The World Breastfeeding Costing Initiative (WBC*i*)

THE NEED TO INV$T IN BABIES

A Global Drive for Financial Investment in Children's Health and Development through Universalising Interventions for Optimal Breastfeeding

IBFAN
defending breastfeeding

gbiĉs the global breastfeeding initiative for child survival

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putting child nutrition at the forefront of social change

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PREFACE

The persistent failure of governments to invest significantly in breastfeeding is hard to comprehend.

With evidence beyond doubt that tobacco kills around 1.5 million people a year from lung cancer, governments and agencies such as WHO now act forcefully and in unison to prevent its insidious promotion. Yet ten years after *The Lancet* series' staggering revelations showing more than a million infants and young children die annually from diarrhoea and related infections because they are deprived of the right milk - breastfeeding, around a million babies still die and government investment in breastfeeding remains minimal, or zero, in most countries.

The benefits of human milk for human infants are so obvious, and so well-established, supported time and again by rigorous science that organisations like IBFAN should not need to gather yet more figures, or mount yet more arguments for investment in breastfeeding. The simple, stark facts are that breastfeeding saves lives; lack of human milk means human babies die.

Moreover, future quality of life is at issue. Strong evidence from randomised trials shows the average effect of early weaning from exclusive breastfeeding is to reduce a child's IQ by 3-7 IQ points. This is comparable with prenatal lead exposure, with cognitive damage akin to several months of wasted schooling.

How can any country afford such waste? Indeed, why in some countries, is the formula industry subsidised to actively promote this loss of human capability and productivity? In the US, as this most comprehensive report points out, the cost of prematurely weaning babies is some $13 billion and hundreds of lives annually. There, 1.4 million babies are born each year; in China, it is over 16 million, worldwide 135 million. The economic and financial cost of 'losing' mothers' milk for these children is incalculable.

Why the silence about the avoidable premature deaths of countless, and uncounted, women worldwide? Again, the evidence on the harm to women of premature weaning is indisputable. Short duration or no breastfeeding increases breast cancer risk, and postpartum haemorrhage. Women die from not breastfeeding long enough. A mother separated from her infant, whether by poor quality maternity care or by working for a living, faces higher health risks because breastfeeding is made harder. Yet, the costs that arise from this, such as for breast cancer, are only measured for the US and the UK.

Surely, the lives of women and children count for more than this!

Worldwide, women produce around 23 billion litres of milk a year; a 'health food' for babies and young children that far surpasses anything that industry makes available. With proper support for optimal breastfeeding, women might offer nearly twice that amount. In the developed world, where exclusive breastfeeding at six months is so rare it can barely be found without huge population surveys, the value of breastmilk is such that hospitals and health funds pay companies not women hundreds, even thousands, of dollars a litre to acquire it.

The burdens of suboptimal infant and young child feeding fall on health systems, governments and nations, as well as women and babies, and the cost is not in dollars alone. The human misery, suffering and grief must also be accounted for. Babies deprived of care, protection and sustenance from their mothers are uniquely vulnerable. Emerging scientific research now signals greater maternal abuse and neglect of children, as well as maternal depression, among mothers unable to sustain breastfeeding.

No one can deny the advances in public health wrought by industrialisation and market development. As markets

expand, new products and work opportunities emerge. Access to health care and better maternity services may improve. Economic development may truly benefit women and children. But the unrestrained expansion of markets in infant formula, as experience has shown, has caused incalculable, sometimes irreversible, damage to breastfeeding. Existence of the 1981 *WHO International Code of Marketing of Breastmilk Substitutes* and subsequent World Health Assembly resolutions acknowledges the particular vulnerability of infants to inappropriate feeding practices.

Today, the twin economic forces against breastfeeding, the persuasive spin undermining breastfeeding including marketing via health systems, and formula as a solution for time-pressed working women, are growing.

Formula sales are booming. Since 2007 sales have risen from $5 billion to $13 billion in China alone. Companies may be investing some $3-4 billion dollars a year to promote their baby food products. Hospitals, health workers and working women are targeted to increase sales, especially the highly profitable 'specialised formulas' or 'follow on formulas'. Competition for market share expands the market. Yet all such products are a proven poor substitute for a mother's own milk.

Who is promoting the truly priceless gift of breastfeeding? How could it happen, so unrestrainedly, so universally that formula is promoted instead?

Inexplicably, international agencies and governments view breastfeeding as a 'best buy', but invest pitifully small amounts of energy and money in protecting it, and the women who provide it.

Women 'invest' in breastfeeding, as they always have, through the hours of time, and skill that they devote to breastfeeding their infant. Many pay a cost to do so lost earnings, or even depleting their own bodily reserves.

Civil society has a vital role in reminding governments of the need to counter not only the commercial propaganda against breastfeeding, and its subversive undervaluing of mothers' milk, but also the costs of failing to provide the maternity protections needed for women to breastfeed whilst sharing in gains from economic development.

Previous work by IBFAN has shown the clear need for a more focussed investment of resources in breastfeeding. Present policies and practices are far from what is required if we are to protect, promote and support breastfeeding in the face of market forces.

This publication and the strategy it outlines will address that need, and show that, if supported by regulation of baby food marketing, investments in mother to mother support, maternity leave, and Baby Friendly Hospitals will pay off.

Most importantly, we must make breastfeeding a priority by resourcing it. Not with words. But with what counts against the Hidden Persuaders of Big Pharma and Big Food money and influence.

This new report must not gather dust. It is a graphic reminder of the pop song warning: 'you don't know what you've got till it's gone'. Governments and international agencies must commit resources of money and influence to the effective implementation of the WHO *Global Strategy on Infant and Young Child Feeding*, and fiercely enforce rules against 'The Whisperers' promoting formula feeding.

Breastfeeding cannot compete in the global market or indeed in the health care system without steadfast community support. Women alone cannot be burdened with responsibilities to choose breastfeeding especially when it may mean deciding between their own life or livelihood and the life of their child.

It must not be our generation, our governments, our institutions, which failed to act when we could.

It is our responsibility the global village that raises the child - to invest in scaling up breastfeeding, and this document shows the way.

- Dr. Julie P. Smith

CONTENTS

ABBREVIATIONS

BCC	Behaviour change communication
BFGM	Breastfeeding Gear Model
BFHI	Baby Friendly Hospital Initiative
BPNI	Breastfeeding Promotion Network of India
CDC	Centre for Disease Control
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CRC	Convention on the Rights of the Child
gBICS	Global Breastfeeding Initiative for Child Survival
GDP	Gross Domestic Product
GIFA	Geneva Infant Feeding Association
Global Strategy	Global Strategy on Infant and Young Child Feeding
HIV	Human Immunodeficiency virus
IBFAN	International Baby Food Action Network
ICDC	International Code Monitoring Centre
IEC	Information, Education and Communication
ILO	International Labour Organisation
IMS	Infant Milk Substitutes
IQ	Intelligence Quotient
IYCF	Infant and Young Child Feeding
LAM	Lactation Amenorrhoea Management
MDG	Millennium Development Goal
NCDs	Non-communicable diseases
NICE	National Institute for Health and Clinical Excellence
PAHO	Pan American Health Organisation
PMNCH	Partnership for Maternal, Newborn and Child Health
PROBIT	Promotion of Breastfeeding Intervention Trial
RCT	Randomised Control Trial
ROP	Retinopathy of prematurity
UN	United Nations
UNICEF	United Nations Children's Fund
USA	United States of America
WBC*i*	World Breastfeeding Costing Initiative
WBT*i*	World Breastfeeding Trends Initiative
WHA	World Health Assembly
WHO	World Health Organisation
WIC	(Special Supplemental Nutrition Programme for) Women, Infants and Children

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.

- Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi in
The Measurement of Economic Performance and Social Progress Revisited - Reflections and Overview (Recommendation made to the French President) in 2009

EXECUTIVE SUMMARY

Formula feeding is a heavy burden on the planet and the people. Enhancing optimal breastfeeding rates will reduce this burden.

Women's capacity for breastfeeding is a valuable national asset which has great economic worth, with benefits such as saving lives and avoiding health costs by reducing the risks of formula feeding and premature weaning. However, since present investment of resources towards promoting and ensuring breastfeeding is insufficient, it is mostly sustained through the unrequited efforts of mothers and volunteers. There is a demonstrable need for greater investment in breastfeeding, to ensure it is protected, promoted and supported as economic development proceeds, and to ensure that the costs of resourcing the breastfeeding of infants and young children are equitably shared.

Optimal breastfeeding means timely initiation of breastfeeding, exclusive breastfeeding for six months, and continued breastfeeding for two years or beyond along with the introduction of appropriate and adequate complementary foods after six months.

There is increasing attention being paid to the importance of nutrition during the first 1000 days of life, especially to breastfeeding because of the magnitude of its effect on mortality (PAHO, 2013; World Economic Forum, 2011) and the effectiveness of interventions to promote it. An ever-increasing number of studies in developed and developing countries are showing the enormous cost-sqaving that is the result of enhancing breastfeeding, especially exclusive breastfeeding, rates.

However, **breastfeeding is amongst the most under-funded** nutrition interventions (Mutuma S, Fremont E and Adebayo A, 2012); so far there has been no political commitment to provide resources commensurate with breastfeeding's importance, nor efforts to create an environment that will make it possible for those mothers who wish to breastfeed to do so. A recent UNICEF report recommends that investments for breastfeeding need to be enhanced and realistic (UNICEF, 2013).

Creating the enabling environment for breastfeeding requires three types of actions - protection, promotion and support of breastfeeding, as outlined in the *Global Strategy for Infant and Young Child Feeding* (*Global Strategy*). The World Bank's estimates on scaling up nutrition interventions includes costs for 'promotion' of breastfeeding, which is widely used as a reference for costing, however, in effect it addresses just a part of one of the interventions, i.e., 'promotion' (Horton S et al 2009).

Noting that the earlier estimations of financial resources needed for breastfeeding are insufficient, we have estimated the comprehensive implementation of the *Global Strategy* for 214 countries at about US$ 15.45 billion as annual costs, with a further one-off cost of US$ 2.05 billion to develop policies and legislation. Recurring costs include coordination, refresher training, implementation of the International Code of Marketing of Breastmilk Substitutes (the Code) and subsequent World Health Assembly resolutions, implementation of the Baby Friendly Hospital Initiative (BFHI), updating of policies and legislation, data management, research and maternity benefits (calculated at US$2 per day for 180 days for women living below the poverty line.

The costs per country will vary according to whether policies and legislation are in place, whether the number of health workers trained is adequate, whether social security schemes exist to assist women living the poverty line breastfeed their infants; however we assume these variations to be minimal, with the estimated savings more than outweighing the costs, as can be seen from studies in UK, US and Australia (Renfrew MJ et al, 2012; Bartick et al, 2010; Smith, 2002).

Investing these resources will contribute significantly towards preventing child mortality and morbidity as well as help in preventing noncommunicable diseases like obesity, diabetes, cancers, etc., later in life. For the mother, it will help prevent premature death including from breast cancer, and postpartum haemorrhage, as well as assisting her health through child spacing (Sassi, 2013).The UNICEF UK report shows that for UK, this would result in a further incremental benefit of more than £31 million, over the lifetime of each annual cohort of first-time mothers (Renfrew MJ et al, 2012).

The purpose of this paper is to assist all countries to implement this *Global Strategy* in its entirety, spread awareness and raise political will to invest in all interventions required with a human rights perspective. The paper focuses discussion on economic and financial implications of breastfeeding including its health cost savings, and helps in making financial decisions. The accompanying 'financial planning tool' helps in development of specific plans of action and accurate budget estimates.

WHY INVEST?

Given the benefits of breastfeeding for both, the baby and the mother, in the human rights context, babies have the right to get breastmilk, and mothers have the right to breastfeed successfully and practise optimal breastfeeding. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) acknowledges women's right to be supported during breastfeeding, through provision of appropriate services and nutrition. The primary duty bearer to ensure the enabling environment women need to breastfeed optimally is the State. The Convention on the Rights of the Child (CRC) also mandates governments to invest in programmes and interventions that are in the best interest of the child and it includes breastfeeding. The right of mothers to breastfeed is also recognised by the International Labour Organisation (ILO), which provides for maternity leave and nursing breaks for working women.

More than 800,000 under five deaths are caused by suboptimal breastfeeding practices. Optimal breastfeeding practices can help to prevent millions of episodes of diseases like pneumonia and diarrhoea and serious conditions later in life like diabetes, obesity, cancer, leukaemia, etc.

Breastfeeding saves lives of infants and young children, reduces malnutrition, promotes health and development, and ensures a healthier life to the growing child. WHO's systematic review of the long-term effects of breastfeeding also lists benefits for children in the case of overweight/obesity, blood pressure, diabetes and intelligence (Horta BL 2013). . As a recent UNICEF UK report shows, in UK alone, in total, over £17 million could be gained annually by avoiding the costs of treating four acute diseases in infants. Increasing breastfeeding prevalence further would result in even greater cost savings (Renfrew MJ et al, 2012). Studies from US (Bartick et al, 2010) and Australia (Smith, 2002), further show the economic benefits of breastfeeding optimally. Increased use of unnecessary formula also results in massive expenditure on the product and the resultant disease. Considering the above-mentioned benefits, breastfeeding saves money at all levels.

Ironically, of the 135 million babies born every year globally, almost 83 million are NOT enabled to follow optimal breastfeeding practices (UNICEF, 2013)**.** Only 42% (56.7 million) of mothers and babies initiate breastfeeding within the first hour of life, 39% (52.6 million) are able to practise exclusive breastfeeding during the first six months of life, and only 58% (73.5 million) continue breastfeeding for at least two years of age.

WHERE TO INVEST?

Simply invest in implementing the Global Strategy for Infant and Young Child Feeding in its entirety. This has been adopted by World Health Assembly and UNICEF's Executive board. Further, both the joint WHO/UNICEF Guide for programming for infant and young child feeding and the more recent, programming guide for infant and young child feeding brought out by UNICEF suggest implementing the following evidence-based interventions; these have been selected in this paper for estimating the financial resources needed:

- Development of policies and plans, coordination;
- Health and nutrition care system: This has two components - BFHI and the training of health workers;
- Community services and mother support;
- Media promotion;
- Maternity protection;
- Implementing the International Code of Marketing of Breastmilk Substitutes; and
- Monitoring and research**.**

HOW MUCH TO INVEST?

According to the estimation, an investment of US$17.5 billion in one-time and recurring costs needs to be made to put in place a package of interventions to create an enabling environment for breastfeeding, some of which are one-time costs like developing legislation and basic training in skilled counselling. Recurring costs include monitoring violations of the International Code, coordination, maternity benefits, data management, research, reviews and updating of policies and legislation. The major recurring cost is of maternity entitlements.

Our estimate is based on calculations with the following assumptions:

- Every woman has a right to protection, access to unbiased information and support for optimal breastfeeding.
- Interventions for creating this enabling environment thus need to be scaled up 100% and required to be implemented concurrently.
- Women below the poverty line need financial assistance as maternity benefit in lieu of wages, to enable them to maintain proximity with the child for exclusive breastfeeding.
- Services will be provided by existing personnel from the health services, labour departments, legal departments, social welfare departments, etc., with additional capacity building.

Limiting factors in the estimate include the scarce amount of available data and the great variation in costs of services in different countries. Since a few countries have recently developed budgets for implementing the *Global Strategy* in part or whole, they shared their estimated costs with us. We also examined existing estimates for promotion of breastfeeding, as well as for BFHI and cash transfer schemes. For maternity benefits, we took the median cost of US$2 per day (between US$1.25 and US$2.50 per day as determined by World Bank) as the threshold to meet basic needs of food, water, sanitation, clothing, shelter, health care and education. We did not include staff salaries in our estimate due to the wide variance in salaries in different countries, as well as the fact that existing staff, who are already being paid, could take on this additional task with some capacity building. Since in some countries this will not be the case, our estimates are an underestimation of the actual costs.

To overcome various limitations, we have developed a financial planning tool as part of the World Breastfeeding Costing Initiative (WBC*i*) to assist countries to plan and prioritise actions, and to budget them accurately. This tool can also be used by international agencies or donors to calculate and track their investment for a country or a region and to put adequate and effective policies and programmes in place that can help enhance optimal breastfeeding rates.

THE WAY FORWARD

The WHO's scientific analysis of the benefits of optimal breastfeeding cannot be ignored. Enhancing breastfeeding rates requires complete implementation of the *Global Strategy* through multi-sectoral action, rather than the implementation of a few interventions. Researchers, analysing why a “breastfeeding gear model” worked in Brazil but failed in Mexico, concluded that Brazil had all the components in place (gears); their functioning was well coordinated and monitored (a master gear) and the results showed improvements in breastfeeding rates. In Mexico, the 'gears' were either missing or misplaced, and the result was a lack of improvement in breastfeeding rates. *Breastfeeding on the Worldwide Agenda*, a landscape analysis report from UNICEF, clearly makes a case for renewed leadership and investment in breastfeeding for full coverage of interventions to provide an

environment conducive to breastfeeding.

All interventions need to be universalised so that every woman has access to the required services. It requires coordinated and concerted action, and resourcing. The major resources must be financial, i.e., cash; the importance of the unremunerated efforts of breastfeeding mothers themselves and via volunteer support which should also be accounted for, and not taken for granted.

The following is a set of recommendations to move forward:

Governments should

1. Plan and budget for the comprehensive implementation of the *Global Strategy* for Infants and Young Child Feeding/National Strategy for Infant and Young Child Feeding, and integrate its implementation as part of national development and economic priorities.
2. Conduct policy and programme assessments on breastfeeding and infant and young child feeding using WHO's assessment tools or WBT*i* tools in order to identify and document gaps.
3. Develop national and sub-national action plans for 1- 5 years with clear budgets to achieve results, based on policy gaps found.
4. Develop national/regional/provincial-monitoring and periodic reporting systems on optimal breastfeeding practices.
5. Institutionalise research to document benefits of this programme to populations, in terms of disease reduction and long term health as well as cost savings.
6. Report annually on the expenditure incurred on interventions for optimal breastfeeding and track it intervention-wise, in all areas of action.
7. Take urgent action on policy matters such as maternity protection and other measures.

The global community should

1. Allocate specific budgets for increasing optimal breastfeeding within existing global funds for child survival, nutrition and women's and children's health. (All donors and global agencies)
2. Revisit its estimates on scaling up nutrition intervention giving full considerations to all interventions required for universal services for optimal breastfeeding. (World Bank)
3. Make a priority commitment of their staff time, including their training on related issues such as the Code and IYCF skills, and funds to be spent on various interventions suggested in the paper. (WHO, UNICEF, World Bank)
4. Report annually regarding the money spent on programmes on improving policy and programmes for optimal breastfeeding. (All agencies)
5. Setup a special maternity benefit fund for cash assistance to women below the poverty line. (World Bank)

INTRODUCTION

THE ISSUE

The WHO estimates that under-nutrition contributes to more than one third of child mortality rates. Over 18,000 children under five years of age still die every day and suboptimal breastfeeding (0-23 months) contributes to 11.6% of these deaths (Bhutta ZA et al, 2013). Lack of optimal breastfeeding (see Box 1.1), especially premature weaning, costs hundreds of thousands of lives, creating problems such as diarrhoea, pneumonia and new-born infections, the major killers of infants and young children. Additionally, it contributes to reduced cognitive development and imposes enormous health and psychological deprivations for the mother as well.

There is a growing concern today about the increasing global burden of malnutrition, both under-nutrition and obesity, as well as about the rising incidence of non-communicable diseases (NCDs), including cardiovascular diseases, diabetes and cancer. Since optimal breastfeeding significantly cuts down the risk of non-communicable diseases, it is the best buy for governments to reduce the costs of their curative services.

Box 1

Optimal breastfeeding practices include:

- Initiation of breastfeeding within one hour of birth.
- Exclusive breastfeeding for the first six months of life.
- Continued breastfeeding for two years and beyond along with nutritionally adequate, safe, age appropriate, responsive complementary feeding starting after six months.

Improving optimal breastfeeding rates is a challenge that involves group and one-to-one counselling for women, strict enforcement of the International Code of Marketing of Breastmilk Substitutes, maternity protection measures, creation of breastfeeding friendly health facilities, workplaces and communities along with massive media promotion of optimal breastfeeding practices and the risks of formula feeding. These actions have to be taken concurrently to be effective. All these interventions need real money, but country budgets do not reflect this. Nor does nutrition aid take these interventions into account in their entirety. The World Bank has estimated the cost of scaling up nutrition; this estimate includes the cost of communication, which is just one of the interventions to increase optimal breastfeeding (World Bank, 2009).

IBFAN Asia took up the exercise of estimating the investment needed for a multi-sectoral action to enhance optimal breastfeeding. Given the variation in costs of various services in countries, a financial planning tool has been developed as part of the the World Breastfeeding Costing Tool (WBC*i*) to help countries to cost all these interventions and make them universally available.

This paper is composed of two parts, Part-I is about **Why**, **Where** and **How Much**. Part-II introduces the financial planning tool.

The chapter *Why Invest?* examines the critical need to prioritise breastfeeding as a public health and economic measure in the context of human rights. The chapter *Where to Invest* examines the evidence supporting all interventions. Very few countries have developed a policy for improving breastfeeding, and allocated a specific budget. This chapter makes a case for initiating action to bridge the gaps in policy and programmes. The chapter *How much to Invest* gives an idea of the scale of investment needed for universalising services to protect, promote and support optimal breastfeeding. This estimate is based on either globally accepted benchmarks or on the amount invested by countries for some interventions.

Part-II of the paper provides information on the financial planning tool that can be used for developing

annual or multi-year budgets and plans. This tool also gives flexibility to countries for prioritising interventions and thus the financial outlays required.

THE PURPOSE

The purpose of this paper is to assist countries to implement in complete the *Global Strategy for Infant and Young Child Feeding* in its entirety. It aims to make governments aware and to raise the political will to invest in all interventions to improve optimal breastfeeding across the globe in a human rights approach. This will help governments to create a specific plan of action and budget lines for these interventions based on their country's current status on optimal breastfeeding indicators. The accompanying WBC*i* financial and planning tool could be utilised for accurately budgeting interventions.

POLICY CONTEXT AND RATIONALE

Policy commitment

There are several global policy commitments in place. In 2002, in the context of under-nutrition, the World Health Assembly and the UNICEF Executive Board adopted the *Global Strategy*, recognising that inappropriate feeding practices and their consequences are major obstacles to sustainable socioeconomic development and poverty reduction. "Governments will be unsuccessful in their efforts to accelerate economic development in any significant long-term sense until optimal child growth and development especially through appropriate feeding practices, are ensured… " (WHO, 2003)

The *September 2011 Political Declaration of "the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases"*(United Nations, 2011) called upon States to "Promote, protect and support breastfeeding, including exclusive breastfeeding for the first six months, as appropriate, as breastfeeding reduces susceptibility to infections and the risk of under-nutrition, promotes infant and young children's growth and development and helps to reduce the risk of developing conditions such as obesity and non-communicable diseases later in life, and, in this regard, strengthen the implementation of the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly resolutions".

Reducing premature weaning from breastfeeding is a multi-sectoral challenge, which requires political will and a human rights approach

The *UN Secretary General's Global Strategy for Women's and Children's Health* is committed to enhancing the number of infants exclusively breastfed by 21.9 million in the year 2015. This strategy proposes a focus on 49 poor income countries.

The *International Labour Organisation* (ILO) in its Convention 102 and 183, set standards of maternity benefits, including paid maternity leave; they state that:

- The benefits should extend throughout the period of leave;
- They should be adequate to maintain the health and living standard of a woman and her child.

The 65th WHA Resolution of May 2012, adopting the *Comprehensive implementation plan on maternal, infant and young child nutrition* urged Member States to take action; the targets of the Plan include increasing exclusive breastfeeding for the first six months by 50%.

Low levels of breastfeeding

In spite of a good policy environment and knowledge of the benefits of optimal breastfeeding, of the 135 million babies born every year, only 39% are able to practise exclusive breastfeeding for the first six months, and the global rates of breastfeeding have remained almost stagnant since 1990 (UNICEF, 2013). Studies have reported weak policy and programme implementation, especially to reduce premature weaning, as the reason for the low level of breastfeeding. Efforts to increase optimal

breastfeeding have been largely neglected in international health and development initiatives.

Breastfeeding is under-funded

There have been clear arguments in favour of increased investments in breastfeeding and complementary feeding. Nutrition has received little international funding, especially when compared with the large investments for the control of other diseases (Victora C, 2009). A report on *Aid for Nutrition* by Action Against Hunger (Mutuma S, 2012) clearly indicates that not only is nutrition under-funded, 44% of the aid goes to tackle micronutrient deficiencies, 40% is spent on treating malnutrition, 15% on promoting good nutritional practices which encapsulate infant and young child feeding and good hygiene, and just 2% is invested into comprehensive programmes. The PMNCH annual report of 2011 noted with concern the lack of focus on commitment to exclusive breastfeeding. There were only seven references made during the commitments meet (PMNCH, 2011).

Breastfeeding is amongst the most under-funded nutrition interventions and current estimates focus on just one intervention, i.e., 'Promotion'

A review in 2013 on how global rates of exclusive breastfeeding for the first six months can be enhanced (Gupta A, Dadhich JP, Suri S, 2013) suggests seven strategic actions that are likely to achieve higher rates of optimal feeding practices. They include protecting, promoting and supporting women, along with four overarching strategies, i.e., coordination, research, training, and data management. In a first global analysis (Lutter CK, Morrow AL, 2013) on implementation of the *Global Strategy*, the authors demonstrated that the benefits of implementing comprehensive strategy in Brazil coincides with a series of policies and programmes put into place during the period.

WHO's Planning Guide (WHO, 2007) for implementing the *Global Strategy* clearly calls for coordinated action and building consensus towards a national strategy and plan of action on IYCF with all the components including promotion, one- to- one community counselling by skilled and adequately trained workers, BFHI and support at birth, implementing the International Code and maternity entitlements such as leave and cash benefits. WHO's *Guide to producing child health subaccounts within the national accounts frameworks* (WHO, 2012) includes "promotion of breastfeeding and complementary feeding including counselling" under the child health expenditure. It also notes that breastfeeding promotion programmes are often under- funded in relation to the health impact that improved feeding practices can have. This tool provides guidance on how to track costs of interventions within child health service delivery, including salary of feeding counsellors and monitors, training costs related to implementation of baby-friendly hospitals, IEC activities, including mass media campaigns, etc. It does not include tracking of costs of Code implementation or maternity entitlements.

This analysis clearly points out key areas that one needs to invest in and the system one needs to put in place at a country level to ensure sustainability.

Part - I

The Need to Invest in Babies- Why, Where and How Much

1. WHY INVEST?

This chapter makes a specific case for investing to enhance optimal breastfeeding practices as a human rights obligation to women and children, for child survival and health and as a public health and economic imperative. This is an agenda which remains unfinished and should be at the heart of development in the post Millennium Development Goals era (Bryce J, Victora CG, Black RE, 2103). We present here evidence of the impact of breastfeeding on health and development of children and adults, and the risks of formula feeding. We also provide economic arguments as a basis to invest.

Optimal breastfeeding should be considered in the context of the human right to food during the first 2 years of life

1.1. HUMAN RIGHTS OBLIGATION

The Convention on the Rights of the Child (CRC) recognises every child's inherent right to life and calls upon the State to ensure to the maximum extent possible, the survival and development of the child. (Article 6). Article 3.1 states, *"In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration."* Article 3.2 says States Parties … *"to this end, shall take all appropriate legislative and administrative measures"*. Article 27.3 calls upon the State "*to take appropriate measures to assist parents and others responsible for the child to implement this right and shall, in case of need, provide material assistance and support programmes, particularly with regard to nutrition, clothing and housing".* Article 27.3 of the CRC thus makes it obligatory for the State to financially support women living below the poverty line, so that they can successfully practise breastfeeding.

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) recognises women's reproductive role and the provisions for maternity protection and child-care are proclaimed as essential rights and are incorporated into all areas of the Convention, whether dealing with employment, family law, health care or education. Society's obligations extend to offering social services, especially child-care facilities that allow individuals to combine family responsibilities with work and participation in public life. Special measures for maternity protection are recommended and "shall not be considered discriminatory" (Article 4).

Optimal breastfeeding should be considered in the context of the human right to food during the first two years of life. Governments may not be able to promise that optimal breastfeeding rates will rise, but they are duty bound to give women the required environment and support to breastfeed optimally.

1.2 PUBLIC HEALTH IMPERATIVE!

Even as investments in breastfeeding have long been neglected, even though a lot is said about its benefit to the world, there is an accompanying silence on the risks of formula feeding. The burden of purchasing infant formula (an unnecessary product) is growing despite the risks to infant health. Global sales of baby food are projected to grow by 37% (US$11.5 billion) to US$42.7 billion from 2008 to 2013 (Euromonitor International, 2008). Keeping in mind the negative impact of formula use on health and development of infants and young children, it would be wise in a long-term sense that countries make the right investments for the health of children. This trend of artificial feeding needs to be reversed and the only way is by investing in optimal breastfeeding.

According to an estimate (Jacklin P, 2007), cost effectiveness of interventions to improve breastfeeding rates are higher in countries with a low rate. The study estimates that spending resources to achieve a 15% point increase in the rates should be considered as cost effective.

There are some examples showing that optimal breastfeeding goes up if you invest. In countries like the US and Brazil, where breastfeeding rates have been shown to rise, governments have invested in interventions. In the US, from 2010 to 2012, the rate of breastfeeding rose by 5%; at six months it was 47.2% in 2012 and at 12 months it was 25.5% (CDC, 2013). In Brazil the median duration of breastfeeding increased from 5.2 months in 1986 to 14 months in 2006, and exclusive breastfeeding increased from 2.5% to 38.6%. This period coincided with the introduction and implementation of new policies and programmes. In Colombia, breastfeeding duration increased from 8.5 months to 14.9 months between 1986 and 2010, and exclusive breastfeeding increased from 15.4% to 46.8% (Lutter C, 2012).

1.3. IMPROVES HEALTH AND DEVELOPMENT

1.3.1. Long term impact on adult health and NCDs

Breastfeeding provides protection against numerous diseases in adulthood (Horta BL et al, 2007), especially over-nutrition or obesity (Arenz S et al, 2004) and noncommunicable diseases such as hypertension, heart disease, asthma (Ip S et al, 2007), malignancies, Type II diabetes (Owen CG et al, 2006). WHO, in its updated 2013 version on long term impact of breastfeeding concludes that breastfeeding has a significant impact on non-communicable diseases, particularly obesity, diabetes and increased performance in intelligence tests in childhood and adolescence. It has also shown a small protective effect against systolic blood pressure (Horta BL, Victora CG, 2013). The global report on NCDs envisages expenditure of trillions of dollars in the coming two to three decades to reduce the burden of NCDs.

According to WHO, breastfeeding can enhance intelligence in childhood and adolescence by 3.5 points

If this is believed to be true, then an investment to increase optimal breastfeeding in one cohort of births has the potential of significantly reducing NCDs in one generation.

1.3.2. Breastfeeding and cognitive development

A meta-analysis suggests the association of breastfeeding with increased performance in intelligence tests during childhood and adolescence, of 3.5 points on average (Horta BL and Victora CG, 2013).

1.3.3. Reduction in child morbidity and mortality

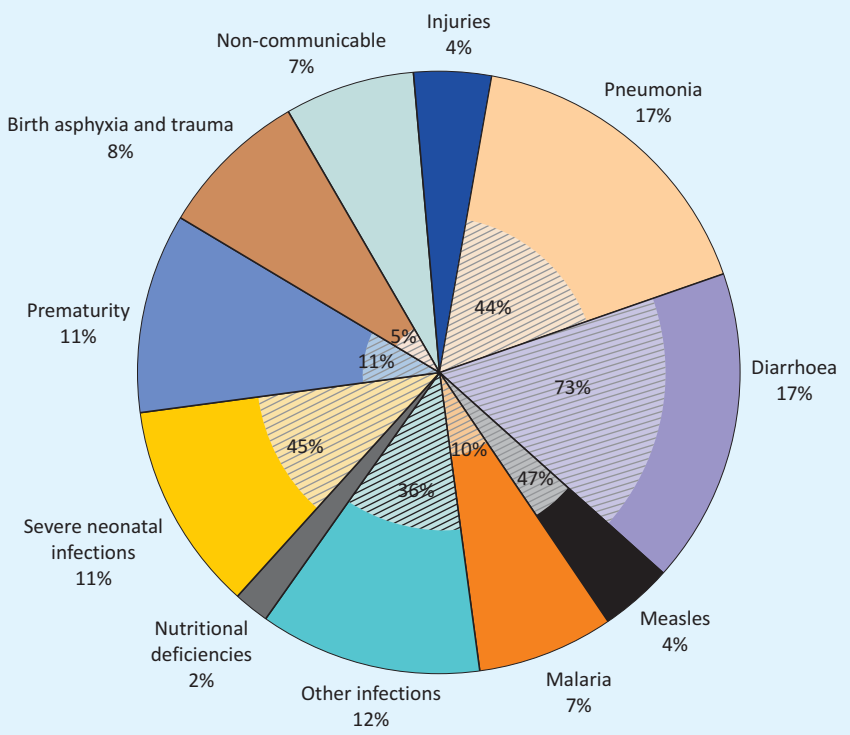
Optimal breastfeeding also improves the quality of life of the mother and the child, especially reducing the risk of under-nutrition. Under-nutrition, particularly in children less than two years of age, prevents them from reaching their full development.

WHO has estimated that under-nutrition contributes significantly (35% of total deaths) to mortality due to major infectious diseases like diarrhoea, pneumonia and neonatal infections in children less than five years of age. Contribution of under-nutrition to deaths due to diarrhoeal diseases is 73%, and about 50% for other infections like pneumonia, measles and severe neonatal infections (WHO, 2009) (see Figure 1.1).

Promotion of breastfeeding is considered to be one of the most cost-effective interventions for child survival, particularly in areas with a high level of infectious disease and unsafe water (World Bank, 1993). A review of evidence reveals that in infants below six months of age, not breastfeeding increases relative risk of all-cause mortality to 14.4 times, diarrhoea mortality to 10.53 times and pneumonia mortality to 15.13 times; in comparison to exclusive breastfeeding. In children 6-23 months of age, premature weaning from breastfeeding increases relative risk of all-cause mortality to 3.68 times, diarrhoea mortality to 2.10 times and pneumonia mortality to 1.92 times (Black RE et al, 2013). (Figure 1.2 & 1.3)

Over 30 studies from around the world, in developing and developed countries alike, have shown that breastfeeding

Figure 1.1: Major causes of death in children under 5 years old with disease-specific contribution of undernutrition, 2004



Source: *WHO 2009. Global health risks: mortality and burden of disease attributable to selected major risks.*

Shaded area indicates contribution of undernutrition to each cause of death

dramatically reduces the risk of dying (León-Cava N et al, 2002). A pooled analysis of studies in Ghana, India and Peru showed that non-breastfed infants are 10 times more susceptible to dying, compared to predominantly or exclusively breastfed infants (Bahl R et al, 2005).

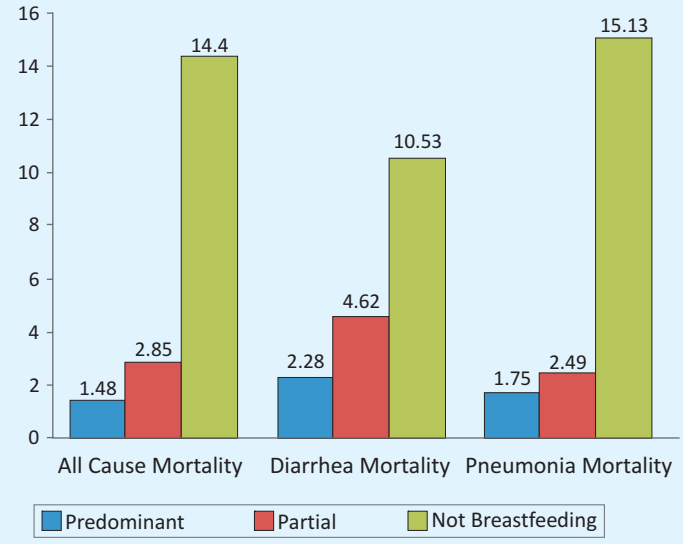
A systematic review (Lamberti LM, 2013) has concluded that breastfeeding is a key intervention to protect against incidence, prevalence, hospitalisation, and mortality due to pneumonia in children younger than five years of age. Similarly for diarrhoea, a review (Lamberti LM, 2011) has concluded that exclusive breastfeeding among infants 0-5 months and any breastfeeding among infants and children 6-23 months offers protection against its incidence, prevalence, hospitalisation and mortality.

An epidemiological evidence of a causal association between early breastfeeding and infection specific mortality in the new-born infants (Edmond KM, 2007) has shown 2.6-fold increased risk of infection-specific neonatal mortality with late initiation of breastfeeding (later than day 1) as shown in figure 1.4.

A global ecological risk assessment study has found that acute infections, including otitis media, Haemophilus influenza meningitis and urinary tract infections are less common and less severe in breastfed infants (Lauer JA et al, 2006). Exclusive breastfeeding has also been found to result in lower rates of HIV transmission than partial breastfeeding with rates of 1% (Iliff PJ et al, 2005; Coutsoudis A et al, 2001)' and 4% (Coovadia HM et al, 2007) being reported from studies in Africa.

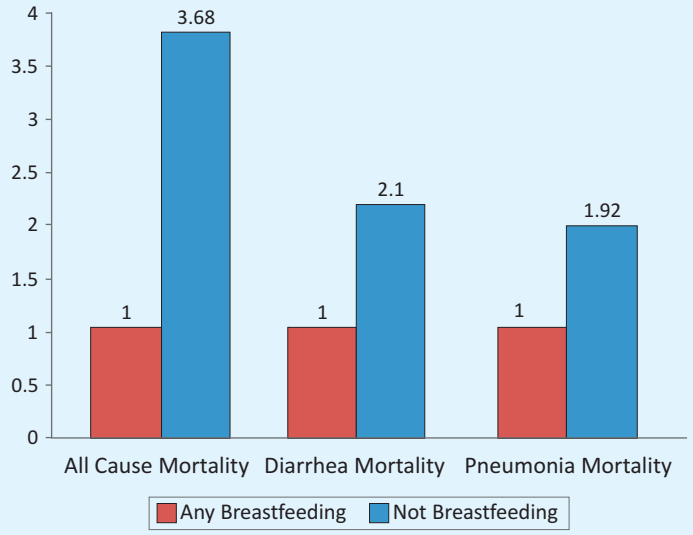
Even in the USA, where death from infection is relatively uncommon, there were 21% to 24% fewer deaths among children who were breastfed than among those who were prematurely

Figure 1.2: Relative Risk of sub-optimal breastfeeding on mortality from diarrhoea and pneumonia in the first six months of life.



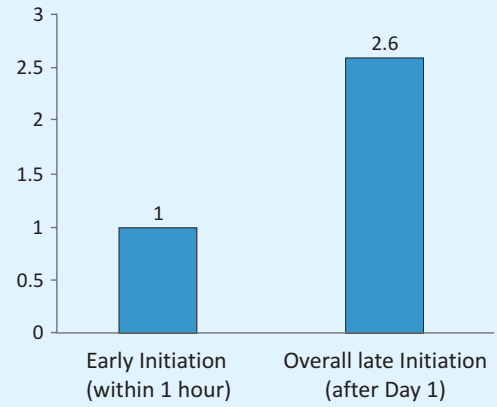
Source: *Black RE et al, 2013*

Figure 1.3: Relative Risk of sub-optimal breastfeeding on mortality from diarrhoea and pneumonia in children 6-23 months of age



Source: *Black RE et al, 2013*

Figure 1.4: The risk of death as a result of infection with delay in initiation of breastfeeding



Source: *Edmond KM et al. 2007*

weaned (Chen A and Rogan W, 2004).

In the UK millennium cohort survey of 15,890 infants, six months of exclusive breastfeeding was associated with a 53% decrease in hospital admissions for diarrhoea and 27% decrease in respiratory tract infections each month; partial breastfeeding was associated with 31% and 25% decreases respectively (Quigley MA, Kelly YJ, Sacker A, 2008). The results of this study suggested that the protective effects wore off soon after breastfeeding ceased.

Yet another study conducted with 283 very low-birth weight (VLBW) infants admitted to the Neonatal Intensive Care Unit (NICU) of Georgetown University Medical Centre from January 1992 through September 1993 showed that human milk feeding among VLBW infants was associated with a lower incidence of retinopathy of prematurity (ROP), compared to exclusively formula-fed VLBW infants after adjusting for confounding variables (Hylander MA et al, 2001).

In addition, the US Surgeon General's *Call to Action* cites increased risk of severe lower respiratory infections (Ip S et al, 2007; Bachrach VR, Schwarz E, Bachrach LR, 2003), and leukaemia (Kwan ML et al, 2004) in formula-fed infants, with risks of hospitalisation for the former being 250% higher than in those who are exclusively breastfed for at least four months. Never-breastfed infants also have a 56% higher risk of mortality from Sudden Infant Death Syndrome (US Department of Health and Human Services, 2011).

1.3.4 Breastfeeding benefits for the mother

Studies show that lack of sufficient breastfeeding increases the risk of ovarian cancer by 27% to 40% (Ness RB et al, 2000; Whittemore AS, Harris R, Itnyre J, 1992; Gwinn ML et al, 1990) and breast cancer by 40% to 80% (Zheng T et al, 2000; Lipworth L, Bailey R, Trichopoulos D, 2000; Romieu I et al, 1996, Yoo K-Y et al, 1992). Exclusive breastfeeding also has an effect on birth spacing: it is as effective as contraceptives for the first six months after delivery. Breastfeeding, which releases oxytocin after delivery, also reduces uterine bleeding.

Premature weaning from breastfeeding can also deprive mothers of health and natural bonding opportunities, with higher risk of depression and increased risk of neglect or even abuse of the child (Strathearn, 2009; AAP 2012).

1.3.5 Breastfeeding and environment protection

Premature weaning from breastfeeding harms the environment as it leaves large carbon and water footprints. The carbon footprint that is created by the formula milk industry from sourcing, producing,

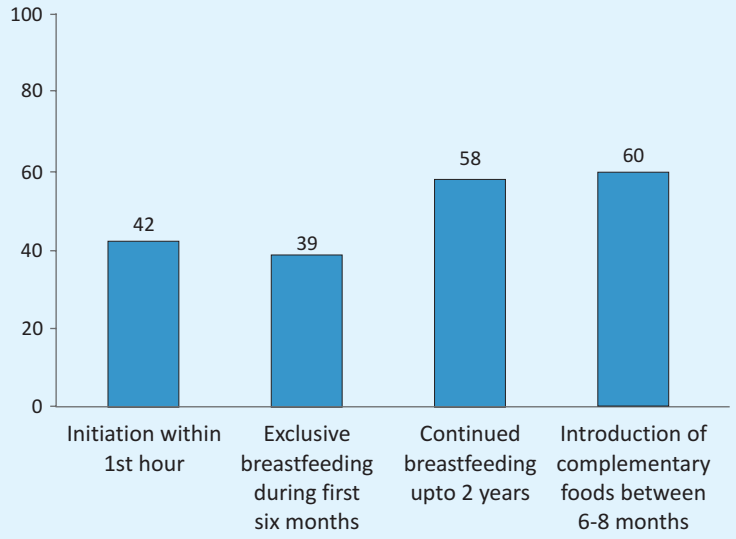
packaging and transportation of infant formula in the US alone is estimated to be huge, as it uses over 32 million kW of energy annually; an additional 550 million cans, 86,000 tons of metal and 364,000 tons of paper are added to landfills every year as well (Coutsoudis A, Coovadia HM, King J 2009).

1.4. OPTIMAL BREASTFEEDING RATES ARE DISMAL AND NOT RISING

Global rates of optimal breastfeeding have been stagnant since 1990. Of the 135 million babies born every year, 83 million are not optimally breastfed, only 42% (56.7 million) initiate breastfeeding within the first hour of life, 39% (52.6 million) are able to practise exclusive breastfeeding during the first six months of life, and only 58% (73.5 million) continue breastfeeding for at least two years of age (UNICEF, 2013) (see Figure 1.5).

In all regions of the world, optimal breastfeeding remains dangerously low (Table 1.1), calling for urgent action by all governments and development partners.

Figure 1.5: Global Infant and Young Child Feeding Practices (%)



Source: *UNICEF, State of the World's Children 2013*

1.5. GLARING GAPS IN THE STATE OF POLICY AND PROGRAMMES

The *Global Strategy* has identified programme and policy indicators, action on which is required to enhance IYCF practices. An assessment of the status of implementation of the *Global Strategy* from 51 countries (IBFAN Asia, 2012) reveals glaring gaps in policy and programmes, primarily due to lack of attention and ignoring the investment perspective. Figure 1.6 shows the average score for each indicator on a scale of 10. An average score of about 5.4 for all indicators is certainly not what will work. The serious gaps that need to be bridged, as identified by the report, include:

- Lack of budgets for implementing policy and programmes.
- Lack of inter-sectoral coordination, which leads to ad-hoc actions.
- Inadequate attention in specific interventions like BFHI.
- Weak implementation of the International Code.
- Women in the unorganised and informal sector are neglected on maternity protection.
- Health workers are inadequately trained in implementation of the International Code.

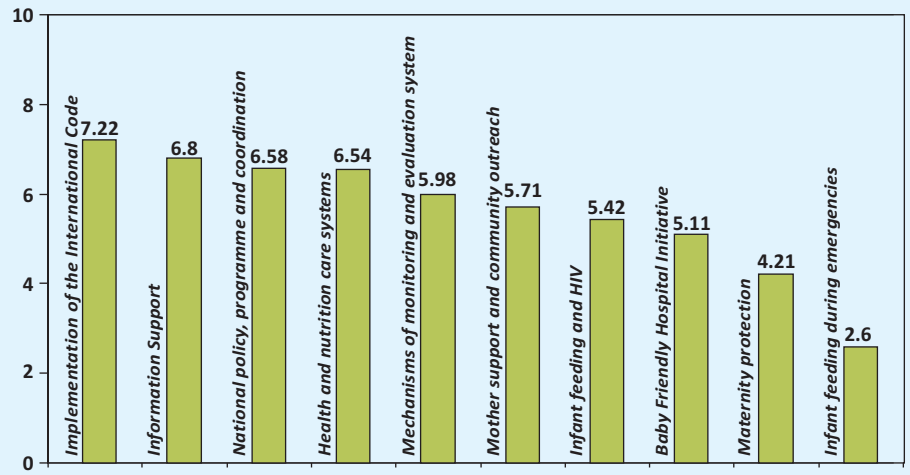
Table 1.1: Optimal Breastfeeding Practices by region

Region	% of children (20062010*) who are:			
	Early Initiation (%)	Exclusive Breastfeeding < 6 months (%)	Breastfeeding at age 2 (%)	Introduction of solid, semi-solid or soft foods 6-8 months (%)
Sub-Saharan Africa	48	37	50	71
Eastern and Southern Africa	56	52	59	84
West and Central Africa	41	25	43	65
South Asia	39	47	75	55
East Asia and the Pacific	41	28	42*	57
Latin America and the Caribbean	-	37	-	-
Least developed countries	52	49	64	68
Global	42	39	58*	60

** exclusing China*

Source: *UNICEF. State of the World's Children 2013*

Figure 1.6: Average scores of indicators



Source: IBFAN Asia, 2012

- Community outreach and support to women to practise optimal IYCF is highly inadequate.
- Women lack full information support on IYCF.
- HIV and Infant Feeding are not integrated in IYCF policies and programmes.
- Policies or programmes are almost non-existent on Infant Feeding during Emergencies/Disasters.
- Weak monitoring and evaluation of nutrition programmes.

1.6. THE ECONOMIC ARGUMENT

Breastmilk and breastfeeding is economically valuable, but it is not 'free'.

Optimal infant and young feeding, especially breastfeeding avoids waste of a valuable food resource, and strengthens a nation's human capital. Formula feeding increases mortality and morbidity placing extra demands on economic resources.

Formula-fed infants are more likely to die young; increased illness and disease risk for both children and their mothers mean additional health care costs for families, the government and society.

Children who are not optimally breastfed as infants have a 3-7 IQ point disadvantage (Kramer et al 2008), thus implying reduced potential educational attainment and future capabilities, productivity and earnings. This is comparable, in effect, to low level lead poisoning (Walker 2011).

However, care of infants, especially exclusive breastfeeding, is time intensive - and time is an economic cost (Leslie J, 1989; Smith JP et al, 2013). Many women carry heavy workloads and may be too busy to breastfeed if their employers and families do not allow them the time. Some women invest in breastfeeding but at the expense of losing work-time or income earning opportunities.

While women invest time and energy (as well as skill) in breastfeeding, there is a need for others to share the economic burden it may entail for women. This would promote economic justice for women. If an appropriate economic value is placed on breastfeeding and breastmilk, supportive investments by families, governments and international agencies are more likely.

1.6.1. Economic value of breastmilk production

Most countries fail to economically account for human breastmilk production. Given the economic worth of mothers' milk, it should not be excluded from national food production (and GDP) statistics. National economic statistics wrongly measure an increase in breastfeeding as a falling national food output and GDP, because less breastfeeding increases commercial infant food production and its related health care expenses - which are measured in GDP! (Also, perversely, the Human Development Index misrepresents optimal breastfeeding as an indicator of economic deprivation rather than an advantage to infant and young child health.) The economic value of breastfeeding as a food has not been included in GDP as it is seen as women's' unpaid work. (Smith JP, 2013; Smith JP, 2005).

However, breastmilk is a commodity which has high economic value and its economic contribution to GDP

can and should be measured. If it were better measured, women would be better appreciated and maybe better supported to breastfeed. Four years ago, two Nobel Prize winners in Economics, Joseph Stiglitz and Amartya Sen (Stiglitz, Sen & Fitoussi, 2009) had recommended to the French President that human milk should be counted in GDP.

"There is a serious omission in the valuation of home-produced goods the value of breastmilk. 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."

Breastfeeding can be valued through the use of market- based prices by using the price that hospitals and mothers are willing to pay to obtain it - presently around U$S85-120 per litre.

Norway is one of the few countries in the world that counts breastmilk as part of the national food supply, and virtually all women breastfeed. In Norway, human milk production valued at US$ 907 million annually is currently 60% of its potential value. In Australia, current human milk production levels now exceed US$3 billion annually. USA has the potential to produce human milk worth over US$110 billion a year, but currently, nearly two-thirds of this value is lost due to premature weaning (Smith JP, 2013).

A 1999 study in India assessed the market value of realistic production of breastmilk at Rs. 5916 crores, when valued at the then prevailing cost of fresh animal milk (Rs. 15 per litre). Were it to be replaced by tinned milk at a cost of Rs 30 per litre (1998 prices); the value doubled to Rs. 11832 crores. If this amount of milk was to be imported, it would require US$4.7 billion at 1998 prices (Gupta A, Khanna K, 1999).

1.6.2. Health costs of formula feeding

Formula is not an analogous product to breastmilk and so the cost of formula understates the true economic value of breastmilk; it does not incorporate the extra costs of health care needed for formula feeding.

The health system economic cost associated with low breastfeeding and high formula feeding is substantial. Introduction of formula during the first three months was estimated to cost the Australian Capital Territory hospital system US$1-2 million per year for treating gastrointestinal illness, respiratory infection, otitis media, eczema and necrotizing enterocolitis (Smith JP et al, 2002).

In California, health insurance and nutrition programmes aimed at low-income residents could save an estimated US$459-659 per family annually if women breastfed for six months (Tuttle CR and Dewey KG, 1996). Similarly, the Women, Infants and Children (WIC) programme could save a minimum of US$112 for formula, and Medicaid could save US$112 among low-income US families with six month olds who breastfed for the same duration (Montgomery DL, 1997).

The United States Breastfeeding Committee, funded by the US Department of Health and Human Services, found that US private and government insurers pay minimally US$3·6 billion to treat diseases and conditions preventable by breastfeeding (Montgomery DL,1997). Formula feeding also resulted in increased health claims, decreased productivity and more days missed from work to care for sick children (United States Breastfeeding Committee, 2002). For every 1000 infants never breastfed, there are 2003 additional office visits, 200 days of additional hospitalisations and 600 prescriptions when compared with infants exclusively breastfed for only three months. This excess translates to US$331-475 more for treating illnesses per infant (United States Breastfeeding Committee, 2002).

A study conducted by the US Department of Agriculture, Economic Research Service in 2001 (Weimer J, 2001) on the economic impact of breastfeeding for three illnesses otitis media, gastroenteritis, and necrotising enterocolitis concluded that if breastfeeding were increased from prevailing levels at 64% in-hospital and 29% at six months to levels recommended by the US Surgeon General (75 and 50% respectively for hospital and at six months), a minimum of US$3.6 billion would have been saved. These savings were based on direct costs of buying

formula as well as fees for physician, hospital, clinic, laboratory etc. and indirect costs for the wages parents lose while caring for an ill child as well as the estimated cost of premature death.

Each case of necrotising enterocolitis costs US$200,000, which occurs 8·4 times more often in very low birth-weight formula-fed babies than breastfed babies (10·1% versus 1·2%) (Bisquera JA et al, 2002).

US families pay US$2 billion to feed infants with breastmilk substitutes per year, and the US federal government pays US$578 million per year for formula (United States Breastfeeding Committee, 2002). The WIC programme provides incentives for mothers to formula feed, as the subsidy is higher for formula feeding. Despite recent changes, this programme remains a subsidy that encourages formula feeding among US mothers at the expense of breastfeeding (Drago R, 2010).

A study (Jacklin P, 2007) prepared for National Institute for Health and Clinical Excellence (NICE) in 2007 estimated that the cost of gastroenteritis, respiratory infections and otitis media in the first year of life because of not breastfeeding is £301 per infant in the UK. A later study commissioned by UNICEF UK notes that the savings for UK gastrointestinal infections related to hospital admissions and consultations with doctors would be £ 3.6 million; for lower respiratory tract infections, it would be £ 6.7million; for acute otitis media related costs, it would be £ 750,000' and for necrotising enterocolitis, it would be over £ 6 million. For the mother, the reduction of premature death and postpartum haemorrhage would result in an incremental benefit of more than £31 million, over the lifetime of each annual cohort of first-time mothers (Renfrew MJ et al, 2012).

A US study calculated the savings from reduced risk of necrotizing enterocolitis, otitis media, gastroenteritis, hospitalization for lower respiratory tract infections, atopic dermatitis, sudden infant death syndrome, childhood asthma, childhood leukemia, type 1 diabetes mellitus, and childhood obesity as well as reduced risk of maternal health morbidity at over US$13 billion in 2013 (premature death of mothers, and lost productivity) (Bartick MC et al, 2013). The state of Louisiana alone would save US$ 216,103,368 on four selected infant diseases (respiratory tract infections, gastroenteritis, necrotizing enterocolitis, and Sudden Infant Death Syndrome) (Ma et al, 2013).

A study conducted by Julie Smith in a Canberra Hospital in Australia, and later extrapolated to the entire country showed that optimal breastfeeding resulted in a saving of Aus $ 60-120 million for just four diseases - gastrointestinal illness, respiratory and ear infections, eczema and neonatal necrotising enterocolitis (Smith et al, 2002).

The authors of this paper used the formula developed by Weimer to calculate the incidence of disease in non-breastfed children using the odds ratio in favour of disease in non-breastfed infants: $x=s/(br+1-b)$ where x is the incidence of disease in non-breastfed children, s is the total incidence of the disease, b is the current breastfeeding rate and r is the odds ratio. We found that if all babies are exclusively breastfed, the costs for treating just diarrhoea (at $ 4.10 per episode) would decrease for India by US$6.2 million and for the world by US$ 74.6 million. Similarly, for just diabetes, where the current global expenditure is over US$ 470 billion annually, scaling up exclusive breastfeeding for the first six months would reduce the global costs by approximately US$ 495 million, and for India, which is currently called the diabetes capital of the world, by US$ 359 million.

Families would also benefit from optimal breastfeeding. According to a study in Philippines by Sobel et al (Sobel HL et al, 2012), nationally, US$260 million was spent on infant formula. The study noted that formula was purchased by almost half of all Philippine families with a young child and one-third of families living on less than US$2 per day. Formula buying families with young children had spent an aggregate of US$143.9 million on medical care as compared to US$56.6 million by non-formula-buying families. After adjusting for income and non-milk family expenditures, the average formula-purchasing Philippine family spent an additional US$ 0.30 (95%

CI:0.24 0.36; r2 = 0.08) on medical expenditure for every US$1 spent on formula.

1.6.3 Investing in breastfeeding is a 'best buy'

Breastfeeding is cited internationally as one of the most cost effective 'interventions' in mother and child health. 'Of available interventions, counselling about breastfeeding [and fortification] has the greatest potential to reduce the burden of child mortality and morbidity' (Bhutta et al, 2008).

The evidence on the benefits of breastfeeding and the risks of formula feeding make a compelling case for investment in interventions to increase optimal breastfeeding practices

Despite the lack of Randomised Control Trials (RCTs) evaluating the impact of breastfeeding neonatal outcomes, there is overwhelming evidence for major perinatal and neonatal health gains from investing in breastfeeding. Promoting exclusive breastfeeding was found to have the potential to prevent 13% of all under-five deaths in developing countries and part of 'the single most important preventative intervention against child mortality' (Bhandari et al, 2008). Costs of breastfeeding programmes range from US$100 to US$200 per death averted, making them comparable in cost-effectiveness to measles and rotavirus vaccination (Caulfield, et al 2006, 551-68).

The most recent evidence shows a cost of per life year saved of promoting early and exclusive breastfeeding for six months and continued breastfeeding for up to 24 months of US$175 (132-286).

1.6.4 Breastfeeding is not free, but it's worth the investment

Given the benefits that optimal breastfeeding will confer on global health and development, it is surprising that so little is invested in it.

What happens if we don't scale up investment in breastfeeding? Breastfeeding could well decline. why would it stay the same? Economic development provides employment opportunities for women and their families. This makes breastfeeding harder to sustain without adequate maternity protection. Adequate paid maternity leave and provisions such as lactation breaks are investments in protecting and supporting breastfeeding while promoting gender equity and economic justice for women.

The food industry has tens of billions of dollars at stake in the sales of formula and manufactured foods for children, and is investing heavily in expanding the market for their products. They are increasing baby food sales through spending over US$4-5 billion a year (assuming 10-15% of the gross sales of US$35 billion) on marketing to hospitals and health professionals, and to busy working mothers. This reduces the share of breastfeeding in infant and young child feeding.

Most countries do not have policies and programmes in place to protect breastfeeding from such pressures. It is important for governments and international agencies to invest more than what the industry does in order to prevent premature weaning from breastfeeding, and to address the on-going harm of current suboptimal infant feeding practices.

The evidence and the current situation hence make a compelling case for investment in interventions to increase optimal breastfeeding practices.

Box 1.1

Global Commitments

WHO's *Comprehensive implementation plan on maternal, infant and young child nutrition*, endorsed at the 65th World Health Assembly in May 2012 by Member States, calls upon them to put in place all interventions needed for enhancing breastfeeding rates, and ensure adequate financial resources for their implementation. In detail it calls for the following:

1. To create a supportive environment for the implementation of comprehensive food and nutrition policies (including development and review of comprehensive nutrition policies, programmes and legislation)
2. To include all required effective health interventions with an impact on nutrition in national nutrition plans, based on the *Global Strategy* and ensure universal access (including provision of nutritional support)
3. To stimulate development policies and programmes outside the health sector that recognise and include nutrition (including provision of maternity protection)
4. To provide sufficient human and financial resources for the implementation of nutrition interventions (including creation of a budget line, and establishing national funds to expand nutrition interventions)
5. To monitor and evaluate the implementation of policies and programmes

The 65th WHA resolution of May 2012, adopting the *Comprehensive implementation plan on maternal, infant and young child nutrition* urged Member States to take action and targets include to increasing exclusive breastfeeding for the first six months by 50%.

The *WHO Guide on Essential Nutrition Actions* suggests a life course approach to identifying interventions. Investing in the different phases of early life and pregnancy is needed to ensure that all the different aspects of infant and young child nutrition are considered as well as the support needed by women, during the pregnancy and after giving birth (WHO, 2013).

The *MDG Report 2010* notes: "…Halving the prevalence of underweight children by 2015 (from a 1990 baseline) will require accelerated and concerted action to scale up interventions that effectively combat under nutrition. A number of simple and cost-effective interventions at key stages in a child's life could go a long way in reducing under nutrition; these include breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life, adequate complementary feeding and micronutrient supplementation between six and 24 months of age…"

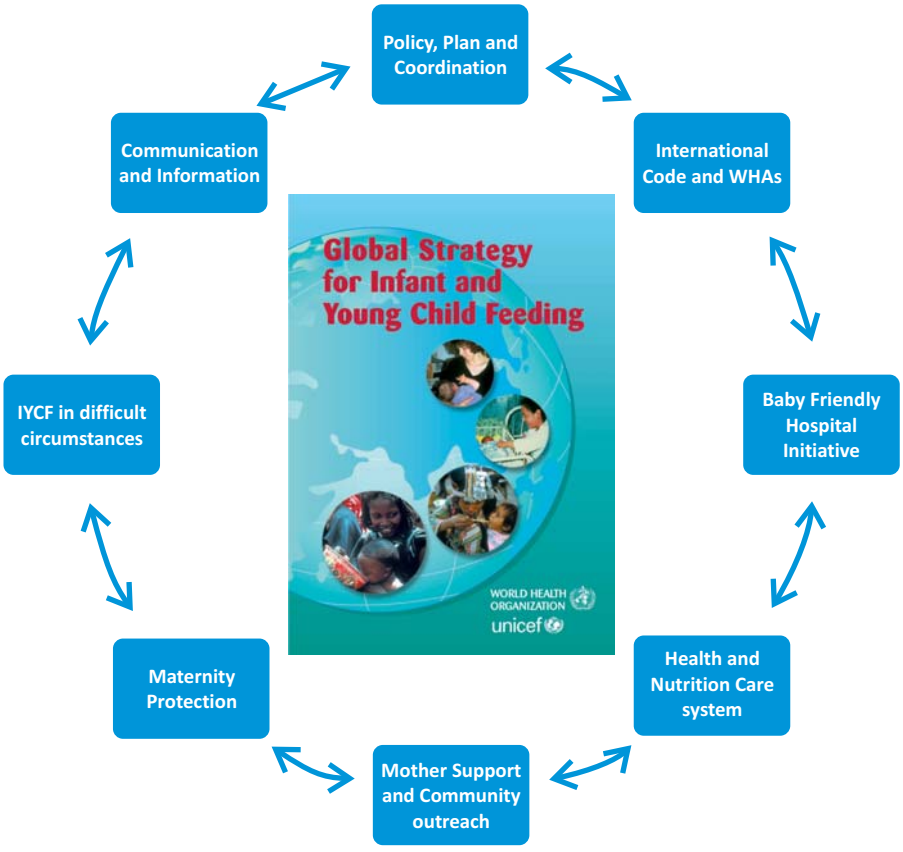
2. WHERE TO INVEST?

This chapter deals with interventions that need investments in order to increase optimal breastfeeding practices; the selection of interventions is based on evidence, global recognition, and experience.

Focussing on the Global Strategy

The *Global Strategy* suggests key strategic intervention settings that need to be considered in a comprehensive and systematic way. Each setting provides a unique environment wherein optimal breastfeeding practices could be protected, promoted and supported.

In 2013, Lutter and Morrow have demonstrated the relationship between protection, promotion and support of breastfeeding and changes in breastfeeding practices by analysing the relationship between implementation of the *Global Strategy*, as measured by the World Breastfeeding Trends Initiative (WBT*i*) and trends in exclusive breastfeeding for the first six months and breastfeeding duration, over the past 20 years in 22 countries in Africa, Asia, the Middle East, and Latin America. The median annual increase in exclusive breastfeeding was 1.0%/y in countries in the upper 50th percentile of WBT*i* scores, indicating national policies and programmes most consistent with the *Global Strategy*. Median increase in exclusive breastfeeding was only 0.2%/y in countries with the lowest WBT*i* scores (P = 0.01). The annual increase in exclusive breastfeeding rates was not associated with maternal demographic factors, such as urban residence, paid maternal employment, maternal education, or gross national income. The authors concluded that the association between breastfeeding protection, promotion, and support and improved exclusive breastfeeding is measurably strengthened by case studies, possibly causal (Lutter C, Morrow AL 2103).



A review of evidence also suggests that seven strategic actions need to be taken by countries to ensure good implementation of the *Global Strategy*. Three of these include the key strategies to protect, promote and support breastfeeding, and four of these are overarching strategies, i.e., coordination, research, data management and education and training (Gupta A, Dadhich JP, Suri S, 2013).

Based on the WHO's planning guide for implementing the *Global Strategy* the following set of interventions are required and have been costed for in this paper. Available evidence on these interventions is presented.

2.1. NATIONAL STRATEGY, POLICY, AND COORDINATED PLAN OF ACTION

A global report on infant and young child feeding programming status (UNICEF 2012) indicates that while 48% countries had developed their plans of action, very few countries had a combination of policy, strategy and plan of action. The WBT*i* 2012 report *Are Our Babies Falling Through the Gaps*? (IBFAN Asia, 2012) shows that only 14 countries of 51 have set aside a budget for implementing IYCF policies. UNICEF's review on infant and young child feeding recommends developing and executing a comprehensive IYCF strategy for implementation at scale (UNICEF, 2010).

Researchers attribute the rise in exclusive breastfeeding rates in Brazil and Colombia to the presence of these policies (Lutter C, Morrow AL 2013). They demonstrate the benefits of implementing a comprehensive strategy and compare action in Brazil and Mexico. In Brazil, the median duration of breastfeeding increased from 5.2 months in 1986 to 14.0 month in 2006, and exclusive breastfeeding increased from 2.5% to 38.6% while in Mexico, exclusive breastfeeding decreased by 6.6 percentage points, from 28.8% in 1987-88 to 22.3% in 2006, and breastfeeding duration only increased from 9.5 to 10.4 months over the same period. The remarkable increase in Brazil coincides with a series of policies and programmes put into place along with continued refinement and readjustment to strengthen breastfeeding protection.

A parsimonious and testable dynamic breastfeeding gear model (BFGM) developed by the Perez-Camilla et al ((Perez-Escamilla et al, 2012) suggests that evidence-based advocacy is needed to generate the necessary political will to enact legislation and policies to protect, promote, and support breastfeeding at the hospital and community level. For the breastfeeding gear to work, a master gear is needed to serve the role of goal setting, coordination and feedback. (Figure 2.1) The study suggests that Brazil has been much more successful than Mexico in improving the prevalence of exclusive breastfeeding since all the components of BFGM have been and continue to be in place in that country.(Figure 2.2)

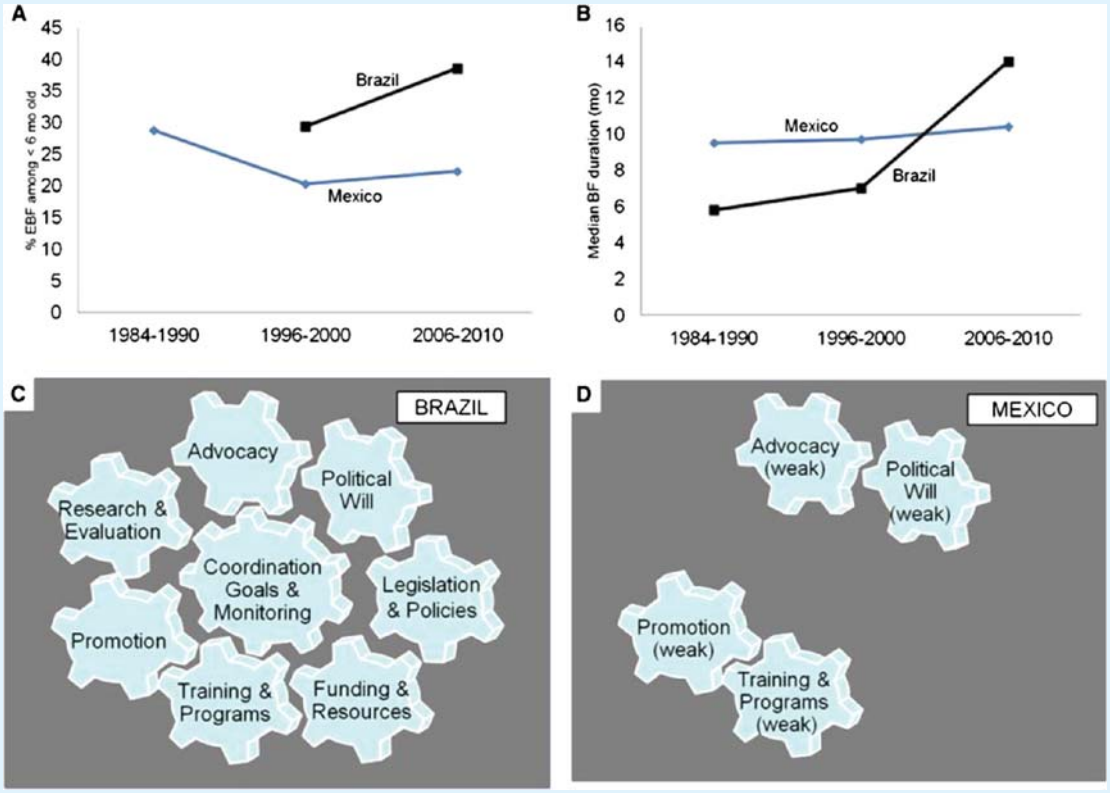
Jacknowitz, while acknowledging the role of changes in demographic characteristics of birth to explain increasing rates of breastfeeding, identifies changes in laws and policies, health promotion, the WIC Special Supplemental Programme, employer support, technological innovations and attitudes towards breastfeeding as important factors in bringing about such a change (Jacknowitz A, 2007).

Scientists (Bryce J et al, 2008), draw attention to the need for creating national policies and action plan and stress on the need for political will and commitment, without which no significant change can occur. They further identify creating legislation as a partial measure to protect effective actions from political change.

Figure 2.1

UNICEF's recent landscape analysis(UNICEF, 2013) on commitment to breastfeeding clearly makes a case for high level of political commitment with resources commensurate with the issues importance. Policies are essential to demonstrate

Figure 2.2



Source: *Perez-Escamilla R, Curry L, Minhas D, et al. Adv. Nutr 2012;3:790-800*

political leadership and to ensure effective investment (ECC, 2012). A written evidence-based policy clearly spelling out priority areas for action and a budget estimate assists in advocacy for investment. For example, the US Surgeon General's *Call for Action to Support Breastfeeding* has been used by the United States Breastfeeding Committee to call for the appropriation of US$15 million from the Prevention and Public Health Fund to support breastfeeding (USBC, 2011).

2.2. Baby Friendly Hospital Initiative

After 22 years of the implementation of BFHI, globally two-thirds of the hospitals offering maternity services **never** complied with the BFHI standards. This is evident from a global analysis of BFHI implementation (Labbok M, 2012). Even though benefits of implementing BFHI have been known, this does not get the attention it began with in 1990s.

A 2012 analysis of the PROBIT (Promotion of Breastfeeding Intervention Trial) research in Belarus demonstrated links between BFHI and longer breastfeeding durations (19.7% vs. 11.4% at 12 months, $P < .001$) and exclusivity (43.3% vs. 6.4% at three months, $P < .001$), reductions in gastrointestinal episodes and rashes, higher verbal IQ scores, and longer exclusive breastfeeding rates for subsequent children but no statistically significant differences in the child's body mass index, blood pressure, or dental health (Patricia J. Martens, 2012).

In Mongolia, BFHI was launched in 1992, and after six years of implementation, breastfeeding rates at four months increased from 48% to 93%. More than 90% of babies initiated breastfeeding within 30 minutes of birth (UNICEF, 2003).

In New Zealand, BFHI accreditation of maternity facilities increased from 0% in 2000 to 96.1% in 2011 and a 28.8-percentage-point increase (55.6% in 2001 to 84.4% in 2011) of exclusive breastfeeding at discharge was found (Martis R and Stufkens J, 2013).

A study from 14 developing countries about the

Table 2.1: Global implementation of BFHI programme

Region	No of countries	No of hospitals with maternities	Ever Certified as of 2009-2010	(%) Ever certified 2009-2010
Total	198	77640	21328	27%
Industrialized	31	12495	1066	9%
Developing	167	65145	20262	31%

Source: *Adapted from Labbok M. Global Baby Friendly Hospital Initiative Monitoring Data: Update and Discussion. BREASTFEEDING MEDICINE Volume 7, Number 4, 2012)*

relationship between BFHI programming and the trends in exclusive breastfeeding has revealed that there was a statistically significant annual increase in rates of exclusive breastfeeding associated with the BFHI implementation (Abrahams SW and Labbok MH, 2009).

Action on BFHI includes the Code implementation as well as skilled counselling and support to women at birth in the health facility or at home.

2.3. TRAINING OF HEALTH WORKERS

Increasing evidence is being gathered about the importance of training in lactation management for enhancing breastfeeding. A systemic review of evidence including RCTs conducted in Australia, Belarus, Brazil, Canada, Denmark, France, Italy, Japan, Netherlands, New Zealand, Scotland, Sweden, Singapore, United Kingdom and United States, found that breastfeeding interventions, especially by trained personnel, are more effective than usual care in increasing short and long term breastfeeding (Mei Chung et al, 2008). A study from Brazil has reported that the training of community health agents working with Brazil's Family Health Programme to provide breastfeeding counselling at home visits resulted in improved rates of exclusive breastfeeding (Coutinho SB, 2013). In the WHO Child Growth Standards study, trained lactation counsellors supported the mothers to prevent and manage breastfeeding difficulties from soon after birth and at specified times during the first year after birth. This strategy resulted in good compliance to exclusive breastfeeding in all the participating countries (WHO Multicentre Growth Reference Study Group, 2006). A cluster RCT (Bhandari N et al, 2003) conducted in India to assess the effect of a 3-day training programme on breastfeeding counselling of village level health and nutrition care functionaries reported an improved rate of exclusive breastfeeding and the reduction of diarrhoea.

Only 37 out of 199 countries reporting (19%) have passed laws incorporating all of the recommendations of the Code (WHO, 2013)

2.4. IMPLEMENTATION OF THE INTERNATIONAL CODE OF MARKETING OF BREASTMILK SUBSTITUTES

Infant formula has been linked to increased risks of diarrhoea and other diseases in infants and young children as well as to increased risk of NCDs and obesity in later life. Yet the market for formula is growing. Increasingly the promotion and marketing practices of the manufacturers of formula target women and children.

The International Code urges nations to create a national legislation to regulate the promotional practices of baby milk manufacturers, as they interfere with breastfeeding recommendations. WHO's 2013 report on the Code shows that only 37 out of 199 countries reporting (19%) have passed laws incorporating all of the recommendations of the Code (WHO, 2013). According to another report only 33/193 (17%) member states of the UN, have so far adapted the International Code into a national law (IBFAN-ICDC, 2011) and very few implement it effectively. According to the WBT*i* national assessments of policies and programmes conducted in 51 countries in the period 2007-2012, of the 28 countries that had enacted all the provisions of the Code as law, only seven countries - Brazil, Costa Rica, Dominican Republic, Gambia, Ghana, Malawi, and Mongolia - actually implemented it (IBFAN Asia/gBICS,

2012). A recent review also concludes that there is a systemic weakness both at the level of the WHO and countries for effective implementation and monitoring of the Code (Forsyth S, 2013). It is clear that implementation of the Code is weak worldwide.

A logistic regression analysis study from Australia (Forster DA, McLachlan HL, Lumley J, 2006) has suggested that a baby receiving formula while in hospital is one of the negative factors associated with feeding any breastmilk at six months. Another study from Australia (Smith and Blake 2013) reports that voluntary industry regulation has not altered companies' marketing of breastmilk substitutes, which is increasingly using tactics like increasing toddler formula and food advertisements, increasing brand promotion directly to the public, and observing limited voluntary regulatory arrangements.

A study in Australia compared the content of formula advertisements in parent magazines. It found in countries where the ban is limited to promotion of infant formula (0-6 months of age only), the companies promote follow on/ toddler's milk. Bans on the advertising of infant formula (0-6 months of age only) products do not prevent companies from advertising (follow-on or toddler formula). These products are presented in ways that encourage consumers to associate the claims with a group of products (a product line) that includes infant formula (Berry NJ, Jones SC, Iverson D, 2012).

Another Australian study found that advertisements of toddler milks indirectly promote infant formula. The respondents understood toddler milk advertisements promoted a range of products that included infant and follow-on formula and accepted the claims uncritically (Berry NJ, Jones S and Iverson D, 2010). In the Philippines 75% of mothers interviewed said that they recall advertising**;** these mothers had twice the risk of using the formula (Sobel et al, 2011). In Laos, 75% of the mothers interviewed recalled advertising (broadcast from Thailand) and 45% of them wanted to buy the product after seeing it (Putthakeo P et al, 2009).

In an analysis of the compliance of labelling requirements as envisaged in the Code in Turkey, the authors found that the majority of the product labels of breastmilk substitutes marketed in their country violated the Code in terms of having photos or pictures idealising the use of infant formula (Ergin A et al, 2013).

Newer strategies like using social media sites by infant formula manufacturers for promotional activities like enabling user-generated content for promoting use of infant formula, financial considerations between infant formula companies and bloggers, and developing mobile applications for use by parents have been documented in a report from the US (Abrahams SW, 2012).

Despite the risks of formula feeding, markets grow unimpeded, the global sales of baby food are projected to grow by 37%

The US Centre for Disease Control (CDC) recommends that “limiting the marketing of commercial competitors who compete with breastfeeding can help mothers and families to make appropriate and informed decisions about infant feeding” (Shealy KR et al, 2005).

Despite global knowledge of the risks of formula feeding, the market for formula is growing unimpeded; the global sale of baby food is projected to grow by 37% - from US$11.5 billion to US$42.7 billion - from 2008 to 2013 (Global Industry Analysts, Inc 2010). Companies are spending a lot more on promoting the formula in comparison to governments spending to promote breastfeeding. In Hong Kong, US$300 million was spent on formula advertising in 2012 and more than US$ 100 million was spent in the Philippines in 2006 (Euromonitor, 2013).

Ensuring optimal breastfeeding rates thus requires an equally aggressive, sophisticated and forceful promotion of breastfeeding to both counter the advertising of formula and also to bring about a behaviour attitudinal change, particularly in the context of cultural beliefs and practices, as well as public opinion that wrongly sees bovine-based

manufactured milk as equating with mother's milk as a food for human infants (Smith JP, 2002). In other words, make breastfeeding the norm rather than the exception, and formula feeding the divergent practice. Special and professional social marketing campaigns, following the principles of commercial marketing, may have to be designed for this purpose, for which adequate financing would be required. At the same time, the International Code and national legislation would have to be strictly enforced by people trained in Code monitoring, which would again require financial outlays.

2.5. MATERNITY PROTECTION

In many countries, it has been shown that formal sector employment is associated with reduced breastfeeding, especially where pregnancy and breastfeeding are not accommodated in workplaces, and mothers lack access to adequate maternity leave and lactation breaks. A study from Ethiopia has concluded that employed mothers were less likely to breastfeed exclusively, necessitating the need for creating an enabling environment and implementing policies for exclusive breastfeeding at the workplace (Setegn T et al, 2012). A recent international ecological study (Heymann J, Raub A, Earle A, 2013) demonstrated that national policies guaranteeing breastfeeding breaks in the workplace were associated with an increase of 7.7 percentage points in the rate of exclusive breastfeeding of infants less than six months of age in countries where the share of females in the labour force is higher.

ILO documents show that as of February 2012, only 23 countries have ratified the Maternity Protection Convention, 2000 (No. 183). These are Albania, Austria, Azerbaijan, Belarus, Belize, Benin, Bosnia and Herzegovina, Bulgaria, Cuba, Cyprus, Hungary, Italy, Latvia, Lithuania, Luxembourg, Mali, Republic of Moldova, Morocco, Netherlands, Romania, Serbia, Slovakia and Slovenia. Overall only 63 countries are party to one of the three ILO conventions on maternity protection. However, 167 countries have some kind of national legislation on maternity benefits (ILO, 2010).

Only 21% of countries provide for 18 weeks and above and majority in the industrialised countries

Childcare services' support for breastfeeding may also need to come under scrutiny, with recent research highlighting inadequate knowledge and training of staff, and in some cases discrimination against breastfeeding mothers (Smith et al 2013; Cameron 2012). **While we have not included these in our cost estimates, given the wide variance in costs of start up, services provided and salaries in various countries, we believe that child-care services, especially accessible and affordable creches managed by well-trained staff, are an imperative to support women to breastfeed optimally. Again, while we have not estimated the costs of providing paid maternity leave and nursing breaks in the formal sector, once again given the vast differences in salaries and wages paid to working women, we make a case for countries to implement maternity protection in the form of adequate paid maternity leave for women working in the formal sector.**

2.5.1. Maternity leave

The link between postnatal leave and breastfeeding has been clearly established through several studies. A study from South Carolina (Ogbuanu C et al, 2011) found that compared with those returning to work within one to six weeks, women who had not yet returned to work had greater odds of initiating breastfeeding, continuing any breastfeeding beyond six months, and predominant breastfeeding beyond three months. Women who returned to work at or after 13 weeks postpartum had higher odds of predominantly breastfeeding beyond three months. Another study from California has revealed that a post-delivery maternity leave of six weeks or less or six to 12 weeks after delivery was associated, respectively, with a four times and two-times higher odds of failure to establish breastfeeding and an increased probability of cessation after successful establishment (Guendelman S et al, 2009).

Studies from Europe further strengthen this conclusion. A review of literature on the length of maternity leave and health of mothers and children to evaluate the Swiss situation in view of the maternity leave policy implemented in 2005 (Staehelin K, Bertea PC, Stutz EZ, 2007) concluded that there was a positive association between the length of maternity leave and the mother's mental health and breastfeeding duration.

Table 2.2: Length of statutory maternity, by region, 2009 (167 countries)

Region	Less than 12 weeks	12-13 weeks (meets C3 and C 103)	14-17 weeks (meets C 183)	18 weeks or more (meets R 191)
All regions	14%	35%	31%	20%
Africa (50 countries analyzed)	18%	34%	48%	0
Asia and the Pacific	17%	65%	17%	0%
Central and South Eastern Europe (non EU) and CIS	0%	7%	93%	0%
Developed economies and EU	0%	8%	46%	46%
Latin America and the Caribbean	6%	72%	13%	9%
Middle East	82%	0%	18%	0%

Note: Figures may not add up to 100 per cent because of rounding.

Source: *ILO. Maternity at work. A review of national legislation Findings from the ILO Database of Conditions of Work and Employment Laws. 2nd ed. (2010). Available online at http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_124442.pdf*

In all Nordic countries, maternity leave has expanded quite rapidly since the 1960s. Swedish policy provides for 14 weeks maternity leave, including up to seven weeks before the birth, and two weeks paternity leave after childbirth. Further, a parental leave follows for up to 18 months, often on reduced pay for the few final months (National Women's Council of Ireland, 2005).

Sweden has one of the most generous parental leave policies in the world (all parents are entitled to 480 days or 16 months paid leave). A study conducted in two Swedish counties shows that parental leave had an impact on breastfeeding. In fact, infants whose fathers did not take their leave, were significantly less likely to breastfeed at age two, four and six (Flaking et al, 2010).

On the whole, ILO data shows that in most countries, maternity leave is not commensurate with the period of exclusive breastfeeding. (Table 2.2)

2.5.2. Wage compensation for the informal sector

The contribution of the informal economy income to the total household income is significant in many regions: for example, in several African countries, informal economy income accounts for nearly 30% of the total income and over 40% of the total urban income. The contribution of the informal economy to the GDP is probably also significant. For those countries where estimates exist, the share of the informal economy in non-agricultural GDP is between 45% to 60% (Chen MA, 2001).

The Maternity Protection Convention, 2000 (No. 183) specifically applies to “all employed women, including those in atypical forms of dependant work”. The most recent instrument on the recommendation concerning National Floors for Social Protection 2012 (No.202) makes explicit reference to “people in the informal economy, acknowledging that social security is an important tool to prevent and reduce poverty…” (ILO, 2013).

Many countries, including those in the least developed and developing category, have started to recognise the challenges faced by women working in the informal sector and migrant workers, especially women who live below the poverty line, and who work in circumstances where maternity protection does not exist. They provide some kind of financial and/or food assistance to such women. These often take the form of cash transfers, with breastfeeding as an implied conditionality. Mongolia has universalised financial support of US$360 per birth, starting from 20 weeks into pregnancy till six months after birth (Personal communication with Dr. Soyolgerel Gochoo). India's national Food Security Act (Ministry of Consumer Affairs, Food and Public Distribution, Government of India, 2013) makes maternity benefits of Rs. 1000 (approx. US$15) a month after birth for six months a legal entitlement of all women. While these amounts may not be adequate, they are a beginning, and exemplify the political will of these governments to help women to be successful in breastfeeding optimally.

In Colombia, a mean increase in weight was noted among neonates and the exposure to a cash transfer programme was associated with an increase in height-for-age *Z* score among infants less than two years of age. This means that among those exposed to cash

transfers; the probability of being malnourished was reduced by 6.9% (Paes-Sousa R, Santos L M P, Miazaki ES 2011). The study, which included children younger than 12 months of age at the baseline, showed the greatest benefit among children less than six months of age in the poorest category.

Brazil's national health-related Conditional Cash Transfer, Bolsa Alimentação, provided eligible households with a cash transfer equivalent to US$6.25-18.70 per month, depending on the number of beneficiaries in the household that included pregnant women, mothers with children aged 0-6 months for whom breastmilk was the principal source of food, and children from six months to seven years of age (Bassett L, 2008). During the first five years of the programme, it was associated with a significant 9.3% reduction in overall infant mortality rates, with greater declines in post-neonatal mortality rates (Shei A, 2013).

Sheffield University in UK has initiated a study to see if financial assistance will overcome cultural barriers to breastfeeding. New mothers from low-income areas are to be offered up to £200 in shopping vouchers to encourage them to exclusively breastfeed their babies for the first six months of life (BBC, 12 Nov. 2013).

Financial assistance to women for breastfeeding will work best when it is linked to programmes promoting optimal infant feeding practices, and combined with appropriate breastfeeding counselling services support, so that the money is not used for buying infant formula. Thus this assistance will need to be accompanied by scaling up of counselling services and restricting the promotion of formula on the one hand, and at times, and may need to incorporate conditions for recipients to attend a minimum number of counselling sessions to promote and enable aspirations and commitment to optimal breastfeeding.

2.6. COMMUNICATION FOR BEHAVIOURAL CHANGE

The World Bank stresses on the importance of the promotion of breastfeeding and complementary feeding practices to prevent and treat infantile acute malnutrition (Horton S et al, 2009).

Kattapong's meta-analysis of education-based breastfeeding interventions, which examined data from 52 studies, concluded that educational breastfeeding interventions are effective in improving the rates of breastfeeding from initiation and up to six months postpartum, especially if in conjunction with multidimensional interventions. (Kattapong K.R. 2007). Investments in longer and better-funded campaigns to achieve adequate population exposure to media messages have shown results in Jordan and Armenia (Wakefield MA, Loken B and Hornik RC, 2010).

UNICEF's case study on Uganda, in its first review of the infant and young child feeding programme, recommends developing a communications strategy aimed at ensuring that all women have equitable access to accurate, clear, and consistent messages (UNICEF, 2009).

Investing in the promotion of breastfeeding as well as highlighting the risks of formula feeding, especially through mass media, gains urgency in the wake of increased promotion of formula and baby foods by the baby milks and baby foods industry.

2.6.1. Skilled Inter-personal communication: One-to-one counselling

WHO and UNICEF have developed a number of tools to increase the capacity of health care providers to protect, promote and support infant and young child feeding. BFHI has an updated 20-hour course targeted at maternity staff, and provides basic knowledge and skills to support the timely initiation and establishment of exclusive breastfeeding. WHO has developed the 40-hour breastfeeding counselling course, the 24-hour complementary feeding counselling course and the 24-hour HIV and infant feeding counselling course, all of which are available to train a cadre of counsellors to whom mothers can be referred to deal with more complex problems (WHO, 2007). WHO recommends all these training courses for counsellors in health facilities. WHO also recommends its integrated IYCF counselling course for one-to-one counselling at the family and community level. UNICEF's planning guide (UNICEF, 2011) recommends a similar skill development.

Box 2.1

Skilled Counselling Works!

The Baby Friendly Community Health Initiative, Lalitpur, India (Kushwaha KP, 2010)

The Baby Friendly Community Health Initiative (BFCHI) Project, Lalitpur, organised by the Paediatrics Department of BRD Medical College Gorakhpur, India, is based on the provision of skilled counselling to each mother at her doorstep. Lalitpur, one of the poorest districts in the state of Uttar Pradesh, also considered as one of the more backward states, has shown a significant increase in the rates of optimal IYCF practices. Reaching out to a population of over one million, the project uses government health and nutrition field workers and functionaries, volunteer women in the villages, and the local district administration to take breastfeeding messages and counselling services to village women and provide support. A unique feature of the project is the strong referral system, where a field worker facing a challenge has access to professional support and help from both, the district hospital and from the staff of the BRD Medical College. In the middle are specially trained "mentoring" counsellors who also supervise the field workers on a regular basis. The training module used is IBFAN Asia's *The '4 in 1' Training Programme - Capacity building initiative for building health workers' skills in Infant and Young Child Feeding Counselling* (BPNI/IBFAN Asia, 2013), and includes capacity building in counselling skills for optimal breastfeeding. The cascade-training course, which is adapted from the various WHO/UNICEF training courses on breastfeeding, complementary feeding and HIV and Infant Feeding, involves the creation of national level trainers, who then build the capacity of a larger cadre of middle level trainers, who in turn build the capacity of frontline workers. In Lalitpur, they also act as "mentors" and supervisors of frontline workers.

In a recently published paper, participants received three peer counselling visits, at the baseline and three weeks later, 24-hour food recalls for infants were collected. After the three visits, exclusively formula-fed infants decreased seven-fold ($P < .001$). Mixed-fed infants decreased 37% ($P < .001$) (Salud MA et al, 2009). Other studies have shown that breastfeeding counselling increases breastfeeding in controlled environments in developed and developing country settings (Haider R et al, 2000; Haque MF et al, 2002; Morrow AL et al, 1999; Anderson AK et al, 2005; Chapman DJ et al, 2004).

A systematic review from UK (NICE, 2005) has identified counselling during the stay in a maternity facility and later, in the community, as one of the practices that have been shown to be extremely effective for enhancing breastfeeding rates and duration.

The results of Cochrane reviews on breastfeeding practices given below show how much breastfeeding could be increased if optimal breastfeeding practices are supported in different settings.

Educational or counselling interventions increased exclusive breastfeeding by 43% on day 1, by 30% until 1 month and by 90% from 1 to 6 months

Early initiation of breastfeeding: Breastfeeding education had a significant effect on the increasing initiation rates as compared to standard care. Subgroup analyses showed that one-to-one, needs-based, informal repeat education sessions and generic, formal antenatal education sessions are effective in terms of an increase in breastfeeding among women of low incomes regardless of their ethnicity and feeding intention (Dyson L, McCormick F and Renfrew MJ, 2005).

Exclusive breastfeeding: All forms of extra support, analysed together, showed an increase in duration of 'any breastfeeding' as well as increased exclusive breastfeeding. All forms of extra support together also had a positive effect on the duration of exclusive breastfeeding. Support by both the lay counsellors and professional counsellors had a positive impact on breastfeeding outcomes, more so if the support is

face-to-face rather than telephonic. Predictable, scheduled on-going visits are required as support offered only when asked by the women is less likely to be effective (Renfrew MJ et al, 2012).

Educational or counselling interventions significantly increased exclusive breastfeeding rates: 43% at day one, 30% until one month and 90% at 1-5 months. Significant reductions in rates of no breastfeeding were noted (Haroon S et al, 2013).

2.6.2. Mass media campaigns

An Australian study (Forster DA, McLachlan HL, Lumley J, 2006) has suggested that women's prenatal breastfeeding intentions are a good predictor of the actual duration of breastfeeding, which in turn indicates the possible need for effective IEC.

Mass media programmes with behaviour change communication (BCC) to promote breastfeeding have been used for the past few decades. A study from Uganda reported that exposure to BCC messages was strongly associated with women's knowledge of six months as the ideal duration for exclusive breastfeeding (Gupta N, Katende C and Bessinger R, 2004). A study from Armenia (Thompson ME and Harutyunyan TL, 2009) showed that a community based communication campaign resulted in 31.4% increase in exclusive breastfeeding.

In addition to the promotion of breastfeeding, mass media campaigns highlighting the risks of formula feeding need to be designed to specifically counter the promotion of formula by the baby milk manufacturers.

2.7. MONITORING AND RESEARCH

The *Global Strategy* stresses the need for monitoring and research, for both evaluating actions taken and their impact and making mid-term changes if needed. It particularly recommends regular monitoring in the areas of

- Policy implementation,
- Maternity entitlements,
- Baby friendly initiative,
- Implementing and monitoring national measures related to the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly resolutions to strengthen them, and
- Growth and development of infants and young children as a routine nutrition intervention.

The *Global Strategy* further urges that such monitoring and evaluations should guide resource investment and management to improve infant and young child feeding.

Stating that epidemiological and operational research is a crucial component, the *Global Strategy* also stresses the need for a new clinical and population-based research and investigations of behavioural concerns. In particular, it urges nations and international agencies to support research on marketing practices and the International Code and subsequent relevant WHA resolutions.

WHO developed a tool, the "Infant and young child feeding: A tool for assessing national practices, policies and programmes" (WHO, 2003) for monitoring the implementation of the *Global Strategy*, which was adapted later by IBFAN Asia as the World Breastfeeding Trends Initiative or WBT*i*. This tool is now introduced in 82 countries, 51 of which have completed the assessment. The report, "Are Our Babies Falling through the Gaps", shows how countries have taken action after having known the gaps in their policy and programmes (IBFAN Asia/gBICS, 2012).

3. HOW MUCH TO INVEST?

All women need an enabling environment to optimally breastfeed their babies. This environment includes unbiased correct information, protection from commercial influence, an effective support structure and adequate maternity protection to every single woman. Universalising this enabling environment or scaling it up to 100% requires financial outlays.

"Sustainability requires political support, dedicated financial resources for IYCF, good stewardship of funds, adequate numbers of skilled human resources..."

UNICEF's *Infant and Young Child Feeding Programme Review - Consolidated Report of Six Country Programme Review* (UNICEF, 2010) states clearly that "Sustainability requires political support, dedicated financial resources for IYCF, good stewardship of funds, adequate numbers of skilled human resources, and evidence-based interventions." The recommendations stress on the need for adequate financial resources in each of the areas like advocacy, implementation of the International Code, maternity legislation and workplace support, BFHI, training and education, communication, community based support, infant feeding in difficult circumstances and integration of IYCF in other programmes.

The most repeated gap reported by the 51 countries using the WBT*i* tool and completing national assessments of the implementation of the *Global Strategy* was the inadequacy of political will and commitment that resulted in scarce financial and human resources (IBFAN Asia/gBICS, 2012).

A major challenge in raising finances is the lack of an understanding of the needs as well as a clear idea of what investment is needed. The WBC*i* is attempt to examine this. This paper is a first in its efforts to determine the financial investment necessary to implement the *Global Strategy* in its entirety, as well as to introduce a tool to estimate exactly what it will cost. The tool will thus be critical, once the decision to invest is taken and may help to raise awareness of the cost savings from reducing premature weaning from breastfeeding.

The estimate of how much to invest is based on a series of interventions that would contribute to increasing optimal breastfeeding. It is important to note the high cost of poor infant feeding practices such as insufficient breastfeeding, and the economic worth of breastfeeding both in providing food and in preventing unnecessary health costs. Investing in prevention (of premature weaning) is crucial. This paper attempts to present an initial framework for the estimate of resources necessary for this.

This paper attempts to work out indicative costs for universalising protection, promotion and support of breastfeeding. *Protection* means protecting women and children from commercial influence and costing includes development of legislation and its implementation. *Promotion* means provision of accurate information from skilled health workers and through other media, in different settings. *Support* means support in a health facility and at home at the time of delivery, skilled counselling on regular basis in the community and work place support in the form of maternity benefits. Apart from this, the cost estimates also include coordination, development of plans and strategies, research and monitoring, etc.

The estimates presented here are merely approximate; they are a call for action to countries in their attempt to develop a budget for optimal breastfeeding practices. The WBC*i* financial planning tool provides

guides in the identification of the actual costs that need to be budgeted in each area of action.

Where interventions need to be phased, optimal breastfeeding recommendations and plans should be institutionalised in a national policy and plan. Breastfeeding must be protected first through the implementation of the International Code. This should be followed by the promotion and support of optimal breastfeeding practices through the provision of skilled counselling and setting up of standards of care in facilities through BFHI. Maternity protection requires much larger financial outlays than either protection or promotion, and may have to be implemented in stages, with the poorest and the most vulnerable women being targeted first. Countries need to decide upon ways to provide this support to best suit their realities and the WBC*i* can assist in both, creating the planning and in creating the budget.

3.1. COSTING OF INTERVENTIONS

We have taken a programmatic approach to scaling up interventions, basing costs on what countries have allocated to the specific intervention or on globally accepted costs.

We have estimated the cost of the selected interventions for 214 countries. These amounts are the minimum that the world needs to invest to universalise the enabling environment for breastfeeding. Individual country estimations are given in Annex 4. Some countries may have some of these interventions in place, or may be already implementing some of them. The actual cost for an individual country may thus vary considerably from our estimation.

While we have calculated costs for 214 countries, our source for data on the birth cohort and the number of households under the poverty line was UNICEF's *State of the World's Children 2013.* This lists only 194 countries. However, the remaining 20 countries and territories are small and birth cohorts are presumably just a few hundreds or thousands. We believe that the difference in total costs and per live birth costs will be minimal.

The interventions for which we have estimated financial outlays include the following:

3.1.1. Development of policies and plans, coordination

We have included the costs of hiring national and international consultants, holding workshops and consultations, developing documents, building consensus, printing and dissemination. Estimates also include multi-sectoral coordination and regular review and analysis of the progress made in implementing the agreed plan using the WBT*i* tool.

National expenditures of Afghanistan, Fiji and Mongolia have included costs of development of policy, while Afghanistan's budget also includes costs for overseeing its implementation. We have computed the median of the three costs (centre point), and estimated the costs for developing policies based on this.

While policy making is a one-time cost, monitoring and review are annual costs.

3.1.2. Health and nutrition care system

This has two components - BFHI and training of health workers.

3.1.2.a. 10 Steps to successful breastfeeding (BFHI)

This step is essential for health facilities. The costs include developing a hospital policy, its dissemination, appropriate training of hospital staff (nurses, lactation counsellors), skilled counselling and support at birth and during the stay of mothers.

Staff salaries and infrastructure costs have not been included.

We used the results from the study conducted through maternity services in Brazil, Honduras and Mexico for estimating the costs and impacts of breastfeeding promotion programmes (Horton S et al, 1996). We combined the suggested costs to eliminate infant formula, practise rooming-in and the cost per birth for maternal education activities within the health facility, including their training. The cost per birth assisted in a health facility (61%), was used to estimate the costs for health facilities with maternity services to implement the 10 steps for successful breastfeeding. The amount

was adjusted for inflation in 2012.

3.1.2.b. Training of public health workers
This step is essential for family level home deliveries. The estimate includes costs of training of midwives, public health nurses and other health workers who conduct deliveries at homes and provide counselling and other services as part of the health system's services.

Staff salaries, infrastructure costs and costs of transport have not been included.

We used the cost and effective analysis of the LINKAGES LAM Promotion Program in Jordan from December 2001-2002; and that determined the cost implications of replicating these activities in other countries in the region or similar programs in Jordan (M. Nersesyan, 2005). The amount per birth was adjusted to consider inflation.

3.1.3 Community services and mother support

This includes training of field workers (community based/peer counsellors) providing counselling services at the household level in the community. These workers may be loosely attached to the health and nutrition system, and may not to be a part of it, like honorary or volunteer community workers who get paid some allowances. The Accredited Social Health Activist and the Anganwadi worker in India are such examples. The estimate also includes training of volunteers and mother support groups. It further includes incentives they get from the health and nutrition system.

Community services require inter-personal communication: one-on-one counselling. We have used the cost of US$7.50 (adjusted per cumulative rate of inflation change to 2012) as calculated by Mason and colleagues (Mason JB et al, 1999), which has also been used in the World Bank's *Scaling Up Nutrition What will it cost?* This includes the cost of training, of incentives to volunteers and of home visits.

We have further included a unit cost per live birth for refresher courses, based on actual expenses incurred by the BCFHI Project in Lalitpur, India. (Personal communication from Dr. K.P. Kushwaha).

We have not taken into account costs of setting up other mechanisms of counselling such as toll-free help lines, as has been done in Australia, setting up of lactation management clinics in the community, and so on.

3.1.4. Media promotion

The value of breastfeeding to the good nutrition and health of populations is such that high levels of national investment are well justified to protect its huge value from being undermined by commercial product messages in the mass media and by direct marketing to health professionals. The cost of such investments in breastfeeding promotion will be lower if the International Code is effectively applied and enforced.

The general principle should be that the investment in breastfeeding promotion should match that by the industry in the same market. A typical rule of thumb for any industry is that their marketing expense is 10-15% of their gross sales value. Hence the investment to match the industry's multibillion global investments in the marketing of formula milks is large, and in some markets it may add up to tens or hundreds of millions of dollars a year. This includes the cost of sophisticated and high quality IEC programmes using mass and local media to counter industry messages undermining breastfeeding on an on-going basis. Costs of developing messages and campaigns are included.

For estimating costs of mass media nutrition education campaigns and the promotion of breastfeeding, as well as campaigns to raise public awareness about the International Code and maternity legislation, we have taken the cost of US$5 per child, as recommended in the World Bank's WPS 952 in 1992 (Horton S, 1992). The amount per child has been adjusted for inflation to 2012.

3.1.5. Maternity Protection

This includes the figure of US$2 per day/mother for 180 days as financial assistance for women living below the poverty line, who may or may not be working in the informal sector. We believe that this sector, being

the most vulnerable, urgently requires some form of financial assistance as wage compensation, to make it possible that mother and baby are together in the early months.

We have not computed the costs of provision of paid maternity leave, paid nursing breaks, or setting up of childcare facilities, as these vary widely from country to country, both in amount as well as in the source of financing.

The World Bank (Ravallion M, Chen S, Sangraula P, 2008) defined the new international poverty line as US$1.25 a day for 2005 (equivalent to US$1.00 a day in 1996 US prices), but this has been updated to be US$1.25 and US$2.50 per day (Ravallion M, Chen S and Sangraula P, 2009). The World Bank US$2/person/day is used as a threshold to determine the minimum amount necessary to mothers to be able to provide food, water, sanitation, clothing, shelter, health care and education. We have used this as flat rate for six months as financial assistance to be given to women below the poverty line and in the informal economy. This estimation is based on the assumption that if a woman is provided for at least 180 days with this amount, i.e., US$360 per woman, she will be able to stay longer with her new-born, and will not rush looking for a livelihood that will support the children or return immediately to her former livelihood.

Financial assistance to women for breastfeeding needs to be implemented concurrently with scaling up of counselling services to 100% and mass media campaigns on the risks of formula feeding and premature weaning.

3.1.6 Implementing the International Code of Marketing of Breastmilk Substitutes

This estimate includes three components - drafting the law, law making and training in its implementation. While the former two are one-time costs, the latter is a recurring cost. The estimate covers the cost of hiring national and international consultants, holding workshops and consultations, advocacy and building consensus, cost of the passage of the law through the legislature and training a cadre of government officials in recognising violations, monitoring adherence and initiating action in case of violations.

The estimate does not include the salaries of the government officials, nor the costs involved in any legal or judicial action in the case of violations.

Drafting a National Code

We used available costing data from different countries Afghanistan, China, Egypt and Fiji; we then computed a median cost that will be needed to support the drafting process of the legislation.

Law Making

A paper (Wilson N et al, 2012) examined the cost of legislating, using New Zealand as a case study. The paper used an innovative approach that calculates the proportion of parliamentary time devoted to law-making (i.e. sitting days in the debating chamber), and the cost of associated policy advice from government agencies was calculated from the proportion of documented policy issues related to law-making. The relative costs of acts and regulations were estimated from the number of pages in the legislation. It was estimated that US$2.6 million is needed to pass a law. While the paper clearly states that the method used is generally applicable to other developed countries, we think it is important to start considering such a cost in relation to new legislation like the Code that impacts optimal breastfeeding practices.

Training on the National Code/Legislation

The state of monitoring of Code violations depends upon the knowledge of bureaucrats and the public about the Code/national legislation, as well as mechanisms in place to report violations. We have, for our calculations, estimated the costs of one-time training based on 2-day training workshops held in India, where 60-80 officials in related ministries and departments were trained in the International Code and in identifying violations. For this estimation, we have assumed that two trainings per year, at US$23160 per training (actual cost of training workshops conducted in India), for a total of 200 participants, held over five years would ensure that an adequate number of officials are trained.

We have not estimated the costs of training of field level workers as we assume that the skill training course provided will include a component on the International Code.

For subsequent monitoring of violations we have used the estimation by Breastfeeding Promotion Network of India of US$1927 per district with a population of 1-2 million (BPNI, 2011).

In order to extrapolate the costs to other countries, we worked out a per live birth cost of such implementation and then estimated what financial resources each country would require for this purpose.

3.1.7. Monitoring and research

This estimate includes the cost of monitoring the implementation of the interventions, including development of the national policy and plan of action, the national law that implements the Code, BFHI, etc., review meetings, updating of policies and plans and operational research.

The *Scaling Up Nutrition 2010* allocates US$200 million for the monitoring and evaluation of the interventions that target 326 million children under the age of five. We computed the cost per beneficiary and then determined the total monitoring and evaluation budget that will be required to monitor and evaluate the implementation of the interventions related to scaling up services for optimal breastfeeding practices that is targeting 135 million live-births.

Most countries are already conducting national surveys on breastfeeding practices, and thus we have not taken these costs into account. However, we have estimated the financial resources needed for conducting national assessments of implementation of the *Global Strategy* using WBT*i* (see www.worldbreastfeedingtrends.org). Currently 82 countries from Asia, Latin America and the Caribbean and Africa are utilising this tool to track and monitor their implementation of the *Global Strategy* and identify gaps. Reassessments are conducted every three to five years. The cost per country for using this tool and building consensus over the assessment and identification of gaps, developing report cards and national reports, is about US$4000, which includes country cost of minimal expenses and project costs at the regional level.

3.2. METHODOLOGY

Our estimate of financial outlays needed include;

1. One-time costs such as making of policies and laws, and;
2. Recurring costs such as training in skilled counselling, and so on, and counselling, monitoring, reviewing and updating, providing refresher courses, media campaigns, maternity protection and monitoring of actions, etc.

All financial estimates are in International dollars, given as US dollars. Unit costs have been adjusted for inflation to 2012 using the published World Bank inflation rates, (World Bank, 2013) and converted to International dollars, using the World Bank purchasing power parity conversion factors for 2012 (World Bank, 2013).

The annual number of births as well as the number of households below the poverty line has been taken from UNICEF's *State of the World's Children 2013.*

We have primarily used findings from published international peer reviewed articles, and where no data was available, the median of budgeted costs shared by countries was eventually computed. The costs for training, social mobilisation, IEC, monitoring, developing of policy and legislation and implementation of the International Code were estimated to arrive at a global estimate.

For this paper, colleagues and people working with the government in relevant ministries in Brunei Darussalam, China, Egypt, Fiji, India, Mongolia, Saudi Arabia, Rwanda and Brazil gave us information on how they have budgeted certain interventions. Other contacts, especially from Australia, directed us towards documents and websites that gave us relevant information.

As stated, some unit costs have been taken from available published data, such as the costs for BFHI, mass media communication, legislating the International Code and community support for breastfeeding/IYCF.

For calculating the estimate on maternity protection, we have allocated a minimum of US$2/day for the number of recipients.

For calculating the unit cost for each intervention, we took the following steps:

1. We calculated the unit cost for the country that is the data source.
2. We adjusted this for inflation, and then using the World Bank's Purchasing Power Parity tables, we converted the unit cost into International dollars. The PPP was available for 167 countries; for the remaining we converted the local currency into US dollars at the regular exchange rate.
3. The PPP was used for calculating the unit costs of BFHI, community outreach and mother support, training of health workers, use of mass media (radio),and training on the implementation of the International Code.
4. The price per child was derived indirectly using the adjusted unit cost.
5. The total cost for the intervention was then calculated by the multiplying the unit cost by the global birth cohort for 194 countries.
6. For country costs, we have considered only the 194 countries given in the *State of the World's Children 2013.* Where available, we have used PPP rates.

3.3. THE ESTIMATE

The world will have to invest about US$17.5 billion a year for one-time costs and recurrent costs for one year, to ensure the implementation on a global scale of comprehensive interventions that will create an enabling environment for women to practise optimal breastfeeding. Table 3.1 gives the details and cost per intervention. Annex-4 gives the estimate for individual country in US$ and in local currency.

3.4. ASSUMPTIONS

3.4.1 Coverage

Our fundamental premise is that the access to interventions to achieve optimal breastfeeding practice (breastfeeding and complementary feeding) is a right of every woman and child in the world. Every woman who gives birth requires an enabling environment to succeed in breastfeeding her baby optimally.

3.4.2. Delivery platforms

We have assumed the delivery platforms for counselling to be

- Health facilities
- Community health and nutrition programmes and home deliveries
- Mother support groups/family level communication

We have assumed that the public sector health and the nutrition delivery system, with its community outreach programmes are already equipped with human resources and transport facilities. Further that the different forms of outreach programmes already contact mothers regularly for antenatal check-ups, distribution of iron and folic acid tablets, tetanus toxoid injections during pregnancy, weighing and growth monitoring of infants and young children and immunization. We assume that with an additional component of training in skilled counselling, this cadre of workers will deliver the required services. For mother support groups, we have assumed that the group will be composed of volunteers in communities who will be given training and some financial incentives for counselling.

For Code monitoring, we have assumed that while the health and nutrition system as well as the general public will monitor the implementation of the Code, the regulatory machinery of the government will have to take action.

For provision of maternity benefits, we have again assumed that various sectors of the governance system - health and nutrition sector, labour, welfare sectors - as well as the general public will monitor the implementation of maternity legislation and ensure that action is taken against violations. Further, the government will do the disbursal of financial benefits. While this would entail certain costs related to staff time and transport, these have not been taken into account. We assume women workers in the formal sector are entitled to maternity leave and we have not costed it.

3.5. STRENGTHS AND LIMITATIONS

The paper is a first in its efforts to determine the financial investment necessary to comprehensively implement the *Global Strategy*. The following are the strengths and limitations of this work:

3.5.1. Strengths

1. Evidence based interventions that would contribute to the improvement of optimal breastfeeding practices.
2. Strategies and interventions that government and developmental partners may implement at the national and sub-national level.
3. An initial framework to estimate the resources necessary to be invested.
4. The platform to share country experiences on investing.
5. The opportunity to identify data/information gaps that may need to be addressed with more research in the area.
6. Priority research agenda for international and national agencies, to help the global community to move beyond the need to invest on commodities and to include programmatic aspects in their investments.

3.5.2. Limitations

The financial resources estimated in this document have the following limitations:

1. Lack of data on birth cohorts and number of households below the poverty line in 20 countries and territories.
2. Limited and dated data about costs for key interventions. The World Bank has provided strong standardised unit cost data for IYCF promotion in its *Scaling Up Nutrition* study; however, more detailed cost data from recent fieldwork is urgently needed for the range of known effective interventions for increasing breastfeeding.
3. Wide divergence between staff responsibilities, salaries, transport costs and infrastructure costs among nations. (An indication of these costs is available at the WHO Database for those interested.) Thus, while it is imperative that the interventions require an increase in human resources and the resultant financial resources in most countries, we did not attempt to cost either the number of staff required nor staff salaries in this exercise.
4. Limited information on the kind of maternity protection and maternity entitlements that are being offered to women working in the unorganised/informal economy, as well as to homemakers in households below the poverty line, in several countries.
5. We have not estimated costs of other direct and indirect interventions that impact optimal breastfeeding practice, such as food supplementation for mothers and children, including micronutrients and foods for preventing and managing malnutrition, special needs of infants in the context of HIV/AIDS, poverty alleviation or food security interventions and nutrition sensitive interventions in related sectors like water and sanitation, agriculture, education, welfare, etc.

Table 3.1: Global financial resources for practicing optimal breastfeeding

Total Target (livebirths only) 214 countries	**135000000**
Total Population 167 countries	
No. of women living below the poverty line	**35200684**
Country with legislated Code	**33**
Total No. of Countries	**214**
% of Births assisted in health facility	**61%**

	ONE TIME COST							
No.	**Description**	**What is included in the cost**	**Unit**	**No. of Units**	**Unit Cost (US$)**	**Total Cost for 214 countries (US$) rounded to the nearest million**	**Cost per live birth US$[a]**	**Reference**
1.	IYCF Policy Development and Review	1. Meetings 2. Discussions 3. consultations and drafting sessions 4. Consultant	Country	214	$ 21,500.00	$ 4.0	$ 0.03	Median Cost four (2) countries: 1) Afghanistan 2) Fiji 3) Mongolia
2.	*International Code*							
2.1	Drafting and Legislative process	1. Meetings 2. Discussions 3. consultations and drafting sessions	Country	181	$ 50,000.00	$ 9.0	$ 0.07	Median Cost, four (4) countries: 1) China 2) Egypt 3) Fiji 4) Afghanistan
2.2	Legislative Process	1. Parliamentary/congress/ legislative process (sessions, committees and plenary debates)	Country	181	$ 2,600,000.00	$ 470.0	$ 3.49	Wilson et al. Estimating the cost of new public health legislation. Bull World Health Organ 2012;90:532–539
3.	*Training*							
3.1	Training of Health Workers	Breastfeeding training for health workers (nurses, midwives)	Country	214	$ 1,173,118.03	$ 251.00	$ 1.86	M. Nersesyan. Cost and Effective Analysis of the LINKAGES LAM Promotion Program in Jordan. 2005. Accessed on March 3, 2013 at http://www.linkagesproject.org/publications/Jordan_Final_CEA_Report_12.1.06.pdf
3.2	Community Support	Training for community volunteers	Country	214	$ 6,254,496.56	$ 1338.00	$ 9.91	Scaling Up Nutrition (World Bank, 2010)
3.3	Training in Code Implementation	five (5) day training on 1) understanding the code and 2) monitoring the Code	Country (200 pax/year)	214	$ 54,998.20	$ 11.00	$ 0.09	India Training Experience
						$ 2,083.00		

No.	Description	What is included in the cost	Unit	No. of Units	Unit Cost (US$)	Total Cost for 214 countries (US$) rounded to the nearest million	Cost per live birth US$[a]	Reference
	ANNUAL COST (RECURRENT)							
1	BFHI Implementation	1. bed in 2. health education to mothers 3. no formula in the facility	Country	214	$ 9,391,876.31	$ 2,010.00	$ 14.89	Improving the cost effectiveness of breastfeeding promotion in maternity services, USAID 1992-1995
2	Media Promotion	1. Cost of media (radio) advertising	Country	214	$ 3.377.157.97	$ 722.71	$ 5.35	S. Horton. Unit costs, cost-effectiveness, and financing of nutrition interventions. Washington, DC: Population and Human Resources Department, 1992.
3	Monitoring	Monitoring the implementation of the different programs (Code, BFHI, community)	Country	214	$ 378,504.67	$ 81.00	$ 0.60	Scaling Up Nutrition (World Bank, 2010)
4	Maternity entitlements	Allowance of USD 2/day for 180 days for women living below the poverty line	Country	214	$ 59,216,103.17	$ 12,672.24	$ 93.87	2USD/day as a minimum entitlement based on the poverty line set by World Bank
						$ 15,485.95		

Cost in billion US$	
One time cost	**Annual (recurring cost)**
2.08 billion or approximately 2.05 billion	15.48 billion or approximately 15.45 billion

Note: All costs in US dollars. Country costs were adjusted using PPP where available, and then for inflation.

THE WAY FORWARD

WHO's scientific analysis of benefits of breastfeeding on child health and development, extending well into adult life and increasing IQ, cannot be ignored, nor can the evidence on reduction of infant and child mortality and malnutrition. Nor can the risks associated with premature weaning. Despite the obvious health benefits, breastfeeding rates are not rising all over the world. The time has come to transform the token attention breastfeeding often receives into a non-negotiable commitment to the full implementation of the *Global Strategy* through multi-sectoral action, rather than the implementation of only a few interventions.

In order to breastfeed successfully, women must have access to all the services that protect, promote and support breastfeeding. Two factors are vital to ensuring proper breastmilk supply: baby's suckling, which controls milk production, and women's confidence and state of mind, which controls breastmilk flow. Thus, women need to be physically close to their infants and to be confident about their ability to feed their infants adequately. They should also be free from commercial influence so as to make good infant feeding decisions. This often requires a behaviour change that can be achieved through skilful counselling, which should ideally happen during pregnancy and at the family level. In addition, interventions that provide complete protection from the commercial sector as well as adequate support at a health facility and the workplace seem to be too important to ignore.

The 2012 report of the WBT*i* assessment of policy and programmes in 51 countries revealed gaps in almost all areas of action contained in the *Global Strategy*.

FULL IMPLEMENTATION WORKS

Researchers have studied why a “breastfeeding gear model” worked in Brazil but failed in Mexico. This was because Brazil had all the components in place (gears); their functioning was well coordinated and monitored (a master gear) and the results showed improvements in breastfeeding rates. In Mexico, the 'gears' were either missing or misplaced, and the result was a lack of improvement in breastfeeding rates. *Breastfeeding on the Worldwide Agenda* (UNICEF 2013), a landscape analysis clearly makes a case for renewed leadership and investment in breastfeeding for full coverage of interventions to provide an environment conducive to breastfeeding.

Since it has been demonstrated that investment on implementing the *Global Strategy* can yield positive results in the form of increased optimal breastfeeding practices, what are we waiting for?

To achieve the target to increase exclusive breastfeeding for the first six months as set out in the WHO's *Comprehensive Implementation Plan on Maternal Infant and Young Child Nutrition*, the world will have to invest its resources in the various interventions suggested in this paper. **The real challenge is to develop plans, and budget them while phasing and prioritising.**

Noting that the **earlier estimations of financial resources needed for universalising breastfeeding interventions are only related to a single aspect of promotion and therefore are insufficient,** we have estimated for actions to protect, promote and support breastfeeding. According to our calculations covering 214 countries, the world needs to invest US$15.45 billion every year to create globally an environment where women can successfully breastfeed. This cost includes coordination, refresher trainings, Code monitoring, implementing the Baby Friendly Hospital Initiative (BFHI), updating policies and legislation, data management, research and maternity benefits at US$2.00 per day for 180 days for women living below the poverty line to enable them to carry out exclusive breastfeeding.

Data shows that investing in breastfeeding makes economic sense. In just one country, the US - raising breastfeeding rates to 90% will save US$13 billion each year in infant and child health treatment costs. For mothers, further health cost savings including those attributable to breast cancer cases avoidable by breastfeeding have also been shown (Renfrew, Pokhrel et al 2012, Bartick, Stuebe et al, Stu 2013).

A further sum of US$2.05 billion would need to be invested one-time to develop policies and legislation, provide basic training in skill counselling for health workers and community workers, and training in Code monitoring.

In advance of better data generated by international and national agencies based on recent practical experience, these are indicative costs. The actual need for financial resources will vary from country to country depending on whether they already have policies and legislation in place; have a cadre of trained skilled counsellors for optimal breastfeeding practices and the number of lactating women living below the poverty line. It will also depend on the extent to which cultural attitudes and practices favouring breastfeeding have been protected among women and families themselves. In addition, overall poverty reduction, which would result in less families living below the poverty line, will further reduce the annual costs of universalising protection, promotion and support of breastfeeding for all women.

The key to fulfilling this human rights obligation is to provide universal coverage of all interventions suggested here. This will benefit the vulnerable section, which is most in need and thus ensure equity.

AVOIDING CONFLICT OF INTEREST

WHO's *Planning Guide* and the framework of *Global Strategy* recommends measures to avoid a conflict of interest. While achieving the steps to protect, promote and support breastfeeding, governments should build consensus among partners and stakeholders like health professionals, community-based groups, education and mass media authorities, child-care groups and international organisations. To minimise a conflict of interests, commercial organisations should only be involved at the time of implementing their obligations and not at the time of planning and setting objectives.

GIVING HIGH LEVEL ATTENTION

Governments and international agencies have a responsibility to ensure resources commensurate with the benefits of optimal breastfeeding. Global and national attention should be visible, especially in terms of making financial resources available within and to countries. This is an idea whose time has come.

The following is a set of recommendations to move forward:

Governments should

1. Plan and budget for the comprehensive implementation of the *Global Strategy* for Infants and Young Child Feeding/National Strategy for Infant and Young Child Feeding, and integrate its implementation as part of national development and economic priorities.
2. Conduct policy and programme assessments on breastfeeding and infant and young child feeding using WHO's assessment tools or WBT*i* tools in order to identify and document gaps.
3. Develop national and sub-national action plans for 1- 5 years with clear budgets to achieve results, based on the policy gaps found.
4. Develop national/regional/provincial-monitoring and periodic reporting systems on optimal breastfeeding practices.
5. Institutionalise research to document benefits of this programme to populations, in terms of disease reduction and long term health as well as cost savings.
6. Report annually on the expenditure incurred on interventions for optimal breastfeeding and track it intervention wise, in all areas of action.
7. Take urgent action on policy matters such as maternity leave and other measures.

The global community should

1. Allocate specific budgets for increasing optimal breastfeeding within existing global funds for child

survival, nutrition and health. (All donors and global agencies)

2. Revisit estimates on scaling up nutrition intervention giving full considerations to all interventions required for universal services for optimal breastfeeding. (World Bank)
3. Make a priority commitment of their staff time, including their training on the related issues such as Code and IYCF skills, and funds to be spent on various interventions suggested in the paper. (WHO, UNICEF, World Bank)
4. Report annually the money spent on programmes on improving policy and programmes for optimal breastfeeding. (All agencies)
5. Setup a special maternity benefit fund for cash assistance to women below the poverty line. (World Bank)

BIBLIOGRAPHY

1. Abrahams SW, Labbok MH. Exploring the impact of the Baby-Friendly Hospital Initiative on trends in exclusive breastfeeding. Int Breastfeed J 2009; Oct 29;4:11.
2. Abrahams SW. Milk and social media: online communities and the International Code of Marketing of Breast-milk Substitutes. J Hum Lact 2012;28(3): 400-6.
3. American Academy of Pediatrics. Breastfeeding and the Use of Human Milk. Section on Breastfeeding. Pediatrics; originally published online February 27, 2012
4. Anderson AK, Damio G, Young S, Chapman DJ, Perez-Escamilla R. A randomized trial assessing the efficacy of peer counseling on exclusive breastfeeding in a predominantly Latina low-income community. Arch Pediatr Adolesc Med 2005;159:836-41.
5. Arenz S, Ruckerl R, Koletzko B, von Kries R. Breast-feeding and childhood obesity a systematic review. Int J Obes Relat Metab Disord 2004; 28:1247-1256.
6. Bachrach VR, Schwarz E, Bachrach LR. Breastfeeding and the risk of hospitalization for respiratory disease in infancy: a meta-analysis. Arch Pediatr Adolesc Med 2003;157:237-243.
7. Bahl R et al. Infant feeding patterns and risks of death and hospitalization in the first half of infancy: multicentre cohort study. Bulletin of the World Health Organization, 2005, 83:418-426.
8. Bartick MC, Stuebe AM, Schwarz EB, Luongo C, Reinhold AG, Foster EM. Cost analysis of maternal disease associated with suboptimal breastfeeding. Obstet Gynecol 2013;122(1):111-9.
9. Bartick M, Reinhold A. The burden of suboptimal breastfeeding in the United States: a pediatric cost analysis. Pediatrics 2010;125:e1048-e1056.
10. Bassett L, 2008. “Can conditional cash transfer programs play a greater role in reducing child undernutrition?” World Bank Social Policy Discussion Paper 0835. Washington, D.C. Available at: http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussionpapers/Safety-Nets-DP/0835.pdf. Accessed on September 28, 2013.
11. BBC News. Breastfeeding mothers offered £200 in shop vouchers. 12 November 2013. Available at http://www.bbc.co.uk/news/health-24900650. Accessed on 12 November 2013.
12. Berry NJ, Jones SC, Iverson D. Circumventing the WHO Code? An observational study. Arch Dis Child. 2012 Apr;97(4):320-5.
13. Berry NJ, Jones S, Iverson D. It's all formula to me: women's understandings of toddler milk ads. Breastfeed Rev. 2010 Mar; 18(1): 21-30.
14. Bhandari N, Bahl R, Mazumdar S, Martines J, Black RE, Bhan MK(Infant Feeding Study Group). Effect of community-based promotion of exclusive breastfeeding on diarrhoeal illness and growth: a cluster randomized controlled trial. Lancet 2003; 361(9367): 1418-1423.
15. Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A,Black RE; Lancet Nutrition Interventions Review Group; Maternal and Child Nutrition Study Group. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? Lancet. 2013 Aug 3;382(9890):452-77.
16. Bisquera JA et al. Impact of Necrotizing Enterocolitis on length of stay and hospital charges in very low birth weight Infants. Pediatrics 2002; 109:423-428.
17. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M, Ezzati M,Grantham-McGregor S, Katz J, Martorell R, Uauy R; Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries. Lancet. 2013 Aug 3;382(9890):427-51.
18. BPNI, 2011. National Consultation to Develop a Plan of Action - Resource Requirements for Enhancing Rates of Breastfeeding & Infant and Young Child Feeding in the 12th Plan A Report. Available at http://www.bpni.org/Research/ Report-National-Consultation.pdf
19. BPNI/IBFAN Asia, 2012. The '4 in 1' training programme. Available at: http://www.bpni.org/Training/4-in-1-brochure.pdf accessed on September 27, 2013.
20. Bryce J, Cesar G, Victora CG, Black RE. The unfinished agenda in child survival. Lancet 2013; 382, (9897): 1049-1059.
21. Bryce J, Coitinho D, Darnton-Hill I, D, Pelletier D, Pinstrup-Andersen P. Maternal and child

undernutrition: effective action at national level. Lancet 2008; 371: 510-26.

22. CDC (2013). Breastfeeding Report Card. Available at: http://www.cdc.gov/breastfeeding/data/reportcard.htm Accessed on September 26, 2013.
23. Chapman DJ, Damio G, Young S, Perez-Escamilla R. Effectiveness of breastfeeding peer counseling in a low-income, predominantly Latina population: a randomized controlled trial. Arch Pediatr Adolesc Med. 2004;158:897-902.
24. Chen A, Rogan W. Breastfeeding and the risk of postneonatal death in the United States. Pediatrics, 2004, 113(5):e435-e439.
25. Chen MA, 2001. Women in the informal sector, A global picture, the global movement. Available at: http://info.worldbank.org/etools/docs/library/76309/dc2002/proceedings/pdfpaper/module6mc.pdf Accessed on September 27, 2013
26. Coovadia HM, Rollins NC, Bland RM et al. Mother-to-child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life: an intervention cohort study. Lancet 2007; 369: 1107-16.
27. Coutinho SB, Lira PI, Lima MC, Frias PG, Eickmann SH, Ashworth A. Promotion of exclusive breast-feeding at scale within routine health services: impact of breast-feeding counselling training for community health workers in Recife, Brazil. Public Health Nutr. 2013;11:1-8.
28. Coutsoudis A, Coovadia, M. The Breastmilk Brand: promotion of child survival in the face of formula-milk marketing. Lancet 2009; 374: 423-425.
29. Coutsoudis A, Pillay K, Kuhn L, et al. Method of feeding and transmission of HIV-1 from mothers to children by 15 months of age: prospective cohort study from Durban, South Africa. AIDS 2001; 15: 379-87.
30. Debes AK, Kohli A, Walker N, Edmond K, Mullany LC. Time to initiation of breastfeeding and neonatal mortality and morbidity: a systematic review. BMC Public Health 2013; 13(Suppl 3):S19.
31. Drago R, 2010). The WIC Program: An Economic Analysis of Breastfeeding and Infant Formula. Breastfeeding Medicine 2010;6(5):49-66.
32. Dyson L, McCormick F, Renfrew MJ. Interventions for promoting the initiation of breastfeeding. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD001688. DOI: 10.1002/14651858.C D001688.pub2
33. ECC, 2012. Submission to the Health Select Committee by Every Child Counts (ECC): Inquiry into Preventing Child Abuse and Improving Child Health. New Zealand. Available at: http://www.parliament.nz/resource/0000196307 Accessed on September 26, 2013.
34. Edmond KM, Kirkwood BR, Amenga-Etego S, Owusu-Agyei S, Hurt LS. Effect of early infant feeding practices on infection-specific neonatal mortality: an investigation of the causal links with observational data from rural Ghana. Am J Clin Nutr 2007; 86: 1126-1131.
35. Ergin A, Hatipoğlu C, Bozkurt AI, Erdoğan A, Güler S, Ince G, Kavurgacý N, Oz A, Yeniay MK. Compliance status of product labels to the international code on marketing of breast milk substitutes. Matern Child Health J. 2013; 17(1): 62-7.
36. Euromonitor International. Global Packaged Food: Market Opportunities for Baby Food to 2013. Euromonitor International, London, 2008.
37. Flaking et al. The influence of fathers' socioeconomic status and paternity leave on breastfeeding duration: a population-based cohort study. Scand J Public Health. 2010;38(4):337-43.
38. Forster DA, McLachlan HL, Lumley J: Factors associated with breastfeeding at six months postpartum in a group of Australian women. International Breastfeeding Journal 2006; 1:18.
39. Forsyth S. Non-compliance with the International Code of Marketing of Breast Milk Substitutes is not confined to the infant formula industry. J Public Health 2013;35(2):185-90.
40. Gladstone et al. Incidence of diarrhoea in Journal of Tropical Pediatrics 2009
41. Global Industry Analysts, Inc 2010. Baby Foods and Infant Formula. Available at: http://www.strategyr.com/MCP-2202.asp Accessed on September, 26, 2013.
42. Guendelman S, Kosa JL, Pearl M, Graham S, Goodman J, Kharrazi M. Juggling work and breastfeeding: effects of maternity leave and occupational characteristics. Pediatrics. 2009;123(1):e38-46.
43. Gupta A, Dadhich JP, Suri S. How can global rates of exclusive breastfeeding for the first six months be enhanced?. ICAN: Infant, Child and Adolescent Nutrition, 2013; 5:133-140.
44. Gupta A, Khanna K. Economic value of Breastfeeding in India, 1999. National Medical Journal of India 1999; 12:123-127.
45. Gupta N, Katende C, Bessinger R. An evaluation of post-campaign knowledge and practices of exclusive breastfeeding in Uganda. J Health Popul Nutr 2004;22(4):429-39.
46. Gwinn ML et al. Pregnancy, breastfeeding and oral contraceptives and the risk of epithelial ovarian

cancer. Journal of Clinical Epidemiology 1990; 43:559-568.

47. Haider R, Ashworth A, Kabir I, Huttly S. Effect of community-based peer counselors on exclusive breastfeeding practices in Dhaka, Bangladesh: a randomized controlled trial. Lancet 2000; 356: 1643-47.
48. Haque MF, Hussain M, Sarkar AK, Hoque MM, Ara FA, Sultana S. Breast-feeding Counselling and Its Effect on the Prevalence of Exclusive Breast-feeding. J Health Popul Nutr 2002; 20(4): 312-16.
49. Haroon S et al. Breastfeeding promotion interventions and breastfeeding practices: as systematic review. BMC Public Health BMC Public Health 2013, 13(Suppl 3):S20.
50. Heymann J, Raub A, Earle A. Breastfeeding policy: a globally comparative analysis. Bull World Health Organ 2013;91(6):398-406.
51. Horta BL, Victora CG (WHO) , 2013. Long-term effects of breastfeeding a systematic review. Available at: http://apps.who.int/iris/bitstream/10665/79198/1/9789241505307_eng.pdf Accessed on September 24, 2013.
52. Horta BL, Bahl RB, Martines JC, Victora CG. Evidence on the long-term effects of breastfeeding: systematic reviews and meta-analyses. World Health Organization, 2007. Available at: http://whqlibdoc.who.int/publications/2007/9789241595230_eng.pdf Accessed on September 29, 2013.
53. Horton S, Sanghvi T, Phillips M, Fiedler J, Perez-Escamilla R, Lutter C, Rivera A, Segall-Correa AM. Breastfeeding promotion and priority setting in health. Health Policy Plan 1996;11(2):156-68.
54. Horton S, Shekar M, McDonald C, Mahal A, Brooks JK, 2009. Scaling Up Nutrition: What Will it Cost? Washington, DC: World Bank. Available at: http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/Peer-Reviewed-Publications/ScalingUpNutrition.pdf Accessed on September 23, 2013.
55. Horton S,1992. Unit Costs, Cost-effectiveness, and financing of nutrition interventions. Population and Human Resources Dept. World Bank. WPS 952.
56. Hylander MA, Strobino DM, Pezzullo JC, and Dhanireddy R. association of human milk feedings with a reduction in retinopathy of prematurity among very low birthweight infants. Journal of Perinatology 2001; 21:356-362.
57. IBFAN Asia/gBICS, 2012. Are our babies falling through the gaps? the state of policies and programme implementation of the global strategy for infant and young child feeding in 51 countries. Available at: http://worldbreastfeedingconference.org/images/51-country-report.pdf Accessed on September 28, 2013.
58. IBFAN-ICDC (2011). State of the Code by country. International Code documentation centre. IBFAN Sdn Bhd, Penang, Malaysia.
59. Iliff PJ, Piwoz EG, Tavengwa NV et al. Early exclusive breastfeeding reduces the risk of postnatal HIV-1 transmission and increases HIV-free survival. AIDS 2005; 19: 699-708.
60. ILO, 2013. The informal economy and decent work: a policy resource guide, supporting transitions to formality / International Labour Office, Employment Policy Department Geneva ILO 2013
61. ILO,2010. Maternity at work. A review of national legislation Findings from the ILO Database of Conditions of Work and Employment Laws. 2nd ed. Available at: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_124442.pdf
62. Ip S, Chung M, Raman G, Chew P, Magula N, DeVine D et al. Breastfeeding and maternal and infant health outcomes in developed countries: evidence report/ technology assessment no. 153. Rockville, MD: Agency for Healthcare Research and Quality; 2007. AHRQ Publication No. 07-E007
63. Jacklin P, Resta P, Dougherty M, Kwan I, 2007. Modelling the cost effectiveness of interventions to promote breastfeeding. NICE Maternal and Child Nutrition Programme. Available at: http://www.nice.org.uk/nicemedia/live/11943/47781/47781.pdf Accessed on September 29, 2013
64. Jacknowitz A. Increasing breastfeeding rates: do changing demographics explain them? Womens Health Issues. 2007;17(2):84-92.
65. Kattapong KR, 2007. A meta-analysis of education based breastfeeding interventions: impact of social marketing techniques, number of intervention components used and methodological quality dissertation submitted to the Faculty of Graduate School, Loyola University, Chicago.
66. Kushwaha KP (Editor), 2010. Reaching the Under 2s-Universalising Delivery of Nutrition Interventions in District Lalitpur, Uttar Pradesh. Report available at: http://bpni.org/BFHI/ Reaching-the-under-2S-Universalising-Delivery-of-Nutrition-Interventions-in-Lalitpur-UP.pdf Accessed on September 27, 2013
67. Kwan ML, Buffler PA, Abrams B, Kiley VA. Breastfeeding and the risk of childhood leukemia: a meta-analysis. Public Health Rep 2004;119:521-535
68. Labbok MH. Global baby-friendly hospital initiative monitoring data: update and discussion. Breastfeed

Med. 2012;7:210-22.68. Lamberti LM, Fischer Walker CL, Noiman A et al. Breastfeeding and the risk for diarrhea morbidity and mortality. BMC Public Health 2011; 11 (suppl 3): S15

69. Lamberti LM, Zakarija-Grkovic I, Fischer Walker CL et al. Breastfeeding for reducing the risk of pneumonia morbidity and mortality in children under two: a systematic literature review and meta-analysis. BMC Public Health 2013, 13(Suppl 3):S18
70. Lauer JA, Betran AP, Barros AJ et al. Deaths and years of life lost due to suboptimal breast-feeding among children in the developing world: a global ecological risk assessment. Public Health Nutr 2006; 9:673-85
71. León-Cava N, Lutter C, Ross J and Martin L. Quantifying the Benefits of Breastfeeding: A Summary of the Evidence. Washington, D.C.: PAHO © 2002. Available at: http://www.linkagesproject.org/media/publications/Technical%20Reports/BOB.pdf Accessed on September 27, 2013.
72. Liesbeth Duijts, Vincent W. V. Jaddoe, Albert Hofman and Henriëtte A. Moll. Prolonged and Exclusive Breastfeeding Reduces the Risk of Infectious Diseases in Infancy. Pediatrics; originally published online June 21, 2010;(doi: 10.1542/peds.2008-3256. Accessed on November 12, 2013
73. Lipworth L, Bailey R, Trichopoulos D. History of breast-feeding in relation to breast cancer risk: a review of the epidemiologic literature. Journal of the National Cancer Institute 2000; 92:302-312
74. Lutter C, Morrow AL. Protection, Promotion and Support and Global Trends in Breastfeeding. Adv Nutr 2013; 4: 213-219
75. Lutter C. World Breastfeeding Week 2012. Understanding the Past Planning the Future - Celebrating 10 years of WHO/UNICEF's Global Strategy for Infant and Young Child Feeding. Pan American Health Organization. Available at: http://www.paho.org/ Accessed on September 27, 2012
76. Ma P, Brewer-Asling M, Magnus JH. A case study on the economic impact of optimal breastfeeding. Matern Child Health J. 2013 Jan;17(1):9-13. doi: 10.1007/s10995-011-0942-2. Available at http://www.ncbi.nlm.nih.gov/pubmed/22278355. Accessed on November 12, 2013
77. Martens PJ. What do Kramer's Baby-Friendly Hospital Initiative PROBIT studies tell us? A review of a decade of research. J Hum Lact. 2012;28(3):335-42
78. Martis R, Stufkens J. The New Zealand/aotearoa baby-friendly hospital initiative implementation journey: piki ake te tihi"strive for excellence". J Hum Lact 2013;29(2):140-6
79. Mason JB, Hunt J, Parker D and Jonsson U. "Investing in Child Nutrition in Asia." Asian Development Review 1999;17 (1, 2): 132
80. Mei Chung et al. Primary Care Interventions to Promote Breastfeeding: An Evidence Review for the U.S. Preventive Services Task Force. Ann Intern Med 2008;149:565-82
81. Ministry of Consumer Affairs, Food and Public Distribution, Government of India, 2013. The national food security act, 2013. Available at: http://egazette.nic.in/WriteReadData/2013/E_29_2013_429.pdf Accessed on September 27, 2013
82. Montgomery DL, Economic benefit of breast-feeding infants enrolled in WIC, J Am Diet Assoc 1997; 97(4):379-85
83. Morrow AL, Guerrero ML, Shults J, Calva JJ, Lutter C, Bravo J et al. Efficacy of home-based peer counseling to promote exclusive breastfeeding: a randomized controlled trial. Lancet 1999; 353: 1226-31
84. Mutuma S, Fremont E, Adebayo A. Aid for Nutrition can investments to scale up nutrition actions be adequately tracked. 2012. Action Against Hunger/ACF International. Available at: http://www.actionagainsthunger.org.uk/fileadmin/contribution/0_accueil/pdf/Aid%20for%20Nutrition%20low%20res%20final.pdf Accessed on September 28, 2013.
85. National Women's Council of Ireland, 2005. An accessible child care model. Available at: http://www.dit.ie/cser/media/ditcser/images/accessible-childcare.pdf Accessed on September 27, 2013
86. Nersesyan M. Cost and Effective Analysis of the LINKAGES LAM Promotion Program in Jordan. 2005. Available at: http://www.linkagesproject.org/publications/Jordan_Final_CEA_Report_12.1.06.pdf Accessed on September 26, 2013.
87. Ness RB et al. Factors related to inflammation of the ovarian epithelium and risk of ovarian cancer. Epidemiology 2000; 11:111-117
88. Ogbuanu C, Glover S, Probst J, Liu J, Hussey J. The Effect of Maternity Leave Length and Time of Return to Work on Breastfeeding. Pediatrics 2011;127:e1414-e1427
89. Oshaug A, Botten G. Human milk in food supply statistics. Food Policy 1994;19(5):479-482. Norwegian Health Directorate. Norway utviklingen i norsk kosthold 2011. Oslo: Norwegian Health Directorate; 2011 November.

90. Owen CG, Martin RM, Whincup PH, Smith GD, Cook DG. Does breastfeeding influence risk of type 2 diabetes in later life? A quantitative analysis of published evidence. Am J Clin Nutr 2006; 84:1043-1054.
91. Paes-Sousa R, Santos L M P, Miazaki ES. Effects of a conditional cash transfer programme on child nutrition in Brazil. Bulletin of the World Health Organization 2011;89:496-503.
92. Pan American Health Organization. Beyond survival: integrated delivery care practices for long-term maternal and infant nutrition, health and development. 2. ed. Washington, DC : PAHO, 2013.
93. Perez-Escamilla R, Curry L, Minhas D et al. Scaling up of breastfeeding promotion programs in low and middle income countries: the "Breastfeeding Gear" model. Adv Nutr 2012;3: 790-800.
94. Pettitt DJ, Forman MR, Hanson RL, et al. Breastfeeding and incidence of non-insulin-dependent diabetes mellitus in Pima Indians. Lancet 1997; 350: 166–8.
95. Putthakeo P et al. Factors influencing breastfeeding in children less than 2 years of age in Lao PDR. Paediatr Child Health. 2009; 45(9): 487-92.
96. Quigley MA, Kelly YJ, Sacker A. Breastfeeding and hospitalization for diarrhoeal and respiratory infection in the United Kingdom Millennium Cohort Study. Pediatrics. 2007;119(4):e837-42.
97. Ravallion M, Chen S and Sangraula P, 2008. ?Dollar a Day revisited? (Report). Washington DC: The World Bank. Available at: http://www-wds.worldbank.org/servlet/ WDSContentServer/ WDSP/IB/2008/09/02/000158349_20080902095754/ Rendered/PDF/wps4620.pdf Accessed on September 28, 2013.
98. Ravallion M, Chen S, Sangraula P. Dollar a day revisited. The World Bank Economic Review 2009; 23 (2): 163-184.
99. Renfrew MJ, McCormick FM, Wade A, Quinn B, Dowswell T. Support for healthy breastfeeding mothers with healthy term babies. Cochrane Database Syst Rev. 2012;5:CD001141.
100. Renfrew MJ, Pokhrel S, Quigley M, McCormick F, Fox-Rushby J, Dodds R, et al. Preventing disease and saving resources; the potential contribution of increasing breastfeeding rates in the UK: UNICEF UK; 2012 18 October.
101. Romieu I et al. Breast cancer and lactation history in Mexican women. American Journal of Epidemiology, 1996; 143(6):543-552.
102. Salud MA et al. People's Initiative to Counteract Misinformation and Marketing Practices: The Pembo, Philippines, Breastfeeding Experience, 2006. J Hum Lact 2009; 25(3):341-349.
103. Sassi, F. Health economics and 'best-buys' for NCD prevention. Presented at the international symposium *Obesity and Non-Communicable Diseases: Learning from International Experiences,* New York Academy of Medicine, NY New York, September 23rd , 2013
104. Setegn T, Belachew T, Gerbaba M, Deribe K, Deribew A, Biadgilign S. Factors associated with exclusive breastfeeding practices among mothers in Goba district, south east Ethiopia: a cross-sectional study. Int Breastfeed J 2012; 7(1):17.
105. Shealy KR, Li R, Benton-Davis S, Grummer-Strawn LM. The CDC Guide to Breastfeeding Interventions. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005. Available at http://www.cdc.gov/breastfeeding/pdf/breastfeeding_interventions.pdf Accessed on September 27, 2013.
106. Shei A. Brazil's conditional cash transfer program associated with declines in infant mortality rates. Health Aff 2013; 32(7):1274-1281.
107. Smith J, Blake M. Infant food marketing strategies undermine effective regulation of breast-milk substitutes: trends in print advertising in Australia, 1950-2010. Aust N Z J Public Health. 2013; 37(4): 337-44.
108. Smith JP, Dunstone MD, Elliot-Rudder ME. 'Voldemort' and health professional knowledge of breastfeeding – do journal titles and abstracts accurately convey findings on differential health outcomes for formula fed infants? ACERH Working Paper Number 4. Australian Centre for Economic Research on Health. December 2008.
109. Smith JP et al. Hospital system costs of artificial infant feeding: estimates for the Australian Capital Territory. Aust N Z J Public Health 2002;26(6):543-51.
110. Smith JP. "Lost Milk?": Counting the Economic Value of Breast Milk in Gross Domestic Product. J Hum Lact. 2013 Jul 12. [Epub ahead of print]
111. Smith JP, Ingham LH. Mothers' milk and measures of economic output. Feminist Economics 2005;11(1):41-62.
112. Smith JP. Human milk supply in Australia. Food Policy 1999;24(1):71-91.
113. Smith JP. Making mothers' milk count. In: Bjørnholt M, McKay A, editors. Counting on Marilyn Waring. Bradford, Ontario: Demeter Press; in press 2013.
114. Sobel HL, Iellamo AD, Raya RR, Padilla AA, Sta Ana FS 3rd, Nyunt-U S. The economic burden of infant formula on families with young children in the

Philippines. J Hum Lact 2012; 28(2):174-80.

115. Sobel HL, Iellamo A, Raya RR, Padilla AA, Olivé JM, Nyunt-U S. Is unimpeded marketing for breast milk substitutes responsible for the decline in breastfeeding in the Philippines? An exploratory survey and focus group analysis. Soc Sci Med. 201;73(10):1445-8.
116. Staehelin K, Bertea PC, Stutz EZ. Length of maternity leave and health of mother and childa review. Int J Public Health. 2007;52(4):202-9.
117. Stiglitz, JE, A Sen & J-P Fitoussi (2009) The Measurement of Economic Performance and Social Progress Revisited; Reflections and Overview, Centre de recherche en économie de Sciences Po (OFCE), p. 39.
118. Strathearn, Lane et al. Does Breastfeeding Protect Against Substantiated Child Abuse and Neglect? A 15-Year Cohort Study. Pediatrics 2009;123;483-493
119. The National Institute of Health and Clinical Excellence (NICE), 2005. The effectiveness of public health interventions to promote the duration of breastfeeding Systematic review 1st edition. Available at: http://www.nice.org.uk/niceMedia/pdf/Breastfeeding_vol_1.pdf Accessed on September 27, 2013.
120. The Partnership for Maternal, Newborn & Child Health, 2011. Analysing Commitments to Advance the Global Strategy for Women's and Children's Health. The PMNCH 2011 Report. Geneva, Switzerland: PMNCH. Available at: http://internationalbudget.org/wp-content/uploads/PMNCH_Report_2011_-_29_09_2011_full.pdf Accessed on September 29, 2013.
121. The World Bank, 2013. Inflation, consumer prices (annual %). Available at: http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG/countries/1W?display=default Accessed on September 28, 2013.
122. The World Bank, 2013. PPP conversion factor, GDP (LCU per international $). Available at: http://data.worldbank.org/indicator/PA.NUS.PPP Accessed on September 28, 2013.
123. Thompson ME, Harutyunyan TL. Impact of a community-based integrated management of childhood illnesses (IMCI) programme in Gegharkunik, Armenia. Health Policy Plan 2009; 24: 101-107.
124. Tuttle CR, Dewey KG. Potential cost savings for Medi-Cal, AFDC, food stamps, and WIC programs associated with increasing breast-feeding among low-income Hmong women in California. J Am Diet Assoc. 1996;96(9):885-90.
125. U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Support Breastfeeding. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2011. Available at: http://www.cdc.gov/breastfeeding/promotion/calltoaction.htm Accessed on September 23, 2013.
126. UNICEF, 2003. UNICEF and the Global Strategy on Infant and Young Child Feeding (GSIYCF) Understanding the Past Planning the Future. Available at: http://www.unicef.org/nutrition/files/FinalReportonDistribution.pdf Accessed on September 30, 2013.
127. UNICEF, 2009. Infant and Young Child Feeding Programme Review. Case Study: Uganda. Nutrition Section, UNICEF New York. Available at: http://www.aednutritioncenter.org/update_docs/IYCF_Feeding_Prog_Rev_Case_Study_Uganda.pdf Accessed on September 27, 2013.
128. UNICEF, 2010. Infant and Young Child Feeding Programme Review. Consolidated report of six country review of breastfeeding programmes. Available at http://www.unicef.org/spanish/nutrition/files/IYCF_Booklet_April_2010_Web.pdf Accessed on September 27, 2013
129. UNICEF, 2011. Programming guide Infant and young child feeding. Available at: http://www.unicef.org/nutrition/files/Final_IYCF_programming_guide_2011.pdf Accessed on September 28, 2013.
130. UNICEF, 2012. Infant and young child feeding programming status. Available at: http://www.unicef.org/nutrition/files/IYCF_65_country_assessment_report_UNICEF.pdf Accessed on September 27, 2013.
131. UNICEF, 2013. Breastfeeding on the worldwide agenda, Findings from a landscape analysis on political commitment for programmes to protect, promote and support breastfeeding. United Nations Children's Fund (UNICEF), New York.
132. UNICEF. State of the World's Children 2013. Available at: http://www.unicef.org/rightsite/sowc/fullreport.php
133. United Nations, 2011. High-level meeting of the general assembly on the prevention and control of non-communicable diseases. Available at: http://www.un.org/en/ga/ncdmeeting2011. Accessed on September 27, 2013.
134. United States Breastfeeding Committee, 2002. Economic benefits of breastfeeding. Available at: http://www.usbreastfeeding.org/LinkClick.aspx?link=Publications/Economic-Benefits-2002-USBC.pdf Accessed on September 29, 2013.

135. United States Breastfeeding Committee (USBC), 2011. Investing in breastfeeding saves money, helps boost our economy. Available at: http://www.usbreastfeeding.org/Portals/0/Advocacy/2011-03-10-One-Pager-Approp-FY12.pdf Accessed on September 26, 2013.
136. Victora C. Nutrition in early life: a global priority. Lancet 2009; 374 (9696):1123-1125.
137. Victora CG et al. Evidence for protection by breast-feeding against infant deaths from infectious diseases in Brazil. Lancet 1987; 2:319-322.
138. Victora CG, Smith PG, Vaughan JP, Nombre LC, Lobardi C et al.. Infant feeding and deaths due to diarrhea: a case-control study. American Journal of Epidemiology1989; 129:1032-41.
139. Wakefield MA, Loken B, Hornik RC. Use of mass media campaigns to change health behavior. Lancet 2010; 376 (9748):1261-1271.
140. Walker CL, Rudan I, Liu L, Nair H, Theodoratou E, Bhutta ZA, O'Brien KL, Campbell H, Black RE. Global burden of childhood pneumonia and diarrhoea. Lancet. 2013 Apr 20;381(9875):1405-16. doi: 10.1016/S0140-6736(13)60222-6. Epub 2013 Apr 12.
141. Weimer J. The economic benefits of breastfeeding: a review and analysis, ERS Food Assistance and Nutrition Research Report No 13. Washington, DC: U.S. Department of Agriculture, Economic Research Service; 2001. Available at: http://www.ers.usda.gov/media/329098/fanrr13_1_.pdf Accessed on September 29, 2013.
142. Whittemore AS, Harris R, Itnyre J. Characteristics relating to ovarian cancer risk: collaborative analysis of 12 US case-control studies. American Journal of Epidemiology 1992; 136:1184-1203.
143. WHO Collaborative Study Team on the role of breastfeeding on the prevention of infant mortality. Effect of breast-feeding on infant and child mortality due to infectious disease in less developed countries: a pooled analysis. Lancet 2000; 355:451-455.
144. WHO Child Growth Standards based on length/ height, weight and age. Acta Paediatr Suppl. 2006;450:76-85.
145. WHO, 2003. Global Strategy for Infant and Young Child Feeding. Geneva, Switzerland. Available at: http://www.who.int/nutrition/publications/infantfeeding/9241562218/en/ Accessed on September 29, 2013.
146. WHO, 2003. Infant and young child feeding: A tool for assessing national practices, policies and programmes. Available at: http://www.who.int/nutrition/publications/infantfeeding/9241562544/en/index.html Accessed on September 28, 2013.
147. WHO, 2007. Planning guide for national implementation of the global strategy for infant and young child feeding. Available at: http://www.who.int/nutrition/publications/infantfeeding/9789241595193/en/index.html Accessed on September 28, 2013
148. WHO, 2009. Global health risks: mortality and burden of disease attributable to selected major risks. Available at: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf Accessed on 19, September 2013.
149. WHO, 2012. Guide to producing child health subaccounts within the national accounts frameworks. Geneva, Switzerland. Available at: http://www.who.int/nha/chsubrcolumn.pdf Accessed on September 29, 2013.
150. WHO, 2013. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Available at: http://apps.who.int/iris/ bitstream/10665/84409/1/9789241505550_eng.pdf Accessed on September 29, 2013.
151. WHO 2013. Country implementation of the International Code of Marketing of Breast-milk Substitutes: status report 2011. Geneva, World Health Organization, 2013. Available at: http://apps.who.int/iris/bitstream/10665/85621/1/9789241505987_eng.pdf Accessed on September 30, 2013.
151. Wilson N, Nghiem N, Foster R, Cobiac L, Blakely T. Estimating the cost of new public health legislation. Bull World Health Organ 2012; 90(7):532-9.
148. World Bank,1993. World Development Report: Investing in Health. New York: Oxford University Press. Available at: http://www.dcp2.org/file/62/ Accessed on September 23, 2013.
149. World Bank, 2006. Repositioning nutrition as central to development - A strategy for large-scale action. Available at: http://siteresources.worldbank.org/NUTRITION/Resources/281846-1131636806329/NutritionStrategy.pdf#page=1&zoom=auto,467,655. Accessed on September 24, 2013.
150. World Economic Forum, 2011. Scaling up action against noncommunicable diseases: How much will it cost?
151. Yoo K-Y et al. Independent protective effect of lactation against breast cancer: a case- control study in Japan. American Journal of Epidemiology1992; 135(7):726-733.
152. Zheng T et al. Lactation reduces breast cancer risk in Shandong Province, China. American Journal of Epidemiology 2000;152:1129-1135.

Annexes

Estimates/budgets/actual expenditures on breastfeeding and IYCF at the country level

Costs of developing and implementing policies in different countries

An increasing number of countries are developing such policies to guide national action. Mongolia and Fiji have estimated the cost of developing infant and young child feeding policy at US$ 5000; the latter is specially allocated to technical support. Afghanistan has developed both a national policy as well as a nation plan of action. The cost estimates for this is US$ 45,000, and includes costs of meetings, remuneration for national and international consultants, advocacy with other departments, printing and dissemination of the policy and plan of action documents. Afghanistan has also estimated the cost of developing guidelines at US$ 38,000, to include the costs of remuneration for national and international consultants for a specified period of two months, printing and dissemination of the guidelines.

As new information regarding optimal breastfeeding practices becomes available, or new threats emerge, policies may need to be updated. Most budgets for breastfeeding do have some kind resources available for this. For instance, Solomon Islands budgeted for SBD$ 21,000 (approx US$ 2960) to be spent in 2012 for the National Breastfeeding Policy Review; the operational costs (annual) for programmes related to enhancing breastfeeding is SBD$87,338 (US$ 12,305). Vietnam has factored in annual review of policy in its budget at approximately VND 100 million (US$ 4800 approx) a year, while Afghanistan has estimated a cost of US$ 10,000 a year; the latter cost includes services of an international consultant for a specified period of time.

The cost of organizing an annual review meeting in Vietnam is VND 100 million, and organizing the annual meeting of the National Breastfeeding Committee in Afghanistan is US$ 7000. Vietnam has also budgeted for annual assessment of policies and programmes for their impact at VND 500 million (US$ 24000 approx. a year); no costs for this head have been included in the Afghanistan budget.

Country	Budget Head	Amount allocated in US$	Comments
Afghanistan	Developing national policy and plan of action	45000	includes costs of meetings, remuneration for national and international consultants, advocacy with other departments, printing and dissemination of the policy and plan of action documents
	Developing IYCF guidelines	38000	Includes the costs of remuneration for national and international consultants for a specified period of 2 months, printing and dissemination of the guidelines
	Annual review of policy	10000	Includes cost of international consultant
	Annual meeting of National Breastfeeding Committee	7000	
Fiji	Developing IYCF policy	5000	Cost of technical support
Mongolia	Developing IYCF policy	5000	No details available
Solomon Islands	Review of National Breastfeeding Policy	2960 approx.	
	Operational costs of programmes	12305 approx.	Annual cost
Vietnam	Review of Policy	4800 approx.	Annual cost
	Assessment of Policy and programmes for their impact	24000 approx	Annual cost

Costs for protection of breastfeeding

The costs of developing national legislation based on the International Code of Marketing of Breastmilk Substitutes are extremely difficult to reference as only a few countries have translated all provisions of the code into law. In China, WHO and UNICEF extended US$ 55,397 from 2006 to 2012 for developing national legislation; however no details are available for this estimate. Technical support for this, in Fiji, has been estimated at US$ 5000, while the costs for training, production and distribution of training material and monitoring and reporting have been estimated at US$40000. The cost for developing national legislation in Egypt was EGP 100000 (US$ 16420 approx), spread over six months. The Afghanistan budget is estimated at US$ 110,000 for this, and includes development of the code through national level advocacy meetings, hiring national and international consultants, training in monitoring of legislation, printing and dissemination of the legislation, and holding meetings to sensitize the bureaucracy and judicial system. Recurring annual costs include cost of monitoring and implementation. The IYCF budget of Afghanistan has put down some estimates, basically related to field visits. These do not take into account the continuous need to monitor violations and take action against the violators.

In India, violations of the Infant Milk Substitutes Feeding Bottles, and Infant Foods (Regulation of Production, Supply and Distribution) Act 1992, and Amendment Act 2003 is a cognizable offence and the State as well as the organization gazetted by the State can take the matter to court. While so far no financial resources have been allocated under this head, a national consultation to estimate the resources required to enhance optimal IYCF rates was organized by Breastfeeding Promotion Network of India in 2011 with assistance from the Planning Commission, to inform the preparation of the 12th Five-year Plan for the country. The report recommended an annual expenditure of INR 61,600,000 (US$ 1188000 approx) at INR 100,000 (US$ 1927) per district for monitoring the IMS Act.

Costs for promotion of breastfeeding

A study from Uganda, which calculated both financial and economic costs, estimated annual project costs be US$56,308. The largest cost component was peer supporter supervision, which accounted for over 50% of total project costs. The cost per mother counselled was US$139 and the cost per visit was US$26; there were six such visits for each mother. The study did not mention any costs related to the training of the peer counselors. Mongolia has allocated US$5000 for training 30 persons over 5 days in skilled counseling for lactation management. In Egypt and Australia, EGP 5 million (US$ 82313120) over five years and AUD 1.8 million (US$ 1830420 approx) over four years respectively, include both costs of training and promotion; no details are available of the estimates for individual interventions. Similarly, the Saudi Arabia

Country	Budget Head	Amount allocated in US$	Comments
China	Developing national legislation	55397	Allocation over 5 years, no further details available
Egypt	Developing national legislation	16420	Spread over six months, no further details available
Fiji	Developing national legislation	45000	Includes costs technical support for developing legislation, for training, production and distribution of training material and monitoring and reporting
Afghanistan	Developing national legislation	110000	Includes holding national level advocacy meetings, hiring national and international consultants, training in monitoring of legislation, printing and dissemination of the legislation, and holding meetings to sensitize the bureaucracy and judicial system
India	Cost of implementation	1188000 or US$ 0.05 per birth	Annual cost

budget of US$106640.0000 includes the cost of training in skilled counselling, as well as providing technical support and hotline services. Fiji has put down the cost of training at US$ 40,000. WHO and UNICEF allocated US$ 195,537 in China for development of BFHI self-appraisal tools over a six-year period from 2006-2012; once again no breakdown of costs are available. The budget for Vietnam costs creating a core group of national trainers and training counselors for field level work over a period of five years at 4650 million Vietnamese Dong, or US$ 222915 approximately. Solomon Islands has spent SBD$68,751 (US$ 9686 approx) in 2012 for creating a cadre of skilled counselors for the Baby Friendly Hospital Initiative (BFHI). Brunei Darussalam used to allocate some finances for training in IYCF, but the budget has been cut. The department for nursing and continuing nursing education now conducts this training, which is down to about two training courses per year.

Refresher courses conducted by middle level trainers for field level workers in Lalitpur District in India cost INR 10 (US$ 0.20 approx) per infant born over the programme period.

Some countries have allocated specific amounts to IEC activities to promote breastfeeding. Egypt has allocated EGP 5 million (US$ 82313120) for an awareness raising campaign for mothers and families about breastfeeding and its benefits through TV spots, Radio spots, brochures, posters, as well as training health care workers in breastfeeding and counseling skills, over five years. Saudi Arabia has estimated US$106640.0000 as the cost of training in skilled counselling, providing technical support and hotline services. In China, WHO and UNICEF allocated US$ 311,674 for programmes related to enhancing breastfeeding over a six-year period from 2006-2012.

Vietnam budgeted VND 1500 million (US$ 71910 approx) in 2010 for implementation of communication activities. The Australian National Breastfeeding Strategy 2010-2015, which builds on existing initiatives to promote, protect, support and monitor breastfeeding, includes $1.8 million (US$ 1830420 approx) over four years to support education and the provision of information resources, as well as health professionals training and support. The IYCF budget of Afghanistan puts the annual cost of raising public awareness at US$ 1,634,000, of which US$ 400,000 is for World Breastfeeding Week celebrations.

Country	Budget head	Amount allocated in US$	Comments
Costs of training in skilled counseling			
Australia	Training and promotion	1830420	Spread over 4 years
China	Development of BFHI Self Appraisal tools	195537	Spread over 6 years No further details available
Egypt	Training and promotion	82313120	Spread over 5 years
Fiji	Training	40000	No further information available
India	Training	4.50 per birth	Onetime costs Costs of BFCHI project, Lalitpur Cost includes training, training material, a minimum honorarium for field level workers, but not any travel costs for delivery of services
	Refresher training	0.20 per birth	Annual costs of refresher course at Lalitpur
Mongolia	Training in skilled counselling and lactation management	5000	Training given to 30 persons over 5 days

Country	Budget head	Amount allocated in US$	Comments
Saudi Arabia	Programme Operation costs	106640	Annual costs Cost includes Training in skilled counseling, providing technical information and hotline services but no further details available
Solomon Islands	Training	9686	Creating a cadre of skilled counselors for BFHI
Vietnam	Training	222915	Spread over 5 years Creating a Core group of national and field level counselors
Costs of other forms of promotion			
Afghanistan	Promotion	1634000	Annual Costs Includes US$ 100,000 for celebration of World Breastfeeding Week.
Australia	Promotion and training in counseling skills	1830420	Over four years
China	Programmes for Enhancing Breastfeeding	311674	Spread over 6 years Nor further details available of what interventions are included in the programme
Egypt	Promotion and training in counseling skills	8321312**0**	Over five years
Vietnam	Promotion	71910	Annual costs

Costs for support of breastfeeding

While we could not access costs of developing legislation to provide maternity benefits, the Afghanistan IYCF budget of US$ 35000 under this head gives us a base for calculating the costs of developing guidelines for implementing the legislation and sensitizing the public.

In Mongolia, every pregnant woman from the 20 weeks of her pregnancy receives 41000 MNT (US$ 30 approx) each month for the next 12 months, till the baby is about six months old. Working mothers receive additional 60 days allowance from insurance. In Fiji, where 70,708 females are employed, there are 84 consecutive days of maternity leave with full pay for the first three confinements, and thereafter, 50% of gross salary is due as maternity benefit; annual leave can be taken with maternity leave. In Brunei Darussalam, non-formal private sectors female employees are entitled to 13 weeks of paid maternity leave; of which compensation for post-delivery 8 weeks is paid by their employer, and the other 5 weeks supported by the Brunei Government through a special procedure involving filling a form in the Dept. of Labour, certification of birth by a government doctor, etc. However this privilege is only applicable to Brunei citizens and permanent residents.

The Australian Government has introduced a comprehensive Paid Parental Leave (PPL) scheme for new parents who are the primary carers of a child born or adopted on or after 1 January 2011. An eligible person will receive taxable PPL payments at the level of the Federal Minimum Wage, currently $543.78 (US$ 553 approx) a week, for a maximum period of 18 weeks; the amount is taxable. However certain conditionalities apply. To be eligible for the PPL scheme, the primary carer (usually the mother) must be in paid work and have (a) been engaged in work continuously for at least 10 of the 13 months prior to the expected birth or adoption of the child; and (b) undertaken at least 330 hours of paid work in the 10 month period (an average of around one day of paid work a week). However, women do not meet these conditionalities can continue to receive assistance from

other forms of family assistance including the Baby Bonus. The PPL scheme is estimated to have a net cost to the Government of AUD 731 million (US$ 743,353,859 approx) over five years.

India has initiated the Indira Gandhi Matritva Sahyog Yojna (Indira Gandhi Maternity Benefit Scheme), which is initially being implemented in 52 selected districts. The scheme enables any woman above 18 years of age to receive a maternity benefit of Rs. 4000 (approximately US$ 80 over six months) provided she attends antenatal clinics, has her delivery at a health facility, and completes the immunization schedule for her child.

Country	Budget head	Amount allocated in US$	Comments
Cost of developing guidelines for providing maternity entitlements			
Afghanistan	Maternity Entitlements	35000	One time cost Developing guidelines for providing maternity entitlements, and sensitizing the public
Types of maternity entitlements and their costs			
Brunei Darussalam	Maternity entitlements	Not available	13 weeks of paid maternity leave for non-formal private sectors female employees; of which compensation for post -delivery 8 weeks is paid by their employer, and the other 5 weeks supported by the Brunei Government through a special procedure involving filling a form in the Dept. of Labour, certification of birth by a government doctor, etc. Applicable to Brunei citizens and permanent residents.
Mongolia	Maternity entitlements	360 per birth	Applicable to each pregnant woman Covers the period from 20 weeks of pregnancy to 6 months after birth
		60 per birth	Additional allowance for 60 days applicable only to working mothers
Fiji	Maternity entitlements	Not available	84 consecutive days of maternity leave with full pay for the first three confinements, and thereafter, 50% of gross salary is due as maternity benefit; annual leave can be taken with maternity leave
Australia	Paid Parental Leave scheme	743,353,859	Applicable over 5 years to primary care givers adopting the scheme Primary care giver receives US$ 553 (approx) each week for maximum 18 weeks; amount is taxable Primary care giver must be in paid work and have (a) been engaged in work continuously for at least 10 of the 13 months prior to the expected birth or adoption of the child; and (b) undertaken at least 330 hours of paid work in the 10 month period (an average of around one day of paid work a week). Does not qualify for oth er assistance related to maternity
India	Indira Gandhi Maternity Benefit Scheme	80 per birth	Spread over 6 months Applicable to all women but with conditions including attending antenatal clinics, delivery at a health facility, and completing the immunization schedule for the baby Currently being piloted in 52 districts in the

References

1. Australian Government publication. Australia's Paid Parental Leave Scheme. Supporting working Australian families.
2. Australian National Breastfeeding Strategy 2010-2015, available at http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-strateg-brfeed-index.htm
3. Breastfeeding Promotion Network of India (2011). National Consultation to Develop a Plan of Action - Resource Requirements for Enhancing Rates of Breastfeeding & Infant and Young Child Feeding in the 12th Plan A Report. Available at http://www.bpni.org/Research/Report-National-Consultation.pdf
4. Infant and Young Child Feeding Plan of Action for Vietnam 2006-2010. Annex 4, Ministry of Health, Vietnam. Available at http://www.ennonline.net/pool/files/ife/iycf-plan-of-action-for-viet-nam-english-version.pdf
5. National Infant and Young Child Feeding Policy and Strategy 2009 2013. Annex 4. Islamic Republic of Afghanistan, Ministry of Public Health.
6. Chola et al. Cost of individual peer counseling for the promotion of exclusive breastfeeding in Uganda. Cost Effectiveness and Resource Allocation 2011, 9:11. http://www.resource-allocation.com/content/9/1/11

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2012 - 2013

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Participants at the Special Session with Development Partners on Scaling Up Breastfeeding and Infant and Young Child Feeding What Will It Cost, held at New Delhi, December 7th to 9th 2012

The session, which introduced the document and explained its basic conceptualisation, was attended by delegates from 23 countries - Afghanistan, Australia, Bangladesh, Burkina Faso, Cameroon, Egypt, Eitrea, Finland, Ghana, India, Kenya, Korea, Malaysia, Mauritius, Nepal, New Zealand, Nicaragua, Sudan, Swaziland, Sweden, Switzerland, Tanzania, and Uganda.

The governments of Kenya, Sudan, Afghanistan and India were represented at the meeting.

International organisations and donor agencies were represented by Dr. Francesco Branca, Director of Nutrition for Health and Development, World Health Organisation, Geneva; Dr. Nune Mangasaryan, Senior Nutrition Advisor (Infant and Young Child Nutrition), UNICEF Headquarters, New York; Ms. Ellen Muehlhoff, Food and Agriculture Organisation, Rome; representatives from UNICEF Eitrea and UNICEF Nicaragua, Mr. Billy Stewart of DFID India, Ms. Ashi Kathuria of World Bank, Dr. Sanjay Kapoor of USAID-India and Mr. Carl-Gustaf Gutberg, who represented SIDA.

Other participants included representatives of civil society organisations and professional and academic bodies such as the South Asia Infant Feeding Research Network (SAIFRN).

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LIST OF 214 COUNTRIES

1. Afghanistan
2. Albania
3. Algeria
4. American Samoa
5. Andorra
6. Angola
7. Antigua and Barbuda
8. Argentina
9. Armenia
10. Aruba
11. Australia
12. Austria
13. Azerbaijan
14. Bahamas, The
15. Bahrain
16. Bangladesh
17. Barbados
18. Belarus
19. Belgium
20. Belize
21. Benin
22. Bermuda
23. Bhutan
24. Bolivia
25. Bosnia and Herzegovina
26. Botswana
27. Brazil
28. Brunei Darussalam
29. Bulgaria
30. Burkina Faso
31. Burundi
32. Cambodia
33. Cameroon
34. Canada
35. Cape Verde
36. Cayman Islands
37. Central African Republic
38. Chad
39. Channel Islands
40. Chile
41. China
42. Colombia
43. Comoros
44. Congo, Dem. Rep.
45. Congo, Rep.
46. Costa Rica
47. Cote d'Ivoire
48. Croatia
49. Cuba
50. Curacao
51. Cyprus
52. Czech Republic
53. Denmark
54. Djibouti
55. Dominica
56. Dominican Republic
57. Ecuador
58. Egypt, Arab Rep.
59. El Salvador
60. Equatorial Guinea
61. Eritrea
62. Estonia
63. Ethiopia
64. Faeroe Islands
65. Fiji
66. Finland
67. France
68. French Polynesia
69. Gabon
70. Gambia, The
71. Georgia
72. Germany
73. Ghana
74. Greece
75. Greenland
76. Grenada
77. Guam
78. Guatemala
79. Guinea
80. Guinea-Bissau
81. Guyana
82. Haiti
83. Honduras
84. Hong Kong SAR, China
85. Hungary
86. Iceland
87. India
88. Indonesia
89. Iran, Islamic Rep.
90. Iraq
91. Ireland
92. Isle of Man
93. Israel
94. Italy
95. Jamaica
96. Japan
97. Jordan
98. Kazakhstan
99. Kenya
100. Kiribati
101. Korea, Dem. Rep.
102. Korea, Rep.
103. Kosovo
104. Kuwait
105. Kyrgyz Republic
106. Lao PDR
107. Latvia
108. Lebanon
109. Lesotho
110. Liberia
111. Libya
112. Liechtenstein
113. Lithuania
114. Luxembourg

115. Macao SAR, China
116. Macedonia, FYR
117. Madagascar
118. Malawi
119. Malaysia
120. Maldives
121. Mali
122. Malta
123. Marshall Islands
124. Mauritania
125. Mauritius
126. Mexico
127. Micronesia, Fed. Sts.
128. Moldova
129. Monaco
130. Mongolia
131. Montenegro
132. Morocco
133. Mozambique
134. Myanmar
135. Namibia
136. Nepal
137. Netherlands
138. New Caledonia
139. New Zealand
140. Nicaragua
141. Niger
142. Nigeria
143. Northern Mariana Islands
144. Norway
145. Oman
146. Pakistan
147. Palau
148. Panama
149. Papua New Guinea
150. Paraguay
151. Peru
152. Philippines
153. Poland
154. Portugal
155. Puerto Rico
156. Qatar
157. Romania
158. Russian Federation
159. Rwanda
160. Samoa
161. San Marino
162. Sao Tome and Principe
163. Saudi Arabia
164. Senegal
165. Serbia
166. Seychelles
167. Sierra Leone
168. Singapore
169. Sint Maarten (Dutch part)
170. Slovak Republic
171. Slovenia
172. Solomon Islands
173. Somalia
174. South Africa
175. South Sudan (with Sudan)
176. Spain
177. Sri Lanka
178. St. Kitts and Nevis
179. St. Lucia
180. St. Martin (French part)
181. St. Vincent and the Grenadines
182. Sudan (with South Sudan)
183. Suriname
184. Swaziland
185. Sweden
186. Switzerland
187. Syrian Arab Republic
188. Tajikistan
189. Tanzania
190. Thailand
191. Timor-Leste
192. Togo
193. Tonga
194. Trinidad and Tobago
195. Tunisia
196. Turkey
197. Turkmenistan
198. Turks and Caicos Islands
199. Tuvalu
200. Uganda
201. Ukraine
202. United Arab Emirates
203. United Kingdom
204. United States
205. Uruguay
206. Uzbekistan
207. Vanuatu
208. Venezuela, RB
209. Vietnam
210. Virgin Islands (U.S.)
211. West Bank and Gaza
212. Yemen, Rep.
213. Zambia
214. Zimbabwe

Projected costs of implementing various interventions by country

Countries	Annual births (SOWC 2013, and where not available, from previous SOWC)	Percentage of population below poverty line (SOWC 2013, and where not available, from earlier SOWC)	Number of BPL women for maternity entitlement	PPP conversion rate (World Bank 2011, 2012, whichever is later)	Interventions			
					Developing, updating and monitoring policies, rules and guidelines	Legislating and implementing the International Code	Implementing BFHI	Training of health workers
African Region								
Algeria	712250	0.07	49857.5	49.21	28490	2599712.5	10605402.5	1324785
Angola	803270	0.54	433765.8	85.73	32130.8	2931935.5	11960690.3	1494082.2
Benin	355730	0.47	167193.1	242.52	14229.2	1298414.5	5296819.7	661657.8
Burkina Faso	730010	0.57	416105.7	214.04	29200.4	2664536.5	10869848.9	1357818.6
Cameroon	715770	0.1	71577	250.99	28630.8	2612560.5	10657815.3	1331332.2
Cape Verde	10190	0.21	2139.9	74.35	407.6	37193.5	151729.1	18953.4
Chad	510630	0.62	316590.6	302.69	20425.2	1863799.5	7603280.7	949771.8
Comoros	27760	0.46	12769.6	258.59	1110.4	101324	413346.4	51633.6
Djibouti	26030	0.19	4945.7		1041.2	95009.5	387586.7	48415.8
Equatorial Guinea	26300		0	405.88	1052	95995	391607	48918
Gabon	41620	0.05	2081	362.78	1664.8	151913	619721.8	77413.2
Gambia	66920	0.34	22752.8	8.43	2676.8	244258	996438.8	124471.2
Ghana	776010	0.3	232803	1.41	31040.4	2832436.5	11554788.9	1443378.6
Guinea	394200	0.43	169506	3,234.86	15768	1438830	5869638	733212
Guinea-Bissau	58790	0.49	28807.1	230.96	2351.6	214583.5	875383.1	109349.4
Liberia	156570	0.84	131518.8	47.35	6262.8	571480.5	2331327.3	291220.2
Madagascar	746840	0.68	507851.2	1,003.85	29873.6	2725966	11120447.6	1389122.4
Mali	727530	0.51	371040.3	291.73	29101.2	2655484.5	10832921.7	1353205.8
Mauritania	118020	0.21	24784.2	126.04	4720.8	430773	1757317.8	219517.2
Mauritius	16470		0	17.03	658.8	60115.5	245238.3	30634.2
Niger	776710	0.64	497094.4	293.97	31068.4	2834991.5	11565211.9	1444680.6
Nigeria	6457910	0.43	2776901.3	91.65	258316.4	23571371.5	96158279.9	12011712.6
Sao Tome and Principe	5190	0.29	1505.1	14,434.27	207.6	18943.5	77279.1	9653.4
Senegal	470840	0.34	160085.6	270.92	18833.6	1718566	7010807.6	875762.4
Seychelles	3252		0	5.97	130.08	11869.8	48422.28	6048.72
Sierra Leone	226800	0.53	120204	2,029.45	9072	827820	3377052	421848
Togo	194710	0.39	75936.9	278.89	7788.4	710691.5	2899231.9	362160.6
Botswana	47210		0	3.36	1888.4	172316.5	702956.9	87810.6
Burundi	287650	0.81	232996.5	646.16	11506	1049922.5	4283108.5	535029
Central African Republic	156200	0.63	98406	281.57	6248	570130	2325818	290532
Congo Dem. Rep. of	2911840	0.54	1572393.6	592.5	116473.6	10628216	43357297.6	5416022.4
Côte d'Ivoire	678780	0.24	162907.2	311.44	27151.2	2477547	10107034.2	1262530.8
Democratic Republic of the Congo	144630	0.59	85331.7	363.77	5785.2	527899.5	2153540.7	269011.8
Eritrea	192720		0	13.69	7708.8	703428	2869600.8	358459.2
Ethiopia	2613320	0.39	1019194.8	7.13	104532.8	9538618	38912334.8	4860775.2
Kenya	1559620	0.2	311924	45.13	62384.8	5692613	23222741.8	2900893.2
Lesotho	60430	0.43	25984.9	4.99	2417.2	220569.5	899802.7	112399.8
Malawi	685780	0.74	507477.2	74.05	27431.2	2503097	10211264.2	1275550.8
Mozambique	889120	0.6	533472	16.04	35564.8	3245288	13238996.8	1653763.2
Namibia	60040	0.49	29419.6	6.28	2401.6	219146	893995.6	111674.4
Rwanda	449230		0	281.2	17969.2	1639689.5	6689034.7	835567.8
Somalia	415680		0		16627.2	1517232	6189475.2	773164.8
South Africa	1052420	0.17	178911.4	5.39	42096.8	3841333	15670533.8	1957501.2
Swaziland	34970	0.63	22031.1	4.76	1398.8	127640.5	520703.3	65044.2
Uganda	1545110	0.29	448081.9	1,013.53	61804.4	5639651.5	23006687.9	2873904.6
United Republic of Tanzania	1912860	0.68	1300744.8	602.1	76514.4	6981939	28482485.4	3557919.6
Zambia	622270	0.64	398252.8	4,417.08	24890.8	2271285.5	9265600.3	1157422.2
Zimbabwe	376710		0		15068.4	1374991.5	5609211.9	700680.6
Sub-Regional Costs					**1274116.48**	**116263129**	**474289859.7**	**59246416.32**

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Interventions				Total cost for implementing all interventions US$	Total in local currency using PPP (World Bank 2012)	Local currency
	Community Outreach and Mother Support	Media Promotion	Monitoring	Maternity Entitlement for women below the poverty line			
African Region							
Algeria	7058397.5	3810537.5	427350	17948700	43824885	2,156,622,590.85	Algerian dinar
Angola	7960405.7	4297494.5	481962	156155688	185332258.2	15,888,534,495.49	Angolar
Benin	3525284.3	1903155.5	213438	60189516	73138285.8	17,737,497,072.22	CFA Franc
Burkina Faso	7234399.1	3905553.5	438006	149798052	176318214.6	37,739,150,652.98	CFA Franc
Cameroon	7093280.7	3829369.5	429462	25767720	51771540.2	12,994,138,874.80	CFA Franc
Cape Verde	100982.9	54516.5	6114	770364	1189853.4	88,465,600.29	Cape Verdean Escudo
Chad	5060343.3	2731870.5	306378	113972616	132538059.8	40,117,945,320.86	CFA Franc
Comoros	275101.6	148516	16656	4597056	5653633.6	1,461,973,112.62	Comorian Franc
Djibouti	257957.3	139260.5	15618	1780452	2774299.8		
Equatorial Guinea	260633	140705	15780	0	1003638	407,356,591.44	Equitorial Guinean Peseta
Gabon	412454.2	222667	24972	749160	2308301.2	837,405,509.34	CFA Franc
Gambia	663177.2	358022	40152	8191008	10667527.2	89,927,254.30	Gambian dalasi
Ghana	7690259.1	4151653.5	465606	83809080	111997202.6	157,916,055.67	Ghana cedi
Guinea	3906522	2108970	236520	61022160	75365852	243,797,980,000.72	Guinean franc
Guinea-Bissau	582608.9	314526.5	35274	10370556	12552281.4	2,899,074,912.14	CFA Franc
Liberia	1551608.7	837649.5	93942	47346768	53073996.2	2,513,053,720.07	Liberian dollar
Madagascar	7401184.4	3995594	448104	182826432	209956850.4	210,765,184,274.04	Malagasy ariary
Mali	7209822.3	3892285.5	436518	133574508	160004745.8	46,678,184,492.23	CFA Franc
Mauritania	1169578.2	631407	70812	8922312	13251717.2	1,670,246,435.89	Ouguiya
Mauritius	163217.7	88114.5	9882	0	647202.2	11,021,853.47	Mauritian rupee
Niger	7697196.1	4155398.5	466026	178953984	207167488.6	60,901,026,623.74	CFA Franc
Nigeria	63997888.1	34549818.5	3874746	999684468	1233898285	113,086,777,783.59	Naira
Sao Tome and Principe	51432.9	27766.5	3114	541836	780025.4	11,259,097,230.46	Dobra
Senegal	4666024.4	2518994	282504	57630816	74753474.4	20,252,211,284.45	CFA Franc
Seychelles	32227.32	17398.2	1951.2	0	167917.52	1,002,467.59	Seychellois rupee
Sierra Leone	2247588	1213380	136080	43273440	51547208	104,612,481,275.60	Leone
Togo	1929576.1	1041698.5	116826	27337284	34447468.6	9,607,054,517.85	CFA Franc
Botswana	467851.1	252573.5	28326	0	1761834.6	5,919,764.26	Pula
Burundi	2850611.5	1538927.5	172590	83878740	94358929	60,970,965,562.64	Rupie
Central African Republic	1547942	835670	93720	35426160	41139972	11,583,781,916.04	CFA franc
Congo Dem. Rep. of	28856334.4	15578344	1747104	566061696	671695014.4	397,979,296,032.00	Congolese franc
Côte d'Ivoire	6726709.8	3631473	407268	58646592	83309154.8	25,945,803,170.91	CFA franc
Democratic Republic of the Congo	1433283.3	773770.5	86778	30719412	36013695.8	13,100,702,121.17	CFA franc
Eritrea	1909855.2	1031052	115632	0	7038027.2	96,350,592.37	Tallero
Ethiopia	25898001.2	13981262	1567992	366910128	461719111.2	3,292,057,262.86	Birr
Kenya	15455834.2	8343967	935772	112292640	168894461.2	7,622,207,033.96	Kenyan shilling
Lesotho	598861.3	323300.5	36258	9354564	11595755.8	57,862,821.44	Lesotho loti
Malawi	6796079.8	3668923	411468	182691792	207608174.8	15,373,385,343.94	Kwacha
Mozambique	8811179.2	4756792	533472	192049920	224339411.2	3,598,404,155.65	Mozambican metical
Namibia	594996.4	321214	36024	10591056	12818106.4	80,497,708.19	Namibian dollar
Rwanda	4451869.3	2403380.5	269538	0	16339079.8	4,594,549,239.76	Rwandan franc
Somalia	4119388.8	2223888	249408	0	15122556.8		
South Africa	10429482.2	5630447	631452	64408104	102618853.2	553,115,618.75	South African rand
Swaziland	346552.7	187089.5	20982	7931196	9249208.2	44,026,231.03	Lilangeni
Uganda	15312040.1	8266338.5	927066	161309484	217385172.6	220,326,393,985.28	Ugandan shilling
United Republic of Tanzania	18956442.6	10233801	1147716	468268128	537678431.6	323,736,183,666.36	Tanzanian shilling
Zambia	6166695.7	3329144.5	373362	143371008	165984518.2	733,166,895,650.86	Zambian kwacha
Zimbabwe	3733196.1	2015398.5	226026	0	13709504.6		
Sub-Regional Costs	**315662357.9**	**170413079.2**	**19111747.2**	**4869124596**	**6026511185**		

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Annual births (SOWC 2013, and where not available, from previous SOWC)	Percentage of population below poverty line (SOWC 2013, and where not available, from earlier SOWC)	Number of BPL women for maternity entitlement	PPP conversion rate (World Bank 2011, 2012, whichever is later)	Interventions			
					Developing, updating and monitoring policies, rules and guidelines	Legislating and implementing the International Code	Implementing BFHI	Training of health workers
North America								
Canada	387640		0	1.23	15505.6	1414886	5771959.6	721010.4
United States of America	4322390		0	1	172895.6	15776723.5	64360387.1	8039645.4
Sub-Regional Costs					**188401.2**	**17191609.5**	**70132346.7**	**8760655.8**
Latin America and Carribean								
Antigua and Barbuda	1601		0	1.79	64.04	5843.65	23838.89	2977.86
Argentina	693480	0.01	6934.8		27739.2	2531202	10325917.2	1289872.8
Bahamas	5330		0	0.69	213.2	19454.5	79363.7	9913.8
Barbados	2980		0		119.2	10877	44372.2	5542.8
Belize	7730	0.12	927.6	1.22	309.2	28214.5	115099.7	14377.8
Brazil	2995980	0.04	119839.2	1.86	119839.2	10935327	44610142.2	5572522.8
Chile	245430	0.01	2454.3	334.21	9817.2	895819.5	3654452.7	456499.8
Colombia	910300	0.16	145648	1,316.22	36412	3322595	13554367	1693158
Costa Rica	73380	0.01	733.8	364.86	2935.2	267837	1092628.2	136486.8
Dominica	1223		0	1.43	48.92	4463.95	18210.47	2274.78
Dominican Republic	215530	0.04	8621.2	22.09	8621.2	786684.5	3209241.7	400885.8
El Salvador	125690	0.05	6284.5	0.53	5027.6	458768.5	1871524.1	233783.4
Grenada	2040		0	1.87	81.6	7446	30375.6	3794.4
Guyana	13470	0.08	1077.6	215.51	538.8	49165.5	200568.3	25054.2
Honduras	204510	0.23	47037.3	10.75	8180.4	746461.5	3045153.9	380388.6
Jamaica	501500		0		20060	1830475	7467335	932790
Mexico	2194670	0.03	65840.1	7.67	87786.8	8010545.5	32678636.3	4082086.2
Panama	69810	0.1	6981	0.57	2792.4	254806.5	1039470.9	129846.6
Paraguay	157650	0.05	7882.5	2,738.72	6306	575422.5	2347408.5	293229
Saint Kitts and Nevis	946		0	2.09	37.84	3452.9	14085.94	1759.56
Saint Lucia	3050	0.21	640.5	1.59	122	11132.5	45414.5	5673
Saint Vincent and the Grenadines	1840		0	1.6	73.6	6716	27397.6	3422.4
Suriname	9600	0.16	1536	3.3	384	35040	142944	17856
Trinidad and Tobago	19630	0.04	785.2	4.31	785.2	71649.5	292290.7	36511.8
Uruguay	49500		0	18.62	1980	180675	737055	92070
Venezuela	598470	0.04	23938.8	4.05	23938.8	2184415.5	8911218.3	1113154.2
Bolivia	264140	0.14	36979.6	3.37	10565.6	964111	3933044.6	491300.4
Ecuador	297870	0.05	14893.5	0.55	11914.8	1087225.5	4435284.3	554038.2
Guatemala	473220	0.17	80447.4	5.11	18928.8	1727253	7046245.8	880189.2
Haiti	266230	0.55	146426.5	26.34	10649.2	971739.5	3964164.7	495187.8
Nicaragua	137860	0.16	22057.6	10.14	5514.4	503189	2052735.4	256419.6
Peru	590550	0.06	35433	1.6	23622	2155507.5	8793289.5	1098423
Sub Regional costs					**445408.4**	**40643516.5**	**165803276.9**	**20711490.6**
Arab World								
Bahrain	23410		0	0.35	936.4	85446.5	348574.9	43542.6
Iran (Islamic Republic of)	1255190	0.02	25103.8		50207.6	4581443.5	18689779.1	2334653.4
Jordan	153890		0	0.57	6155.6	561698.5	2291422.1	286235.4
Kuwait	49960		0		1998.4	182354	743904.4	92925.6
Lebanon	64670		0	1,001.43	2586.8	236045.5	962936.3	120286.2
Libyan Arab Jamahiriya	143760		0		5750.4	524724	2140586.4	267393.6
Oman	49500		0		1980	180675	737055	92070
Qatar	21320		0	4.09	852.8	77818	317454.8	39655.2
Saudi Arabia	604760		0	2.97	24190.4	2207374	9004876.4	1124853.6
Syrian Arab Republic	465520	0.02	9310.4	28.26	18620.8	1699148	6931592.8	865867.2
Tunisia	179430	0.03	5382.9	0.68	7177.2	654919.5	2671712.7	333739.8
United Arab Emirates	94250		0	3.64	3770	344012.5	1403382.5	175305
Egypt	1885630	0.02	37712.6	2.84	75425.2	6882549.5	28077030.7	3507271.8

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Interventions				Total cost for implementing all interventions US$	Total in local currency using PPP (World Bank 2012)	Local currency
	Community Outreach and Mother Support	Media Promotion	Monitoring	Maternity Entitlement for women below the poverty line			
North America							
Canada	3841512.4	2073874	232584	0	14055826.4	17,288,666.47	Canadian dollar
United States of America	42834884.9	23124786.5	2593434	0	156729861.4	156,729,861.40	US dollar
Sub-Regional Costs	**46676397.3**	**25198660.5**	**2826018**	0			
Latin America and Carribean							
Antigua and Barbuda	15865.91	8565.35	960.6	0	108052.26	193,413.55	
Argentina	6872386.8	3710118	416088	2496528	27692112.8		
Bahamas	52820.3	28515.5	3198	0	243265.8	167,853.40	
Barbados	29531.8	15943	1788	0	158054.8		
Belize	76604.3	41355.5	4638	333936	664225.8	810,355.48	Belize dollar
Brazil	29690161.8	16028493	1797588	43142112	151826346.8	282,397,005.05	Brazilian real
Chile	2432211.3	1313050.5	147258	883548	9832839.8	3,286,233,389.56	Chilean peso
Colombia	9021073	4870105	546180	52433280	85490758	112,524,645,494.76	Colombian peso
Costa Rica	727195.8	392583	44028	264168	2974926.8	1,085,431,792.25	Colon
Dominica	12119.93	6543.05	733.8	0	94345.98	134,914.75	East Carribean dollar
Dominican Republic	2135902.3	1153085.5	129318	3103632	10968749.8	242,299,683.08	
El Salvador	1245587.9	672441.5	75414	2262420	6869939.4	3,641,067.88	Colon
Grenada	20216.4	10914	1224	0	123970.4	231,824.65	East Carribean dollar
Guyana	133487.7	72064.5	8082	387936	926358.2	199,639,455.68	Guyanese dollar
Honduras	2026694.1	1094128.5	122706	16933428	24398960.6	262,288,826.45	Lempira
Jamaica	4969865	2683025	300900	0	18234390		Jamaican dollar
Mexico	21749179.7	11741484.5	1316802	23702436	103331170.2	792,550,075.43	Peso
Panama	691817.1	373483.5	41886	2513160	5094470.6	2,903,848.24	Balboas
Paraguay	1562311.5	843427.5	94590	2837700	8604089	23,564,190,626.08	Paraguayan guarani
Saint Kitts and Nevis	9374.86	5061.1	567.6	0	84301.96	176,191.10	East Carribean dollar
Saint Lucia	30225.5	16317.5	1830	230580	391173	621,965.07	East Carribean dollar
Saint Vincent and the Grenadines	18234.4	9844	1104	0	116718.4	186,749.44	East Carribean dollar
Suriname	95136	51360	5760	552960	951056	3,138,484.80	Surinamese dollar
Trinidad and Tobago	194533.3	105020.5	11778	282672	1044455.8	4,501,604.50	East Carribean dollar
Uruguay	490545	264825	29700	0	1844870	34,351,479.40	Uruguayan peso
Venezuela	5930837.7	3201814.5	359082	8617968	30368490.2	122,992,385.31	Venezuelan bolivar fuerte
Bolivia	2617627.4	1413149	158484	13312656	22940372.4	77,309,054.99	Bolivian peso
Ecuador	2951891.7	1593604.5	178722	5361660	16212426.2	8,916,834.41	US dollar
Guatemala	4689610.2	2531727	283932	28961064	46170021.2	235,928,808.33	Quetzal
Haiti	2638339.3	1424330.5	159738	52713540	62417039.8	1,644,064,828.33	Haitian gourde
Nicaragua	1366192.6	737551	82716	7940736	12989539.6	131,713,931.54	Cordobas
Peru	5852350.5	3159442.5	354330	12755880			Peruvian nuevo sol
Sub Regional costs	**110349931.1**	**59573373.5**	**6681126**	**282024000**	**653167491.6**		
Arab World							
Bahrain	231993.1	125243.5	14046	0	898846.6	314,596.31	Bahraini dinar
Iran (Islamic Republic of)	12438932.9	6715266.5	753114	9037368	54600557.4		
Jordan	1525049.9	823311.5	92334	0	5630051.4	3,209,129.30	Jordanian dollar
Kuwait	495103.6	267286	29976	0	1861549.6		
Lebanon	640879.7	345984.5	38802	0	2394934.2	2,398,358,955.91	Lebanese pound
Libyan Arab Jamahiriya	1424661.6	769116	86256	0	5262737.6		
Oman	490545	264825	29700	0	1844870		
Qatar	211281.2	114062	12792	0	823063.2	3,366,328.49	Riyal
Saudi Arabia	5993171.6	3235466	362856	0	21978597.6	65,276,434.87	Saudi Riyal
Syrian Arab Republic	4613303.2	2490532	279312	3351744	20281499.2	573,155,167.39	Syrian pound
Tunisia	1778151.3	959950.5	107658	1937844	8493975.8	5,775,903.54	
United Arab Emirates	934017.5	504237.5	56550	0	3467505	12,621,718.20	UAE dirham
Egypt	18686593.3	10088120.5	1131378	13576536	81999479.8	232,878,522.63	Egyptian gineih

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Annual births (SOWC 2013, and where not available, from previous SOWC)	Percentage of population below poverty line (SOWC 2013, and where not available, from earlier SOWC)	Number of BPL women for maternity entitlement	PPP conversion rate (World Bank 2011, 2012, whichever is later)	Interventions			
					Developing, updating and monitoring policies, rules and guidelines	Legislating and implementing the International Code	Implementing BFHI	Training of health workers
Iraq	1413990	0.04	56559.6	1,772.59	56559.6	5161063.5	21054311.1	2630021.4
Morocco	620250	0.03	18607.5	4.82	24810	2263912.5	9235522.5	1153665
Yemen	939590	0.18	169126.2	129.04	37583.6	3429503.5	13990495.1	1747637.4
Sub Regional costs					**318604.8**	**29072688**	**118600636.8**	**14815123.2**
Europe (including Russia and CIS countries)								
Andorra	851		0		34.04	3106.15	12671.39	1582.86
Austria	73580		0	0.83	2943.2	268567	1095606.2	136858.8
Belgium	122630		0	0.85	4905.2	447599.5	1825960.7	228091.8
Croatia	42970		0	3.77	1718.8	156840.5	639823.3	79924.2
Cyprus	12930		0	0.67	517.2	47194.5	192527.7	24049.8
Czech Republic	115690		0	13.7	4627.6	422268.5	1722624.1	215183.4
Denmark	63670		0	7.74	2546.8	232395.5	948046.3	118426.2
Finland	60970		0	0.93	2438.8	222540.5	907843.3	113404.2
France	792310		0	0.86	31692.4	2891931.5	11797495.9	1473696.6
Germany	699440		0	0.79	27977.6	2552956	10414661.6	1300958.4
Greece	117230		0	0.68	4689.2	427889.5	1745554.7	218047.8
Iceland	4780		0	140.97	191.2	17447	71174.2	8890.8
Ireland	722900		0	0.82	28916	2638585	10763981	1344594
Israel	156040		0	3.94	6241.6	569546	2323435.6	290234.4
Italy	566780		0	0.78	22671.2	2068747	8439354.2	1054210.8
Luxembourg	5950		0	0.91	238	21717.5	88595.5	11067
Malta	3820		0	0.56	152.8	13943	56879.8	7105.2
Monaco	365		0		14.6	1332.25	5434.85	678.9
Netherlands	181450		0	0.83	7258	662292.5	2701790.5	337497
Norway	60780		0	8.82	2431.2	221847	905014.2	113050.8
Portugal	96500		0	0.62	3860	352225	1436885	179490
San Marino	316		0		12.64	1153.4	4705.24	587.76
Slovenia	29320		0	0.62	1172.8	107018	436574.8	54535.2
Spain	499110		0	0.69	19964.4	1821751.5	7431747.9	928344.6
Sweden	113200		0	8.67	4528	413180	1685548	210552
Switzerland	76570		0	1.39	3062.8	279480.5	1140127.3	142420.2
United Kingdom	761070		0	0.66	30442.8	2777905.5	11332332.3	1415590.2
Albania	41010	0.01	410.1	45.46	1640.4	149686.5	610638.9	76278.6
Armenia	307140	0.01	3071.4	201.8	12285.6	1121061	4573314.6	571280.4
Azerbaijan	183790	0.01	1837.9	0.55	7351.6	670833.5	2736633.1	341849.4
Bosnia and Herzegovina	31560	0.31	9783.6	0.73	1262.4	115194	469928.4	58701.6
Bulgaria	75040	0.01	750.4	0.67	3001.6	273896	1117345.6	139574.4
Georgia	50850	0.15	7627.5	0.98	2034	185602.5	757156.5	94581
Kyrgyzstan	131090	0.02	2621.8	22.63	5243.6	478478.5	1951930.1	243827.4
Poland	410470		0	1.87	16418.8	1498215.5	6111898.3	763474.2
Romania	220530	0.01	2205.3	1.67	8821.2	804934.5	3283691.7	410185.8
Montenegro	7670		0	0.38	306.8	27995.5	114206.3	14266.2
Serbia	109770		0	39.5	4390.8	400660.5	1634475.3	204172.2
Slovakia	57770		0	0.52	2310.8	210860.5	860195.3	107452.2
Tajikistan	194100	0.22	42702	2.01	7764	708465	2890149	361026
The former Yugoslav Republic of Macedonia	21960		0	18.77	878.4	80154	326984.4	40845.6
Turkey	1288620	0.03	38658.6	1.04	51544.8	4703463	19187551.8	2396833.2
Turkmenistan	109490	0.25	27372.5	1.75	4379.6	399638.5	1630306.1	203651.4
Uzbekistan	588670	0.46	270788.2	903.29	23546.8	2148645.5	8765296.3	1094926.2
Belarus	106750		0	3,573.91	4270	389637.5	1589507.5	198555
Estonia	16230		0	0.55	649.2	59239.5	241664.7	30187.8
Hungary	99750		0	128.45	3990	364087.5	1485277.5	185535
Kazakhstan	344860		0	127.88	13794.4	1258739	5134965.4	641439.6
Latvia	24330		0	0.36	973.2	88804.5	362273.7	45253.8

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Interventions				Total cost for implementing all interventions US$	Total in local currency using PPP (World Bank 2012)	Local currency
	Community Outreach and Mother Support	Media Promotion	Monitoring	Maternity Entitlement for women below the poverty line			
Iraq	14012640.9	7564846.5	848394	20361456	71682733.4	127,064,096,397.51	Iraqi dinar
Morocco	6146677.5	3318337.5	372150	6698700	29238965	140,931,811.30	Moroccan dirham
Yemen	9311336.9	5026806.5	563754	60885432	95004965.4	12,259,440,735.22	Yemeni rial
Sub Regional costs	**78934339.2**	**42613392**	**4779072**	**115849080**	**405464331.2**		
Europe (including Russia and CIS countries)							
Andorra	8433.41	4552.85	510.6	0	80857.26		
Austria	729177.8	393653	44148	0	2718010.8	2,255,948.96	Euro
Belgium	1215263.3	656070.5	73578	0	4496563.8	3,822,079.23	Euro
Croatia	425832.7	229889.5	25782	0	1608092.2	6,062,507.59	Kuna
Cyprus	128136.3	69175.5	7758	0	518841.8	347,624.01	Euro
Czech Republic	1146487.9	618941.5	69414	0	4244919.4	58,155,395.78	Czech koruna
Denmark	630969.7	340634.5	38202	0	2358674.2	18,256,138.31	Danish krone
Finland	604212.7	326189.5	36582	0	2260772.2	2,102,518.15	Euro
France	7851792.1	4238858.5	475386	0	28779160.6	24,750,078.12	Euro
Germany	6931450.4	3742004	419664	0	25411694.4	20,075,238.58	Euro
Greece	1161749.3	627180.5	70338	0	4300759.8	2,924,516.66	Euro
Iceland	47369.8	25573	2868	0	223322.8	31,481,815.12	Icelandic krona
Ireland	7163939	3867515	433740	0	26262354	21,535,130.28	Euro
Israel	1546356.4	834814	93624	0	5708010.4	22,489,560.98	New shekel
Italy	5616789.8	3032273	340068	0	20601442.8	16,069,125.38	Euro
Luxembourg	58964.5	31832.5	3570	0	265747	241,829.77	Euro
Malta	37856.2	20437	2292	0	188513.2	105,567.39	Euro
Monaco	3617.15	1952.75	219	0	63234.9		
Netherlands	1798169.5	970757.5	108870	0	6629377	5,502,382.91	Euro
Norway	602329.8	325173	36468	0	2253882.8	19,879,246.30	Norwegian krone
Portugal	956315	516275	57900	0	3549090	2,200,435.80	Euro
San Marino	3131.56	1690.6	189.6	0	61458.16		
Slovenia	290561.2	156862	17592	0	1113143.2	690,148.78	Euro
Spain	4946180.1	2670238.5	299466	0	18147728.6	12,521,932.73	Euro
Sweden	1121812	605620	67920	0	4154632	36,020,659.44	Euro
Switzerland	758808.7	409649.5	45942	0	2826428.2	3,928,735.20	Euro
United Kingdom	7542203.7	4071724.5	456642	0	27646398.2	18,246,622.81	Pound sterling
Albania	406409.1	219403.5	24606	147636	1684658.6	76,584,579.96	Lek
Armenia	3043757.4	1643199	184284	1105704	12292600.4	2,480,646,760.72	Dram
Azerbaijan	1821358.9	983276.5	110274	661644	7375869.4	4,056,728.17	Manat
Bosnia and Herzegovina	312759.6	168846	18936	3522096	4716461.6	3,443,016.97	Euro
Bulgaria	743646.4	401464	45024	270144	3041094.4	2,037,533.25	Lev
Georgia	503923.5	272047.5	30510	2745900	4639721	4,546,926.58	Lari
Kyrgyzstan	1299101.9	701331.5	78654	943848	5747171.4	130,058,488.78	Som
Poland	4067757.7	2196014.5	246282	0	14933642.2	27,925,910.91	Zloty
Romania	2185452.3	1179835.5	132318	793908	8840325.8	14,763,344.09	Romanian leu
Montenegro	76009.7	41034.5	4602	0	328114.2	124,683.40	
Serbia	1087820.7	587269.5	65862	0	3980260.2	157,220,277.90	Serbian dinar
Slovakia	572500.7	309069.5	34662	0	2144740.2	1,115,264.90	Euro
Tajikistan	1923531	1038435	116460	15372720	22460786	45,146,179.86	Somoni
The former Yugoslav Republic of Macedonia	217623.6	117486	13176	0	846269.6	15,884,480.39	Macedonian dinar
Turkey	12770224.2	6894117	773172	13917096	60692457.2	63,120,155.49	Turkish lira
Turkmenistan	1085045.9	585771.5	65694	9854100	13874207.4	24,279,862.95	Turkmen new manat
Uzbekistan	5833719.7	3149384.5	353202	97483752	118878926.2	107,382,145,247.20	Uzbekistan Som
Belarus	1057892.5	571112.5	64050	0	3920755	14,012,425,502.05	Belarusian ruble
Estonia	160839.3	86830.5	9738	0	638499.8	351,174.89	Euro
Hungary	988522.5	533662.5	59850	0	3666935	471,017,800.75	Forint
Kazakhstan	3417562.6	1845001	206916	0	12554623.6	1,605,485,265.97	Tengay
Latvia	241110.3	130165.5	14598	0	932205.8	335,594.09	Lats

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Annual births (SOWC 2013, and where not available, from previous SOWC)	Percentage of population below poverty line (SOWC 2013, and where not available, from earlier SOWC)	Number of BPL women for maternity entitlement	PPP conversion rate (World Bank 2011, 2012, whichever is later)	Interventions			
					Developing, updating and monitoring policies, rules and guidelines	Legislating and implementing the International Code	Implementing BFHI	Training of health workers
Lithuania	35340		0	1.62	1413.6	128991	526212.6	65732.4
Republic of Moldova	43550	0.02	871	5.9	1742	158957.5	648459.5	81003
Russian Federation	1688950	0.77	1300491.5	18.56	67558	6164667.5	25148465.5	3141447
Ukraine	494150		0	4.16	19766	1803647.5	7357893.5	919119
Sub-regional costs					**482586.48**	**44036016.3**	**179642817.2**	**22440271.32**
Southeast Asia								
Indonesia	4331100	0.19	822909	6,737.75	173244	15808515	64490079	8055846
Myanmar	829040		0		33161.6	3025996	12344405.6	1542014.4
Cambodia	317180	0.28	88810.4	1,529.50	12687.2	1157707	4722810.2	589954.8
Timor-Leste	44490	0.37	16461.3	0.63	1779.6	162388.5	662456.1	82751.4
Brunei Darussalam	7630		0	0.96	305.2	27849.5	113610.7	14191.8
Singapore	47030		0	1.05	1881.2	171659.5	700276.7	87475.8
Lao People's Democratic Republic	140400	0.34	47736	3,817.27	5616	512460	2090556	261144
Malaysia	579120		0	1.87	23164.8	2113788	8623096.8	1077163.2
Philippines	2357580	0.23	542243.4	24.77	94303.2	8605167	35104366.2	4385098.8
Viet Nam	1457780	0.13	189511.4	9,143.25	58311.2	5320897	21706344.2	2711470.8
Thailand	824020	0.11	90642.2	17.35	32960.8	3007673	12269657.8	1532677.2
Sub-regional costs					**437414.8**	**39914100.5**	**162827659.3**	**20339788.2**
East Asia								
Democratic People's Republic of Korea	347840		0	826.19	13913.6	1269616	5179337.6	646982.4
Japan	1072990		0	105.97	42919.6	3916413.5	15976821.1	1995761.4
China	16364170	0.16	2618267.2	4.23	654566.8	59729220.5	243662491.3	30437356.2
Mongolia	65220	0.22	14348.4	912.88	2608.8	238053	971125.8	121309.2
Republic of Korea	479400		0	826.19	19176	1749810	7138266	891684
Sub-regional costs					**733184.8**	**66903113**	**272928041.8**	**34093093.2**
South Asia								
Afghanistan	1407680		0	21.22	56307.2	5138032	20960355.2	2618284.8
Pakistan	4763690	0.23	1095648.7	39.88	190547.6	17387468.5	70931344.1	8860463.4
Bangladesh	3016200	0.5	1508100	31.4	120648	11009130	44911218	5610132
Bhutan	14830	0.26	3855.8	19.13	593.2	54129.5	220818.7	27583.8
India	27098280	0.42	11381277.6	20.9	1083931.2	98908722	403493389.2	50402800.8
Maldives	5340	0.02	106.8	11.12	213.6	19491	79512.6	9932.4
Sri Lanka	373260	0.07	26128.2	59.71	14930.4	1362399	5557841.4	694263.6
Nepal	722310	0.55	397270.5	38.18	28892.4	2636431.5	10755195.9	1343496.6
Sub regional costs					**1496063.6**	**136515804**	**556909675.1**	**69566957.4**
Oceania and Pacific								
Australia	302924		0	1.46	12116.96	1105672.6	4510538.36	563438.64
New Zealand	64370		0	1.45	2574.8	234950.5	958469.3	119728.2
Cook Islands	434		0		17.36	1584.1	6462.26	807.24
Fiji	18370		0	1.61	734.8	67050.5	273529.3	34168.2
Kiribati	2054		0	0.68	82.16	7497.1	30584.06	3820.44
Marshall Islands	1115		0		44.6	4069.75	16602.35	2073.9
Micronesia (Federated States of)	2730		0	0.83	109.2	9964.5	40649.7	5077.8
Niue	31		0		1.24	113.15	461.59	57.66
Palau	423		0	0.58	16.92	1543.95	6298.47	786.78
Papua New Guinea	208500	0.36	75060	1.57	8340	761025	3104565	387810
Samoa	4460		0	1.83	178.4	16279	66409.4	8295.6
Solomon Islands	17300		0	4.32	692	63145	257597	32178
Tonga	2780		0	1.52	111.2	10147	41394.2	5170.8
Tuvalu	210		0		8.4	766.5	3126.9	390.6
Vanuatu	7180		0	64.03	287.2	26207	106910.2	13354.8
Sub regional costs					**25315.24**	**2310015.65**	**9423598.09**	**1177158.66**

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Countries	Interventions				Total cost for implementing all interventions US$	Total in local currency using PPP (World Bank 2012)	Local currency
	Community Outreach and Mother Support	Media Promotion	Monitoring	Maternity Entitlement for women below the poverty line			
Lithuania	350219.4	189069	21204	0	1331428.4	2,156,914.01	Lithuanian litas
Republic of Moldova	431580.5	232992.5	26130	313560	1942683	11,461,829.70	Moldovan leu
Russian Federation	16737494.5	9035882.5	1013370	468176940	529468267	9,826,931,035.52	Russian rouble
Ukraine	4897026.5	2643702.5	296490	0	17967879	74,746,376.64	Ukrainian hryvnia
Sub-regional costs	**119560800.4**	**64545941.7**	**7238797.2**	**615309048**	**1055373692**		
Southeast Asia							
Indonesia	42921201	23171385	2598660	296247240	453342926	3,054,511,299,656.50	Rupiah
Myanmar	8215786.4	4435364	497424	0	30110990.4		
Cambodia	3143253.8	1696913	190308	31971744	43522690.8	66,567,955,578.60	Riel
Timor-Leste	440895.9	238021.5	26694	5926068	7589275.4	4,781,243.50	US dollar
Brunei Darussalam	75613.3	40820.5	4578	0	326663.8	313,597.25	Brunei dollar
Singapore	466067.3	251610.5	28218	0	1755307.8	1,843,073.19	Singapore dollar
Lao People's Democratic Republic	1391364	751140	84240	17184960	22325864	85,223,850,871.28	Kip
Malaysia	5739079.2	3098292	347472	0	21048891.2	39,361,426.54	Ringgit
Philippines	23363617.8	12613053	1414548	195207624	280743474.8	6,954,015,870.80	
Viet Nam	14446599.8	7799123	874668	68224104	121133206.8	1,107,551,193,074.10	dong
Thailand	8166038.2	4408507	494412	32631192	62560157.2	1,085,418,727.42	Baht
Sub-regional costs	**108369516.7**	**58504229.5**	**6561222**	**647392932**	**1044459448**		
East Asia							
Democratic People's Republic of Korea	3447094.4	1860944	208704	0	12662678.4	10,461,778,267.30	
Japan	10633330.9	5740496.5	643794	0	38956617.4	4,128,232,745.88	Japanese yen
China	162168924.7	87548309.5	9818502	942576192	1535990996	6,497,241,913.93	Renminbi (yuan)
Mongolia	646330.2	348927	39132	5165424	7580301.2	6,919,905,359.46	Togrog
Republic of Korea	4750854	2564790	287640	0	17433044	14,403,006,622.36	
Sub-regional costs	**181646534.2**	**98063467**	**10997772**	**947741616**	**1612623637**		
South Asia							
Afghanistan	13950108.8	7531088	844608	0	51092476.8	1,084,182,357.70	Afghani
Pakistan	47208167.9	25485741.5	2858214	394433532	567214931.4	22,620,531,464.23	Pakistani rupee
Bangladesh	29890542	16136670	1809720	542916000	652333412	20,483,269,136.80	Taka
Bhutan	146965.3	79340.5	8898	1388088	1975823.8	37,797,509.29	Bhutanese ngultrum
India	268543954.8	144975798	16258968	4097259936	5079893569	106,169,775,587.92	Indian rupee
Maldives	52919.4	28569	3204	38448	282076.4	3,136,689.57	Maldiviyan rufiyaa
Sri Lanka	3699006.6	1996941	223956	9406152	22990559.6	1,372,766,313.72	Sri Lankan rupee
Nepal	7158092.1	3864358.5	433386	143017380	169258340.6	6,462,283,444.11	Nepalese rupee
Sub regional costs	**370649756.9**	**200098506.5**	**22440954**	**5188459536**	**6545041189**		
Oceania and Pacific							
Australia	3001976.84	1620643.4	181754.4	0	11034024.24	16,109,675.39	Australian dollar
New Zealand	637906.7	344379.5	38622	0	2384056.2	3,456,881.49	
Cook Islands	4300.94	2321.9	260.4	0	65736.84		New Zealand dollar
Fiji	182046.7	98279.5	11022	0	716096.2	1,152,914.88	
Kiribati	20355.14	10988.9	1232.4	0	124478.04	84,645.07	
Marshall Islands	11049.65	5965.25	669	0	90429.9		
Micronesia (Federated States of)	27054.3	14605.5	1638	0	148989.8	123,661.53	
Niue	307.21	165.85	18.6	0	51124.06		
Palau	4191.93	2263.05	253.8	0	65337.98	37,896.03	
Papua New Guinea	2066235	1115475	125100	27021600	34631810	54,371,941.70	
Samoa	44198.6	23861	2676	0	211719.6	387,446.87	United States dollar
Solomon Islands	171443	92555	10380	0	677298	2,925,927.36	
Tonga	27549.8	14873	1668	0	150802.8	229,220.26	
Tuvalu	2081.1	1123.5	126	0	57614.6		
Vanuatu	71153.8	38413	4308	0	310346.8	19,871,505.60	
Sub regional costs	**6271850.71**	**3385913.35**	**379728.6**	**27021600**	**50719865.06**		

Note: *Unit cost for interventions taken from Table 3.1 on Page No. 40*

Basic indicators and nutritional status (from State of the World's Children 2013, UNICEF)

Countries	Under-5 mortality rate (U5MR) *2011*	Infant mortality rate (under 1) *2011*	Neonatal mortality rate *2011*	Annual no. of under-5 deaths (thousands) *2011*	Early initiation of breastfeeding (%) *2007-2011*	Exclusive breastfeeding <6 months (%) *2007-2011*	Introduction of solid, semi-solid or soft foods 6-8 months (%) *2007-2011*	Breastfeeding at age 2 (%) *2007-2011*	Underweight (%) 2007-2011*		Stunting (%) 2007-2011*	Wasting (%) 2007-2011*	Overweight (%) 2007-2011*
									moderate & severe	Severe	moderate & severe	moderate & severe	moderate & severe
Afghanistan	101	73	36	128	-	29	54	33	12	59	9	5	100
Albania	14	13	7	1	39	78	31	5	2	19	9	23	-
Algeria	30	26	17	21	7	39	22	3	1	15	4	13	-
Andorra	3	3	1	0	-	-	-	-	-	-	-	-	-
Angola	158	96	43	120	11	77	37	16	7	29	8	-	55
Antigua and Barbuda	8	6	4	0	-	-	-	-	-	-	-	-	-
Argentina	14	13	8	10	-	-	28	2	0	8	1	10	-
Armenia	18	16	11	1	35	48	23	5	1	19	4	17	-
Australia	5	4	3	1	-	-	-	-	-	-	-	-	-
Austria	4	4	3	0	-	-	-	-	-	-	-	-	-
Azerbaijan	45	39	19	8	12	83	16	8	2	25	7	14	-
Bahamas	16	14	7	0	-	-	-	-	-	-	-	-	-
Bahrain	10	9	4	0	-	-	-	-	-	-	-	-	-
Bangladesh	46	37	26	134	64	71	90	36	10	41	16	2	94
Barbados	20	18	10	0	-	-	-	-	-	-	-	-	-
Belarus	6	4	3	1	9	38	4	1	1	4	2	10	-
Belgium	4	4	2	1	-	-	-	-	-	-	-	-	-
Belize	17	15	8	0	10	-	27	4	1	22	2	14	-
Benin	106	68	31	36	43	76	92	18	5	43	8	11	98
Bhutan	54	42	25	1	49	67	66	13	3	34	6	8	-
Bolivia (Plurinational State of)	51	39	22	13	60	83	40	4	1	27	1	9	21
Bosnia and Herzegovina	8	7	5	0	18	29	10	1	0	10	4	26	-
Botswana	26	20	11	1	20	46	6	11	4	31	7	11	75
Brazil	16	14	10	44	41	70	25	2	-	7	2	7	-
Brunei Darussalam	7	6	4	0	-	-	-	-	-	-	-	-	-
Bulgaria	12	11	7	1	-	-	-	-	-	-	-	14	-
Burkina Faso	146	82	34	101	25	61	80	26	7	35	11	-	87
Burundi	139	86	43	39	69	70	79	29	8	58	6	3	83
Cambodia	43	36	19	13	74	82	43	28	7	40	11	2	92
Cameroon	127	79	33	88	20	63	24	15	5	33	6	6	-
Canada	6	5	4	2	-	-	-	-	-	-	-	-	-
Cape Verde	21	18	10	0	60	80	13	-	-	-	-	-	-
Central African Republic	164	108	46	25	34	56	32	24	8	41	7	2	0
Chad	169	97	42	79	3	46	59	30	13	39	16	3	-
Chile	9	8	5	2	-	-	-	-	-	-	-	10	-
China	15	13	9	249	28	43	-	4	-	10	3	7	-
Colombia	18	15	11	16	43	86	33	3	1	13	1	5	-
Comoros	79	59	32	2	21	34	45	-	-	-	-	22	-
Congo	99	64	32	14	19	78	21	11	3	30	8	9	-
Cook Islands	10	8	5	0	-	-	-	-	-	-	-	-	-
Costa Rica	10	9	6	1	15	92	40	1	-	6	1	8	-
Côte d'Ivoire	115	81	41	75	4	51	37	16	5	27	5	-	100
Croatia	5	4	3	0	-	-	-	-	-	-	-	-	-
Cuba	6	5	3	1	49	77	17	-	-	-	-	-	-
Cyprus	3	3	1	0	-	-	-	-	-	-	-	-	-
Czech Republic	4	3	2	0	-	-	-	-	-	-	-	4	-
Democratic People's Republic of Korea	33	26	18	12	65	31	36	19	4	32	5	-	100
Democratic Republic of the Congo	168	111	47	465	37	52	53	24	8	43	9	-	98
Denmark	4	3	2	0	-	-	-	-	-	-	-	-	-
Djibouti	90	72	33	2	1	35	18	23	5	31	10	10	95
Dominica	12	11	8	0	-	-	-	-	-	-	-	-	-
Dominican Republic	25	21	14	5	8	88	12	3	0	10	2	8	-

Countries	Under-5 mortality rate (U5MR) *2011*	Infant mortality rate (under 1) *2011*	Neonatal mortality rate *2011*	Annual no. of under-5 deaths (thousands) *2011*	Early initiation of breastfeeding (%) *2007-2011*	Exclusive breastfeeding <6 months (%) *2007-2011*	Introduction of solid, semi-solid or soft foods 6-8 months (%) *2007-2011*	Breastfeeding at age 2 (%) *2007-2011*	Underweight (%) 2007-2011*		Stunting (%) 2007-2011*	Wasting (%) 2007-2011*	Overweight (%) 2007-2011*
									moderate & severe	Severe	moderate & severe	moderate & severe	moderate & severe
Ecuador	23	20	10	7	40	77	23	6	-	-	-	5	-
Egypt	21	18	7	40	53	70	35	6	1	29	7	21	-
El Salvador	15	13	6	2	31	72	54	6	1	19	1	6	-
Equatorial Guinea	118	80	37	3	24	-	-	11	-	35	3	8	-
Eritrea	68	46	22	13	52	43	62	35	13	44	15	2	46
Estonia	4	3	2	0	-	-	-	-	-	-	-	-	-
Ethiopia	77	52	31	194	52	55	82	29	9	44	10	2	71
Fiji	16	14	8	0	40	-	-	-	-	-	-	-	-
Finland	3	2	2	0	-	-	-	-	-	-	-	-	-
France	4	3	2	3	-	-	-	-	-	-	-	-	-
Gabon	66	49	25	3	6	62	9	8	2	25	4	6	-
Gambia	101	58	34	6	34	34	31	18	4	24	10	2	93
Georgia	21	18	15	1	55	43	17	1	1	11	2	20	-
Germany	4	3	2	3	-	-	-	-	-	-	-	4	-
Ghana	78	52	30	60	63	76	44	14	3	28	9	6	-
Greece	4	4	3	1	-	-	-	-	-	-	-	-	-
Grenada	13	10	7	0	-	-	-	-	-	-	-	-	-
Guatemala	30	24	15	14	50	71	46	13	-	48	1	5	28
Guinea	126	79	39	48	48	32	-	21	7	40	8	-	88
Guinea-Bissau	161	98	44	9	38	43	65	18	5	32	6	3	100
Guyana	36	29	20	0	33	81	49	11	2	18	5	6	-
Haiti	70	53	25	19	41	90	35	18	6	29	10	4	36
Holy See	-	-	-	-	-	-	-	-	-	-	-	-	-
Honduras	21	18	11	4	30	84	48	8	1	29	1	6	-
Hungary	6	5	4	1	-	-	-	-	-	-	-	-	-
Iceland	3	2	1	0	-	-	-	-	-	-	-	-	-
India	61	47	32	1,655	46	56	77	43	16	48	20	2	66
Indonesia	32	25	15	134	32	85	50	18	5	36	13	14	76
Iran (Islamic Republic of)	25	21	14	33	23	68	58	-	-	-	-	-	-
Iraq	38	31	20	42	25	62	36	6	2	26	6	15	-
Ireland	4	3	2	0	-	-	-	-	-	-	-	-	-
Israel	4	4	2	1	-	-	-	-	-	-	-	-	-
Italy	4	3	2	2	-	-	-	-	-	-	-	-	-
Jamaica	18	16	11	1	15	36	24	2	-	4	2	-	-
Japan	3	2	1	4	-	-	-	-	-	-	-	-	-
Jordan	21	18	12	3	22	84	11	2	0	8	2	7	-
Kazakhstan	28	25	14	11	17	50	16	4	1	17	5	17	-
Kenya	73	48	27	107	32	85	54	16	4	35	7	5	-
Kiribati	47	38	19	0	69	-	82	-	-	-	-	-	-
Kuwait	11	9	5	1	-	-	-	-	-	-	-	9	-
Kyrgyzstan	31	27	16	4	32	60	26	2	0	18	3	11	-
Lao People's Democratic Republic	42	34	18	6	26	41	48	31	9	48	7	1	92
Latvia	8	7	5	0	-	-	-	-	-	-	-	-	-
Lebanon	9	8	5	1	15	35	15	-	-	-	-	17	-
Lesotho	86	63	39	5	54	68	35	13	2	39	4	7	-
Liberia	78	58	27	12	34	51	41	15	2	42	3	4	96
Libya	16	13	10	2	-	-	-	-	-	-	-	22	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	6	5	3	0	-	-	-	-	-	-	-	-	-
Luxembourg	3	2	2	0	-	-	-	-	-	-	-	-	-
Madagascar	62	43	23	45	51	86	61	36	-	50	15	-	91
Malawi	83	53	27	52	72	86	77	13	3	47	4	9	96
Malaysia	7	6	3	4	-	-	-	13	-	17	-	-	-
Maldives	11	9	7	0	48	91	68	17	3	19	11	7	-
Mali	176	98	49	121	38	25	56	27	10	38	15	-	96
Malta	6	5	4	0	-	-	-	-	-	-	-	-	-
Marshall Islands	26	22	12	0	31	77	53	-	-	-	-	-	-
Mauritania	112	76	40	13	46	61	47	20	4	23	12	-	100

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									moderate & severe	Severe	moderate & severe	moderate & severe	moderate & severe
Mauritius	15	13	9	0	21	-	-	-	-	-	-	-	-
Mexico	16	13	7	34	19	27	-	3	-	16	2	8	-
Micronesia (Federated States of)	42	34	17	0	-	-	-	-	-	-	-	-	-
Monaco	4	3	2	0	-	-	-	-	-	-	-	-	-
Mongolia	31	26	12	2	59	78	66	5	2	16	2	14	85
Montenegro	7	7	5	0	19	35	13	2	1	7	4	16	-
Morocco	33	28	19	21	31	66	15	3	-	15	2	11	-
Mozambique	103	72	34	86	41	86	52	15	4	43	6	7	100
Myanmar	62	48	30	53	24	81	65	23	6	35	8	3	96
Namibia	42	30	18	2	24	91	28	17	4	29	8	5	-
Nauru	40	32	22	0	67	65	65	5	1	24	1	3	-
Nepal	48	39	27	34	70	66	93	29	8	41	11	1	91
Netherlands	4	3	3	1	-	-	-	-	-	-	-	-	-
New Zealand	6	5	3	0	-	-	-	-	-	-	-	-	-
Nicaragua	26	22	13	4	31	76	43	6	1	22	1	6	2
Niger	125	66	32	89	27	65	-	39	12	51	12	4	95
Nigeria	124	78	39	756	13	76	32	23	9	41	14	11	73
Niue	21	18	10	0	-	-	-	-	-	-	-	-	-
Norway	3	3	2	0	-	-	-	-	-	-	-	-	-
Oman	9	7	5	0	-	91	73	9	1	10	7	2	-
Pakistan	72	59	36	352	37	36	55	32	12	44	15	6	90
Palau	19	14	9	0	-	-	-	-	-	-	-	-	-
Panama	20	17	9	1	-	-	-	4	-	19	1	-	-
Papua New Guinea	58	45	23	12	56	76	72	18	5	43	5	3	12
Paraguay	22	19	13	3	24	67	14	3	-	18	1	7	-
Peru	18	14	9	11	71	82	55	4	1	20	0	-	-
Philippines	25	20	12	57	34	90	34	22	-	32	7	3	91
Poland	6	5	4	2	-	-	-	-	-	-	-	-	-
Portugal	3	3	2	0	-	-	-	-	-	-	-	-	-
Qatar	8	6	4	0	-	-	-	-	-	-	-	-	-
Republic of Korea	5	4	2	3	-	-	-	-	-	-	-	-	-
Republic of Moldova	16	14	8	1	46	18	2	3	1	10	5	9	-
Romania	13	11	8	3	16	41	-	4	1	13	4	8	-
Russian Federation	12	10	7	20	-	-	-	-	-	-	-	-	-
Rwanda	54	38	21	23	85	79	84	11	2	44	3	7	76
Saint Kitts and Nevis	7	6	5	0	-	-	-	-	-	-	-	-	-
Saint Lucia	16	14	9	0	-	-	-	-	-	-	-	-	-
Saint Vincent and the Grenadines	21	20	13	0	-	-	-	-	-	-	-	-	-
Samoa	19	16	8	0	51	71	74	-	-	-	-	-	-
San Marino	2	2	1	0	-	-	-	-	-	-	-	-	-
Sao Tome and Principe	89	58	29	0	51	74	20	13	3	29	11	12	44
Saudi Arabia	9	8	5	6	-	-	-	-	-	-	-	6	-
Senegal	65	47	26	30	39	61	51	18	5	27	10	3	-
Serbia	7	6	4	1	14	84	15	2	1	7	4	16	-
Seychelles	14	12	9	0	-	-	-	-	-	-	-	-	-
Sierra Leone	185	119	49	42	32	25	48	22	8	44	9	10	99
Singapore	3	2	1	0	-	-	-	3	0	4	4	3	-
Slovakia	8	7	4	0	-	-	-	-	-	-	-	-	-
Slovenia	3	2	2	0	-	-	-	-	-	-	-	-	-
Solomon Islands	22	18	11	0	74	81	67	12	2	33	4	3	-
Somalia	180	108	50	71	9	16	35	32	12	42	13	5	12
South Africa	47	35	19	47	8	49	31	9	-	24	5	-	44
South Sudan-	121	76	38	43	45	21	38	28	12	31	23	-	-
Spain	4	4	3	2	-	-	-	-	-	-	-	-	-
Sri Lanka	12	11	8	5	76	87	84	21	4	17	15	1	-
State of Palestine	22	20	13	3	27	-	-	-	-	-	-	-	-

Countries	Under-5 mortality rate (U5MR) *2011*	Infant mortality rate (under 1) *2011*	Neonatal mortality rate *2011*	Annual no. of under-5 deaths (thousands) *2011*	Early initiation of breastfeeding (%) *2007-2011*	Exclusive breastfeeding <6 months (%) *2007-2011*	Introduction of solid, semi-solid or soft foods 6-8 months (%) *2007-2011*	Breastfeeding at age 2 (%) *2007-2011*	Underweight (%) 2007-2011*		Stunting (%) 2007-2011*	Wasting (%) 2007-2011*	Overweight (%) 2007-2011*
									moderate & severe	Severe	moderate & severe	moderate & severe	moderate & severe
Sudan-	86	57	31	95	41	51	40	32	13	35	16	-	-
Suriname	30	26	16	0	2	58	15	7	1	11	5	4	-
Swaziland	104	69	35	4	44	66	11	6	1	31	1	11	41
Sweden	3	2	2	0	-	-	-	-	-	-	-	-	-
Switzerland	4	4	3	0	-	-	-	-	-	-	-	-	-
Syrian Arab Republic	15	13	9	7	43	-	25	10	-	28	12	18	-
Tajikistan	63	53	25	12	25	15	34	15	6	39	7	-	99
Thailand	12	11	8	10	15	-	-	7	1	16	5	8	-
The former Yugoslav Rep. Of Macedonia	10	9	6	0	23	41	13	1	0	5	2	16	-
Timor-Leste	54	46	24	2	52	82	33	45	15	58	19	6	59
Togo	110	73	36	21	62	44	64	17	4	30	5	2	22
Tonga	15	13	8	0	-	-	-	-	-	-	-	-	-
Trinidad and Tobago	28	25	18	1	13	83	22	-	-	-	-	5	-
Tunisia	16	14	10	3	6	61	15	3	-	9	3	9	-
Turkey	15	12	9	20	42	68	22	2	0	12	1	-	-
Turkmenistan	53	45	22	5	11	54	37	8	2	19	7	-	-
Tuvalu	30	25	14	0	35	40	51	2	0	10	3	6	-
Uganda	90	58	28	131	62	75	46	14	3	33	5	3	60
Ukraine	10	9	5	5	18	86	6	-	-	-	-	-	-
United Arab Emirates	7	6	4	1	-	-	-	-	-	-	-	-	-
United Kingdom	5	4	3	4	-	-	-	-	-	-	-	-	-
United Republic of Tanzania	68	45	25	122	50	92	51	16	4	42	5	6	97
United States	8	6	4	32	-	-	-	1	0	3	0	8	-
Uruguay	10	9	5	1	65	35	27	5	2	15	2	9	-
Uzbekistan	49	42	15	30	26	47	38	4	1	19	4	13	95
Vanuatu	13	11	7	0	40	68	32	-	-	-	-	5	-
Venezuela (Bolivarian Republic of)	15	13	8	9	-	-	-	4	-	16	5	6	-
Viet Nam	22	17	12	32	17	50	19	12	2	23	4	-	99
Yemen	77	57	32	70	12	76	-	43	19	58	15	5	9
Zambia	83	53	27	46	61	94	42	15	3	45	5	8	72
Zimbabwe	67	43	30	24	31	86	20	10	2	32	3	6	56
MEMORANDUM													
Sudan and South Sudan-	-	-	-	-	-	-	-	-	-	-	-	5	-
SUMMARY INDICATORS													
Sub-Saharan Africa	109	69	34	3,370	37	71	50	21	7	40	9	7	78
Eastern and Southern Africa	84	55	29	1,177	52	84	59	18	5	40	7	5	72
West and Central Africa	132	83	39	2,096	25	65	43	23	8	39	12	9	83
Middle East and North Africa	36	28	16	351	-	-	-	8	-	20	9	12	-
South Asia	62	48	32	2,309	47	55	75	33	14	39	16	3	73
East Asia and Pacific	20	17	11	590	28	57	42	6	4	12	4	5	85
Latin America and Caribbean	19	16	10	203	37	-	-	3	-	12	2	7	-
CEE/CIS	21	18	10	125	-	-	-	2	-	12	1	16	-
Least developed Countries	98	65	33	2,649	49	68	64	23	7	38	10	4	82
World	51	37	22	6,914	39	60	58	16	10	26	8	7	75

The World Breastfeeding Trends Initiative (WBT*i*)

The WBT*i* and assessing national policies and programmes

The value of World Breastfeeding Trends Initiative (WBT*i*) is in its specific ability to generate action to enhance breastfeeding rates. In this context, the tool is now being recognised as a valid tool to study the impact of implementing the on IYCF practices, especially on exclusive breastfeeding rates. The paper by Chessa Lutter et al is a first global analysis on implementation of the WHO/UNICEF Global Strategy for Infant and Young Child Feeding as measured by and trends in exclusive breastfeeding and breastfeeding duration over 20 years across 22 countries in Africa, Asia, Middle East and Latin America. The authors conclude that the global strategy is having important positive effect. It also shows the association between breastfeeding promotion, protection and support and improved exclusive breastfeeding (EBF) are measurable by the WBT*i* tool. The findings show median annual increase in EBF was 1.0%/y in countries in the upper 50th percentile of WBT*i* scores, indicating national policies and programs most consistent with WHO/ UNICEF recommendations, whereas the median increase in EBF was only 0.2%/y in countries with the lowest WBT*i* scores (P =0.01). The median annual increase in breastfeeding duration in all countries was<0.1%/ y.

The paper by Chessa Lutter et al demonstrates the benefits of implementing comprehensive strategy and compares action in Brazil wherein the median duration of breastfeeding increased from5.2moin 1986 to 14.0 mo in 2006, whereas exclusive breastfeeding increased from 2.5 to 38.6%, to Mexico, where exclusive breastfeeding decreased by 6.6 percentage points, from 28.8% in 1987-88 to 22.3% in 2006, and breastfeeding duration only increased from 9.5 to 10.4 mo over the same period. This remarkable increase in Brazil coincides with a series of policies and programs put into place during the period along with continued refinement and readjustment to strengthen breastfeeding protection.

The WBT*i* consists of two distinct activities, one to assess the policy and programmes of a country using the WBT*i* assessment tool, and the second is to use the gaps thus found for advocacy and to call for a change at the national level. The entire process is founded on the philosophy that if people know their problems they tend to fix them. The initiative works on a triple AAA approach- Assessment, Analysis and Action.

The five components of WBT*i* are:
A: Action,
B: Bringing people together,
C: Consensus building and commitment,
D: Demonstration of achievements and gaps, and
E: Efficacy, improving policy and programme.

A. Action: It is quite evident that the initiative did lead to much needed action in South Asia. IBFAN groups at national level coordinated the assessment process, and thus their own capacity in data collection and analysis got enhanced. There is sustainable action for setting up good process in a country, the groups having facilitated the assessment thrice in the case of five countries. Assessment teams often become more stringent and quality conscious perhaps due to greater understanding of the tool, which is meant to generate action rather than just a score. This is also evident from the second and third assessment scores of the South Asian countries.

B-Bringing together: Participation of 115 partners groups including government representatives, health professional organisation, people's organisations,

women's and children's rights groups, development partners, etc., enhanced their capacity to influence infant feeding policies. Governments have been serious partner in conducting assessments in most countries. The governments led the process at many places such as Afghanistan and Bhutan. This is extremely useful that countries will rely on the views that have come from the government.

C-Consensus building: This has helped to reach a consensus on what actions need to be taken on a priority basis based on which they developed a set of recommendations. The core group, after having done the initial work, lists the gaps and shares it to build consensus.

D: Demonstration of achievement and gaps: Countries/groups developed the reports and report cards, which were shared and used for advocacy in various meetings and called on governments to take action.

E-Efficacy/improvement of policy and programmes: All countries in the South Asian region show good progress except India as they have failed to capitalise on their earlier gains. Some of the impacts noted by almost all countries: the WBT*i* process has increased awareness among policy makers on IYCF, generated a sense of pride among the stakeholders that they are participating in a global initiative, improved networking at the national level, and in many cases, developed a national plan of action for implementation by the government, or for advocacy to the government. One noteworthy feature of the WBT*i* assessment is that it highlights the need for taking action on several fronts concurrently, so as to get results. Several countries noted this, and have initiated policies and programmes in more than one area. The comparison between their scores for IYCF policies and programmes and scores for IYCF practices indicate that all the countries have improved their scores significantly over the last 8 years. The reason, especially for the increase in the scores of IYCF practices for these two countries underscores the value of the WBT*i* tool.

The World Health Organisation has also recognised the tool for its usefulness in one of their statements issued at the time of the World Breastfeeding Week 2012.

Today, 82 countries are involved in conducting the WBT*i* assessment, of which 51 have completed the task of assessment and also used the findings for national advocacy to call for change. They include 14 countries from the Latin American and Caribbean region, 14 from Africa, eight from South Asia, five from the Arab World, four each from East Asia and Southeast Asia, and two from Oceania. Of the 51 countries where WBT*i* analyses has been conducted between 2008 and 2012, five countries in the South Asian region Afghanistan, Bangladesh, Bhutan, India, and Sri Lanka have completed the assessment thrice, in 2005, 2008 and 2012. Two countries in the Latin American and Caribbean region Costa Rica and Dominican Republic have conducted two assessments each, one in 2008 and the other in 2012. The rest have conducted just one assessment, though some of the countries in the African region are in the process of conducting a second assessment.

Part - II

Infant and Young Child Feeding (IYCF) Financial Planning Tool

Version 1.1

Infant and Young Child Feeding (IYCF) Financial Planning Tool

RATIONALE

More than 800,000 under five deaths are caused by sub-optimal breastfeeding and complementary feeding practices. Breastfeeding save lives, but globally optimal breastfeeding and complementary feeding have not improved over the past few decades.

There is a need of a user- friendly tool to guide and support countries in their efforts to determine what resources are needed to implement all policy and programmes in the framework of the Global Strategy for Infant and Young Child Feeding

The **WBC*i*** *Financial Planning tool*, a milestone initiative of IBFAN Asia aims at filling a major gap in this implementation.

PURPOSE

The **WBC*i*** *tool* has been developed following the principles and structure of the World Breastfeeding Trends Initiative (WBT*i*) tool and its key components and strategies. Cost for a minimum set of interventions necessary to implement the Global Strategy for Infant and Young Child Feeding can be estimated.

The **WBC*i*** *tool* is flexible, user friendly and countries can easily customize it to meet their peculiar and specific situations.

Annual IYCF financial plans, as well as multi-year estimates can be easily generated, using local estimates, inputs and information.

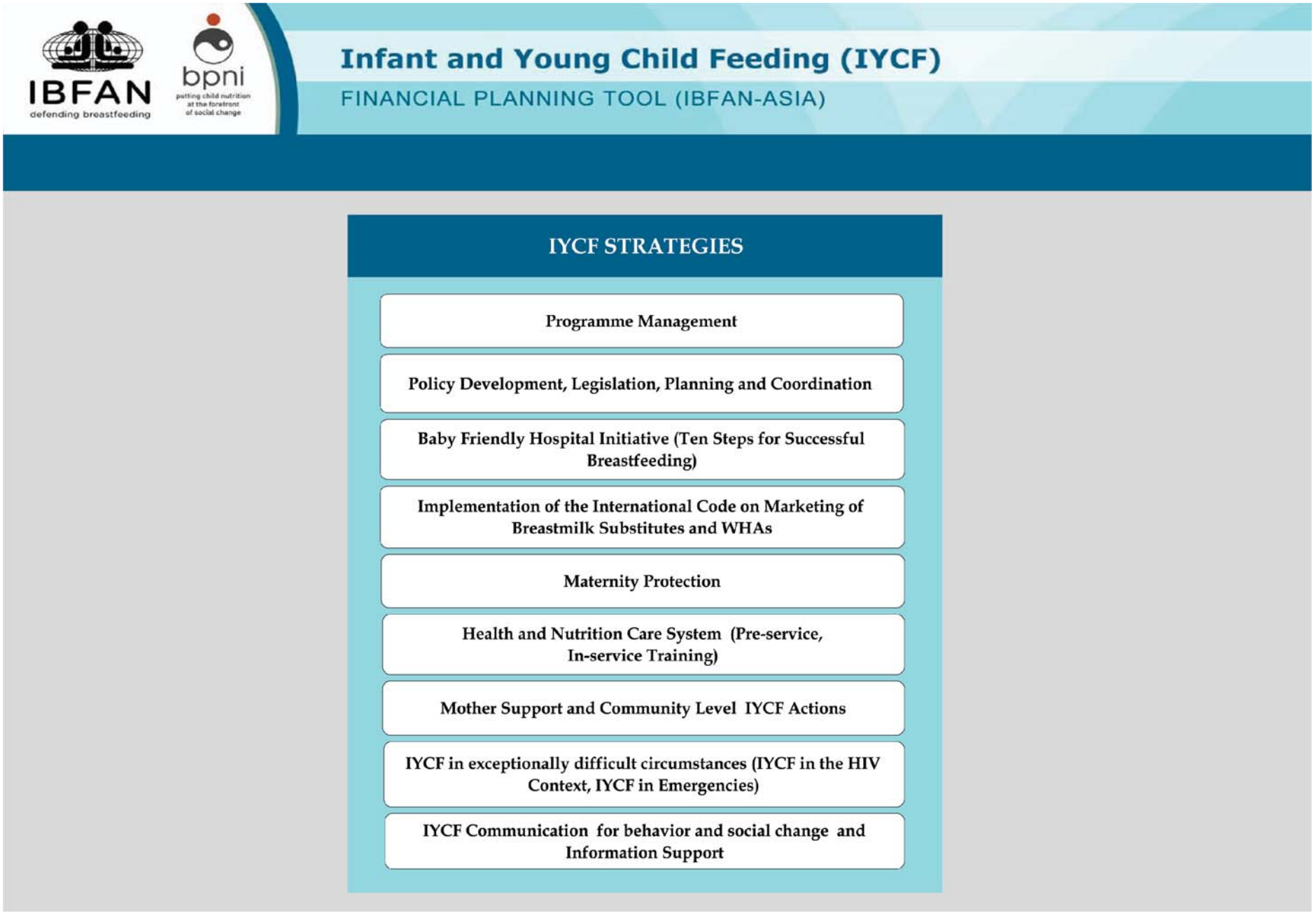
Intended Users:

The WBC*i* *tool* is intended for programme managers and partners to initiate a constructive and productive advocacy with national governments and donors, towards the identification of the actual financial and human resources required to protect, promote and support appropriate breastfeeding and complementary feeding practices in the country.

The WBC*i* *tool* is developed to assist planners, maternal and child health / nutrition coordinators, public health practitioners, and finance personnel in developing an annual or multi-year budget to implement the Global Strategy for Infant and Young Child Feeding.

This tool is also helpful for project coordinators and personnel in the preparation of project budgets and in doing costing analysis. It will be useful to track budgets as well.

The WBC*i tool,* which is a set of excel files, can be downloaded at http://www.bpni.org/wbci.html


IBFAN
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Infant and Young Child Feeding (IYCF)
FINANCIAL PLANNING TOOL (IBFAN-ASIA)
IYCF STRATEGIES
Programme Management
Policy Development, Legislation, Planning and Coordination
Baby Friendly Hospital Initiative (Ten Steps for Successful Breastfeeding)
Implementation of the International Code on Marketing of Breastmilk Substitutes and WHAs
Maternity Protection
Health and Nutrition Care System (Pre-service, In-service Training)
Mother Support and Community Level IYCF Actions
IYCF in exceptionally difficult circumstances (IYCF in the HIV Context, IYCF in Emergencies)
IYCF Communication for behavior and social change and Information Support

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Programme Management

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US $)
Programme Management Unit	605,000	1.8%	9,307.69
Operations	-	0.0%	-
Information System	1,200	0.0%	18.46
Research and Development	-	0.0%	-
Annual Planning, Management, Staff & Volunteer Development	42,440	0.1%	652.92
Human Resources	180,150	0.5%	2,771.54
Monitoring and Evaluation	317,000	0.9%	4,876.92
Capital Cost	32,995,000	96.6%	507,615.38
Other Activities	-	0.0%	-
Total	34,140,790	100.0%	525,242.92

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Policy Development, Legislation , Planning and Coordination

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys for policy development	2,500,000	40.1%	38,461.54
Conferences, seminars, workshops for policy review and development	551,060	8.8%	8,477.85
Five Year National Plan of Action on Infant and Young Child Feeding	682,500	10.9%	10,500.00
CODEX: Coordination, Meeting, Management and Participation	-	0.0%	-
Lobbying- dialogues/meetings with policymakers and stakeholders	4,540	0.1%	69.85
Codex: Conferences, seminars, workshops for policy review and development	-	0.0%	-
Public Dissemination Forum (Policy and Plan of Action)	1,240,000	19.9%	19,076.92

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Baby Friendly Hospital Initiative (Ten Steps for Successful breastfeeding)

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys on BFHI Development	13,250	3.3%	203.85
Conferences, seminars, workshops for BFHI policy review and development	19,500	4.9%	300.00
Lobbying- dialogues/meetings with policymakers and stakeholders	7,220	1.8%	111.08
Public Dissemination Forum	28,600	7.2%	440.00
Social Mobilizations & Other Advocacy Events	62,180	15.7%	956.62
Training	39,420	9.9%	606.46
Monitoring and Evaluation of compliance with BFHI	226,000	56.9%	3,476.92
Other Activities	1,000	0.3%	15.38
Total	397,170	100.0%	6,110.31

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Implementation of the International Code of Marketing for Breastmilk Substitutes and Subsequent WHAs

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys for policy implementation (International Code and subsequent WHAs)	33,500	17.4%	515.38
Conferences, seminars, workshops for policy implementation review and/or development	15,900	8.3%	244.62
Lobbying- dialogues/meetings with policymakers and stakeholders	5,840	3.0%	89.85
Public Dissemination Forum (Implementation of the Int. Code and WHAs)	29,200	15.2%	449.23
Social Mobilizations & Other Advocacy Events	17,951	9.3%	276.17
Training	22,050	11.5%	339.23
Monitoring and Evaluation of Compliance	65,000	33.8%	1,000.00

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Maternity Protection

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Maternity Entitlement	-	0.00%	-
Research, studies, surveys for policy development on Maternity Protection	1,000,000	2.9%	15,384.62
Conferences, seminars, workshops for policy development on Maternity Protection	560,000	1.6%	8,615.38
Lobbying- dialogues/meetings with policymakers and stakeholders	560,000	1.6%	8,615.38
Public Dissemination Forum (Information sessione with workers, union leaders, employers, government, others)	-	0.0%	-
Social Mobilizations & Other Advocacy Events (workers, union leaders, employers, government, others)	1,200,000	3.4%	18,461.54
Training	-	0.0%	-

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FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Health and Nutrition Care System (Pre-service, In-service Training)

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys, reviews on health providers schools and pre-service/in-service education programmes	510,000	0.0%	7,846.15
Conferences, seminars, workshops on pre-service/in-service education	3,560,000	0.1%	54,769.23
Advocacy- dialogues/meetings with policymakers and stakeholders	572,000	0.0%	8,800.00
Public Dissemination Forum (academe, government, others)	6,040,000	0.1%	92,923.08
Social Mobilizations & Other Advocacy Events	-	0.0%	-
Pre-Service/In-Service Training	28,800,000	0.6%	443,076.92
Training	4,761,260,800	99.0%	73,250,166.15

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

Mother Support and Community Level IYCF Actions

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Community Support Groups (Community Volunteers, Breastfeeding Volunteers,Peer Counsellors)	-	0.00%	-
Research, studies, surveys on programme implementation and development (community support and outreach programmes)	500,000	0.0%	7,692.31
Conferences, seminars, workshops for policy review and development (community supporrt and outreach programmes)	1,240,000	0.0%	19,076.92
Lobbying- dialogues/meetings with policymakers and stakeholders	520,000	0.0%	8,000.00
Public Dissemination Forum	-	0.0%	-

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

IYCF in exceptionally difficult circumstances (IYCF in the HIV Context, IYCF in Emergencies)

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys for situation analysis and policy development (IYCF in the Context of HIV and Emergencies)	80,000	17.3%	1,230.77
Conferences, seminars, workshops for policy review and development (IYCF in the context of HIV and Emergencies)	19,500	4.2%	300.00
Development of a Nutrition/IYCF Emergency Preparedness Plan (Conference/ Workshop to Develop the Plan)	61,450	13.3%	945.38
Advocacy- dialogues/meetings with policymakers and stakeholders	7,220	1.6%	111.08
Public Dissemination Forum	29,200	6.3%	449.23

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Infant and Young Child Feeding (IYCF)

FINANCIAL PLANNING TOOL (IBFAN-ASIA)

Component Summary

IYCF Communication for behavior and social change and Information Support

Component Cost	Total Cost (Indian Rupee)	Cost distribution analysis (%)	Total Cost (US$)
Research, studies, surveys for communication planning and assessment	80,000	12.7%	1,230.77
Conferences, seminars, workshops for communication plan review and or development	19,500	3.1%	300.00
IEC/Communication	55,000	8.7%	846.15
Lobbying- dialogues/meetings with policymakers and stakeholders	7,220	1.1%	111.08
Public Dissemination Forum	29,200	4.6%	449.23
Social Mobilizations & Other Advocacy Events	62,180	9.9%	956.62
Celebration of the World Breastfeeding Week	7,220	1.1%	111.08
Training	35,160	5.6%	540.92

About the authors

RADHA HOLLA, Campaign Coordinator at Breastfeeding Promotion Network of India/International Baby Food Action Network (Asia), is an anthropologist with over 36 years experience in the development sector, on issues related to health, gender, environment and human rights.

ALESSANDRO ILLEAMO, Consultant with the World Health Organisation, Western Pacific Region, has worked on community development and Infant and Young Child Feeding for the past decade. He has handled projects in several countries in Asia and in Rwanda.

DR. ARUN GUPTA, Regional Coordinator, International Baby Food Action Network (Asia) and Chairperson, global Breastfeeding Initiative for Child Survival, is a fellow of the Indian Academy of Paediatrics and has worked extensively on child health and nutrition policy for past three decades in many countries of Asia with a particular interest in breastfeeding. He is the creator of the World Breastfeeding Trends Initiative (WBTi), a breakthrough tool to measure inputs at country level, and has championed the development of World Breastfeeding Costing Initiative.

Dr. JULIE P. SMITH, Fellow, Australian Centre for Economic Research on Health, College of Medicine, Biology and the Environment (CMBE), is an economist at the Australian National University with internationally recognised expertise on the economics of breastfeeding. She previously was a senior economist in Australian and New Zealand treasuries working on overseas development assistance, and taxation and social policy issues.

Dr. JP Dadhich is a senior Paediatrician with 25 years of experience. Presently, he is the National Coordinator of the Breastfeeding Promotion Network of India (BPNI), Consultant for HIV and breastfeeding programmes for International Baby food Action Network (IBFAN) Asia, Co-coordinator, World Alliance for Breastfeeding Action (WABA) Taskforce on Global Advocacy and South Asia Regional Focal Point Coordinator for World Alliance for Breastfeeding Action (WABA). He has Contributed chapters in text books on various subjects including Newborn Care, Pediatric care, Infant and young child nutrition etc. He has reviewed research articles and published papers in pediatric, neonatology and nutrition journals. He has also contributed in editing of Journals, policy documents, position statements, training modules, conference reports etc. on breastfeeding, infant and young child feeding, newborn health, child survival, etc.

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