

### 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 Singapore. 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.

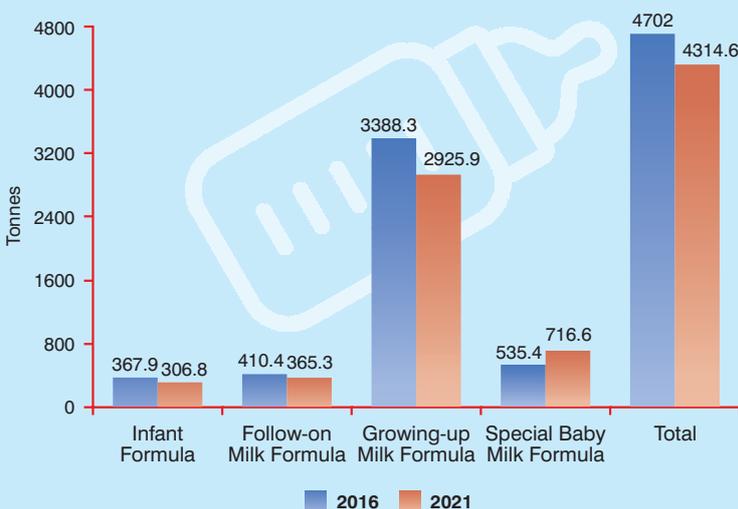


### Estimating GHG emissions due to BMS

This report card has used the method developed by IBFAN Asia to estimate the GHG emission [kg CO<sub>2</sub> eq. emissions, that is, the GHG amount that would have the same global warming potential as a kilogram of carbon dioxide gas (CO<sub>2</sub>)] 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.

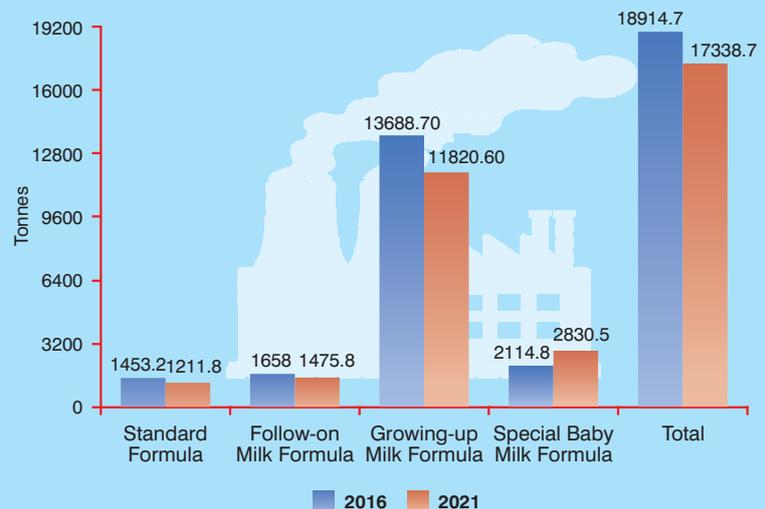
Estimated GHG emissions per kg of BMS ranged from 3.95 kg CO<sub>2</sub> eq. for standard infant formula and special baby milk formula and 4.04 kg CO<sub>2</sub> eq. for follow-up formula and growing up milks.<sup>1</sup>

#### Sales of BMS in 2016 and projected sales in 2021 (Tonnes)<sup>2</sup>



- In 2016, total sale of BMS in Singapore was 4,702 tonnes, out of which 3,388.3 tonnes was growing up milks, 410.4 tonnes was follow-up formula, 367.9 tonnes was standard infant formula and 535.4 tonnes was special baby milk formula.
- Total projected sale of BMS in Singapore in 2021 is 4,314.6 tonnes out of which 2,925.9 tonnes is growing up milk, 365.3 tonnes is follow-up formula, 306.8 tonnes is standard infant formula and 716.6 tonnes is special baby milk formula.
- Projections show that by 2021 sale of all categories of BMS will decrease by 10%, except special baby milk formula which will increase substantially.

#### GHG Emissions due to BMS in 2016 and projected emissions in 2021 (Tonnes CO<sub>2</sub> eq.)<sup>1,2</sup>



- Total GHG emissions due to BMS in 2016 was 18,914.7 tonnes of CO<sub>2</sub> eq. out of which 13688.7 tonnes was due to growing up milks, 1,453.2 tonnes was due to standard formula, 1,658 tonnes was due to follow up formula, and 2,114.8 tonnes was due to special baby milk formula.
- Projected total GHG emissions in 2021 due to BMS is 17,338.7 tonnes of CO<sub>2</sub> eq., maximum contribution to it will come from the growing up milks.

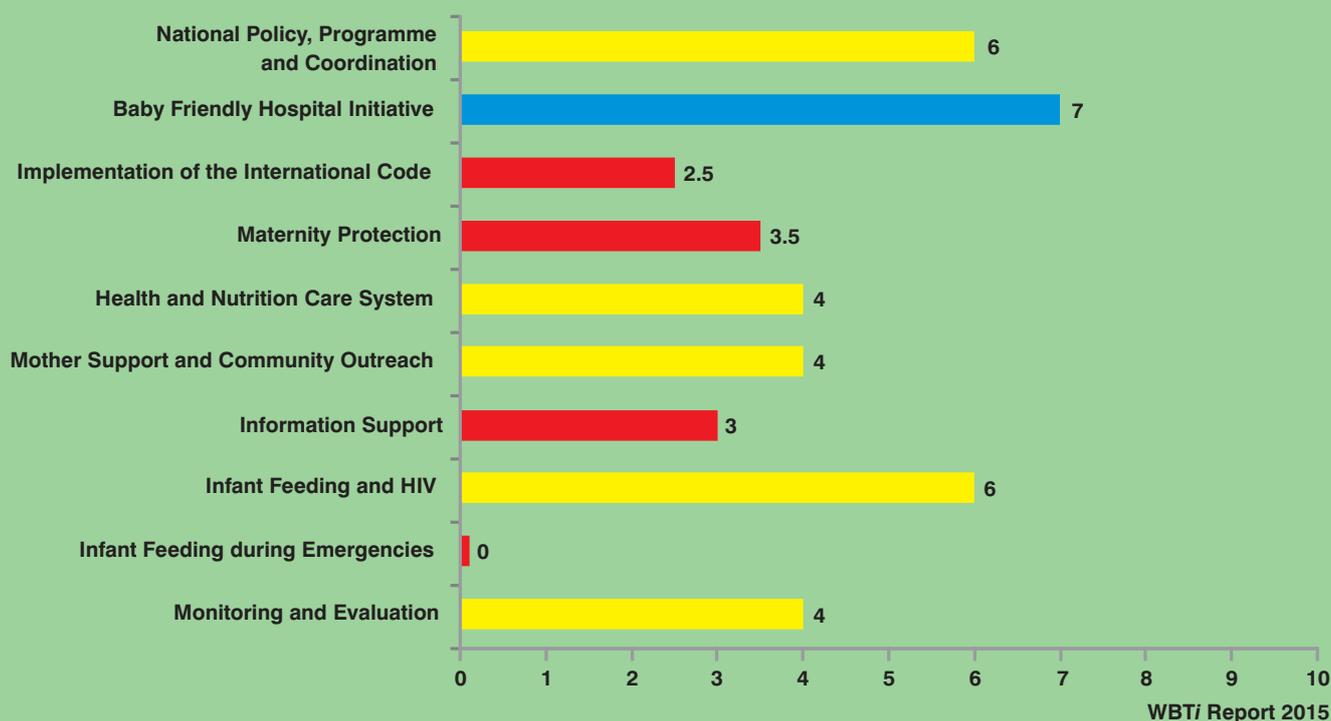
## IYCF Practices<sup>3</sup>

Adequate data for breastfeeding practices are not available in Singapore. The national breastfeeding survey 2011 reported that 95% mothers initiated breastfeeding in hospital but exact timings were not reported; 50.3% mothers breastfed exclusively at hospital discharge which dropped to 0.8% at 6 months post-delivery. Any breastfeeding rate was 41.6% at 6 months, while median duration of breastfeeding was 1.8 months



## Policies and Programmes on IYCF<sup>4</sup>

To enhance breastfeeding rates and to restrict use of BMS, strengthening of policies and programmes on IYCF is required. WBTi assessment 2015 has revealed many gaps in policies and programmes on IYCF.



- There is a need to have a robust national IYCF policy, enhanced maternity protection, appropriate IEC policy, effective policies and programmes on infant feeding during emergencies and inclusion of breastfeeding indicators in the national health and nutrition surveys.
- More importantly there is a need for effective implementation of the International Code of Marketing of Breastmilk Substitutes<sup>5</sup> by enacting a national legislation which includes all the provisions of the Code and establishing Code monitoring mechanisms which are independent, transparent and free from commercial influence.

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 Singapore

3. National Breastfeeding Survey 2011, Available at: <https://data.gov.sg/dataset/national-breastfeeding-survey>

4. WBTi report of Singapore 2015. <http://www.worldbreastfeedingtrends.org/GenerateReports/countrysubmit.php?country=SG>

5. WHO, UNICEF, IBFAN. Marketing of breast-milk substitutes: national implementation of the international code: status report 2016

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