

Innovation in Scottish Aquaculture

Heather Jones, CEO

Sjávarútvegsráðstefnan 2016, Hörpu, 24.-25. nóvember.

8 Scottish Innovation Centres



UK aquaculture context



- Salmon – 99% of UK aquaculture production by value; 95% by volume
- Salmon – the UK's single largest food export (occasionally displaced by chocolate)
- Aquaculture > capture fisheries (volume and value)
- Aquaculture – intensive production processes
- Aquaculture – significant business investment in innovation
- Aquaculture – a biological system
- Aquaculture – an industry using new technologies

zoetis Industry consortium members

ScanBio

Landcatch
A Hendrix Genetics Company

FishVet
Group

AKVA GROUP™

SKRETTING
a Nutreco company

Scottish
Sea Farms

Cooke
AQUACULTURE
SCOTLAND
Refusing to go with the flow



dawnfresh

PHARMAQ



EWOS®



Young's
SEAFOOD LIMITED



TESCO

Scottish
Aquaculture
Innovation
Centre



M&S
EST. 1884

ASDA

Waitrose

MORRISONS

ScottishShellfish
Marketing Group

Sainsbury's

- 1. Purpose**
2. Priorities
3. Progress
4. Plans

PURPOSE

SAIC = industry success through research partnership

- Industry leadership
- Innovation
- International ambition
- Infrastructure

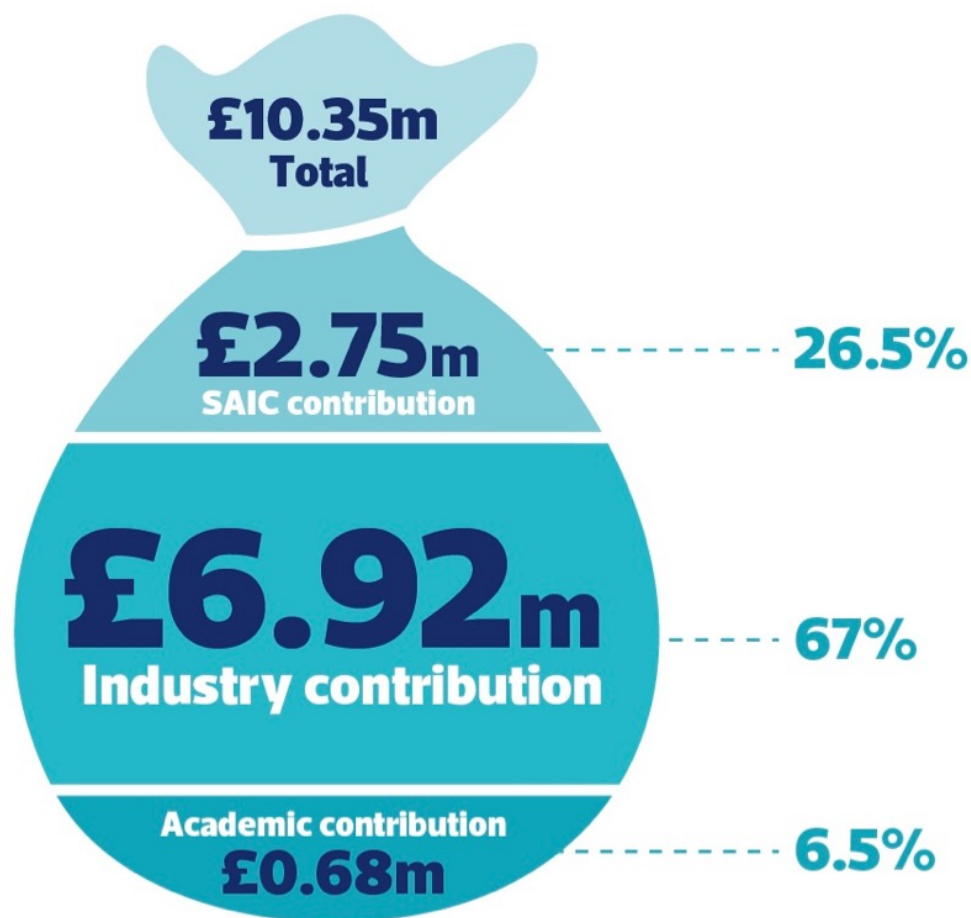
1. Purpose
- 2. Priorities**
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Four Priority Innovation Areas



1. Purpose
2. Priorities
- 3. Progress**
4. Plans

Total project value



Project performance

Number of projects per PIA



Demonstration projects



Project performance

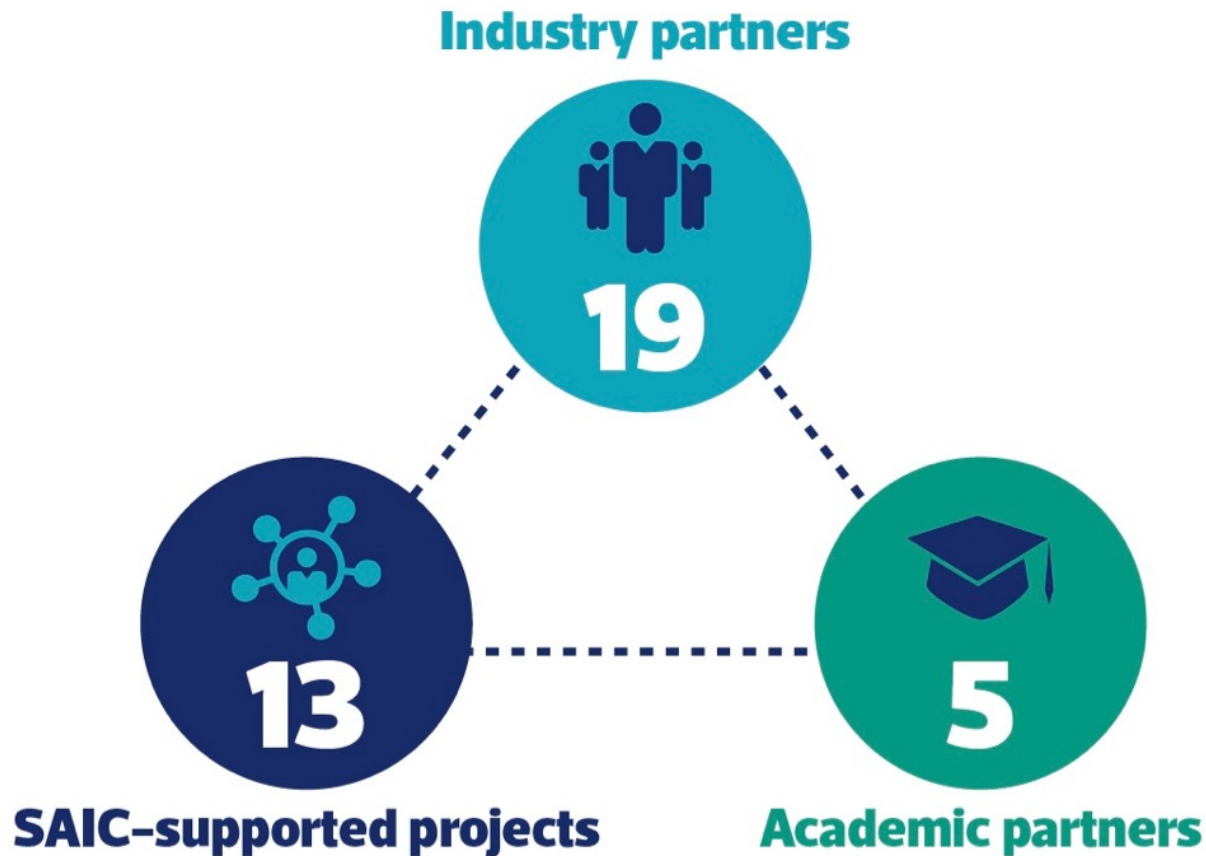
Industry investment per PIA



Demonstration projects



Connecting and collaborating



Industry and academic project partners



Project duration

**12 months
or less**



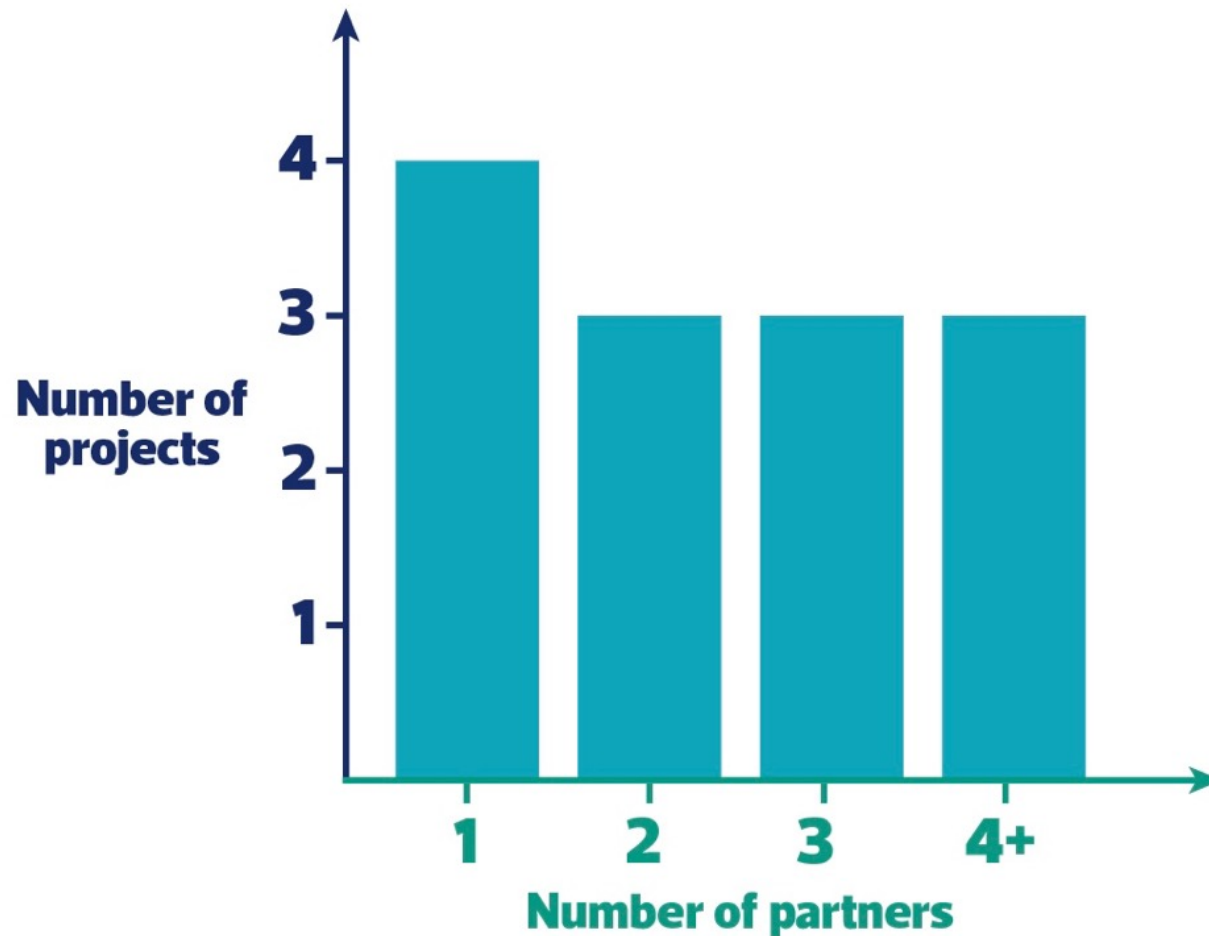
**1 to 2
years**



**2 years
or more**



Industry partnering industry



Industry investors



Scaling up production and deployment of cleaner fish

Partners: Marine Harvest Scotland, Scottish Sea Farms, BioMar and the Institute of Aquaculture at the University of Stirling

Project life: 42 months

Value: £4.05m, of which SAIC is contributing 21%



Improving cleaner fish vaccination methodology and technology

Partners: Aqualife, Scottish Sea Farms and the Institute of Aquaculture at the University of Stirling

Project life: 18 months

Value: £314k of which SAIC is contributing 37%



Developing diagnostic techniques for assessing fish health and the impact of sea lice treatment

Partners: Kames Fish Farming, Marine Harvest Scotland, Randox Food Diagnostics, Europharma Scotland and the University of the West of Scotland

Project life: 12 months

Value: £242k, of which SAIC is contributing 39%



Enhancing the health and welfare of lumpfish in hatchery production and salmon cages

Partners: Fish Vet Group, FAI Aquaculture, Scottish Sea Farms, the Scottish Salmon Company, Cooke Aquaculture and the Institute of Aquaculture at the University of Stirling

Project life: 24 months

Value: £475k, of which SAIC is contributing 25%



Exploring ultrasound-based technology for salmon delousing

Partners: Pulcea, University of Dundee and the Institute of Aquaculture at the University of Stirling

Project life: six months

Value: £99k, of which SAIC is contributing 40%



Establishing a sustainable supply and optimal deployment of lumpsuckers for sea lice control

Partners: Marine Harvest Scotland, Pharmaq, BioMar, the Scottish Salmon Company, Otter Ferry Seafish and the Institute of Aquaculture at the University of Stirling

Project life: 36 months

Value: £2.1m, of which SAIC is contributing 39%



Simulating *in vitro* Atlantic salmon intestinal microbiome system

Partners: Alltech, Marine Harvest Scotland, Nofima and the University of Glasgow

Project life: 18 months

Value: £360k, of which SAIC is contributing 28%



Developing a mobile biomarker detection device for seawater readiness monitoring

Partners: Europharma Scotland, PrimerDesign and the Institute of Aquaculture at the University of Stirling

Project life: 12 months

Value: £78k, of which SAIC is contributing 41%



Developing DNA-based metagenomic methodologies for seabed monitoring and aquaculture management

Partners: Marine Harvest Scotland, SEPA and SAMS at the University of the Highlands and Islands

Project life: 18 months

Value: £274k, of which SAIC is contributing 56%



Piloting a commercial mussel hatchery in Scotland

Partners: SSMG, Highlands and Islands Enterprise, and the University of the Highlands and Islands

Project life: 30 months

Value: £1.7m, of which SAIC is contributing 6%



Developing genetic tools for the successful management of mussel hatchery broodstock

Partners: Xelect and the NAFC at the University of the Highlands and Islands

Project life: 12 months

Value: £150k, of which SAIC is contributing 66%



Researching the technologies and processes required for a commercial mussel hatchery

Partners: SSMG, SAMS at the University of the Highlands and Islands, the Institute of Aquaculture at the University of Stirling and Marine Scotland Science

Project life: 30 months

Value: £366k, of which SAIC is contributing 55%



Knowledge exchange



Skills and training



Communication



01786 278322
scottishaquaculture.com

YouTube LinkedIn Facebook Instagram Twitter

News round-up



**WELCOME TO THE
NEW-LOOK SAIC
ROUND-UP**

Heather Jones
Chief Executive Officer

Welcome to the new-look news round-up from the Scottish Aquaculture Innovation Centre (SAIC).

It has been a productive few months with the SAIC-supported mussel hatchery and lumpfish projects about to get underway; our first two Rapid Response projects being

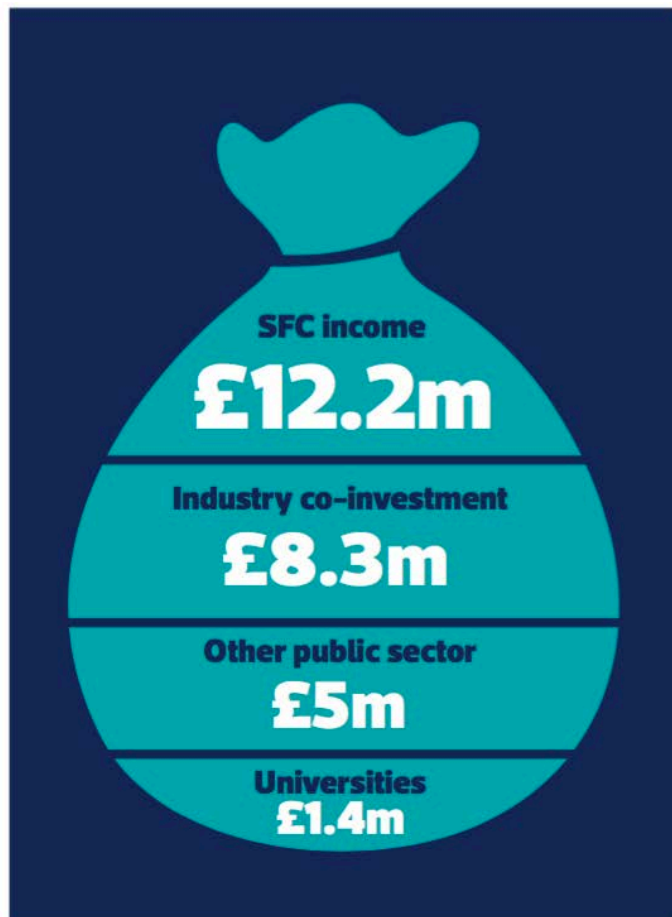
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- ALL SYSTEMS GO FOR AQUACULTURE UK 2016
- JUST DAYS LEFT TO ENTER FOR THE AQUACULTURE INNOVATION AWARD
- SAIC TO CO-FUND INDUSTRY INTERNSHIPS



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Five-year plan



2015 to 2025 impact



Source: SAIC Performance Monitoring and Targets Report by Ekos Ltd, August 2015.