

# The World Bank and WHO in Yemen, 2017–2022

Preventing collapse, building resilience





Over the past eight years Yemen has been home to the world’s worst humanitarian crisis – armed conflict, compounded by rising undernutrition, poverty and inflation, infectious diseases, and social and environmental health challenges.

Together, the World Bank and WHO have worked on three projects to prevent the collapse of Yemen’s health system and leverage opportunities **to build resilience towards sustainable development:**

01

**Emergency Health and Nutrition Project (EHNP), 2017–2022**



**Partners:**  
World Bank, UNICEF, WHO

02

**Yemen COVID-19 Response Project (YCRP), 2020–2022**



**Partners:**  
World Bank, WHO

03

**Emergency Human Capital Project (EHCP), 2022–2025**



**Partners:**  
World Bank, UNICEF, WHO, UNOPS

With a total investment of **more than US\$ 372 million** via WHO, significant results have been achieved.



**32 million**

beneficiaries of essential health and nutrition services

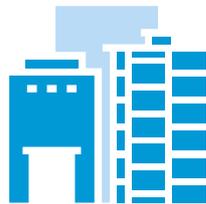
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**71 key areas**

of hospitals and 26 isolation units rehabilitated

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**32**

waste treatment units installed

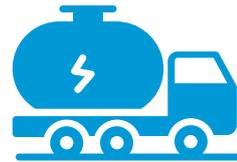
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**1.3 billion**

liters of clean water for over 200 health facilities

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**33.4 million**

liters of fuel for health facilities

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**3.3 million**

oxygen cylinders refilled for health facilities

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**Over 25,000**

health workers trained in essential health and nutrition topics

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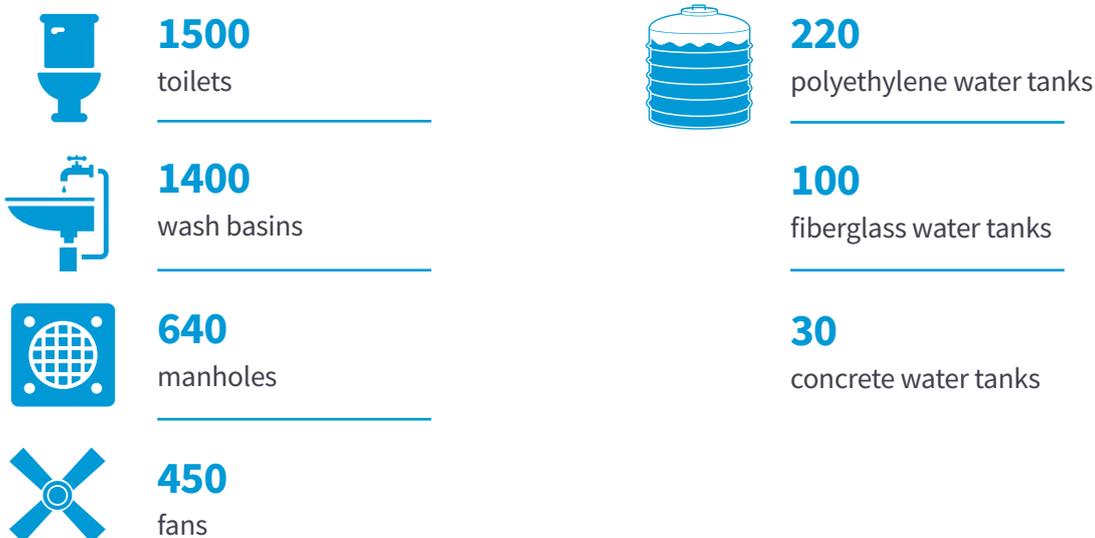
## Preventing health system collapse in Yemen

The World Bank–WHO partnership has contributed significantly to preventing the collapse of Yemen’s health system. This included rolling out the Minimum Service Package (MSP) from 2017 onwards in more than 70 hospitals. With the backing of the Health Cluster and buy-in of health authorities, the MSP was adopted as a guiding package for all partners working on health service delivery in Yemen.

WHO has provided critical inputs, including fuel, water, oxygen, supplies, equipment, training and needed rehabilitation to keep 72 hospitals functioning.



### WHO installed in hospitals:



### Health service availability in Yemen increased between 2016 and 2020

The investments of the World Bank, WHO and other partners over the past five years have resulted in improved availability of services for communities. Surveys from the Health Resources and Services Availability Monitoring System (HeRAMS) show a notable increase in service

availability across all MSP domains in supported hospitals. For example, availability of general clinical services and trauma care increased from 55% in 2016 to 75% in 2020 (a 36% increase). Additionally, the number of supported hospitals functioning 24 hours, 7 days a week, increased from 34 in 2016 to 53 in 2020.

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### **Bringing care closer to communities**

Data from third party monitoring (TPM), triangulated with WHO monitoring and evaluation information, indicates that the World Bank's support through WHO succeeded in decentralizing health care and bringing it closer to communities, thereby making it more accessible. This may have contributed to improved system efficiency and reduced out-of-pocket costs for transport and opportunity-time costs.

For example, the average number of outpatient consultations decreased in larger governorate hospitals and increased by 116% in supported intra-district hospitals between 2017 and 2021, while district hospitals saw an increase of 67%.

### **Leading to more people accessing services**

In addition to contributing to decentralizing services, service utilization improved in supported hospitals over the years. In 2016, there were 2.17 million outpatient visits, this increased by 34% in 2017. Even aside from COVID-19 disruptions, there was still a 49% increase in outpatient utilization between 2016 and 2021.

Analysis in 2019 of TPM data showed that around half (47%) of all outpatient consultations occurred at supported hospitals compared to 53% occurring in supported primary health care facilities. This highlights the importance of future investments in strengthening referral systems and building community trust in health services at all levels, starting with primary health care.



# Key supplies provided to the health sector by WHO and the World Bank



## Hospital equipment and supplies

- 437 ventilators
- 17 x-ray machines
- 7 C-arms
- 3284 hospital beds
- 285 electrocardiogram (ECG) machines
- 576 patient monitors
- 124 infant incubators
- 2 mammography machines



## Essential supplies

- 1.97 million 500 ml bottles of dextrose intravenous (IV) fluids
- 2.9 million of normal saline
- 2.15 million bottles of ringer's lactate
- 691,124 of dextrose and sodium chloride (DNS) solution
- 900,000 bottles of metronidazole 500 mg in 100ml
- IV infusion
- 300,000 Salbutamol 0.1 mg oral inhaler
- 100,000 Beclomethasone 250 mcg inhaler
- 600,000 insulin vials
- 2000 Rh0(D) immune globulin
- 49,734 anti-rabies vaccine vials
- antibiotics, antihypertension, anti-inflammatory, antidiabetic and NCD medicines



## Emergency health kits

- 7774 Intra-agency Emergency Health Kits
- 3138 Trauma and Emergency Surgery Kits
- 3196 nutrition/severe acute malnutrition kits
- 875 oxygen concentrators
- 464 pulse oximeters



## Laboratory equipment and supplies

- 53 fully automated chemistry analysers
- 93 fully automated hematology analysers
- 13 fully automated ELISA
- 125 centrifuges
- 63 laboratory refrigerators
- 66 microscopes
- 6 spectrophotometers
- 348 laboratory clinical chemical kits
- 104 urine analysis kits
- 104 gram stain kits
- 120 HBs AG kits
- 120 Hepatitis C antibodies kits
- 120 HIV antibodies kits
- 36,401 different rapid diagnostic tests
- 237,200 blood bags

## Other essential supplies

- 1000 infra-red thermometers
- 335 sprayers



## Containing the world's largest cholera outbreak and continued campaigns to prevent future outbreaks

Since 2017, more than 2.5 million suspected cases of cholera have been reported in Yemen and sadly 3915 people have died. The peak of the epidemic occurred between April and December 2017 when more than 1 million suspected cases and 2200 deaths were reported. WHO and partners worked hard to ensure access to clean water, sanitation, treatment and vaccination, as well as training health workers, reinforcing surveillance, and engaging communities.

With the World Bank's support, 229 diarrhoea treatment centres (DTCs) with inpatient capacities, and 400 oral rehydration corners for early detection, treatment, and referral of severe cholera cases were established. In all 333 districts, rapid response teams were created to quickly deal with flare-ups. These teams were then maintained and tasked with responding to more than 20 diseases and providing health awareness and education for communities.

This support, along with the contributions of other partners, has led to declines in cholera incidence from 2019 onwards. A key driver of the decreasing trend in cholera cases, is preventive vaccination campaigns. WHO and health authorities have collaborated on these campaigns several times since 2018.

The most recent campaigns in November 2021 and February 2022, reached almost 692,000 people with vaccination in the first round (91% coverage) and 670,000 people in the second round (88% coverage). While vaccination remains a key prevention tool, increasing vaccine hesitancy in the context of misinformation around the COVID-19 pandemic, and resistance of the authorities in the northern governorates to conducting campaigns, are two key risks that will require ongoing advocacy to ensure communities have access to essential services.



## Nutrition screening for 1 million children and saving the lives of around 70,000 children with severe acute malnutrition

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An estimated 17 million people (almost 60% of Yemen's population) are food insecure and require urgent humanitarian assistance. WHO provides life-saving treatment for children with severe acute malnutrition (SAM) with medical complications. Children with SAM are nine times at higher risk of death compared with normal or moderately malnourished children.

From February 2017 to June 2022, there were 75,103 children under-five who received treatment for SAM with medical complications in more than 100 WHO-supported therapeutic feeding centers (TFCs). Of these, TFCs, 60 are supported with full operational costs with World Bank funding.

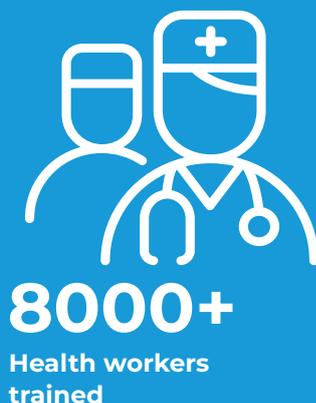
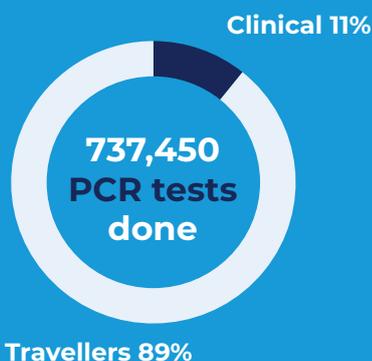
Treatment is free-of-charge and includes access to therapeutic feeding and medicines, and meals and health education for caregivers.

WHO has also established 300 nutrition surveillance sites (NSS) to detect and refer undernourished children for treatment. More than one million children under-five were screened for acute and chronic malnutrition, breastfeeding status, and anaemia at these sites. Of these, 72,582 children were referred for treatment for undernutrition.

# Stopping the spread of COVID-19 and building critical care capacities

The World Bank was the first partner to recognize the potential magnitude of the COVID-19 pandemic in Yemen, and quickly made funding available in April 2020. Thereafter the Bank's support drove the COVID-19 response, with the YCRP accounting for over 40% of WHO's funding to respond to the pandemic in Yemen.

## YCRP top achievements



**COVID-19 hotline established** to answer queries on from the public and support transfers and referrals

**IPC adherence improved** e.g. biohazard and immunization waste management, 90%+ improvement compared to first TPM round



## Expanding disease surveillance from 1000 to 2379 sentinel sites

In Yemen, every year, cases of cholera, dengue, diphtheria, malaria, measles, and other diseases are reported. When the EHNP started there were around 1000 surveillance sites across 306 districts in Yemen. One year later the number of sites had doubled and expanded to all 333 districts in the country. By 2022, there were 2379 sites all regularly reporting via Yemen's Electronic Integrated Disease Early Warning System (EIDEWS).

The World Bank–WHO collaboration also enabled significant upgrading of EIDEWS. The platform is now completely digital and standardizes line lists, investigation forms and response forms as well as summarizing key information into visual dashboards. WHO continues to support the strengthening of Yemen's disease surveillance system capacities with 1655 health workers from all 23 governorates trained on rapid response, disease surveillance and data collection.

## Scaling-up and sustaining laboratory and blood transfusion services

Prior to the conflict in Yemen, there were five functioning central public health laboratories (CPHLs) in Yemen. By 2017 only two CPHLs were active in Aden and Sana'a, and both were partially functioning. With the support of WHO and the World Bank, 12 CPHLs are now up and running in Sana'a, Aden, Al Bayda, Al Hodeidah, Hajjah, Ibb, Marib, Mukalla, Sayoun, Sana'a, Shabwah and Taizz.

These facilities are bringing laboratory services closer to communities, providing expanded access to testing and confirmation of communicable disease infections, and liver and kidney function, among others. They also facilitate the confirmation of outbreaks, for example of cholera, diphtheria, measles and COVID-19.

In 2017, the only National Blood Transfusion Center (NBTC) was in Sana'a. Nine NBTCs are now active in Aden, Al-Hodeidah, Mukalla, Hajjah, Ibb, Sada'ah, Sana'a, Sayoun and Taiz. Prior to the establishment of these centers, communities only had access to whole blood at hospitals. The presence of NBTCs facilitates access to blood components, such as plasma and red blood cells. This enables blood only to be transfused according to need. For example, cancer patients sometimes only require red blood cells and platelets and burns patients may only require plasma.

## Over 23 million doses of oral polio vaccine administered to protect children from disability

To minimize flare-ups of polio caused by low immunization coverage, and to maintain Yemen's polio-free status since 2006, WHO and the World Bank contributed with other partners, to the delivery of six vaccination campaigns from 2017 to 2021, each reaching between 1.26 million and 4.54 million beneficiaries, depending on the geographical area targeted.

Each campaign learned from the last one, with strategies to reach routine immunization zero-dose children and new techniques for social mobilization, such as engaging mother-to-mother volunteers, implemented over the years.

These campaigns were implemented amid so many challenges, including for example, since 2021, increasing resistance by authorities in the northern governorates, particularly to house-to-house campaigns – a proven, best-practice approach for reaching communities and preventing outbreaks.

Outbreaks of circulating vaccine-derived poliovirus persist in Yemen, and constant advocacy and partnership will be needed going forward, including house-to-house approaches, to stop these outbreaks in their tracks. WHO will keep advocating for work in this area.





## Almost halving the schistosomiasis incidence since 2017

Preliminary data from EIDEWS indicates that the incidence of schistosomiasis has been almost halved from 3022 cases reported in 2017 to 1636 cases reported in 2021. Under EHNP, WHO supported the authorities to conduct four rounds of mass drug administration (MDA) for schistosomiasis and soil-transmitted helminths (STH), via which around 9.4 million people received medications for these neglected tropical diseases.

Geographically, two thirds of Yemen are now estimated to have achieved elimination of schistosomiasis as a public health problem. The results of a forthcoming impact evaluation survey in late 2022 or early 2023 will help to inform the way forward towards elimination of schistosomiasis in Yemen.

## Reducing malaria cases in key hotspots and expanding action on emerging vector-borne diseases

Almost 20 million Yemeni's are living in areas at risk of malaria transmission. With EHNP support there are promising signs of progress in two governorates, Al Hodeida and Hajjah, which account for 65% of the national burden of reported cases. Data from EIDEWS shows that the malaria positivity rate declined from 28% and 17% in Hajjah and Hodeida in 2018 to 13.8% and 6.1% by end of 2021 respectively.

EHNP contributed to this success through activities such as indoor residual spraying, covering the cost of transport of long-lasting insecticide treated nets, and procurement of laboratory supplies.

WHO has also supported the scaling-up of action on climate sensitive emerging threats, such as dengue and chikungunya, and West Nile virus. Work in this area focused on case management, vector control and epidemiological and entomological surveillance. Through fogging activities in response to outbreaks, more than 2 million people were protected against dengue and chikungunya across 15 governorates.

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## Building awareness and acceptance of environmental and social standards

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The World Bank's Environmental and Social Framework (2018) has paved the way for an increasing focus on ensuring the safety of workers and communities in the delivery of interventions, of engaging stakeholders in the design and implementation of projects, and of promoting gender equality, climate co-benefits, and other social and environmental public goods.

WHO has integrated educational sessions on environmental and social safeguards in all World Bank funded trainings, to expand awareness and acceptance among the authorities, partners and beneficiaries of the importance of these aspects. Site-specific environmental and social management plans have been prepared to guide the installation of around 30 waste treatment units in supported facilities. These plans were developed with inclusive consultations with beneficiaries and capacity-building of WTU operators.

Over 400 health workers were trained on medical waste management and WHO regularly provided personal protective equipment to workers to enable adherence to infection prevention and control standards. Social safeguards were advanced through the establishment of a grievance redress mechanism and resolution of almost 600 queries and grievances, and awareness raising on gender equality and prevention of gender-based violence, delivered to over 800 beneficiaries.



## Surpassing targets

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Under the EHNP, the results framework agreed between WHO, UNICEF and the World Bank, was **to reach 16 million people with essential health, nutrition and population services.**

The end achievement was double this target, **with 32 million beneficiaries receiving these services** between 2017 and 2022, an average of 6.4 million per year. WHO and UNICEF also succeeded in training 274% more health workers than targeted, reflecting the enormous needs for continuous leading in the health sector, due to emerging threats, such as infectious diseases, as well as the high rate of turnover due to limited salary payments and more attractive working conditions in the private sector and abroad.

Similarly, for the YCRP, which ends in December 2022, the project is on track to surpass **by 67%, the target for training health workers in infection prevention and control protocols.**

Through intense advocacy and coordination with the authorities, **the target of promoting 35% of female health professionals** as vaccinators is being exceeded by 46%. So far more than half of all COVID-19 vaccinators are women. The project also set out **to ensure there were at least 12 laboratories testing for COVID-19,** up from a baseline of two at the start of the pandemic. During COVID-19 waves up to 18 laboratories have tested for the virus.

The EHCP, which started substantive implementation in 2022 is also on track to surpass its targets. In collaboration, WHO and UNICEF have **reached around 2.8 million beneficiaries with essential health and nutrition services.**

Building on the success of EHNP, both agencies are now expanding support to additional facilities, scaling-up capacity-building, and placing stronger emphasis on environmental and social safeguards and climate change.





## Lessons learned

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From this partnership, one key lesson is that **flexibility in financing is crucial**, to enable rapid response to emerging threats. Such flexibility was exercised with the World Bank's support, in response to cholera, COVID-19 and other outbreaks.

Coupled with this flexibility, **trust between stakeholders is critical**. This can help to facilitate fast communication, updating and decision-making. The World Bank's environmental and social framework, and emphasis on social safeguards, have provided a strong platform to integrate stakeholder engagement in all project activities. Regular meetings with UNICEF, as a co-implementing partner, and UN sister agency, both on EHNP and other topics, have enhanced synergies on joint activities such as the MSP rollout and vaccination campaigns. Over the years, collaboration with the authorities has also increased, shifting more towards joint planning.

In addition to regular communication and good working relationships, **strong partner coordination is important, towards enhancing synergies and complementarity**, and reducing instances of overlap and duplication. The Health Cluster has proved to be a key mechanism to bring partners together regularly, to share information, and to plan and implement activities.

Finally, **the value of data in shaping decision-making** has been reaffirmed. WHO has compiled a significant amount of data from third-party-monitoring reports, HeRAMS, WHO M&E and EIDEWS and implementation of activities that will be used to guide health systems strengthening activities going forward.

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## Next steps

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Building on the successes and lessons learned over the past five years, the World Bank and WHO are sustaining support to Yemen's health sector through the EHCP, in partnership with UNICEF and UNOPS, and taking forward opportunities to strengthen individual and institutional capacities.

Amid decreasing funds to Yemen, with global shifts towards Ukraine, Afghanistan and other priorities, the EHCP is increasingly the backbone of Yemen's health system.

Every opportunity is being taken by the project to shift across the humanitarian-development nexus towards interventions and activities that will have a lasting impact, while at the same time maintaining readiness to respond to acute emergencies and lifesaving needs.

### Key strategic directions for the EHCP will include:

- **Sustained action to mitigate the undernutrition crisis** by supporting 60 TFCs with full operational costs and partial support to other WHO TFCs. Nutrition surveillance will be shifted to DHIS2 as part of strengthening the health information system in Yemen and to enhance the availability of data for decision-making.
- **Maintaining critical inputs for sustaining service delivery**, including fuel, oxygen, medicines, consumables, and equipment, on an as needed basis.

- **Streamlining and integrating surveillance and rapid response capacities** to enhance multi-hazard preparedness and response to health emergencies.
- **Seeking opportunities to work with academic institutions and other local institutions** to build structural capacities and enhance the sustainability of project interventions. This will include exploring opportunities to embed, accredit and evolve WHO trainings into diploma-style courses.
- **Costing of the updated minimum service package (MSP)**, with the World Bank's support, coupled with further prioritization and development of guides and tools to rollout the MSP in all facilities, in collaboration with the authorities and partners.
- **Scaling-up work on noncommunicable diseases (NCDs)** by establishing NCD surveillance using DHIS2, expanding access to health education and health promotion on NCD risk factors, and building the capacity of health workers to provide NCD care, with a focus on early intervention.
- **Proactively promoting gender equality, climate co-benefits, and environmental and social standards** in all that we do.

By working in these critical areas, WHO and the World Bank can maximize the impacts of investments and seek increasing complementarity with other partners to save lives and strengthen Yemen's health system.



World Health  
Organization

Yemen



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