



Strengthening impact from research

A new policy brief offers guidance on how actors involved in research and innovation can meet increasing demands for demonstration of impact from research.

In order to meet demands from policy makers, funders and society for increased demonstration of impact from research, a cultural shift is needed so that all actors involved in research and innovation (R&I) projects consider impact before research projects are initiated. As part of this shift, a better understanding of the pathways through which research leads to impact is critical and this understanding should be co-developed within a multi-actor framework if possible. Such an approach should be supported by an enabling policy, funding and market environment. These were some of the high-level conclusions of a recently completed policy brief on programming research and innovation for improved impact. The policy brief, launched in October 2018, was the outcome of a cross-Standing Committee of Agricultural Research (SCAR) Strategic Working Group (ARCH, AKIS, Food Systems) workshop held in April 2018 and supported by the Common Agricultural and wider bioeconomy reSearch Agenda (CASA) project. The brief primarily targets R&I policymakers and funders in the European Commission and in national ministries. However, it is also intended to provide value to researchers and their institutions.

Background

The fundamental starting point for the policy brief was the acknowledgement that agricultural research and innovation systems are open, complex and changing rapidly. Against this background, there is an increasing demand from public and private funders, as well as from society, for researchers to measure, document and demonstrate the impact of research, over and above traditional scientific impact metrics. However, most of the emphasis to date has been on demonstrating the economic, societal or environmental impacts of research activities *ex post*, or after the research has taken place. Relatively less attention has been paid to the likely effects of initiatives *ex ante*, or before activities actually start; in other words, how to foster impact and generate a culture of impact from the very

beginning of projects. The policy brief identified that from both a research and an innovation perspective, a co-designed and co-delivered multi-actor approach is most likely to deliver on these demands depending on whether research is more fundamental or applied. Such an approach is already happening within some EU funding programmes such as H2020 and EIP Agri. The policy brief acknowledged this but also identified what needs to happen in order for such an approach to become more widespread.

Pathways from research to impact

A key part of that approach is a better understanding of how impact occurs. Douthwaite *et al.* identify three interconnected pathways as a good framework for understanding how agricultural research might lead to impact: technology development and adoption; capacity development; and, policy influence. Crucially, there are strong feedback loops among these pathways, which strengthen the capacity of the system to have an impact. A clear understanding of impact pathways and the feedback loops is key to programming research for impact, and all stakeholders should have these interactions in mind when starting an *ex ante* assessment of research activities. Of course, there are many external influences on these pathways and possible eventual impact. For example, policymakers and funders can influence the enabling environment for research and innovation by shaping the direction of research issues. A variety of funding mechanisms encourage different types of research. Separate to policy and funding effects, market distortions and barriers to the diffusion of new technology and innovations can also hinder impact and what happens along the pathways. Given this complexity and the need to understand impact pathways, a multi-actor and interdisciplinary approach is required where research is embedded within a broader economic, political, social and cultural context.

How to *ex ante* evaluate impact?

So how can *ex ante* evaluation and a better understanding of impact pathways be incorporated into research projects? What is the process? By definition, *ex ante* evaluation, which focuses on how R&I programmes might generate impact, is conducted before implementation. Increasing the focus on *ex ante* evaluation requires a cultural shift, as it means moving from a purely linear approach to change to a multidimensional model of change as exemplified by the impact pathways framework. A better understanding of the interactions between the various elements of the framework, its actors, and how this can be used to generate changes in practices and behaviour is key to programming research that will ultimately lead to better impact. Such an approach to *ex ante* programming, where researchers and other actors construct, in a participatory and strategic manner, a shared vision and identify plausible impact pathways through which research teams and their partners expect to contribute to impacts, is outlined by Blundo Canto *et al.* in a six-stage approach as shown in **Figure 1**.

The policy brief made 12 recommendations targeted at five different audiences. First, research institutions should develop a culture of impact: include all stakeholders in understanding potential impact pathways, and also include use of and achievement of impact indicators as a parameter for assessing researchers. Second, funding agencies should require both *ex ante* and *ex post* impact assessment, and as far as possible, projects and programmes should be co-designed and co-delivered to help achieve this. Existing good examples of *ex ante* assessment in EIP Operational Groups and H2020 projects should be analysed and collated with a view to translation to other programmes. Third, policy makers should foster an enabling environment for impact and provide researchers with the support needed to develop the capacity for this. Also, they should ensure that funding regulations are flexible enough to support impact. Fourth, SCAR Strategic Working Groups should

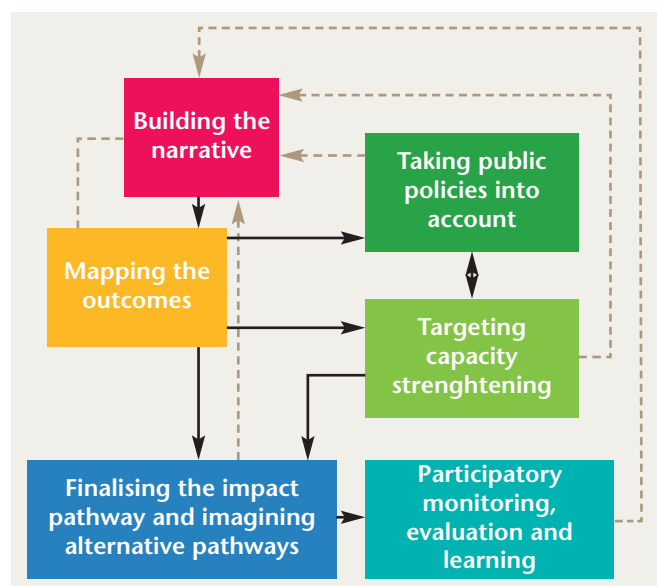


FIGURE 1: Flowchart for *ex ante* programming (source: Blundo Canto *et al.*, 2018).

provide advice on *ex ante* evaluation planning and monitoring. Finally, general recommendations to all actors were to ensure a co-design and co-delivery approach to research and innovation where appropriate: enable regular exchanges between researchers, funding agencies, policy makers and end-users at the national and European level; strengthen incentives and evaluation criteria for research organisations and individual researchers to encourage a focus on impact and a multi-actor approach; strengthen the environment for supporting impact generation by including actors from knowledge transfer organisations as well as innovation support services and innovation brokering where appropriate; and, train researchers in multi-actor and co-creative working methods.

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The policy brief can be accessed at:

<https://scar-europe.org/index.php/akis-documents>

Further information

Blundo Canto, G., Barret, D., Faure, G., Hainzelin, E., Monier, C., Triomphe, B., *et al.* (2018). 'ImpresS *ex ante*. An approach for building *ex ante* impact pathways.' Montpellier, France, CIRAD, 64 p. Available from: <https://doi.org/10.19182/agritrop/00013>.

Douthwaite, B., Mur, R., Audouin, S., Wopereis, M., Hellin, J., Moussa, A., *et al.* (2017). 'Agricultural research for development to intervene effectively in complex systems and the implications for research organizations.' KIT Working Paper, 2017: 12. Available from: <https://www.kit.nl/wp-content/uploads/2018/08/Agricultural-Research-for-Development-to-Intervene-Effectively-in-Complex-Systems-and-the-Implications-for-Research-Organizations.pdf>.

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