

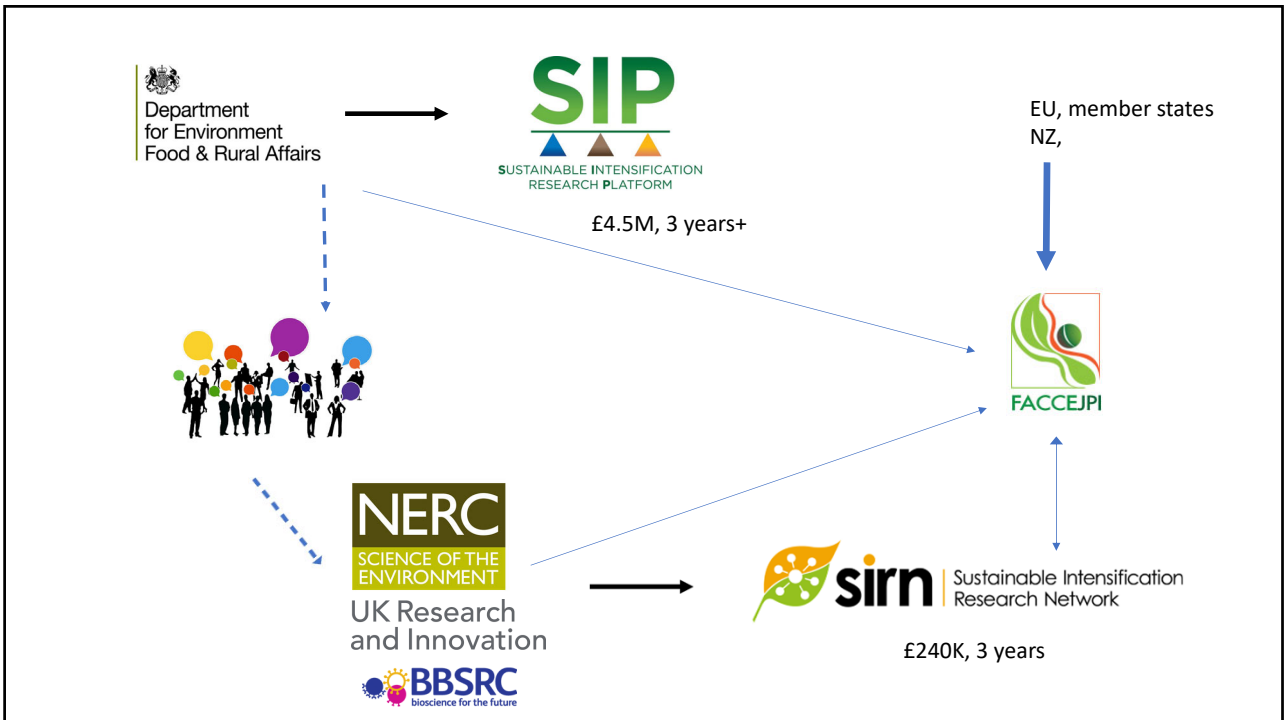


# 'Results': SIRN Network

Andy Whitmore  
Rothamsted Research  
UK  
PI SIRN Network



UK Research and Innovation



**SIRN aims to consolidate systems-approach research in the UK with the following objectives:**

**Objective 1:** To develop new research questions and new ways of approaching the challenges of SI

**Objective 2:** To identify UK research strengths, priorities and gaps (taking account of their wider international context)

**Objective 3:** To develop future research agendas to inform funders and stakeholders of emerging scientific opportunities

**Objective 4:** To engage stakeholders to improve researchers' understanding of user needs and inform the framing of research questions

**Objective 5:** To facilitate sharing and coordination of capacities and resources of expertise, facilities and data through workshops, training courses, inter-laboratory exchanges and so on

**Objective 6:** To encourage links with other related UK and, where appropriate, international activities (for example, aspects of other relevant networks; the Global Food Security interdisciplinary research programme on Resilience of the UK food system in a global context, Defra's Sustainable Intensification Platform and so on)

**Objective 7:** To promote, disseminate and connect activities in SI research, and stimulate new ones

**Objective 8:** To provide a community point of contact for researchers, stakeholders and funding agencies



**Objective 1.** *Identify strengths and gaps in UK SI research and seek to add value to current research linked to SI by developing new ways of working SIRN will canvas the wider research community to gain better knowledge of its strengths, capabilities and needs and disseminate these findings.*

**Objective 2.** *Develop innovative cross disciplinary methods to address the knowledge gaps and enable the research community to tackle emerging challenges e.g. big data, new technology, new science areas SI requires a concerted action from diverse researchers who are dispersed geographically.*

**Objective 3.** *Support the application of basic research to new SI areas and improve interdisciplinary exchanges and understanding Increased dialogue is needed between the joined-up SIRN community and end-user groups such as policy makers, environmental NGOs, farmers, biotech companies, consumers, and health officials to direct research to priority areas and ensure relevance to real world issues that promote economic growth and development.*

**Objective 4.** *Link to and from UK research communities associated with SI. SI is currently an area of considerable research investment with an increasing number of SI initiatives.*



## Large Scale aims

### Initially:

Foster cooperation and bottom-up, self organisation among the SI community  
Leading to an increase in high quality grant proposals in the area of SI to NERC & BBSRC

### Subsequently

Support interactions between scientists in relation to a series of thematic programmes  
launched by **UKRI**  
Leading to an increase....

### Consequently

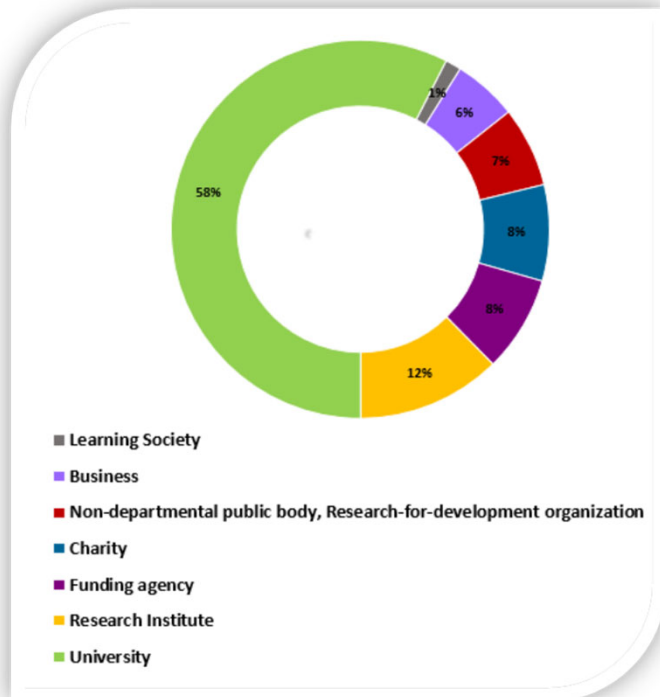
Self-organisation has not really emerged  
Nature of the events organised changed

## Major Achievements and Activities



- Participation in the KNSI
- Workshop between social and agricultural scientists to explore means of working together  
Outcome: successful grant to AHDB (levy board)
- Provision of funds to facilitate workshop meetings between scientists seeking funding  
Outcome: 4 groups supported
- Support for a conference organised by the Association of Applied Biologists and Defra SIP on SI  
Outcome: 100+ participants
- Support for Defra SIP follow-on funds  
Outcome: 3 grants funded, 1 paper in progress and 1 submission to NERC for a research theme
- Workshop to brainstorm large-scale ideas that might attract thematic funding from UKRI  
Outcome: 3 programmes worked up and submitted to BBSRC & NERC
- Workshop for young scientists to provide mentoring in the area of grant-writing, policy reviews  
Outcome 1 grant proposal and 1 paper, to date. Other papers in progress

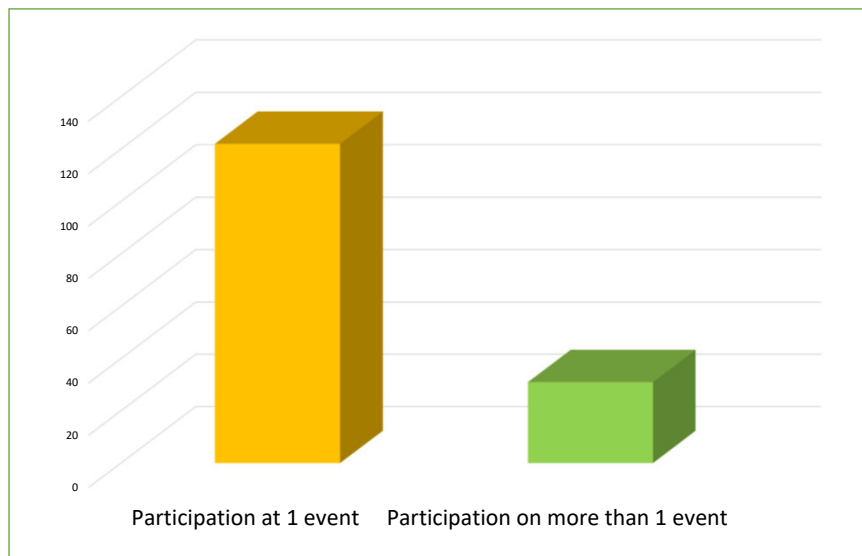
Who joined SIRN?



<ul style="list-style-type: none"> <li>Bangor University</li> <li>Brunel University</li> <li>Coventry University</li> <li>Cranfield University</li> <li>Harper Adams University</li> <li>Lancaster University</li> <li>London School of Hygiene and Tropical Medicine</li> <li>Loughborough University</li> <li>Newcastle University</li> <li>Nottingham Trent University</li> <li>Queens University of Belfast</li> <li>Royal Agricultural University</li> <li>Royal Veterinary College</li> <li>SRCU</li> <li>University of Exeter</li> <li>University of Sheffield</li> <li>University College London</li> <li>University of Aberdeen</li> <li>University of Birmingham</li> <li>University of Bristol</li> <li>University of Cambridge</li> <li>University of East Anglia</li> <li>University of Essex</li> <li>University of Exeter</li> <li>University of Gloucestershire</li> <li>University of Greenwich</li> <li>University of Hertfordshire</li> <li>University of Lancaster</li> <li>University of Leeds</li> <li>University of Leicester</li> <li>University of Lincoln</li> <li>University of Manchester</li> <li>University of Northampton</li> <li>University of Nottingham</li> <li>University of Oxford</li> <li>University of Leicester</li> <li>University of Lincoln</li> <li>University of Manchester</li> <li>University of Northampton</li> <li>University of Nottingham</li> <li>University of Oxford</li> <li>University of Reading</li> <li>University of Sheffield</li> <li>University of Stirling</li> <li>University of Warwick</li> <li>University of York</li> <li>University of Kent</li> <li>University of Keele</li> </ul>	<ul style="list-style-type: none"> <li>Agri-Food and Biosciences Institute</li> <li>Biomathematics and Statistics Scotland (biOSS)</li> <li>British Geological Society</li> <li>Centro for Ecology &amp; Hydrology</li> <li>James Hutton Institute</li> <li>John Innes Centre</li> <li>Moredun Research Institute</li> <li>NAB</li> <li>Rothamsted Research</li> </ul>
<ul style="list-style-type: none"> <li>Game &amp; Wildlife Conservation Trust</li> <li>LEAF</li> <li>National Trust</li> <li>Organic Research Centre - Elm Farm</li> <li>RSPB</li> <li>Soil Association</li> </ul>	<ul style="list-style-type: none"> <li>ADHB</li> <li>BBSRC</li> <li>Defra</li> <li>ESRC</li> <li>NERC</li> <li>The Knowledge Transfer Network</li> </ul>
<ul style="list-style-type: none"> <li>Committee on Climate Change</li> <li>Environment Agency</li> <li>Kew Gardens</li> <li>Natural England</li> <li>Biodiversity International</li> </ul>	<ul style="list-style-type: none"> <li>Geoinfo Fusion Ltd.</li> <li>eftec</li> <li>Eppel Sustainability Ltd</li> <li>Fera Science Ltd</li> <li>AAB</li> </ul>

Main (Large) Events		
2016	SIRN launch - Annual Conference	56
2017	BBSRC-led workshop, funded through the Global Challenges Research Fund (GCRF)	50
	SIRN workshop: What role can the social sciences play in Sustainable Intensification research?	20
2018	Sustainable Intensification conference in partnership with AAB and Defra-SIP	80
	Sustainable Intensification workshop: Building on our Research Foundations in partnership with BBSRC, Defra and NERC	56
	SIRN support for planning meeting to discuss how can the existing SIP farm network contribute to addressing SI issues	7
	SIRN support for planning meeting to discuss ideas and strategies for developing a larger project on optimising use of organic wastes in agricultural systems to achieve goals of SI	11
	SIRN funded meeting to discuss better metrics for SI considering scalability and temporality, in a diversity of farming contexts.	6
	SIRN funded meeting to bring together a multidisciplinary team of researchers to build on synergies with the BBSRC/NERC funded ASSIST programme and BBSRC funded Soil to Nutrition programme.	11
2019	SIRN Horizon scanning event	23
	SIRN and Valuing Nature joint workshop on Sustainable Intensification & Valuing Nature in Dialogue: enabling researchers to work across environment	33

Did we always reach the same people?



**Has 'sustainable intensification' had its day?**

Has been misunderstood. Has provoked a backlash (but) was never about producing more from less  
4<sup>th</sup> pillar (quality of nutrition) increasingly evident

**Is there a new term(s)?**

What aspects of SusAg are important: Holistic - Inclusive - Systems - Cooperative – Nutrition - Social

**Expectations?**

NERC and BBSRC in particular were impressed by the added value that emerged within the molecular biology community as a result of GarNet. Here the molecular biology community came together to access reduced prices for sequencing by buying large volumes.

Having done so, the community discovered other communal benefits around shared platforms such as Arabadopsis. BBSRC hoped that SIRN might bring people together around shared platforms such as university farms. However, the scale/size and fixed nature of these platforms (people have to move rather than the resource) mean that these additional benefits have not accrued.

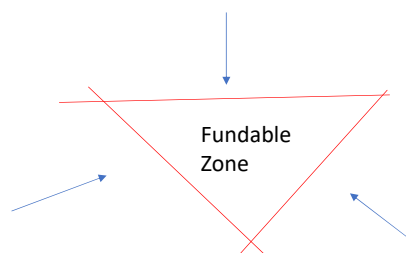
In contrast to SIRN, other networks received relatively generous funding. Nexus (£1.8M), VNN (5 years, £6.5M), STFC food network (3 years), GARNet (running since 2004) and have run their own calls for significant amounts of funding which they have been able to disburse. [Disappointment has been expressed on more than one occasion about the level of funding Defra was able to offer within SIRN event where SIRN's budget for all activities less still.]

**What can the SIRN experience tell us generally about networks?**

There are tensions between competitive funding and cooperative working.  
SIRN has moderated some of these, or at least opened doors to multidisciplinary research.

There has to be an incentive for researchers to move beyond a secure funding stream and expose themselves to the risk of peer-review by single-discipline experts whose individual red-lines together reduce the fundable space to zero [unachievable in an interdisciplinary project].

A future network might want to pay specific attention to this risk. That is to say, how to maintain rigour in reviewing interdisciplinary proposals without losing the novelty that comes from connecting research from different disciplines that taken singly, are off the leading edge.





## Conclusions

1. SIRN has achieved much – long list of events held. Some complex, many at funders specific request
2. Different expectations from (i) proposers, (ii) funders (iii) community served
3. Funding welcome, but not large in comparison to other networks
4. Very large changes in the funding landscape – UKRI, Austerity measures, Defra, Brexit
5. So achievements do not map well onto planned objectives
6. In particular, difficult to create a self-organising community from above with the help of a small budget over a short time-scale alongside multiple, changing objectives.