



# Ready-to-Use Therapeutic Food: Market Outlook

UNICEF Supply Division

March 2021

## Ready-to-Use Therapeutic Food - Current Outlook March 2021

This update provides information for the period 2017-2023 on ready-to-use therapeutic food supply and increased supplier diversity. It highlights UNICEF's procurement approach to meet programme country requirements and to introduce alternative formulations. UNICEF procures an estimated 75-80 per cent of global funded ready-to-use therapeutic food demand a year, which still only covers 25 per cent of the estimated needs of children suffering from severe wasting.

### 1. Summary

- Most of the ready-to-use therapeutic food (RUTF) is used in emergency response. UNICEF procures an estimated 75-80 per cent of the global demand for RUTF, averaging 49,000 metric tons (MT) per year over the last four years, suitable to treat 3.5 million children.<sup>1</sup> Despite the high volumes through UNICEF, it still only covers 25 per cent of the global estimated number of children suffering from severe wasting. RUTF procured by governments, non-governmental organizations (NGOs) and other United Nations (UN) agencies cover an additional five to ten per cent. As such, approximately 65-70 per cent of children suffering from severe wasting, globally, do not have access to treatment, and most live in non-humanitarian contexts, which get less attention.
- The RUTF supplier base has expanded substantially over the last ten years. UNICEF now procures RUTF from 22 different suppliers, of which 18 are located in countries with high levels of malnutrition. The global RUTF production capacity currently exceeds the global funded demand and is sufficient to respond to increasing the treatment coverage of children with severe wasting.
- The interest in non-peanut based RUTF is increasing, particularly from countries where peanuts are not a staple food in local diets. To increase the treatment of severely wasted children that have not had access to treatment, UNICEF encourages the validation and access to alternative RUTF formulations.
- The weighted average price (WAP) for RUTF continues to decrease in response to increased procurement volumes, competition, and supplier diversity. The WAP for RUTF procured for export and use in programme countries decreased by 28 per cent over twelve years, from USD 57.00 per carton in 2008, to reach USD 41.01 per carton in 2020, making it more affordable. The WAP for locally produced products decreased by 22 per cent over the same period, even though locally produced RUTF remains higher priced than imported RUTF.
- UNICEF's response to RUTF demand during the COVID-19 pandemic has greatly benefitted from having established sources of supply locally nearer to the demand. The pandemic has not had a major impact on the RUTF industry's ability to respond to the demand, as RUTF manufacturers have often been exempted from closure and lockdowns as they are considered an essential business. However, they have still had to deal with delays in the supply of raw materials as well as logistical constraints. UNICEF anticipates the economic consequences from the pandemic, and the strain placed on routine health and nutrition services, to result in a sharp increase in malnutrition levels.<sup>2,3</sup>
- UNICEF concluded its last tender in 2018 to cover its April 2019-April 2021 tender period, seeking to maintain a healthy supplier base in programme countries close to beneficiaries, as well as to increase programme coverage by trying to make RUTF more affordable, and more acceptable, with alternative formulations. Good progress has been made in reaching the target of reducing the global WAP by 10 per cent, compared to the 2018 baseline. However, the disruptions caused by the pandemic have hampered new product development, trialling, and introduction of innovative RUTF products made with alternative ingredients. In addition, they delayed the construction and start-up activities of new manufacturers in strategic regions. This required UNICEF to extend the tender duration by two years until April 2023.

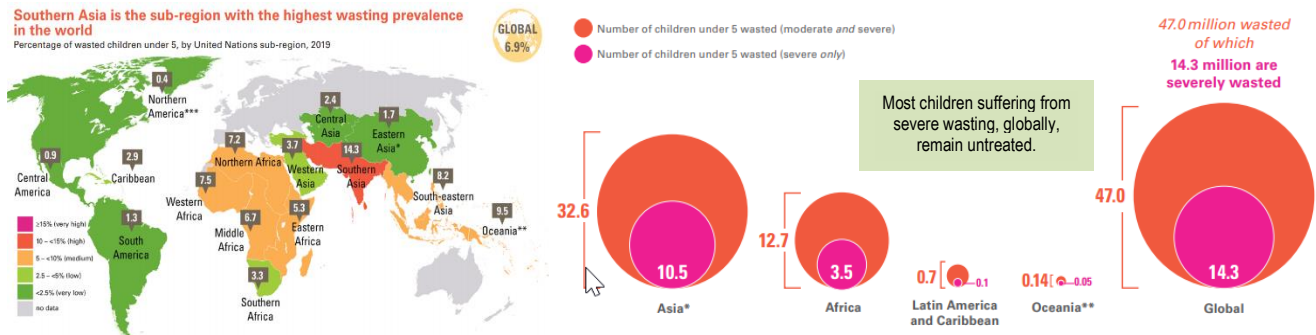
<sup>1</sup> One MT contains 72 cartons of RUTF. One carton (92gr. x 150 sachets) is sufficient to treat one child with 10-15 kg of RUTF over 6-8 weeks.

<sup>2</sup> UNICEF and the World Food Programme, [Nutrition Crisis Looms as More than 39 billion In-school Meals Missed Since Start of Pandemic](#), UNICEF, New York, 27 January 2021.

<sup>3</sup> UNICEF, [Impacts of COVID-19 on Childhood Malnutrition and Nutrition Related Mortality](#) UNICEF, New York, July 2020.

## 2. Brief Background

An estimated 47 million children under-five suffer from wasting,<sup>4</sup> globally,<sup>5</sup> of which more than two thirds live in South Asia, and more than a quarter live in Africa.<sup>6</sup>



Source: UNICEF, WHO, WB

14.3 million children suffer from its extreme form, severe wasting, and require specialised therapeutic feeding care, and an estimated one million children die annually as a consequence of wasting.<sup>7</sup> Severe infectious diseases such as tuberculosis, diarrhoea, and measles, as well as sudden onset food insecurity, are among the leading causes of severe wasting.<sup>8</sup> The development of RUTF, combined with the adoption of community-based management and treatment of wasting, has greatly increased the effectiveness and efficiency of therapeutic feeding care. It also enabled programmes to increase their access and coverage of populations in need. UNICEF procures RUTF for country programmes and partners in two forms:

- RUTF paste: A lipid-based energy dense, micronutrient paste, using a mixture of peanuts, sugar, oil, and milk powder, suitable for children between the ages of 6-59 months.<sup>9</sup>
- RUTF biscuits: An energy dense, nutrient-fortified wheat and oat bar suitable for older children.

UNICEF procures other related nutrition products including [therapeutic milk](#) (F-75, F-100),<sup>10</sup> [multiple micronutrient powder \(MNP\)](#),<sup>11</sup> [vitamin A supplementation](#),<sup>12</sup> and a complex of minerals and vitamins (CMV), which are not described in this note.

## 3. Innovation

Currently all RUTF procured by UNICEF is based on peanuts, sugar, milk powder (providing 50 per cent of the proteins), oil, vitamins, and minerals. It complies with the Joint Statement,<sup>13</sup> issued in 2007 by the World Health Organization (WHO), the World Food Programme (WFP), UNICEF, and the United Nations System Standing Committee on Nutrition (UNSSCN), which endorsed community-based management of acute malnutrition (CMAM). Since 2015, UNICEF has requested manufacturers to propose products based on using alternative ingredients for review and future consideration, including non-peanut based ingredients or alternatives to milk. Not only can alternative ingredients generate cost savings in producing RUTF, but non-peanut recipes may also increase acceptability in many countries where peanut-based products are not a staple food and are relatively foreign compared to other foods. Some alternative RUTFs use different legumes and cereals instead of peanuts (typically, soy, chickpea, flour, lentils, or oats). These formulations are known and referred to under the category of

<sup>4</sup> The term 'wasting' in this document incorporates severe acute malnutrition (SAM), which includes severe wasting, also known as marasmus, kwashiorkor, and marasmus kwashiorkor, with and without the presence of oedema; as well as moderate acute malnutrition (MAM).

<sup>5</sup> UNICEF, World Health Organization, and the World Bank, [UNICEF/WHO/The World Bank Group joint child malnutrition estimates: levels and trends in child malnutrition: key findings of the 2020 edition](#), WHO, Geneva, 31 March 2020, p. 2.

<sup>6</sup> Ibid., p. 7.

<sup>7</sup> UNICEF, The World Health Organization, The World Food Programme, [Community-based Management of Severe Acute Malnutrition: A Joint Statement by WHO, WFP, the UN System Standing Committee on Nutrition, and UNICEF](#), WHO, Geneva, May 2007, p. 2.

<sup>8</sup> Action Against Hunger, [Underlying Causes of Malnutrition](#), Action Against Hunger, Toronto, 2016.

<sup>9</sup> Lipids are a class of organic compounds, such as fatty acids or derivatives, and include natural oils, that are insoluble in water but soluble in organic solvents.

<sup>10</sup> UNICEF, [Therapeutic Milk Market and Supply Update](#), UNICEF, Copenhagen, June 2020.

<sup>11</sup> UNICEF, [Multiple Micronutrient Powder Supply and Market Outlook](#), UNICEF, Copenhagen, June 2020.

<sup>12</sup> UNICEF, [Vitamin A Supplementation: Market and Supply Update](#), UNICEF, Copenhagen, June 2018.

<sup>13</sup> UNICEF, WHO, WFP, [Community-based Management of Severe Acute Malnutrition: A Joint Statement by WHO, WFP, the UN System Standing Committee on Nutrition, and UNICEF](#).

“renovation” products, as they represent a step change in the ingredients used in RUTF, and still comply to the Joint Statement compositional guideline. They have the same nutrient composition, similar texture, and shelf life compared to peanut-based paste, and they can be produced using the existing manufacturing facilities and the established equipment and manufacturing processes.

Out of the selection of alternative RUTF products offered to UNICEF in the 2018 tender, UNICEF prioritized the soy and chickpea variants for acceptability trialling over the next three to four years. These two ingredients were the most commonly represented products offered in the tender and are predicted to deliver cost savings of around 3-5 per cent.

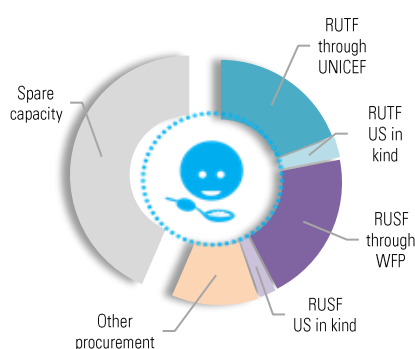
Other pipeline products, categorized as “novel” products, are new RUTF formulations that replace milk protein with other protein sources to meet protein requirements, and increase iron and vitamin C compared to the standard composition. Some manufacturers have also formulated products that fall into the “innovation” category, which use alternative sources of protein to milk in formulations that may be more culturally adapted and increase local acceptance. These include using different animal sourced proteins such as fish or egg powder. Both the “novel” and “innovation” product categories require efficacy trials and considerable investment before they are at a stage of being considered for scale-up into CMAM programmes, as they do not comply with the Joint Statement. The procurement of these alternative formulations will be subject to an assessment of their suitability for the management of severe wasting following an updated guideline from WHO to support their use in programmes.

#### 4. Current Market Situation

UNICEF is the main procurer of RUTF, procuring up to 75-80 per cent of global demand. The World Food Programme procures a similar volume of lipid-based nutrition products as UNICEF, but it procures predominantly the *supplementary* foods in this product group. UNICEF and WFP account for 70-75 per cent of the global procurement of these products.

The United States Agency for International Development’s (USAID) Bureau for Humanitarian Assistance (BHA) has been providing in-kind contributions of RUTF to UNICEF since 2012. These donations have been supporting the therapeutic feeding needs of 25 countries in Africa, in addition to Afghanistan, Bangladesh, Haiti, Myanmar, Pakistan, and Yemen. The USAID/BHA contribution of RUTF to UNICEF and of lipid-based nutritional supplements (LNS) to WFP accounts for an additional five to ten per cent of the global procurement of lipid-based nutrition products. The remaining global volumes are procured directly by governments, other UN agencies, such as the UN High Commissioner for Refugees (UNHCR) and WHO, as well as other organizations such as Action Against Hunger (AAH), the International Committee of the Red Cross (ICRC), and Médecins Sans Frontières (MSF). In 2020, the total volume of RUTF and other supplementary lipid-based nutrition products procured reached an estimated 140,000 MT. This volume represents approximately 56 per cent of the current total global production capacity of this product group (Figure 1).

Figure 1 Estimated Global Lipid-based Production Capacity and Known Utilization 2020



Source: UNICEF Supply Division

UNICEF manages RUTF as a non-stock item that is made to order due to several factors, including its short shelf life of 24 months, typically large order sizes, high number of orders, product bulkiness, and the cost of holding finished product inventory. Considering the geographical spread of UNICEF’s supplier base, and that most manufacturers have a buffer production volume in advance of orders, pre-positioning of stocks of RUTF for emergency preparedness is currently only happening in the region of West Africa, funded by the United Kingdom’s Foreign Commonwealth, and Development Office (FCDO)’s PARSNIP and other donors.<sup>14,15</sup> The combined global production capacity for lipid-based nutrition products is estimated to have increased to reach 245,000 MT in 2020, from over 208,000 MT in 2017, and which is more than sufficient to meet sudden increased demand from emergencies. Procurement volumes have further increased in the following years, as did manufacturing capacity.

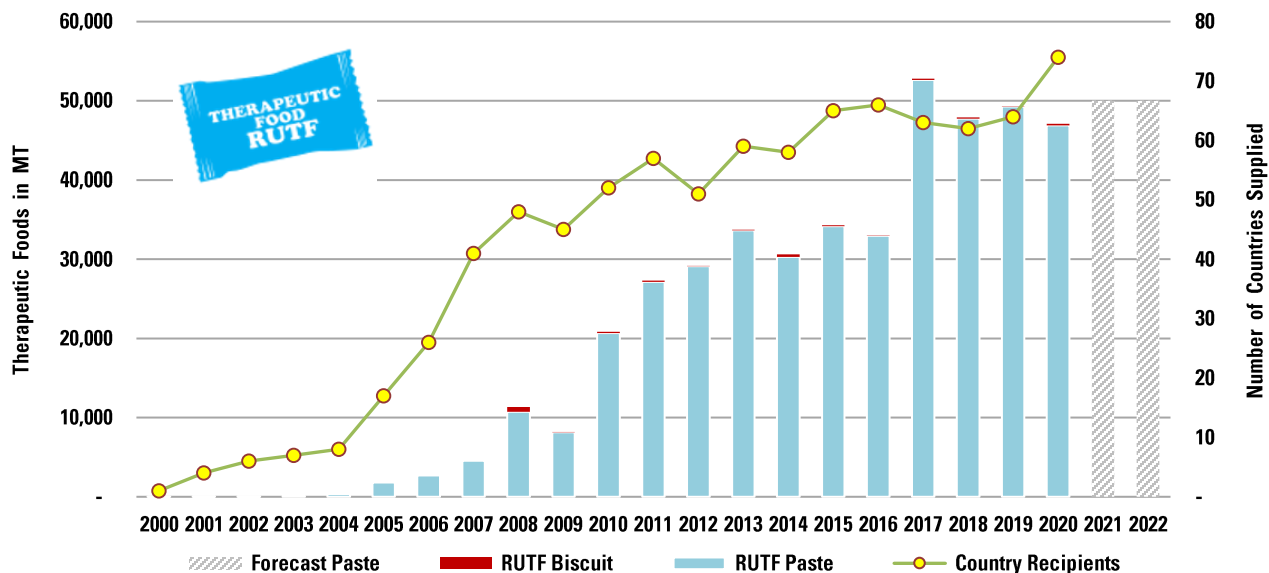
<sup>14</sup> United Kingdom, Foreign, Commonwealth and Development Office, [Progressing Action on Resilient systems for Nutrition through Innovation and Partnership \(PARSNIP\)](#), FCDO, London, 20 October 2020.

<sup>15</sup> The FCDO’s Progressing Action on Resilient Systems for Nutrition through Innovation and Partnership (PARSNIP) is a new strategic collaboration between UNICEF and the Government of the United Kingdom on improving the prevention, early detection and treatment of child wasting.

## 4.1 Demand

UNICEF has procured RUTF since 2000. The growing number of pilot-programmes and the subsequent endorsement of CMAM in 2007 by WHO, WFP, UNICEF, and UNSSCN, resulted in the demand for RUTF through UNICEF to increase to a yearly average of between 30,000-35,000 MT from 2013 to 2016. This volume corresponds to the treatment of approximately 2.1 to 2.5 million children in over 60 countries, driven by emergencies and programmatic acceptance (Figure 2).<sup>16</sup> In 2017, the demand spiked to reach 52,620 MT due to multiple emergencies occurring in the Horn of Africa, Nigeria, South Sudan, and Yemen, amongst others. The high level of procurement continued through 2020 to reach 46,900 MT, averaging 49,000 MT a year over the last four years, suitable to treat 3.5 million children. Nevertheless, the supply through UNICEF still only covers approximately 25 per cent of the global estimated 14.3 million severely wasted children.<sup>17</sup> RUTF supplies from other sources, notably from AAH, MSF, USAID, and others, correspond to an additional five to ten per cent of the global estimated needs. In other words, most children suffering from severe wasting, globally, remain untreated.

Figure 2 UNICEF RUTF Procurement, Forecast, and Number of Countries Supplied 2000-2022



Source: UNICEF Supply Division

The widespread use of RUTF in emergencies makes country forecasts challenging and often inaccurate. In 2013, UNICEF and partners established the Nutrition Dashboard (NutriDash) to help address these challenges.<sup>18</sup> NutriDash is a web-based database with access limited to key partners. It is used to collect and strengthen nutrition programme information, and used to support programme management, advocacy, and mobilize resources, as well as to improve country demand forecasting. It helps countries to project supply requirements and ensure timely delivery. As wasting is perceived as a humanitarian problem, it receives 80 per cent of its funding from humanitarian budgets. However, in reality the condition is more prevalent in non-emergency contexts, whereby approximately 65-70 per cent of the children suffering from severe wasting, globally, do not have access to treatment, and live in non-humanitarian, stable development environments, which often get less attention.

Over the last few years, there has been a growing interest by donors and other partners to invest in innovative and catalytic [supply financing](#).<sup>19</sup> The aim is to increase domestic resource allocation in the treatment of child wasting and to improve financing predictability due to the nature of humanitarian budgets account for 80 per cent of its funding. The Nutrition Match Fund,<sup>20</sup> seeks to match domestically mobilized spending on RUTF, and the nutrition window of the Vaccine Independence Initiative (VII) addresses temporary cash flow timing issues via pre-financing.

<sup>16</sup> One MT contains 72 cartons of RUTF. One carton (92gr. x 150 sachets) is sufficient to treat one child with 10-15 kg of RUTF over 6-8 weeks.

<sup>17</sup> UNICEF, WHO, and the World Bank, [Levels and Trends in Child Malnutrition](#).

<sup>18</sup> UNICEF, [NutriDash](#), UNICEF, New York, 2019.

<sup>19</sup> UNICEF, [Supply Financing](#), UNICEF, Copenhagen, February 2021.

<sup>20</sup> UNICEF, [New Fund Aims to Unlock \\$1 Billion for Children's Nutrition](#), UNICEF, New York, April 2015.

UNICEF expects demand could increase further as a result of higher coverage rates, improved management approaches to severe wasting, as well as a growing focus on hunger and malnutrition to meet the Sustainable Development Goals (SDGs). The SDGs, adopted by the UN General Assembly in September 2015, seek to end all forms of malnutrition by 2030, including achieving the World Health Assembly (WHA) targets to bring childhood wasting below five per cent and reducing stunting by 40 per cent by 2025. It will require the rapid expansion in both the reach and coverage of targeted feeding programmes, notably CMAM, and the use of RUTF. The World Bank estimates nutrition interventions could save up to 3.7 million child lives and 65 million fewer stunted children, compared to a 2015 baseline, should programmes reach their targets by 2025.<sup>21</sup>

## 4.2 COVID 19 Pandemic and Malnutrition Outlook

The global COVID-19 pandemic resulted in an initial increase in demand as programmes built up buffer stocks in anticipation of production problems and logistical constraints. The RUTF industry has been less affected by lockdowns and border closures than other sectors as RUTF and food manufacturers were exempt and considered as essential businesses. UNICEF has also greatly benefitted from having established sources of supply locally in programme countries nearer to the demand. UNICEF is also noting that there is growing evidence that the economic consequences of the pandemic, in addition to the reductions in routine health and nutrition services, are resulting in an increase in malnutrition levels.<sup>22, 23</sup>

Within the context of UNICEF and WFP's new partnership framework to address wasting in children globally,<sup>24</sup> UNICEF and WFP have joined forces to scale up the prevention and treatment of child wasting in response to the anticipated increased need of prevention and treatment services due to the consequences of global lockdown restrictions and COVID-19.<sup>25</sup>

The two agencies will be leading the adaptation and scale up nutrition programmes to avoid a major increase in the burden of child wasting due to the containment measures and the socio-economic impact of the pandemic. Based on respective mandates, comparative advantages, and operational capacity, UNICEF and WFP will work in coordination with national/sub-national governments and nutrition sector/cluster coordination platforms to support the design and scale-up of context-specific simplified approaches for the early detection and treatment of child wasting.

Both agencies have intensified their efforts to strengthen the capacity of mothers and caregivers to detect and monitor their children's nutritional status using low-literacy/numeracy tools including mid-upper arm circumference (MUAC) tapes, pre-positioning (with a minimum buffer stock of two months) of essential commodities for the prevention and treatment of child wasting including RUTF and LNS products at national, community and health facility levels.<sup>20</sup>

## 4.3 Supplier Base

From 2000-2007, the RUTF market had a single qualified international supplier producing RUTF for export, from which UNICEF sole-sourced supply to meet demand. In response to growing country programme demands and programme preferences for locally produced RUTF for in-country use, and for reasons of economic development and supply chain efficiencies, the sole-source supplier established local franchises in programme countries. This coincided with increased demand from a growing number of countries. Local franchises increased local supply availability and supported broader economic and development goals by providing employment, the transfer of technical, production, supply chain knowledge and expertise, in addition to increasing global production capacity. UNICEF also sought to diversify the supply base beyond local franchises, and encouraged independent quality suppliers, particularly in programme countries to enter the market. To measure progress, UNICEF adopted a supply outcome target to source 50 per cent of RUTF procurement from suppliers located in programme countries by 2016.

To facilitate these efforts, UNICEF developed manufacturing and product standards as well as a strong quality assurance system to help mitigate the risks of microbiological contamination associated with peanut- and milk-based products (i.e. Enterobacteriaceae, *Salmonella*). UNICEF also strengthened country demand forecasts and used competitive bidding in tenders to improve market efficiency and leverage competition. UNICEF apportioned total forecasted quantities among

<sup>21</sup> The World Bank, [Investing in Nutrition, the Foundation for Development](#), the World Bank, Washington, 2016.

<sup>22</sup> UNICEF and the World Food Programme, [Nutrition Crisis Looms as More than 39 billion In-school Meals Missed Since Start of Pandemic](#), UNICEF, New York, 27 January 2021.

<sup>23</sup> UNICEF, [Impacts of COVID-19 on Childhood Malnutrition and Nutrition Related Mortality](#) UNICEF, New York, July 2020.

<sup>24</sup> UNICEF and the World Food Programme, [Addressing Wasting in Children Globally: UNICEF and WFP Partnership Framework](#), the Emergency Nutrition Network, Kidlington, October 2020.

<sup>25</sup> UNICEF and the World Food Programme, [Supporting Children's Nutrition during the Covid-19 Pandemic](#), UNICEF, Copenhagen, April 2020.

suppliers with production facilities that meet UNICEF’s technical requirements and product specifications, while balancing evaluation criteria between pricing (landed cost), quality, and the capacity to respond to demand to maintain a healthy market. As a result, the number of UNICEF RUTF paste suppliers increased from one supplier in 2007 to reach 21 suppliers as of May 2020, of which 18 (86 per cent) are suppliers based in countries with high concentrations of malnutrition. One supplier supplies RUTF in biscuit form (Table 1).

Table 1 UNICEF Supply Arrangements for RUTF in 2019-2021 (2023 for RUTF biscuits)

	Supplier	Type of supply	Start	End	Product
1	Amul Dairy (Kaira), India	International	Apr-19	Apr-21	RUTF Paste
2	Compact, India	International	Apr-19	Apr-21	RUTF Paste
3	DABS Nigeria	Local	Apr-19	Apr-21	RUTF Paste
4	Diva Nutritional Products, South Africa	International	Apr-19	Apr-21	RUTF Paste
5	Edesia, USA	International	Apr-19	Apr-21	RUTF Paste
6	GC Rieber Compact, Norway	International	May-20	May-23	RUTF Biscuits
7	GC Rieber Compact, South Africa	International	Apr-19	Apr-21	RUTF Paste
8	Hexagon, India	International	Apr-20	Apr-21	RUTF Paste
9	Hilina, Ethiopia	Local	Apr-19	Apr-21	RUTF Paste
10	InnoFaso, Burkina Faso	International/Local	Apr-19	Apr-21	RUTF Paste
11	Insta Products, Kenya	International/Local	Apr-19	Apr-21	RUTF Paste
12	Ismail Industries, Pakistan	International/Local	Apr-19	Apr-21	RUTF Paste
13	Mana Nutritive Aid, USA	International	May-20	Apr-21	RUTF Paste
14	Meds for Kids, Haiti	International/Local	Apr-19	Apr-21	RUTF Paste
15	Nuflower Foods and Nutrition, India	International	May-20	Apr-21	RUTF Paste
16	Nutriset, France	International	Apr-19	Apr-21	RUTF Paste
17	NutriVita Foods, India	International	May-20	Apr-21	RUTF Paste
18	Project Peanut Butter, Malawi	Local	Apr-19	Apr-21	RUTF Paste
19	Samil Industry, Sudan	International/Local	Apr-19	Apr-21	RUTF Paste
20	Société de Transformation Alimentaire, Niger	International/Local	Apr-19	Apr-21	RUTF Paste
21	Société JB, Madagascar	International/Local	Apr-19	Apr-21	RUTF Paste
22	Soma Nutrition, India	International	Apr-20	Apr-21	RUTF Paste

Source: UNICEF Supply Division

UNICEF will continue to be the main buyer of RUTF for the foreseeable future, as it is an essential and core product in the treatment of wasting at community level. However, the price of RUTF is limiting the generation of additional demand even though the market has a sufficient number of suppliers. UNICEF’s procurement strategy is to meet programme needs with quality-assured products acceptable to beneficiaries, at the lowest acceptable price, while sustaining a healthy, diverse, and geographically well-spread, responsive, good manufacturing practice (GMP)-approved production capacity. UNICEF’s 2018 tender, which resulted in contracts for the period April 2019-April 2021, sought to:



UNICEF is making good progress towards reaching its target of reducing the global WAP by 10 per cent compared to its 2018 baseline, even though the disruptions caused by the pandemic have hampered the trials and introduction of innovative RUTF

with alternative ingredients The pandemic also delayed the construction and start-up activities of new manufacturers in strategic regions. Based on the above, UNICEF decided to extend its tender duration by two years until April 2023.

#### 4.4 Sustainable Procurement

Sustainable procurement (SP) is an approach to procurement that incorporates the three sustainability pillars of social, economic, and environmental impact considerations. It goes beyond the more familiar “green” public procurement, to ensure that all products and services procured support local economic and social development, with the least environmental impact, and the best value for money (VfM).

SUSTAINABLE  
PROCUREMENT

Sustainable Procurement Considerations

In implementing SP, UNICEF will seek to include green manufacturing quality management system and social considerations, SP criteria in tender commercial evaluations, and specific supply targets to develop local industry capacity in programme countries.

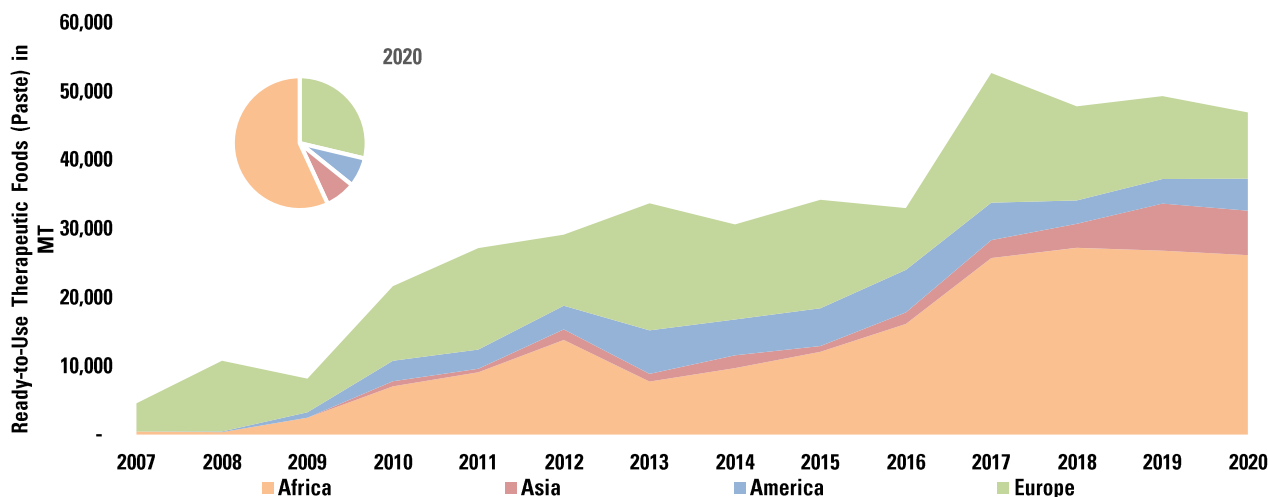
In applying SP, many UNICEF procurement decisions will face trade-offs between SP’s three (economic, social, and environmental) pillars, and present key operational challenges, especially between environmental and social considerations, with the latter often being more difficult to quantify. The absence of evidence to make any informed trade-off decisions will be part of the challenge. The other challenge will be the difficulty to make value judgments to prioritize one pillar over the other. However, solutions will be situation specific and priorities based on readiness, market influence, and targeted objectives.

Some SP elements, notably under the social pillar, may put some pressure on short-term costs that generate longer-term savings, such as investments in fairer employment working conditions, or health and safety, which would be offset by increased motivation, productivity, and reductions in work-related injury and absenteeism. To achieve higher tangible economic benefits and VfM, UNICEF and industry will strive to manage procurement decisions based on longer-term perspectives, considering the advantages of environmentally, socially sound products and services, and better performing staff, bring in the long-term.

In February 2018, UNICEF released its Procedure on SP ([SUPPLY/PROCEDURE/2018/001](#)). The procedure constitutes UNICEF’s policy on SP and is applicable across all UNICEF offices engaged in supply planning and procurement, wherever feasible and applicable, whether for goods or services, or for programmes or office assets, read more [here](#).<sup>26</sup>

Through its tender, UNICEF documents the RUTF industry’s current sustainability practices and collects information it can use to establish a baseline with a focus on the three pillars. To support the many initiatives already planned and implemented by RUTF manufacturers, UNICEF will monitor progress on sustainability with due consideration for the health of the market and the finished product’s affordability.

Figure 3 UNICEF RUTF (Paste) Procurement by Production Region of Origin 2007-2020



Source: UNICEF Supply Division

<sup>26</sup> UNICEF, [Sustainable Procurement](#), UNICEF, Copenhagen, September 2018.

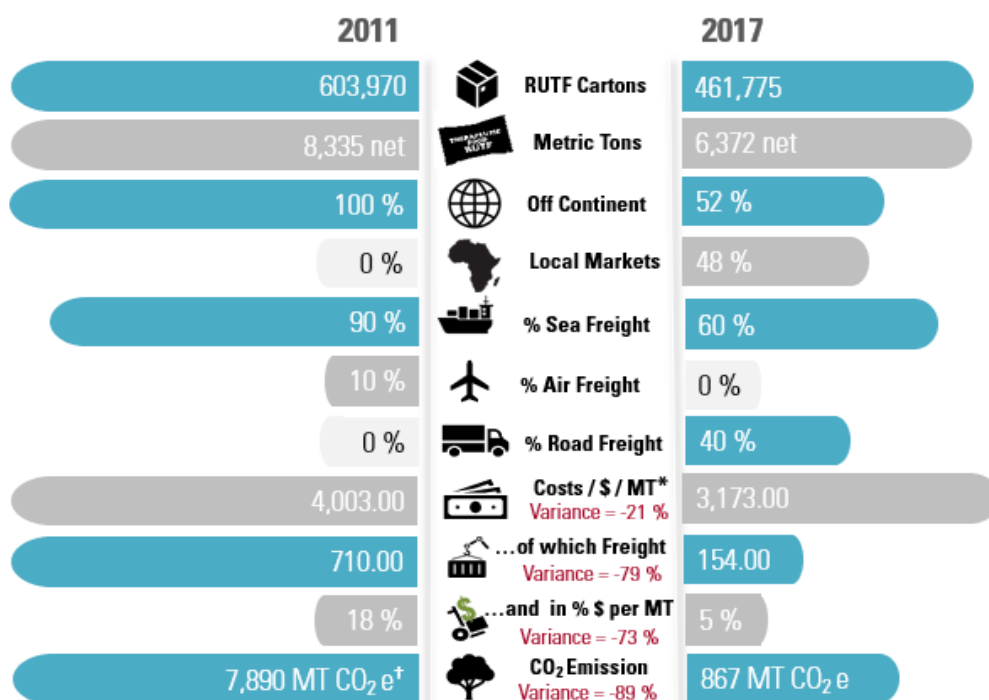


UNICEF's share of RUTF procurement from suppliers based in programme countries has steadily increased. Apart from a decrease from 50 per cent in 2012 to 25 per cent in 2013 on account of updated quality requirements for finished products, procurement from suppliers based in programme countries increased to 37 per cent in 2015 (Figure 2, page 4). UNICEF exceeded its target to source at least 50 per cent of RUTF from suppliers located in programme countries at the end of 2016 by reaching 56 per cent and increasing this level to reach 71 per cent in 2020 (Figure 3, previous page).

The key advantages programmes can have from increased local production capacity include improved local availability and acceptability, government endorsement, and it can contribute to supply chain cost efficiency, as well as reduced delivery lead-times. UNICEF compared two of its recent emergency response peak periods of demand in the Horn of Africa, covering the period of April to September in 2011, with the same period in 2017 (Figure 4).<sup>27</sup>

In 2011, UNICEF had to source all its RUTF supply, 8,335 MT (9,167 MT gross) off continent, spending USD 6.5 million on freight including USD 4.5 million on international air freight alone. By contrast in 2017 during the peak of the emergency response, UNICEF was able to source 48 per cent of its 6,372 MT (7,009 MT gross) RUTF supply from manufacturers in the Horn of Africa, eliminating the need for the use of air freight. As it sourced a greater share of its supply nearer the areas of need in 2017, it contributed to cost-reduction of 21 per cent in USD per MT\*, reducing the average cost per MT by USD 830.30, from USD 4,003 in 2011, to USD 3,173 in 2017, due to reductions in net product prices, and as supply relied on cheaper overland and sea freight costs, rather than far more expensive international air freight as compared to 2011. The reduction in average freight cost per MT was USD 556.00, which is a 79 per cent reduction from USD 710.00 in 2011, to USD 154.00 in 2017, and which in turn, contributed to an 89 per cent reduction in carbon emissions (Figure 4).

Figure 4 Influencing Markets Near Programme Countries in Emergencies



Source: UNICEF Supply Division

**Note** \*: Cost per MT is gross, inclusive of freight, pallets, and procurement costs, 9,167 MT for 2011 (8,335 MT net), and 7,009 MT for 2017 (6,372 net).

**Note** †: CO<sub>2</sub> e: Carbon dioxide equivalent.

UNICEF could also see how the effects of sourcing an increasing share of supply from local manufacturers in response to the emergency stimulated local markets. The two suppliers in Ethiopia and Kenya increased their combined RUTF production

<sup>27</sup> Mulla John Mulla, *Influence of RUTF Markets Near Programme Countries in the Horn of Africa, (Ethiopia, Kenya, and Somalia)*, UNICEF, Copenhagen, 2017.

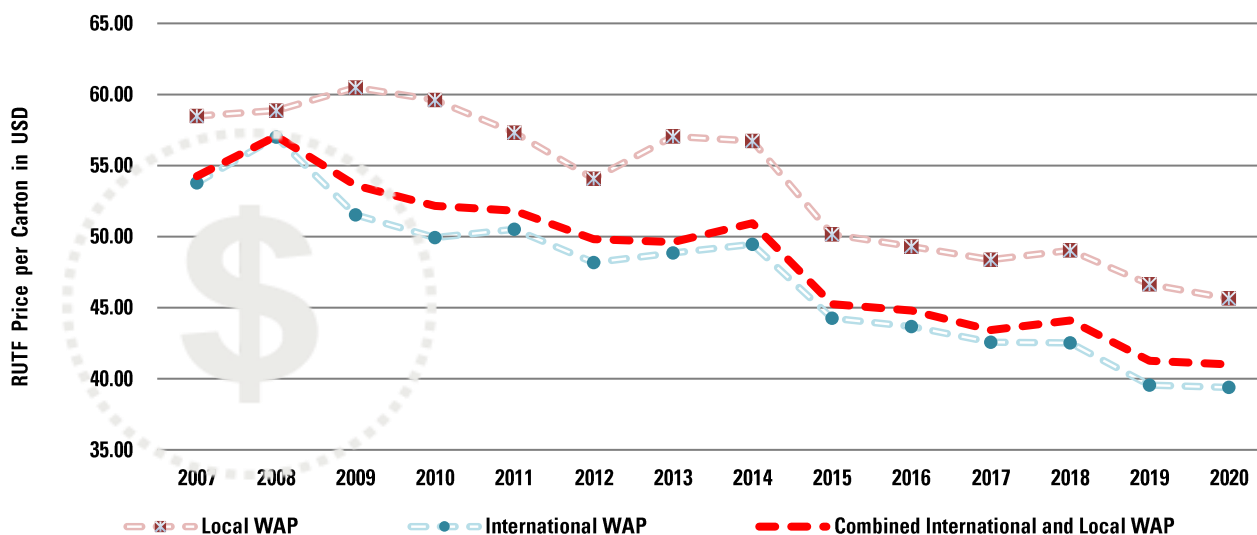
capacity by 125 per cent compared to 2011. They increased their overall number of employees by 76 per cent, and the proportion of female employees (which had been 36 per cent) by five per cent. The social and economic impact and benefit of relying on local production strengthened a wider vision and understanding of sustainability through using, and leveraging, UNICEF's supply function. Growing local production and technical capacity during humanitarian responses can further leverage procurement and supplies as a key programme input to assist and enable long-term economic development.

#### 4.5 Pricing

The WAP for internationally procured RUTF for export has steadily decreased since its peak in 2008 from USD 57.00 per carton to reach USD 41.01 in 2020, representing a decrease of 28 per cent over twelve years. WAP fluctuations in 2013 and 2014 compared to previous years reflect updated product safety and quality requirements. Many suppliers had to make improvements to production facilities and production processes, which increased production costs. The sharp decrease in WAP in 2014 was due to a global oversupply of dry skimmed milk and fluctuations in the exchange rate between the USD and Euro (Figure 5).

The WAP for RUTF procurement from local suppliers (both franchisees and independent suppliers) producing RUTF for in-country use are comparatively 12-14 per cent higher than from international suppliers (Figure 5). Whilst the importation of finished RUTF products is tax-exempted, given their programmatic purpose and the nature and health status of the beneficiaries they treat, local production requires the importation of most packaging materials and ingredients such as milk, peanuts, and the vitamin-mineral mix from international suppliers. In many instances, the import duties on these separate ingredients and materials contribute to higher pricing, rendering locally produced RUTF more expensive than the landed cost of imported RUTF. Many local producers also have difficulty to attract investment capital to expand and increase production. They also face challenges with high interest rates on capital loans, long cash conversion cycles, and less convenient access to quality testing laboratories. Despite these challenges, the trend in WAP follows a similar trend to international procurement. It decreased from its highest level of USD 60.49 per carton in 2009, to fall below USD 45.65 in 2020, representing a decrease of 25 per cent over eleven years.

Figure 5 UNICEF WAP for International and Local RUTF Paste Procurement 2007-2020<sup>\*, †, §</sup>



Source: UNICEF Supply Division

**Note\***: One carton contains 150 sachets of 92 gr. 72 cartons make up 1 MT.

**Note†**: UNICEF local WAP based on ex-works (EXW) local production prices.

**Note§**: UNICEF international WAP based on Free Carrier (named place) (FCA) export prices. Euro-based FCA export WAP is recalculated on an aggregate of USD value procurement.

For further information, UNICEF publishes a [list of RUTF prices](#) for each supplier having held, or holding a long-term arrangement (LTA) with UNICEF. Published prices include discounts and scale pricing suppliers offer to UNICEF.<sup>28</sup>

<sup>28</sup> UNICEF, [Pricing Data](#), UNICEF, Copenhagen, February 2021.

## 5. Issues and Challenges

- Assuring RUTF product quality is critical to UNICEF. The possible presence of microbiological contaminants in peanut- and milk-based foods poses potential hazards, given the nature and health status of the intended beneficiary children.<sup>29</sup> Current microbiological standards follow the latest advice in consultation with the United Nations Food and Agriculture Organization (FAO) and WHO on the microbial safety of lipid-based ready-to-use foods for the management of wasting. The Codex Alimentarius,<sup>30</sup> updated in 2018 its applicable manufacturing standards for this food: [Code of Hygienic Practice for Low-Moisture Foods](#).<sup>31</sup> It includes the maintenance of good hygienic practices, hygienic equipment design, proactive maintenance programmes, and the control of incoming materials. It also includes the physical separation of ingredient materials within the low-moisture food establishment based on specific hygiene requirements, which all help to prevent the contamination of low-moisture foods with pathogens in the production of RUTF.
- Since 2007, the number of new international and local supplier entrants in the market has led to a decrease in RUTF WAP. However, UNICEF still considers the cost of RUTF too high to mainstream the products into existing national health and nutrition programmes.<sup>32</sup> The WAP for locally produced RUTF also remains higher compared to RUTF produced in non-programme countries.
- Even though UNICEF RUTF procurement volume and donations received from USAID's BHA has increased and is sufficient to cover the needs of an estimated 4.9 million children,<sup>33</sup> programmes must scale-up coverage further to meet the unmet needs of an estimated 8-9 million children that are severely malnourished.<sup>34</sup> This would generate significant potential increases in future RUTF demand. UNICEF estimates the current global production capacity for RUTF and LNS products to be at least 245,000 MT, and sufficient to respond to increasing the treatment coverage of children with severe wasting.
- To mitigate the risk of delays in the timely delivery of RUTF, notably from sudden surges in demand in response to emergencies, UNICEF encourages suppliers to hold a buffer stock of UNICEF tested and approved product.
- NutriDash issues yearly RUTF country demand forecasts, but reliability is still limited given that RUTF is primarily used in emergencies, and emergency funding tends to be short-term and unpredictable. Longer-term, more structural, and more sustainable domestic funding is needed.
- UNICEF expects continuous product improvement from suppliers to achieve higher quality products, and it will continue to focus on quality assured and traceable raw materials and production process controls.
- In line with UNICEF's food safety policy, UNICEF, together with partners including AAH, FAO, ICRC, MSF, USAID, WFP, and WHO, will continue to engage in reviewing product specifications. They will also work on appropriate testing sampling plans and strategies to monitor and control the presence of food safety risks in ingredients, production processes, production environments, and finished products.
- Through peer-to-peer exchanges, such as the Nutrition Supply Chain Practitioners Forum, held in June 2016 in Copenhagen, UNICEF will continue to strengthen national capacity to manage increased RUTF volumes, including storage and secondary distribution through supply chain optimization to reduce programme costs and prevent product wastage.<sup>35</sup> Every couple of years, UNICEF hosts a [Nutrition Supply Forum](#) bringing together manufacturers, partner organizations, UNICEF staff, donors and academia, to exchange ideas, best practices, and updates on supplies and procurement for nutrition programmes. The last one was held in November 2019.

## 6. Steps Forward

- UNICEF, following the extended tender period, will seek to maintain a healthy supplier base in programme countries close to beneficiaries, as well as to increase coverage by making RUTF more affordable and more acceptable with alternative formulations. It will continue to focus on cost reductions through sourcing local ingredients and by expanding ingredient varieties, to achieve better economies of scale, and enhanced competition.

<sup>29</sup> The World Health Organization and Food and Agriculture Organization, [Microbial Safety of Ready-to-Use Lipid Based Therapeutic and Supplementary Foods: Conclusions and Recommendations of an FAO/WHO Technical Meeting](#), UNICEF, New York, March 2013.

<sup>30</sup> The Food and Agricultural Organization, [The Codex Alimentarius Food Standards](#), FAO, Rome, February 2020.

<sup>31</sup> Food and Agriculture Organization, World Health Organization, [Code of Hygienic Practice for Low-Moisture Foods](#), FAO, Rome, 2015.

<sup>32</sup> UNICEF, [Evaluation of Community Management of Acute Malnutrition \(CMAM\), Global Synthesis Report](#), UNICEF, New York, May 2013, p. xvi.

<sup>33</sup> UNICEF, [UNICEF annual report 2019](#), UNICEF, New York, 2020, p. 17.

<sup>34</sup> Out of the 14.3 million children that are severely wasted, UNICEF's supplies have been sufficient to treat an estimated 4.9 million in 2020. Including the contribution of other actors (governments, other UN agencies, NGO's), there are an estimated 8-9 million children not reached).

<sup>35</sup> UNICEF, [Strengthening National Supply Chains](#), UNICEF, Copenhagen, February 2021.

- In order to increase and encourage the mobilization of domestic financing, UNICEF together with the Nutrition Match Fund will seek to match domestically mobilized spending on RUTF, and with the nutrition window of the Vaccine Independent Initiative address temporary cash flow timing issues via pre-financing.
- UNICEF will continue to ensure ongoing technical support to local suppliers, to assist in product development and sustain RUTF procurement from programme countries, with a focus on high-burden countries where local manufacturing capacity and/or availability of more acceptable alternative formulations could incentivize governments to invest (more) in CMAM.
- To increase access and enable increased quality and coverage of nutrition programming used to prevent and treat nutritional deficiencies, UNICEF will continue to advocate that countries add RUTF and other essential nutrition commodities to their essential list of medicines, or other applicable essential health commodity lists, and classify RUTF as foods for special medical purposes. Furthermore, UNICEF will continue to advocate that countries fully integrate these products into their health system's supply chain.
- In collaboration with country governments, other procurement agencies, and RUTF suppliers, UNICEF will continue to support the development of a Codex guideline for RUTF, which will provide a framework for governments to regulate in-country RUTF products and facilitate its proper use. The finalization of the guideline is anticipated by December 2021 and adopted in July 2022.

For further questions or additional information, please contact:

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Other UNICEF information notes can be found at: [Market notes and updates | UNICEF Supply Division](#)

UNICEF issues market and information notes on products and supplies that are essential for the needs of children, and by extension their families. While some products are easily available and affordable, the availability of others can be limited, or in some instances, non-existent in the quality and price required. UNICEF places a strategic focus on these supplies to shape healthy markets. UNICEF seeks to influence the market to achieve greater coverage, affordable prices, diversified supplier bases, competitive market landscapes, and product quality that is fit for purpose and in the right form for children.