

THE NEXUS NETWORK

new connections in food, energy, water and the environment

An ESRC investment

# Transdisciplinary Methods for Developing Nexus Capabilities Workshop

29 and 30 June 2015

University of Sussex

Wifi: 'Conferences'

Password: 'state his solid powder'

Why a Globalised Food System affects UK consumers

**Professor Guy Poppy**  
Chief Scientific Adviser to the FSA  
**University of Southampton**





Food  
Standards  
Agency  
food.gov.uk



Food Standards Agency  
Strategic Plan 2015-20

[www.food.gov.uk](http://www.food.gov.uk)

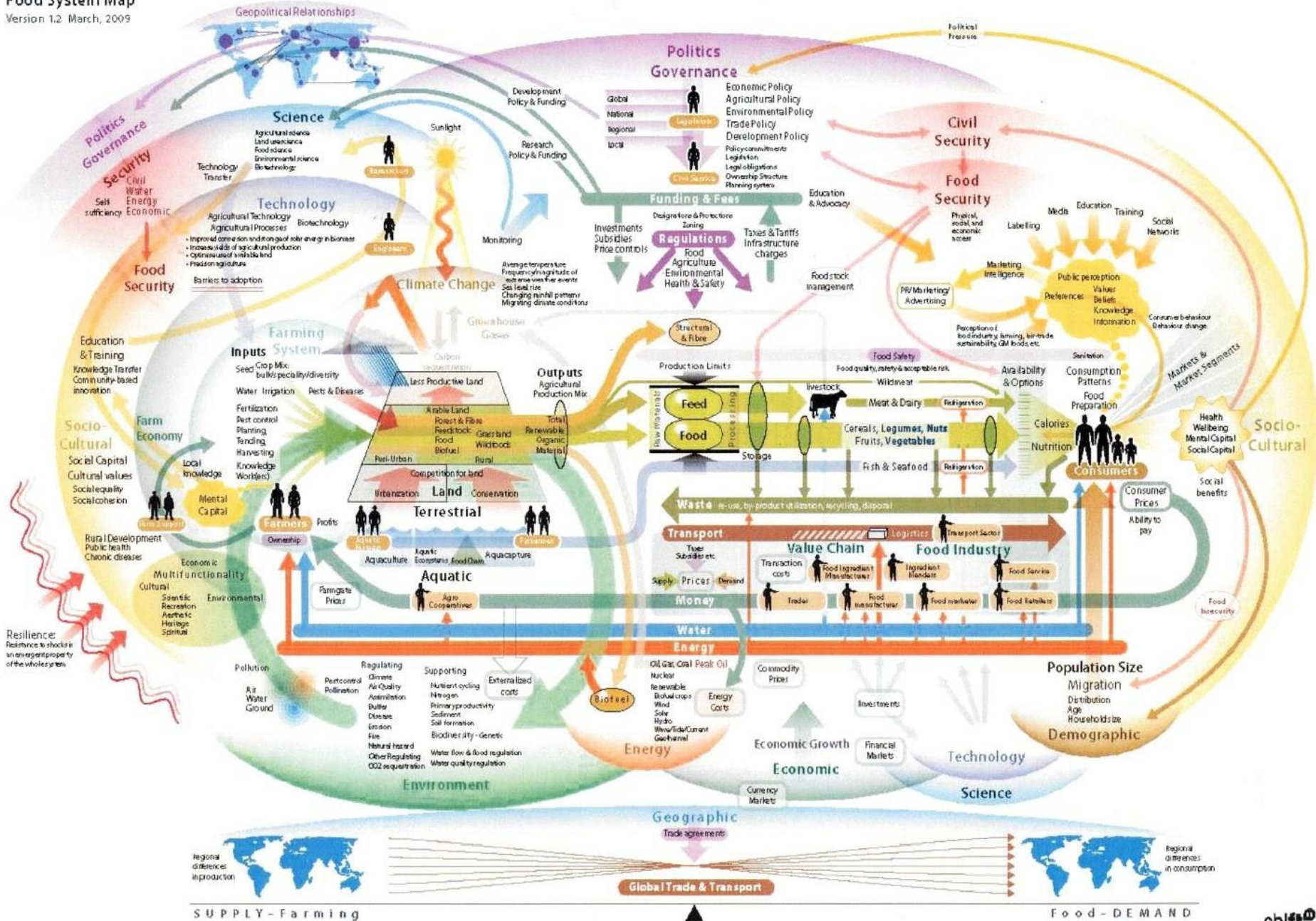
- In consultation with consumers we identified three consumer rights to underpin our work:
- The right to be protected from unacceptable levels of risk.
- The right to make choices knowing the facts.
- The right to the best food future possible.

- We will use science, evidence and information both to tackle the challenges of today, and to identify and contribute to addressing emerging risks for the future.



# The Global Food System

Food System Map  
Version 1.2, March, 2009



# Key facts on food system

## Number, type and distribution of food businesses – LAEMS data 2013

Risk category	Primary producers	Manufacturers and Packers	Importers/ Exporters	Distributors/ Transporters	Retailers	Restaurants and Caterers	Total
A	15	605	3	14	396	2,569	3,602
B	92	2,592	12	84	2,771	27,358	32,909
C	285	5,181	131	953	29,805	190,922	227,277
D	675	2,596	162	1,728	27,170	68,245	100,576
E	2,489	5,506	507	5,344	66,498	113,654	193,998
Not Yet Rated (NYR)	1,183	1,418	127	756	6,462	25,797	35,743
Outside *	1,157	387	163	685	2,610	9,036	14,038
<b>Total</b>	<b>5,896</b>	<b>18,285</b>	<b>1,105</b>	<b>9,564</b>	<b>135,712</b>	<b>437,581</b>	<b>608,143</b>
Breakdown by country							
England	3,589	13,448	995	7,838	111,687	359,533	497,090
Northern Ireland	59	994	41	415	4,330	13,946	19,785
Scotland	1,873	2,777	55	876	12,010	39,760	57,351
Wales	375	1,066	14	435	7,685	24,342	33,917

# Model results

## Scenarios modelled

Intervention		Campylobacter counts (cfu/g; post chill)		
		<100	100 - 1,000	>1,000
One intervention	Model Baseline	39%	33%	<b>28%</b>
	On farm - risk of contamination reduced by 50% per day	56%	24%	<b>20%</b>
	On farm - risk of contamination reduced by 25% per day	45%	30%	<b>25%</b>
	Slaughterhouse - electrolysed water	81%	16%	<b>3%</b>
	Slaughterhouse - lactic acid	78%	18%	<b>4%</b>
	Slaughterhouse - hot water	67%	23%	<b>10%</b>
	Slaughterhouse - Steam	71%	19%	<b>10%</b>
Two interventions	On farm + electrolysed water	86%	12%	<b>2%</b>
	On farm + lactic acid	84%	13%	<b>3%</b>
	On farm + hot water	66%	27%	<b>7%</b>
	On farm + steam	79%	14%	<b>7%</b>

## Final scenario agreed and used to set target

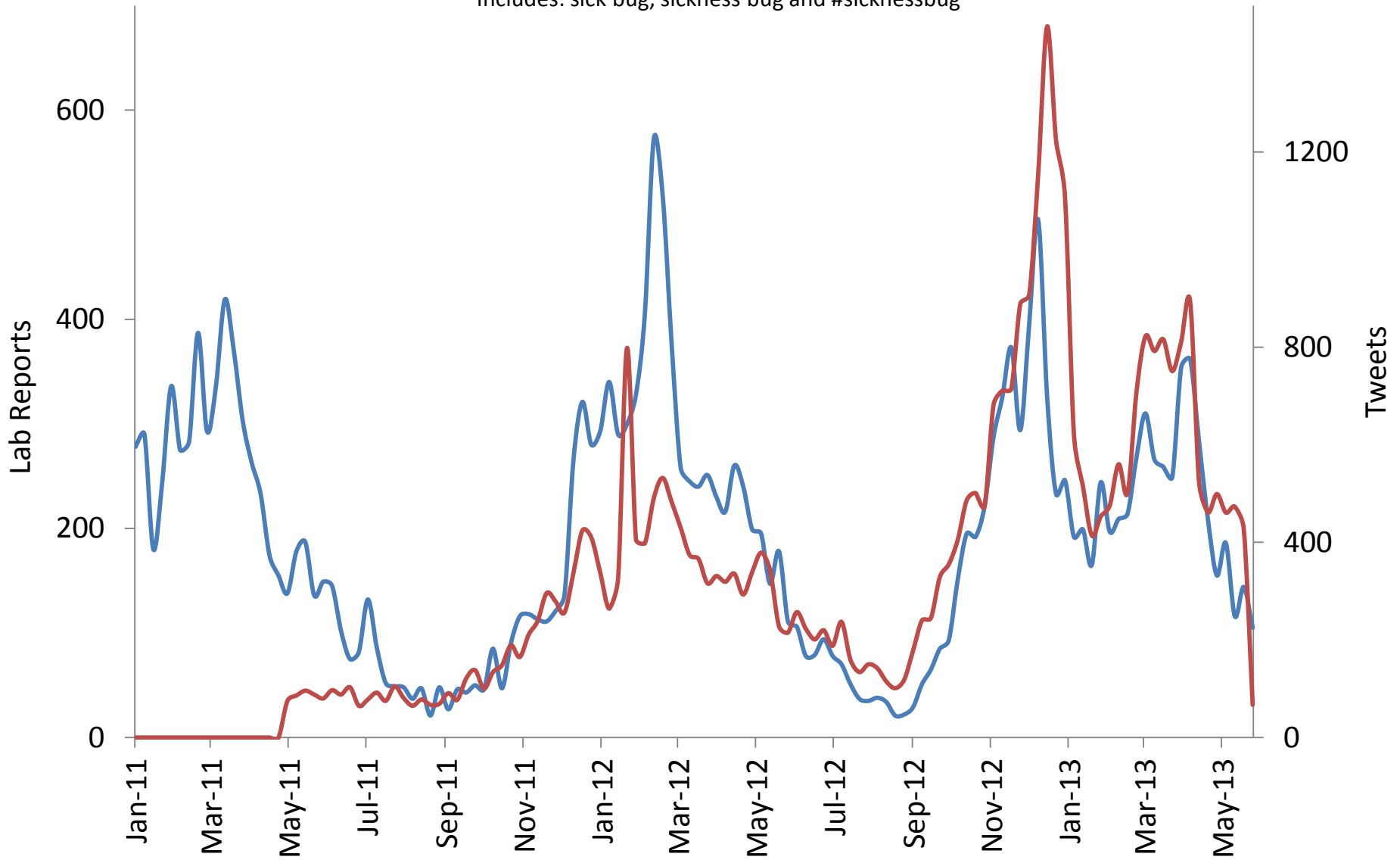
Intervention	Campylobacter counts (cfu/g; post chill)		
	<100	100 - 1,000	>1,000
On farm + representative slaughterhouse intervention	68%	22%	<b>10%</b>



# LAB REPORTS vs. TWEET VOLUMES

— Lab Reports — Sickness Tweets

\*Includes: sick bug, sickness bug and #sicknessbug



# Proportionate Risk Management and Risk Communication

- Certainty/Uncertainty
- Weight of Evidence
- Precaution and Innovation

# Measuring impact – never easy but can be useful for identifying how to use/prioritise science

## Using Economics

Key work areas 2014/15:

- Developing FSA Specific Health Outcome Measures:
  - Quality Adjusted Life Years (QALYs)
  - Consumer Willingness to Pay (WTP)
  - Cost of Foodborne Illness (COI)
- Impact Assessments (IAs)

# A POSSIBLE SCALE OF THE JUDGED QUALITY OF A RISK ANALYSIS

---

## **Star rating**

★★★★

4 star

## **Meaning**

We are fully confident of our understanding of the underlying process, so although we cannot predict what is going to happen, we can provide good numerical assessments.

---

★★★

3 star

We are reasonably confident in our analysis: we can expect numbers to change as we learn more, but not sufficient to justify major policy shifts.

---

★★

2 star

New evidence could have a substantial impact on our assessment, although no major new surprises are expected: we encourage a robust decision-making approach with some precaution and adaptivity.

---

★

1 star

We have very limited understanding of the process or possibilities, and so resilience to unexpected occurrences is called for.