



# WFP ENGINEERING OUR SERVICES

**MSD** | Management Services Division

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e-mail: [wfp.publications@wfp.org](mailto:wfp.publications@wfp.org)







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# Introduction

Welcome to WFP’s Engineering Service Catalogue, a comprehensive guide showcasing our expertise in humanitarian and development infrastructure. Within these pages, you will find detailed information on our diverse range of services as well as remarkable infrastructure projects positively impacting communities around the world.

This overview is aimed at the humanitarian and development community interested in learning more about WFP’s Engineering

portfolio, areas of work and specific examples of our contribution to achieving a better future.

We hope you this document encourages you to share our service portfolio and partner with us as we strive to build a more resilient and connected world, where infrastructure empowers communities and drives positive change towards #zerohunger.



**Sara Adam**

Management  
Services Division  
Director

*Infrastructure solutions have a lasting impact in our relentless efforts towards a world free of hunger. Through building bridges, rehabilitating roads, or constructing school kitchens and markets, WFP Engineers not only ensure that life-saving humanitarian assistance reaches those in need, but also lay the foundation for a more prosperous and sustainable future for communities worldwide.*



# 1.

## About WFP Engineering





# 1. About WFP Engineering

WFP's global operations and presence within the humanitarian sector is fortified by Engineering expertise (Management Services Division). According to [WFP's Strategic Plan 2022-2025](#), protecting, restoring, creating, and enhancing basic infrastructure is crucial to support food-insecure communities. The plan also recognizes WFP's role as a system-wide service provider, including for engineering

projects, in collaboration with the wider humanitarian community.

WFP's global community of more than **200** in-house **engineers and technicians** works on infrastructure projects stationed in more than 45 countries worldwide, supported by a qualified and experienced team of specialist engineering professionals in Rome (WFP headquarters).

[WFP Engineering](#) provides **cost-effective, high-quality, timely, and sustainable infrastructure** to help both WFP and other humanitarian and development actors reach those in need. We have extensive experience partnering with other UN agencies, governments, and NGOs and the broader humanitarian and development community to provide an efficient response in emergency situations, as well as in longer-term development programmes.

From quality storage facilities, feeder roads and bridges, culverts, dams and river infrastructure, these projects connect communities to markets, providing easier access to food and lowering the risk of devastating food insecurity.

Through the vision '**Building for a Sustainable Future**', WFP's Engineering team brings to life the belief that bold infrastructure paves the way for reaching global humanitarian objectives and ensures a better future for the people we serve.







## WHAT WE BUILD

### **Access and logistics infrastructure:**

This includes building or rehabilitating roads, bridges, airstrips, shipping ports, logistics bases and storage facilities including medical cold-chain and humanitarian staging areas to secure access to food and non-food items.



### **Community infrastructure projects:**

Shops and bakeries for local traders, agricultural food production and irrigation schemes, water preservation and culverts, school kitchens and community canteens, solar panel installations, and medical clinics, among others.



### **Safe and secure facilities and accommodation:**

Rehabilitation and construction of compounds, office facilities and secured guesthouses in complex environments.



WITH SUSTAINABILITY ALWAYS PRESENT,  
WFP ENGINEERS PROPOSE MEASURES TO REDUCE  
GREENHOUSE GAS EMISSIONS AND PROMOTE  
ENERGY EFFICIENCY IN BOTH HUMANITARIAN  
OPERATIONS AND NEW INFRASTRUCTURE PROJECTS.

For more information about sustainability and  
engineering activities at WFP, see section 5  
(*Sustainability*).





# 2.

## WFP Engineering services





## 2. WFP Engineering services

In both development and emergency contexts, WFP's in-house Engineering teams provide engineering services for WFP operations and partners in the context of supporting governments to achieve their sustainable development objectives.

WFP Engineering provides a **comprehensive range of professional services** encompassing various phases of project management, which are carried out

either by the in-house engineering team or by global and regional consultancy firms that are overseen by WFP, many of them holding long-term agreements with our organization.

Our expertise extends across the **entire project lifecycle**, ensuring seamless support and delivering exceptional results.



## WFP ENGINEERING SERVICES INCLUDE:

### 1. Project scope, planning and initiation

- Feasibility studies and site assessments such as seismic, structural, and road assessments.
- Survey planning and execution: for the planning, design, construction, and monitoring of projects.

### 2. Design and development

- Standardization: development of context-specific technical guidelines and standards.
- Design engineering: optioneering, preliminary and detailed design.

### 3. Implementation and execution

- Contract procurement: management of construction procurement processes.
- Project implementation: complete management of implementation.

### 4. Quality assurance and control

- Technical peer reviews: conducting third-party validations to ensure quality and standards.

### 5. Project closure and handover

- Post-completion warranty, which includes a 12-month construction defect warranty.
- Operations and maintenance training: providing handover operational manuals and training for maintenance and use.

Should you be interested in requesting our services, please see **section 6** (*Contact WFP Engineering*).

## SPECIALIST TECHNICAL SERVICES

Provide completely independent peer reviews, specialist services and studies.

## TURNKEY SOLUTIONS

Implementation of all project stages includes initiation and planning, design and development, implementation and execution, quality assurance and control through project closure and handover.



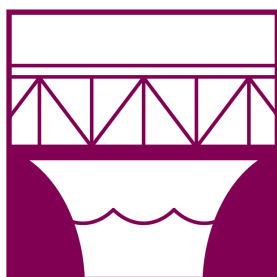
# 3.

## WFP infrastructure project examples





## 3.1 Bridges



As part of its portfolio of projects, WFP engages in bridge construction and repairs with in-house experts. Besides, to strengthen its operational capacity, WFP has established a Long-Term Agreement (LTA) for Modular Steel Bridges with three global suppliers, facilitating the rapid procurement of steel bridges that meet international standards for strength and durability and provide for simplified installation techniques and robustness.

These bridges can be tailored to site-specific needs, including span, number of lanes, loading capacity, and features such as footpaths and parapets.



## ETHIOPIA GEELDOH BRIDGE

In Ethiopia, WFP has been providing food aid in the Somali Region for many years. Before 2016, access to Lagahida and Salahad Districts in the Nogob (Fik) zone of this remote area was presenting several challenges, requiring inter regional transportation and a travel distance of approximately 1,205 km from WFP's operational base in Jijiga. The construction of a **single-span modular bridge of 80 m** over the Wabe-Shebele River allowed direct access from Somali region and reduced the travel distance by 70 percent. The bridge also had direct positive socio-economic benefits and increased mobility and market access for an estimated 127,000 people across three districts.

LENGTH:

**80-METER-LONG**

REDUCED TRAVEL  
DISTANCE BY:

**70 PERCENT**

INCREASED  
MOBILITY FOR:

**127,000 PEOPLE**

## GEELDOH BRIDGE IN ETHIOPIA FACTS:

- The bridge is made of 100 percent recyclable steel.
- 107 local workers per day were involved in the construction.
- The bridge was designed to have adequate robustness against fatigue failure, errant vehicles collision and vandalism.
- It was built and launched in seven different increments to adapt to the launching plain.
- A temporary airstrip was cleared near to the site in case of any accidents/emergencies during the construction process as the location was very remote.



**Geeldoh Bridge in Ethiopia under construction.**  
Photo: WFP/Country Office Engineering team

**Geeldoh Bridge in Ethiopia finalized.** Photo: WFP/Country Office Engineering team





## SOUTH SUDAN KUAJOK BRIDGE

WFP is supporting South Sudan in the construction and rehabilitation of infrastructure impacted by the civil war, particularly transport infrastructure. As a result, **Kuajok bridge** was inaugurated in June 2019, connecting the previously completed Kangi-Kuajok and Kuajok-Lunyaker roads on both sides of Jur river.

The project involved the construction of concrete sub-structure on piled foundations, the supply and installation of the prefabricated bridge superstructure and the development of a 7 km approach road.

The WFP Engineering team in South Sudan led the overall project implementation with direct support from the WFP HQ specialist engineering team.

People can now safely travel across the region all year-long, even during the rainy season.

PROJECT TOTAL COST:

**US\$ 6.5 MILLION**

BRIDGE TYPE:

**MODULAR STEEL  
BRIDGE**

LENGTH:

**120-METER-LONG**

**Kuajok Bridge in South Sudan.**

*Photo: WFP/Country Office Engineering team*



## COX'S BAZAR, BANGLADESH BAILEY STEEL BRIDGE

WFP Engineering in Bangladesh provides technical and emergency support to the Rohingya community, hosted in the refugee camps of Cox's Bazar. To facilitate the transportation of goods and essential products within the camp, as well as access to food distribution points, the Engineering team constructed a **prefabricated bailey steel bridge in 2018**.

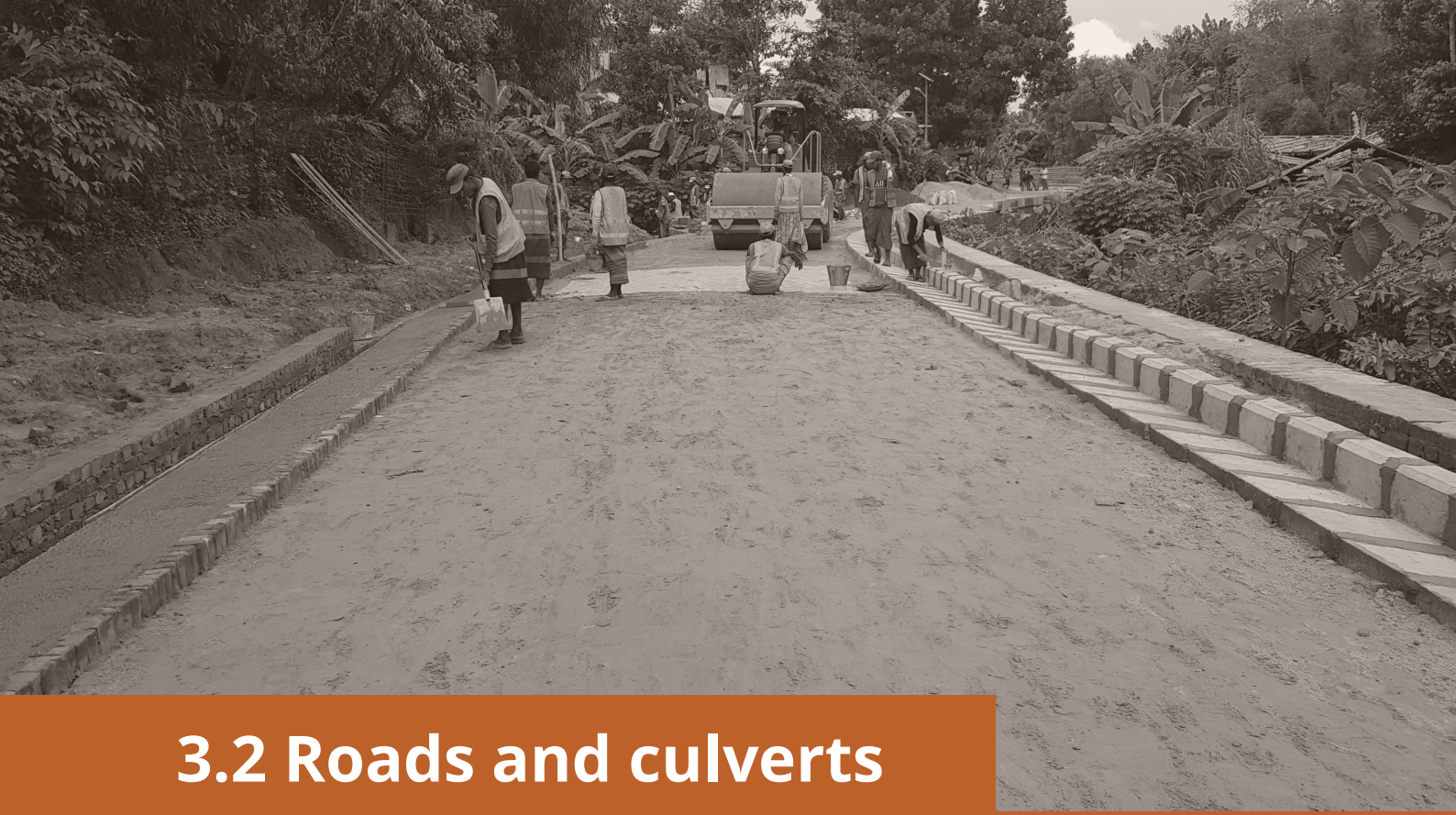
The bridge includes a cast-in-situ pile foundation, pile cap and wing walls. It has a single span of 45 m.

SINGLE SPAN OF:  
**45 METERS**

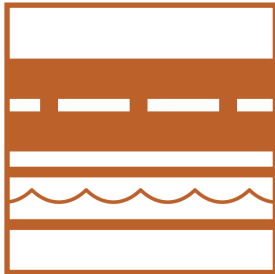
Construction of bailey steel bridge in Cox's Bazar.  
*Photo: WFP/Country Office Engineering team*







## 3.2 Roads and culverts



WFP Engineering, alongside government partners, identifies priorities related to road works, trails, or water crossing points, to provide or maintain vehicular access for community access to markets and other essential services, development activities and humanitarian response.



## SOUTH SUDAN FEEDER AND TRUNK ROADS

WFP South Sudan Engineering team supports the design, construction, rehabilitation, repairs and maintenance of feeder and trunk roads. These projects include choke points repairs (spot repairs) and maintenance of major supply routes (trunk roads) used by WFP fleet trucks and WFP transporters (commercial trucks) to deliver food supplies to WFP field offices and warehouses across the country.

Between 2018 and 2022, **3,847 km of trunk roads were rehabilitated**, and 79 km of feeder roads were built in the country. This led to a considerable decrease in costly air operations, leading to **over 80 percent efficiency gains in food delivery activities**.

**3,847 KM**

OF TRUNK ROADS  
WERE REHABILITATED

**79 KM**

OF FEEDER ROADS  
WERE BUILT

**80%**

EFFICIENCY GAINS IN  
FOOD DELIVERY



**Road rehabilitation project in Western Equatoria State.**  
*Photo: WFP/Country Office Engineering team*



# REDUCED TRAVEL TIME FROM SIX HOURS TO ONLY ONE

The rehabilitation of roads in South Sudan also brought multiple benefits to the local communities. **Torit-Magwi road** was completed in 2021, **reducing travel time from six hours to only one.** This helped improve the access to agricultural markets and social services, while also increasing permanent settlements and land cultivation areas around the road.



**Section of Torit-Magwi rehabilitated road in South Sudan.**  
*Photo: WFP/Country Office Engineering team*



## COX'S BAZAR, BANGLADESH REFUGEE CAMP ROADS



Road rehabilitation works in Cox's Bazar.  
*Photo WFP/Country Office Engineering team*

WFP's Engineering team in Cox's Bazar has worked on the construction of 16 km of roads to provide **vehicular access to and across the refugee camps**. In addition, the road construction works involved large scale earthworks to reshape the site's terrain as well as slope protection activities.

More than 1 million beneficiaries have been positively impacted, either directly or indirectly, due to the roads construction and other access infrastructure works done by WFP across the camps.

**+1 MILLION**

**BENEFICIARIES  
POSITIVELY IMPACTED**



Rehabilitated roads in Cox's Bazar.  
*Photo: WFP/Country Office Engineering team*





## 3.3 Airstrips



The United Nations Humanitarian Air Service (UNHAS) has been supporting WFP operations and the wider humanitarian and development community since 2003, helping deliver assistance and move staff engaged in humanitarian and development operations in the most remote locations around the world. WFP Engineering supports UNHAS in the execution of the construction and rehabilitation of airstrips to make sure WFP and partners can reach affected communities.



## CHAD GOZ BEIDA AIRSTRIP

In 2016, WFP Engineering carried out the rehabilitation of **Goz Beida airstrip**, which had deteriorated after more than a decade of UNHAS flights and adverse weather.

An earthmoving equipment was used to scarify, re-grade and re-compact the airstrip, creating a safe incline on the runway and making it possible for aircrafts to **land safely in a variety of weather conditions**.

The new airstrip can accommodate both Dash 8-100 and Caravan 208 aircrafts.

THE NEW  
AIRSTRIP IS

**1,800 METERS**

IN LENGTH BY

**30 METER**

WIDE

**Rehabilitation works of Goz Beida airstrip.**  
*Photo: WFP/Country Office Engineering team*





## MAURITANIA BASSIKOUNOU AIRSTRIP

Rehabilitation of Bassikounou airstrip in Mauritania to **expand UNHAS air operations and provide access for the humanitarian and development community**. The project, which included compacting and levelling layers of filling materials, was implemented by WFP Mauritania with the financial support of the Central Emergency Response Fund (CERF), the United States Department of State, Bureau of Population, Refugees, and Migration (PRM), the European Union (EU), and technical advice from WFP Engineering.

WFP Engineering is carrying out a quarterly maintenance program of Bassikounou's laterite airstrip. The runway, 1,700 m long and 30 m wide, is a **vital infrastructure for humanitarian workers to reach beneficiaries**.

# THE RUNWAY IS 1,700 M LONG AND 30 M WIDE



**Bassikounou's airstrip.**  
Photo: WFP/UNHAS Mauritania





## DEMOCRATIC REPUBLIC OF CONGO (DRC) TSHIKAPA AIRSTRIP

Rehabilitation of Tshikapa airstrip to prevent flooding and ensure **safe landing of UNHAS flights**, improving access of humanitarian transport as well as commercial flights.

Thanks to the new airstrip, UNHAS flights to DRC's capital have increased from one per week to three.

**UNHAS FLIGHTS  
INCREASED  
FROM ONE PER  
WEEK TO  
THREE.**



## 3.4 Food storage facilities and warehouses



As the leading organization in the fight against global hunger, efficient and sustainable storage facilities play a key role in ensuring timely delivery of assistance to those in need. WFP Engineering has extensive expertise in crafting robust and efficient structures (permanent and semi-permanent), including temperature controlled warehouses and cold storage facilities, that enable the secure storage of food and other relief items.



## ETHIOPIA

### JIJIGA WAREHOUSE COMPOUND

WFP Engineering work is key to support **WFP's humanitarian assistance in Somalia region**, where thousands of people experience food insecurity due to the drought every year.

In Jijiga, WFP Engineering carried out the construction of **five permanent warehouses**. Each warehouse has an approximate size of 4,000 m<sup>2</sup> and around 10,000 mt storage capacity.

EACH WAREHOUSE  
HAS AN  
APPROXIMATE  
SIZE OF

**4,000 M<sup>2</sup>**

AND AROUND

**10,000 METERS**  
STORAGE CAPACITY



Construction process of new warehouse in Jijiga.  
Photo: WFP/Country Office Engineering team



Construction process of the fifth warehouse in Jijiga.  
Photo: WFP/Country Office Engineering team



## PAKISTAN STRATEGIC GRAIN RESERVES

# TECHNICAL SUPPORT

IN THE CONSTRUCTION  
OF WHEAT GRAIN  
RESERVES WITH A TOTAL  
STORAGE CAPACITY OF

# 20,000 MT

TOTAL PROJECT COST:

# US\$ 5.2 M

WFP Engineering has provided support to the Food Departments in the four provinces of Pakistan to **strengthen their capacity in enhancing food systems**. The project included completing feasibility studies to improve grain reserves near the farms (wheat storage silos), constructing a model warehouse with office building (3,000 mt capacity), with a testing lab and a training hall in Malakand, Khyber Pakhtunkhwa province.

WFP also provided technical support in the construction of **wheat grain reserves** in two provinces, with a total storage capacity of 20,000 mt, in Punjab and Khyber Pakhtunkhwa provinces.

Total project cost: US\$ 5.2 million



Strategic grain reserves project in Pakistan.  
Photo: WFP/Country Office Engineering team



Strategic grain reserves project in Pakistan. Photo: WFP/Country Office Engineering team



## BURKINA FASO NATIONAL FOOD RESERVE

Supply and construction of 35 semi-permanent steel cladded mobile storage facilities in Burkina Faso supported by the Government through the World Bank as part of the **expansion of emergency response food reserve** administered by the National Food Reserve authority SONAGESS. The storage facilities, built in 2021, are located in Ouagadougou, Ouahigouya, Kaya, Bogande & Dori. In addition, this support covers the construction of the warehouses, the supply, transport, and storage of 40,000 mt of cereals.

SUPPLY AND  
CONSTRUCTION OF

35

MOBILE STORAGE  
FACILITIES



Warehouses in Burkina Faso. Photo: WFP/Burkina Faso Country Office



## AFGHANISTAN WAREHOUSE UPGRADES

To increase the food storage capacity of existing warehouses and bolster the storage of **temperature-sensitive food commodities** like lipid-based nutrient supplements (LNS) and super cereals, 12 flospan structures were installed in different areas of the country, starting in September 2022. The structures are made of prefabricated a steel frame and Galvanized Iron (GI) corrugated sheets, GI strips, blanket insulation and assembling parts.



Inside view of the warehouse in Kabul.  
Photo: WFP/Afghanistan Engineering team

**12 FLOSPAN**  
STRUCTURES WERE  
INSTALLED IN  
DIFFERENT AREAS OF  
THE COUNTRY

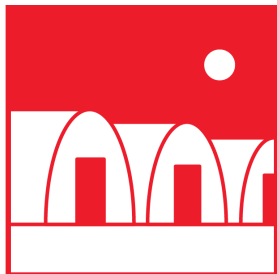


Warehouse upgrades in Kabul. Photo: WFP/Afghanistan Engineering team





## 3.5 Humanitarian response depots



Humanitarian response depots are an instrumental part of WFP's mission, serving as centralized points to support both immediate disaster relief and long-term recovery initiatives. These strategically located infrastructure facilities help WFP to rapidly deploy assistance to disaster-affected areas, thus increasing humanitarian response capabilities, strengthening logistics systems, and enhancing supply chain efficiencies.



## BARBADOS LOGISTICS HUB AND CENTRE OF EXCELLENCE



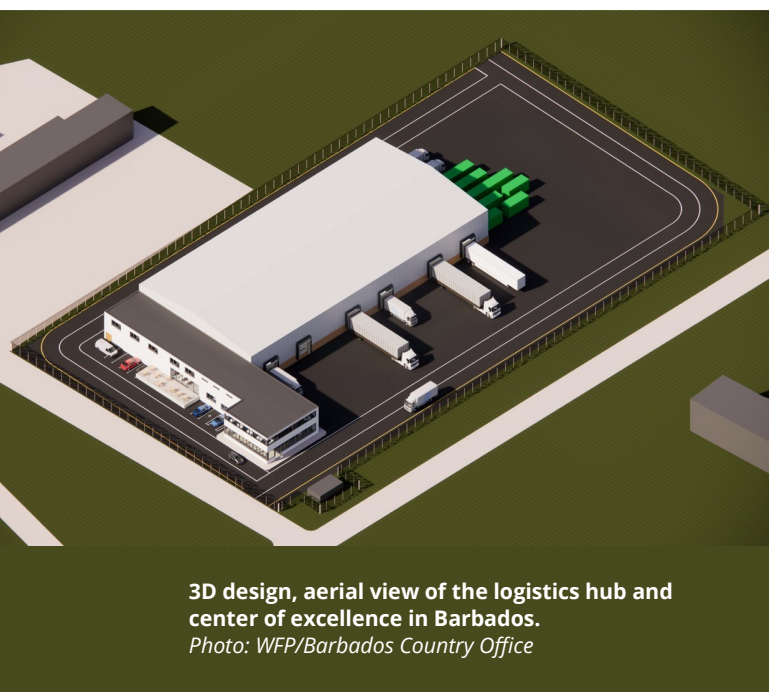
**3D design, logistics hub and center of excellence in Barbados.**

*Photo: WFP/Barbados Country Office*

WFP, in coordination with the Caribbean Disaster Emergency Management Agency (CDEMA) and the Participating States (PS), is developing a facility to **launch large-scale humanitarian responses and enhance emergency preparedness and readiness** in the region.

The facility, located at Grantley Adams International Airport, consists of three main elements:

- SURGE AREA
- 2,550 M WAREHOUSE
- OFFICES AND TRAINING FACILITY



**3D design, aerial view of the logistics hub and center of excellence in Barbados.**

*Photo: WFP/Barbados Country Office*

The warehouse allows for National Departments of Emergency Management, national key stakeholders, and emergency responders, regional (CDEMA), and international organizations to **access low-cost space to preposition emergency response stocks, tools, and equipment.**

The training center aims to **strengthen the disaster risk management capacities** and overall resilience of the Caribbean through the development of emergency logistics skills.

The construction of the hub has been funded in part by the Government of Canada, the EU and the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance.

## DJIBOUTI HUMANITARIAN LOGISTICS HUB

To enhance efficiencies in both the humanitarian and commercial logistics sector, the Government of Djibouti and WFP Engineering developed a **humanitarian logistics hub** outside Djibouti City to serve WFP operations and the wider humanitarian and development community. The project included the construction of:

- Offices
- Grain management facilities
- Check point
- Weighbridges
- Silos with capacity to store 40,000 mt of bulk food
- Storage yard for containers
- Two pre-engineered steel warehouses of 6,000 and 2,800 m<sup>2</sup>

With the construction of this hub, **four strategic objectives were achieved:** enhanced supply chain efficiencies in the Horn of Africa; augmented regional humanitarian response capabilities; alignment of port operations with Ethiopia's expanding strategic reserves; and strengthened logistics systems and capacities at the Djibouti port.



Aerial view of the humanitarian logistics hub in Djibouti.  
Photo: Mulmix/2020



Humanitarian logistics hub in Djibouti. Photo: WFP/WFP Engineering



COMBINED STORAGE  
CAPACITY OF

**24,000 MT**

TOTAL PROJECT COST:

**US\$ 25 MILLION**



**Construction of the humanitarian response facilities in Pakistan.**

*Photo: WFP/Country Office Engineering team*

## PAKISTAN HUMANITARIAN RESPONSE FACILITIES

Between 2013 and 2020, WFP carried out the construction of various facilities in collaboration with the National Disaster Management Authority (NDMA) as part of the **disaster preparedness activities**. The warehouses, strategically positioned in eight different locations, have a combined storage capacity of 24,000 mt.

The facilities played a crucial role in **storing and distributing essential relief supplies** during emergencies such as Covid-19 and 2022 large floodings, ensuring that affected communities received timely food assistance and humanitarian support.

Once completed, they were handed over to the respective Provincial Disaster Management Authority (PDMA), assuming full responsibility for operation, management and maintenance.

Total project cost: US\$ 25 million.



**Humanitarian response facilities in Pakistan.**

*Photo; WFP/Country Office Engineering team*



## 3.6 Infrastructure for communities



From the construction of school kitchens to the implementation of irrigation systems, water infrastructure, markets and nutrition centres, WFP engineers are committed to building the foundations of thriving communities. Our expertise lies in designing and implementing small and medium scale engineering solutions that address the unique challenges faced by vulnerable populations, empowering them with the infrastructure they need to flourish and ensuring a brighter, more sustainable future for all.

Where possible, local contractors and local workers are involved in this kind of infrastructure projects.





# SCHOOL INFRASTRUCTURE

## 📍 NEPAL

WFP’s Engineering team is supporting the **School Meals Programme** in Nepal, by building school infrastructure such as kitchens, latrines, and washing stations. Since 2015, over 200 school kitchens have been built and almost 250 hand washing stations, benefiting 30,000 children.



School kitchens in Nepal. Photo: WFP/Nepal Country Office







## 📍 VENEZUELA

Successful implementation and expansion of the WFP school-based programme in Venezuela depends largely on the schools' capacity to store and cook meals. Most schools have very limited infrastructure and equipment, especially after the pandemic.

Therefore, between 2022 and 2023, the refurbishment of school kitchens has been an essential part of WFP's work in the country. Over 300 kitchens (of 1,300

planned) have been improved in close consultation with school communities, partners and local education authorities. The scope of the works includes **water storage, functional pumping system, washing points, water disposal systems, stoves, adequate ventilation, and water purification systems**. In some kitchens, tasks to improve roofs, walls, and structures are also carried out. This is combined with provision of key cooking equipment and utensils.



Rehabilitation process of school kitchens in Venezuela. Photo: WFP/Venezuela Country Office



## 📍 NICARAGUA

WFP has carried out the **construction and rehabilitation of school kitchens, handwashing stations and rainwater collection systems** to increase climate resilience and improve conditions in food preparation in the rural areas. The projects cover the central and northeast areas of the country, Jinotega, the Dry Corridor, and the Autonomous Region of the North Caribbean Coast. A total of 163 communities were reached thus benefiting the same amount of education centres and over 24,000 children during the last three years.

The handwashing stations installed in schools were mainly to provide an immediate response to the challenges arising from Covid-19, providing coverage to 7 municipalities, 25 schools and over 6,300 beneficiaries.

PROVIDING  
COVERAGE TO

**7 MUNICIPALITIES,**

**25 SCHOOLS**

AND OVER

**6,300**

**BENEFICIARIES**



**Inauguration of a new school kitchen.**  
*Photo: WFP/Nicaragua Country Office*



**Rainwater collection system.**  
*Photo: WFP/Nicaragua Country Office*



## HAITI

Ten schools affected by the earthquake were rebuilt, with improved storage areas and safe cooking, allowing WFP to resume school feeding activities.



School kitchens in Haiti.  
Photo: WFP/Haiti Country Office

## EL SALVADOR

Transformation of shipping containers into fully equipped school kitchens as part of the pilot project “Kitchen-in-a-Box”, carried out in collaboration with the Ministry of Education of El Salvador. Solar energy and induction stoves replace traditional firewood, promoting safer cooking practices, reducing the risk of diseases, and mitigating air pollution.



Kitchen in a box. Photo: WFP/El Salvador Country Office





**Stoves in schools in Burundi.**  
*Photo: WFP/Burundi Country Office*

## 📍 BURUNDI

Construction of stoves for School Meals Programme in Nyabiraba, Bujumbura Province.



## 📍 MALAWI

Construction of school kitchens, using half walls to ensure proper ventilation.



**Back view of the school kitchen in Malawi.**  
*Photo: WFP/Malawi Country Office*



## TRAILS AND TRAILS BRIDGES

### 📍 NEPAL

A **120-meter-long suspended bridge** was constructed as part of the after-earthquake response to improve the access for 11,000 local villagers to essential healthcare, schools, and local markets.



**Nepal Dharkha bridge.**

*Photo: WFP/Country Office Engineering team*



## FOOD PROCESSING UNITS

### 📍 SYRIA

Bakeries rehabilitation in different cities of Syria. **Building structures and production lines** are being rehabilitated to become operative.

One example is Sakhour bakery in Aleppo, which now provides fresh bread to 120,000 people.



**Bakery rehabilitation in Deir Ezzor.** *Photo: WFP/Hussam Al Saleh*



## 📍 COLOMBIA

Construction of an **agro-industrial plant** for the transformation of green bananas surplus into flour to generate a quality product that the community can commercialize in the benefit of the local population and farmers.

**Green banana transformation plant in El Choco, Colombia.**  
Photo: WFP/Colombia Country Office



**Food processing site in Sierra Leone.** Photo: WFP/Sierra Leone Country Office



## 📍 SIERRA LEONE

WFP Engineering is working on the establishment of **four local complementary food production sites** across the country: one in Moyamba, two in Pujehun, and one in Kambia districts. This initiative encompasses the construction of all the infrastructure, the implementation of a solar-powered system to facilitate production, and the installation of the necessary machinery for the production of food. This project aims to significantly **enhance food production capabilities in these regions**, ultimately contributing to increased access to affordable and enriched complementary food for children between 6 and 23 months and an improved livelihood for the local communities.



# IRRIGATION CANALS & OTHER WATER INFRASTRUCTURE

## 📍 SYRIA

Rehabilitation of Adraa **water treatment plant** (11.2 km and 3,020 ha), enhancing the treatment capacity from 80,000 m<sup>3</sup> to 170,000 m<sup>3</sup> per day.

ENHANCING THE  
TREATMENT CAPACITY  
FROM

**80,000 M<sup>3</sup>  
TO 170,000 M<sup>3</sup>  
PER DAY**



Before and after pictures of the plant rehabilitation.  
*Photo: WFP/Country Office Engineering team*





**Smallholder farmer in the irrigation canal in Dollo Ado, Somalia region.**  
*Photo: WFP/Michael Tewelde*

## ETHIOPIA

WFP Engineering, in support of the “Changing Lives” agenda, has constructed a **canal irrigation system** to boost cultivation 216 ha of land for farmers in Dollo Ado, Somali region. The team is also working with the Resilience team and cooperating partners to further expand the irrigation network to over more than 1,000 ha. Further environmental impact assessments are ongoing for this expansion.

## TOTAL LAND AREA OF 216 HA

## KENYA

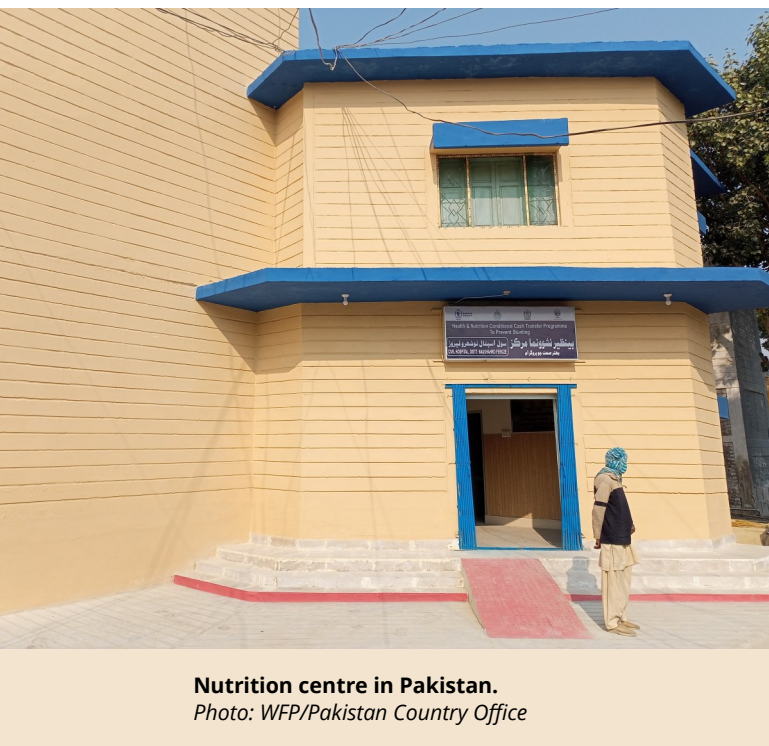
Replacement of irrigation ditches with **concrete channels**, reducing water losses and soil runoff and improving water access for thousands of smallholder farmers.



**Nanyee Irrigation Scheme in Kenya.**  
*Photo: WFP/Georgina Stickels*



# NUTRITION CENTRES



**Nutrition centre in Pakistan.**  
Photo: WFP/Pakistan Country Office

## PAKISTAN

WFP Engineering, in collaboration with the Government of Pakistan, supported the Benazir Nashonuma Programme with the **renovation of over 500 nutrition centres across 158 districts** between 2022 and 2023. With a total project cost US\$ 3 million, these efforts have transformed old hospital rooms into secure and fully equipped spaces (facilitation centres), where women and children receive essential health and nutrition assistance.

## YEMEN

Construction and rehabilitation of **nutrition centres** to provide nutrition support to mothers and children to treat and prevent malnutrition.



**Nutrition centre in Yemen.**  
Photo: WFP/Yemen Country Office





**Nutrition site in Uganda.**  
*Photo: WFP/Uganda Country Office*

## UGANDA

Construction of a waiting shed, office, and storage area at three health centres in Obongi to ensure **proper storage of WFP nutrition food supplements** provided to lactating mothers.



# HEALTH EMERGENCY RESPONSE FACILITIES

## VARIOUS AFRICAN COUNTRIES

As part of the Ebola response in 2014, 2018 and 2019, WFP Engineering and Logistics worked together for the construction of medical facilities, camps and logistics hubs across seven countries (Liberia, Guinea, Sierra Leone, Senegal, Ghana, DRC and Uganda), including **Ebola Treatment Centres (ETC)** with an additional capacity. In West Africa, the project also involved the construction of an air terminal at Dakar to support UNHAS air operations into affected countries; as well as the expansion of UN clinics.

**ETCs construction for the Ebola response in West Africa.**

*Photo: WFP/Engineering team*



**ETCs for the Ebola response in West Africa.**

*Photo: WFP/Engineering team*





**Al Salif Medical Centre in Yemen.**  
*Photo: WFP/Country Office Engineering team*



**Omer Al Mukhtar Hospital in Yemen.**  
*Photo: WFP/Country Office Engineering team*

## YEMEN

Health emergency response following **Cholera outbreak** in 2017. Design and construction of 31 Infectious Disease Treatment centres across all governorates.

Total project cost: US\$ 2.8 million.

DESIGN AND  
CONSTRUCTION OF

**31 INFECTIOUS  
DISEASE  
TREATMENT  
CENTRES**



**Construction works of the Eka Kotebe hospital.**  
*Photo: WFP/Ethiopia Country Office*



## 📍 ETHIOPIA

In 2020, to support the COVID-19 response, the **World Health Organization (WHO)** requested to improve the solid/sewage disposal system of the Eka Kotebe hospital, one of the hospitals in Addis Ababa designated for COVID-19 patients.

The system was designed to upgrade the septic tanks from the existing capacity of 100 m<sup>3</sup> to 300 m<sup>3</sup>, including **infiltration wells and pumping units**. Additionally, three new incinerators and a solid waste storage shade have been provided, as well as a solid/sewage disposal system, and construction works are in process to improve the overall compound drainage system.

In addition, WFP undertook the establishment of a **field service hospital** with 90 beds in Addis Ababa, Ethiopia dedicated to the isolation and effective treatment of critical COVID-19 patients.

**Field service hospital in Addis Ababa, inside view.**  
*Photo: WFP/Country Office Engineering Team*

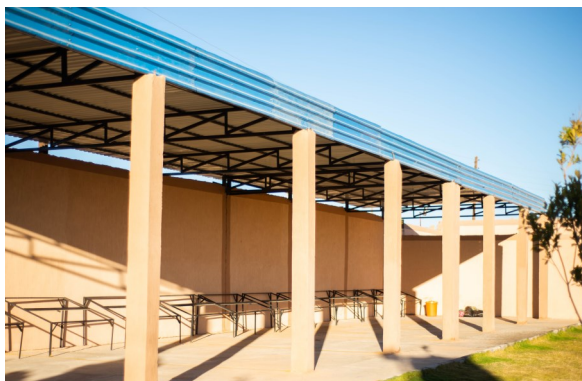


UPGRADE THE SEPTIC  
TANKS FROM THE  
EXISTING CAPACITY OF

**100 M<sup>3</sup>**  
TO  
**300 M<sup>3</sup>**



## COMMUNITY MARKETS



**Ubari market stalls.**  
*Photo: WFP/Libya CO*

### LIBYA

Rehabilitation of **community markets in Ubari and Sebha**, allowing local farmers sell their products and facilitating the access to fresh and local products to more than 150,000 people.

ACCESS TO FRESH  
AND LOCAL PRODUCTS  
TO MORE THAN  
**150,000**  
**PEOPLE**



**Sebha market stalls.**  
*Photo: WFP/Libya CO*



**Ubari market inauguration day.**  
*Photo: WFP/Libya CO*



 DRC



**Market in DRC.**

*Photo: WFP/Country Office Engineering team*

**Market construction** as part of a wider infrastructure project involving the construction of a community warehouse, a market, a literacy centre, and a farm warehouse.

TOTAL PROJECT COST:

**US\$ 3.5 MILLION**

 KENYA

Market construction in Towoukayeni, Kakuma Camp, to enable **access to agricultural products** to the local population.



**Market construction in Towoukayeni.**

*Photo: WFP/Country Office Engineering team*



# 4.

## Technical support to communities for resilience





Asset Creation and Livelihoods programmes – also referred to as **'Food Assistance for Assets' (FFA)** in WFP – help move ecosystems rehabilitation forward by combining food assistance with technical capacity to build or rehabilitate community or household assets, restore degraded land, and improve natural resource management.

Among other various benefits, FFA activities help local communities, improve access to food and better nutrition, reduce risks and increase resilience to shocks, strengthen dialogue and cooperation between communities, and promote gender equality and women empowerment.

In this context, **WFP Engineering supports Asset Creation and Livelihoods activities by providing technical expertise and guidance** to support the design and implementation of asset creation projects built by the communities, such as bridges, dams, feeder roads or irrigation systems, in exchange of food or cash assistance. Their work is essential in ensuring quality standards, safety, and sustainability of these assets.

## FEEDER ROAD REHABILITATION IN DRC

Local communities supported the feeder roads rehabilitation projects in DRC between 2019 and 2021 through cleaning, filling, or manual compacting, among other activities.



Community members carrying out road rehabilitation works in North Kivu.  
Photo: WFP/DRC Engineering team



# 5.

## Sustainability





WFP Engineering is committed to creating a **sustainable future** that is not only free of hunger, but also **environmentally conscious**. Through innovative and clean energy solutions implemented worldwide, we strive to maximize the impact of our operations, respect the environment, and better serve the communities in need.

By introducing **solar power systems**, we provide sustainable and reliable energy sources for various kinds of infrastructure such as logistics centres or guesthouses. This helps reduce the reliance on fossil fuels while also ensuring a consistent power supply in remote areas with limited access to electricity such as **DRC, Sudan, or Ethiopia**.

At the same time, **green cooking solutions in countries such as Nepal or El Salvador** have introduced cleaner and more efficient cooking technologies such as improved cookstoves, reducing the environmental impact of traditional cooking methods while promoting healthier and safer cooking practices.



**Green kitchens pilot in Nepal.**

*Photo: WFP/Country Office Engineering team*



**Solar panels in Mokha hub, Yemen.**

*Photo: WFP/Country Office Engineering team*

**DRC guesthouse powered by solar energy.**

*Photo: WFP/Country Office Engineering team*



**Solar panel installation in Kitchen in a Box, El Salvador.**

*Photo: WFP/El Salvador Country Office*

**Solar powered water pumps in Ethiopia.**

*Photo: WFP/ Michael Tewelde*



Additionally, by harnessing **solar energy** to power irrigation pumps in countries such as Kenya or Ethiopia, we enable farmers to have a more reliable and sustainable water supply for their crops. This reduces dependence on fossil fuels and provides farmers with an environmentally friendly solution that contributes to their resilience and food security.

Through these environmentally friendly initiatives, WFP Engineering is making a significant impact in addressing global challenges, **paving the way for a greener and cleaner future**.

# 6.

## Contact WFP Engineering







WFP's Engineering global team is present in more than 45 countries worldwide, bringing to life the belief that **infrastructure is essential to reach global humanitarian objectives and ensure a better future for the people we serve**. When properly planned and executed, infrastructure can save lives and protect livelihoods, speed recovery following a disaster, and enable communities to meet their own food and nutrition needs, lowering the risk of devastating food insecurity.

With an extensive expertise in providing cost-effective, high-quality, timely and sustainable infrastructure in different humanitarian and development contexts, WFP Engineering works in a wide variety of projects, from warehouses and silos, to roads, bridges and markets that enable access to food and other essential services.

Should you be interested in learning more about WFP Engineering services, exploring collaboration opportunities, or partnering with us, please reach out to:

[wfp.engineering@wfp.org](mailto:wfp.engineering@wfp.org)

Further details about WFP's Engineering work at:  
[www.wfp.org/engineering-services](http://www.wfp.org/engineering-services)

# Acronyms

<b>CDEMA</b>	Caribbean Disaster Emergency Management Agency
<b>ETC</b>	Ebola Treatment Centres
<b>EU</b>	European Union
<b>FFA</b>	Food Assistance for Assets
<b>GI</b>	Galvanized Iron
<b>SONAGESS</b>	National Company for the Management of Food Security Stocks in Burkina Faso
<b>DRC</b>	The Democratic Republic of the Congo
<b>UN</b>	United Nations
<b>UNHAS</b>	United Nations Humanitarian Air Service
<b>USAID</b>	United States Agency for International Development







**World Food Programme**

Via Cesare Giulio Viola 68/70,

00148 Rome, Italy - T +39 06 651 131

[www.wfp.org](http://www.wfp.org)

# Management Services Division

Engineering – **MSDE**

