Every child has the right to education. But in Afghanistan, girls are being systematically deprived of this fundamental right.

In September 2021, schooling for Afghan girls over 12 was indefinitely postponed, and by December 2022, universities closed their doors to all female students.

Currently, 80 per cent of school-aged Afghan girls and young women – a total of 2.5 million people – are out of school. Almost 30 per cent of girls have never entered primary education.

UNICEF is committed to ensuring that every child – especially girls – in Afghanistan has access to quality education. We will persevere in our advocacy efforts and in scaling up our delivery of supplies for children across all programmes, no matter how hard it gets and for however long it takes.
Contents

4 Foreword

6 Achieving results

8 Procurement overview

10 Commodity groups

12 Services

13 Supplier countries

14 Achieving equitable access to ready-to-use therapeutic food

18 Sourced with care

20 Reimagining supply preparedness through public health emergency archetypes

22 Product innovation prioritizes children’s well-being in public health emergencies

24 Breakthroughs towards equitable access to assistive technologies for children

26 Malaria vaccine: incentivizing markets to produce a new vaccine at scale
**28 Packed with love**

- 30 Packed with love: UNICEF’s Supply Community
- 32 Ready to respond: Supply Community emergency deployments
- 34 Surge deployment stories
- 36 Transport and logistics partners: solidarity in a year of emergencies
- 38 Overview 2022: convening power and strategic collaboration

**40 Delivered with hope**

- 42 Emergency supply response overview 2022
- 44 Supply response to natural disasters and climate-amplified crises
- 46 Responding to super floods in Pakistan
- 47 The Philippines: preparing for recurring climate disasters
- 48 Natural disasters and extreme weather compound Afghanistan’s complex humanitarian crisis
- 50 Rapidly responding to the war in Ukraine
- 52 COVID-19 supplies: 2022 milestones towards equity in procurement and delivery
- 54 Building a future fit for children
- 56 Examples of past and ongoing UNICEF construction projects
- 58 Nigeria and Rwanda: introducing barcodes to strengthen supply chains against fake medicines
- 60 Madagascar: One UN for strong health supply chains

**62 Annexes**

- 65 Annex 1
- 66 Annex 2
- 67 Annex 3A
- 68 Annex 3B
- 69 Annex 4

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Braving the storm, a health worker transports life-saving vaccines in cold boxes to remote island communities in the Sundarbans, India.
Foreword

In 2022, UNICEF Supply Division celebrated 60 years of supply and logistics operations in Denmark; 60 years of sourcing with care, packing with love and delivering with hope. As our operations advanced, our global supply team grew in size and diversity to embody a rich community of people, each with a story to tell and a steadfast commitment to deliver for the world’s children.

What a journey it has been, evolving from a modest packing and shipping operation to a network of Global Supply and Logistics Hubs. In 2022, the value of goods and services procured by UNICEF rose to the highest in its history: $7.383 billion. The magnitude of this was reflected in increased warehouse operations and packing lines; our five Global Supply and Logistics Hubs delivered a record $363 million worth of goods.

New global crises and existing protracted emergencies accounted for much of this increase, with UNICEF delivering $863.9 million worth of supplies to emergencies in 140 countries and areas in 2022.

The escalation of the war in Ukraine triggered a series of acute needs and the first trucks with supplies were dispatched within 24 hours. We simultaneously continued our emergency response in Afghanistan, adapting to the emergence of multiple crises in the country. In Haiti, we addressed risks brought on by conflict and climate-induced disasters, a severe nutrition crisis loomed in the Horn of Africa, and the conflicts in Syria and Yemen did not abate.

As we moved beyond the acute phase of the COVID-19 pandemic response, we reflected on the lessons learned from this global public health emergency and what measures must be put in place to strengthen preparedness for future threats.

Other highlights of our work in 2022, captured in this report, include:

- The story of equitable access to ready-to-use therapeutic food and its importance in curbing the global malnutrition crisis.
- Changing children’s lives through product innovation, including access to assistive
In October 2022, UNICEF Executive Director Catherine Russell and Supply Division Director Etleva Kadilli welcomed Her Royal Highness the Crown Princess of Denmark to UNICEF’s Global Supply and Logistics Hub in Copenhagen. In 1962, the Danish capital became home to UNICEF’s supply function.

I am optimistic about our future. We will have to face an evolving global landscape shaped by converging macro events like climate change, conflict and economic trends. But I believe we have the spirit, know-how and agility to respond to the challenges ahead of us. And the commitment to, and of, our partners to build solutions together will remain more essential than ever. At UNICEF we will continue to leverage our strengths to source with care, pack with love and deliver with hope—for every child.

Etleva Kadilli
Director, UNICEF Supply Division
In southern Mauritania, sisters Aicha and Fatoumata show their long-lasting insecticidal net, which keeps them protected against malaria.
Achieving results

In 2022, UNICEF procured a record $7.383 billion in supplies and services – an expression of our commitment and collaboration towards more equitable access.

Children need supplies to learn, stay healthy and keep safe and warm. Because supplies are fundamental to making children’s rights a reality, every item is sourced with care, packed with love and delivered with hope.
Procurement overview 2022

In 2022, the UNICEF supply and logistics function procured $7.383 billion in goods and services for children in 162 countries and areas.

UNICEF’s total 2022 procurement value represents a 93 per cent increase compared to pre-pandemic global procurement (2019). This growth was partly driven by our supply response to new and protracted emergencies and a 20 per cent increase in services (compared to 2021) – most significantly in construction, cash and voucher assistance, and international freight.

80 per cent of goods procurement was conducted in collaboration with UN agencies and development partners.
$863.9 million

EMERGENCY SUPPLIES
In 2022, UNICEF delivered emergency supplies to 140 countries and areas.

$812.6 million (94 per cent) supported large-scale (Level-2 and Level-3) emergencies, including UNICEF’s COVID-19 pandemic response.*

* Excludes procurement on behalf of the COVAX Facility

$4.488 billion

PROCUREMENT SERVICES
worth of supplies and services delivered to 129 countries.

UNICEF Procurement Services is a strategic programmatic platform that enables governments and other partners to use UNICEF’s procurement scale and decades-long expertise to ensure access to quality products and address critical supply needs.

GLOBAL SUPPLY AND LOGISTICS HUBS

$363 million in goods from UNICEF Global Supply and Logistics Hubs were delivered to 146 countries and areas.

The 2022 total represents a 190 per cent increase from 2021.

In Copenhagen, UNICEF increased operations to seven days a week and added new packing lines to nearly triple the number of kits packed.

In 2022, 409,551 kits were packed and shipped to 77 countries. (Kit types and percentage increase/decrease from 2021 are shown).

- 179,729 medical kits including obstetric surgical kits and midwifery kits. (+340 per cent)
- 108,337 standard classroom kits. (+152 per cent)
- 66,968 WASH & dignity kits. (+386 per cent)
- 26,266 recreation kits. (+40 per cent)
- 19,869 early childhood development kits. (-5 per cent)
- 6,893 country-specific classroom kits. (+64 per cent)

Assembling school-in-a-box kits on the packing line at the UNICEF Global Supply and Logistics Hub in Copenhagen.
Commodity groups

In 2022, UNICEF procured $5.555 billion in goods. Procurement values for the largest commodity groups are listed, along with additional details about deliveries.

$3.736 billion VACCINES/BIOLOGICALS

UNICEF delivered 3.429 billion vaccine doses to 108 countries, including

- 2.451 billion vaccine doses that supported national vaccination targets and outbreak response. Overall, UNICEF procured vaccines to reach 45 per cent of the world’s children under 5 years of age.
- In addition, UNICEF managed the delivery of 977.9 million COVID-19 vaccine doses to 92 countries. Among these, 100.8 million doses to 27 countries were delivered on behalf of the African Union’s African Vaccine Acquisition Trust initiative.
- Across all COVAX Facility partners, including UNICEF, 924.6 million COVID-19 vaccine doses were delivered to 113 countries and areas.

$392.4 million NUTRITION SUPPLIES

Nutrition supplies delivered in 2022 represented a 90 per cent increase from 2021, primarily in ready-to-use therapeutic food (RUTF).

UNICEF delivered

- 68,702 metric tons of RUTF to 64 countries.
- 920 metric tons of therapeutic milk to 60 countries.
- 18.6 million mid-upper arm circumference tapes for children in 54 countries.
- 475.9 million vitamin A capsules to 71 countries.
- 101.1 million deworming tablets to 49 countries.
- 612.7 million sachets of multiple micronutrient powder to 42 countries.
- 482.0 million iron folic acid tablets to 40 countries.

For supplies delivered in the context of the COVID-19 pandemic in 2022, please see p. 53

$322.1 million MEDICAL SUPPLIES AND EQUIPMENT including COVID-19 non-immunization supplies.

UNICEF delivered

- 2.4 billion syringes for immunization (2.1 billion auto-disable syringes, 284 million reuse prevention syringes)
- 22.1 million safety boxes for used needles and syringes.
- 15 million malaria rapid diagnostic tests to 17 countries.
- 3.7 million HIV rapid diagnostic tests to 27 countries. Of this total, 1.3 million were HIV/syphilis combo diagnostics tests to 13 countries, and 80,400 were HIV self-tests to 6 countries.
- 179,729 medical kits from Global Supply and Logistics Hubs to 63 countries.

11-month-old Mariam receives her pentavalent vaccine at a Family Medicine Centre in Bishkek, Kyrgyzstan.
$188.7 million
WATER AND SANITATION SUPPLIES
UNICEF delivered
- 2.191 billion water purification tablets – enough to treat 62 billion litres of water – to 48 countries.
- 57.9 million chlorination/flocculation sachets – an amount that could treat 579 million litres of water – to 21 countries.
- 12.3 million sanitary pads in packs.

$164.6 million
COLD CHAIN EQUIPMENT
$84.8 million in solar-powered systems delivered to 63 countries.
In addition, in-country logistics and installation services related to cold chain equipment amounted to $22 million. UNICEF is the procurement agency for the Cold Chain Equipment Optimization Platform (CCEOP), and, in 2022, installed 10,486 fridges at the health facility level in 26 countries.
UNICEF also delivered
- 554 ultra-low temperature freezers for mRNA vaccine storage to 41 countries.
- Electric mains-powered cold chain equipment with 4.2 million litres of storage capacity to 85 countries.

$149 million
PHARMACEUTICALS
UNICEF delivered
- 221 million dispersible amoxicillin tablets to 41 countries – equivalent to 22.1 million pneumonia treatments for children under 5 years old.
- 1.60 million packs of antiretroviral medicine to 34 countries – enough to provide 27,601 adults and 70,568 children with one year of first-line therapy.
- 88.8 million cotrimoxazole tablets to treat bacterial infections, such as pneumonia and bronchitis, to 21 countries.
- 24.2 million artemisinin-based combination therapy malaria treatments to 25 countries.
- 47.0 million oral rehydration salts (ORS) sachets to 57 countries. Of this total, 11.3 million sachets were ORS and zinc co-packs delivered to 23 countries.

$10.7 million courses of sulfadoxine-pyrimethamine to 15 countries. This quantity could provide malaria protection to 3.56 million pregnant women who would be provided chemoprevention during their three antenatal care visits.

$134.3 million
EDUCATION SUPPLIES
UNICEF delivered education supplies to 112 countries, including
- 162,830 education kits from Global Supply and Logistics Hubs to 52 countries.
- $13.4 million worth of IT equipment (e.g., computers, laptops, tablets) to enable children to continue learning in Moldova, Nigeria, Poland, and Ukraine.

“...For children caught in conflict and facing so much uncertainty, UNICEF’s early childhood development kits provide puzzles and games that help create a safe space where children can engage with others and have some form of normalcy. Toys such as puppets help give them the confidence to talk about their feelings after a traumatic experience.”

Marieme Diallo Touré
Technical Specialist, Water, Sanitation and Education Centre, UNICEF Supply Division

$54.9 million
SHELTER/FIELD EQUIPMENT
UNICEF delivered
- 7,001 high-performance tents to 48 countries.
- 203 generator sets to Ukraine.

$38.5 million
BED NETS/INSECTICIDES
UNICEF delivered 38.18 million long-lasting insecticidal nets to 30 countries.
Services

In 2022, UNICEF procured $1.828 billion in services—an increase of 20 per cent compared to 2021. The six largest service categories account for 66 per cent of the total value of contracting for services.

**$300 million**
CONSTRUCTION SERVICES

- The value of construction services increased by over 16 per cent compared to 2021.
- UNICEF supports programmes with tailored construction solutions to meet the needs of children, including education, nutrition, health and health emergencies, immunization, and WASH.
- Middle East and North Africa and Eastern and Southern Africa regions accounted for the highest procurement of construction services, worth $135.9 million and $56.5 million, respectively.

**$211.3 million**
CASH AND VOUCHER ASSISTANCE

Cash and voucher assistance enables families to make their own choices in buying goods and services available in the local market. The value of cash and voucher assistance support increased by 22 per cent from 2021. Cash and voucher assistance supported families in 20 countries, including South Sudan, Ukraine and Zimbabwe.

**$190.9 million**
LOCAL TECHNICAL WORKFORCE FOR PROGRAMME SUPPORT

Human resources contracted to share expertise with partner governments, implement social mobilization campaigns and provide temporary labour for programmes.

**$124.4 million**
IN-COUNTRY LOGISTICS AND WAREHOUSING SERVICES

Support to programmes includes road cargo transport, storage, local aircraft charters, customs brokerage and clearance services and warehousing. The 2022 total represents a 36 per cent increase from 2021 and supported 92 countries.

**$117 million**
RESEARCH, SURVEYS, MONITORING AND EVALUATION SERVICES

Includes programmatic research, surveys, market and supply chain analyses, and monitoring and evaluation of programme implementation.

Students look out the window of their soon-to-be-expanded school in East Nile, Sudan.
Supplier countries

Countries from which UNICEF procurement exceeded $10 million, based on country of invoice (in $ millions)

- Over $200 million: Belgium ($878.5), United Kingdom ($792.6), United States ($589.2), India ($381.8), Denmark ($270.7), India ($251.3), China ($225.9), Switzerland ($218.4)
- $100 million – $200 million: Indonesia ($138.4), Pakistan ($132.2), Republic of Korea ($116.7), Lebanon ($114.3)
- $80 million – $100 million: Kenya ($94.7), United Arab Emirates ($89.9), Luxembourg ($85.2), Afghanistan ($82.2), Singapore ($80.9)
- $60 million – $80 million: Ukraine ($74.2), Bangladesh ($70.0), Germany ($69.5), Netherlands ($65.5), Nigeria ($63.7), South Sudan ($62.4), Ethiopia ($61.6)
- $40 million – $60 million: Türkiye ($56.5), Jordan ($46.7), Russian Federation ($46.5), Sudan ($46.0), South Africa ($44.5), Niger ($41.9)
- $20 million – $40 million: Democratic Republic of the Congo ($33.7), Uganda ($33.0), Italy ($32.4), Burkina Faso ($26.8), Somalia ($25.5), Madagascar ($25.4), Spain ($25.3), Iraq ($22.2), Brazil ($21.1), Chad ($20.5)
- $15 million – $20 million: Mozambique ($18.4), Greece ($18.0), Cyprus ($16.9), Japan ($16.7), Burundi ($15.9)
- $10 million – $15 million: State of Palestine ($14.9), Côte d’Ivoire ($14.8), Ireland ($14.3), Poland ($13.8), Austria ($13.8), Haiti ($12.5), Mali ($12.5), Sweden ($12.5), Malawi ($12.1), Myanmar ($12.1), Zimbabwe ($11.2), Colombia ($10.5), Syrian Arab Republic ($10.0)

Regions where supplies were used

- 48% Sub-Saharan Africa
- 36% Asia
- 8% Middle East and North Africa
- 6% Central and Eastern Europe
- 2% Latin America and the Caribbean
Achieving equitable access to ready-to-use therapeutic food

At current production levels of ready-to-use therapeutic food (RUTF), UNICEF and the humanitarian community can reach only 1 child in 3 who need RUTF to treat severe acute malnutrition.

In 2022, for the fourth consecutive year, the number of people experiencing acute food insecurity and requiring urgent food, nutrition and livelihood assistance increased. Over a quarter of a billion people faced acute hunger and people in seven countries were on the brink of starvation.

Globally, 1 in 5 deaths among children under the age of 5 is attributed to severe wasting – making it one of the top threats to child survival. Ready-to-use therapeutic food (RUTF) is a highly effective treatment to treat severe wasting in children under 5. The total cost to treat a child with RUTF is about $100.

UNICEF procures around 80 per cent of the global supply of RUTF and is the provider of first resort for children affected by humanitarian crises. Ramping up the global availability of RUTF is essential to achieving equitable access.

CHILDREN SUFFERING FROM WASTING
Globally, there are an estimated 45.4 million children under 5 suffering from wasting. Two-thirds live in South Asia, and more than a quarter live in Africa.

CHILDREN WITH SEVERE WASTING
13.6 million of these children suffer from severe wasting – the most extreme form of malnutrition. They require specialized therapeutic feeding care.

CHILDREN REACHED WITH RUTF
In 2022, UNICEF delivered RUTF suitable to treat 4.8 million children.

1 metric ton of RUTF contains 72 cartons.
1 carton contains 150 sachets (92 grams each)
A child with severe wasting needs 3 sachets a day. A carton is enough to treat one child for 6 to 8 weeks.
UNICEF’S RUTF SUPPLIER BASE

Since RUTF became commercially available in the early 2000s, UNICEF has embarked on a mission to increase its accessibility and affordability through market-shaping strategies, innovative financing solutions, supply chain reinforcement and collaborative partnerships.

2006 - 2015

In the early 2000s, UNICEF partnered with the only global RUTF supplier to establish local franchises across Africa, the Americas, and Asia. In addition, UNICEF invited independent quality suppliers, particularly in programme countries, to enter the market.

2016

Half of UNICEF’s RUTF procurement was sourced from programme countries.

2018 - 2021

UNICEF procures 80% of the global supply of RUTF, with an average procurement of 50,000 metric tons (MT) per year for the last four years. This amount is suitable to treat 3.6 million children under 5 years of age.

2020 - 2021

The diversified supplier base proved critically useful when the COVID-19 pandemic disrupted the global freight industry. UNICEF’s average annual delivery remained the same as in pre-pandemic years.

2022

UNICEF now procures RUTF from 21 suppliers, of which 90 per cent are located closer to where children require treatment. Over 64 per cent of the RUTF was sourced from programme countries.

A surge in donor support allowed UNICEF to make advance payments to RUTF manufacturers for 121,000 MT to be delivered over 2022 and 2023.

In 2022, production levels achieved by RUTF manufacturers enabled UNICEF to deliver 68,702 MT to 64 countries.

DECLINING WEIGHTED AVERAGE PRICE

Over two decades, the steady decline of weighted average price was achieved through economies of scale, a broader supplier base and increased competition.

2006 - 2021

The weighted average price (WAP) of RUTF declined by 21 per cent from $52.00 per carton in 2006 to $41.00 per carton in 2021.

2021 - 2022

Between 2021 and 2022, higher costs of raw ingredients, packaging, energy and freight drove up costs by 9 per cent.

2022

In 2022, for the first time, the WAP for RUTF from suppliers in programme countries dropped below that of European suppliers: Among Asian suppliers - 13 per cent less and among African suppliers - 7 per cent less.
2022 NUTRITION CRISIS AND UNICEF’S RESPONSE

Child malnutrition is rapidly increasing in areas affected by conflict and intensified climate shocks.

In countries continents away, the escalation of the war in Ukraine was experienced as deepening food insecurity. As countries emerged from lockdowns, skyrocketing energy costs and inflation increased the vulnerability of families of children.

UNICEF issues a Child Alert urging governments and donors for additional investments to reduce child death rates through effective treatments like RUTF.

USAID announces a $200 million contribution to UNICEF to combat wasting, with $120 million for RUTF procurement and $80 million for implementation. An additional $50 million was pledged by private philanthropies.

HORN OF AFRICA DROUGHT CRISIS

The Horn of Africa is experiencing the longest drought in recent history, following four consecutive failed rainy seasons. Parts of Ethiopia, Kenya and Somalia are among the worst affected. At the end of 2022, the UN estimated that 36.4 million people (19.9 million children) were affected by the drought, and 21.7 million (10.8 million children) needed food assistance. UNICEF estimated that up to 5.7 million children in the region required treatment for wasting, and 1.8 million were experiencing severe wasting – the deadliest form of malnutrition. In 2022, nearly 39 per cent of the UNICEF’s total RUTF delivery went to the Horn of Africa.

The situation in the Horn of Africa remains critical into 2023. In Somalia, for example, the Food and Nutrition Analysis Unit estimates that between April and June 2023, a total of 8.3 million people are likely to face a food security crisis – including 1.8 million children. And of these, half a million with severe wasting will require care and treatment.

Avoiding RUTF stock out in Somalia

UNICEF is the primary source of RUTF for Somalia’s Ministry of Health and implementing partners. In 2022, UNICEF supported partners in delivering over 350,000 cartons of RUTF to the country’s Outpatient Therapeutic Programs and Stabilization Centres providing treatment for severe wasting in children under 5, and to eight inaccessible districts for the treatment of moderate wasting. A partner agreement with
UNICEF provides advance payments for 121,000 MT of RUTF for delivery in 2022 and 2023. Advance payments are critical for manufacturers to buy primary ingredients: powdered milk, peanuts, butter, vegetable oil, sugar, and a mix of vitamins and minerals, and to maximize RUTF production lines.

In collaboration with USAID and WFP, UNICEF convenes 130 participants from partner agencies and 20 manufacturers to identify solutions to increase the availability of lipid-based nutritional supplements and RUTF.

$280 million is pledged by Canada, Ireland, the Netherlands, and the United Kingdom, along with the Bill & Melinda Gates Foundation (BMGF), the Children’s Investment Fund Foundation, among other philanthropies and private donors at the 77th annual United Nations General Assembly to address the growing food crisis.

In collaboration with USAID, UNICEF convenes 130 participants from partner agencies and 20 manufacturers to identify solutions to increase the availability of lipid-based nutritional supplements and RUTF.

UNICEF establishes the RUTF Window, an innovative financing facility to support RUTF manufacturers in ramping up production. This facility is operated in conjunction with the Vaccine Independence Initiative (VII) and backed by funds from the VII, the BMGF, and UNICEF USA. The VII is a prefinancing tool managed by UNICEF that helps countries to bridge temporary short-term funding gaps which could lead to shortages and stock outs. In 2022, the VII secured access to and accelerated the procurement of 2.5 million cartons of RUTF.

In August, UNICEF provides advance payments for 121,000 MT of RUTF for delivery in 2022 and 2023. Advance payments are critical for manufacturers to buy primary ingredients: powdered milk, peanuts, butter, vegetable oil, sugar, and a mix of vitamins and minerals, and to maximize RUTF production lines.

WFP enabled treatment to prevent a further 35,000 children from slipping into severe wasting.

In 2022, despite limitations in the global supply of RUTF and the doubling of the number of children needing treatment, Somalia did not experience supply pipeline breaks and was able to treat 464,616 children under 5 years old. UNICEF supply planning and collaboration with the Ministry of Health and partners were critical.

In 2022, UNICEF anticipated a worsening nutrition crisis and applied adaptive scenario-based planning to procure and pre-position adequate essential nutrition commodities like RUTF. These scenarios considered various assumptions such as targeted caseloads increasing by 30-, 50-, and 100 per cent. To ensure a continuous nutrition supply, UNICEF increased the buffer stocks in Mogadishu from 3 months to 6 months, taking into account suppliers’ average delivery lead time.

UNICEF introduced a nutritional supply guideline and simplified the supply request process, which included a 10 per cent buffer stock for partners. This enabled partners to reach a larger caseload than initially anticipated. All UNICEF implementing partners were oriented on how to adopt agile planning when calculating supply requests for the following quarter. UNICEF also developed and disseminated guidelines for RUTF pipeline management for all Nutrition Cluster partners.

The guidelines enhance accountability through a monthly online stock status report by implementing partners which can be triangulated with partner reports.

This proactive measure helped UNICEF to keep donors informed about the RUTF pipeline through regular updates on the status of RUTF stocks.

UNICEF will continue to monitor the RUTF pipeline at national and subnational levels to protect the stock levels and ensure children in need have adequate access. Tracking at site level has been enhanced through the deployment of field monitors in every state. A monthly field checklist has been developed, which incorporates a comprehensive stock report, and end-user monitoring of RUTF through an exit survey with a sampling of mothers and children. Findings will be analyzed and shared with donors through quarterly reports and other coordination platforms.

In Somalia, UNICEF’s Nutrition and Supply and Logistics teams collaborated with the Logistics Cluster and WFP to save costs in air charters and road convoys to deliver RUTF and other critical nutrition supplies to hard-to-reach areas.

Close coordination between UNICEF at the country level and Supply Division ensures an uninterrupted nutrition supply chain. Looking forward to 2023, the level of RUTF stock is sufficient to cover the projected caseloads up until the first quarter of 2024.
UNICEF’s Global Supply and Logistics Hub in Copenhagen is home to strategic-level thinking and collaboration to ensure supplies and services are on hand whenever and wherever they are needed.

Progress was achieved through partnerships with other organizations and industry and with the insights of colleagues who work in countries where we deliver.
In Zanzibar, Tanzania, community health volunteers implement polio vaccination campaigns supported by UNICEF and partners of the Global Polio Eradication Initiative.
Reimagining supply preparedness through public health emergency archetypes

In 2022, UNICEF pioneered the development of public health emergency archetypes to guide decision-making on R&D and other investments around supplies that prevent and treat infectious diseases. The archetype framework serves as a common platform to identify market challenges that impede low- and middle-income countries from accessing vital life-saving products during public health emergencies and helps identify supply solutions to close equity gaps.

The COVID-19 pandemic highlighted the crucial role of vaccines, therapeutics and diagnostic tools in mitigating the deadliest impact of the virus and paving the way for countries to recover from the social and economic consequences of prolonged lockdowns.

The coordination and collaboration across the international health community, donors, and industry resulted in the rapid development and availability of new COVID-19 vaccines, treatments, and diagnostics and the massive scale-up of oxygen concentrators and other preventive measures such as hand sanitizer and personal protective equipment.

In 2022, countries continued efforts to end the ongoing pandemic with health supplies and tools that are now widely available.

However, many low- and middle-income countries also struggled with health supply challenges in the face of new and sometimes intensified outbreaks of other serious infectious diseases like cholera, Ebola, mpox and polio, among others.

The absence of equitable access is most acute when vaccines, treatments and diagnostics to protect populations are either not yet developed, unaffordable, or unavailable in the quantities needed.

The archetype framework categorizes public health emergencies according to two main considerations:

1. The type of infectious disease outbreak, based on the potential size of the market for life-saving products.

For example, a global pandemic will require an exponentially greater volume of health supplies compared to a disease outbreak that affects a small number of countries or a specific demographic of the population. The role of high-income countries also needs to be considered, especially if an anticipated scramble for products in limited supply pushes up prices and reduces equitable access.

2. The ready availability of health products such as vaccines, treatments and diagnostics to prevent or respond to specific infectious diseases.

Much more intensive investments will be needed to bring products to market if they are still at early-stage R&D. For example, if the demand for a disease-specific vaccine or treatment is expected to decrease notably once the health crisis is brought under control, incentives may have to be considered to ensure products remain available on the market for the next time they are needed.

Accelerating R&D or scaling up the production of health products requires global health partners, donors, and industry to work together to activate market strategies (e.g., demand pooling, pooled procurement, technology transfer to new manufacturers, expedited regulatory approvals, among others) and investments (e.g., R&D push funding, among others).

The framework offers a systematic approach to selecting and applying supply levers that would be most effective and appropriate, according to the public health emergency archetype.
Effective medical supplies need to be brought into existence.

Effective medical supplies need to be made more available and accessible for low- and middle-income countries.

Low- and middle-income countries are in competition with high-income countries in the face of high demand for products.

Uncertainty in demand for products across volume, time and countries needs to be mitigated.

Demand for products is extremely low and the weak commercial case for product development needs to be overcome.

Examples of the current availability of health products for different public health emergencies:

**Type of disease outbreaks**
- Rare and historically small
- More frequent/predictable
- With pandemic potential

**R&D gap to licensed products**
- Early-stage R&D
- Later-stage clinical trials
- Licensed

**Vaccines and treatments for new variants of COVID-19**

**Vaccines and treatments for yellow fever, dengue, chikungunya virus**

**Vaccine for chikungunya virus**

**Vaccines and treatments for new variants of COVID-19**

**Vaccines and treatment for cholera and vaccines for dengue, yellow fever, and Japanese encephalitis**

**Vaccines for Nipah virus and Marburg virus and treatments for Ebola**

**Vaccines for Sudan Ebola, Zika virus, MERS, and Lassa fever**

**Vaccines for mpox and Zaire Ebola vaccine**
Product innovation prioritizes children’s well-being in public health emergencies

The COVID-19 pandemic showed how suddenly and quickly a public health emergency can overwhelm health systems and leave them unable to cope with the influx of patients needing essential primary care. In countries where health systems are already fragile, the rapid escalation of an infectious disease outbreak disproportionately increases the vulnerability of children and families.

The development of a rapidly deployable health emergency facility (HEF) began in 2020. In 2022, UNICEF, alongside WHO and Médecins Sans Frontières, went to Uganda to test how well the HEF performed in facilitating screening, isolation and treatment during the country’s worst Ebola virus disease outbreak in two decades.

Role of partners in HEF design

- **Lead the implementation of the HEF in health emergencies.**
- **Provide expertise in emergency medical care.**
- **Ensure compatibility with normative guidance on public health and epidemiology.**
- **Procure products available through the UNICEF Supply Catalogue (e.g., high-performance tents, early childhood development kits, recreation kits, etc.).**
- **Lead the design of the HEF facilities together with Techne Network.**

*“The 2022 Ebola outbreak provided an opportunity to demonstrate the versatility of UNICEF high-performance tents in a health emergency facility context. Within hours, we set up tents in treatment units in Ebola epicentres, isolating suspected cases while paying special attention to the well-being of children and families.”*

Tom Akoko
Supply Assistant, UNICEF Uganda Country Office
Product innovation prioritizes children’s well-being in public health emergencies

UNICEF is paying special attention to the design of the inside of the tent where children – whether alone or with their family – have to spend extended periods in isolation.

In Uganda, partners set out these tents in an arrangement that enabled the safe flow of patients and health workers and provided designated areas for staff (low risk area) and patients (high risk area). The positioning of tents that made up the HEF maximized safe zones that allow visitors to communicate with patients (area) at safe distances.

The building block of the HEF blueprint is UNICEF’s 24 m² high-performance tent, which has proved to be durable in extreme climates, easily transportable to hard-to-reach locations, and features sustainable add-ons such as solar panels.

The field test in Uganda highlighted the importance of providing a designated area for recovering children to play together (area) when they started feeling better.

The Uganda experience also showed that the windows and doors of the tents needed to be positioned to capture the intake of fresh air and allow regulation of interior temperatures, and for all isolating patients to have convenient access to designated toilets and showers and outside spaces (area).

HEF partners co-create with industry to develop an innovative isolation liner (in yellow in the model) that divides the tent interior into two separate isolation units (A/B). This isolation liner includes a sealed window (4) that allows health personnel to observe their patients and provide mental health support and companionship without the risk of infection.

The Uganda experience inspired the idea of making the middle wall removable (1) – to create a larger isolation unit in case several family members were admitted to the HEF for treatment at the same time. This larger space would also be much more suitable as a delivery room for isolating pregnant women.

Furniture will be carefully considered, for example, beds for young children need safety rails (2). Toys and games for children isolating alone need to cater to individual play (e.g., puzzles, books) rather than social interaction (3).
Breakthroughs towards equitable access to assistive technologies for children

Only 1 in 10 of the world’s 240 million children with disabilities has access to assistive technologies that enable them to learn, play, and fully participate in activities with their family and community.

For children with disabilities in low- and middle-income countries (LMICs), the high cost of available assistive technologies (ATs), along with the lack of trained specialists in AT-related professions, often puts needed devices out of reach.

UNICEF’s Product Innovation Centre, at the Global Supply and Logistics Hub in Copenhagen, is home to UNICEF-led efforts and partnerships around product innovation – including increasing access to appropriate ATs, especially in LMICs and in emergencies.

In 2022, UNICEF reduced the cost of high-quality ATs, such as hearing aids, by as much as 94 per cent. This significant breakthrough in pricing durable and appropriate products was the outcome of UNICEF’s transparent consultations with industry and strategic engagement with leading AT suppliers – and a relentless focus on minimum product specifications for high quality. A combined UNICEF-WHO global tender resulted in long-term agreements (LTAs) with the most competitive suppliers of hearing aids, wheelchairs and wheelchair cushions.

Eight new wheelchairs and five different hearing aids are among the 24 new ATs that are now available through UNICEF’s Supply Catalogue. However, access alone is not enough: sometimes, an unsuitable product is worse than having none. For example, an ill-fitting wheelchair can cause painful pressure sores and lasting postural damage. To help

11-year-old Margaryta can now move independently with her appropriately-sized wheelchair and cushion.
AFFORDABLE CHILDREN’S HEARING AIDS: RWANDA

UNICEF’s work to drive down the cost of hearing aids from $2,000 down to $118, enabled the Government of Rwanda to procure high-quality hearing aids at only one-tenth of the price they would typically pay in their local market.

In 2022, increased affordability enabled Rwanda to equip 600 children with 1,250 new hearing aids. The new hearing aids are pre-programmed and configurable to suit varying degrees of hearing loss. This technological development bridges the gap in access due to the absence of infrastructure and trained audiology personnel.

DISABILITY-FRIENDLY LATRINES: FOR EVERY CHILD, A RIGHT TO DIGNITY

In emergencies, access to ATs is virtually unimaginable for children whose needs are frequently overlooked in response efforts. UNICEF-led product innovation work applies a disability lens across standard products to make them more inclusive.

For example, UNICEF worked with Care International to pilot a new add-on component for standard squatting plates to create disability-friendly latrines. Since 2019, this AT solution has been introduced in 19 countries and is now integral to UNICEF’s WASH response in emergencies.

APPROPRIATE WHEELCHAIRS IN EMERGENCY SETTINGS: UKRAINE

In 2022, UNICEF delivered 698 wheelchairs to Ethiopia, Rwanda, Sierra Leone, the State of Palestine, Tanzania, Ukraine, and Zimbabwe.

In emergency settings such as Ukraine, UNICEF worked with government and local partners to conduct comprehensive needs assessments of internally displaced children so they could be provided with adapted early intervention services.

The UNICEF-led Early Intervention project at the Dzerelo Children’s Rehabilitation Centre identified that 42 per cent of the 5,870 displaced children had disabilities and provided them with ATs suitable for their needs.
Malaria vaccine: incentivizing markets to produce a new vaccine at scale

In August 2022, UNICEF awarded a contract for the world’s first malaria vaccine. This historic award will lead to the supply of 18 million doses of RTS,S/AS01e malaria vaccine between Q4 2023 and 2025. Although malaria is one of the top three causes of death among children under 5 in Africa, it has taken over 35 years to reach this point. While vaccine development was technically difficult due to the complex nature of the malaria parasite, there was also a lack of prioritization and funding for malaria vaccine research.

UNICEF’s role in bringing the malaria vaccine to scale
The long road to developing a malaria vaccine required intense collaboration between the vaccine manufacturer and partners, including PATH, WHO, Gavi, the Vaccine Alliance, Bill and Melinda Gates Foundation, Global Fund, Unitaid, and participating countries.

In 2019, the malaria vaccine was piloted in Ghana, Kenya and Malawi as part of the malaria vaccine implementation programme coordinated by WHO. UNICEF Supply Division oversaw the forecasting, supply planning and coordination of vaccine deliveries. UNICEF country offices provided programmatic and logistics support.

In 2021, based on evidence generated by the pilots, WHO recommended the widespread use of the malaria vaccine in countries with moderate to high P. falciparum malaria transmission. The same year, Gavi approved funding for malaria vaccine programmes in eligible countries.

Determined to minimize the time between WHO’s policy recommendation and the availability of the new vaccine, UNICEF led the development of the procurement strategy and planning, which featured intensive consultations with industry and global health partners.

Malaria vaccine milestones and UNICEF engagement

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984-97</td>
<td>Early development of RTS,S vaccine</td>
</tr>
<tr>
<td>2015</td>
<td>UNICEF engages with vaccine manufacturer and partners on the vaccine supply</td>
</tr>
<tr>
<td>2016</td>
<td>Launch of the malaria vaccine implementation programme (MVIP) in Ghana, Kenya and Malawi</td>
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<tr>
<td>2017</td>
<td>WHO recommends pilot implementation</td>
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<tr>
<td>2018</td>
<td>UNICEF Supply Division supports supply forecasting and planning and coordinates vaccine deliveries for the MVIP</td>
</tr>
<tr>
<td>2019</td>
<td>Phase III clinical trial results published</td>
</tr>
<tr>
<td></td>
<td>European Medical Agency approves RTS,S vaccine</td>
</tr>
<tr>
<td></td>
<td>2015-2016</td>
</tr>
</tbody>
</table>
Looking forward: malaria prevention and control
According to WHO, more than 30 countries have areas with moderate to high malaria transmission. In these countries, the vaccine could provide added protection against malaria to over 25 million children each year when the production scales up. Together with the vaccine, recommended malaria control interventions must be continued to optimize impact and reduce child mortality, including using long-lasting insecticide-treated nets, deploying insecticidal spraying, and taking anti-malaria medication.

While the RTS,S/AS01e vaccine represents a major breakthrough, there are some important considerations. For example, the first dose is given to children at five months, but for maximum efficacy, a four-dose schedule is needed. Countries may consider a five-dose schedule in areas with high seasonal transmission.

The malaria vaccine supply is expected to increase as manufacturing capacity ramps up and additional manufacturers enter the market through technology transfer and other means.

There are also new diagnostics and innovations in malaria medicines in the pipeline, including the development of monoclonal antibodies. The COVID-19 pandemic highlighted the need for greater investment in regional vaccine production to bolster equitable access. UNICEF encourages the strengthening of African manufacturing to increase vaccine security, broaden vaccination coverage and achieve resilience in public health systems.

Many exciting innovations are taking place to develop improved, new and next-generation vaccines that can lead to increased supply and a healthier vaccine market. UNICEF’s procurement strategy enables us to react to changes in this dynamic market as we engage closely with industry and partners.”

Michaela Briedova
Contracts Specialist, Vaccine Centre,
UNICEF Supply Division
Because life-saving supplies for children are at the heart of everything we do, our technical skills in supply and logistics are intertwined with determination, compassion, and a sense of urgency.

In 2022, UNICEF, together with partners, identified solutions, fostered innovation, and amplified the impact of individual efforts.

Packed with love
Children play with fun and games from the UNICEF recreation kit in Zulia State, the Bolivarian Republic of Venezuela.
In 2022, the Supply Community reaffirmed an unwavering commitment to strengthening our people, culture, and social fabric.

UNICEF’s flagship Global Supply Meeting took place in November and brought the Supply Community together. The event was attended by 130 in-person participants and a daily average of 250 colleagues online, representing 147 nationalities. Inspired by external speakers, participants reflected on the dynamic environment of the Supply Function and agreed on actions to ensure we remain vigilant of the challenges ahead to advance access to supplies for children.

2022 also marked a year of recognition and accolades celebrating Supply Community accomplishments. We are proud recipients of the UNICEF Annual Staff Team Award for our part in the COVID-19 vaccine rollout. Our endeavours also contributed to UNICEF receiving the North-South Prize of the Council of Europe for our role in the COVAX Facility.

All this was achieved while responding to the increasing number of humanitarian crises. Through 61 deployments, Supply Community colleagues helped ensure the delivery of life-saving supplies when and where they were needed most.

This commitment is characteristic of our people and the community we embody – and to which we are indebted.

Richard Wolstenholme
Supply Community Manager

At the UNICEF warehouse in Khartoum, Sudan, Supply and Logistics Officer Hashim Adam and Warehouse Associate Mutasim Zaroug, display school furniture they will deliver to learning spaces.
The Supply Community in numbers

1,308 Staff

10,174 years of experience working for UNICEF

147 number of nationalities they represent

198 offices where they work

116 countries where they are based

55% men

45% women

73% from programme countries

27% from donor countries

The Supply Community’s presence in UNICEF programme countries

26% West and Central Africa

24% Eastern and Southern Africa

13% South Asia

15% Middle East and North Africa

6% Latin America and the Caribbean

8% East Asia and the Pacific

8% Europe and Central Asia

8% Latin America and the Caribbean

Students gather around a UNICEF-supplied solar power panel in their newly renovated school in South Darfur, Sudan.
Ready to respond: Supply Community emergency deployments

In 2022, through 61 deployments, the Supply Community responded to emergencies in eight regions. Supply Community surge support has been instrumental in ensuring children in emergencies receive the supplies needed to survive, recover, and build resilience.

Suvi Rautio, Deputy Director, Supply Chain, UNICEF Supply Division, shares how deployments enable UNICEF to mobilize diverse technical expertise to rapidly increase operational capacity and save lives.

Q: Why does UNICEF need to send staff on deployments?
A: Our deployments are one of the key success factors in responding to major crises and crucial to accelerate an emergency response from the start and ensure it progresses with speed. Emergencies typically involve a rapid escalation of logistics activities because of the large amounts of pre-positioned supplies we send from our global hubs in Copenhagen and Dubai. This scale-up requires expanding our warehouse capacity enormously – and at times establishing new warehouses inside the affected country. For this reason, assistance from our experienced warehouse colleagues is imperative. In 2022, Supply Community colleagues set up new warehouses in Ukraine within days of the escalation of the conflict. Such staff deployments also supported our response to crises in Afghanistan and Pakistan.

Q: What challenges do we face when trying to identify staff to deploy on missions?
A: A deployment mission usually leaves a gap in the home office – often for two or three months – and sometimes it is difficult to find colleagues who can be immediately released. Therefore, Supply Division has come up with an emergency surge roster. We identify and prescreen staff with expertise and experience in a particular field who can be quickly deployed at the onset of an emergency with the approval of their supervisor. Our surge roster is a database of supply and logistics experts who are always on standby and ready to respond.

Q: What qualities do you look for when identifying staff to deploy?
A: Staff going on deployment should already have the expertise and skills to do the work because they will be required to perform and respond to the crisis immediately. They must also go through the screening process when they apply to be on the supply emergency surge deployment roster.

Q: Do colleagues from country offices ever come on surge missions to HQ locations like Copenhagen?
A: Deployments happen across the organization: from HQ to a country office and from one country office to another. And
Yes, we also have deployments from field locations to HQ locations like Supply Division in Copenhagen. This happens, for example, when we have a large procurement action in our Global Supply and Logistics Hub that needs to be rapidly scaled up.

Q: Have you seen any major changes or trends in the profiles of colleagues who have stepped up to go on surge deployments?
A: Deployment is a great way to develop professionally. The skills and knowledge gained are invaluable to the organization. I have seen that over the years, more colleagues are stepping up to support emergency response and that there is great solidarity within the Supply Community to support countries affected by crises.

Suvi Rautio, Deputy Director, Supply Chain, UNICEF Supply Division, inside the Global Supply and Logistics Hub in Copenhagen.
Surge deployment stories

In 2022, surge deployment missions were vital to scale up UNICEF’s supply response in multiple large-scale emergencies. Whenever and wherever needed, deployments enabled staff to help partners and communities by providing a range of technical expertise in supply and logistics: from establishing new warehouses and procuring and distributing supplies – to rebuilding schools and health facilities.

**Edgard Seikaly**
Supply and Logistics Chief, UNICEF Iraq
Deployed to Burkina Faso

I can write a book about the experience. Chapter 1 will be about one of the dozen schools where we delivered supplies under extreme pressure. Chapter 2 will be on the assessment of three oxygen plants. Chapter 3 will cover the launch of bidding and technical evaluations for construction works and long-term agreements (LTAs) for school supplies. Chapters 4 and 5 will be on political changes and getting malaria. The final chapter will be about the inspiration of being in Burkina Faso for three months and understanding the lengths a humanitarian will go to achieve results for children.

**Alok Sharma**
Contracts Specialist, UNICEF Supply Division, outposted to Global Shared Services Centre, Budapest, Hungary
Deployed to Afghanistan

My deployment was a great and rewarding experience, both personally and professionally. A lesson learnt is to go prepared with clear terms of reference to start working from day one – but also be flexible, depending on the needs on the ground. I had the best opportunity to learn, plan and act in a delicate situation. During the mission, I found I had developed new skills, and I hope to have an opportunity to help again.

**Félicité Hatungimana**
Supply Officer, UNICEF Burundi
Deployed to Myanmar (remote support)

I helped the Myanmar Country Office move forward on many issues, including implementing LTAs and contracts, which will allow them to respond to multiple emergencies in real-time. Supporting Myanmar remotely taught me many things, especially on time management, sustainability and using a shared knowledge management platform. We conducted and analyzed bids online and used e-signatures which are great for preserving the environment. I also got the opportunity to improve my English skills.
**Surge deployment stories**

**Omar Rijal**  
Warehouse Assistant, Warehouse & Inventory Management Centre, UNICEF Supply Division  
Deployed to Ukraine

I was deployed to Ukraine in the first week of the conflict. It was very challenging because amidst ongoing conflict, colleagues and I had to work on everything from setting up new warehouses to completing paperwork for supplies and identifying local transportation options. The biggest lesson for me when supporting emergencies is that you must be open to working in hostile environments and take up new challenges because every day is different.

**Dilara Ayazova**  
Procurement Officer, UNICEF Turkmenistan  
Deployed to Moldova

Being on a surge mission is a real opportunity to positively impact children’s lives during their worst moments and contribute to achieving UNICEF’s Core Commitment for Children by adhering to and acting on the principles of humanity, impartiality, independence and neutrality. It was a pleasure to work with a hardworking operations team and see how colleagues support each other during such challenging times.

**Bhanu Arora**  
Senior Procurement Associate, UNICEF India  
Deployed to Poland

I was deployed to Warsaw to support the supply and procurement function. With support from the team there, I established LTAs for winterization supplies that needed to be pre-positioned in anticipation of the influx of Ukrainian refugees to Poland. The mission was both a challenging and rewarding experience.

**Adebayo Adekola**  
Programme Manager, Centre for Health Emergencies Strategy & Partnerships, UNICEF Supply Division  
Deployed to the ACT-A/COVAX Governance and Coordination Secretariat, Supply Division

This was my first deployment, and I was responsible for coordinating and executing regional and country engagements to drive solutions for product access, data visibility, technical assistance, and streamlined communications. It was an excellent opportunity to work closely with teams and partners across multiple regions and also serve as the internal voice of regions and countries in line with UNICEF priorities within the broader Access to COVID-19 Tools Accelerator (ACT-A) partnership. Understanding the programmatic and supply drivers made a positive difference in decision-making, communication and defining joint solutions to improve the supply of COVID-19 tools across country typologies.
Transport and logistics partners: solidarity in a year of emergencies

Across multiple humanitarian crises affecting 274 million people globally in 2022, UNICEF’s supply chain partners stepped up to deliver humanitarian aid for children.

In 2022, UNICEF strengthened existing partnerships to meet the immediate needs of children in crises. Together, we also forged new collaborations to improve supply operations in the future.

New partners joined the Supply Chain & Transport Industry Charter, originally formalized in December 2020 to support UNICEF’s role in COVID-19 vaccine distribution. In 2022, the World Economic Forum (WEF), supply chain partners, and UNICEF broadened the Charter to include strengthening Humanitarian Supply Chain Resilience. Twenty signatories* committed to supporting the humanitarian community in prioritizing the delivery of life-saving supplies, resolving bottlenecks, and identifying solutions for international and in-country distribution. Extreme pressure on global supply chains reinforced the urgent need for improved visibility of global supply system performance. WEF, in collaboration with UNICEF, Accenture, Everstream Analytics, and EVRTHNG, founded the Global Supply Resilience Initiative and launched the pilot phase of the Resilience Global Supply System Dashboard. For the pilot, UNICEF is helping identify data needed to achieve a near real-time overview of supply chain bottlenecks and disruptions in the supply line for ready-to-use therapeutic food in West and Central Africa. Enhanced visibility on supply chain bottlenecks and disruptions will enable organizations to make decisions to reduce delays and costs.

UNICEF, in partnership with the Global Alliance for Trade Facilitation, is using digitalization to modernize customs and border processes – resulting in more efficient, cost-effective importation and clearance of critical supplies. In 2022, committed partners in transport and

*A Mohamed Juma Al Shamisi, Group CEO, AD Ports Group & Chairman, Hope Consortium; Tarek Sultan Al Essa, CEO and Vice Chairman of the Board, Agility; Søren Skou, CEO, A.P. Møller-Maersk; Richard Forson, President and CEO, Cargolux Airlines; Rodolphe Saadé, Chairman and CEO, CMA CGM Group; Frank Appel, CEO, Deutsche Post DHL Group; Sultan Ahmed bin Sulayem, Group Chairman and CEO, DP World; Jens Bjørn Andersen, Group CEO, DSV; Ryan Petersen, Founder and CEO, Flexport; Detlef Trefzger, CEO, Kuehne+Nagel International; Dorothea von Boxberg, CEO, Lufthansa Cargo; Takeshi Hashimoto, President and CEO, Mitsui O.S.K. Lines; Jacques Vandermeiren, CEO, Port of Antwerp-Bruges; Jett McCandless, Founder and CEO, project44; Tan Chong Meng Group, CEO, PSA International; Allan Melgaard, Group CEO, Scan Global Logistics; Eric Peck Chief Executive Officer and Co-Founder, Swoop Aero; Carol Tomé, CEO, UPS, Catherine Russell, Executive Director, UNICEF; Børge Brende, President, World Economic Forum.
Transport and logistics partners: solidarity in a year of emergencies

A charter flight unloads UNICEF emergency supplies at Jinnah International Airport, Karachi, Pakistan, in response to the devastating floods.

Logistics leveraged their assets and expertise to support UNICEF’s relief efforts – whenever and wherever they were needed.

For example:

**CMA CGM Foundation** donated cargo space of over 500 containers to ship vital supplies to more than 20 countries.

**Deutsche Post DHL Group** supported UNICEF’s COVID-19 supply operations through seconded staff sharing technical expertise on warehouse management.

**DP World** funded critical water, sanitation, hygiene and education supplies for children and families in flood-hit Pakistan. The company also made a large hub operation available to UNICEF to pre-position COVID-19 supplies for Africa and Asia.

**Flexport** delivered humanitarian supplies to Afghanistan, Chad, Ethiopia, Ukraine and Yemen, among others, and pledged significant in-kind transport support for the Sahel and Horn of Africa crises.

**IAG Cargo** provided in-kind cargo space to ship critical supplies to Pakistan.

**Kuehne+Nagel** delivered dignity kits, hygiene supplies, blankets, and WASH items to Ukraine.

**Maersk** provided additional warehouse space to help UNICEF scale up the response in Pakistan.

**Port of Antwerp-Bruges**, Belgium, and **Port of Cotonou**, Benin, in partnership with UNICEF and West Africa’s logistics sector, worked towards enhanced coordination which resulted in improved delivery times and lower costs.

**UPS Foundation** delivered life-saving supplies to Chad, Ghana, and Lebanon and provided funding for humanitarian supplies to Pakistan.

**TUI Airways** transported vital water, sanitation and hygiene items to Ukraine.

**Scan Global** transported life-saving supplies to Pakistan.
Overview 2022: convening power and strategic collaboration

As the largest United Nations procurement agency, UNICEF’s convening role in strategic collaboration drives change and advances progress towards equitable access.

In 2022, UNICEF brought together organizations and people to identify solutions and new approaches, foster innovation, and amplify the impact of individual efforts to save lives through supplies and services for children.

- **Milestone in market-shaping and/or procurement**
- **Milestone in delivery support & supply chain strengthening**
- **Milestone in product innovation**
- **Industry & partner consultation**
- **Advocacy & strategic partnership**
- **Innovative financing**
- **UNICEF-led process around joint tender and long term agreements (LTAs)**

### OCTOBER

- **Celebrating 60 years of UNICEF Supply Division in Denmark**
  - Co-hosted by UNICEF and the Danish Ministry of Foreign Affairs, Executive Director Catherine Russell and Supply Division Director Etleva Kadilli welcomed Her Royal Highness the Crown Princess of Denmark, the UNICEF International Council and other bills partners, to celebrate our 60th anniversary at our Global Supply and Logistics Hub in Copenhagen.

- **North-South Prize of the Council of Europe**
  - Lead agencies of the COVAX Facility were recognized for their collaboration and achievements in ensuring more equitable availability of COVID-19 vaccines. Story page 53.

- **Vaccine Procurement Practitioners Exchange Forum (VPPEF)**
  - In collaboration with the UNICEF Regional Office for the Middle East and North Africa convened 50 practitioners from 12 countries to discuss procurement, best practices, and cold chain capacity.

- **Ready-made education kits tender**
  - UNICEF Supply Division and Türkiye Country Office convened a bid for pre-assembled education and recreation kits. Türkiye’s Union of Chambers and Commodity Exchanges and over 20 companies participated.

- **Traceability and Verification System (TRVST)**
  - In collaboration with Africa CDC, BMGF, Gavi, Global Fund, USAID, World Bank, regulatory agencies of Nigeria and Rwanda, TRVST was launched to tackle falsified medical products and through GS1 barcode technology. Story page 58.

### 2022

#### JANUARY

- **Nutrition supply forum**
  - Virtually convened 180 participants (45 companies and 12 partner organizations) to exchange ideas and best practices on how the supply function can contribute to accelerating progress towards achieving nutrition-relevant SDGs, World Health Assembly targets and UNICEF strategic objectives.

#### FEBRUARY

- **UNICEF and UNHCR collaboration on Blue Dot Hubs**
  - Since February, 40 Blue Dots have been opened at strategic locations to provide safe spaces and multi-sector support for refugees fleeing Ukraine. Story page 50.

#### MARCH

- **Kuehne+Nagel Ukraine charter flight**
  - A donated chartered Antonov-124, one of the largest aircrafts in the world, allowed UNICEF to deliver 111 metric tons of emergency supplies to Poland for distribution in Ukraine. Story page 50.

- **Humanitarian supply chain and logistics consultation and expert sharing forum**
  - Convened over 20 logistics and transport companies, the World Economic Forum (WEF) and partner humanitarian organizations, and more than 400 participants, in-person and online.
Overview 2022: convening power and strategic collaboration

Global Supply Resilience Initiative (GSRI)
- Founded by WEF in collaboration with UNICEF, Accenture, Evergreen Analytics, and YERTHING. UNICEF initiated GSRI’s pilot Global Supply System Dashboard providing real-time data to enable decision-making that minimizes supply chain interruptions. Story page 37.

ACT-A Oxygen Alliance and Industry Collaboration
- UNICEF’s procurement and technical expertise enabled the delivery of more than 100 oxygen plants-in-a-box in 35 countries.

UN Joint Tender for Specialized Insurance Brokerage Services
- UNICEF-led joint tender harmonized and standardized supply chain practices and established an LTA accessible to all UN agencies.

Global Health Supplies: Market Authorization, Procurement, and Supply Chain Approaches
- 400 industry and 50 donor/patient participants convened at the UNICEF-UNPA-WHO meeting on in vitro diagnostics, vector control products, vaccines, immunization devices, contraceptive devices.

Informal Advisory Group (IAG) on Public Health Emergency Archetypes and Supply Levers
- Convened 15 thought leaders from CEPI, Gavi, WHO, government and national surveillance labs, and donor and financing organizations to guide and share insights on UNICEF’s archetype framework. Story page 20.

Public Sector Healthcare & Pharmaceutical Supply Chain Excellence Award
- Awarded to UNICEF and Crown Agents for ensuring vital technical assistance to governments implementing ultra-cold chain for COVAX-supported COVID-19 vaccines.

Nutrition Bridge Funding
- Bill & Melinda Gates Foundation (BMGF) announced $50 million for UNICEF to create a capital facility enabling manufacturers to ramp up production and reach 4.5 million more children in three years. Story page 17.

In Vitro Surveillance Diagnostics Industry Consultation
- Partners and 23 manufacturers convened to gather industry insights into opportunities to increase national diagnostics capacity for targeted vaccination, especially during outbreaks.

Lipid-Based Nutritional Supplements and RUTF Industry Consultation
- In collaboration with USAID and WFP, 130 participants from partner agencies and 20 manufacturers were convened to identify solutions to increase availability. Story page 17.

Overview 2022: convening power and strategic collaboration

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COVID-19 Vaccine Industry Consultation
- Brought together 130 industry and other partners to address the procurement strategy for COVID-19 vaccines for 2023 and beyond.

USAID invests $200 million in ready-to-use therapeutic food (RUTF) Procurement
- Following USAID’s historic announcement, UNICEF immediately began implementing plans to maximize procurement and delivery for children in the Horn of Africa and the Sahel. Story page 17.
Using a mid-upper arm circumference tape, Monia screens Thikra for malnutrition.
In humanitarian crises, when you are surrounded by the trauma and grief of losing people you love and missing the certainty of home, supplies and services for children can remind you that your life is not forgotten and that hope is still alive.
In 2022, UNICEF delivered $863.9 million in emergency supplies to 140 countries and areas. The four largest commodity groups account for 80 per cent of the total value of emergency supplies delivered.

Of this total, $812.6 million (94 per cent) supported Level-2 and Level-3 emergencies including the COVID-19 pandemic response. For each of these affected countries and areas, this map shows the total value of supplies delivered and the largest commodity groups.

Level-2 emergencies, led by the respective Regional Director, and Level-3 emergencies, led by UNICEF’s Global Emergency Coordinator, are the largest and most complex humanitarian crises, requiring immediate scaling up of supplies and personnel.
Ukraine and refugee crisis

Ukraine
At the onset of the crisis, UNICEF implemented an immediate response in six neighbouring countries (Belarus, Hungary, Moldova, Poland, Romania, Slovakian), expanding to 19 host countries by the end of 2022.

Belarus*, Bosnia and Herzegovina, Bulgaria*, Croatia, Czech Republic*, Estonia, Georgia, Greece, Hungary*, Italy, Latvia, Lithuania, Moldova*, Montenegro, Poland*, Romania*, Serbia, Slovakia*, Türkiye

*UNICEF’s programmatic focus

Ukraine: $91.5 million
Belarus*: $24.3 million
Bosnia and Herzegovina: $2.5 million
Bulgaria*: $2.4 million
Croatia: $1.0 million
Czech Republic*: $7.9 million
Estonia: $28.8 million
Georgia: $24.2 million
Greece: $2.0 million
Hungary*: $57.9 million
Italy: $28.8 million
Latvia: $10.6 million
Lithuania: $24.2 million
Moldova*: $1.0 million
Montenegro: $24.2 million
Poland*: $27.5 million
Romania*: $17.0 million
Serbia: $10.8 million
Slovakia*: $2.5 million
Türkiye: $2.5 million

Emergency supply response overview 2022
Supply response to natural disasters and climate-amplified crises

In 2022, natural disasters and weather-related calamities intensified by climate change triggered health and nutrition crises around the world. The collateral impact on critical services and the health and well-being of populations has been acute.

UNICEF’s rapid mobilization of essential supplies was instrumental in supporting early recovery, long-term development, and preparedness for the future.

Latin America and the Caribbean Region

Since 2020, more than 88 per cent of disasters in the region were related to warming trends that intensified levels of rain, causing floods in many countries, including Brazil, Columbia, Guatemala, Guyana, Suriname, and Venezuela.

Belize was struck by 14 tropical storms, of which Hurricane Lisa was the worst. In the Dominican Republic, Hurricane Fiona put 1.8 million people at risk, including 666,856 children.

Haiti, still making a slow recovery from the magnitude 7.2 earthquake in August 2021, faced further devastation from Tropical Storm Grace. In March 2022, a magnitude 6.0 earthquake struck Ecuador’s second-largest city.

Climate-related crises contribute to reduced access to safe water and inadequate sanitation – ideal conditions for cholera and other infectious disease outbreaks. With losses and structural damage from tropical cyclones and a rising sea level, UNICEF’s preparedness action and resilience building are critical to mitigating the worst impacts.

Middle East and North Africa Region

Climate-driven hazards exacerbated hardships resulting from protracted humanitarian situations, disease outbreaks, political uncertainty and civil unrest affecting the lives of children across the region. War in distant Ukraine added further complexities by increasing food and fuel prices.

The effects of climate change exposed more children to new vulnerabilities. Drought and drought-like conditions in countries like Djibouti, Iraq, Sudan, the Syrian Arab Republic, and Yemen called attention to critically low groundwater levels, the disappearance of pastures and vegetation, and record-breaking high temperatures.

In 2022, UNICEF prioritized the delivery of immediate life-saving assistance and capacity-strengthening of national systems to continue providing essential services to children in emergencies. Emergency preparedness and readiness support to Djibouti, Iran, Libya, Sudan, the State of Palestine, the Syrian Arab Republic, and Tunisia aimed to ensure the continuation of UNICEF country programmes.

Eastern and Southern Africa Region

Climate change is impacting lives and livelihoods through increasing temperatures, shifting rainfall patterns, droughts and floods. In countries like Angola, child malnutrition increased by 138 per cent from last year.

Malawi, Mozambique, South Africa and South Sudan experienced some of the worst floods in four years caused by combinations of extreme rain, cyclones, and storms.
Emergency response to natural disasters and climate-amplified crises

East Asia and Pacific Region
Climate change poses major challenges to environmental stability, economic growth and human development. According to the World Bank, the region includes 13 of the 30 countries most vulnerable to the impacts of climate change.

La Niña is causing prolonged drought in parts of the Pacific islands. Kiribati proclaimed a state of emergency. Tuvalu requested UN assistance. UNICEF’s supply response included the provision of solar distillation units, repair of desalination plants, delivery of drinking water, and provision of jerry cans and water purifiers.

In 2022, UNICEF’s emergency response focused on the delivery of life-saving medicine, WASH supplies and the rehabilitation of water sources and hygiene facilities to prevent the spread of infectious diseases.

Europe and Central Asia Region
Warmer temperatures and more volatile weather patterns are disrupting ecosystems and increasing the frequency of droughts and floods. The poorest countries and most vulnerable households face the worst impacts of climate change through lost livelihoods and environmental degradation. 3.7 million people live in areas with a heightened risk of earthquakes.

In Kyrgyzstan and Uzbekistan, heavy rain brought on flooding and mudflows, affecting nearly 1,000 households. UNICEF worked quickly to provide access to hygiene and clean water. Four devastating wildfires in Greece and Türkiye forced people to evacuate.

In 2022, UNICEF supply interventions focused on enhancing emergency preparedness capacities, strengthening risk-informed programming, including social protection mechanisms to build resilience, and supporting response to sudden-onset emergencies.

South Asia Region
More than 800 million people across South Asia are living in climate hotspots. In 2022, a prolonged heatwave in India and Pakistan contributed to flooding in Pakistan, India (16.35 million people affected) and Bangladesh (7.2 million people affected).

In Afghanistan, the La Niña effect and a magnitude 5.9 earthquake in June heightened the risk of disease outbreaks. UNICEF’s scaled-up WASH response reached 6.6 million people and 662,670 children were treated for severe wasting – a 100 per cent increase from 2021.

UNICEF has been consistently one of the first humanitarian organizations to respond with life-saving supplies. In addition, UNICEF interventions in South Asia Region focus on supporting governments and communities to build climate resilience.
Responding to super floods in Pakistan

In 2022, Pakistan experienced abnormally high heat waves in the south and glacial melting in the north, followed by nearly three times the average amount of monsoon rain. By July and August, one-third of the country was submerged, and UNICEF’s emergency supply corridor into Afghanistan was also impeded. The historic super floods affected 33 million people, and an estimated 20.6 million people, including 9.6 million children, needed urgent humanitarian assistance.

The floods damaged or swept away 2.2 million homes. With schools, water systems and health services no longer functioning, children faced many risks, including displacement and waterborne diseases. The climate disaster contributed to widespread food insecurity, a nutrition crisis, and outbreaks of acute watery diarrhoea disease (AWD) and cholera.

UNICEF supplemented its four field offices in flood-affected areas with four additional operation hubs in the hardest-hit areas. Using pre-positioned emergency supplies, UNICEF was able to rapidly deliver drinking water, water purification tablets, hygiene kits, medicines, vaccines, therapeutic nutritional supplements and mosquito nets.

Through UNICEF support, nearly 1.2 million people were provided with access to safe drinking water through water tanks and the installation of water filtration plants. WASH supplies, including menstrual hygiene kits and soap, reached nearly 1.7 million people. As part of the AWD response, UNICEF tested over 2,000 water samples and supported the daily chlorination of, on average, 82 million gallons of water at 10 pumping stations in Karachi, serving 7.5 million people. UNICEF established 230 oral rehydration corners in health facilities in three provinces and provided doxycycline, oral rehydration salts and zinc, personal protective equipment, and sanitizers more widely. 17 interagency emergency kits (each one equipped to provide three months of basic health services for 10,000 people) were positioned in AWD-affected districts.

In partnership with district health departments, UNICEF helped establish mobile teams by providing additional medical supplies and mobility support. As a result, more than 1.5 million people (827,680 children) benefited from primary health services, more than a million children were immunized against measles, and 48,544 pregnant women received antenatal care. UNICEF is supporting repairs and providing the equipment needed for 109 damaged health facilities and district warehouses. In response to outbreaks of dengue and malaria, UNICEF
The Philippines is one of the world’s most disaster-prone countries. In 2022, recurring natural hazards and extreme weather events linked to climate change left 2.4 million people, including 912,000 children, in need of humanitarian assistance.

While UNICEF was helping communities recover from Super Typhoon Rai (locally called Odette), new crises unfolded as five more cyclones made landfall, including Super Typhoon Noru (Karding) and Severe Tropical Storm Nalgae (Paeng). In July, a 7.0 magnitude earthquake struck the north of the country.

Lessons from the Super Typhoon Haiyan emergency in 2013 reinforced the importance of pre-positioned emergency supplies in centralized UNICEF and interagency Supply and Logistics Cluster warehouses. UNICEF Supply and Logistics Specialist John Philip “JP” Perez explained that the pre-positioning of supplies and coordination with partners and suppliers are integral to UNICEF’s emergency preparedness supporting the Government-led response.

UNICEF ensures that levels of pre-positioned family hygiene and dignity kits, jerry cans, water purification tablets, therapeutics, supplementary food, tents, and child-friendly spaces kits are available to meet the immediate needs of 12,500 families. Long-term agreements (LTAs) with suppliers and service providers allow the rapid scale-up of the distribution of supplies supporting WASH, health, nutrition and education interventions. Furthermore, UNICEF’s Global Supply and Logistics Hub in Copenhagen can pack and deliver life-saving kits within 72 hours of any disaster.

Logistical operations to overcome the country’s archipelago geography require transport by air, road, river and sea. Reaching the most remote and vulnerable communities also relies on the strong relationships that UNICEF has built with vendors and partners.

In 2022, UNICEF’s continued delivery of health, education and WASH supplies were critical in helping children and communities recovering from the impact of Super Typhoon Odette.
Natural disasters and extreme weather compound Afghanistan’s complex humanitarian crisis

In 2022, the number of people needing humanitarian assistance in Afghanistan increased from 24.4 million to 28.3 million, including 15.3 million children. Bureaucratic delays, a ban on female NGO workers, and a fragile local market seriously challenged humanitarian partners as UNICEF worked tirelessly to prioritize children and families, especially in underserved areas.

In June, UNICEF mobile health and nutrition teams (MHNTs) arrived within 48 hours of a 5.9 magnitude earthquake in southeastern Afghanistan. UNICEF was part of an interagency response team that reached 203,000 people with health services, 9,000 with emergency shelter, 98,000 with cash assistance, and 14,000 with nutrition and education. 410,000 people received soap and chlorine tablets to prevent acute watery diarrhoea (AWD)/cholera. UNICEF supported the repair of a district-level health centre, vaccinated 138,696 children against measles, and delivered over 30 metric tons of medical supplies.

As temperatures drop below zero in Afghanistan, UNICEF delivers WASH and winterization supplies to help children like Hadi stay safe and warm.
In July and August, extraordinary rainfall caused the worst flooding in five years—destroying homes, livelihoods, bridges and roads. Continuing La Niña weather patterns intensified widespread drought. Twenty million people were acutely food insecure—with 6 million on the brink of famine-like conditions. A scale-up in fixed nutrition sites and mobile nutrition teams enabled UNICEF and partners to identify and treat severe wasting in 662,870 children under 5—a 100 per cent increase from 2021. UNICEF procured over one million cartons of ready-to-use therapeutic food (RUTF)—606,581 cartons were used in 2022, and the remainder was earmarked for 2023.

Of the 242,562 reported cases of AWD/cholera—55.3 per cent were children under 5. UNICEF established 1,922 oral rehydration points, activated MHNTs and 349 cholera treatment centres/units, and deployed 419 AWD kits. Scale-up water system repairs and maintenance, trucking, quality assessments and chlorination gave 6.6 million people (nearly 3.1 million children) access to safe water. UNICEF helped construct and rehabilitate WASH facilities in 116 health centres and 228 schools and supported water quality monitoring in 13 provinces. As a Core Pipeline Supply Hub agency, UNICEF provided essential WASH supplies to humanitarian partners while supporting the distribution of WASH supplies to over 8.9 million people (4.5 million children).

UNICEF initiated a massive medicine procurement that allowed the distribution of $45.7 million in vaccines and other health supplies. Responding to a countrywide measles epidemic, UNICEF delivered vaccines and strengthened cold chains, reaching 8.3 million children. Around 2.5 million more were vaccinated via Afghanistan’s Health Emergency Response project, implemented by UNICEF. UNICEF support enabled 7.2 million adults to become fully vaccinated against COVID-19, bringing that total to 10.8 million. In 138 difficult-to-access districts, UNICEF pre-positioned a winter supply lifeline of 34,000 newborn kits, pharmaceuticals, and heating supplies.

Afghanistan represented UNICEF’s largest education supply programme in 2022. Deliveries of high-performance tents, classroom materials, textbooks and much more reached over 6 million children. When partners were suspended from printing textbooks, UNICEF ensured payment and distribution of 38.7 million textbooks for nearly 5 million students (39 per cent girls) and nearly 30,000 teachers. In Q4 2022, Supply Division helped procure $60 million worth of education supplies, including ready-made kits. The shipment volume of 563 containers will arrive for the 2023 academic year.

Secondary schools remained open for girls in 12 provinces. In December, UNICEF supported the provision of Grade 12 certificates for girls who were allowed to sit their graduation exams—a courageous achievement considering the ever-tightening restrictions imposed on the rights and freedoms of girls and women.
Rapidly responding to the war in Ukraine

UNICEF’s supply response continued urgently throughout the year. We delivered over 12,000 metric tons in first aid kits, education materials, winter blankets, water and sanitation items and much more. UNICEF’s overall emergency response also covered 19 countries hosting children and families who fled to safety.

Since 24 February 2022, the destruction of Ukraine’s infrastructure has severely compromised access to education, clean water, electricity, and health care for 17.7 million people. By the end of 2022, 7.9 million people had fled the country.

Scale and speed
Within 24 hours of the escalation of the war, supply trucks loaded with first aid kits, midwifery kits for safe births and WASH supplies departed from UNICEF’s Global Supply and Logistics Hub in Copenhagen.

UNICEF logisticians quickly established a supply route from Poland to Lviv, 70 kilometres from the border. An empty chicken factory was repurposed into an emergency warehouse, and it became the main collection point for supplies that were urgently distributed inside the country. In six months, 10 to 20 trucks arrived at the warehouse daily.

"The war demanded a highly complex supply response. UNICEF and partners have overcome major logistical challenges, and we will continue to think outside of the box to reach children."

Andrey Demidovich
Supply and Logistics Manager, UNICEF Ukraine

UNICEF’s emergency support also focused on Poland and other neighbouring countries – and quickly scaled up to 19 countries as children and families travelled west.

UNICEF’s response involved close coordination across UN agencies, the Government, and humanitarian partners. The supply chain and logistics community were also solidly behind our efforts. The logistics firm Flexport and the tourism group TUI helped deliver dignity kits, hygiene supplies, education kits, blankets, and WASH items. A Kuehne+Nagel charter flight donation airlifted 111 metric tons in humanitarian supplies on one of the world’s largest cargo planes.

Emma Maspero, Senior Emergency Manager, UNICEF Supply Division, describes the urgency and impact of midwifery kits and other UNICEF supplies for newborns sheltering in the basement of Lviv Regional Hospital.
A child-focused supply response
UNICEF and education partners reached over 1.8 million children with education services and support. Around 685,000 children and caregivers across Ukraine were provided with winter clothes, recreation kits, early childhood development kits and adolescent kits. More than 300 children with disabilities received assistive devices, including wheelchairs and hearing aids. (Story page 24). UNICEF led construction efforts to restore 16 damaged schools so that children could return to learning – and this work will continue into 2023.

More than 1.5 million people were reached with hygiene kits, water containers, water purification tablets, menstrual hygiene products and other WASH supplies. The UNICEF-led WASH Cluster grew to 47 lead agencies with 85 implementing partners. Together, we worked with service providers to keep utilities going for 7.2 million people. Water treatment installations were vital in ensuring the continued production of daily needs such as bread.

In Ukraine, recreation and education supplies were delivered to Spilno (“Together”) Child Spots, where children and their parents could enjoy games, toys and learning. In countries receiving children and families, UNICEF worked closely with national and local authorities to establish 40 UNICEF-UNHCR Blue Dots, with support from IKEA. Blue Dot child-friendly spaces became a lifeline for children travelling alone and families needing information and psychosocial support.

Carlos de la Espriella
Contracts Manager, Construction Unit, UNICEF Supply Division

UNICEF is repairing war-damaged schools so children can return to learning safely.

What are the Blue Dot Hubs?
Alongside its COVAX partners, UNICEF has led the largest vaccine supply and delivery operation in history, helping to ensure equitable access to quality-assured COVID-19 vaccines. On 16 January 2022, the one billionth COVID-19 vaccine dose was delivered to Kigali, Rwanda – a milestone in the collective effort to defeat the pandemic since COVID-19 vaccine delivery began in 2021.

COVAX is the vaccine pillar of the Access to COVID-19 Tools Accelerator (ACT-A), a groundbreaking global collaboration to accelerate the development, production, and equitable access to COVID-19 tests, treatments, and vaccines.

UNICEF managed the delivery of 977.9 million COVID-19 vaccine doses to 92 countries, of which 100.8 million doses to 27 countries were delivered on behalf of the African Union’s African Vaccine Acquisition Trust initiative. Across all COVAX Facility partners, including UNICEF, 924.6 million COVID-19 vaccine doses were delivered to 113 countries and areas.

Through its ACT-A Supplies Financing Facility (ACT-A SFF), UNICEF supported 76 countries with $614.4 million to increase access to life-saving COVID-19 supplies. We also mobilized the market for auto-disable syringes to produce four times as many syringes, from 750 million in 2019 to 3.2 billion in response to COVID-19 forecasts. UNICEF significantly reduced the price of COVID-19 diagnostics through its engagement with partners from $5.00 per antigen rapid diagnostic test when the pandemic began to $2.15 per test by the end of 2022. UNICEF also established supply arrangements to enable access to the first quality-assured COVID-19 rapid diagnostic self-tests.

In 2022, new COVID-19 antivirals, such as molnupiravir, were being used increasingly as part of national COVID-19 response strategies to help reduce hospitalization of non-severe COVID-19 in patients at high risk. Initially not widely accessible to low- and middle-income countries, the first shipment of molnupiravir arrived in Cambodia in August 2022 – and by the end of the year, UNICEF had shipped $2.1 million worth of molnupiravir to nine countries.
In 2022, in the context of the COVID-19 pandemic, UNICEF delivered:

- **977.9 million doses of COVID-19 vaccines** (including donated doses) to 92 countries.
- **1.05 billion syringes** to 84 countries and **10.2 million safety boxes** to 82 countries through the COVAX Facility.
- **7.4 million litres of cold chain equipment storage capacity** in 104 countries.
- **$160 million worth of personal protective equipment items** to 121 countries to protect health workers and support the continuity of health services.
- **20,716 oxygen concentrators**, advancing access to oxygen therapy and oxygen equipment for many low- and middle-income countries.
- **69 oxygen plants-in-a-box** to 27 countries.
- **8.5 million COVID-19 diagnostic tests** to 51 countries.
- **20.5 million dexamethasone tablets and ampoules** to 24 countries – the equivalent of nearly 1 million treatments.
- **23,094 molnupavir tablets and ampoules** to 9 countries – the equivalent of 23,094 treatments.

UNICEF expanded its innovative COVID-19 Market Dashboard beyond vaccines and immunization devices to include information on COVID-19 therapeutics, providing further transparency to governments and partners on critical medical supplies to treat COVID-19.

**North South Prize of the Council of Europe awarded to the COVAX Facility**

The COVAX Facility brings together governments and industry with the shared concern of ensuring that COVID-19 vaccines are equally available to low- and middle-income countries. Recognizing the role played in global solidarity, protecting public health and building a more equitable world, the Council of Europe honoured the COVAX Facility with the 2021 North South Award. UNICEF, Gavi, the Vaccine Alliance, the Coalition for Epidemic Prevention Initiative (CEPI), and WHO jointly received the award in November 2022.
Building a future fit for children

UNICEF construction embodies more than building. It is a means to create hope, sow the seeds of resilience, and promulgate skills, behaviour change and community involvement. It is the foundation of strategic longevity and impact that is evident in sustainable solutions as countries build back after emergencies and plan and undertake programming.

Investments in children and communities
UNICEF construction projects offer tailored solutions to respond to the needs of children now and in the future. For example, the construction of vaccine warehouses has expanded immunization programmes in the Democratic Republic of Congo, and in Syria, gender-sensitive WASH facilities in schools have empowered girls to stay in school.

By working with local companies, we can strengthen communities and cash transfer. And our projects can reach beyond the tangible result of a new building and have a holistic impact on the entire community. The development of sustainable skills encourages behavioural change and long-term resilience. A WASH project in Venezuela became an opportunity to teach children how to maintain a green kitchen garden as well as providing water and accessible toilets. These skills are a lifelong investment for the children and an immediate push for the community to embrace change.

UNICEF technical and normative guidance
Our technical and normative support helps country offices as they undertake construction projects in programme countries. Enhanced contracts and standard templates create consistency and risk mitigation; project management toolkits lead to improved planning and quality assurance, technical guidance and capacity-building for global contracting teams continuously improve the knowledge and skills of UNICEF construction professionals around the world to assure quality construction in the long term.

UNICEF has a responsibility and duty of care to keep abreast of changes in the construction sector and to adapt to shifting global challenges and technological advancements. This includes leaning into accessibility, resilience and sustainable solutions, building responsibly and seeking out innovative approaches. Our construction projects primarily use local materials, employ local workers and implement local techniques.

“Building a future fit for children is not just bricks and mortar. It is about building a future that is fit for children where they can realize their hopes and dreams. It’s an opportunity to teach children skills, build community capacity and trigger behaviour change. We can have a sustainable, long-term impact and build resilience as well as infrastructure.”

Wamidh Shammas
Contracts Specialist, Construction Unit, UNICEF Supply Division

UNICEF Supply Division
field mission supporting construction and WASH activities at Al-Qosor Collective Centre, Idlib Governorate, Syrian Arab Republic.
In Goma, the Democratic Republic of the Congo, UNICEF rebuilt Daniella’s primary school which was destroyed by the volcanic eruption of Mount Nyiragongo in May 2021.

Building a future fit for children

all leading to a lower carbon footprint and structures that are easy to maintain by the community.

In Cameroon, the UNICEF Connect My School Initiative illustrates the impact of innovation on communities in seeking education solutions for this and future generations of schoolchildren. The e-container digital hub design inserts three recycled 20-foot shipping containers into existing school locations. The hubs run on renewable energy sourced by solar panels and energy-efficient air circulation, and furniture and insulation are made from recycled materials. These digital learning hubs provide education opportunities for 20,000 students and their teachers.

**Increasing complexity, value and impact**

Recent years have seen a dramatic increase in UNICEF construction activities: in 2018 our construction contracts amounted to $118.3 million, and in 2022 this had increased to almost $300 million. This was accompanied by an expansion in the complexity and value of projects, such as a technically complex seawater desalination plant in the State of Palestine commenced in 2016 that requires the participation of multiple stakeholders and is an ambitious multi-year project to provide drinking water to Gaza. This growth has stoked the momentum of UNICEF construction and a diversity of projects. There were many achievements in 2022, including the rehabilitation of schools in Lebanon and Ukraine and WASH projects in the Pacific. UNICEF construction projects secure a future for children not only through tangible structures but also through accompanying opportunities for learning.

The range of activities can be seen in a newly launched web page dedicated to UNICEF construction. This site encompasses information on UNICEF-supported projects, with a search engine allowing for rapid identification of activities.

In Goma, the Democratic Republic of the Congo, UNICEF rebuilt Daniella’s primary school which was destroyed by the volcanic eruption of Mount Nyiragongo in May 2021.
Examples of past and ongoing UNICEF construction projects

Between 2018 and 2022, the value of UNICEF construction contracts grew by 56 per cent. In these five years, UNICEF has:

- Raised construction contracts in 113 countries.
- Invested $1.009 billion in construction contracts (excludes works through implementing partners).

### UNICEF construction works by programme area

- **Education** 51%
- **Child Protection** 2%
- **UNICEF facilities** 7%
- **Health and Nutrition** 22%
- **Water, sanitation and hygiene (WASH)** 18%

### UNICEF construction works by region

- **Middle East and North Africa** 31%
- **East Asia and the Pacific** 5%
- **Europe and Central Asia** 5%
- **South Asia** 10%
- **Western and Central Africa** 25%
- **Latin America and the Caribbean** 1%
- **Eastern and Southern Africa** 23%

#### Middle East and North Africa

In 2020 UNICEF rehabilitated 23 public schools that had become unsafe for Syrian and Lebanese children in Lebanon. The renovations focused on ensuring safety, hygiene, accessibility, and gender sensitivity.

Between 2020 and 2021, UNICEF worked with the Ministry of Education to rebuild 139 schools across Syria. UNICEF helped to rehabilitate classrooms and restore or build new gender-sensitive toilets and drinking water stations.

In 2019, UNICEF launched a construction plan in Yemen, investing $20 million to rehabilitate and rebuild damaged or destroyed schools and water services – and increasing to $120 million over 2020 and 2021.

#### Latin America and the Caribbean

After the 2021 earthquake in Haiti, UNICEF is reconstructing schools so children can return to learning.

#### West and Central Africa

In 2019, in Côte d’Ivoire, an innovative project used recycled plastic to build learning spaces for children. Ensuring access to water and sanitation constitutes 18 per cent of UNICEF’s construction services, such as this new water pump in Mali.
Examples of past and ongoing UNICEF construction projects

Europe and Central Asia

In 2022, UNICEF committed to installing 300 containers with 600 preschool classrooms as part of Turkey’s commitment to increasing the quality of and access to early childhood education.

In 2022, UNICEF began supporting the rehabilitation of 20 hospitals, 58 schools and 16 social centres at a cumulative value of $14 million.

East Asia and the Pacific

In the Pacific region, UNICEF realized significant construction to improve access to WASH in schools and health centres for a value of $6 million.

South Asia

Since 2018, UNICEF has been working with the government of Myanmar to construct nine vaccine storage warehouses, incorporating clean solar energy and the use of local materials and local labour.

Following the 2022 super floods in Pakistan, UNICEF provided materials for climate-resilient toilets and built solarized water systems for safe drinking water.

East and Southern Africa

Women led the construction of an early childhood development centre in Rwanda in 2019.

In 2022, UNICEF began supporting the rehabilitation of 20 hospitals, 58 schools and 16 social centres at a cumulative value of $14 million.

Examples of past and ongoing UNICEF construction projects
Nigeria and Rwanda: introducing barcodes to strengthen supply chains against fake medicines

UNICEF and partners launched the Traceability and Verification System (TRVST) as a significant step toward improving patient safety and ending the devastating impact of the $30 billion counterfeit medicines industry in low- and middle-income countries (LMICs).

Every year, counterfeit medicines cost the lives of 169,000 children under 5 who need treatment for pneumonia and 116,000 who need treatment for malaria. WHO reported that in pre-pandemic times, one in 10 medical products in low- and middle-income countries (LMICs) were either substandard or falsified. As the distribution of COVID-19 vaccines ramped up worldwide, so did the production of falsified and sub-standard vaccines and related supplies.

In August 2022, UNICEF and partners announced a major milestone in the fight against the counterfeit medicine industry when Nigeria and Rwanda became the first countries in Africa to authenticate vaccines using GS1 barcode technology. Across the health supply chain and wherever patients access care, a smartphone app can help regulatory authorities, customs agents, and healthcare workers confirm the genuineness of medicines and vaccines. Any verification failure or suspicious activity triggers an alert to the respective manufacturer and regulatory authority. Scanning enables real-time identification of the root causes of supply chain issues, tracking adverse effects, and timely removal of harmful products through recall.

The launch of the Traceability and Verification System (TRVST), a collaboratively designed solution that allows countries to verify the authenticity of health products and track and trace them through their supply chain, marked a major achievement.

TRVST is the result of a multi-stakeholder consortium comprising national regulatory authorities in LMICs, vaccine manufacturers, private businesses and development partners, including the Bill & Melinda Gates Foundation, Gavi, Global Fund, UNICEF, USAID, WHO and World Bank. Project coordination was provided by Vital Wave.

**TRVST rollout and expansion in Africa**

Health supply chains in LMICs often lack the necessary infrastructure and technology to ensure the quality and safety of medicines. By expanding the uptake of the GS1 barcoding technology in Africa, TRVST is contributing to efforts to improved visibility and transparency of healthcare supply chains, ultimately increasing patient safety and saving lives.

Verifying the authenticity of a vaccine using the TRVST mobile app to scan a barcode.
Nigeria and Rwanda, in collaboration with Johnson & Johnson, made COVID-19 vaccines the first products to apply TRVST. TRVST aims to significantly broaden coverage to other essential medicines and health products, including vaccines for routine immunization, HIV and tuberculosis treatments, reproductive health supplies and anti-malarial products.

In 2022, UNICEF, in collaboration with the East Africa Community (EAC) Regional Centre of Excellence for Vaccines, Immunization, and Health Supply Chain Management, held a training with regulatory agencies of all EAC member states to build national capacity and staff skills in the use of GS1 standards.

Since its launch, TRVST functionalities have been upgraded to support fully-fledged, end-to-end traceability systems for health products. Six countries have committed to the deployment of TRVST and 27 are in the planning stages for deployment. Three global manufacturers of vaccines for routine immunization and COVID-19 have signed participation agreements, and 18 are in discussions with UNICEF and partners for TRVST onboarding.

Staff from Nigeria’s National Agency for Food & Drug Administration and Control use barcode technology to verify the authenticity of a consignment at the medical warehouse.

“TRVST offers a technological solution already available in high-income countries. The global TRVST repository UNICEF helped establish in Rwanda and Nigeria increases supply chain visibility and reduces risks of counterfeit products and will soon be adopted by other LMICs.”

Max Kabalisa
Supply Chain Manager, Supply Chain Strengthening Centre, UNICEF Supply Division
In 2022, UNICEF leveraged its convening power to unite the Government, UN agencies, and other development partners to pool their strengths and make evidence-based investments to strengthen the country’s health supply chain.

In Madagascar, access to basic healthcare and vaccine distribution is highly inequitable. One child in every three under 5 years old is not fully immunized, and the country’s health supply chain challenges can be seen in product stock-outs, lack of infrastructure and distribution networks, and the shortage of trained healthcare workers. The impact is particularly acute in the most underserved communities where the effect of recurrent climate shocks, nutrition crises, the COVID-19 pandemic and other infectious disease outbreaks is more devastating.

A framework unifying the strengths of supply chain partners
In response to Madagascar’s health supply chain challenges, UNICEF convened partners to launch the UN Delivering as One for Health Supply Chains initiative. Co-leading this initiative were the Ministry of Health, the UN Resident Coordinator’s Office, WHO, UNFPA and USAID.

In May and June 2022, the One UN for Health Supply Chains initiative conducted a comprehensive performance assessment of Madagascar’s supply chains across essential medicines, reproductive health, vaccines, and nutrition. The UNICEF Supply Chain Maturity Model served as the guiding framework designed as an inclusive review process. The framework establishes a foundation for a shared understanding and a common vision and approach to the country’s supply chain strengthening priorities.

Participants in the initiative used the UNICEF Supply Chain Maturity Model framework to qualitatively assess 13 critical operational and technical supply chain functions. These included strategy and policy, coordination and governance, financing, human resources capacity, infrastructure and equipment, and information management. Through a consultative and inclusive qualitative assessment, participants agreed and assigned a score between 1 and 5 to indicate their current state of development. Level 5 reflected a sustainable, financially and technically robust supply chain.

A shared vision
The findings of the evaluation identified potential for more supply chain integration and opportunities for synergies across health programmes. They highlighted the importance of streamlining resources, sharing knowledge and expertise, capitalizing on achievements and leveraging partnerships to replicate and institutionalize best supply chain management practices. The findings also revealed that increased investments and technical cooperation are needed to bring the least-performing areas to a higher maturity level.

The Madagascar experience is a brilliant illustration of a supply chain strengthening...
process transforming evidence into commitment across Government and supply chain strengthening partners. At the end of the assessment, stakeholders agreed to work together to establish a national, multi-partner and evidence-driven systems-strengthening strategy with ambitious targets and objectives to meet the Sustainable Development Goals. Partners are committed to strengthening coordination and achieving better results by pooling their assets and competencies.

Systems-strengthening investments are critical for Madagascar’s health supply chain to become more resilient, and such investments envision the integration of health and nutrition supply chains, strategy formulation, and the development of new information systems to digitalize supply chain processes.

Since 2019, the UNICEF Supply Chain Maturity Model has been used by 39 governments to identify their investment and technical needs and execute appropriate responses. Establishing an evidence base that specifies systemic weaknesses is fundamental in taking action to close gaps across a range of programmes dependent on strong supply chains, including health, nutrition, education and WASH.

“...The Maturity Model is helping Madagascar to leverage UNICEF’s convening power for the supply chain partners to break silos and advocate for unity as we progress in making investments to strengthen supply chains.”

Anne Cabrera-Clerget
Supply Manager, UNICEF Madagascar

The lives of children and families in villages like Anjamahavelo in southern Madagascar, depend on strong health supply chains.
In Pidlyman village in eastern Ukraine, volunteers use bicycles to deliver UNICEF hygiene kits that provide washing powder, soap, adult and child diapers, sanitary napkins, shampoo, and towels.
Annexes
UNICEF global procurement statistics

**ANNEX 1**
UNICEF procurement by country/area of invoice and US$ value, aggregating local, country-to-country, and international procurement.

**ANNEX 2**
UNICEF procurement by country/area, supplier, and category, giving separate US$ values for local, country-to-country and international procurement (orders with a combined value of over $100,000).

**ANNEX 3A**
Destination countries/areas for UNICEF procured commodities, aggregating local, country-to-country and international procurement.

**ANNEX 3B**
Destination countries/areas where services were used, aggregating local, country-to-country and international procurement.

**ANNEX 4**
Number of companies invited to bid by UNICEF Supply Division for international procurement responses received by country/area.

**LOCAL**
Goods and services procured by country offices for local delivery and subject to the principle of competitive bidding from local suppliers.

**COUNTRY-TO-COUNTRY**
Goods and services procured on behalf of another country, or international procurement by country or regional offices, and subject to the principle of competitive bidding.

**INTERNATIONAL**
Goods and services procured by Supply Division, or by country offices through Direct Order arrangements, or by other headquarter divisions, and subject to the principle of international competitive bidding.

For a list of contracts awarded at or above the value of $100,000 by UNICEF Supply Division, visit [www.unicef.org/supply/contract-awards](http://www.unicef.org/supply/contract-awards)

For further information on the work of UNICEF in markets to secure the rights of children, visit [www.unicef.org/supply/influencing-markets](http://www.unicef.org/supply/influencing-markets)

Annexes of the Supply Division Annual Report 2022 are accessible by scanning the QR code or following the URL: [www.unicef.org/supply/documents/annexes-supply-annual-report-2022](http://www.unicef.org/supply/documents/annexes-supply-annual-report-2022)
In South Tarawa, Kiribati, one of UNICEF’s most remote field offices, we delivered vaccines to support immunization programmes.
Zahra, 8, and Nasreen, 6, walk home from a UNICEF-supported Accelerated Learning Centre in Daikundi Province, Afghanistan.