

Sustainability Report

2023-2028



BrightSAM

BRAIN DEVELOPMENT, GROWTH & HEALTH
IN CHILDREN WITH
SEVERE ACUTE MALNUTRITION

Basic Information

CVR number: 29190623 (Rigshospitalet)

Legal form: Self-governing institution (research project)

NACE code: 72.20.00 and 72.10.00

Total assets 2023–2028: Not applicable

Revenue 2023–2028: Not applicable

Number of employees (full-time equivalents): 61.9

Country of domicile: Denmark

This report has been prepared primarily based on the VSME Basic Module (Voluntary Sustainability Reporting Standard for non-listed SMEs). As the report relates to a research project, only the elements relevant to this project have been included. The reporting covers the project period from Q3 2023 to Q1 2028.

The BrightSAM project is led by Mette Frahm Olsen, Rigshospitalet, in collaboration with NIMR (National Institute of Medical Research). The report covers all participating sites.

Location	Address	Postal Code	City	Geolocation
Office, Rigshospitalet Denmark	Blegdamsvej 9	2100	Copenhagen Denmark	55.69860 °N 12.56133 °Ø
Office, NIMR (National Institute of Medical Research) Mwanza;	International school road, Isamilo area, P.O. Box 1462	33104	Mwanza Tanzania	-2.50929 °N, 32.90700 °Ø

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Background of the Project

Severe Acute Malnutrition

Climate change leads to floods, storms, and droughts that threaten food security and increase malnutrition. COVID-19 has exacerbated the situation, and in Africa, the level of malnutrition is now the highest in 20 years. Each year, nearly 15 million children are affected by severe acute malnutrition (SAM = Severe Acute Malnutrition), which impairs growth, health, and development. Child malnutrition is one of the major consequences of climate change, leading to poor health outcomes and hindering sustainable development in low- and middle-income countries (LMICs).

Treatment and Challenges

The introduction of ready-to-use therapeutic food (RUTF) has improved treatment and accessibility, but SAM still causes cognitive and social consequences. Climate change worsens the problem by reducing the nutrient content of crops, and more expensive animal-based foods make it more difficult to meet requirements for, among other things, n-3 fatty acids and choline.

The research project supports three of the United Nations' 17 Sustainable Development Goals

1. Zero Hunger; eradicate hunger and malnutrition
2. Good Health and Well-being; reduce the number of children who die before the age of 5
3. Climate Action; mitigate climate-related disasters

Hypothesis

With only minor adjustments to treatment, severely malnourished children can improve their chances of achieving age-appropriate development.



Need for New Solutions

Psychosocial stimulation (PS) is critical for child development but is rarely included in SAM treatment. While previous interventions have shown positive effects, they are difficult to scale.

There is a need for simple, context-adapted interventions that can be integrated into healthcare systems.

BrightSAM Initiative

In collaboration with NIMR (National Institute of Medical Research) in Tanzania, BrightSAM develops and tests new combined nutrition and care interventions.

The objectives are to:

- Improve children's development
- Evaluate implementation and scalability
- Strengthen local research capacity

Project Objectives

The main purpose of the BrightSAM project is to understand the impact of dietary fat composition and simultaneous psychosocial stimulation on brain development in severely acutely malnourished children. Today, RUTF (Ready-to-Use Therapeutic Food) with low omega-3 content is still the standard intervention. Therefore, it is ethically justifiable to conduct a randomized controlled trial.

The study is designed as a 2×2 trial, investigating the effect of the two interventions both individually and in combination. The two interventions are:

- A new type of RUTF in which the content of essential fatty acids is adapted to the latest knowledge on how the body metabolizes these fatty acids, while keeping the product as low-cost as possible.
- A simple and locally adapted form of psychosocial stimulation.

Organization and Partners

The organization responsible behind the research project is Rigshospitalet in Copenhagen. The study is led by Mette Frahm Olsen, Associate Professor, MSc, PhD.

NIMR (National Institute of Medical Research) in Mwanza is responsible for the practical implementation and is led by George PrayGod, Associate Professor, MD, PhD. In addition, researchers from Tanzania, Denmark, Finland, England, and the USA participate in the study, and three PhD students are employed on the project in Tanzania under the supervision of George PrayGod.

The consulting firm Better Green is part of the project and is responsible for screening the project's sustainability aspects and providing support on these matters in connection with any potential scaling of the treatment. Better Green has also been responsible for preparing the present report.

Other partners

- IMA World Health, a local NGO that collaborates with community health workers trained to screen children in their homes
- Tanzania Home Economics Association, which works to support families in providing early childcare and education
- UNICEF – involved in scaling up BrightSAM interventions if they prove effective
- Nutriset, France, the largest global supplier of RUTF for the treatment of SAM
- Sokoine University of Agriculture, Tanzania, to establish links to existing local action plans aimed at improving food security in relation to climate change

Locations

The field study is conducted in the Mwanza Region of Tanzania, which has a population of approximately 2.8 million. The site was selected because it meets requirements for safety and basic research infrastructure, as well as access to other medical resources, thereby helping to ensure the quality of the study while reducing costs.

In addition, research, preparation, as well as data processing and dissemination of results take place in Denmark, England, Finland, and Tanzania.

Nine health centres in and around Mwanza carry out the practical implementation of the study, involving approximately 800 children. These include:

- Magu Health Center
- Kahangara Health Center
- Luegye Health Center
- Kisesa Health Center
- Karume Health Center
- Sangabuye Health Center
- Nyamagana Health Center
- Buzuruga Health Center
- Kwimba Health Center





Applied Methodology

The BrightSAM study investigates how the treatment of children with severe acute malnutrition (SAM) can be improved. It's a randomized trial in which both an improved nutritional treatment (RUTF) is compared with the current standard treatment, and an intervention involving psychosocial stimulation is compared with standard counselling.

In addition to measuring the effects of the interventions, the study also examines how they can be implemented in practice, their environmental impact, and how research capacity can be strengthened.

The interventions are based on previous pilot work from 2019–2022, during which methods and approaches were developed and tested.

The improved RUTF is formulated based on the latest knowledge of nutrients that are important for children's brain development and has been developed in collaboration with Nutriset. The psychosocial stimulation intervention is based on the WHO/UNICEF *Care for Child Development* programme and has been adapted for use in the treatment of children with SAM.

The psychosocial intervention is delivered as weekly group sessions in connection with follow-up visits and continues until the child is nutritionally recovered or for up to 12 weeks, in accordance with current clinical practice.

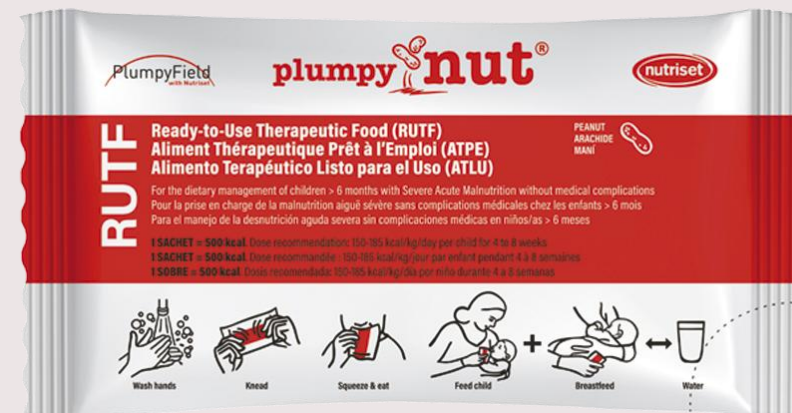
Plumpy'Nut® – RUTF

Plumpy'Nut® or RUTF (Ready-to-Use Therapeutic Food) is a nutritional product used to treat acute malnutrition in children and is designed to meet the child's total daily energy requirements. RUTF is produced by Nutriset, which was founded in 1986 and is a global leader in the development and production of nutritional products to combat malnutrition. Plumpy'Nut® is based on peanut butter enriched with vitamins and minerals. In addition, RUTF contains vegetable oil, sugar, and skimmed milk powder.

Subsequent research has shown that omega-3 levels remain low in children receiving treatment with RUTF, which has inspired the BrightSAM research team to optimise the nutritional products used in humanitarian operations. BrightSAM has further supplemented the formulation with fish oil (omega-3) and choline.



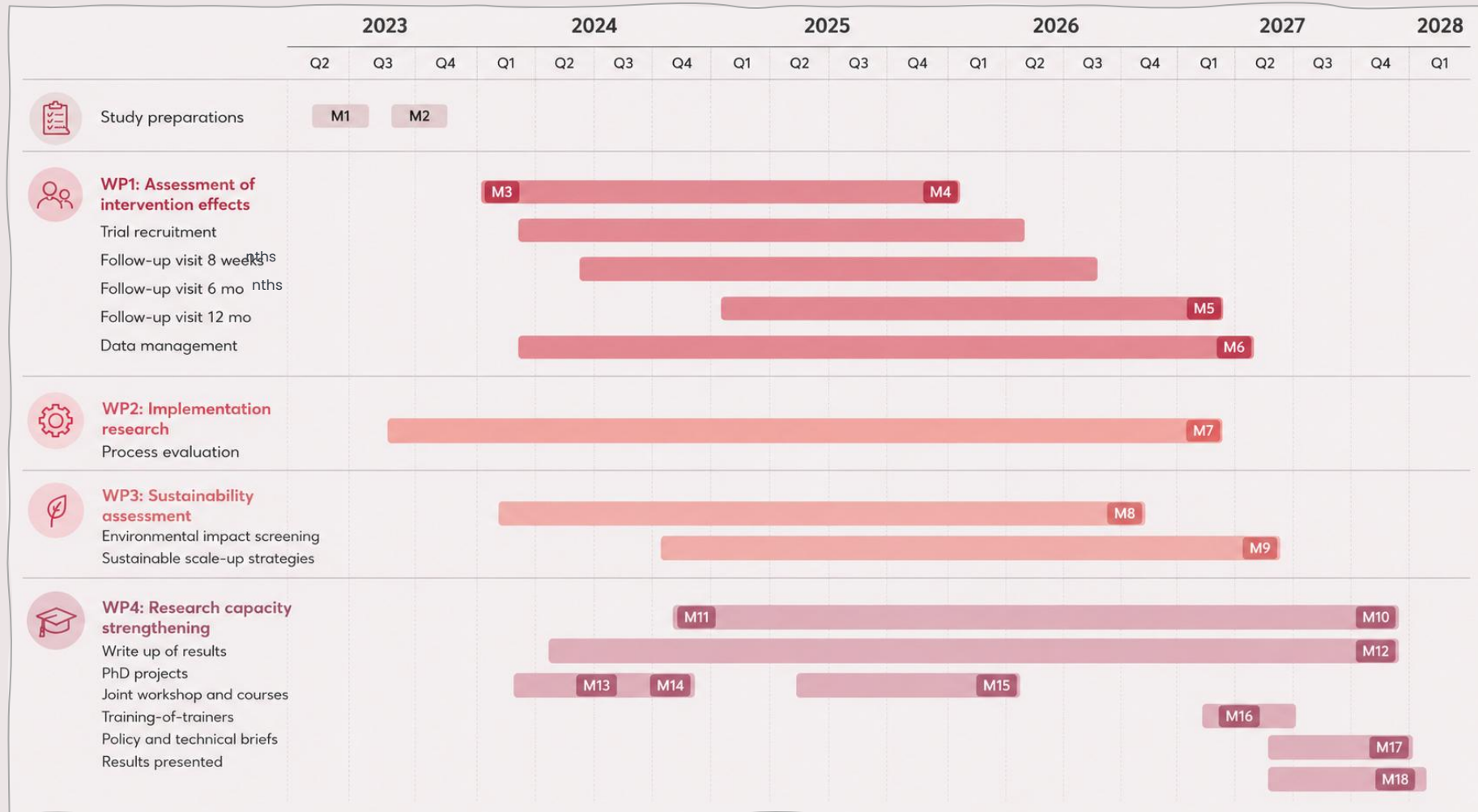
To the left: a sachet of the optimized RUTF used in the study.



To the right: a sachet of the original Plumpy'Nut RUTF.

Timeframe

The BrightSAM research project was initiated in 2023 and is expected to be completed in 2028. In this report, the entire project period is assessed as a single entity, and CO₂e emissions and other environmental impacts are not reported on an annual basis, but for the entire project period.

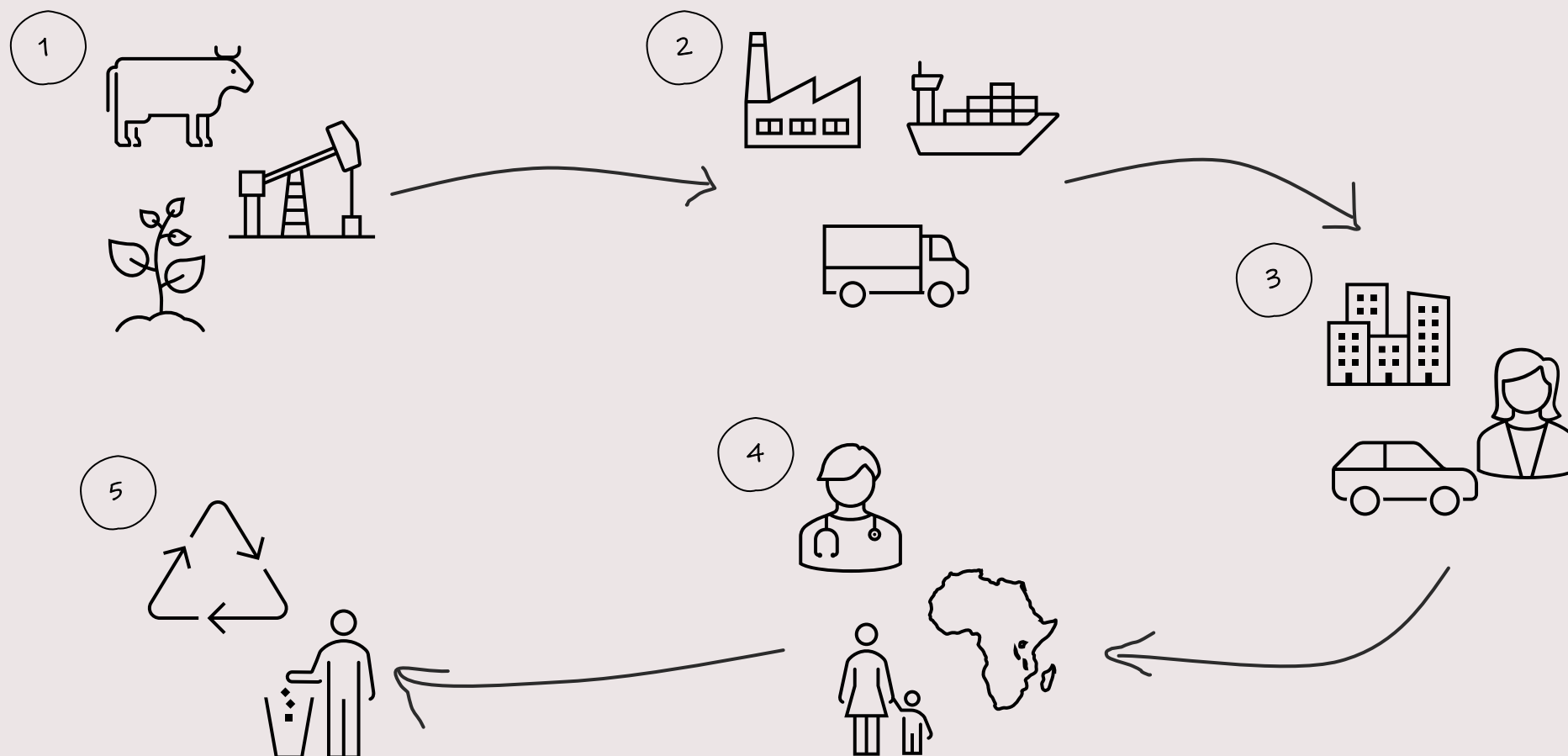


Key Activities and Supply Chain

The extraction and cultivation of raw materials and the production of Plumpy'Nut® are among the most significant activities in the value chain. Key activities related to the product include production, distribution, and storage. Plumpy'Nut® is produced by Nutriset in France and is typically transported by ship. It is then centrally stored at the health centre at NIMR and distributed from there to the various health centres.

Other key activities include the transport of blood and urine samples from the children participating in the research project. These are typically transported by air to primarily European countries, where they are analysed and stored.

Additionally, there is the transport of research staff and local staff. Research staff from countries including Denmark and England visit the project regularly and travel by air, while local transport is carried out by car.



1. Extraction of raw materials (e.g. peanuts, palm oil, minerals, milk/milk powder, oil for plastic packaging and transport), cultivation of ingredients, and medical equipment
2. Production and transport of RUTF to Tanzania
3. Research, reporting, and project management (office operations, staff transport, business travel)
4. Research project in Tanzania, including distribution of RUTF and follow-up of the children, as well as packaging, transport, and buildings (hospitals/trial sites)
5. Waste management of packaging and residual products – i.e. RUTF that has exceeded its shelf life

Purpose of the Sustainability Work

- To identify and understand the challenges and opportunities associated with the project's impact on the most significant sustainability areas. To assess how environmental and climate-related risks and opportunities may affect the study and any future scaling of the treatment.
- To minimize the negative environmental and social impacts of the research project.
- To contribute responsibly to the global SDGs:
 - Goal 2 (Zero Hunger)
 - Goal 3 (Good Health and Well-being)
 - Goal 13 (Climate Action)
- To collect knowledge and data about the project, which can be used to establish systems for evaluating sustainability in a future scaling of the project and humanitarian interventions. This will help ensure a long-term, ethical, and sustainable effort to combat malnutrition.

"We aim for the research project to have the least possible negative impact on the environment and on people. This includes environmental and climate aspects, social conditions, as well as project governance.

Climate change leads, among other things, to increases in temperature, drought, changes in rainfall patterns, and impacts on biodiversity. This may potentially affect the extraction of raw materials and minerals, as well as the cultivation of the ingredients used in RUTF.

For these reasons, among others, we must consider how we ourselves impact our surroundings – even when we do so to protect the lives and quality of life of some of the world's most vulnerable children.

When we understand how the project affects different areas, we are better able to assess what actions we can take."

Mette Frahm Olsen, Project Lead, BrightSAM

Double Materiality Assessment

A double materiality assessment (DMA) has been conducted to identify which topics are most relevant for the BrightSAM project. The method combines two (hence “double”) perspectives:

- **Financial materiality (outside-in perspective):**

An assessment of which sustainability factors may affect the project’s finances, operations, and future development, and the severity of these impacts. This may include operational risks (e.g. supplier issues, logistical challenges, or project delays), regulatory risks (e.g. requirements from authorities, research ethics, or waste management), as well as reputational and financing risks such as donor requirements, partnerships, or public criticism.

- **Impact materiality (inside-out perspective):**

An assessment of which activities within the project have a significant impact on people, the environment, and the climate. Impact materiality is scored based on scale (how severe the impact is on people or the environment), scope (how many people or how large an area is affected), and irremediability (how difficult it is to mitigate the impact).

The overall materiality is assessed based on a combination of financial and impact materiality. All parts of the value chain, both upstream and downstream, are included, and all sustainability areas in accordance with the VSME standard have been reviewed. A topic, such as climate change, is scored from 1 to 5 based on how significant the impact is assessed to be.

A topic is considered material if it has a total score of 3 or above out of a possible 5, in either impact materiality or financial materiality.

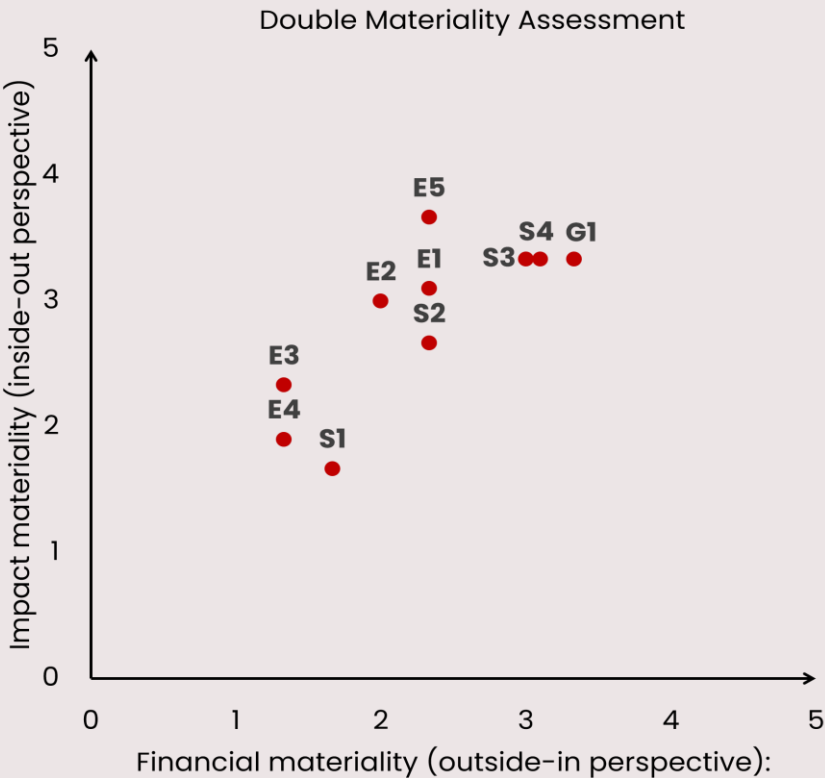
For impacts, risks, and opportunities, both short- and long-term time horizons are considered, as the impacts exist today and are expected to persist for many years.

Stakeholders have not been involved in the double materiality assessment at this stage.

The results of the materiality assessment

By applying a systematic approach to sustainability, a foundation is established for prioritising initiatives and reporting. The focus is directed toward the areas where the project’s impact is greatest and where the most significant risks and opportunities within the relevant sustainability themes are identified. The results of the materiality assessment are presented in the chart below. The chart shows that sustainability areas with an average score of 3 or above are considered material.

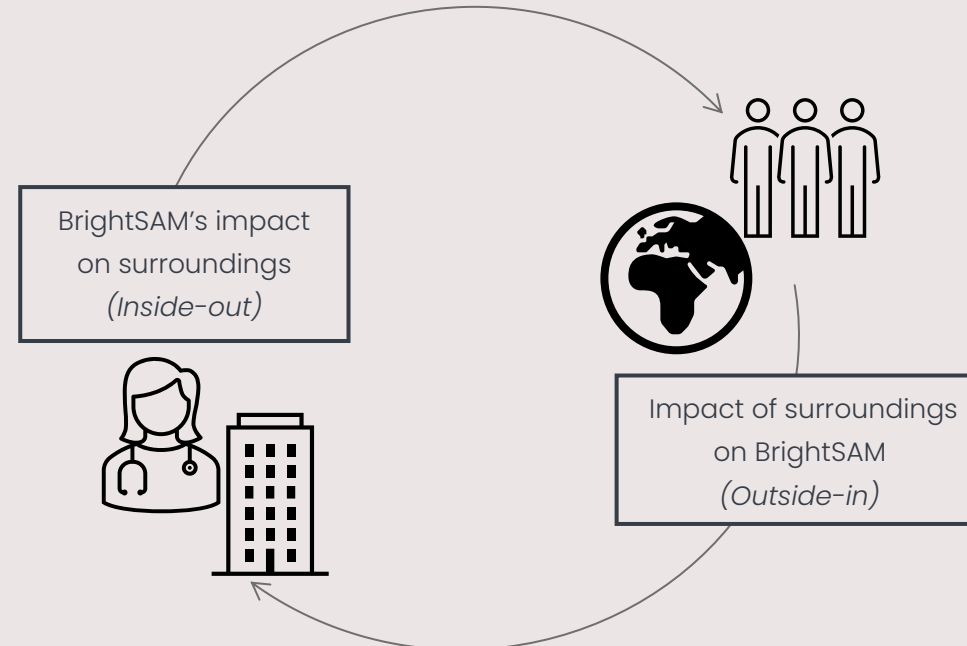
E1	Climate Change
E2	Pollution
E3	Water & Marine Resources
E4	Biodiversity & Ecosystems
E5	Resource Use & Circular Economy
S1	Own Workforce
S2	Workers in Value Chain
S3	Affected Communities
S4	Consumers & End-users
G1	Business Conduct



Background for the Double Materiality Assessment

The background and rationale for the results of the materiality assessment are described below. The assessment is based on the entire value chain, i.e.:

1. All activities that take place prior to the actual implementation of the project at the locations involved. This includes, among other things, the production of Plumpy'Nut®, packaging, medical equipment, and other necessary inputs. BrightSAM has limited control over these activities.
2. The implementation of the research project itself. This includes the treatment of severely acutely malnourished children in Mwanza, the collection of data, as well as subsequent analysis and processing at participating research institutions, and thus covers activities that are directly controlled by BrightSAM.
3. Activities that take place after the completion of the project and which are not under the direct control of BrightSAM. This includes, among other things, waste handling and other downstream processes.



Environment and Climate

Environmental conditions

The most significant environmental factors for the BrightSAM project have been assessed as climate change (CO₂e emissions), pollution (emissions to water, soil, and air), as well as resource use and circular economy. This applies both in the short and long term. These topics will be elaborated on in the following sections.

Climate Change

Climate change represents a significant global challenge with considerable consequences for both people and the environment. Changes in weather patterns, precipitation, and the increased frequency of extreme weather events can reduce local food production and thereby increase the prevalence of malnutrition, including severe acute malnutrition among children.

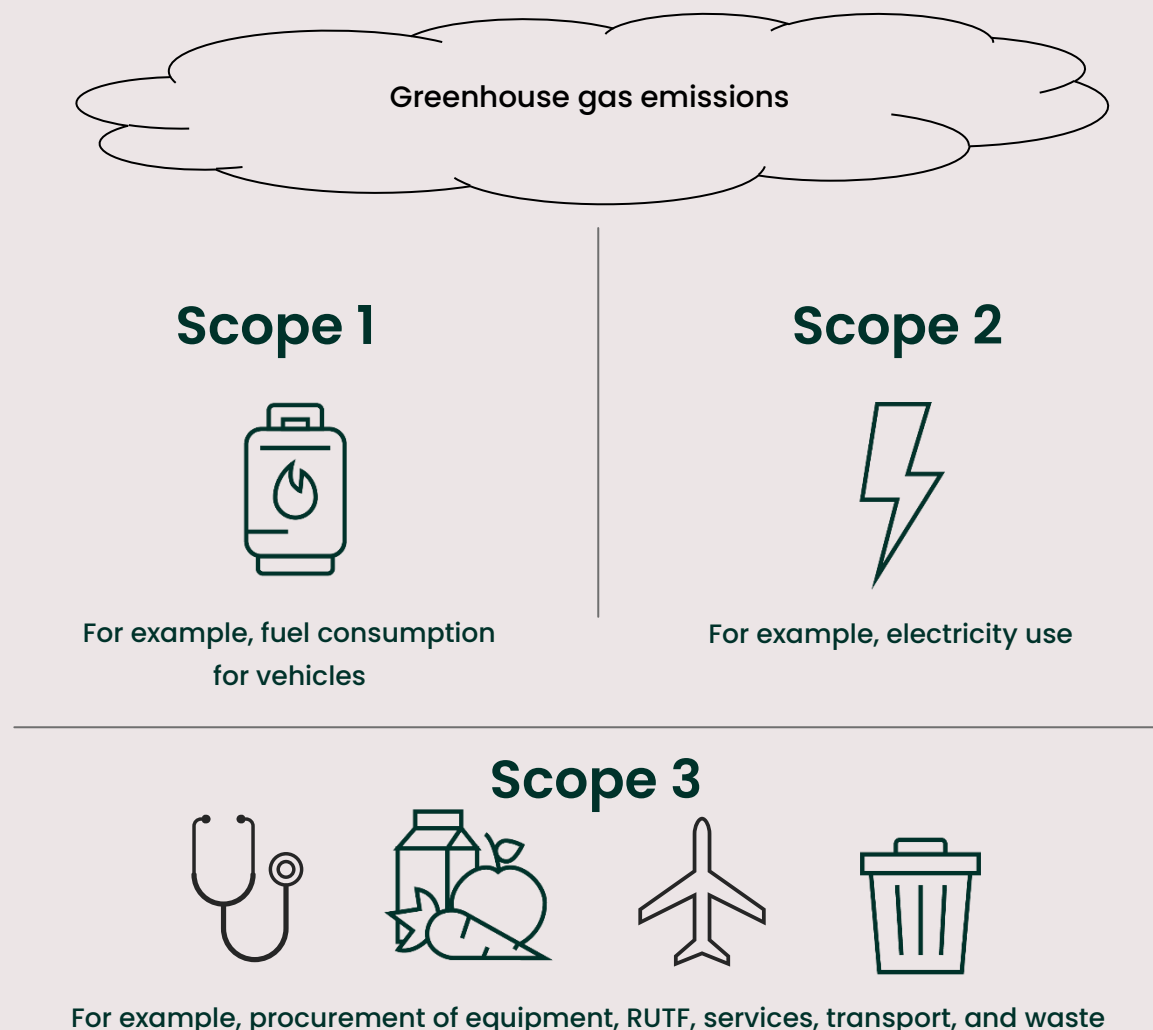
At the same time, climate change may also affect the production of raw materials for RUTF, such as peanuts, milk, and sugar, potentially leading to lower yields, rising raw material prices, and higher production costs. Higher temperatures may further increase the need for cooling and energy consumption, both in production and at health centres, while natural disasters, rising travel costs, and stricter climate requirements for transport may impact logistics, delivery times, and project planning.

To provide an overview of the project's climate impact, a quantification of greenhouse gas emissions from the project's most significant activities has been carried out. The analysis identifies the main sources of emissions and can therefore serve as a basis for future initiatives aimed at reducing the climate footprint and supporting more sustainable solutions in similar projects going forward.

Greenhouse gas emissions

A greenhouse gas emissions inventory has been prepared for the project. This includes emissions from the start of the project in Q3 2023 through to Q1 2028, when the project is expected to be completed. The climate footprint is reported in CO₂ equivalents (CO₂e), meaning that all relevant greenhouse gases have been converted into a single common unit based on their global warming potential.

Emissions are categorized into Scope 1, 2, and 3. Scope 1 includes direct emissions from sources owned or controlled by the project, such as fuel consumption for vehicles financed by the project. Scope 2 covers indirect emissions primarily associated with purchased energy, including electricity. Scope 3 includes all other emissions related to the project. These are allocated across relevant categories and include, among other things, the procurement of RUTF and medical equipment, air travel to Tanzania, transport of blood and urine samples, and waste management.



Results

The table below provides an overview of the estimated greenhouse gas emissions for the entire project period, spanning from the third quarter of 2023 to the first quarter of 2028. The inventory includes all identified and available emission sources for the period 2023–2025, as well as estimated emissions for the remaining project period.

Scope 2 emissions are the energy consumption at the participating health centres in Tanzania. The health centres use electricity from the local power grid, and several sites also have access to electricity from solar installations and/or diesel generators.

Scope 2 emissions constitute only a limited share of the total climate footprint, as only a small proportion of energy consumption can be directly allocated to the project's activities.

CO ₂ e-emissions [tonnes CO ₂ e]	2023–2028*
Scope 1 Co ₂ e-emissions	13.9
Scope 2 Co ₂ e-emissions (location based)	5.8
Scope 2 Co ₂ e-emissions (market based)	5.8
Scope 1+2 Co ₂ e-emissions (location based)	19.7
Scope 1+2 Co ₂ e-emissions (market based)	19.7
Scope 3 Co ₂ e-emissions	207.1

Total CO ₂ e-emissions (location based)	226.8
Total CO ₂ e-emissions (market based)	226.8

CO₂e-intensity is used as a measure of greenhouse gas emissions relative to the project's budget and is calculated as tonnes of CO₂e per million DKK. This indicator enables comparison of climate efficiency across projects of different budget sizes. The BrightSAM project has an estimated CO₂e-intensity of 152.6 tonnes of CO₂e per million USD.

CO₂e-emissions [tonnes CO₂e / million USD]	2023-2028*
CO ₂ e-intensity (Scope 1+2)	13.3
CO ₂ e-intensity (Scope 1+2+3)	152.6

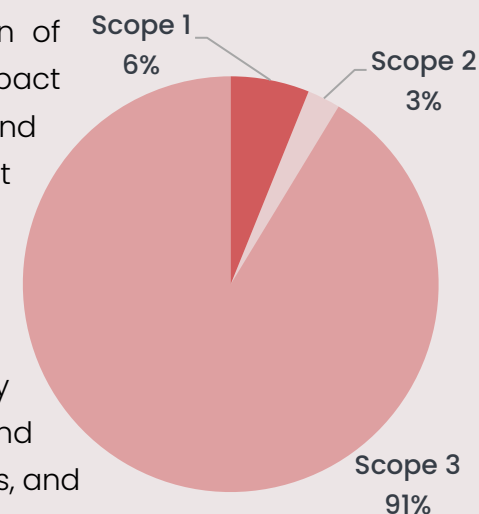
** The project period starts in Q3 2023 and runs until Q1 2028*

The greenhouse gas inventory for the BrightSAM project shows that most emissions originate from Scope 3 emissions, which account for approximately 91% of the project's total climate footprint. The largest single source is the procurement of Ready-to-Use Therapeutic Food (RUTF), which alone accounts for around 37% of total Scope 3 emissions.

Plumpy'Nut® consists of food-based ingredients as well as packaging. Although the production of packaging and international transport contributes to the overall climate footprint, the primary impact originates from the ingredients themselves. For the original Plumpy'Nut®, milk powder, peanut paste, and palm oil account for more than 90% of the product's total climate footprint. Milk powder is the largest contributor, representing approximately 67% of total greenhouse gas emissions, followed by peanut paste and palm oil.^{1,2}

Medical equipment is the second-largest emissions source, accounting for approximately 51 tonnes of CO₂e. This includes disposable supplies for blood and urine sampling, as well as other essential study equipment (Scope 3.1). Additional emissions, about 1 tonne of CO₂e, arise from the maintenance and procurement of equipment needed to implement the study, such as tablets, eye trackers, refrigerators, and tents (Scope 3.2).

The project's direct emissions (Scope 1) account for roughly 6% of the total climate footprint. These stem mainly from the use of Land Rover vehicles for transport between project sites in Tanzania, including the movement of Plumpy'Nut® and blood and urine samples to and from health centres. Minor indirect emissions of around 3 tonnes of CO₂e are also associated with the extraction and production of energy sources, such as diesel for vehicle use (Scope 3.3).

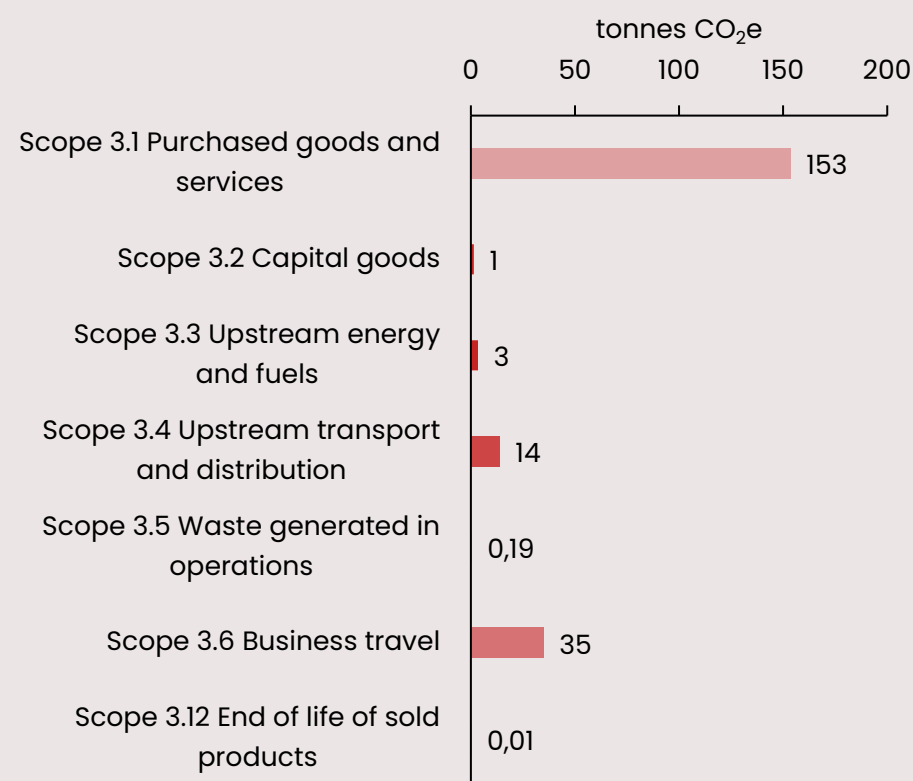


¹ Sévégnès P, Rajput A, Schmid S, (2025), *Life Cycle Assessment of Ready-to-Use-Therapeutic Food (version 1.4, 16.06.2025)*

² Earth action, Climate Action Accelerator, Alima, (2023), *Life Cycle Assessment of a Plumpy'Nut sachet*

* No Life Cycle Assessment has been conducted for the new RUTF used in this project. This means that the new ingredients—fish oil and choline—are not included in the existing LCA

Transport and distribution within the value chain also contribute to the project's climate footprint (Scope 3.4). For example, approximately 14 tonnes of CO₂e are emitted in connection with the transport of Plumpy'Nut® from Nutriset's production facilities in France to Tanzania, as well as during the transport of blood and urine samples to analysis facilities, primarily in Canada and Germany. These transports are carried out using a combination of truck, rail, ship, and air freight. Air travel between Denmark, England, and Tanzania undertaken by project staff also represents a significant source of greenhouse gas emissions, as air transport is emission-intensive and involves long travel distances (Scope 3.6).



During the implementation of the trial, small amounts of waste are generated at the health centres, primarily consisting of single-use medical items such as gloves, as well as equipment used for collecting blood and urine samples. In the greenhouse gas inventory, this waste is assumed to be incinerated at facilities without energy recovery. In addition, empty Plumpy'Nut® packaging is assumed to be disposed of in landfill (Scope 3.12), based on the prevailing waste management practices in the project area.

Plumpy'Nut® has a long shelf life, significantly reducing the risk of food waste. As a result, only very small quantities of the product are expected to be discarded due to expired shelf life. Previous life cycle assessments of Plumpy'Nut® packaging show that incineration with energy recovery can significantly reduce climate impacts compared to incineration without energy recovery. Landfilling contributes relatively modestly to greenhouse gas emissions but may lead to other environmental challenges, such as the leaching of pollutants into the aquatic environment.

Pollution

Pollution has been assessed as a material sustainability issue for the BrightSAM project, as Plumpy'Nut® consists of agricultural raw materials and plastic packaging. The production of these raw materials may lead to soil and water pollution in the countries of origin using pesticides, fertilizers, and chemicals in plastic production.

In Tanzania, local pollution arises from packaging as well as medical and laboratory-related waste. Plastic waste may degrade into microplastics and pose a health risk, particularly in areas with inadequate waste management systems, such as around Lake Victoria.

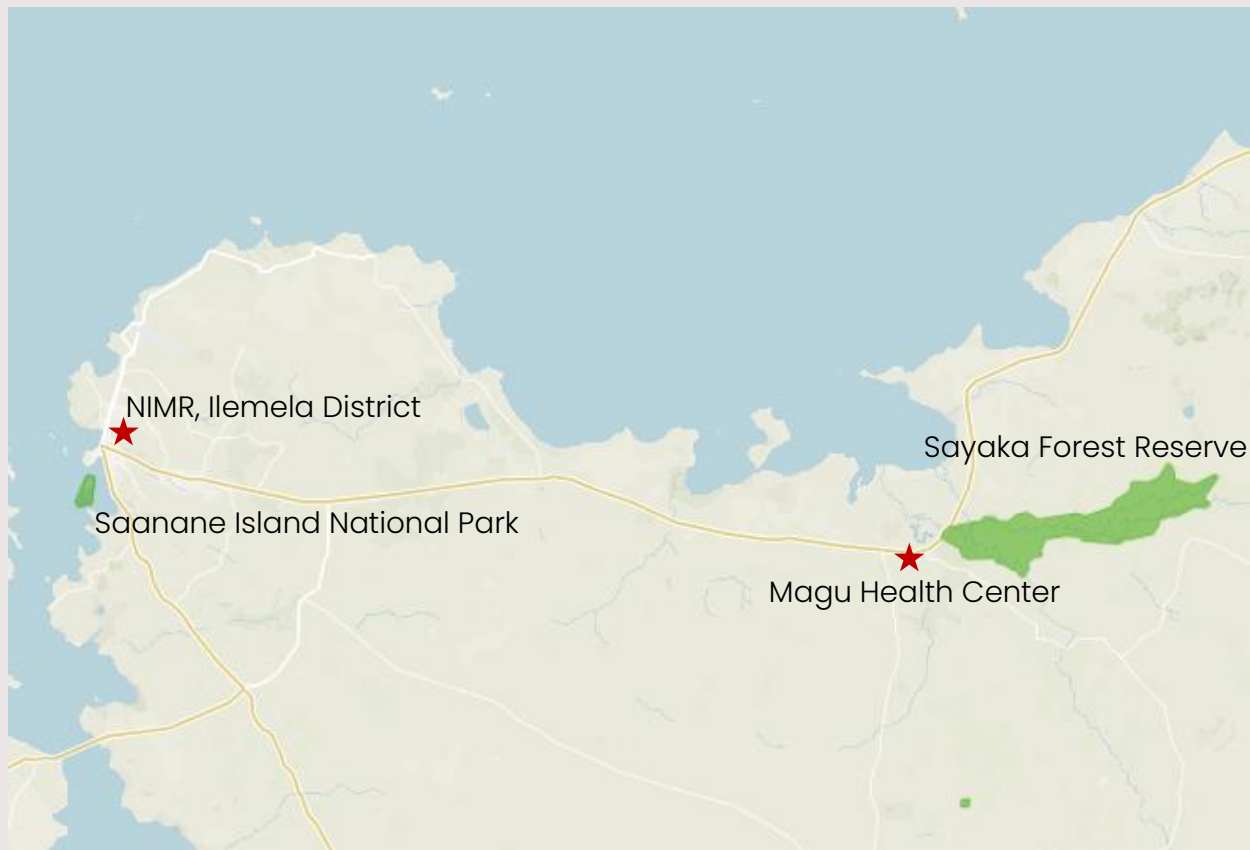
As described above, single-use medical equipment and hazardous waste are incinerated at facilities without energy recovery. In addition, empty Plumpy'Nut® packaging is assumed to be disposed of in landfill.

The project is not required to report pollutant-specific emissions, and no precise data is available for individual pollutants.

The implications of pollution for the project are twofold: on the one hand, stricter environmental requirements for suppliers may increase production costs and thereby the price of Plumpy'Nut®, for example due to impacts on agricultural yields. On the other hand, waste management in Tanzania represents a direct environmental pressure, which may result in increased operational costs and administrative burdens.

Biodiversity

BrightSAM's activities do not take place in or near biodiversity-sensitive areas. Only the NIMR site and Magu Health Centre are located close to such areas. Magu Health Centre is situated a few kilometres from the protected Sayaka area; however, the distance is considered sufficient so that no specific mitigation measures are required. NIMR is located opposite Saanane Island National Park, a biodiversity-sensitive area near Mwanza, but the project is likewise assessed not to have any direct impact on this site.



UNEP-WCMC (2026). Protected Area Profile for United Republic of Tanzania from the World Database on Protected Areas, June 2026. Available at: www.protectedplanet.net

Site	Adress	Postal code	City	Country	Coordinates (geolocation)
Kontor, NIMR (National Institute of Medical Research) Mwanza;	International school road, Isamilo area, P.O. Box 1462	33104	Mwanza	Tanzania	-2.50929 °N, 32.90700 °Ø
Magu Health Center	P.O. Box 30, Ibidanja, Magu, Mjini	33401	Magu, Mwanza Region	Tanzania	-2.59193 °N 33.44522 °Ø

The project's primary impact on biodiversity is indirect and linked to raw material production within the value chain. The production of agricultural inputs such as milk powder, peanuts, and vegetable oils may lead to biodiversity loss through land-use change, monoculture practices, and the use of pesticides and fertilizers.

These impacts occur outside the geographical boundaries of the project itself but are significant from a life-cycle perspective. This issue is also addressed under "circular economy and resource use".

Water

The lack of clean drinking water in Mwanza is primarily due to water stress caused by pollution, insufficient treatment, and inadequate infrastructure, not an actual shortage of water. Lake Victoria is affected by wastewater, waste, and agricultural activities, and the growing population further increases pressure on the water supply. Climate change, with longer periods of drought, exacerbates this situation.

However, BrightSAM’s health centres are primarily supplied through the public water system (MWAUWASA), which treats the water, and they also have access to alternative sources such as water storage tanks. These conditions mean that the project’s operations are only affected to a limited extent directly.

On this basis, water has been assessed as not material in the double materiality analysis, as both the direct environmental impact and the financial risk to the project are limited.

Water withdrawal [m³]	Project period
All locations (estimate based on the below*)	957 m3 *
From locations in water-stressed areas	957 m3 *

* Specific water withdrawal cannot be provided for each individual hospital; however, based on WHO’s: CLASSIFICATION AND MINIMUM STANDARDS FOR EMERGENCY MEDICAL TEAMS³ and estimated numbers of staff and patients per site, a total water withdrawal has been assessed for all units involved in the project in Mwanza.

³ Geneva: World Health Organization, (2021), *Classification and minimum standards for emergency medical teams*. Licence: CC BY-NC-SA 3.0 IGO

Circular Economy, Resource Use and Waste Generation

Circular economy, resource use, and waste generation have been assessed as material sustainability issues for the BrightSAM project. The production of food ingredients, medical equipment, and packaging, on which the BrightSAM project depends, requires significant natural resources and results in substantial environmental impacts. This is particularly the case for raw materials such as milk powder, peanuts, vegetable oils, and sugar. Life cycle assessment (LCA) studies show that the greatest impacts arise from the production of raw materials, including agricultural activities involving the use of fertilisers, pesticides, and energy, which contribute to climate change, eutrophication, and toxicity.

The raw materials are primarily produced in conventional agricultural systems, and circularity is limited, as food ingredients are biologically consumed and therefore cannot be recycled as materials. For plastic packaging and certain medical equipment, recycling is theoretically possible, but in practice limited, especially in humanitarian contexts with inadequate waste management systems. The widespread use of single-use products, including plastic packaging and medical equipment (such as gloves, syringes, and needles), increases both waste volumes and resource consumption. The project also generates potentially hazardous waste (e.g. needles and syringes) that requires special handling.

As described above, medical single-use equipment and hazardous waste are incinerated at facilities without energy recovery. In addition, empty Plumpy'Nut® packaging is assumed to be disposed of in landfill. Both practices result in material loss and a linear resource flow.

There are some positive elements: toys used in treatment are reused and upcycled, and Plumpy'Nut® has a long shelf life, which reduces food waste. The cardboard boxes holding 150 sachets of Plumpy'Nut® are reused as storage or can be folded and used for psychosocial play materials. Furthermore, LCAs of RUTF show that raw materials, particularly milk powder, dominate the environmental impact, while packaging contributes less to the climate footprint, although it may still have significant local environmental effects, such as plastic pollution.

The high level of resource consumption and limited circularity may lead to economic risks in the form of rising raw material prices, increased operational costs, and stricter requirements from donors and regulators, which may affect procurement, supply security, and budgets.

Total Waste Generated During the Project Period		
	Total waste generated [kg]	Waste for reuse or recycling
Non-hazardous waste [kg]		
Plumpy'Nut® packaging (plastic sachets)	782	0
Plumpy'Nut® packaging (cardboard boxes)	920	920
Paper (printables)	5	0
Hazardous waste [kg]		
Single-use medical equipment and packaging*	474	0

* Includes: needles and syringes (sharps), contaminated gloves/wipes, blood sampling materials, and single-use medical items containing bodily fluids (infectious waste and potentially biologically contaminated waste).

**Social
conditions**

Own Workforce

The projects's own workforce has been assessed as not material in the double materiality analysis. The project has limited direct impact and low financial risk in this area, as employment conditions and working terms are largely regulated by established institutional and national frameworks.

The BrightSAM project has an international workforce composition, including employees from Rigshospitalet in Denmark, collaborators from, among others, the United Kingdom, as well as a larger group of locally employed staff in Mwanza, Tanzania. Various forms of employment are used, including permanent positions, temporary contracts, part-time employment, and PhD students. The project does not collect data on gender and ethnicity.

Employment conditions and working terms follow national legislation and public structures, particularly in Tanzania. Employees are remunerated in accordance with applicable wage structures and at a minimum in line with the national minimum wage. Employment conditions are covered by collective arrangements, and employees have access to professional representation.

The project is embedded in an established research environment with a focus on capacity building and skills development. Employees are offered ongoing training in areas such as research ethics, Good Clinical Practice, laboratory methods, and data management. Equal access to development opportunities is sought.

The work involves field activities in demanding contexts, and occupational health and safety are managed in accordance with applicable national and institutional procedures. No workplace accidents or work-related fatalities have been recorded during the reporting period.

The project complies with relevant legislation, including Tanzania's *Employment and Labour Relations Act*.

Contract Type	Unit	During the Project Period
Permanent employment (study nurses)	Number	8
Temporary employment (BG)	Number	2
Part-time employment	Number	34
Study staff (PhD)	Number	3
Total number of employees	Number	47
Employment Contracts by Country		
Denmark	Number	6
United Kingdom	Number	1
Tanzania	Number	40
Total number of employees	Number	47
Health and Safety		
Recorded workplace accidents	Number	0
Work-related fatalities	Number	0
Remuneration		
All employees receive at least the minimum wage	Yes/No	Yes
Collective Agreements		
Employees covered by a collective agreement	%	100
Average Training Hours per Employee		
Male employees	Average hours	Not reported
Female employees	Average hours	Not reported
Other	Average hours	Not reported
Severe Human Rights Violations		
Confirmed cases related to child labour, forced labour, human trafficking, discrimination, accident prevention, or other	Yes/No	No
Awareness of human rights violations in the value chain	Yes/No	No

Workers in the Value Chain

Ingredients and raw materials to produce Plumpy'Nut®, as well as other medical supplies, primarily single-use equipment used in the treatment of severe acute malnutrition, are sourced from a wide range of countries. These include countries such as Indonesia, Malaysia, China, Brazil, Argentina, and Nigeria, as well as European countries such as Germany, France, and Poland.

Working conditions across the entire value chain are not fully known; however, it is important to remain aware that agriculture, food production, and raw material extraction may entail risks related to poor working conditions, low wages, or inadequate safety standards.

Economic risks may arise, for example, if supplier issues lead to reputational risks or requirements to change suppliers. Health crises (e.g. pandemics) may affect factory workers and production. NGOs and customers may also exert pressure to improve working conditions.

In any case, it is essential to have insight into the working conditions within the value chains on which the project depends.



Affected communities

Affected communities have been assessed as a material sustainability topic for the BrightSAM project. The project has a positive impact on surrounding communities, but there is also a potential for negative impacts.

Agriculture and raw material production can have significant implications for local communities, particularly through changes in land use and the consumption of natural resources. For example, large-scale cultivation of a single crop (monoculture) for a project may displace local food production and reduce biodiversity.

The producer of Plumpy'Nut®, Nutriset, has a strategy of using local factories and production, which can generate positive effects. When production takes place locally, jobs are created, and employees develop technical and organisational skills. For example, a factory producing nutritional products such as RUTF may employ local workers while also providing training in food safety and quality control. This can strengthen the local economy and reduce the need for imports.

In the country where the project is implemented, the overall impact on surrounding communities is largely positive. Life-saving food products (such as therapeutic nutritional products) have a significant positive effect by improving health and survival in crisis situations. They can rapidly stabilise malnourished children and reduce mortality.

The project's target group consists of vulnerable populations, such as malnourished children, which places specific demands on the project. BrightSAM has a strong focus on and experience with this target group, as similar studies have previously been conducted (e.g. the TREATFOOD project in Burkina Faso, which examined improved food for children with Moderate Acute Malnutrition), and as the research practice is based on high ethical standards.

The economic risks associated with affected communities are relatively limited; however, important considerations include community acceptance, reputation, and collaboration with local authorities, as well as the risk that natural disasters and economic crises may suddenly increase demand for the project.

Consumers & end-users

In this context, consumers and end-users are the project participants, i.e. children suffering from Severe Acute Malnutrition (SAM), as well as their families. For this reason, consumers and end-users have also been assessed as a material sustainability topic for the BrightSAM project. At the same time, this is an area characterized by strong focus and a high level of professional knowledge and experience.

On this basis, the risk related to patient safety is assessed as low, as quality and treatment pathways are managed systematically and based on evidence. This means that the opportunities significantly outweigh any potential risks.

The project's results have a substantial impact on both access to treatment and the overall health conditions in the affected communities. In addition, the results have direct implications for future funding, as well as for the potential to scale and expand the solution.

Positive results may support broader implementation of effective treatment methods and thereby contribute to improved nutritional status and increased survival among vulnerable populations. At the same time, these populations remain exposed to external pressures such as conflict, famine, and climate change, which increases the need for therapeutic nutritional products and makes such interventions even more critical.

Overall, the project's results are therefore crucial both for future interventions and for the target groups the project aims to support.



Governance

Governance

Governance has been assessed as a material sustainability topic for the BrightSAM project. Governance primarily concerns how the project is managed responsibly and ethically. Within the supply chain for raw materials, packaging, and medical equipment, risks may arise regarding corruption, lack of transparency, and unethical labour conditions. It is therefore essential that the project actively selects suppliers with due care, ensures fair trade principles, and carries out thorough due diligence.

Within clinical studies, governance is likewise a central aspect. The project is responsible for ensuring research integrity, data protection, ethical approvals, and responsible project management.

Collaboration with partners such as UNICEF, the World Food Programme (WFP), and other NGOs involves increasing requirements for transparency, sustainability, and responsible governance. Donors expect documentation of responsible practices, and failure to comply may result in requirements to change suppliers, loss of funding, or termination of partnerships. This is not currently relevant, as the project is already funded, but it may become relevant going forward.

Overall, this means that external requirements, regulations, and expectations play a significant role in shaping how the project operates and impose ongoing demands for a high standard of governance

Convictions for Corruption and Bribery	Unit	During the Project Period
Number of convictions	Number	0
Total amount of fines	Number	0

Targets and Actions

Strategy, targets and Actions for Sustainability

The six sustainability themes, climate change, pollution, resource use and circular economy, workers in the value chain, affected communities, and governance, have been assessed as material for BrightSAM. This is because they either have a significant impact on the environment and people or may influence the project's financial performance and implementation.

These themes therefore form the basis for identifying which initiatives are relevant to pursue and should receive additional focus during the remainder of the project period. The work carried out and the experience gained may be applied in the future if the treatment proves to have the desired effect.

The BrightSAM project is already well underway, and the most important decisions regarding suppliers, products, and solutions have been made. This means that the opportunities to change fundamental aspects of the value chain are limited.

The strategy is therefore to improve what can still be adjusted, thereby reducing unnecessary impacts while also building experience with sustainability in the treatment of malnutrition in different contexts.

A key purpose of assessing and documenting the sustainability of this project is to establish a stronger decision-making basis for future projects, including through enhanced supplier dialogue, increased transparency in the value chain, and the development of more systematic due diligence processes.

Climate Change

The most significant climate impacts in BrightSAM are associated with the production of Plumpy'Nut® and other products used. At the current stage, opportunities to reduce these emissions are limited, and efforts therefore focus on the project's own activities, as well as mapping and documenting the climate footprint:

- The project aims to reduce emissions from travel by limiting non-essential flights, increasing the use of virtual meetings, and, where possible, improving the planning of fieldwork. At the same time, relevant emission sources, including travel and energy consumption, are recorded so that CO₂e emissions within Scope 1, 2, and relevant Scope 3 categories can be calculated.
- Going forward, the project will use existing knowledge, such as LCA data, to better understand where the largest climate impacts occur. This knowledge can be used in dialogue with suppliers and to set more stringent requirements in future projects.

Pollution

Pollution arises both during the extraction and production of materials, where pesticides and fertilizers are significant contributing factors and in waste handling in Tanzania. At the current stage, it is primarily local waste management where the project is implemented, that offers potential for improvement. Relevant initiatives may include:

- Engaging in dialogue with suppliers regarding materials and packaging and establishing stricter requirements in future initiatives.
- The same initiatives as those described under "Resource Use and Circular Economy".

Resource Use and Circular Economy

As most materials have already been procured and used, the potential to reduce resource consumption is limited at this stage. Efforts therefore focus on avoiding unnecessary consumption during the remainder of the project period and on generating knowledge about more circular solutions:

- One improvement opportunity is to map material use and waste streams and identify possibilities for reduction and reuse where practically feasible, including for non-clinical equipment. At the same time, structural barriers to recycling in the local context, where waste is primarily incinerated, are analysed.
- There may also be potential in simple solutions, such as providing incentives to return empty Plumpy'Nut® packaging, if feasible in practice. Utilizing the component of the treatment that involves a locally adapted psychosocial stimulation intervention could help foster meaningful dialogue and provide educational support to families
- Lessons learned will be used to integrate more circular solutions from the outset in future projects.

Affected Communities

The project has a direct and predominantly positive impact on local communities in Tanzania, as it contributes to the treatment of malnourished children. Efforts are therefore focused on maintaining the project's effectiveness, reputation within the community, and overall results:

- Focus is placed on implementing the project responsibly in close collaboration with local health actors and authorities. Continuous dialogue is maintained with relevant stakeholders, and the project documents its health-related outcomes.
- At the same time, potential negative impacts are monitored so they can be addressed if they arise. Experiences and results are collected and may be used to improve future initiatives.

Consumers & End-users

The end-users of the project are children suffering from severe acute malnutrition (SAM). A key risk in the final phase of the project is that logistical challenges, such as changing weather conditions, may hinder access to project participants and thereby affect the implementation of treatment.

For future recipients of the treatment, there is also a risk that insufficient or inconclusive results may delay implementation. This may be due to challenges related to funding or limited capacity-building that do not match a potentially increasing demand for treatment.

- These risks can be mitigated by diversifying procurement across multiple suppliers, maintaining buffer stocks, and being prepared for unforeseen events.
- In addition, robust contingency plans should be established to manage crises and sudden increases in demand, enabling the project to adapt to changing needs

Governance

At this stage, governance primarily concerns ensuring that the project is implemented in a responsible and transparent manner:

- The project complies with applicable requirements for research ethics and data protection and continuously documents decisions and experiences. In relation to suppliers, dialogue and information gathering are conducted, though without the possibility of changing existing agreements.
- Going forward, the project may contribute to developing a more systematic approach to supplier management and due diligence, ensuring that sustainability is better integrated from the outset in future projects.

Overall Assessment

BrightSAM's sustainability approach reflects the advanced stage of project implementation. The primary focus is therefore on establishing a comprehensive overview of the project's impacts, as well as the associated risks and opportunities, followed by targeted action in areas where improvement remains feasible.

Although opportunities to fundamentally alter the value chain are limited, the project retains the capacity to reduce its own impacts, strengthen positive outcomes, and generate valuable insights. This knowledge will support the advancement of sustainability practices in future projects and programmes.

The BrightSAM project has not established dedicated sustainability policies or improvement initiatives prior to or during implementation. Such measures will be developed and implemented to the extent feasible following the preparation of this report



BrightSAM

BRAIN DEVELOPMENT, GROWTH & HEALTH
IN CHILDREN WITH
SEVERE ACUTE MALNUTRITION

This sustainability report is developed in cooperation with Better Green Aps – *Bettergreen.dk*

