

Development of a Strategic Research and Innovation Agenda (SRIA) for food related research in food related priority areas identified under the National Research Prioritisation Exercise particularly ‘Sustainable Food Production and Processing’ and ‘Food for Health’.

A number of the priority research areas identified in the Report of the Research Prioritisation Steering Group approved by Government and published by the Minister for Jobs, Enterprise and Innovation relate to various aspects of food in particular Priority Area H ‘**Food for Health**’ and Priority Area I ‘**Sustainable Food Production and Processing**’. Details relating to these can be viewed in the published Report which is available at: http://www.forfas.ie/media/ffs20120301-Research_Prioritisation_Exercise_Report.pdf

The subsequent **Action Plans** drawn up to give effect to these two priority areas envisaged the development of National Strategic Research and Innovation Agendas (SRIAs) with the following objectives:

Food for Health (http://www.forfas.ie/media/22072013-H_Action_Plan-Publication.pdf)

Develop a SRIA which is informed by the needs of all relevant stakeholders to facilitate growth within the Irish food sector on the one hand, and at the same time, to contribute to the mutual goal of improved population health through improved diet, nutrition and lifestyle strategies; and facilitate active participation in EU and International research activities.

Sustainable Food Production & Processing (http://www.forfas.ie/media/22072013-I_Action_Plan-Publication.pdf)

Develop an SRIA, in line with Food Harvest 2020, which draws on existing relevant research plans which have been informed by the needs of all relevant stakeholders to facilitate growth within the Irish food sector; and to facilitate active participation in EU and International research activities.

A Working Group of the Prioritisation Action Group (PAG) comprising representatives of all relevant funders (Dept. of Agriculture, Food and the Marine; Science Foundation Ireland; Enterprise Ireland; Industrial Development Authority; Health Research Board; Teagasc; Marine Institute; and the Environmental Protection Agency) and chaired by DAFM is currently in the process of developing these SRIAs.

As part of that process we are now inviting submissions from all interested parties but especially research end users e.g. farming representatives, agri-business, food industry, health sector professionals, etc. If interested, please submit a **brief outline of your idea(s) strictly in the format outlined in Form SRIA 1 (attached) and email them to foodsria@agriculture.gov.ie by Thursday 6th March 2014 at the latest**. All material received will be taken into account through the PAG process for possible selection and inclusion in the final SRIA document.

A listing of submissions, and sources, may be included in the WG Report.

Yours,

Richard Howell
Chair of the PAG Food Working Group

Form SRIA 1

Please **briefly** outline up to 10 **high level goals**¹ that you believe can and should be progressed through publicly funded research under the “Food for Health” and/or “Sustainable Food Production and Processing” priority areas of the National Research Prioritisation Exercise together with (i) a description of the nature of the research required to address the goal(s), (ii) the justification for publicly funding that research and (iii) an outline of what a successful outcome from such research would look like and how it might be measured.

Submitted by: ___Morag Friel_____

On behalf of: ___FEASTA the Foundation for the Economics of Sustainability_____

	Desired high level strategic goal relevant to the “Food for Health” and/or “Sustainable Food Production and Processing” research priority area.	²Outline of the proposed research that will help achieve the strategic goal	Rationale / Justification i.e. how will this research help achieve the goal and why should it be publicly funded.	Expected result / what will success look like. Also, what metrics can be used to measure degree of success.
1	Reduction of the climate impact of food production and consumption systems	Environmental and climate analysis of food production and consumption patterns including footprinting, life cycle analysis etc.	The importance of food production and consumption in climate change and other environmental challenges is well documented ¹ More detailed comparative research on various food systems is required.	Better understanding of the steps needed to reduce the climate and environmental impact of food production and consumption in Ireland and globally.
2	Reduction of the climate impact of food production and consumption systems	Exploration of the potential for inclusion of agriculture in the EU Emissions Trading System, or alternative methods of driving change in food production and consumption patterns towards foods with lower climate impacts, additionally taking account of potential public health co-benefits in Ireland and globally.	Irish agricultural interests have criticised the inclusion of agriculture in the Effort-Sharing Decision but have not developed proposals for how the EU should address agricultural emissions.	Policy options for addressing agriculture within climate change policy, incorporating public health considerations.

¹ Please note that in this context “high level strategic goal” means some development, innovation, or way of overcoming a persistent growth impediment that would have an impact of economic value.

² This description should not be so specific that it amounts to an actual individual project but, rather, sufficiently broad in concept that it could be used as a basis for inviting a number of applications in a competitive research Call process. Equally, it should not be so broad as to be meaningless.

3	Improvement of public health through alterations in diet	Exploration of appropriate methods for promoting healthier diets taking account of potential synergies with policies to reduce the greenhouse gas impacts of food production and consumption systems.	Self-evident.	Policy options for moving to healthier food and more sustainable food production and consumption
4	Adaptation of food production and consumption to climate change	Research into the likely impacts of climate change on agriculture, and exploration of the appropriate adaptation measures which might be taken in response	Climate change poses a major challenge to agriculture and food production. ⁱⁱ Adaptation is a universally recognised challenge.	Better adaptation and resilience of food production systems to climate change
5	Understanding of the extent of the potential contribution of biochar and associated technologies to reducing net greenhouse gas emissions, water pollution and other environmental impacts of food production, including consideration of all environmental social and economic aspects	Field trials of biochar in various agricultural applications, gathering data on impacts on production, emissions, economics etc.	Some biochar research suggests there is high potential in the technology. Extensive practical trials are needed.	Better understanding of the potential benefits and costs of biochar in Ireland and similar environments.
6	Increased recovery of energy and nutrients from the waste products of agriculture, food production and consumption	Research into the economic potential for and barriers to anaerobic digestion(AD) and the lack of uptake of AD of food system wastes.	AD appears to be a logical technical approach in Ireland with benefits for greenhouse gas emissions, waste management, water pollution, energy security, rural development, agricultural incomes etc. Research could address how best to get an appropriate level of uptake.	Increased recovery of energy and nutrients from the waste products of agriculture, food production and consumption
7	Understanding the extent of the potential contribution of soil mineral balancing to improving quality, health and yield from different Irish agricultural soil types.	Pot and field growing trials of various of major and minor mineral concentrations in soils, gathering data on the impacts on production, plant health, produce quality, economics, etc.	Some research suggests that remineralization of soils, and the balancing of mineral proportions can significantly improve quality and productivity. Extensive practical trials are needed.	Better understanding of the potential benefits and costs of remineralization in various Irish soils.
8	Better understanding of existing and potential agro-ecological and permacultural food production systems in Ireland	Research into agro-ecology and permaculture	Agroecological and permacultural approaches remain underused and poorly understood in Ireland. Research is needed to demonstrate practical applications as well as develop new techniques based on these approaches.	Better use of agroecological and permacultural approaches in production of food and non-food products.

9	Incorporation of agro-ecological and permaculture principles into food production and consumption systems	Research into the best methods for disseminating agro-ecological and permacultural approaches to food production and consumption		Better awareness of and availability of agroecological and permacultural techniques and approaches.
10	Protection and restoration of peatlands while making economic use of peatland products	Exploration of the potential in Ireland for paludiculture systems	Paludiculture offers the potential for productive use of wetlands without damaging and indeed while restoring the ecosystem services they provide (climate, hydrology, water quality, biodiversity.) ⁱⁱⁱ There is major potential in Ireland which has such extensive areas of degraded peatlands.	Understanding of the potential for peatland restoration, environmental and economic benefits and ongoing production.
11	Effective integration of sustainable development into research prioritisation.	Establish how to remedy the current situation where sustainability is not at the centre of research prioritisation in Ireland but is very much an add-on despite the fact that business as usual is leading to a complex of environmental crises including climate change and biodiversity loss.	<p>We appreciate this theme is significantly wider than the specific consultation, On reviewing the documentation from the entire research prioritisation process, the lack of attention to the ecological crisis was a real surprise.</p> <p>The scientific community is very clear on the enormity of the challenge we face ^{ivv} We expected this knowledge to be reflected in the research prioritisation process. We don't understand why these funda</p> <p>mental challenges are either being ignored or treated as niche market opportunities; clearly the research prioritisation process is not working properly and it is essential to understand why and to take appropriate steps to address this problem.</p>	An approach to research prioritisation which reflects the extent of the environmental challenges facing Ireland and humanity as described by environmental scientists including IPCC, etc. and consequently assigns the appropriate importance to the research needs of the transition to sustainability.

- i Alexander Popp, Hermann Lotze-Campen, Benjamin Bodirsky. **Food consumption, diet shifts and associated non-CO2 greenhouse gases from agricultural production.** *Global Environmental Change*, 2010; 20 (3): 451 DOI: [10.1016/j.gloenvcha.2010.02.001](https://doi.org/10.1016/j.gloenvcha.2010.02.001)
- ii Flood, Stephen, 2013, Projected Economic Impacts of Climate Change on Irish Agriculture http://www.stopclimatechaos.ie/download/pdf/projected_economic_impacts_of_climate_change_on_irish_agriculture_oct_2013.pdf
- iii <http://www.paludiculture.uni-greifswald.de/en/index.php>
- iv Intergovernmental Panel on Climate Change, 2013-2014, Fifth Assessment Report, <http://ipcc.ch/report/ar5/#.UxiXmV6P8Ug>
- v Nature, 2009, Planetary Boundaries, <http://www.nature.com/news/specials/planetaryboundaries/index.html>