

UK Research  
and Innovation



Imperial College  
London

# Support for breastfeeding is an environmental imperative



Support for breastfeeding is an environmental imperative  
Formula milk contributes to environmental degradation and climate change Conversations around the complex subject of infant feeding hav...  
[bmj.com](https://bmj.com)

Dr Natalie Shenker  
BM BCh, MSc, PhD

# From medicine to milk

**2003-2009**  
**Surgery**

**2009 – 2015**  
**MSc / PhD**

**2016 – 2019**  
**“Postdoc”**

**2019 -**  
**UKRI FLF**







Litres donor milk

250  
200  
150  
100  
50  
0



Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar April May June July Aug Sept Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

2017

2018

2019

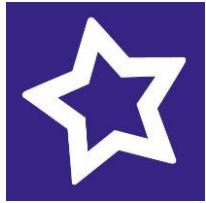


Donor milk for  
sick babies in  
hospital

Donor milk for  
families in the  
community



Clinical Commissioning Group



Innovative  
research



Educational  
resources

UK Research  
and Innovation

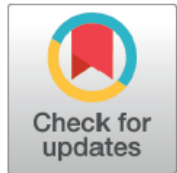
Global reach



Swansea University  
Prifysgol Abertawe

Imperial College  
London





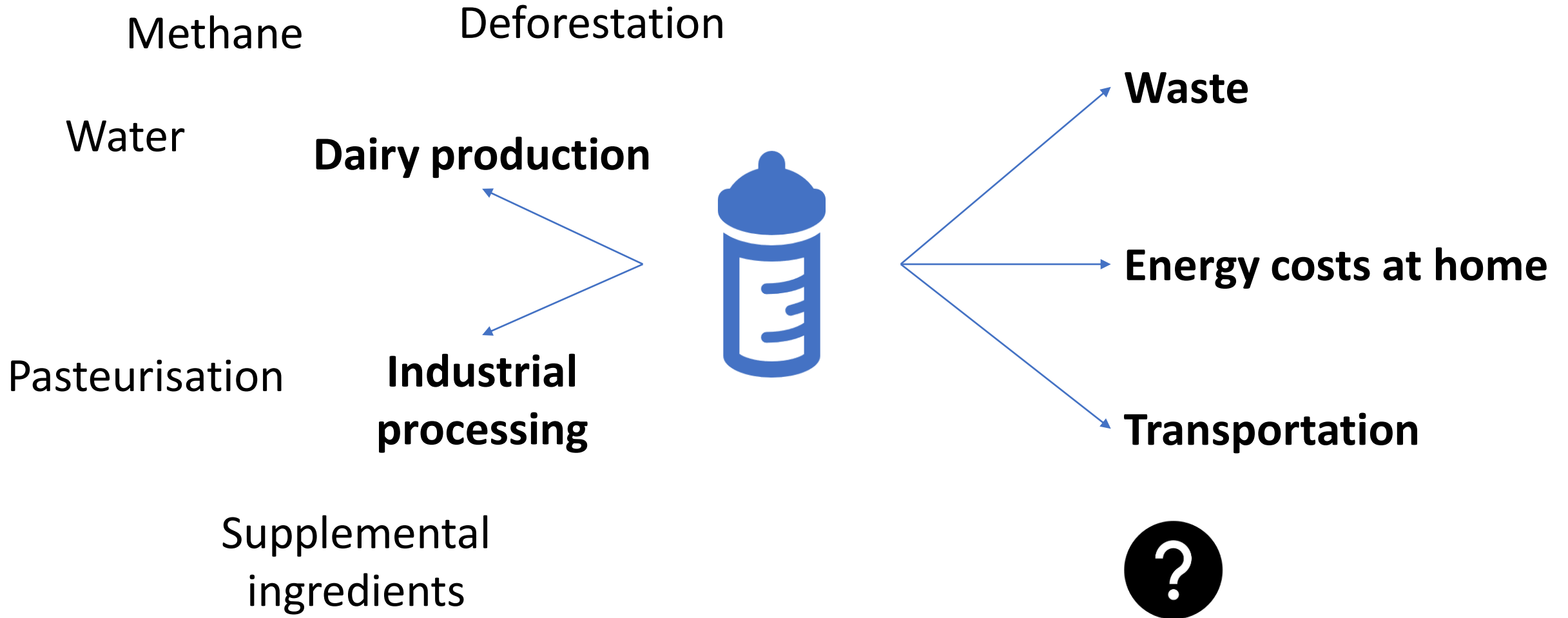
# EDITORIALS

## Support for breastfeeding is an environmental imperative

Formula milk contributes to environmental degradation and climate change

Naomi Joffe *technician and environmental lead*, Flic Webster *milk donor*, Natalie Shenker *researcher*

# Carbon footprint of formula production



# Carbon footprint of infant feeding



11-14 kgCO<sub>2</sub>e per kg BMS  
21 kg needed to feed babies to 6/12



5.9 – 7.8 kgCO<sub>2</sub>e to replace 1 kg  
BMS

**103 – 126 kgCO<sub>2</sub>e net reduction per baby over 6 months**



# Carbon footprint of infant feeding

Imperial College  
London

THE CONVERSATION

Academic rigour, journalistic flair

Q Search analysis, research, academics...

Arts + Culture Business + Economy Cities Education Environment + Energy Health + Medicine Politics + Society Science + Technology

Arts + Culture



**Breastfeeding can help tackle climate crisis but it's on governments, not mums to save the world**

October 7, 2019 5:25pm BST

GRAZIA

FASHION ▾

BEAUTY & HAIR ▾

CELEBRITY ▾

LIFE ▾

NEWSLETTER

SUBSCRIPTIONS ▾

SHOP

The Telegraph

Home > News > Science

**Breastfeed to save the planet say as study exposes infant damage to environment**



HUFFPOST

PARENTS

## This Is The Environmental Cost Of Formula Milk

*Taking action to support breastfeeding mothers would equate to taking 77,500 cars off the road, argue experts.*

By Mike Rampton

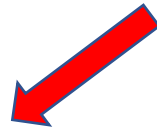
02/10/2019 11:30pm BST | Updated October 4, 2019



## Women Are Being Told They Need To Breastfeed To Stop Climate Change

Why does the responsibility always seem to fall to women?





BMJ 2019;367:j5646 doi: 10.1136/bmj.j5646 (Published 2 October 2019)

Page 1 of 2

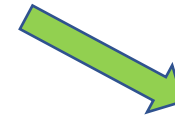


## EDITORIALS

### Support for breastfeeding is an environmental imperative

Formula milk contributes to environmental degradation and climate change

Naomi Joffe *technician and environmental lead*, Flic Webster *milk donor*, Natalie Shenker *researcher*



- Fed is Best
- The dairy lobby
- A male psychologist from New York

- Grantham Institute
- WABA
- Everyone else...

**And infant formula companies have started to shout about their green credentials**

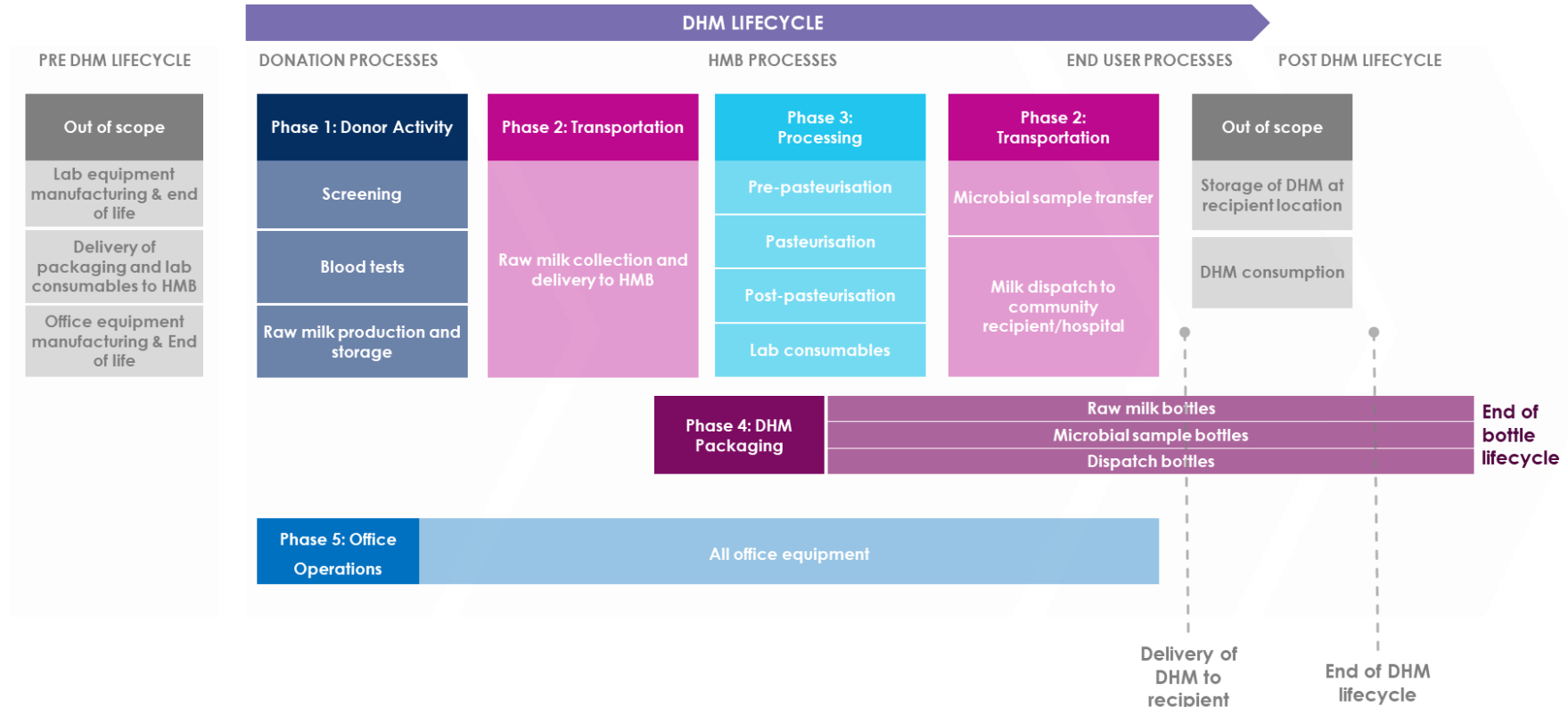


# Carbon footprint of infant feeding



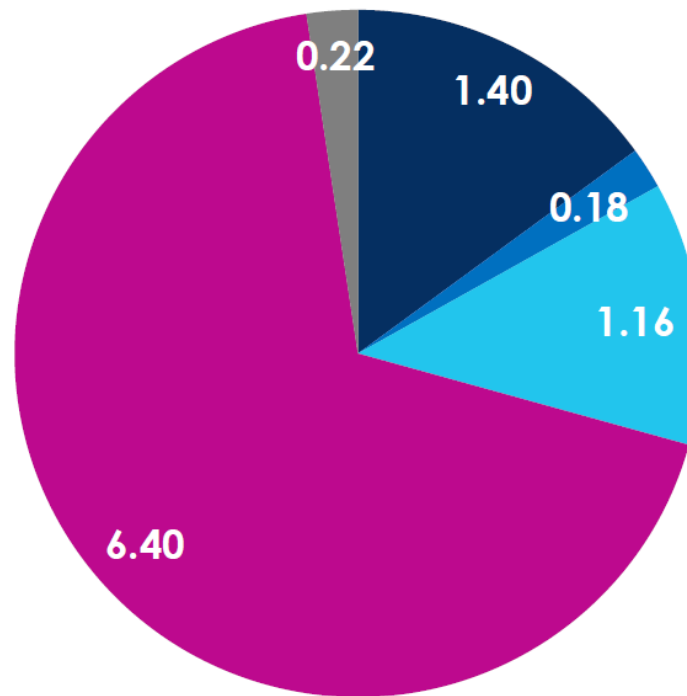
## Imperial CEP MSc on Environmental Technology:

- Thea Chung
- Melanie Stephen
- Roselle Houston
- Peter Huppertz
- Chloe Parking
- Pai Lui



# Carbon footprint of infant feeding

## Results and Key Findings



Total CFP = **9.36 kgCO<sub>2</sub>e/litre** DHM

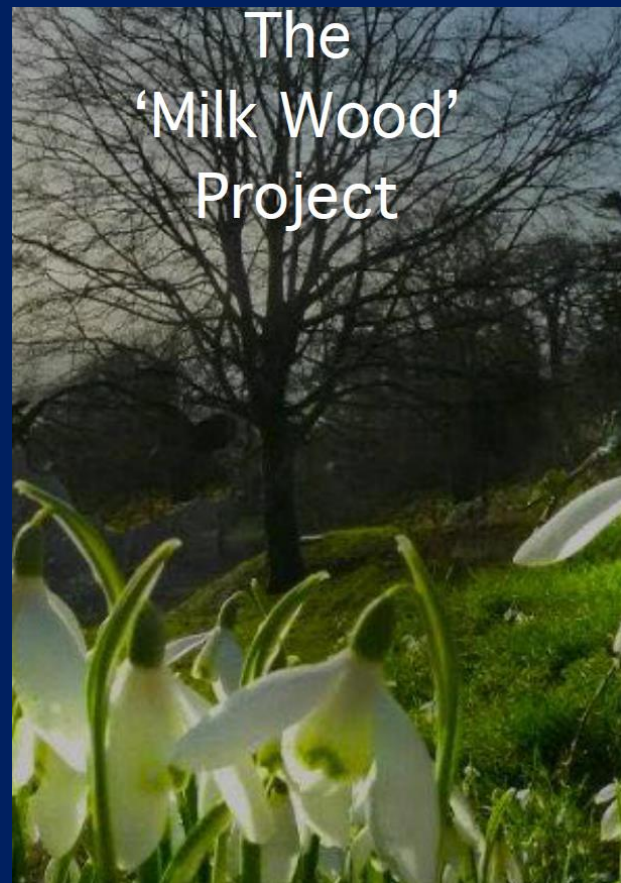
Donor Activity	(15%)
Office operations	(2%)
Processing	(12%)
Transportation	(68%)
Packaging	(2%)

Figure 1. Carbon footprint by LCA phase (kgCO<sub>2</sub>e/l)





## The 'Milk Wood' Project



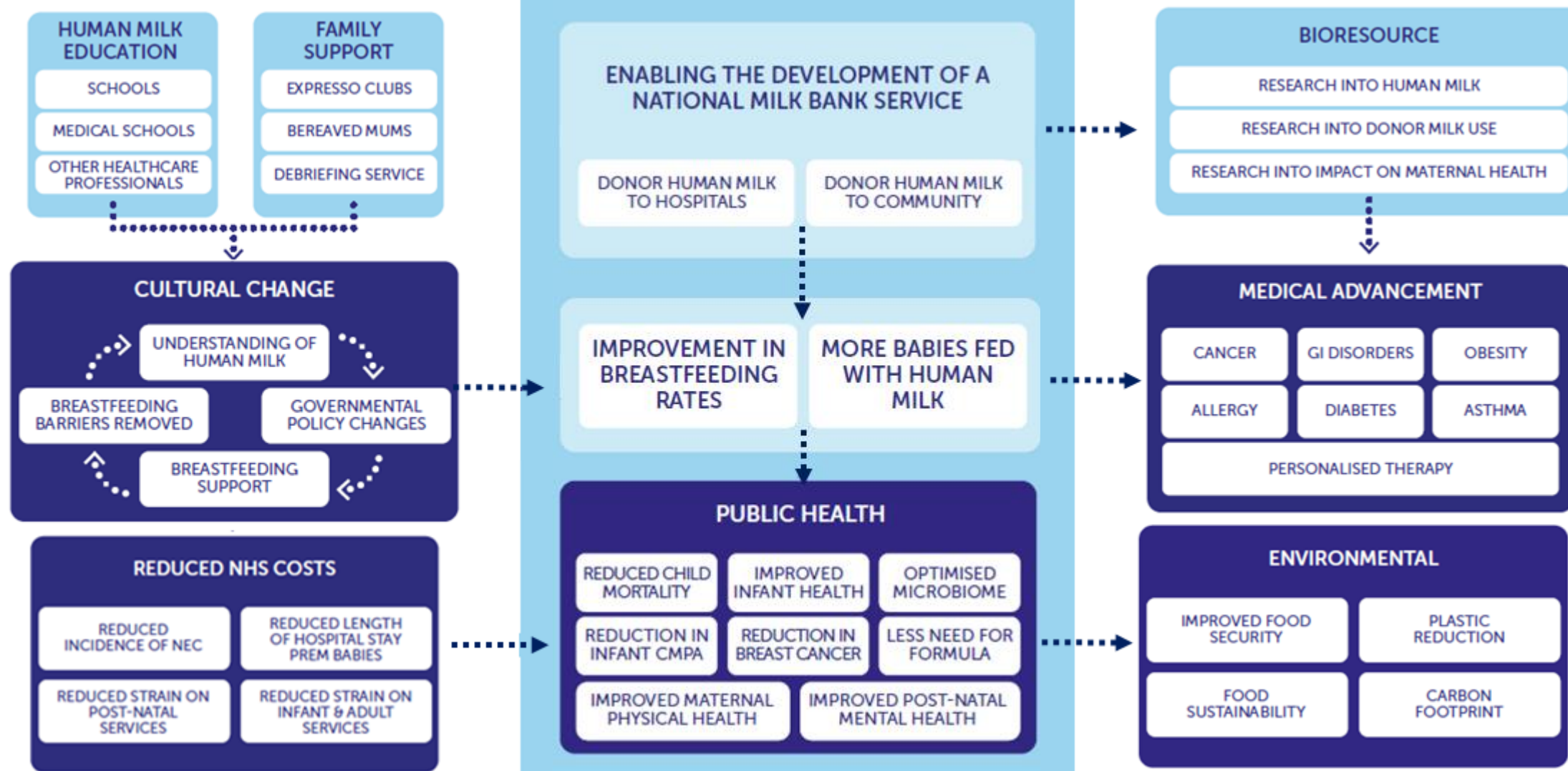
Becoming the first ever  
carbon neutral milk bank

The 'Milk Wood' will be a beautiful local place in Hertfordshire where we will plant a tree to offset the carbon footprint of every milk donor, and a snowdrop for every bereaved mum who donates milk to us. This will raise awareness about milk donation whilst also contributing to sustainability.

## Support & Study

## Supply

## Science







[natalie@humanmilkfoundation.org](mailto:natalie@humanmilkfoundation.org)

@DrNShenker, @milk\_foundation

<https://humanmilkfoundation.org>

© Human Milk 2017

