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# Measuring and Valuing Women's Productivity: The Mothers' Milk Tool

Julie Smith
Australian National University
Webinar Chair

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Alive & Thrive Southeast Asia
Webinar Co-chair

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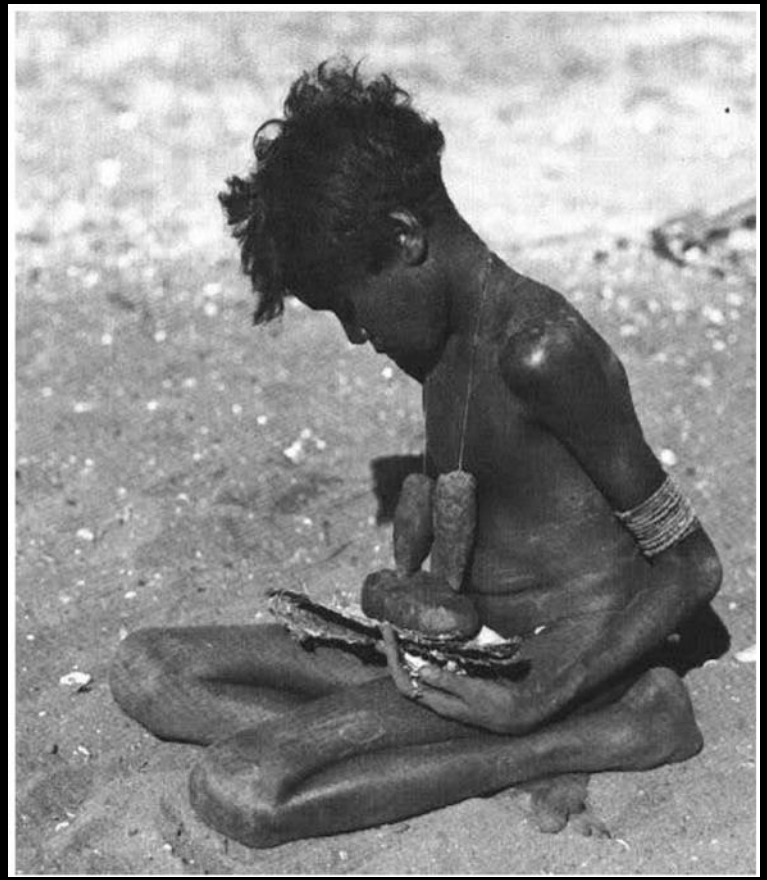
World Breastfeeding Trends Initiative Australia
Webinar Manager

# Acknowledgement of Country

"A mother normally fed a child at the breast until the age of three or four. To abandon breastfeeding at an early age was risky.

… the traditional emphasis on breastfeeding was a boon for the Aborigines"

Professor Geoffrey Blainey. The Story of Australia's People, 2015.



Donald Thompson, Children of the Wilderness

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## MOTHERS' MILK TOOL

### SOCIAL MEDIA TOOLKIT

**Overview**

Breastfeeding and mothers' milk is presently not counted in food systems or the economy but should be. The Mothers' Milk Tool will help.

Money is the language of policymakers. Counting human milk production in food and economic statistics will assist in better policy decision-making and investments in women's unpaid care work. The Mothers' Milk Tool quantifies the volume of breastmilk and value of breastfeeding at national and global levels, as well as how much is lost if country environments and policies, or healthcare, work and community settings do not enable women's and children's rights to breastfeeding.

The Australian National University and Alive & Thrive Southeast Asia have partnered to develop this easy to use, downloadable tool that makes more visible the economic value contributed to society by women's unpaid care work through breastfeeding of infants and young children.

## What do our users say?

This is very exciting, and personally, we believe the tool will be very useful in our effort to promote breastfeeding among the public and policy makers.

**Adiatma Y. M. Siregar**
Director
CEDS Universitas Padjajaran
Indonesia

The individual data is just sensational. I'm so excited to let my partner know about that. I know the first question he will ask is "And how was that calculated?"

**Malvina Walsh**
Advocate for IYCF protection and support
Baby Feeding Law Group
Ireland

Thank you - it was fun using the tool! We believe it can be useful for training and in public health initiatives.

**Anne Bærug**
Nutritionist
Unit on Breastfeeding, Norwegian Institute of Public Health
Norway


# Are you on social media?

Please share

## Primary hashtag

#MothersMilkTool

## Handles

@aliveandthrive
@fhisolutions
@ANUPopHealth

Envato

# Program - Rationale and Introduction

**Opening remarks: What GDP ignores and we care about: the economics of health for all**

*Professor Dame Marilyn Waring, Auckland University of Technology, New Zealand*

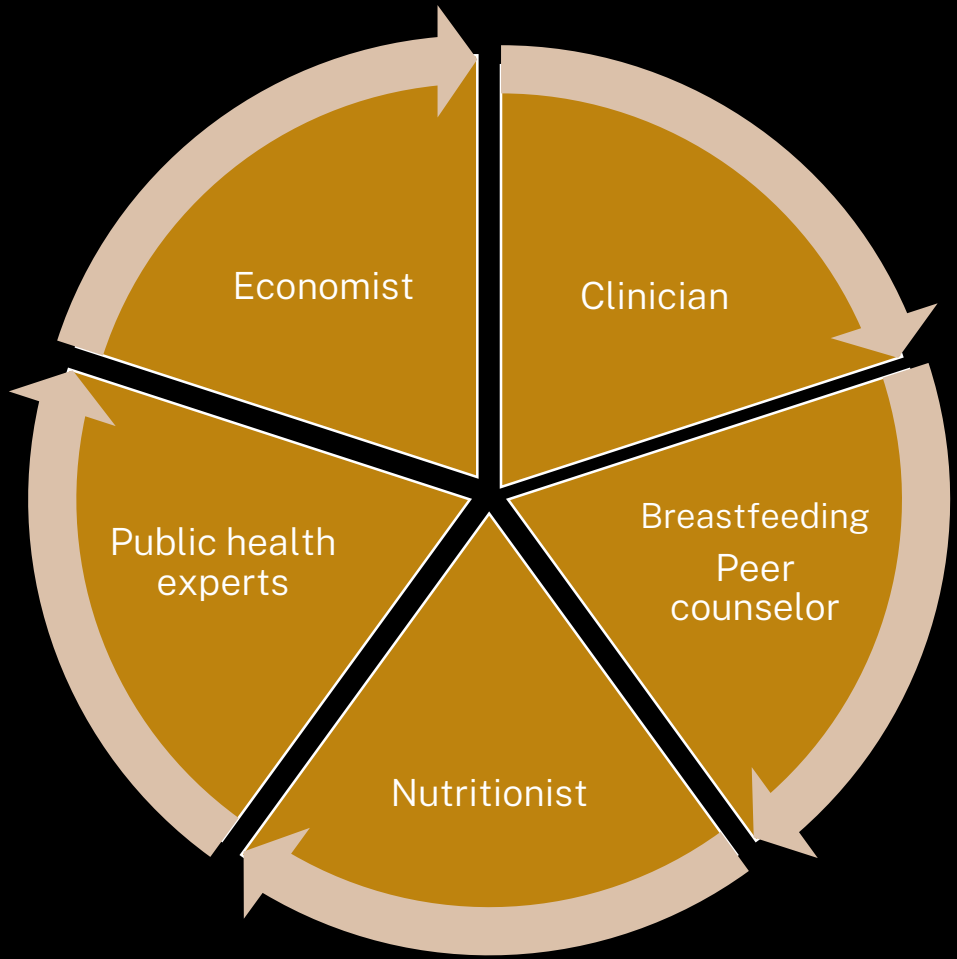
**Breastfeeding economics & 'lost milk': making mothers' productivity visible and valued**

*Dr Julie Smith, Australian National University, Australia*

**Introducing the Mothers' Milk Tool**

*Mr Alessandro Iellamo, Independent Consultant, United Kingdom*

# Program
# -
# User's perspectives



# Program - Uptake of the Tool

**The Mothers' Milk Tool as a lever for transformative change in first food systems**

*Dr Phil Baker, Institute for Physical Activity and Nutrition (IPAN), Deakin University, Australia*

**Processes for successful uptake of nutrition modelling tools**

*Ms Frances Knight, London School of Hygiene and Tropical Medicine (LSHTM)/World Food Program, United Kingdom/Italy*

**Q&A and Mothers' Milk Tool Logo Voting**

*Dr Tuan Nguyen, Alive & Thrive Southeast Asia, Vietnam*

# Opening remarks: What GDP ignores and we care about: the economics of health for all

*Professor Dame Marilyn Waring*

*Auckland University of Technology*

*New Zealand*

# Breastfeeding economics & ‘lost milk’: making mothers’ productivity visible and valued


*Julie P Smith, PhD, BEc (Hons)/BA*
*Honorary Associate Professor and ARC Future Fellow*

*College of Health and Medicine, Australian National University*

*Australia*


# Objectives

1. Recognise the costs of not breastfeeding
2. Know how the economic statistics framework treats breastfeeding and why it is not counted
3. Understand the thinking behind the Mothers' Milk Tool

# Outline

| | |
|---|---|
| 1 | The costs of not breastfeeding |
| 2 | GDP and measures of economic value |
| 3 | The Mothers' Milk Milk Tool and its development |
| 4 | How the tool may help |
| 5 | What next? |

Research to enhance measurement, understanding, and policy regulatory approaches to emerging markets and trade in mothers' milk

This research will contribute to public policy by. Exploring issues arising out of growing market exchanges of human milk. It. Will consider how best to balance health benefits of human milk for babies, with hazards of exchange, and with risks of weaning infants from breastfeeding too early, and will improve methods to measure **its economic value**.

## Questions

- **Can the increased commodification of breastfeeding improve economic and national accounting methods for measuring its economic value?**
- Can new theoretical perspectives provide a more coherent organising framework for regulation on markets in milk
- How to maximise benefits, balance risks and minimise costs and harms of necessary regulation?

1

# Planetary health economics 101 for mammals’

- People are mammals
- Milk is ‘species-specific’
- Human mothers and babies are ‘designed’ for breastfeeding and human milk

Commercial milk formula is modified cow's milk – designed for baby cows

Unmeasured cost consequences for:

- **Human health**
- **Human cognition**
- Environment
- Animal welfare

'These unmeasured and unpriced 'externalities' create market incentives for harming others

# Unmeasured productivity, and costs of invisibility

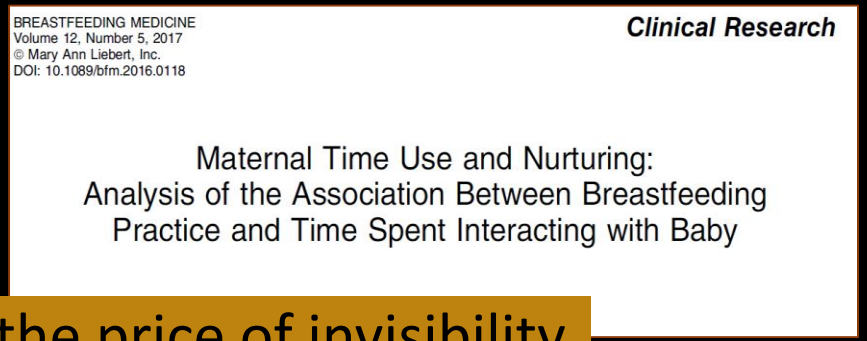

Smith and Forrester *International Breastfeeding Journal* (2021) 16:7
https://doi.org/10.1186/s13006-020-00347-z

International Breastfeeding Journal

RESEARCH Open Access

Association between breastfeeding and new mothers' sleep: a unique Australian time use study

Julie P. Smith[1*] and Robert I. Forrester[2]


BREASTFEEDING MEDICINE
Volume 12, Number 5, 2017
© Mary Ann Liebert, Inc.
DOI: 10.1089/bfm.2016.0118

*Clinical Research*

Maternal Time Use and Nurturing:
Analysis of the Association Between Breastfeeding Practice and Time Spent Interacting with Baby


*Original Research*

**Who Pays for the Health Benefits**
**Exclusive Breastfeeding? An Analy**
**of Maternal Time Costs**

**J. P. Smith, BEc (Hons), BA, PhD[1], and Robert Forr**

Who pays the price of invisibility and inaction – mothers and others?

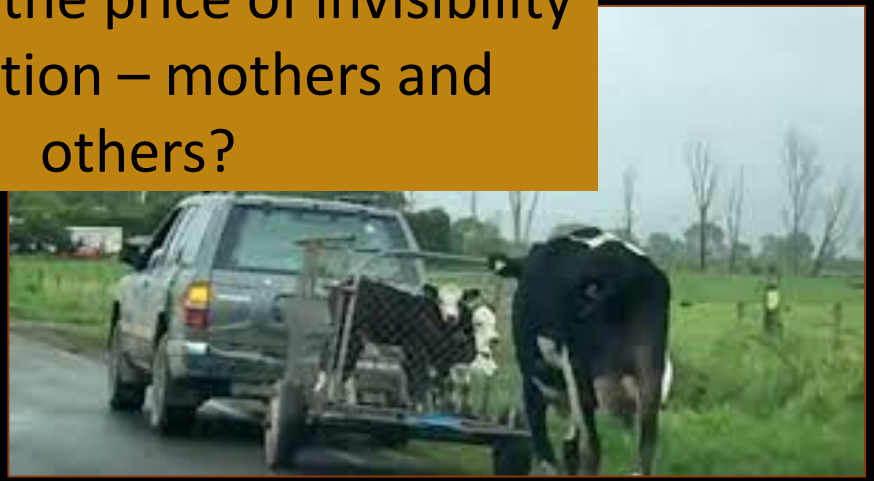

Smith *International Breastfeeding Journal* (2019) 14:49
https://doi.org/10.1186/s13006-019-0243-8

International Breastfeeding Journal

COMMENTARY Open Access

A commentary on the carbon footprint of milk formula: harms to planetary health and policy implications

Julie P. Smith

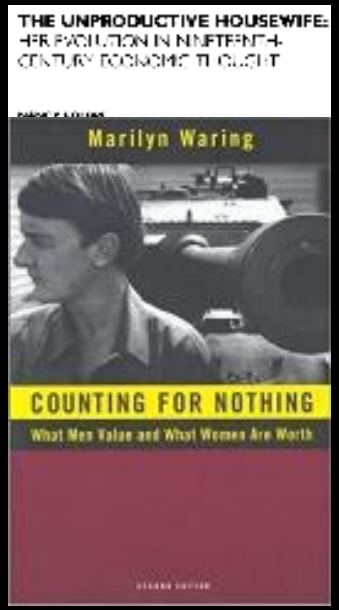


# 2 Measuring economic value

*An unusual depletion in the crude oil reserves of an oil-producing country of Asia or Latin America would be termed a crisis. Its economic and social implications would be so apparent that actions to reverse the trend would be awarded high priority. Yet a comparable crisis, involving a valuable natural resource and losses in the hundreds of millions of dollars, is going virtually unnoticed in many of the poor countries of the world. The resource is human breast milk, and the loss is caused by the dramatic and steady decline of maternal nursing in recent decades.*

World Bank nutritionist Alan Berg, 'The crisis in infant feeding practices', 1973

# Counting for nothing in economic statistics

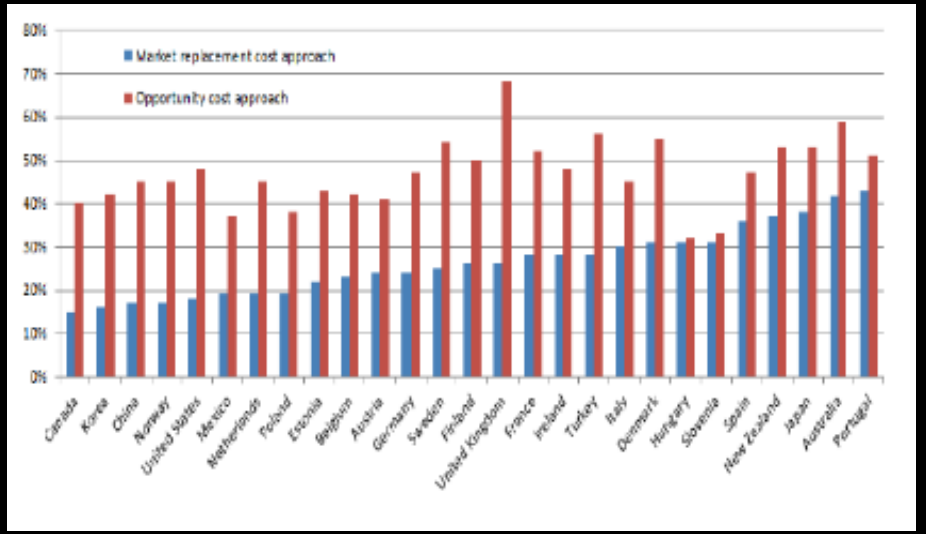



- Early measures of the economy counted unpaid work
- Rules for measuring GDP in the economic statistics framework were standardised by the UN SNA from 1950
- GDP now only counts monetised economic activity

- GDP growth is wrongly seen as a measure of economic performance and development
- The SNA been famously described as ‘applied patriarchy’ (Waring 1988)

# Recognition of non-market household production


UN Women/Neelabh Banerjee




Australian Bureau of Statistics (ABS) (2014). Spotlight on the national accounts: unpaid work and the Australian economy. 2017.

Around 40% of GDP, or more

# Why measuring breastfeeding in food statistics?

- Breastfeeding exemplifies the gender, environmental and human capital measurement problems in global economic statistical systems
- Breastfeeding has many values far beyond economic

Envati

# Why measuring breastfeeding in food statistics?

- NOT measuring its production in food statistics and its monetary value in GDP can suggest it has NO value.
- If perceived to have no dollar value, societal resources are less likely to be allocated to protecting it.

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# Why measuring breastfeeding in food statistics?

SNA rules allow countries to count production and consumption of all commodities in GDP, including mother's milk

- Is feasible to measure and include using conventional methods
- Is substantial in value, shifts across sectors over time responding to market forces

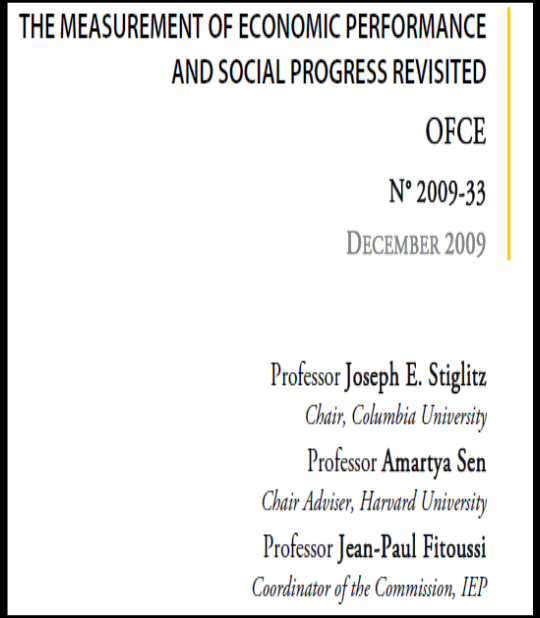
Alive & Thrive

Smith, J. P. (2018). Valuing Human Milk in GDP: Market Values for Imputation of Non Market Household Production through Breastfeeding. Paper presented at the 35th IARIW General Conference, Denmark.

-- (2017 ). Increasing GDP relevance and usefulness in a changing, globalising world - arguments for measuring a unique and complex food - human milk - in GDP. Paper presented at the IARIW-Bank of Korea Conference "Beyond GDP: Experiences and Challenges in the measurement of Economic Well-being," Seoul, Korea

# What we measure affects what we do…

*What we measure affects what we do; and if our measurements are flawed, decisions may be distorted. Policies should be aimed at increasing societal welfare, not GDP….This report, building on extensive earlier work, describes the additions and subtractions that can and should be made to provide a better measure of welfare.*


THE MEASUREMENT OF ECONOMIC PERFORMANCE AND SOCIAL PROGRESS REVISITED

OFCE

N° 2009-33

DECEMBER 2009

Professor Joseph E. Stiglitz
*Chair, Columbia University*

Professor Amartya Sen
*Chair Adviser, Harvard University*

Professor Jean-Paul Fitoussi
*Coordinator of the Commission, IEP*

Stiglitz, J.E., Sen, A., and Fitoussi, J.-P. (2009) The measurement of economic performance and social progress revisited; Reflections and overview, Centre de recherche en économie de Sciences Po (OFCE).

# Statistics matter …

*Why do statistics matter? In simple terms, they are the evidence on which policies are built.'*

*World Bank, 2000*

# Bankers and breastmilk

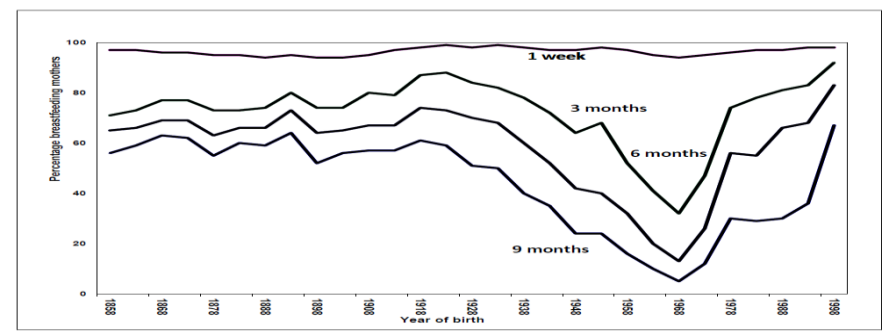
**Increasing GDP Relevance and Usefulness in a Changing, Globalising World – Arguments for Measuring a Unique and Complex Food - Human Milk - in GDP**

Julie P. Smith (Australian National University)

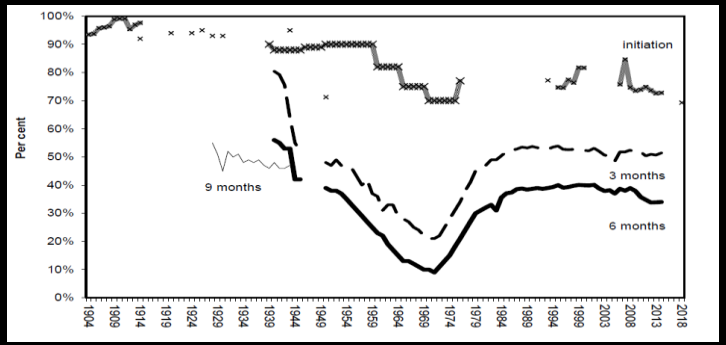
2017 IARIW-BOK

IARIW-Bank of Korea Conference "Beyond GDP: Experiences and Challenges in the Measurement of Economic Well-being," Seoul, Korea, April 26-28, 2017

# Breastfeeding and mother's milk production trends




Norway
1860-2008




Australia
1905-2018

Rosenberg, M. (1989). Breast-feeding and infant mortality in Norway 1860-1930. *J Biosoc Sci, 21(3), 335-348*
Smith, J. P. (1999). Human milk supply in Australia. *Food Policy, 24(1), 71-91.*

# ‘A serious omission …’

*“There is a serious omission in the valuation of home-produced goods – the value of breast milk.*
*This is clearly within the System of National Accounts production boundary, is quantitatively non-trivial and also has important implications for public policy and child and maternal health.”*


THE MEASUREMENT OF ECONOMIC PERFORMANCE AND SOCIAL PROGRESS REVISITED

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Stiglitz, J.E., Sen, A., and Fitoussi, J.-P. (2009) The measurement of economic performance and social progress revisited; Reflections and overview, Centre de recherche en économie de Sciences Po (OFCE)
Citing Smith JP, Ingham LH. Mothers' milk and measures of economic output. Feminist Economics. 2005;11(1):41-62.

# Human milk production can and should be counted in economic statistics

- Breastmilk is a commodity that can be stored, exchanged and traded. Hence it fits the international (SNA) guidelines to be measured in GDP.

Economic valuation methods have improved.

- The macroeconomic value of human milk production is substantial even if most is not sold or exchanged. This is demonstrated for developed as well as developing countries.

- The macroeconomic value of human milk production is substantial even if most is not sold or exchanged. This is demonstrated for developed as well as developing countries.

Smith, JP & LH Ingham (2005) 'Mothers' Milk and Measures of Economic Output', Fem Econs 11(1): 41.
Gupta, A & K Khanna (1999) 'Economic Value of Breastfeeding in India', Natl Med J India 12(3): 123-7.

Aguayo, VM & J Ross (2002) 'The Monetary Value of Human Milk in Francophone West Africa', Food Nutr Bull 23(2): 153-61.
Gupta, A & K Khanna (1999) 'Economic Value of Breastfeeding in India', Natl Med J India 12(3): 123-7.

# 3 The ‘Mothers’ Milk Tool and its development

# Three types of macroeconomic studies of breastfeeding, leading to …

| √ | √ | ? |
| --- | --- | --- |
| • ‘Cost of Not Breastfeeding Tool’ | • ‘WBTi Costing Tool’ for implementing Global Strategy on Infant and Young Child Feeding | • Tool for calculating economic value of breastfeeding |

Walters DD, Phan LTH, Mathisen R. The cost of not breastfeeding: global results from a new tool. Health Policy Plan 2019;34:407-17.
Holla-Bhar R, Iellamo A, Gupta A, Smith JP, Dadhich JP. Investing in breastfeeding - the world breastfeeding costing initiative. Int Breastfeed J 2015;10:8.

# Main variables

- The broad methodology for estimating the volume of milk produced annually is that used in Norway. Norway publishes such figures in its national food statistics.
- To measure human milk production we used figures for:
  - the number of infants of the relevant age;
  - breastfeeding prevalence;
  - estimated daily volumes of breastmilk production
- For monetary values we used data on
  - The price of a litre of human milk.

Norwegian Health Directorate. Norway utviklingen i norsk kosthold 2011. Oslo: Norwegian Health Directorate; 2011 November.

# Breastfeeding prevalence and milk intake

Breastfeeding data from DHS or MICS, or official country statistics:

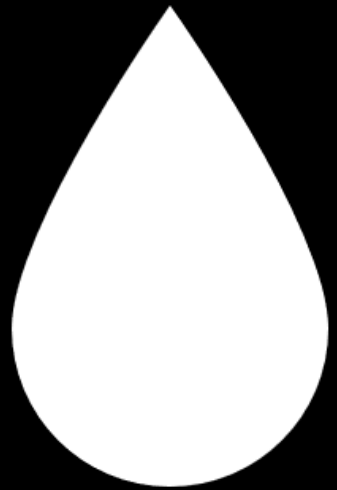
- Any breastfeeding not exclusive breastfeeding due to poor data
- Biologically feasible production is defined as 98% of women being able to breastfeed.
- The difference in human milk production between actual and potential breastfeeding rates is called ‘lost milk’.

# Breastfeeding prevalence and milk intake

## Milk intake

- For 0-12 months: 211 litres total
- For 0-3 years: 431 litres total

Details described in the Tool



Butte NF, MG Lopez-Azarcon, Graza C. Nutrient adequacy of exclusive breastfeeding for the term infant during the first 6 months of life. Geneva: World Health Organisation; 2002.
Hatloy A, Oshaug A. Human milk: an invisible food resource. J Hum Lact 1997;13:299-305.

# Valuation

- National accountants and statisticians generally use market prices as the best indicator of economic value as it directly reveals ‘willingness to pay’.
- Other techniques (such as input cost approach) are used if there are no market prices, or if society may have higher or lower valuations on production.

# Valuation

- Human milk is mostly not marketed, but markets in human milk reveal the price of the analogous product.
- A number of published studies used the price charged by milk banks to value human milk production.
- This may be a minimum value, as milk banks sell at cost, use donated milk, and are not-for-profit so there are no direct shareholder costs

Smith, JP (1999) 'Human Milk Supply in Australia', Food Policy 24(1): 71-91.
Oshaug, A & G Botten (1994) 'Human Milk in Food Supply Statistics', Food Policy 19(5): 479-482.

# Monetary values for human milk

| | US$ per litre, 2022 |
|---|---|
| Market price: Internet trading[1] | 30-75 |
| Replacement cost: Wet nursing[2] | 71-286 |
| Market Price: Milk banks: Australia | 83 |
| Market price: Milk bank: Norway[4] | 100 |
| Market Price: Milk banks: North America[3] | 85-150 |
| Market price: Commercial donor milk: North America[5] | 265-410 |

[1]Prices vary depending on quantity, packaging, and shipping distance, 'Only the Breast' website.
[2]2012 assumed 700mL daily intake. Some wages include childcare
[3]$3-5 per oz.
[4]Milk banks in Norway pay donors a US$20 per L expenses.
[5]US$9-14 per oz., in-hospital use only. .

Smith JP. "Lost milk?": Counting the economic value of breast milk in gross domestic product. J Hum Lact 2013;29:537-46.

# 4 How the Mothers' Milk' Tool may help

- Quantify and make visible
- Track progress and compare countries
- Inform updating of policies and programs
- Help advocacy and motivate greater investments
- Breastfeeding confidence and motivation

# Global

| TOTAL for 3 years* | Volume | Value | Value |
|---|---|---|---|
| *(Estimate for 36 Data Entries)* | *in million Liters* | *in million USD* | *in million US Dollar* |
| 1. Actual production of Breastmilk | 35,555.97 | 3,555,597.42 | 3,555,597.42 |
| 2. Biologically feasible potential production of Breastmilk | 57,490.49 | 5,749,049.13 | 5,749,049.13 |
| 3. Lost Breastmilk | 21,934.52 | 2,193,451.71 | 2,193,451.71 |
| Per Cent % lost | 38.2% | | |

*Exchange rate US$ 1:* *1 US Dollar*
*Data source:* *Generated*

Every year, the world loses around 21.9 billion liters of the perfect baby food because governments fail to invest in support for women to keep breastfeeding.

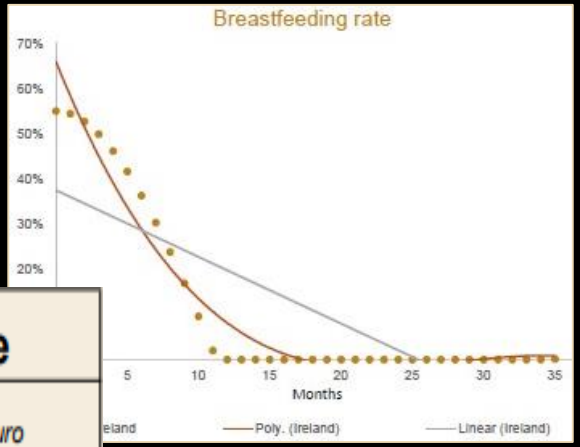
# Nepal


| TOTAL for 3 years* | Volume | Value | Value |
|---|---|---|---|
| *(Estimate for 36 Data Entries)* | *in million Liters* | *in million USD* | *in million Nepalese Rupee* |
| 1. Actual production of Breastmilk | 221.25 | 22,124.92 | 2,619,621.89 |
| 2. Biologically feasible potential production of Breastmilk | 230.25 | 23,025.31 | 2,726,229.16 |
| 3. Lost Breastmilk | 9.00 | 1,031.49 | 122,130.09 |
| Per Cent % lost | 3.9% | | |

*Exchange rate US$ 1:* *118.4014 Nepalese Rupee*
*Data source:* *Full data, Source: DHS*

Lost milk 4%

# Ireland




| TOTAL for 3 years* | Volume | Value | Value |
|---|---|---|---|
| *(Estimate for 36 Data Entries)* | *in million Liters* | *in million USD* | *in million Euro* |
| 1. Actual production of Breastmilk | 4.41 | 440.82 | 379.10 |
| 2. Biologically feasible potential production of Breastmilk | 24.08 | 2,408.15 | 2,071.01 |
| 3. Lost Breastmilk | 19.67 | 1,967.33 | 1,691.91 |
| Per Cent % lost | 81.7% | | |

*Exchange rate US$ 1:* *0.86 Euro*
*Data source:* *Generated*

Lost milk 82%

# Norway

| TOTAL for 3 years* | Volume | Value | Value |
|---|---|---|---|
| *(Estimate for 36 Data Entries)* | *in million Liters* | *in million USD* | *in million Norwegian Krone* |
| 1. Actual production of Breastmilk | 10.70 | 1,069.57 | 9,347.00 |
| 2. Biologically feasible potential production of Breastmilk | 25.35 | 2,534.90 | 22,152.46 |
| 3. Lost Breastmilk | 14.65 | 1,465.32 | 12,805.46 |
| Per Cent % lost | 57.8% | | |

*Exchange rate US$ 1:* *8.739 Norwegian Krone*
*Data source:* *Generated*

Lost milk 58%

# Australia

| TOTAL for 3 years* | Volume | Value | Value |
|---|---|---|---|
| *(Estimate for 36 Data Entries)* | *in million Liters* | *in million USD* | *in million Australian Dollar* |
| 1. Actual production of Breastmilk | 50.80 | 5,079.91 | 7,061.07 |
| 2. Biologically feasible potential production of Breastmilk | 143.22 | 14,322.17 | 19,907.81 |
| 3. Lost Breastmilk | 92.42 | 9,242.26 | 12,846.74 |
| Per Cent % lost | 64.5% | | |

*Exchange rate US$ 1:* *1.39 Australian Dollar*
*Data source:* *Generated*

Lost milk 65%

# 5 What’s next?

# What's next?

- Measure health and environmental costs of milk formula and depletion of human and environmental assets in economic statistical systems
- Count breastfeeding and mothers' milk production in national food balance sheets, food statistics, and food surveillance systems


Created by Olga Ferreras

# What's next?

- Create experimental national economic accounts to value mother's milk in country' GDP and SNA
- Urgently begin SNA time use accounting for infant and young child feeding and car

# Conclusion

- ‘Lost milk’ is substantial but the loss is not measured
- The invisibility of this economic loss distorts public policy priorities.
- It also severely undermines credibility of economic data

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“At present, measures of national economic output show a decline if more babies are breastfed and a rise if commercial baby foods displace breastfeeding. These are ridiculous results and severely undermine the public credibility of GDP estimates and other economic data.”

These are ridiculous results and severely undermine the public credibility of GDP estimates and other economic data.”

# Thank you

julie.smith@anu.edu.au
@JuliePSmith1

Australian National University

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# Introducing the Mothers' Milk Tool


*Mr Alessandro Iellamo*

*Independent Consultant*

*United Kingdom*


# User’ Perspectives

Introduction 1

Experiences using the tool 2

Feedbacks about the tool 3

# Dr Arun Gupta

Central Coordinator

Breastfeeding Promotion Network of India

India

# Ms Malvina Walsh

Advocate for IYCF protection and support

Baby Feeding Law Group

Ireland

# Ms Manisha Laxmi Shrestha

Nutrition Specialist

Suaahara II Program, FHI 360

Nepal

# Dr Anne Bærug

Nutritionist

Unit on Breastfeeding, Norwegian Institute of Public Health

Norway

# Ms Di Anne Mendoza

- Breastfeeding Peer Counselor
- Arugaan and Breastfeeding Care Center of the North Baguio City
- Philippines

# Dr Bindi Borg

Independent Consultant

Australia

# Dr Elien Rouw

Medical Doctor, Fellow and President-Elect

Academy of Breastfeeding Medicine

Germany

# Dr Adiatma Y. M. Siregar

Director

CEDS Universitas Padjajaran

Indonesia

# The Mothers' Milk Tool as a lever for transformative change in the first food systems

*Dr Phil Baker*

*Institute for Physical Activity and Nutrition (IPAN), Deakin University*

*Australia*

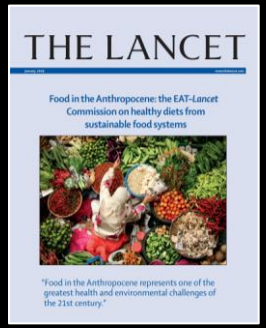
# THE MOTHERS MILK TOOL AS A LEVER FOR TRANSFORMATIVE CHANGE IN FIRST FOOD SYSTEMS

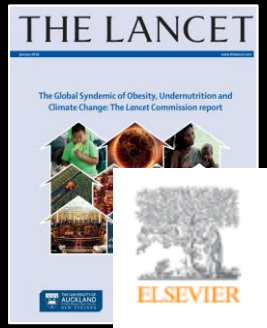
## Measuring and Valuing Women's Productivity: The Mothers' Milk Tool

**Dr Phillip Baker**
Institute for Physical Activity and Nutrition
Deakin University, Melbourne, Australia

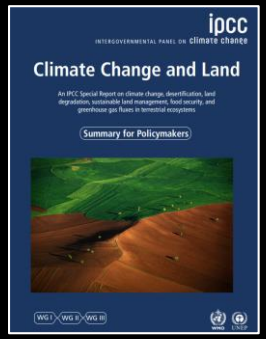
# THE FOOD SYSTEMS TRANSFORMATION AGENDA

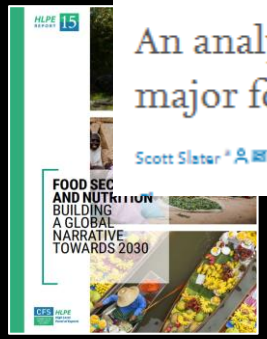
**A sustainable food system** "…ensures food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition of **future generations** are not compromised" (FAO, 2018)

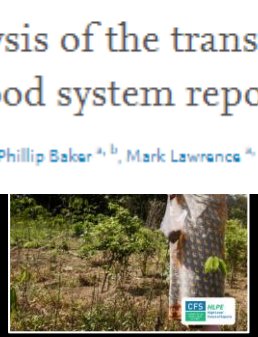


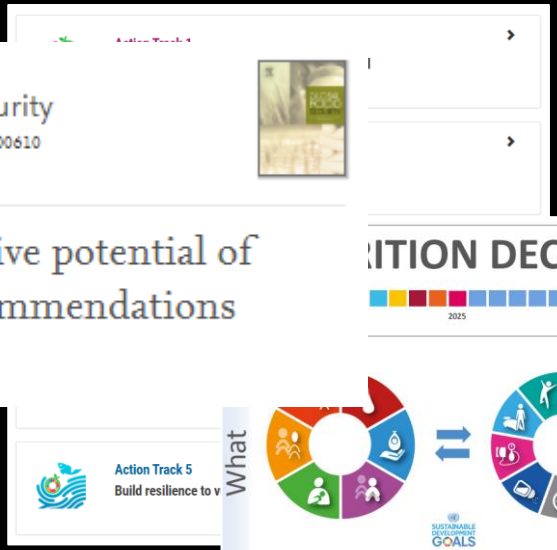


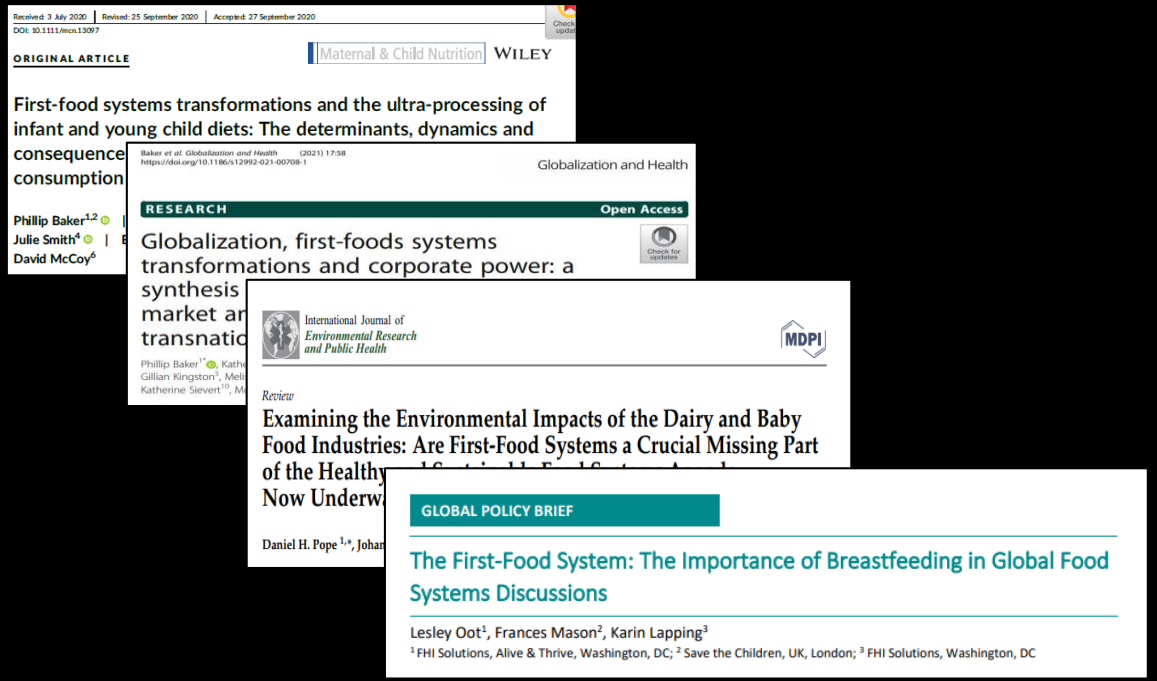





Yet breastfeeding as a major form of global food production, and infant and young child feeding as women's care work, is often ignored in food systems dialogue, research and action

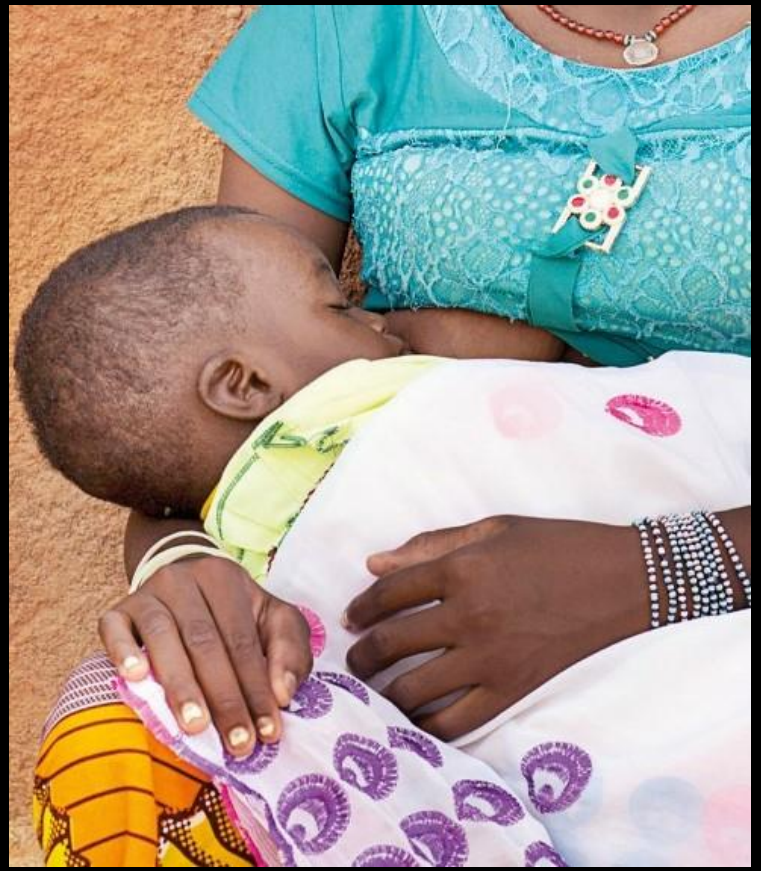
**First-food systems** are the food systems that provision foods for infants and young children (0-36 months), and that structure feeding practices at the population-level



# The mother-child breastfeeding dyad

## A ‘first-food system’ in and of itself

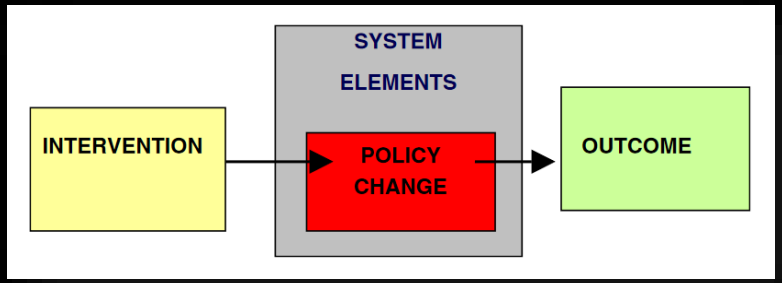
- An on-demand global food production system, and arguably the shortest food supply chain on Earth, unparalleled in safety
- Delivering optimal nutrients and immunological factors, evolving from feed-to-feed, and responsive to the child’s evolving needs
- Near universal breastfeeding would save an estimated 823,000 deaths in children under-5 years of age, and 98,000 maternal deaths every year (Victora et al, 2016)
- Literally ‘packaged with love’ – breastfeeding fosters mother-child bonding and reduces stress for both
- Helps mothers regain pre-birth weight, and birth-spacing and family planning

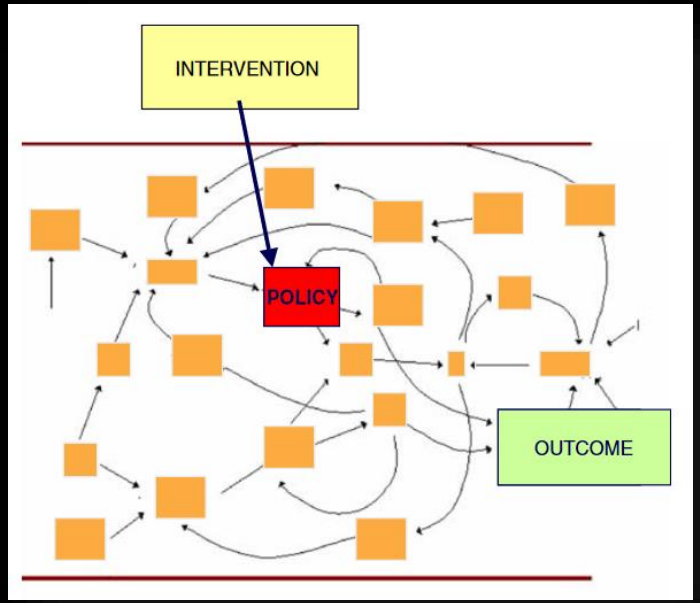


Alive & Thrive

…where sustainable food systems begin

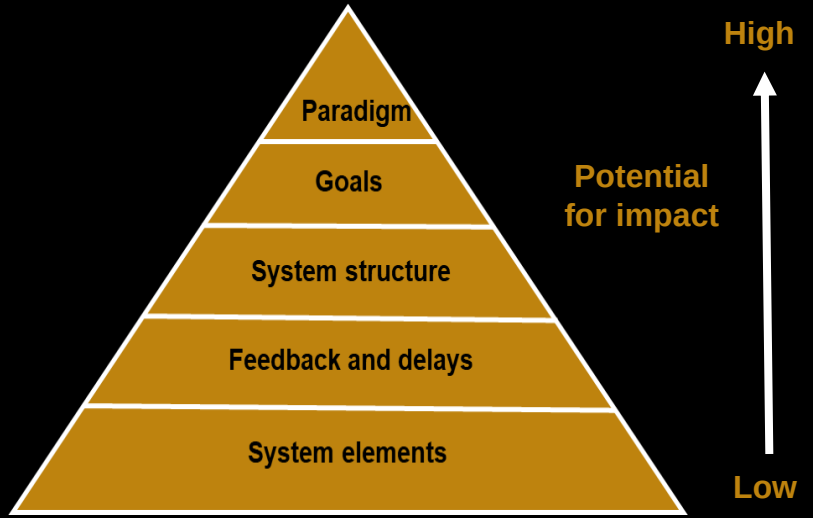
# WHAT DOES IT MEAN TO TRANSFORM A SYSTEM?
# A BRIEF INTRODUCTION TO (FOOD) SYSTEMS THINKING




Foster-Fishman, P. G., Nowell, B., & Yang, H. (2007). Putting the system back into systems change: A framework for understanding and changing organizational and community systems. *American journal of community psychology*, *39*(3-4), 197-215

# WHAT DOES IT MEAN TO TRANSFORM A SYSTEM? UNDERSTANDING 'LEVERAGE POINTS' FOR FIRST-FOOD SYSTEMS CHANGE




**Transforming the system (3rd order change)**
**e.g. prioritising the rights of mothers and children over corporate profits and trade**
**e.g. moving away from purely 'biomedical model' of health professional training**
**e.g. making women's work visible and valued in economic decision-making**

**Reforming the system (2nd order change)**
**e.g. establish a national breastfeeding governance and policy framework**
**e.g. firewall governance and policy processes from baby food industry lobbyists**
**e.g. establish a national monitoring and enforcement system**

**Adjusting the system (1st order change)**
**e.g. remove formula samples from hospitals**
**e.g. ban labels that compare formula with breastmilk**
**e.g. mass-media campaigns to promote breastfeeding**

Malhi L et al. Places to Intervene to Make Complex Food Systems More Healthy, Green, Fair, and Affordable. Journal of Hunger & Environmental Nutrition. 2009;4(3/4):466-76

McIsaac JL et al. Understanding System-Level Intervention Points to Support School Food and Nutrition Policy Implementation in Nova Scotia, Canada. International Journal of Environmental Research and Public Health. 2019;16(5)

Lawrence, M. A., Friel, S., Wingrove, K., James, S. W., & Candy, S. (2015). Formulating policy activities to promote healthy and sustainable diets. Public health nutrition, 18(13), 2333-2340.

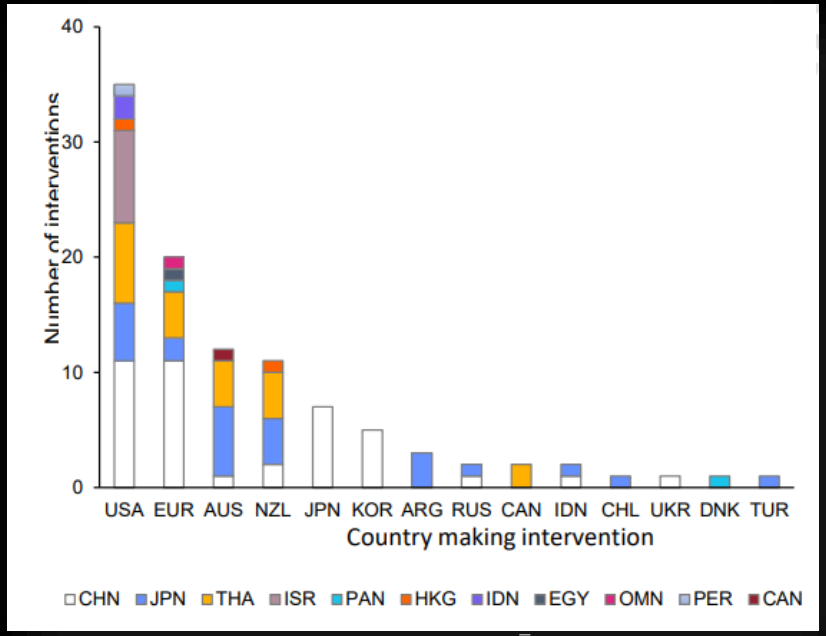
# CHALLENGING THE PARADIGM: BREASTFEEDING IS AN IMMENSELY VALUABLE FORM OF CARE WORK & NON-MARKET HOUSEHOLD PRODUCTION, YET OFTEN INVISIBLE TO ECONOMIC DECISION-MAKERS

- Baby food sales get counted in national accounting systems, contributing to GDP
- However, the immense value that mother's render society by breastfeeding, is typically invisible to economic decision-makers; it simply does not get 'counted' (Waring, 1998)
- Economic output measures, including GDP, are strongly biased against women's reproductive, health and economic rights (Smith, 2012)
- Vast majority of employed mothers (68%) lack effective maternity protection (ILO, 2014); 35.3% legally entitled to cash benefits
- Coverage is extremely poor in countries with large informal sectors

Giacomo Pirozzi | Allive & Thrive

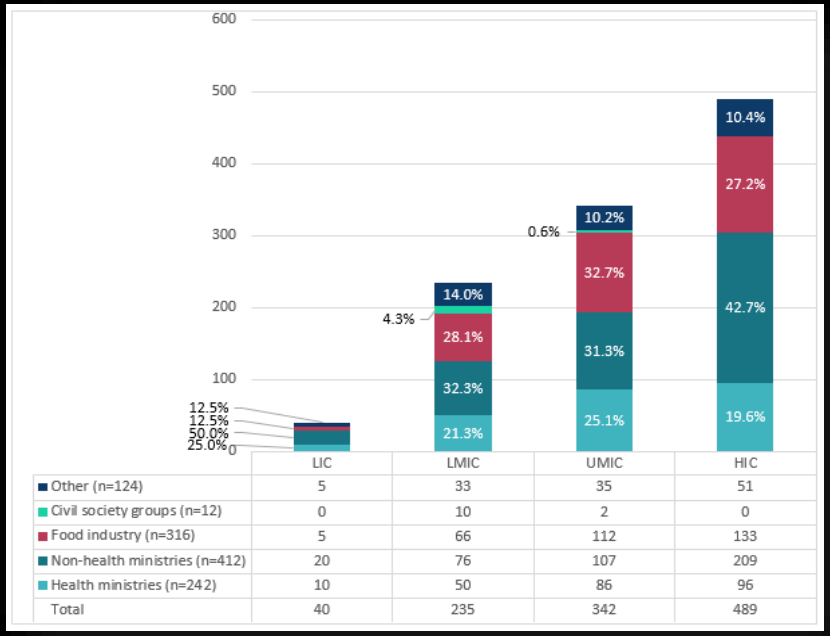
# CHALLENGING THE PARADIGM: COMMERCIAL INTERESTS TOO OFTEN GET PRIORITISED OVER THE RIGHTS OF MOTHERS AND CHILDREN IN INTERNATIONAL TRADE FORA

Member countries making vs receiving **WTO** interventions concerning commercial milk formula regulation, 1996- 2019




Russ K, Baker P, Byrd M, et al. What you don't know about the codex can hurt you: how trade policy trumps global health governance in infant and young child nutrition. International Journal of Health Policy and Management. 2021

Proportion of interest groups at **Codex** CNFSDU meetings representing member states by country income, 2015-2019




| | LIC | LMIC | UMIC | HIC |
|---|---|---|---|---|
| Other (n=124) | 5 | 33 | 35 | 51 |
| Civil society groups (n=12) | 0 | 10 | 2 | 0 |
| Food industry (n=316) | 5 | 66 | 112 | 133 |
| Non-health ministries (n=412) | 20 | 76 | 107 | 209 |
| Health ministries (n=242) | 10 | 50 | 86 | 96 |
| Total | 40 | 235 | 342 | 489 |

Boatwright M, Lawrence M, Russell C, Russ K, McCoy D, Baker P (2021) The politics of regulating foods for infants and young children: a case study on the framing and contestation of Codex standard-setting processes on breast-milk substitutes. International Journal of Health Policy and Management. 2021

# CHALLENGING THE PARADIGM: BREASTFEEDING AS AN IMMENSELY VALUABLE FORM OF FOOD PRODUCTION, IS EXCLUDED FROM NATIONAL AND INTERNATIONAL FOOD MONITORING SYSTEMS

- Food systems are strongly gendered. Women are responsible for half of the world's agricultural production, and in LMICs produce 60-80% of food (FAO, 1997)
- A crucial food source – in LMICs average breastmilk intake at 12-23 months is ~550 g/day, providing ~35-40% of energy needs (WHO, 1998)
- At current breastfeeding rates, this equates to ~21.9 billion litres of breastmilk produced by mothers every year worldwide (Mothers Milk Tool)
- Potential world production is at least twice this, given less than half of children meet WHO recommendations
- Yet almost all national (except Norway) and international food monitoring systems ignore breastfeeding

# THANK YOU

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fhi solutions

# Processes for successful uptake of nutrition modelling tools

*Ms Frances Knight*

*London School of Hygiene and Tropical Medicine/ World Food Program*

*United Kingdom/ Italy*

May 2022

# Processes that Encourage Successful Uptake and Use of Nutrition Modelling Tools

## Findings from a Qualitative Study

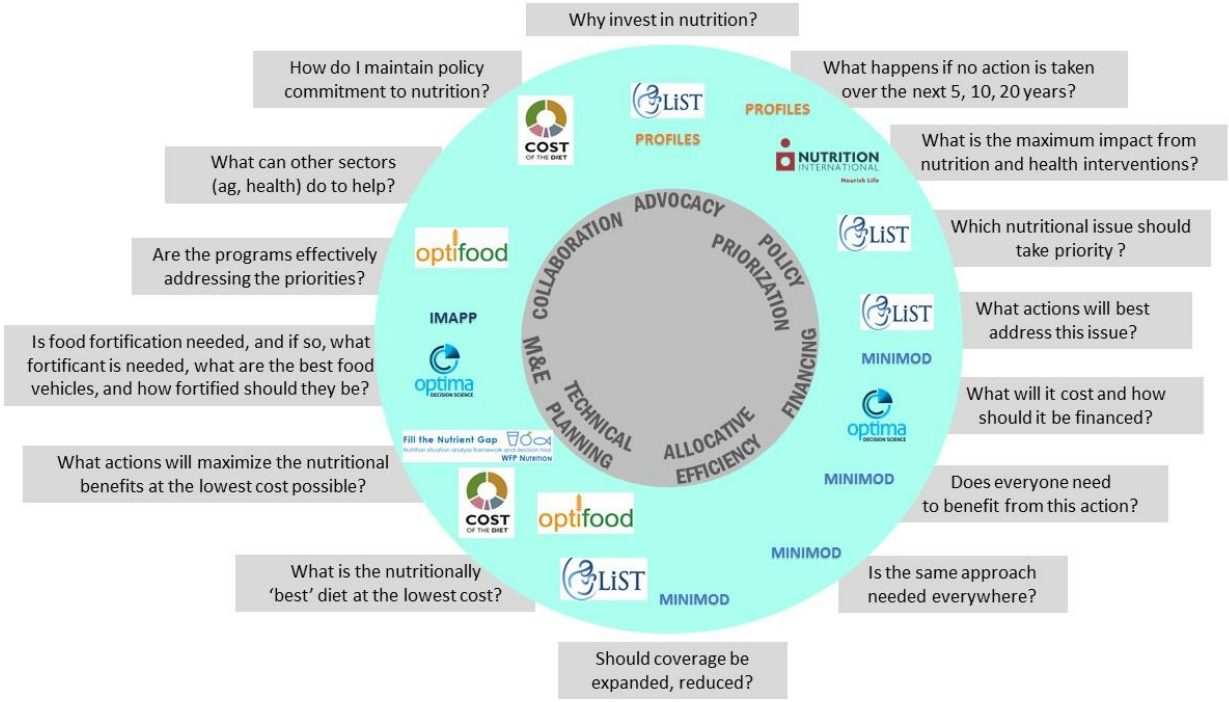
Frances Knight

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

NMC NUTRITION MODELING CONSORTIUM

# The Nutrition Modelers Consortium

- Members include developers and users of >15 Nutrition Modelling tools
- Aims to improve use of evidence in policy and programme decision making through use of mathematical modelling of nutrition activities
- Interested in better understanding how tools can meet nutrition programming and policy needs
- Focus on technical interoperability, usability and processes that encourage uptake and use of results



# Objectives of the Study:

- Document **different** nutrition modelling tool applications including **objectives**, analysis and dissemination **process** and **results**
- Document any use of results and **influence** on **programme or policy decisions**
- Identify factors that **strengthen** or **hinder** on programme or policy decision **influence**.
- Develop **recommendations** on the design and implementation of nutrition modelling tools to inform policy and programme decisions.

# Methods: Semi structured interviews

## 14 Tools

- CoDB
- COHA
- CoNBF
- CotD
- FNG
- IMAPP
- LiST
- MAPS
- MoMS
- MINIMOD
- OMNI
- Optifood
- Profiles
- SEEMS

## 32 Case Studies

- Central Asia
- South Asia
- Southeast Asia
- Latin America
- East Africa
- Southern Africa
- West Africa

## 113 Participants

- Academia
- Government
- UN Organisations
- NGOs

## 3 end-user types

- Brokers
- Technical Analysts
- Consumers

**Most case studies had the primary goal of informing government decision-making.**

**A few to inform NGO programmes**

- Almost all initiated by International Organisations.
- Many done in partnership with government.
- Local staff trained to do analysis in some cases.

## Reported approaches for engagement and analysis:

1. Analysis presented on preloaded, online dashboards.
2. Analysts access tool and conduct modeling independently.
3. Analysts trained and supported to apply NMT as part of ongoing monitoring or research activities.
4. Analysts trained at one point in time to conduct modeling, independently or with support.
5. Local partners prepare modeling inputs for international specialists to run analysis.
6. International researchers or consultants run analysis with local review.

# Tool applications contributed to enabling environments for nutrition and influenced programmes and policy in most cases:

| Policy cycle stage | Policy and programme influences |
|---|---|
| Advocacy | Increased nutrition commitments, validated existing policies, contributed to advocacy efforts |
| Situation Assessment | Addressed misconceptions and improved understanding |
| Prioritisation | Specific issues gained momentum or targeted in programming |
| Programme planning | Informed prioritisation of nutrition actions |
| Resource allocation | Informed programme scale-up |
| Evaluation | Justified alteration to improve existing programmes |

**However, policy uptake was never the result of tools exclusively and potential remained for strengthening their influence..**

# Key findings and recommendations:

- Policy influences not result of modelling tools alone, analyses need to be strategically nested within **larger advocacy efforts**
- Analyses need to be coupled with activities to build **understanding** and **ownership** amongst end users
- **Capacity building** for analysis may be appropriate in some contexts, in others there may be more pressing capacity needs
- Basing analyses on existing, validated and nationally-representative **secondary data** encourages trust and ownership

# Key findings and recommendations:

- **Targeting** important, however local actors also need capacity for **strategic and opportunistic** application of modelling

- Accessible tool interfaces and methods encouraged, yet high-quality, **simple, and relevant communication** of methods and findings to non-analysts more important

- **Coaching local partners** to present modelling increased understanding and trust

- Local partners require adequate **resourcing** for meaningful involvement in tool applications, which builds ownership

# For more information:

Ann. N.Y. Acad. Sci. ISSN 0077-8923

ANNALS OF THE NEW YORK ACADEMY OF SCIENCES

Original Article

**Nutrition modeling tools: a qualitative study of influence on policy decision making and determining factors**

Frances Knight,[1,2] Megan W. Bourassa,[3] Elaine Ferguson,[1] Helen Walls,[1] Saskia de Pee,[2,4,5] Stephen Vosti,[6] Homero Martinez,[7] Carol Levin,[8] Monica Woldt,[9,10,11] Kavita Sethurman,[11] and Gilles Bergeron[3,12]

[1]Department of Population Health, London School of Hygiene and Tropical Medicine, London, United Kingdom. [2]Nutrition Division, United Nations World Food Programme, Rome, Italy. [3]New York Academy of Sciences, New York, New York. [4]Friedman School of Nutrition Science and Policy, Tufts University, Boston, Massachusetts. [5]Human Nutrition, Wageningen University, Wageningen, the Netherlands. [6]Department of Agricultural and Resource Economics, University of California, Davis, Davis, California. [7]Nutrition International, Ottawa, Ontario, Canada. [8]Department of Global Health, University of Washington, Seattle, Washington. [9]Helen Keller International, Washington, District of Columbia. [10]USAID Advancing Nutrition, Arlington, Virginia. [11]Formerly with Food and Nutrition Technical Assistance Project (FANTA), Washington, District of Columbia. [12]Poverty, Health, and Nutrition Division, International Food Policy Research Institute, Washington, District of Columbia

Address for correspondence: Frances Knight, Department of Population Health, London School of Hygiene and Tropical Medicine, London WC1E 7HT, UK. frances.knight@lshtm.ac.uk

**Nutrition modeling tools (NMTs) generate evidence to inform policy and program decision making; however, the literature is generally limited to modeling methods and results, rather than use cases and their impacts. We aimed to document the policy influences of 12 NMTs and identify factors influencing them. We conducted semistructured interviews with 109 informants from 30 low- and middle-income country case studies and used thematic**

Knight F., M.W. Bourassa, E. Ferguson, *et al.* 2022. Nutrition modelling tools: a qualitative study of influence on policy decision making and determining factors. *Ann. N. Y. Acad. Sci.* 1–22.

# THANK YOU

**For more information please contact:**

Frances.Knight@lshtm.ac.uk

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

NMC NUTRITION MODELING CONSORTIUM

The New York Academy of Sciences™

BILL & MELINDA GATES foundation

# Questions and Answers

*Dr Tuan Nguyen*

*Alive & Thrive Southeast Asia*

*Viet Nam*

Are you excited to vote for the logo of Mothers’ Milk Tool?

# Option 1

MOTHERS' MILK TOOL

**Logo concept**

Breastfeeding mothers

+

Love

+

Global

# Option 2

MOTHERS' MILK TOOL

**Logo Concept**


Breastfeeding mothers

+


Love

+


Global

# Option 3

MOTHERS' MILK TOOL

**Logo Concept**

Milk Drop

Breastfeeding mothers

Love

Option 1

MOTHERS'
MILK TOOL

Option 2

MOTHERS'
MILK TOOL

Option 3

MOTHERS'
MILK TOOL

# Closing Remarks

*Mr Roger Mathisen*

*Alive & Thrive Southeast Asia*

*Viet Nam*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Australian National University

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# *Thank you*