OXFORD ECONOMICS

# CASE STUDY

## Covid-19 Vaccine Delivery Partnership

## SOMALIA

# 1. PROJECT HIGHLIGHTS

| Key Cross-Country Benefit | Key National Benefit |
|---|---|
| ***Closing the Covid-19 vaccine gap to decreases risk of disease out-break, transmission, and illnesses in other countries.*** | ***Comprehensive in-country distri-bution of Covid-19 vaccines and implementation of reliable infra-structure for further campaigns.*** |

# 2. QUICK FACTS

| Categories | Project Details |
|---|---|
| **Project Name** | Covid-19 Vaccine Delivery Partnership Somalia |
| **Project Description** | The **COVID-19 Vaccine Delivery Partnership (**CoVDP) coordinates the distribution of vaccines against Covid-19 in Somalia. It provides technical assistance and infra-structural support to successfully complete the last step in the vaccination value chain, namely the distribution to citizens in-country. |
| **Global Public Good (GPG) Theme** | Global public health |
| **Sub-Theme** | Limiting the cross-country spread of known communicable diseases |
| **Sector** | Health |

**Disclaimer:** We based the case study on the information cited and publicly available as of May 2023. The findings – especially concerning the GPG perspective – have been concluded to our best knowledge. The views expressed are the authors' assessments and do not necessarily reflect the project stakeholders' views. Any errors that remain are our responsibility.

| | |
|---|---|
| **Country of Implementation** | Somalia |
| **Region** | Sub-Saharan Africa |
| **Income Category** | Low-income |
| **Implementation Period** | 2022 – ongoing |
| **Project Volume (actual)** | US$ 7.3 million |
| **Financial source (actual)** | Trust Fund |
| **Instruments** | Operational Funding, Technical Assistance |
| **MDB Involved** | World Bank |
| **Implementing Partner** | World Health Organization |
| **Link to detailed project information[1]** | https://www.who.int/publications/m/item/covid-19-vaccine-delivery-partnership-november-2022 |

# 3. WHY THIS IS A BEST PRACTICE

- **Ambition:** The vaccination rate against Covid-19 has increased by almost 40 percent over the course of the project. Additional vaccination against other diseases was carried out. Without the project, most likely only a small fraction of the vaccinations would have been distributed. The CoVDP is thus making an ambitious and important contribution to containing the spread of Covid-19.
- **Sustainability:** Several components of the project sustain and help providing a positive long-term impact of the CoVDP. The awareness and acceptance within society as well as the knowledge transfer regarding the importance of immunisation that was conveyed during the project remain. Additionally, health care infrastructure that was implemented during the project can help to implement vaccination campaigns against other diseases.
- **Scalability:** The basic mechanism of funding and technical assistance for the in-country distribution of vaccines is highly scalable. In fact, the larger the country in which vaccines need to be distributed and the more people that need to be vaccinated, the more important it is to establish well-functioning structures to manage the operational challenges that arise.

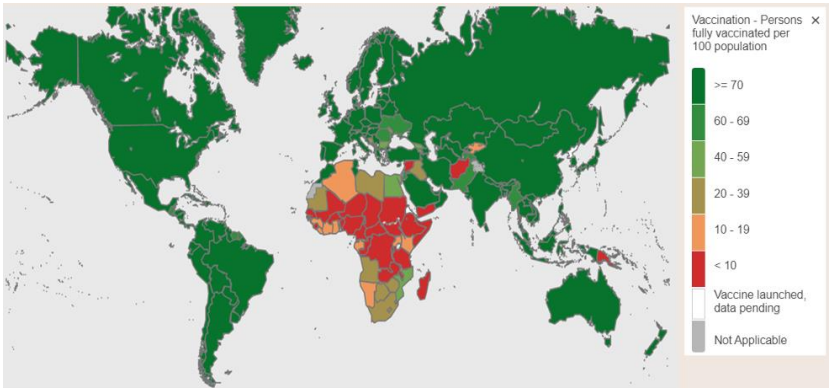
[1] Unless otherwise stated, the information used in this case study can be found in this source.

# 4. PROJECT INFORMATION

### 4.1 CHALLENGES OF GPG PROVISION IN THE COUNTRY CONTEXT

The emergence and spread of Covid-19 have imposed a significant threat to global public health. Somalia was hit only moderately by Covid-19 with a little more than 27,000 confirmed cases (as of February 2023).[2] However, due to the lack of test infrastructure, the true number of cases is expected to be considerably higher. In general, Somalia is characterised by **a weak health system that needs to deal with the spread of multiple severe diseases at once**. A large share of internally displaced people and nomadic citizens further complicate a comprehensive and targeted medical treatment.

**FIGURE 1: SHARE OF PERSONS FULLY VACCINATED, AS OF FEBRUARY 2022**




Source: UNICEF (2022)

Vaccination is an effective means to mitigate the recurring waves of infections and to reduce severe illnesses. After the approval of the first vaccine against Covid-19 in the end of 2020, the vaccination campaign had started in many countries around the world. The speed and scope of this campaign significantly differed between countries. These differences are large, due to large disparities in vaccine allocations and infrastructural capacities: Even after the first worldwide bottleneck was overcome**, some regions continued lacking the infrastructure and vaccine doses to carry out comprehensive vaccination campaigns**. Especially in sub-Saharan Africa, the shortage of vaccines as well as poor infrastructure led to a low level of immunisation, as can be seen in Figure 1.

However, to effectively fight a contagious disease and avoid mutations, a **comprehensive immunisation across all parts of the globe is important**. Especially for a global pandemic, it is both in the national and the international interest to reach a high vaccination rate across many countries. This can prevent local infection outbreaks which induce bad consequences in the place of occurrence as well as negative externalities to other countries, for example due to increased contagion following travel activities. The quality of global public health does not only depend on the mere amount of vaccination, but also on their equal distribution. Further increasing the vaccination rates in countries that already have a high share of vaccinated people provides less additional benefit than increasing the vaccination rates in countries with a low level so far, to reach a certain immunisation level in every country. Due to the characteristics of a pandemic and global public health as a global public good (GPG), the effectiveness of, and global benefit from immunisation require all countries to have a certain minimum vaccination rate.

[2] John Hopkins University (2023): https://coronavirus.jhu.edu/region/somalia

## 4.2 INTERVENTION

### 4.2.1 Project Design and Agents of Change

The goal of the **CoVDP** is to support the countries which have low Covid-19 vaccination rate to increase this rate. It was designed in January 2022 and focused on the 34 countries worldwide that had 10 percent or less vaccine coverage at that time. With this priority, it complements initiatives that had been put in place before to coordinate the procurement of Covid-19 related tools, namely the *Access to Covid-19 Tools (ACT) Accelerator*. One of the three pillars of the *ACT Accelerator* is *COVAX*. It is responsible for the distribution of vaccines. Its procurement platform—*COVAX Facility*—organises the financing. To ensure access to vaccines for all income groups, the *Advanced Market Commitment (AMC 92)* is a financing tool dedicated to support 92 low- and middle-income countries in the procurement of the vaccines. Despite the comprehensive structures that had been in place before, there were still significant differences in the vaccination rates, making concerted action necessary.

The CoVDP is a joint initiative by the WHO, UNICEF, and the vaccine alliance GAVI. As one of the four funding members of GAVI, the World Bank is an important contributor to the project, not least regarding the organisation of financing. Additionally, it provides technical assistance and infrastructural support. The project's main goal is to **assist countries that face difficulties in the access to, and distribution of vaccine doses**. This takes place through financial support, for example in the form of urgent operational funding, and through technical assistance.

Within the group of countries that were targeted by the CoVDP, **Somalia** belongs to the 10 priority countries for immediate intervention and is therefore one of the countries in which the project was first implemented. In January 2022, it had a vaccination rate of 5.2 percent.[3] This project adds to the **Somalia COVID-19 Emergency Vaccination Project**, which was approved by the World Bank in 2021 and comprises a grant of US$ 45 million by its International Development Association (IDA) arm. It will support the immunisation programme for COVID-19 in Somalia until the end of 2024.[4]

### 4.2.2 Expected Results

In contrast to existing initiatives for vaccine procurement, the CoVDP has a particular focus on the **last step in the allocation, namely the local distribution of vaccines within countries**. While *COVAX* combined with the *AMC 92* to ensure that the country was able to get vaccines in the first place, CoVDP funded the operational costs. In Somalia, those operational costs are high, as shipping in fragile country parts usually has to be done by air. Without financial and operational support, this allocation would only be possible to a significantly less effective extent. The broad goal is to kickstart vaccination initiatives in the places where this had not been the place before and to significantly increase vaccination rates.

[3] World Health Organization Somalia (2023): https://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-23.pdf?ua=1

[4] World Bank (2021): https://documents1.worldbank.org/curated/en/355641634141590075/pdf/Somalia-COVID-19-Emergency-Vaccination-Project.pdf

# 5. PROJECT IMPACT

## 5.1 NATIONAL BENEFITS

For Somalia, the project yields two types of national benefits. In the **short run**, the country managed to achieve a **high immunisation coverage**, despite the fragile health system. Without the intervention, the high operational costs would have made it difficult to achieve the desired goal of a high immunisation rate within the population. In fact, the Covid-19 immunisation rate within the Somalian society **has risen from about 5 percent before January 2022 to 37.4 percent in October 2022 and to almost 42 percent in December 2022**, as can be seen in Figure 2. Particularly, the partnership has contributed to increasing the primary series coverage for females in the country from 19 percent fully vaccinated in 2021 to 46 percent in 2022.[5] Somalia is one of the countries with the lowest Gender Inequality Index (0.776 in 2012 with a maximum of 1 denoting complete inequality).[6] As such**, increasing the vaccination coverage for females was prioritised for addressing gender inequality and vaccine gaps**.

Vaccination rate increased

from 5 percent to 42 percent in less than 12 months

Between September 2022 and October 2022, a concerted vaccination campaign took place that increased the primary series coverage from 15.5 percent to 38 percent. This makes clear that the lack of immunisation had most likely not been due to rejection within society, but rather due to missing infrastructure and distribution capacity. The campaign was particularly targeted at vulnerable groups and those groups that are difficult to reach otherwise—for example, internally displaced people. Additionally, in the **medium and long run**, the project helped to **establish a functioning vaccine-delivery system** and **get a foot in the door** to improve vaccination distribution also for other diseases.

Additional to the benefits that an increased vaccination rate yield for public health, it can have a positive impact on economic growth expectations. Starting from a low vaccination rate, an increase in vaccination rate of 8.9 % is expected to be associated with a GDP growth that is 1 percentage point higher per each year of exposure to Covid-19, compared to the growth without vaccination during the same time.[7] In the case of Somalia, the increase in vaccination rate from 5.2 to 41.7 percent would translate to an additional economic benefit of up to US$ 316 million[8] – far more than the US$ 7.3 million cost for the project.

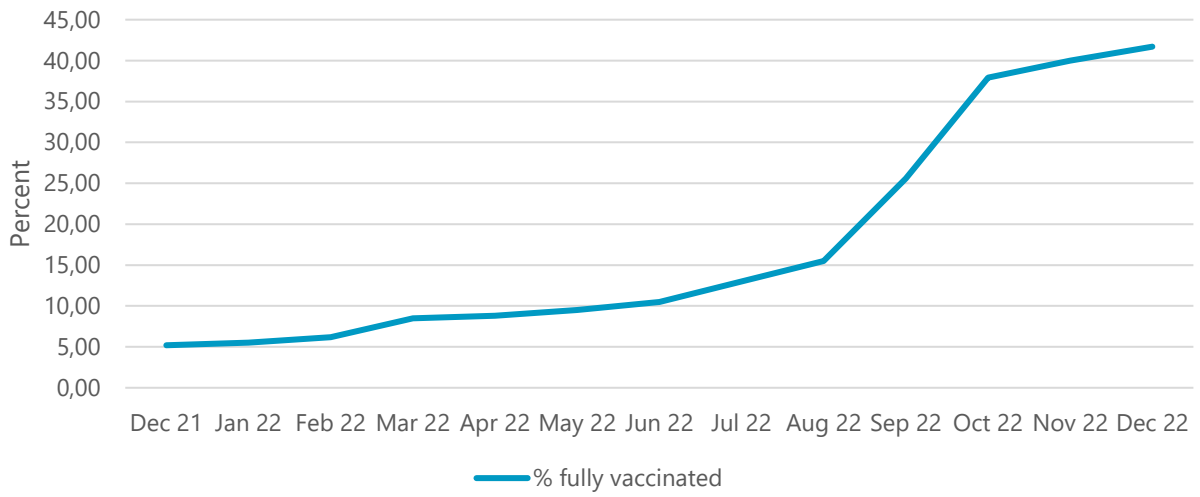
[5] World Health Organization Somalia (2023): https://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-23.pdf?ua=1

[6] UNDP Somalia (2015): https://www.undp.org/sites/g/files/zskgke326/files/migration/so/Gender-in-Somalia-FINAL.pdf

[7] UNDP (2021): https://data.undp.org/vaccine-equity-archive/impact-of-vaccine-inequity-on-economic-recovery/

[8] This calculation assumes that the whole increase in vaccination can be associated to the CoVDP. Considering the difficulties in vaccine distribution before the start of the project, this assumption is reasonable. The calculation reads as follows: The difference in the vaccination rate between the start and the end of the project corresponds to 36.5 percentage points (41.7%-5.2%). This is 4.15 times as much as 8.8% - the reference value for a 1 percentage point increase in GDP. Accordingly, this increase in vaccination rate corresponds to a 4.15 percentage point increase in GDP. Multiplying this with the Somalian GDP of US$ 7.63 billion (World Bank (n.d.)) leads to an economic benefit of US$ 316 million. Although the economic effect of a vaccination rate increase is likely to be nonlinear, this estimation still provides a rough approximation to the economic benefits of vaccination.

**FIGURE 2: SHARE OF VACCINATED PEOPLE IN SOMALIA**




Source: Oxford Economics based on WHO Regional Office for the Eastern Mediterranean (2023)

Owing to the push for increasing the distribution of vaccines against COVID-19, the **overall vaccine delivery and immunisation services in the country has been strengthened remarkably.** Accompanying benefits of this strong system include for example routine immunisations, such as a vaccination of 113,000 children against measles. Additionally, in 2022, a national immunisation day for polio took place in which several million children could be vaccinated.[9] This initiative benefitted from the indirect benefits of the CoVDP which has resulted in improving delivery of immunisation services for all vaccines. The operational support and financial leeway that the CoVDP enabled hence yielded multiple short-term benefits for Somalia.

Various structures that were built and lessons learned during the capacity building for the vaccination against Covid-19 persist even after the immediate intervention. For example, efficient planning tools and strategies to reach internally displaced or nomadic people are important also for future vaccination efforts.

### 5.2 CROSS-COUNTRY BENEFITS

The transmission of diseases does not stop at national borders. Instead, the immunisation level—and, correspondingly, the disease spread in one country—significantly influences the public health in adjacent countries. In this specific case, a low vaccination rate in Somalia leads to negative externalities to other countries, as cross-border travel transmits the infection and disease incidence. In turn, increasing the vaccination rate in Somalia yields positive externalities for neighbouring countries. Sustainably limiting the cross-country spread of Covid-19 **requires all countries to have a sufficiently high immunisation rate**. Therefore, other countries directly benefit from increased immunisation rates in Somalia.

Further, the spread of Covid-19 in Somalia imposes additional economic costs to other countries. Those include for example impeded trade flows or disrupted supply chains. Conversely, investing in the vaccination campaign in Somalia yields cross-country economic benefits. They can be derived from the national economic benefit that corresponds to about US$ 316 million (see above). Assuming the external effect to correspond to about

[9] World Health Organization Somalia (2022): https://www.emro.who.int/somalia/news/ending-polio-in-somalia-children-vaccinated-against-polio-in-national-immunization-day.html

one third of that, the cross-country benefit could amount to more than US$ 100 million.[10] This, however, is only a rough simulation and rather serves as an approximation.

# 6. LESSONS FOR FUTURE GPG PROVISION

### 6.1 SUCCESS FACTORS

After initial vaccine supply constraints were solved, the disbursement of the vaccines soon proved to be of equal importance in the planning of a successful vaccination campaign. The Covid-19 Vaccine Delivery Partnership Somalia conducts broad activities for the vaccine distribution at the local level using a decentralised provision and combines this with trusted and well-established health structures. By doing so, competences and resources are pooled. One success factor is the **close cooperation with local health services and structures** that increases trust of the community. Working together with healthcare workers that citizens are already familiar with increases credibility and willingness to cooperate. This is also true in terms of gender disparity. Specific measures—such as female vaccinators and convenient times of vaccination that can be aligned with household responsibilities—enabled access for women to participate in vaccination. In general, the project—although designed on an international level—is **sensitive to local conditions and does not follow a one-size-fits-all approach** but strives to find customised solutions. This targeted design enables **knowledge gains and sustainable improvements in health structure** that are useful for future health crisis. From this perspective, CoVDP does not only serve as short-term crisis response, but as investment in the quality of the national health system. This, in turn, also yields positive externalities regarding the provision of public health for the region. In the case of Somalia, the project worked particularly well, because it served as an enabler to establish a functioning vaccine-delivery system for other national health issues.

> *"We are focusing on quick impact funding that is targeted—countries and communities need the right amount of money at the right time and the right place."*
>
> *- (Ted Chaiban, Head of CoVDP)* ”

### 6.2 HOW TO REPLICATE THE BEST PRACTICE

In addition to that, the following lessons can be learnt from the project and can be used to replicate the best practice project:

- Besides vaccine supply, operational costs are a great challenge to the goal of universal immunisation. Adequate support systems need to be in place to enable a comprehensive and nationwide vaccination.
- Implementing new infrastructure imposes costs that cannot always be compensated for by additional monetary revenues that follow this implementation. In this case, grants are necessary to provide financial leeway that prevents even greater costs.
- Not all countries are hit equally badly by Covid-19 (e.g., due to an already high immunisation rate against coronavirus in general, as was the case in Somalia). Hence, the private benefits of vaccinations

[10] The assumption that the external effects correspond to one third of national economic benefit is derived by work by Deb et al. (2021).

against Covid-19 are limited. The national incentive to still participate in comprehensive vaccination campaigns against Covid-19 is increased if those campaigns are combined with vaccinations against other diseases.

- Building **infrastructural capacities for vaccination and public health in general** can also work in countries with weak political institutions. This is important, as strengthening the weak-performing countries in the international system determines the overall provision level of global public health.
- The project can be replicated both in other countries and regarding vaccinations against other diseases**. The problem of high transport costs and difficulties regarding the in-country distribution not only arises in the specific case of Covid-19 vaccinations in Somalia**. In particular, the CoVDP overall operates in 34 countries and proves to be a highly replicable mechanisms, while considering the country-specific special circumstances.