the development and regeneration of rural communities and society, including in developing countries
- Mitigation of and/or adaptation to risks for society has been addressed through the research project.
- Significant contribution to global challenges has occurred through the research, for example in areas of food security and nutrition or climate change.

### ***Environment Impact***

Impacts from the research that benefits both the natural environment (soil, water, air, climate, ecosystems and biodiversity) and built environments (farms, work places, facilities), at different scales, and where benefits accrue together for society, animals and plants. Some general examples of environmental impacts are provided below:

- Research projects improve or influence the practices, activities or strategies in agriculture, food or forestry to enhance the sustainable management or conservation of natural resources, such as water, energy or food resources.
- New technologies, products or services have reduced the impact of pollutants, contaminants, greenhouse gas emissions and ammonia emissions on the environment.
- Farming or food processing infrastructure and/or buildings have been influenced through the research process, such as farm safety, energy efficiency.
- New and/or established systems, practices or management techniques have been developed or enhanced to improve climate change mitigation and adaptation strategies or reduce environmental risks, such as soil and nutrient loss, habitat loss.
- Increased scientific and/or technical knowledge and understanding has been elucidated for environmental systems through agriculture, food and forestry research projects.
- Research has informed environmental debate, planning decisions, and/or environmental and agri-environmental policy decisions.

### ***Economic Impact***

Impacts that benefit new or established businesses and other commercial or professional organisations and activities which creates jobs and revenue based on the research undertaken. Some general examples of economic impacts are provided below:

- A new business activity or sector has been created or expanded through new or improved products and/or services, or because of an improved technology or process.
- A new start up or spinout entity has been created from the research project's product, service or license.
- Changes to professional standards, guidelines, work practices and/or training have been informed by research
- New or increased employment (academic and/or non-academic) has resulted from the research project that is in demand by industry and/or academia.
- Industry or other organisations have invested in their own research, development and innovation through the research project collaboration.
- Performance of economic activity has been enhanced or improved through highly skilled people taking up specialist roles that draw on their research.
- New or changed technologies, products, services, processes have been adopted that draws on the findings of the research project.

### ***Health and Wellbeing***

Impacts resulting from the research project where health outcomes or quality of life has been improved or enhanced for people, animals and plants. Impacts may also include the wellbeing of people specifically where there is a connection to the food security, the food chain or nature, and the welfare of animals. Some general examples of health and wellbeing impacts are provided below:

- Human health and wellbeing has improved through new products or processes of the research project through improvements in the quality of life, such as improved water/air quality, access to amenities or trails, increased biodiversity and wildlife.
- Food security, food quality and nutritional value has been established or improved through the research project
- Mitigation of risks to human health through the food chain and/or animal/plant health has been established through the research.
- Public and/or regulatory authority awareness of risks, costs and benefits to human health through the food chain, animal health and/or plant health has been raised.
- Animal welfare has been enhanced through the research project.
- Animal and/or plant health has been enhanced through the research project, such as through genomic gain, disease prevention or markers of animal/plant health have been created or improved.
- A new or existing treatment (diagnostics, devices, health strategies) has been created or improved, or a reduction in the cost of a treatment has resulted, from the research project when compared to an equivalent outcome for animals and/or plants.

### ***Public Policy and Services***

Impacts where the beneficiaries may include government departments and their agencies, non-governmental organisations (NGOs) and other public sector organisations and society. Delivery of these impacts may occur through top-down changes to policy or public schemes, from the bottom up changes to behaviours or a combination of both. Some general examples of public policy and service impacts are provided below:

- Implementation of a new policy or revision/verification of an existing policy to improve the effectiveness, efficiency and/or responsiveness of public services or action and/or government regulation
- Improvements in best practice have been made based on the research project to deliver public services/schemes
- Changes in agriculture, forestry, the food or marine sectors have been informed by research
- Changes to legislation, regulations, guidelines or policies have been informed by evidence from research

### ***Human Capacity and Skills***

Impacts on the capacity and skills of people nationally and internationally that have a benefit for the wider society, general public and workforce, but also for specific individuals or groupings such as rural

communities, researchers and postgraduates, the agri-food, forestry and bio-based sector workforce. Some general examples of human capacity impacts are provided below:

- The production of highly educated and relevant workforce in demand by industry and academia in the agri-food, forestry and bio-based sectors
- Enhanced scientific, social scientific and technical skills of the current and future workforce
- Attraction of international scientists and talented people to Ireland for the research undertaken
- Increased productivity and/or performance of workforce through improved working practices and/or from new or updated technologies, processes or strategies that have been adopted.
- Further leveraging of other national/international funding through industrial and collaborative research, such as Horizon 2020 and Horizon Europe, Disruptive Technology Fund, Commercialisation Fund.

### 3.0 Other References on Impact

[Broadening the Scope of Impact](#). Defining, assessing and measuring impact of major public research programmes, with lessons from 6 small advanced economies. Harland, K. and O'Connor H, SAEI, March 2015, v.2

European Commission (Research and Innovation), [Evaluation, impact assessment and monitoring of EU research and innovation programmes](#).

European Commission (Research and Innovation), [Maximising the impact of EU research and innovation](#).

UK Research and Innovation (Economic and Social Research Council), [Impact Toolkit](#)

European Science Foundation, 2012, [Evaluation of Publicly Funded Research](#)

## Annex A – Template for Impact Implementation Plan

Impact Area	Impact Beneficiary (inc. subgroups)	Expected Impact	Impact Pathway (activities to achieve impact)	Milestone(s)	Deliverable(s)	Timeline <sup>12</sup>

<sup>12</sup> Short-term ≤2 years; Medium-term 2-5 years; Long-term ≥5 years