

Report Card on Carbon Footprints due to Breastmilk Substitutes (BMS)

Breastfeeding is a sustainable and natural source of food and nutrition. On the other hand, industrially manufactured Breastmilk Substitutes are made from dairy and other agricultural products, which generate greenhouse gases (GHG) including methane and nitrous oxide during production, transport and use. Their use also generates a sizable volume of waste, which needs disposal. **GreenFeeding** is a call to make feeding decisions that have dual benefits i.e. practicing breastfeeding which is a natural and sustainable source of food and nutrition for infants and young children (and contributes to achieving global nutrition targets), as well as avoiding BMS and helping conserve the natural environment.

However, the use of milk formula is increasingly driven by sub-optimal implementation of policies and programmes, particularly regulation of marketing of commercial baby foods to enhance optimal breastfeeding practices.

This report-card provides estimates of GHG emissions arising from BMS sale in Taiwan, ROC. This is set alongside assessment of the implementation of policies and programmes on infant and young child feeding in the country and some suggested actions to improve the situation.

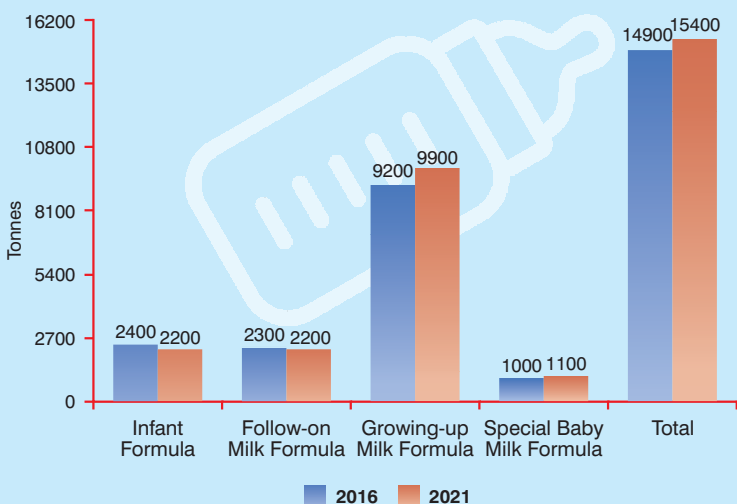


Estimating GHG emissions due to BMS

This report card has used the method developed by IBFAN Asia to estimate the GHG emission [kg CO₂ eq. emissions, that is, the GHG amount that would have the same global warming potential as a kilogram of carbon dioxide gas (CO₂)] per kg of BMS sold. It took into account the GHG emissions due to constituents of BMS like milk powder, vegetable oils and sugars, as found from a literature review. Proportions of ingredients in various BMS products were calculated using Codex Alimentarius guidance on macronutrient composition. Published industry data from Euromonitor International for milk formula sales provided data on volumes of milk formula sold in the country.

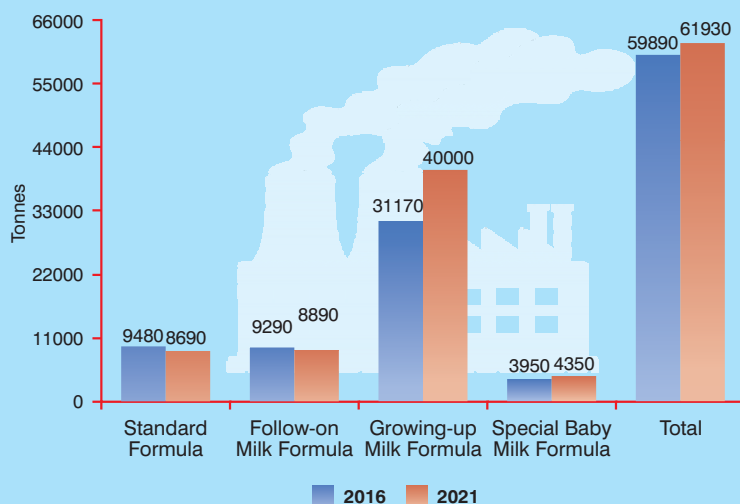
Estimated GHG emissions per kg of BMS ranged from 3.95 kg CO₂ eq. for standard infant formula and special baby milk formula and 4.04 kg CO₂ eq. for follow-up formula and growing up milks.¹

Sales of BMS in 2016 and projected sales in 2021 (Tonnes)²



- In 2016, total sale of BMS in Taiwan, ROC was 14,900 tonnes, out of which 9,200 tonnes was growing up milks, 2,300 tonnes was follow-up formula and 2,400 tonnes was infant formula.
- Total projected sale of BMS in Taiwan in 2021 is 15,400 tonnes out of which 9,900 tonnes is growing up milk, 2,200 tonnes is follow-up formula and 2,200 tonnes is infant formula.
- Projections show sale of infant formula and follow-up formula will go down slightly while there will be about 8% increase in the sale of growing up milk by 2021.

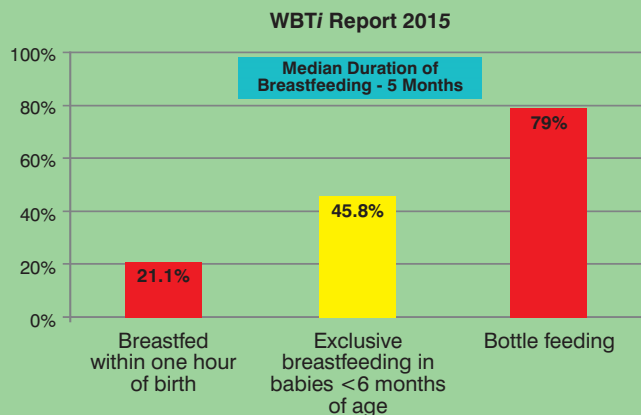
GHG Emissions due to BMS in 2016 and projected emissions in 2021 (Tonnes CO₂ eq.)^{1,2}



- Total GHG emissions due to BMS in 2016 was 59,890 tonnes of CO₂ eq. out of which 37,170 tonnes was due to growing up milks, 9,290 tonnes was due to follow up formula, 9,480 tonnes was due to infant formula and 3,950 tonnes was due to special baby milk formula.
- Projected total GHG emissions in 2021 due to BMS will increase slightly to 61,930 tonnes of CO₂ eq., maximum contribution to it will come from the growing up milks.

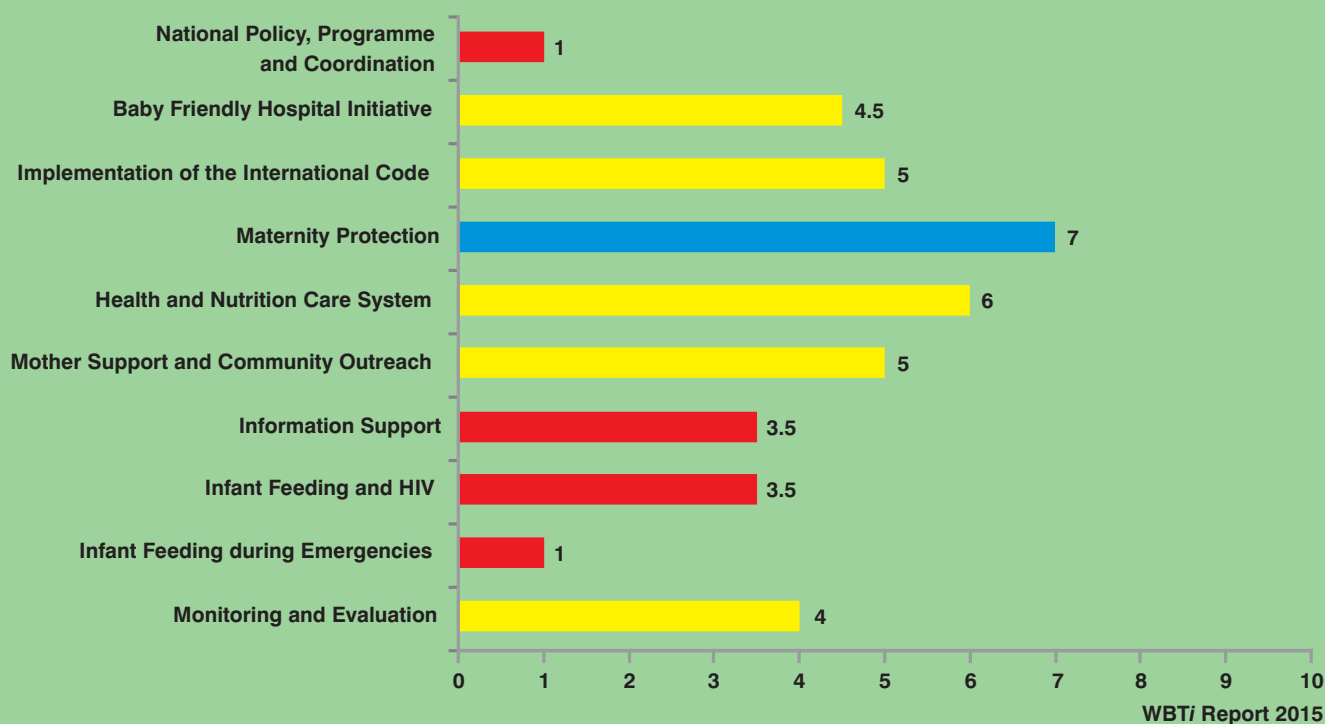
IYCF Practices

A high bottle feeding rate of 79.0% coupled with low rates of early initiation and exclusive breastfeeding < 6 months and a median duration of breastfeeding of 5 months need immediate attention. It shows that BMS are introduced early and they replace breastfeeding during the infancy and in the second year of life.



Policies and Programmes on IYCF³

To enhance breastfeeding rates and to restrict use of BMS, strengthening of policies and programmes on IYCF is required. WBTi assessment 2016 has revealed many gaps in policies and programmes on IYCF.



- There is a need to have a robust national IYCF policy, appropriate information support, improved policy and programmes on HIV and infant feeding and strengthening of programmes on infant feeding during emergencies.
- More importantly there is a need for effective implementation of the International Code of Marketing of Breastmilk Substitutes by enacting a national law which includes all the provision of the Code and have a robust mechanism for its implementation. Although, advertisements of the breastmilk substitutes are now not allowed due to the newly revised Food Safety and Sanitation Law.⁴

1. Dadhich JP, Smith J, Iellamo A, Suleiman A. Report on carbon footprints due to milk formula: a study from selected countries of the Asia-Pacific Region. Delhi: BPNI/IBFAN Asia; 2016.
 2. Euromonitor International (2016). Passport-Baby Food in Taiwan
 3. WBTi report of Taiwan 2015. <http://worldbreastfeedingtrends.org/GenerateReports/countrysubmit.php?country=TW>
 4. <https://www.global-regulation.com/law/taiwan/9330910/act-governing-food-safety-and-sanitation.html>

Written by: Dr. J.P. Dadhich **Reviewed by:** Chwang Leh-Chii, Dr. Arun Gupta
Designed by: Plan B Communication Partners, Amit Dahiya
 Contribution of Dr. Julie Smith, Naomi Hull, Dr. Neelima Thakur and Nupur Bidla in developing this report card is thankfully acknowledged.

This report card has been produced by the International Baby Food Action Network (IBFAN)-Asia/ Breastfeeding Promotion Network of India (BPNI) with the Support of the Swedish International Development Cooperation Agency (Sida).



International Baby Food Action Network (IBFAN), Asia Breastfeeding Promotion Network of India (BPNI)
 BP-33, Pitampura, Delhi-110034
 Tel: +91-11-27312705, 27312706, 42683059
 Email: info@ibfanasia.org, bpni@bpni.org
 Websites: www.ibfanasia.org, www.bpni.org



The Chinese Women Consumers Association
 No. 151, 4F-9, Ming Sheng E Road,
 Sec 5, Taipei,
 Taiwan