

# Embedding sustainability into an undergraduate curriculum at Plymouth

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## Speaker:

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# Embedding sustainability into an undergraduate curriculum at Plymouth University

Janet Richardson

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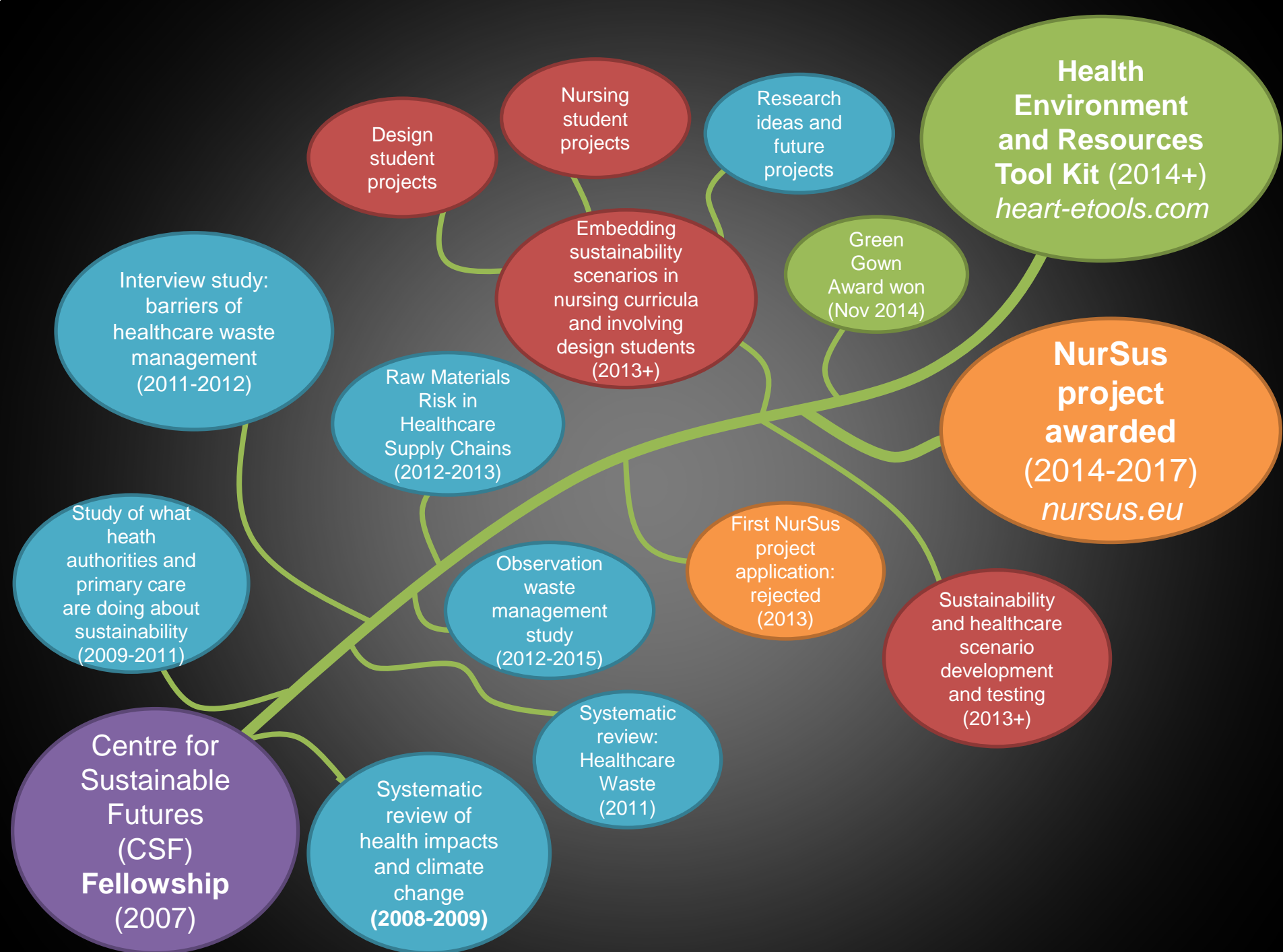
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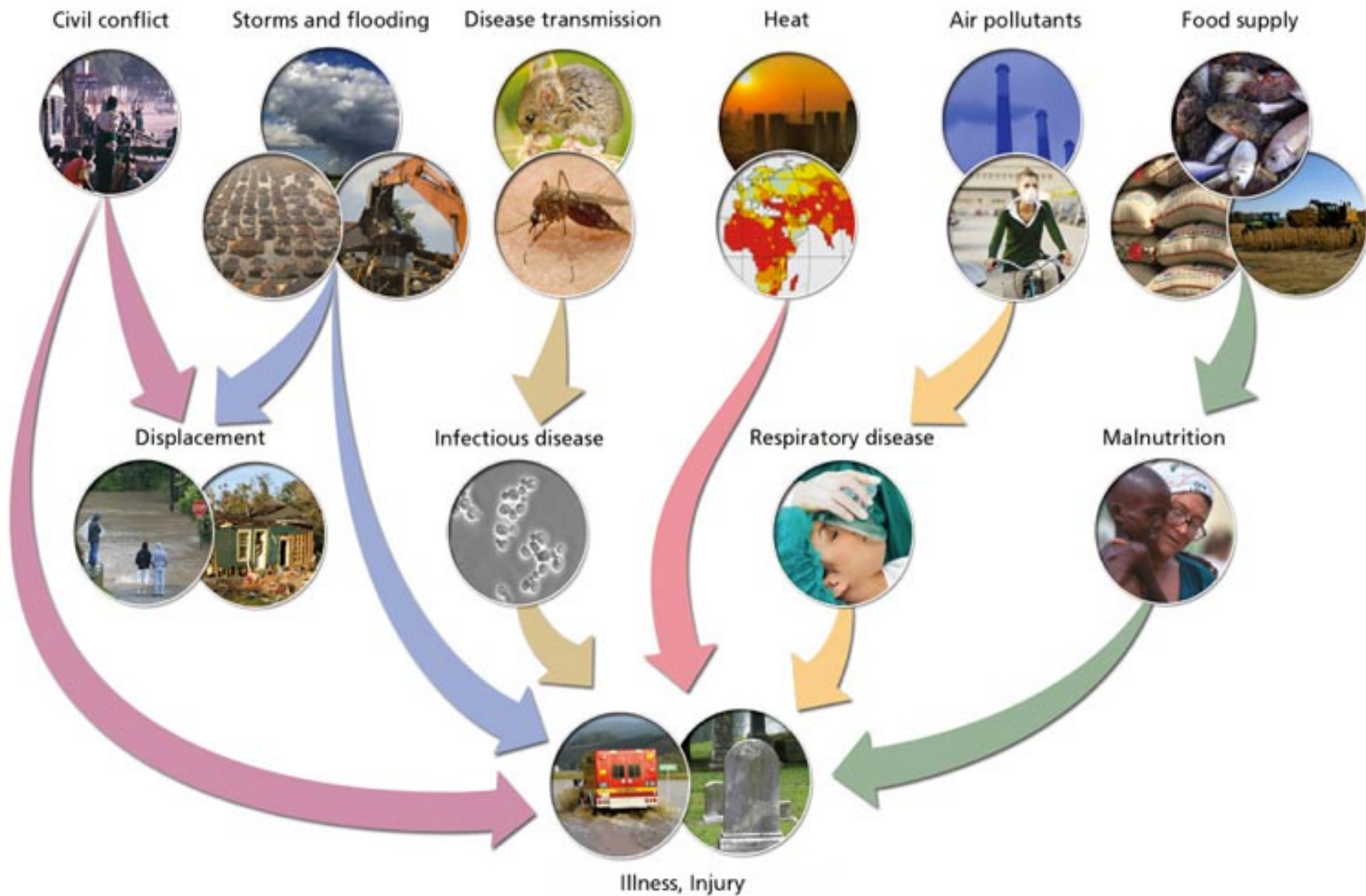




# **Centre for Sustainable Futures (CSF) Fellowship (2007)**

**Systematic review of health impacts and  
climate change: (2008-2009)**

# Climate Change Effects on Human Health



# Systematic Review: Conclusions

A number of papers report the potential health effects of climate change while others report policies and strategies to tackle these effects. However there is an urgent need to identify and report on the implementation of strategies to mitigate and adapt to these challenges and to publish real examples of actions (published 2009)

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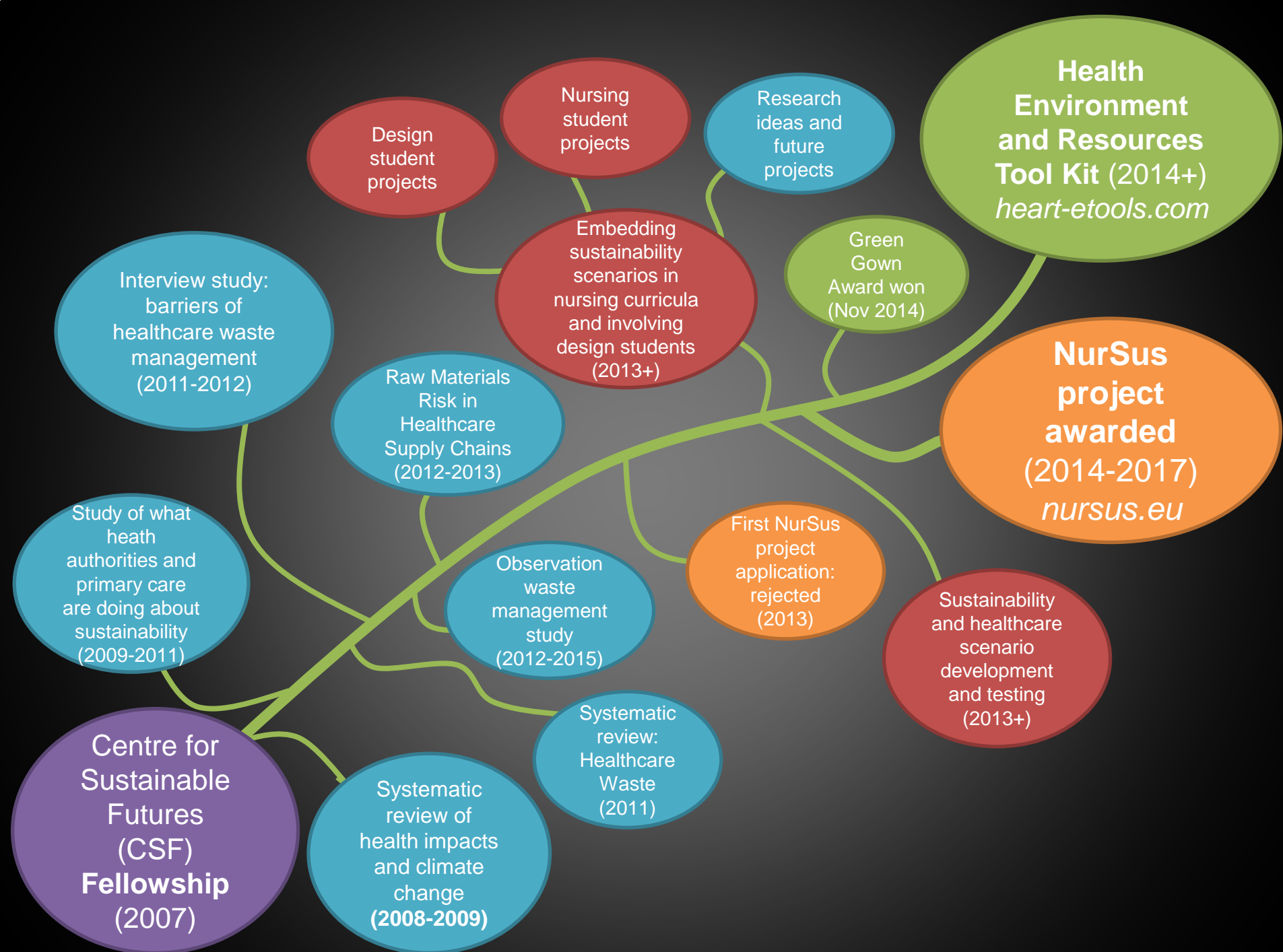
Study of what health authorities (England) are doing about sustainability (policy analysis):  
**(2009-2011)**

Study of what primary care organisations are doing about sustainability (policy analysis followed by survey):  
**(2009-2011)**



# Findings

- Results indicate that many SHAs in England have yet to embrace sustainability, or to integrate preparations for climate change and energy vulnerability within their organisational strategies (Published 2009)
- Primary Care: Evidence of good examples in sustainable development predominantly limited to policy statements and strategic aims; evidence of action was limited (estates / waste) (Published 2009)



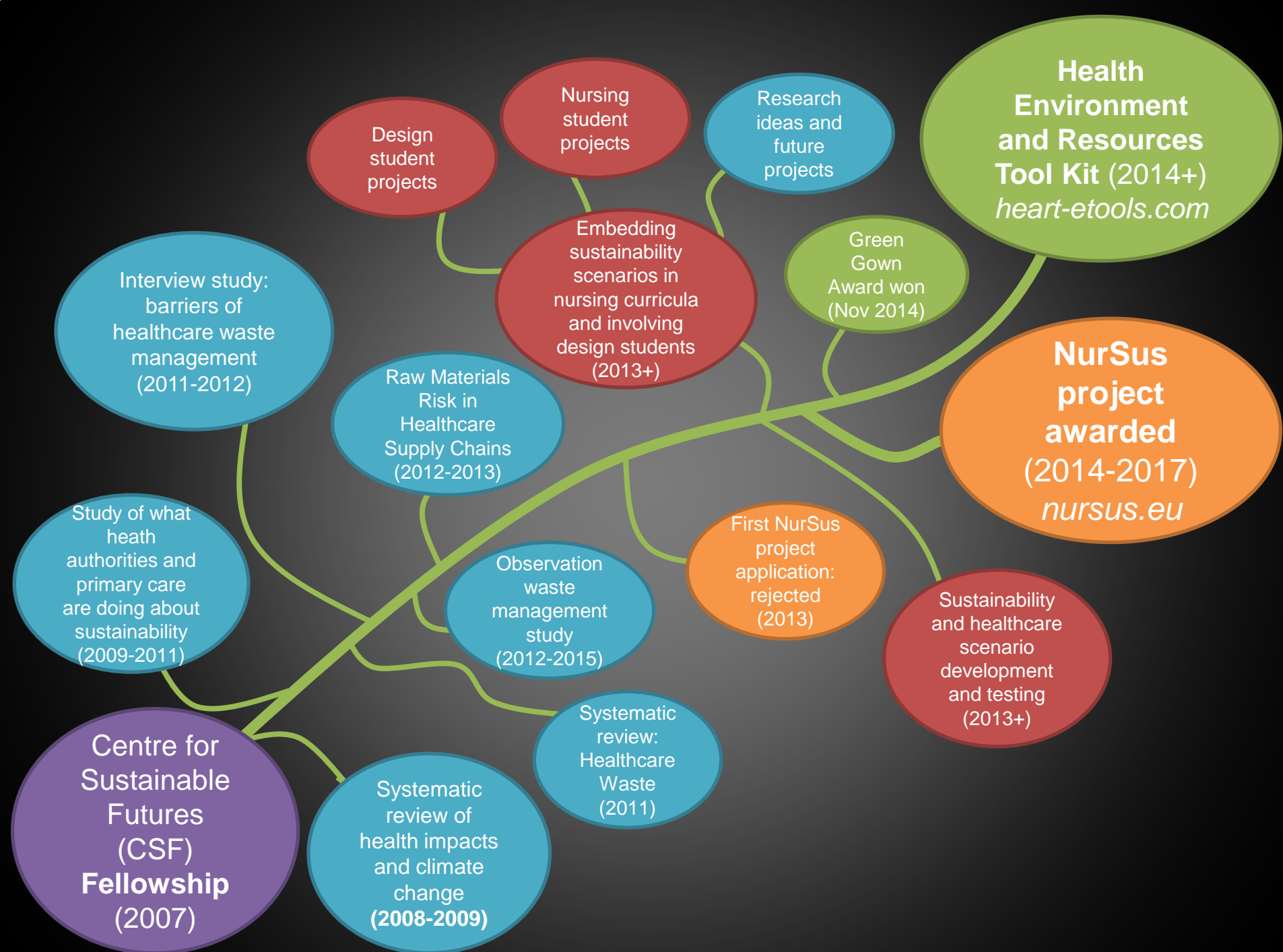
# Systematic Review: Factors that influence healthcare waste management

- Behaviour
- Context / environment
- Waste management approaches
- Employee strategies
- Purchasing strategies
- Overall policies
- Rethinking existing solutions



# Interview Study Barriers & Enablers







**EPQW**

European Pathway to **Zero Waste**  
Demonstrating the route to zero landfill

## A Guide to Identifying Raw Materials Risks

Available at: <http://www.wrap.org.uk/content/sustainable-procurement>

In partnership with

- Department of Health
- Cornwall Partnerships NHS Foundation Trust
- Royal Cornwall Hospitals NHS Trust
- Cornwall and Isles of Scilly Primary Care NHS Trust
- Peninsula Community Health

Project Ref: LIFE08 ENV/UK/000208 MPP001-010

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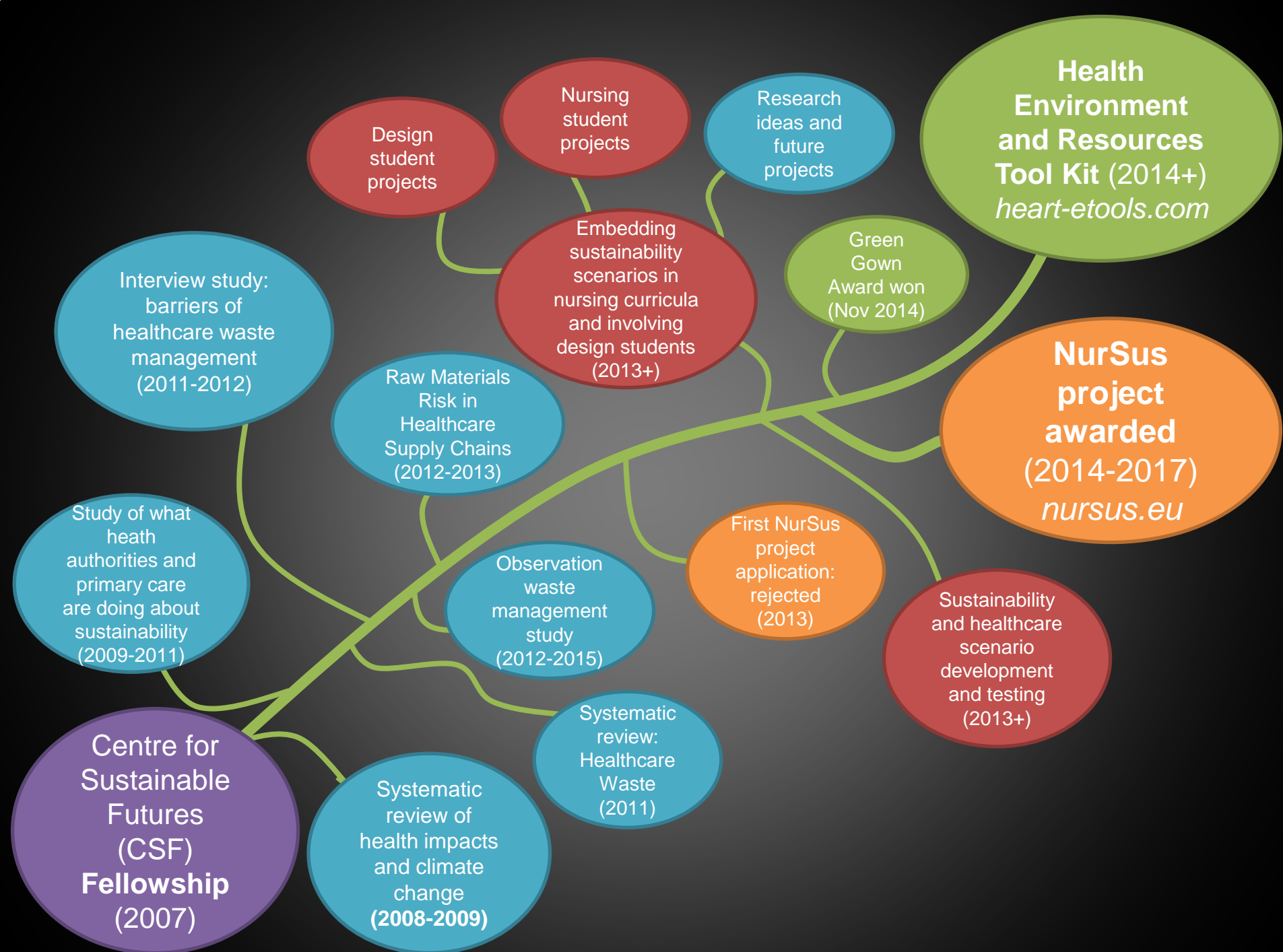
# Potential Resource Scarcity

Item		Item	
1	Administration sets	38	Lens intra-ocular
5	Bag resuscitation disposable	44	Orthopaedic prosthesis
6	Bag urine drainage	51	Procedure pack cardiac
10	Beds for hospital patients	52	Procedure pack theatre general
14	Cannula	53	Procedure pack cataract
16	Cardiac pacemakers	55	Renal consumables
22	Connector plastic	57	Stockings anti embolism
32	Gloves surgeons latex	58	Swabs cotton
36	Injector contrast media	66	Tube plastic blood collection
37	Laparoscopic shears	68	Tube plastic oxygen

# Potential Resource Scarcity and waste management in health & social care

- Scenarios: Based on research / evidence, tested with senior managers and practitioners (NHS / Academic)
- Resources: Focus on scarce natural resource and high impact items
- Waste: Focus on correct segregation, relative cost, and reduce, re-use, recycling potential





# Embedding sustainability in the curriculum

## Blocks

- Some colleagues didn't get it!
- 'No room in the curriculum'
- Not a priority for nursing or healthcare
- 'Sustainability not relevant to nursing'
- 'Not relevant to clinical practice'

## Enablers

- Enthusiastic / dynamic colleagues
- Embedded within clinical skills sessions
- Based on evidence and policy / national drivers
- Based on resources used in clinical practice
- Involved colleagues in a session





Nursing Sustainability by Design <http://youtu.be/zIFT2Dbq08o>

# Convincing people by results *evaluate, evaluate, evaluate*

- Before and after questionnaire
- Tests knowledge (source of plastic / cost of waste)
- Measures attitudes toward climate change and sustainability (and inclusion in curriculum)
- Data on 293 students (during 2013-14)

# Evaluation Results: Knowledge

- Students initially demonstrated limited knowledge about natural resources used in the production of items used in healthcare; they engaged in discussions following the use of Internet resources, and were able to segregate waste appropriately
- Source of plastic; cost of clinical & domestic waste  $p < 0.000$
- Comments on the questionnaire indicated a high level of engagement and interest in the subject.

## Evaluation Results: Attitudes 7 point Likert Scale

- Climate change is an important issue for nursing
- Include in the nursing curriculum
- Sustainability is an important issue for nursing
- Include in the nursing curriculum
- Apply sustainability principles in my nursing practice
- Apply sustainability principles at home
- Segregation of healthcare waste is important

*P* < 0.000 (more likely to strongly agree after participating in the scenarios)

# Moving Forward: Health Environment and Resources Toolkit (HEaRT)

<http://heart-etools.com/>





<https://www.plymouth.ac.uk/schools/school-of-nursing-and-midwifery/sustainability-in-the-school-of-nursing-and-midwifery>



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