

Indonesia COVID Additional Financing Technical Assessment (P175759)

Introduction

1. **This addendum to the technical assessment evaluates the adequacy of the proposed Program-for-Results (PforR) Additional Financing (AF) to scale up and expand activities of the Indonesia Emergency Response to COVID-19 parent PforR (P173843).** The total IBRD financing for the parent PforR is US\$250 million and was approved on May 22, 2020 as part of the COVID-19 Strategic Preparedness and Response Plan (SPRP) using the Multiphase Programmatic Approach (MPA), which itself was approved by the Board of Directors of the Bank on April 2, 2020. Its program development objective (PDO) is to prevent, detect and respond to the threat posed by COVID-19 and strengthen national systems for public health preparedness in Indonesia. It includes three results areas: (i) address hospital and health system readiness and systemic improvements in the quality of care; (ii) strengthen the Government of Indonesia's (GOI) public health laboratory and surveillance systems; and (iii) facilitate communication and coordination for better pandemic response and preparedness. As Indonesia continues to experience increasing and widespread community transmission, the number of confirmed cases and deaths has risen to 1,718,575 confirmed cases and 47,218 deaths from COVID-19 as of May 8, 2021, - the highest in the East Asia Pacific Region. The GOI has requested an additional loan of US\$500 million to support the GOI's plan for scaling up its response to COVID-19 and to support the COVID-19 vaccination plan as one of the national economic recovery strategies.

2. **The scope of this document acts as an addendum on new or incremental aspects of the parent PforR rather than a repetition or update of the original assessment.** It will be organized in four sections (i) assessing the strategic relevance and technical soundness of the AF; (ii) updating the Program expenditure framework based on the performance of the original PforR and new elements covered by the AF; (iii) updating the results framework and assessing the performance of monitoring and evaluation (M&E) arrangements; and (iv) providing an economic justification for the new activities described in the AF.

Strategic Relevance and Technical Soundness

Strategic Relevance

3. **Given the importance of limiting the spread of COVID-19 for both health and for economic recovery, providing access to COVID-19 vaccines will be critical to accelerate economic and social recovery.** By one estimate, delaying access to vaccination by just six months will cost the economy US\$44 billion or 4.1% of GDP¹. While global vaccine production plans are already underway, production capacity

¹ <https://theconversation.com/delaying-a-covid-19-vaccination-program-may-cost-indonesia-us-44-billion-147446>

depends on the successful vaccine candidates and the expected demand, among other factors. High-income countries, representing 13 percent of global population, have already reserved 51 percent of the initial supply of COVID-19 vaccines.

4. **The GOI has included COVID-19 vaccination as one of the key interventions under the national strategy for economic recovery.** A Presidential Decree appointed the Ministry of Health (MOH) as the main implementer of the national COVID-19 vaccination program (Presidential Decree 99, 2020 on 'Procurement and Implementation of COVID-19 Vaccines'). The decree delineates MOH's roles as the main agency to procure, price, and implement COVID-19 vaccination. It also clarifies the roles of other government ministries and agencies to support the MOH². The GOI has also taken measures to secure vaccines from several sources. Indonesia has already signed an agreement on COVID-19 vaccine procurement under the Gavi-led COVID-19 Vaccines Global Access Facility (COVAX Facility) – which aims to accelerate the development and manufacture of COVID-19 vaccines and to promote equitable access to COVID-19 vaccines. The COVAX facility initially assures vaccines for 20 percent of the country's population and has delivered 6.4 million doses as of May 8th, 2021. The Government has, in addition, undertaken bilateral agreements with vaccine suppliers from China, United States, and United Kingdom.

5. **With a population of 268 million, Indonesia's financing needs to secure vaccines for its entire population will be substantial.** Although considerable uncertainty about final vaccine prices³ remains, cost estimates of US\$4 per dose in low-and lower-middle income countries (LMICs) and US\$6.5 in upper-and high-income countries have been used. Incremental costs for deployment are further estimated at US\$1 per dose, bringing the estimated cost for each vaccine dose, including delivery, to US\$5 in LMICs and US\$7.5 in upper-middle income countries. Indonesia is expected to secure favorable pricing that should not exceed estimates for the LMICs. It is also expected that a two-dose vaccine regimen may be required for most vaccine candidates. This would bring Indonesia's total financing needs to more than US\$1.8 billion, were it to vaccinate 68 percent of its population – enough to reach herd immunity, assuming a cost of US\$10 per person. Prioritizing front line workers, people with co-morbidities and other groups who stand to benefit the most – or ~20 percent of its population – would cost over US\$ 535 million.

6. **This AF plays a critical role in strengthening the GOI readiness for vaccine deployment system as well as support the health service delivery system for an effective rollout of COVID-19 vaccines.** The GOI program to acquire, deploy, and deliver COVID-19 vaccines for all the targeted beneficiaries require an increase in the overall expenditure envelope of the Government budget. The budget commitment for the vaccine program has increased in early 2021 and is now estimated between US\$4.7 to US\$5.2 billion, of which US\$1.5 billion is for vaccine procurement in 2021, resulting from the GOI's decision in December

² For instance, the National Agency for Food and Drug will be the main partner for pharmacovigilance and state-owned pharmaceutical companies will act as vaccine procurement agents.

³ One frontrunner vaccine is already priced at below US\$3 to US\$5 per dose in high-income countries. This vaccine candidate and another prominent one are both priced at up to US\$3 per dose in low-income countries. The manufacturer of another leading candidate has agreed to US\$10 per dose in the US (for what is hoped to be a single-dose regiment); their price for developing country purchase is not yet confirmed. Vaccines using innovative technologies such as mRNA vaccines may cost US\$20-40 per dose.

2020 to provide free vaccines for all adults in the country. The GOI is mobilizing various sources of financing and has already allocated an estimated US\$240 million in 2020 for the upfront payment to secure vaccines. The GOI is leading donor coordination in close consultation with the World Bank (Table 1). The World Bank proposed AF, along with co financing from other partners is projected to provide significant share of total funding for the COVID-19 response in the health sector. Therefore, continuing Bank engagement is essential to enabling the expansion of a sustained and comprehensive pandemic response in Indonesia.

Table 1: Financial and in-kind development partner support

Development Partners	Financing amount (if known)
WHO	
<p>Providing technical leadership for vaccine introduction, and assessment of country readiness (along with UNICEF);</p> <p>Providing technical support to the GoI on the vaccination policy objectives, strategy, targets and vaccine safety issue in the country's roadmap;</p> <p>Supporting the Indonesian Technical Advisory Group on Immunization (ITAGI) (along with UNICEF);</p> <p>Supporting the development of guidelines and training on adverse events following immunization (AEFI) surveillance, vaccine pharmacovigilance</p> <p>Organizing and leading development partner coordination for support to the Country's COVID-19 response including the vaccine roll out</p>	<p>In-kind support with a US\$22 million contribution from the Korea International Cooperation Agency - KOICA, Japan - JICA, Germany - KfW, The Australian Gov – DFAT, and USAID⁶</p>
UNICEF	Financing amount
<p>Providing technical support for the vaccine introduction readiness assessment and Cold Chain Equipment (CCE) assessment</p> <p>Supporting the development of a COVID-19 vaccine deployment roadmap, including the quantification and forecasting of needed supplies for service delivery (e.g. CCE);</p> <p>Advising on the integration of COVID-19 vaccine roll-out within the expanded programme of immunization and other primary health care (PHC) services</p> <p>Enabling the procurement of vaccines, CCEs, and other supplies for the vaccine roll-out;</p> <p>Supporting monitoring and evaluation functions related to vaccine deployment as well as the continuity of essential health services (along with WHO, WB)</p> <p>Providing support to monitor the vaccine hesitancy and continuity of essential health services (along with WHO, WB)</p>	In-kind support
UNDP	Financing amount
<p>Providing technical support for the vaccine introduction readiness assessment and Cold Chain Equipment (CCE) assessment in collaboration with UNICEF</p> <p>Expanding the use of technological solution to strengthen the immunization supply chain system through SMILE (electronic logistic monitoring information system)</p>	In-kind support
Gavi/COVAX	Financing amount
<p>Providing vaccines to cover the first prioritized 20 % of the population</p> <p>Providing access to COVAX Facility vaccine pricing beyond the fully subsidized 20% vaccines</p> <p>Providing technical assistance through supporting the ITAGI</p>	<p>Through COVAX Facility: the value of vaccines for 20% of the population or 108 million doses. Estimated at US\$ 400 million.</p>

Development Partners	Financing amount (if known)
DFAT	Financing amount
COVID Emergency Response Regional COVID-19 Vaccine Access and Health Security Initiative (VAHSI)	AUD 1,5 billion (~USD 1.15 billion); ~AUD 100m, a part of which also flows through this AF
AIIB	Financing amount
Co-financing with the World Bank in the COVID-19 Emergency Response PforR and this Additional Financing	USD 250 m + USD 500 m
ADB – supporting BioFarma in purchase and deployment of vaccines Support Indonesia’s Fight Against COVID-19 grants COVID-19 Emergency Response and Vaccine	US\$ 450 m USD 3 million (TBD)
KfW	Financing amount
COVID-19 Emergency Response	200 million Euro
JICA	
Financial and Technical support, in-kind	Financial support: TBD + In-kind support
USAID and US-CDC	
Technical support, in-kind	In-kind support
EIB	
Financial support (budget support) against purchase of vaccines	Euro 300 million

7. **The AF will also support crucial non-vaccine immunization costs needed to expand immunization capacity.** Even with considerable doses of an effective and safe vaccine in hand, Indonesia will face major challenges deploying those vaccines at scale. Indonesia (and most countries) are used to vaccinating successive cohorts of infants – and not vaccinating a large proportion of all adults (>65 percent of their population) all at once, though this is what would be required to reach ‘herd’ immunity. Using routine childhood immunization as a proxy for potential COVID-19 vaccine delivery, Indonesia does not compare favorably to its peers. Vaccinating adults is much more complex, especially when it may involve multiple doses – adding the complexities of targeting and monitoring. The latest Indonesian Basic Health Survey reported that the proportion of fully immunized children was 58 percent, and 63 percent of all unvaccinated children were living in rural areas⁴. As much as a three-fold difference in immunization coverage rates exist across provinces, and sizeable inequalities by economic status exist as well.

8. **In Indonesia, several weaknesses from local production capacity to service delivery hinder the achievement of higher immunization coverage rates.**

- a. **Local production and procurement.** Most domestic manufacturers of program pharmaceuticals are not able or willing to make costly investments in system and equipment upgrades needed to meet the quality standards of stringent regulators or the World Health Organization (WHO) Prequalification of Medicines Program (PQP). As a result, only *PT. Bio Farma* (an Indonesian state-owned enterprise) is prequalified by the WHO for vaccines. The procurement procedure of

⁴ <https://www.litbang.kemkes.go.id/laporan-ri-set-kesehatan-dasar-risikesdas/>

program pharmaceuticals and supplies is also complex resulting in long lead times and drugs that are close to expiry. Routine vaccines are procured using the national budget *Anggaran Pendapatan dan Belanja Negara* funds (APBN)⁵. All procurement that uses APBN must use the Indonesian Government Procurement System (IGPS)⁶.

- b. Supply chain management.** The selection, planning, procurement, and distribution of APBN-funded program pharmaceuticals and supplies falls under the MOH's One Gate Policy ("*Tata Kelola Obat-Vaksin Secara Terpadu*"); they are distributed via a network of central, provincial, and district medicine warehouses (*Instalasi Farmasi*) before reaching facilities' medicine warehouse. Upon leaving *PT. Bio Farma*, routine immunization vaccines are sent to Provincial Health Office Medicines Warehouses to be distributed to District Health Office Medicines Warehouses and health facilities, while maintaining cold chain throughout the distribution process. The availability of functioning cold-chain equipment at public health facilities has improved with the increased financing from the Central level over the past five years, while the maintenance costs rely on the local government's budget and commitment. The UNICEF's assessment of Effective Vaccine Management completed in May 2020 identified temperature monitoring and storage capacity were among the main gaps in vaccine supply chains. The enhanced storage and supply chain needed for COVID vaccination, therefore, may require exploring private sector capacity, while also providing an opportunity to upgrade the supply chain and strengthen temperature monitoring systems.
- c. Decentralized service delivery.** Although the central government procures and distributes vaccines, provincial and district governments manage the operations of public health facilities and services. Management capacity and commitment to immunization is extremely variable across different provinces/districts, leading to varying immunization coverage rates. Still, routine immunization services are available at virtually all public health center (*puskesmas*). Two-thirds (67 percent) of *puskesmas* offer daily or weekly immunization services, and 92 percent provide outreach services on at least a monthly basis. However, the lack of a distribution budget is a last-mile-availability barrier. To date, the cost for distributing program pharmaceuticals is financed by the central government through BOK channels or covered by local government on an ad-hoc basis. This is a significant barrier given that almost three-fourths of all vaccinated children in Indonesia receive their immunization at a sub-village level health post (*posyandus*), followed by 10 percent at *puskesmas*, 10 percent at private clinics and hospitals (although this can be as high as 50 percent in some provinces), and the remainder at a delivery village post (*polindes*) and other

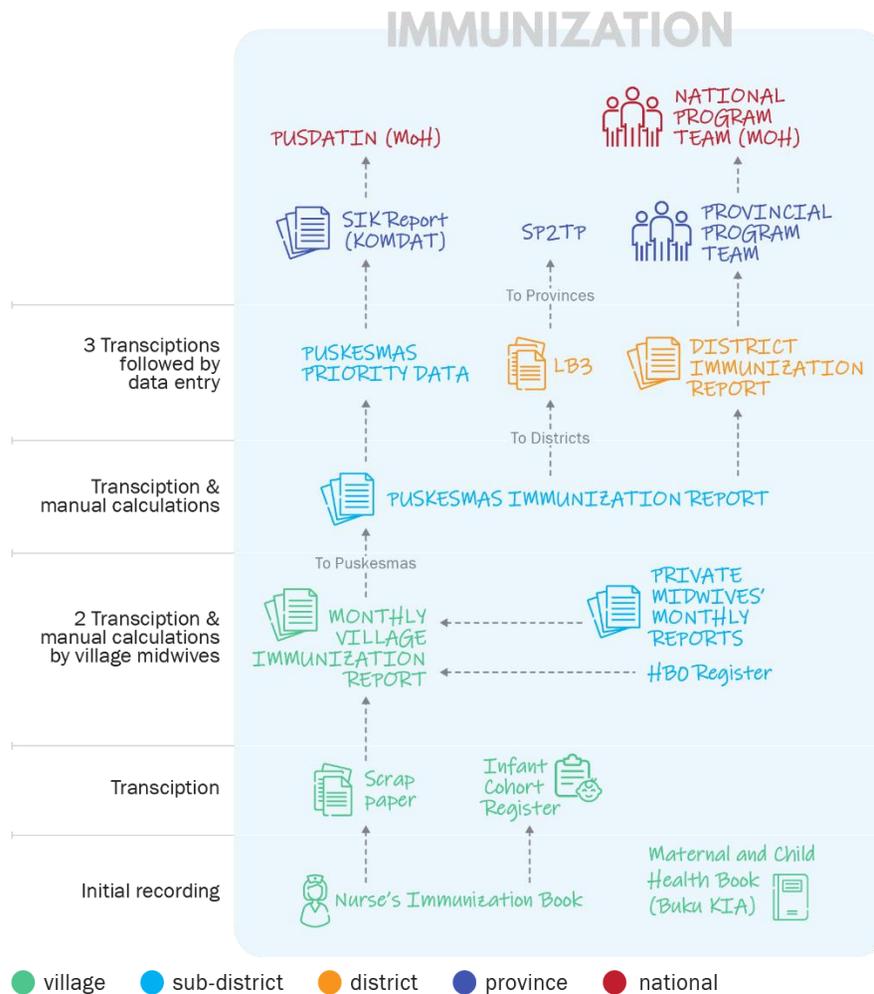
⁵ The main source of pharmaceutical financing is the national budget (APBN), whereby APBN funds are transferred to local governments, using the Specific Allocation Fund or *Dana Alokasi Khusus* (DAK). Fiscal transfers for pharmaceuticals via DAK for health could occur through two mechanisms: DAK *Fisik*, for public pharmaceuticals, and DAK *Non-Fisik* (i.e. *Bantuan Operasional Kesehatan*, BOK), for distribution costs. However, local governments, both provincial and district, also utilize local budgets (*Anggaran Pendapatan dan Belanja Daerah*, APBD) to pay for pharmaceuticals. The third source of financing is capitation payments from *Badan Penyelenggara Jaminan Sosial* (BPJS), the administrative and implementing body for JKN. MOH Regulation No. 19/2014 specifies that 40% of capitation payment can be utilized to support operational expenses, which includes pharmaceuticals, medical devices and medical supplies.

⁶ Despite being eligible to procure vaccines internationally through low-cost platforms such as those of UNICEF, Indonesia prefers to use BioFarma under its domestic preference policy, though vaccine prices are much higher.

places (including midwives' homes). Routine immunization is also provided for school children via the school based *Bulan Imunisasi Anak Sekolah (BIAS)* program.

- d. Monitoring and evaluation.** The quality of administrative data on immunization is poor and there is often a 30-40 percentage points difference between administrative data and survey data. There are also inconsistencies between survey data from different sources. Among the main reasons for poor data quality hindering accurate monitoring and evaluation are: 1) the existence of a patient is not known or different target populations are used as denominators at different reporting levels contributing to widely varying coverage rates; 2) data is distorted in transmission. The immunization program relies on facility reporting starting from the community level, *posyandu*. Data is manually transcribed between documents six times and subject to manual calculations and one electronic calculation as it makes its way up from point of care all to the national level; 3) the fragmented nature of the MOH information system contributes to a high reporting burden on the front lines of the public health system, variable/inconsistent reporting rates and data of questionable quality; 4) finally, there is poor data storage/handover that adds to the challenge (Figure 1).

Figure 1: Immunization data collection and reporting flows



There are several challenges to data reporting in Indonesia:

There is a **high potential for errors**. Information is manually transcribed 6 times between documents and subject to 3 manual calculations and 1 electronic calculation.

Unstandardized forms and inconsistent interpretation make it difficult to make comparisons. The forms used by villages are not identical.

Reporting **compliance is low** and sometimes unreliable. The burden is high as health workers must fill out the same information several times for each program (nutrition, maternal health, tuberculosis, etc.)

Important **information is not collected**. The only place where data on a child's full immunization status is held is the infant cohort register but this is not part of the reporting chain.

Forms are inconsistent across levels of care – forms at higher levels require gender disaggregated data that is not required at lower levels.

Source: Findings from a 2017 World Bank Health Data Tracing study in South Sumatra, Maluku and East Nusa Tenggara

9. The MOH has also recently undertaken a vaccine readiness assessment using the integrated VIRAT (Vaccine Introduction Readiness Assessment Tool) and VRAF (Vaccine Readiness Assessment Framework) Tool 2.0 with the support of World Bank, WHO, and UNICEF; its findings are summarized in Table 2 below.

Table 2: Vaccination readiness findings from the VIRAT/VRAF 2.0 assessment

Core Activity Areas	Assessment Area	Readiness and Measures to Address Key Gaps
A. Planning and Management	A1. Vaccination objectives and targets	<ul style="list-style-type: none"> • Readiness. Priority target population group has been identified, estimated/calculated, and mapped. The National Deployment and Vaccination Plan (NDVP) is being revised, but the implementation guideline has been issued (January 2, 2021). Stakeholders are actively involved — including ITAGI. • Key gaps and measures to address them. A detailed national deployment and vaccination plan⁷, including subpopulation targeting, is developed. An integrated target population database is being developed that includes health personnel database, the Dukcapil (Civil Registration and Vital Statistics) data under the Ministry of Home Affairs, the National Health Insurance Agency (<i>Badan Penyelenggara Jaminan Sosial - Kesehatan</i>, BPJS-K) membership and facility databases, and various civil service databases under the coordination of the Ministry of Communication and Information registry. The GOI has added a bottom-up listing and registration process to ensure the comprehensiveness of Program coverage. A bottom-up approach to add any missing beneficiaries is being undertaken. The PforR includes DLIs, as well as PAP requirements, to support the GOI in addressing these issues.
	A2. Regulation and Standards	<ul style="list-style-type: none"> • Readiness. The national regulatory authorization path has been established and communicated to the WHO. The waiver mechanism for expediting import and local lot testing release based on summary protocol are in place. Regulatory approvals for vaccines procurement will be using the national procedures. • Key gaps and measures to address them. Policy to expedite the procurement and import of COVID-19 related goods is already in place. BPOM has already authorized two vaccines, Sinovac and AstraZeneca, based on review of the data submitted. The WHO and UNICEF are also providing technical assistance in this process.

⁷ Technical Guidelines for COVID-19 Vaccination Plan are developed and issued, and will be updated from time to time; The document fits the description of a national deployment and vaccination plan as recommended by the WHO; The MOH issued the plan in technical guidelines format as it is more adaptive to the dynamic of the COVID-19 vaccination. The guidelines contain overall strategy and plan for the acquisition, prioritization, deployment, and monitoring of the COVID-19 vaccine implementation; a technical guideline document provides operational guidance and technical steps for the field managers, and vaccinators.

Core Activity Areas	Assessment Area	Readiness and Measures to Address Key Gaps
	A3. Performance management and M&E	<ul style="list-style-type: none"> • Readiness. The GOI has assured privacy protection of the database of the vaccine beneficiaries; personal data protection has been incorporated in the database with the support from the National Cyber and Crypto Agency (<i>Badan Siber dan Sandi Negara, BSSN</i>). • Key gaps and measures to address them. The quality of health reporting continues to be a major concern. A supervision system is in place and to ensure the effectiveness of this system. The GOI has developed a One Data for Vaccination information system to ensure the reporting quality of the program. The PAP for the original financing includes requirements on data privacy which will continue to be applicable to the AF and will help mitigate this risk.
	A4. Budgeting	<ul style="list-style-type: none"> • Readiness.: The GOI has committed budget allocation for the vaccine program, wherein the financial management will be in accordance with the national regulations. These have been reflected in an MOF decree. • Key gaps and measures to address them. The GOI has decided to fully finance vaccines for all adults in the country—estimated at 181.5 million persons (around 67% of the total population). The GOI has mobilized financing both internally (for example, revised budgetary allocation for this increased need will be reflected in the MOH budget), as well as from external sources.
B. Supply and Distribution	B1. Vaccines, PPEs and other medical and non-medical supplies	<ul style="list-style-type: none"> • Readiness. The GOI has identified sources of vaccines, estimated amount, and procurement mechanisms that will be used. The GOI has allocated budget for the provision of vaccines and supplies including PPE. • Key gaps and measures to address them. The GOI has secured about 80% of the country’s projected vaccine needs, including commitments for free vaccines from the COVAX Facility. The GOI has expressed its intention to acquire further doses through the COVAX Facility on self-payment basis. Exact additional paid allocation from COVAX is not yet known and will be clearer in the coming months, once decisions on allocations from this paid allocation are made by COVAX. However, the Government also has the provision to further increase its orders from bilateral suppliers to meet its requirements.
	B2. Logistics and cold chain	<ul style="list-style-type: none"> • Readiness. Distribution and logistics strategy for the vaccines and ancillary products has been developed to include the public and private sectors. The CCE assessment is being finalized, which will be followed by the plan to address the CCE capacity gaps. The use of technology to monitor temperature up to points of service has been included in the technical guidelines. • Key gaps and measures to address them. The logistics and cold chain for such a large number of vaccines will require careful management of available storage and logistics solutions. The cold chain action plan is one of the DLIs under this PforR, and several other areas for strengthening cold chain and logistics are also incorporated in the PforR design.

Core Activity Areas	Assessment Area	Readiness and Measures to Address Key Gaps
	B3. Waste management	<ul style="list-style-type: none"> • Readiness. Waste management is already included in the recently published Vaccination Technical Guideline⁸. • Key gaps and measures to address them. A wide range of health facilities/local government capacity, and whether the most appropriate waste management is available in certain locations, needs to be ensured. A guideline for waste management has been developed and disseminated. Coordination with the national authority (Ministry of Environment and Forestry [MOEF]) is ongoing.
C. Program Delivery	C1. Community engagement and advocacy	<ul style="list-style-type: none"> • Readiness. An initial assessment on vaccine hesitancy has been conducted, and a public communication strategy and messages are being developed. The communication strategy needs to be continuously updated. • Key gaps and measures to address them. The MOH team has been conducting data collection to monitor for misinformation, while regular assessment of social behavior still needs to be developed. The development support may include a population-based survey that monitors government programs implementation and social behavior due to and toward COVID-19 to inform the vaccine rollout. Development partners, such as UNICEF and the World Bank, are planning to conduct regular monitoring on community response toward the GOI COVID-19-related programs.
	C2. Points of delivery	<ul style="list-style-type: none"> • Readiness. The facility database has been developed, operational standards have been developed, and a mechanism exists to identify points of service/vaccination facilities including those from the private sector. Monitoring tools have been developed and outlined in the vaccination implementation technical guideline. This will include the private sector. The training for health personnel involved in the vaccination rollout has been developed, and virtual training has been initiated. • Key gaps and measures to address them. Supervision and monitoring to ensure the quality of service, reported data, and the training. UNDP is providing support to expand the availability of the logistics and remote temperature monitoring system.
	C3. Vaccine safety surveillance	<ul style="list-style-type: none"> • Readiness. The guideline for KIPi (Adverse Events Following Immunization) is being finalized, and institutional arrangements have been clarified in an MOH decree. An active surveillance guideline is being finalized, and the information system has been functioning and has the ability to track the type of vaccine given. The KIPi committee has been established at the central and subnational levels and is to be provided with training. The KIPi monitoring will be based on the existing surveillance system. • Key gaps and measures to address them. Training for KIPi surveillance is being designed. Compensation scheme for KIPi has been designed and announced.

⁸ Technical Guideline, see footnote 7 (above)

Core Activity Areas	Assessment Area	Readiness and Measures to Address Key Gaps
D. Supporting Systems and Infrastructure	D1. Data quality	<ul style="list-style-type: none"> • Readiness. An integrated database and information system for recording and reporting (<i>Sistem Informasi Satu Data Vaksinasi C19 – C-19 Vaccination One Data Information System</i>) is to be developed for COVID-19 vaccine implementation, as stated in the technical guideline. • Key gaps and measures to address them. The integrated database and information system continue to evolve. The Phase 1 implementation for health personnel has been used as a ‘field test’ of the information system, and the system improvement is ongoing. The GOI also mobilized experts from communication companies and technology-based companies to provide technical support to improve the information system, especially to address data quality issues.
	D2. Infrastructure	<ul style="list-style-type: none"> • Readiness. Mapping and assessment of facility capacity have been partially completed; for energy and IT, it is still at an early stage. • Key gaps and measures to address them. Existing infrastructure readiness is variable across the country. • Possible solutions. The involvement of the private sector, and expediting the strengthening of the national immunization program, and health service delivery in general, for instance, the expansion of remote temperature monitoring system to cover all provinces and more districts and health facilities.

10. **Therefore, it is essential that the national COVID-19 vaccine effort also strengthens the underlying immunization infrastructure.** This includes: (i) functional, end-to-end supply chain and logistics management systems for effective vaccine storage, handling, and stock management; (ii) rigorous cold chain control; (iv) robust service and coverage tracking systems; (v) well trained, motivated and supervised vaccinators, tailored large-scale communication and outreach campaigns at household, community and national level; (vi) people centered service delivery models that reach different target populations effectively; and (vii) effective governance and any additional institutional frameworks for the safe and effective deployment of vaccines, regulatory standards for vaccine quality, guidelines for acceptable minimum standards for vaccine management, and policies to ensure robust governance, accountability, pharmacovigilance, and citizen engagement mechanisms.

Technical Soundness

11. **There is strong technical rationale for vaccination consistent with the strategies recommended globally to slow down the transmission of COVID-19 and prevent associated illness and death.** While the efficacy of the various vaccines under production remains a clinical unknown, we know from global experience that vaccines significantly reduce or even eliminate the threat of morbidity and mortality from disease. Following a surge of cases during the New Year holiday, many hospitals are on the verge of being overwhelmed, with intensive care units and isolation rooms at more than 70 percent capacity.

12. **The GOI’s national COVID-19 vaccination implementation roadmap proposes a phased approach based on.** Indonesia’s vaccine strategy is to vaccinate the entire adult population (18 years old and above) with the exception of those pregnant, currently COVID-19 positive, and with uncontrolled co-morbidities, who may

be at high risk of adverse effects from vaccination. Frontline health workers were the first priority group to receive the vaccines, and this has been completed in February 2021. The next phase, ongoing now, comprises of the elderly and the frontline public service workers. The national regulatory authority (the Indonesian Food and Drug Agency, or BPOM) has approved the use of the available vaccines for the elderly, as well as those with co-morbidities, with strict screening (Table 3).

Table 3: Indonesia’s vaccination plan for target populations

	Population group	Number of target beneficiaries (million)	% of total population
First Wave	Vaccination Period January – May 2021		
Phase 1	<i>Health Personnel: Vaccination will be conducted for health personnel in 34 provinces. This includes health assistants, support/administrative personnel, and students who are currently in professional training who also work in health service facilities</i>	1.5	0.65%
Phase 2 a	<i>Public service workers: military and police forces, other uniformed officers judicial officers, and strategic public service officers those working at ports of entry, transportation stations, banks, utilities electric/power companies, and clean water companies, as well as other officers involved directly provide services to the community</i>	17.3	6.44%
Phase 2 b	<i>Senior citizens: 60 years old (y.o) and above*</i>	21.5	8.0%
Second Wave	Vaccination Period June 2021 - March 2022		
Phase 3	<i>Vulnerable population based on geographical location, social, and economic aspects</i>	63.9	23.66%
Phase 4	<i>Wider population; Economic actors using a cluster approach according to the availability of vaccines</i>	77.4	28.66%

13. **The overall risk to achieving the PDO will be revised from Substantial to High, given the risks associated with support for the implementation of a national vaccination campaign.** Safe and effective deployment of a COVID-19 vaccine to a large share of the population is an unprecedented endeavor and entail additional risks that were not anticipated under the original Program. These include risks related to: (a) overall macroeconomic outlook, (b) political and governance; (c) the technical design of the Program, (d) the institutional capacity for implementation, and (e) stakeholders.

- a. **Overall macroeconomic risk.** While the pandemic has dealt a significant blow to public finances – increasing the deficit to 7.1 percent in 2020 – the shortfall is expected to narrow to narrow to 6.1 percent in 2021 and further thereafter as it is unlikely that the government will enact further lockdowns. The government’s reluctance to repeat the more large-scale restrictive measures it introduced in 2020 will mean less economic disruption. However, in the immediate future, Indonesia is experiencing severe fiscal pressures and faces the risk of not having sufficient additional fiscal space for the purchase of vaccines at scale and other COVID-related response interventions. The proposed AF specifically aims to mitigate this risk by providing financing for

- vaccine purchase and promoting prioritized deployment to vulnerable groups. Residual macroeconomic risk to the AF and parent PDO is limited to risks that cannot be readily mitigated (e.g., risks related to significant counterpart financing, other specific macroeconomic risks that may hinder the operation from achieving its intended results).
- b. **Political and governance risks will be revised from Moderate to Substantial.** This is mainly due to two reasons. First, COVID-19 vaccines' integrated deployment will be carried out at an unprecedented scale and in a relatively short period of time, which would mean an additional political pressure on the government to acquire and deploy the vaccines which may affect the quality of implementation. This risk will be mitigated by the fact that all readiness and deployment support under this Program will be for the VAC-compliant vaccines, accompanied by system strengthening measures and linked to a program of technical assistance, to support strengthening and resilience of the overall health system. Another potential risk is associated with ensuring appropriate targeting of the population to be vaccinated given the initial vaccine supply constraints as well as limitations of existing population databases, which could result in the vaccines not reaching the priority populations, based on objective public health criteria. Current identification of target and prioritized populations is relying on multiple existing population databases; however, data inconsistencies and discrepancies exist. This risk will be mitigated by development and implementation of a mechanisms to complement the top-down data, to ensure inclusion of the target population.
 - c. **Technical design of the AF:** The large-scale acquisition and deployment of COVID-19 vaccines entails certain risks. There are several unknowns with regards to vaccine efficacy, durability of immunity, and potential adverse reactions. The first vaccines certified through the SRA mechanism may not be the most effective, nor purchased in a timely manner. A mass vaccination effort also stretches capacity, entailing risks. This is mitigated to some extent by using the COVAX Facility as a source of vaccines, which invests in a diverse and actively managed portfolio of candidate vaccines, thereby maximizing the probability of success. COVID-19 vaccine deployment will also be an unprecedented effort in terms of population coverage. The PforR will also focus on expanding immunization capacity, supporting the health system to implement a comprehensive (and sustainable) COVID-19 vaccine deployment strategy. The Bank and its partners will work with the country to consider trade-offs and to determine the appropriate approach and risk balance. The remaining risk must be considered against the risk of not deploying COVID-19 vaccines, or less timely and effective deployment of vaccines, potentially exacerbating development gaps and eroding past development gains.
 - d. **Institutional capacity for implementation:** the magnitude of the pandemic; the uncertainty around vaccine efficacy, safety and availability; the challenges in providing technical assistance amidst limited mobility (both international and within the country); the need for contextual and technical expertise to support the development of necessary institutional frameworks to ensure the safe delivery of vaccines, are among the challenges that further stretch an already constrained immunization program. The PforR instrument will mitigate these risks by coordinating with other partners to organize appropriate technical assistance to support the development of policies, plans, and strategies for the safe and effective deployment of vaccines. Competition for vaccine purchasing will only increase once approved production commences and access to limited supplies

may be difficult. However, the PforR supports financing of the payments to the COVAX Facility, allowing the Government to ensure equitable and affordable access to cost-effective vaccines for priority populations.

- e. **Stakeholders:** The main concern is that the GOI's response does not meet the need of particular segments of the population, particularly poor, vulnerable, and remote populations. Mitigation measures will be proposed in the program action plan as well as DLIs aimed at improving communications. A critical intervention would be to identify and prioritize critical populations for the different phases of vaccine availability in a transparent way consistent with the WHO's Fair Allocation Framework. In addition, 87.2 percent of the population identify as Muslim and reassurance that vaccines are classified as halal will prove crucial to the success of the vaccination effort and mitigation of vaccine hesitancy. The Indonesian Ulema Council – the country's top clerical body – has also already declared the coronavirus vaccine halal.
- f. **Other risks are rated High.** Digitization of the immunization database and vaccine certification, while important from an implementation perspective, also carries risks related to data privacy. The GOI has assured the privacy protection of the database of the vaccine beneficiaries; provisions for personal data protection have been incorporated in the database with support from BSSN. The PAP for the original financing includes requirements on data privacy which will continue to be applicable to the AF and will help mitigate this risk. Further, there are integrated risks associated with the implementation of a large-scale national vaccination campaign with newly developed vaccines entails certain global risks which individual countries are not well-placed to mitigate. A mass vaccination effort in the context of this global pandemic may exacerbate the already stretched capacity. Further spread of the disease and the new variants may result in less effective deployment of the vaccine, potentially further enhancing development gaps and eroding past development gains. This risk will be mitigated through the implementation of the government's vaccination strategy with clearly defined targeting measures and communication efforts.

Expenditure Framework

14. **The program boundary has increased at mid-term review, fueled by the rising number of COVID-19 cases and rising budget needs for detection and treatment. The AF expenditure framework will support:**

15. **Results Area 1: Improve hospital and health system readiness for COVID-19 response and vaccination and maintaining essential non-COVID-19 health services (IBRD AF US\$245 million)**

Results Area 1 supports further strengthened health system readiness for COVID-19 response, including vaccination. This will include:

- Specific additional measures to support and compensate health professionals for added COVID-19-related workload and risk are implemented (Scaled up parent Program indicator);
- Health facilities' readiness for emergency response: 2,000 additional high care beds in existing medical facilities outside Jakarta are equipped to manage severe respiratory illnesses pursuant to the National Protocol (of which at least 50 percent are equipped with ventilators) (Scaled up parent Program indicator);

- Use of public and private hospital capacity for free treatment of COVID-19 patients and improved timeliness of hospital claims payment; and
- Maintaining unintended impact of COVID response on essential non-COVID health services: (i) Developed a deployment/mobilization plan for ongoing COVID-19 response and mass vaccination in a manner that preserves a share of staffing to maintain Essential Non-COVID Health and Nutrition Services; (ii) Essential Non-COVID Health and Nutrition Services are utilized at more than 90% of pre-COVID utilization.

16. Results Area 2: Strengthening public health laboratory, surveillance and supply chain capacity (IBRD AF US\$136 million)

With vaccine cold chain requirements, the need for temperature monitoring, and also pharmacovigilance systems needed in place, the scope of this expanded results area will include:

- Assessing and planning actions to address gaps in supply chain and logistics for maintaining the cold chain for storage and distribution of vaccines: (i) Developing an action plan to address identified gaps in supply chain and logistics for maintaining the cold chain from points of entry to points of service for COVID-19 vaccines; (ii) Installing temperature monitoring devices in vaccine storage locations (not including Jakarta) and specifically: (a) Remote temperature monitoring is installed and functioning at the Province and district level; (b) Remote temperature monitoring is installed and functioning at the Puskesmas level; (c) End-to-end supply chain management and logistics information system is functional (at least for COVID-19 vaccines) and regularly in use;
- Improving installed capacity of quality-assured COVID-19 confirmatory tests per day tested 1 person per 1000 population per week (including polymerase chain reaction (PCR), rapid molecular and rapid antigen tests) in the Additional Provinces;
- Introducing Rapid Antigen Testing in all Provinces;
- Undertaking regular genomic surveillance for variants of the COVID-19 virus; and
- A pharmacovigilance system is in place to report adverse events in a timely manner: Developed and implemented a pharmacovigilance system to monitor any adverse events related to the COVID-19 vaccine.

17. Results Area 3: Enabling communication and coordination for emergency response and vaccine delivery (IBRD AF US\$119 million)

- Upgrade the public communication/information services for COVID-19 response and on vaccine deployment;
- Develop an HR plan for the vaccination delivery. The plan should include capacity building/training plan, and training modules for HR for vaccine delivery;
- Monitor the training of relevant HR for health engaged in the vaccine implementation including those at the subnational level (MOH received confirmation of training completion from districts. The vaccine prioritization plan for the first 20 percent of population includes health workers and elderly persons and generally follows WHO Strategic Advisory Group of Experts on Immunization (SAGE) and other guidance. It considers priority for vulnerable adult population with co-morbidities; it also includes a fair allocation for remote provinces with community transmission.

- The vaccine allocation plan across all provinces is done through a consultative and transparent process;
- Ensure a communications strategy is in place, based on an assessment of vaccine hesitancy and mitigation measures planned to improve uptake, with appropriate cultural sensitivity and a focus on inclusion.

Results Framework and Monitoring and Evaluation Capacity

18. **The Program’s progress toward achievement of the PDO and overall implementation progress were rated Satisfactory in the last Implementation Status and Results Report (ISR) of March 3, 2021, and the Program continues to display good progress, as was also assessed at the midterm review (MTR) conducted in October 2020.** As of May 5, 2021, disbursements amounted to US\$212.5 million or 85 percent of the IBRD financing (and an equal amount was disbursed from the AIIB’s co-financing as well). Overall, the PforR has made remarkable progress in the achievement of its DLIs at the midterm. The three prior results DLIs were reported as achieved by the end of July 2020. Of the remaining seven DLIs, DLIs 4–6 were verified as fully achieved, while DLI 7 is partially achieved. Even for the remaining DLIs 8–10, which are due in 2021, significant progress has been made already, and these are expected to be reported, verified, and disbursed by June 2021 (details of these DLIs are provided in the DLI matrix included in section IX on Results Framework and Monitoring). Achievement of DLIs are summarized in Table 4.

19. **The PDO will remain largely unchanged; However, since the AF will finance the scale-up of program activities and new activities around COVID vaccine roll-out the results framework, theory of change, and disbursement linked indicators will be modified accordingly.** The existing PDO level indicators will have one additional PDO indicator to reflect improved immunity at the population level measured by number of persons who have received free vaccination in accordance to the prioritization group. The target values of the PDO and intermediate results will be updated to account for the current achievements and extended duration of the program. (highlighted in blue in Figure 2 and Table 5).

Table 4: Results achieved under parent project by DLI

DLI	As per Notification	As Confirmed by Task Team	Disbursement in USD
DLI#1: Specific additional measures to support and compensate health professionals for added COVID-19 related workload and risk are implemented	DLR#1.1: Guidelines to provide support for health professionals in response to COVID-19 have been issued and benefits have started to be paid out.	DLR#1.1 is achieved.	50,000,000
DLI#2: MOH works closely in coordination with the country's multi-sectoral National Task Force to Accelerate the Response to the COVID-19 Emergency	DLR#2.1: The Government of Indonesia has: (i) set up a National Taskforce to accelerate emergency response to COVID-19 with a member of the MOH staff as Vice Leader; and (ii) completed and issued a national plan in response to COVID-19	DLR#2.1 is achieved.	10,000,000
<p>DLI#3: Increased capacity for patient isolation and medical care</p> <p>DLR #3.1: 1500 beds belonging to non-medical establishment(s) have been converted and suitably adapted to serve as temporary, low-intensity medical facilities</p> <p>DLR #3.2: MOH has issued the MOH Guidelines on Claims Reimbursement for different levels of severity of COVID-19 patients managed in health facilities.</p>	<p>DLR#3.1: As of June 8, 2020, there are 2,391 inpatient rooms with total of 6,011 beds in Tower 4, 6, and 7 at RSD Kemayoran.</p> <p>DLR#3.2: The Ministry of Health has issued <i>KMK</i> regarding Technical Guidelines for Claims for Reimbursement of Patient Care Costs for Certain Emerging Infectious Diseases for Hospitals Organizing COVID-19 Services.</p>	DLR#3.1 and DLR#3.2 are achieved.	<p>7,500,000</p> <p>7,500,000</p>
<p>DLI#4: Health facilities' readiness for emergency response</p> <p>DLR #4.1: At least 3000 high care beds in existing medical facilities are equipped to manage severe respiratory illnesses pursuant to the National Protocol (of which at least 50% are equipped with ventilators)</p>	<p>Based on data from RS Online as of September 28 and 29, 2020, there are currently 3,974 ICU beds with 708 beds equipped with ventilators. Meanwhile there are 41,338 beds for COVID-19 isolation with 1,426 beds equipped with ventilators.</p>	DLR #4.1 is achieved.	75,000,000
DLI#5: Strengthen the implementation of optimal infection and control measures in healthcare settings.	As of September 30, 2020: The number of PPE purchased consists of covers all of 4,712,400 pcs and N95 masks totaling 1,0276,152 pcs. Of these, 4,366,039 pieces of	DLR #5.1 is achieved.	20,000,000

<p>DLR #5.1: At least 1,000,000 sets of Personal Protective Equipment (PPE) have been procured and distributed by the Borrower.</p> <p>DLR 5.2 As of January 1, 2021 or later, at least 100,000 sets of Personal Protective Equipment (PPE) are available as reserves for future emergency needs.</p>	<p>cover all have been distributed and 863,780 pcs of N95 masks have been distributed.</p> <p>Reported achieved as of 07 May 2021</p>	<p>DLR 5.2 reported achieved</p>	<p>10,000,000</p>
<p>DLI#6: Protocols for infection prevention and clinical management of patients with respiratory symptoms.</p> <p>DLR #6.1: MOH has developed protocols for infection prevention and clinical management of patients with respiratory symptoms and disseminated them to all Non-Referral Facilities</p>	<p>The Ministry of Health has published several protocols related to COVID-19 that have been disseminated and can be accessed by the public, including:</p> <ul style="list-style-type: none"> - Protocol for the Prevention and Control of COVID-19 - Technical Guidelines for the Use of PPE in managing the COVID-19 outbreak - Waste management protocols in various types of medical facilities 	<p>DLR #6.1 is achieved.</p>	<p>10,000,000</p>
<p>DLI#7: Installed capacity of quality-assured COVID-19 confirmatory tests per day</p> <p>DLR #7.1: The Borrower has established and maintained an external quality assurance system for the entire installed capacity of COVID-19 confirmatory Polymerase Chain Reaction (PCR) tests – including MOH and non-MOH hospitals authorized to carry out COVID-19 testing.</p> <p>DLR #7.2: The Borrower has made 350 quality-assured rapid molecular testing machines regularly functional for undertaking COVID-19 confirmatory tests.</p>	<p>DLR #7.1: The Ministry of Health has established the 5th revision of the Guidelines for Prevention and Control of COVID-19 (Chapter IV) which has mentioned the steps taken in the context of Consolidating Laboratory Quality, which includes mentioning that the laboratory should conduct External Quality Consolidation (PME) or quality assurance according to the provisions stipulated. determined by the Litbangkes Agency. The Ministry of Health has issued a Decree of the Minister of Health (KMK) regarding the Establishment of a COVID-19 Examination Laboratory, which is updated with KMK regarding the COVID-19 Examination Laboratory Network.</p> <p>DLR #7.2: As of September 30, 2020, there are 98 quality-assured rapid molecular testing machines regularly functional for undertaking COVID-19 confirmatory tests.</p>	<p>DLR #7.1 requires further discussion and evidence to confirm that the external quality assurance system was operational for the full lab network. We propose to process this separately for a timely confirmation of the remaining achievements.</p> <p>DLR#7.2 is partially achieved, for 28% of the scalable target.</p>	<p>Not achieved</p> <p>3,920,000</p>
<p>Total</p>			<p>193,920,000</p>
<p>Authorized for Payment</p>			<p>183,920,000</p>

Figure 2: Theory of change of the Additional Financing

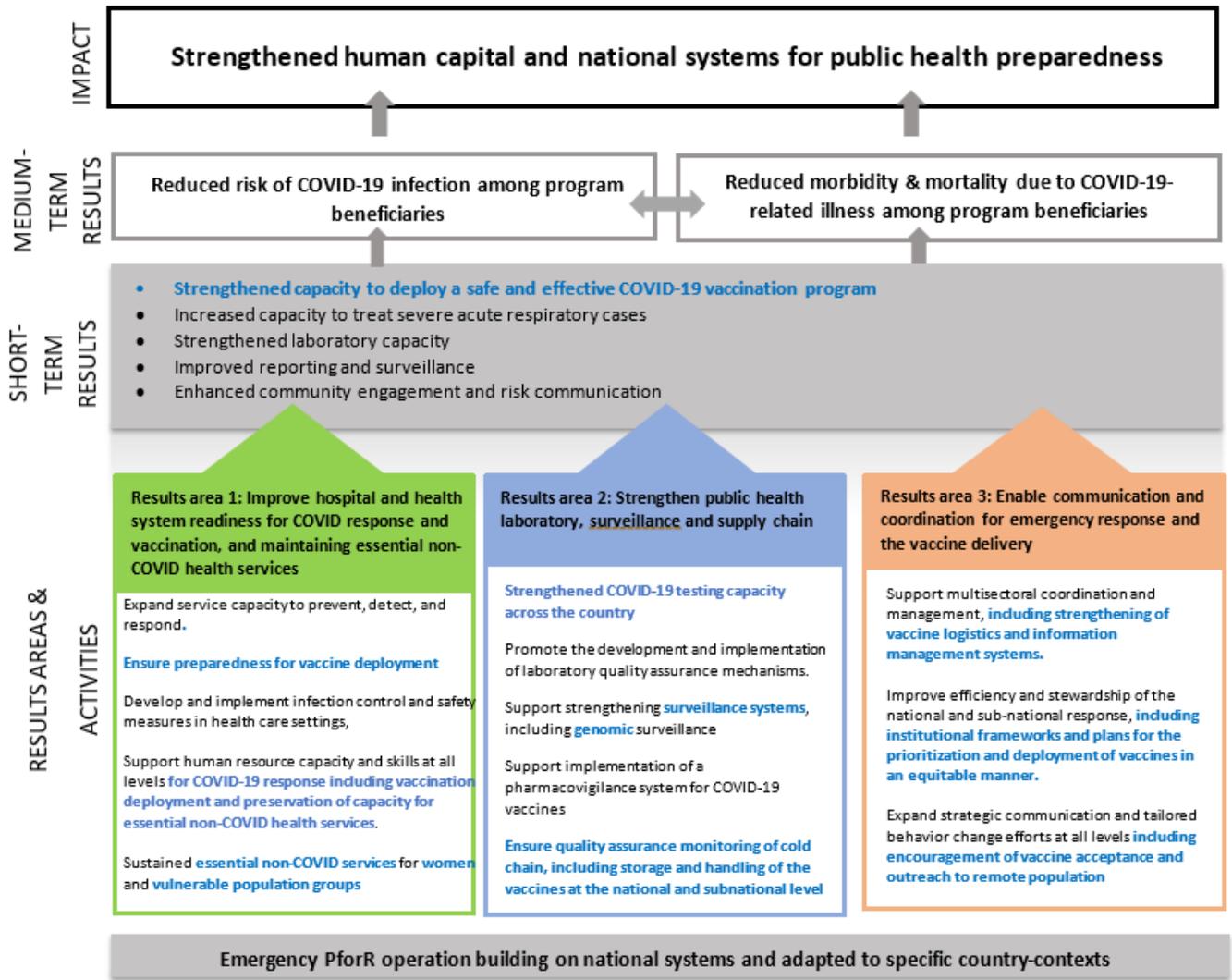


Table 5. Intermediate and PDO indicators, by results area (new AF indicators in blue)

Results Areas	Intermediate Indicators	PDO Indicators
Improve hospital and health system readiness for COVID response and vaccination, and maintaining essential non-COVID health services	<ul style="list-style-type: none"> Concrete measures to support and compensate health professionals for added COVID-19-related workload and risk are implemented Number of beds temporarily converted for patient isolation and/or low-intensity medical care Number of COVID-19 cases successfully treated, disaggregated by sex Infection prevention and clinical management protocols developed and disseminated to all non-referral facilities Maintaining essential non-COVID services – Number of completed fourth ANC services delivered in the previous quarter as a proportion to the corresponding quarter in 2019 	<ul style="list-style-type: none"> Increased population immunity to COVID-19, as measured by number of persons who have received free vaccination in accordance to the prioritization group Reduced service readiness gap in treating serious respiratory illness patients
Strengthening public health laboratory, surveillance, and supply chain systems	<ul style="list-style-type: none"> Number of functional locations with remote temperature monitoring system. Cumulative number of COVID-19 suspects tested by PCR or rapid molecular testing, disaggregated by sex. A surveillance mechanism for community-based reporting of outbreaks and new illnesses among humans and animals is functional Cumulative number of cases reported in the pharmacovigilance system 	<ul style="list-style-type: none"> Strengthened laboratory capacity Improved reporting and surveillance system
Enable communication and coordination for emergency response and vaccine delivery	<ul style="list-style-type: none"> MOH supports the creation of a multisectoral coordination mechanism for COVID-19 response MOH counters COVID-19 related misinformation and posts on its website Cumulative number of cases MOH counters COVID-19 vaccine related misinformation and posts on its website Cumulative number of website visitors to the COVID-19 communication portal set up by the Government of Indonesia. 	<ul style="list-style-type: none"> Enhanced community engagement and communication

20. The Disbursement Linked Indicators for the AF reflect the Program's results areas and involves the similar implementing units responsible for the Parent Program. DLIs related to the scale up of the COVID responses will continue to include the Director General (DG) of Health Services, the Board for Human Resource for Health. While for those related to the vaccine and surveillance, including pharmacovigilance, highlights the roles of the DG of Disease Control, especially the Surveillance Directorate, as well as the Center for Biomedics under the Institute of Health Research and Development.

The Disbursement linked results to ensure the continuity of essential non-COVID services such as maternal health services, child immunization and nutrition outreach, and tuberculosis (TB) case detection and treatment, require multiple units coordination. This would include not only the respective programs but also health personnel deployment plan and monitoring.

21. **The Program Implementation Unit was established under the parent project and is coordinating effectively.** The program management structure and coordination mechanism were established with a Ministerial decree; this unit sits under the MOH's Bureau of Planning. The management structure brings together various units responsible for DLI achievements and Program Action Plan (PAP) implementation. The same implementation arrangements will continue under the AF.

22. **However, the parent project will have to be restructured to incorporate changes related to the AF.** First, representation on the program implementation unit needs to expand to include the MOH's immunization sub-directorate. MOH units responsible for the achievement of AF DLIs are listed in Table 6. Second, the PforR's closing date needs to be extended to December 31, 2022 to reflect the GOI's vaccine deployment schedule. Third, changes to target changes on the DLI/Rs related to strengthening health laboratory due to rapid expansion of the PCR diagnostic laboratory network, from 12 laboratories to more than 500 laboratories in the 12-month period (March 2020 – March 2021), and to introduce a new DLR (10.2) to accommodate the GOI expansion on testing and tracing as a key element of Surveillance. The DLIs will be updated to account for the current achievements and extended duration of the program as described above.

Table 6. New DLIs under the AF

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
(1) DLI #1: Specific additional measures to support and compensate health professionals for added COVID-19 related workload and risk are implemented	DLR #1.2: The Implementation Guidelines for Health Professionals' Support for COVID-19 response remain in place and the payment of benefits has been continued in FY 2021.	0	The policy to provide incentives and death compensation is continued for all calendar quarters in 2021.	<p>Value: US\$ 40 million</p> <p>Scalable/monthly payment: Unit Price: \$3,333,333 per Calendar month in 2021 that the Guidelines for Health Professionals' Support remain in place and the payment of benefits has been continued.</p> <p>Responsible MOH units: The National Board for Human Resource for Health Empowerment and Use (Badan PPSDM)</p>
(3) DLI #3: Increased capacity for patient isolation and medical care	<p>DLR #3.3: At least 90% of hospital claim payments received by the hospital within 10 working days after receiving the verified claims for treating COVID-19 cases in each calendar quarter of 2021.</p> <p>DLR # 3.4: Number of COVID-19 patients with moderate to severe illnesses that receive hospitalization and have their claims paid for by the MOH, on or after the date of signature of this Agreement.</p>	<p>0</p> <p>0</p>	<p>More than 90% for each quarter</p> <p>200,000</p>	<p>Value US\$ 10 million (Unit Price: \$2,500,000 for every calendar quarter of 2021 that the Target is met.</p> <p>Target: at least 90% of hospitals treating COVID-19 patients have received claim payment within 10 working days of submitting claims</p> <p>MOH Unit: DG Health Services (Referral Unit)</p> <p>Value US\$ 60 million. Scalable. Unit Price: \$300 for each claim paid for COVID-19 patients receiving free hospital treatment, up to the Target.</p>

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
				MOH Unit: DG Health Services (Referral Unit)
(4) DLI #4: Health facilities' readiness for emergency response	DLR #4.2: 2000 additional high care beds in existing medical facilities outside Jakarta are equipped to manage severe respiratory illnesses pursuant to the National Protocol (of which at least 50% are equipped with ventilators)	0 in May 2020 Current value is 2,355	2,000 new beds over and above the current achievement.	<p>Scalable; Value: US\$ 50 million</p> <p>Unit Price: \$25,000 per high care bed fully equipped pursuant to the National Protocol, up to</p> <p>2,000 new beds over and above the Baseline.</p> <p>Current value: 2,355 is the # of high care beds outside of Jakarta 2020</p> <p>MOH Unit: DG Health Services (Referral Unit)</p>
(7) DLI #7: Installed capacity of quality-assured COVID-19 confirmatory tests per day	DLR 7.3 Borrower has tested 1 person per 1000 population per week (including polymerase chain reaction (PCR), rapid molecular and rapid antigen tests) in the Additional Provinces.	5 Provinces	20 Provinces	<p>Total value: US\$ 45 million</p> <p>Scalable, Unit Price:</p> <p>\$3,000,000 per Additional Province beyond the baseline where 1 person per 1000 population per week is tested up to the Target.</p> <p>Target: 15 Additional Provinces</p> <p>Note: The five provinces as the baseline; DKI Jakarta, Daerah Istimewa (DI) Yogyakarta, Kalimantan Timur, Kalimantan Selatan, Kalimantan Utara.</p> <p>MOH Units: DG Disease Control and the National Institute for Health Research</p>

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
	DLR 7.4 The Borrower has introduced Rapid Antigen Testing in all Provinces.	0 provinces	34 provinces	Value US\$ 51 million; Scalable. Unit Price: \$1,500,000 per Province that has completed the first 10,000 Rapid Antigen Testing up to the Target. MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine)
	DLR 7.5 The Borrower is undertaking regular genomic surveillance for variants of the COVID-19 virus.	0	At least 300 samples for every calendar semester from January 2021 to June 2022.	Value US\$ 15 million; Scalable: Unit Price: \$5,000,000 per calendar semester in which at least 300 samples are tested for genomic variants of the COVID-19 virus during the Target period. Target: January 2021 to June 2022 MOH Unit: The National Institute for Health Research
(9) DLI # 9 Communications strategy on COVID-19 based on experience and lessons-learned	DLR # 9.2 By no later than September 30, 2021, MOH has updated the communication strategy for information on COVID-19 vaccines, their rollout, eligibility, and grievance redress as well as adverse event information	0	COVID-19 vaccine-related update to the MOH communication strategy is available	Value: US\$ 10 million. MOH Unit : DG Community Health (Directorate Health Promotion)
(11) DLI # 11 Assess and plan actions to address gaps in supply chain and logistics for maintaining the cold chain for storage and distribution of COVID-19 vaccines	DLR 11.1 By no later than July 30, 2021, the Borrower has developed an action plan to address identified gaps in supply chain and logistics for maintaining the cold chain from points of entry to points of service for COVID-19 vaccines.	0	Cold chain action plan is developed and under implementation.	Value: US\$ 10 million MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine)

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
	<p>DLR 11.2 The Borrower has deployed remote temperature monitoring devices in vaccine storage locations (not including Jakarta) and specifically:</p> <p>(a) remote temperature monitoring is installed and functioning at the Province and district level;</p> <p>(b) remote temperature monitoring is installed and functioning at the Puskesmas level;</p> <p>(c) end to end supply chain management and logistics information system is functional (at least for COVID-19 vaccines) and regularly in use in 2000 Puskesmas up to March 31, 2022.</p>	0	<p>a) Remote temperature monitoring is installed and functioning at (i) the provincial and district level for all identified districts;</p> <p>b) Remote temperature monitoring is installed and functioning at the Puskesmas level in all identified districts.</p> <p>c) End-to-end supply chain management and logistics information system is functional (at least for COVID-19 vaccines) and regularly in use in up to 2,000 Puskesmas locations as of 31st March 2022.</p>	<p>DLR #11.2 Value: US\$ 45 million.</p> <p>DLR #11.2 (a) Unit Price: \$150,000 for each percentage point of Identified Districts where remote temperature monitoring is installed and functioning at the Province and district level;</p> <p>DLR #11.2(b): \$15,000,000</p> <p>Unit Price: \$150,000 for each percentage point of Identified Districts where remote temperature monitoring is installed and functioning at the Puskesmas up to the Target.</p> <p>Target: all Identified Districts</p> <p>DLR #11.2(c): \$15,000,000</p> <p>Unit Price: \$7,500 per Puskesmas where end-to-end supply chain management and logistics information system is functional (at least for COVID-19 vaccines) and regularly in use, as of March 31, 2022.</p>

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
				MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine)
(12) DLI #12 Human Resource Capacity Building and Managing unintended impact of COVID response on essential non-COVID health services	DLR 12.1 By no later than July 30, 2021, the Borrower has developed a deployment/mobilization plan for ongoing COVID-19 response and mass vaccination in a manner that preserves a share of staffing to maintain Essential Non-COVID Health and Nutrition Services.	0	HR Mobilization plan that preserves essential services, is developed and implemented	Value: US\$ 10 million. MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine) and other relevant units within MOH
	DLR 12.2 The Borrower has confirmed that appropriate capacity building/ training of human resources for COVID-19 vaccine delivery has been carried out.	No	MOH has received confirmation of training completion for all districts implementing COVID-19 vaccination.	Value: US\$ 20 million; Scalable. Unit Price: \$40,000 per district that has confirmed that appropriate capacity building/training of human resources for COVID-19 vaccine delivery has been carried out up to the Target. Target: 500 districts MOH Unit: The Board for Human Resource Planning and Use (Badan PPSDM), The Center for Health Workforce Training, and relevant units responsible for the essential health service)
	DLR 12.3 Essential Non-COVID Health and Nutrition Services are utilized at more than 90% of pre-COVID utilization.	0	Targets for each program will be based on individual program performance in 2019.	Value: US\$ 69 million Scalable; Unit Price: \$3,000,000 per calendar quarter for each program achieving the Target in each quarter between April 2021 and June 2022.

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
		<p>(2019 performance)</p> <p>Programs & Indicators**</p> <p>Maternal</p> <p>- K4 visits 84.6% (KOMDAT/Program reporting)</p> <p>- Facility based delivery 83.15% (KOMDAT, Program)</p> <p>Nutrition</p> <p>Under 5s monthly weighing 73.6% (Program reporting)</p> <p>TB</p> <p>Case notification 67% (Program reporting)</p> <p>Immunization</p>	<p>Programs & Indicators</p> <p>Maternal</p> <p>- K4 complete visits</p> <p>- Facility based delivery</p> <p>Nutrition</p> <p>Monthly Growth Monitoring of Children Under 5</p> <p>TB</p> <p>Case Notification</p> <p>Immunization</p> <p>Pentavalent (3rd dose)</p>	<p>Target: program is utilized at more than 90% of pre-COVID utilization, with the exception of the treatment coverage of TB program (=> 82% than 2019, or not lower than 55%)</p> <p>MOH Units: DG Community Health (Dit Family Health and Dit Nutrition); DG Communicable Diseases (Dit Surveillance and Health Quarantine, and Dit Directly Transmissible Diseases – the National TB Program); Under the coordination of Secretary General Ministry of Health</p>

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
		Pentavalent (3rd dose) coverage (Program reporting)		
(13) DLI #13 Vaccine prioritization and distribution is based on pre-determined, fair and objective criteria.	<p>DLR 13.1. The Borrower has developed fair and equitable criteria for prioritization and distribution of COVID-19 vaccines across its geographical areas through a consultative and transparent process.</p> <p>DLR 13.2 As of September 30, 2021, the prioritization, deployment and distribution of COVID-19 vaccines has conformed to the fair and equitable criteria referred to in DLR #13.1.</p> <p>DLR 13.3 As of December 31, 2021, the prioritization, deployment and distribution of COVID-19 vaccines has conformed to the fair and equitable criteria referred to in DLR #13.1</p>	0.	Vaccine prioritization and distribution criteria are developed, made publicly available, and COVID-19 vaccines deployment and distribution has conformed to the criteria	<p>Value: US\$ 25 million</p> <p>DLR 13.1 Criteria developed and made publicly available: US\$5 million</p> <p>DLR 13.2 As of September 30, 2021, the COVID-19 vaccines distribution has conformed to the above criteria: US\$10 million</p> <p>DLR 13.3 As of December 31, 2021, the COVID-19 vaccines distribution has conformed to the above criteria: US\$ 10 million</p> <p>MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine)</p>
(14) DLI #14 A pharmacovigilance system is in place to report adverse events in a timely manner	DLR #14.1 The Borrower has developed and implemented a pharmacovigilance system to monitor any adverse events related to the COVID-19 vaccine(s).	0		<p>Value: US\$ 10 million</p> <p>The system has the ability to track the exact batch of COVID-19 vaccine</p> <p>Pharmacovigilance system is developed</p>

Disbursement Linked Indicators	Disbursement Linked Results	Baseline	Target including Updated Target	Notes/Formula
	<p>DLR #14.2 As of September 30, 2021, the pharmacovigilance system has been implemented and is functioning in accordance with the ITAGI Guidance, to monitor any adverse events related to the Program COVID-19 vaccine.</p> <p>DLR# 14.3 As of March 30, 2022, the pharmacovigilance system has been implemented and is functioning in accordance with the ITAGI Guidance, to monitor any adverse events related to the COVID-19 vaccine.</p>	0	The pharmacovigilance system is developed and is providing regular reports.	<p>Value: US\$ 15 million</p> <p>As of September 30, 2021, the system is functioning and able to track exact batch of COVID-19 vaccines given to beneficiaries</p> <p>Value: US\$ 15 million</p> <p>As of March 30, 2022, the system is functioning and able to track exact batch of COVID-19 vaccines given to beneficiaries</p> <p>MOH Unit: DG Disease Control (Directorate Surveillance and Health Quarantine)</p>

Economic Justification

23. **The economic rationale for investment in a COVID-19 vaccine is strong, considering the massive economic losses due to the pandemic.** The Indonesian economy is expected to shrink by 1.5 percent in 2021⁹. The COVID-19 crisis is also expected to result in a sharp increase in poverty. Preliminary projections indicate an additional 8 million individuals will either be unemployed or impoverished in Indonesia. Unemployment in Indonesia is expected to rise to 7.5 percent in 2020, up from 5.3 percent in 2019 – implying an additional 3 million projected to be unemployed. In addition, declining economic growth is projected to push an additional 5 million below the poverty line. However, the successful development, production, and delivery of a vaccine has the best potential to reverse these trends, generating benefits that will far exceed vaccine-related costs. A rapid and well-targeted deployment of a COVID-19 vaccine can help reduce the increases in poverty and accelerate economic recovery – even at levels of imperfect effectiveness. By one estimate, delaying access to vaccination by just six months will cost the economy US\$44 billion or 4.1% of GDP.

24. **There are also traditional economic arguments for investment in vaccines to contain communicable diseases.** First, they are generally considered merit goods that have positive externalities that extend beyond the select group who can afford to pay for them. Second, the risk and uncertainty of falling ill to COVID-19, a partial and/or lengthy recovery, or death exposes individuals to potentially ruinous medical expenditures and loss of earnings during extended sick days.

25. **Beyond the economic arguments, vaccinations will also significantly reduce morbidity and mortality from COVID-19.** As of May 8, 2021, Indonesia confirmed 1,718,575 confirmed cases and cases and 47,218 deaths from COVID-19 – the largest burden of COVID-19 in the East Asia Pacific region. While the efficacy of the various vaccines under production remains a clinical unknown, global experience shows that vaccines significantly reduce or even eliminate the threat of morbidity and mortality from disease. Using conservative estimates of COVID prevalence between 5-10 percent, a case fatality rate of 3 percent, and a vaccine efficacy rate of 75 percent, between 300-600 thousand deaths could be averted – more if the prevalence rate for the Indonesia is determined to be higher.

26. **A simplified cost-benefit analysis suggests that a COVID-19 vaccination programs will generate a positive cost to benefit ratio making the support provided by this PforR a good investment.** Assuming the value of a statistical life saved is approximated to be three times Indonesia's GDP per capita – US\$4,136 in 2019 – and that individuals saved have 10 years of remaining working life, the total benefit from vaccinating the target populations (~68 percent of population) is roughly estimated to be over US\$270 billion. Using an estimated cost of vaccination of US\$10 per person, this yields a benefit to cost ratio of 149. This is also a gross underestimate as it only considers the benefits from deaths averted – not the benefits from the cost of illness, nor the economic impact of sustained

⁹ These estimates are based on the latest data from the IMF's World Economic Outlook update.

closures. Global experience with immunization against diseases shows that by avoiding these and other health cost, vaccines are one of the best buys in public health.

Program Boundaries

			IDR	US\$	DLI/ DLR
SECRETARIAT GENERAL	PROGRAM MANAGEMENT SUPPORT				
		001 Dissemination of Information for Health Development Policy	20,237,743	1,432,534	DLI 9/DLR 9.2
		002 Public Communication Strategy and Public Opinion Management	2,622,080	185,605	DLI 9/DLR 9.2
		003 Information Services and Contact Centre 'Halo Kemenkes'	1,365,660	96,669	DLI 9/DLR 9.2
		004 Development of Public Communication and Information Management	809,090	57,272	DLI 9/DLR 9.2
DIRECTORATE GENERAL COMMUNITY HEALTH	Community Nutrition Program		750,231,553	53,105,354	DLI 12/DLR 12.1; 12.3
	Family Health Program		350,655,991	24,821,284	DLI 12/DLR 12.1; 12.3
	Health Promotion and Community Empowerment		256,614,892	18,164,558	DLI 12/DLR 12.1; 12.3
DIRECTORATE GENERAL HEALTH SERVICES					
	Health Service Delivery Facilities		671,416,495	47,526,408	DLI 3; DLI 4/DLR

					3.3; 3.4; DLR 4.2	
	Referral Health Services					
		Norms, Standards, and Criteria for Health Service Delivery and Management	1,021,361	72,297	DLI 3; DLI 4/DLR 3.3; 3.4; DLR 4.2	
	Support for Vertical Health Facilities		31,059,551,375	2,198,559,192	DLI 3; DLI 4/DLR 3.3; 3.4; DLR 4.2	
DIRECTORATE GENERAL DISEASE PREVENTION AND CONTROL	Management Support for Disease Control and Prevention Programs		979,413,102	69,328,035	DLI 11; DLI 12; DLI 13; DLI 14	
	Surveillance and Health Quarantine					
		Standards and Management of Prevention and Control of Outbreak Potential Diseases	2,703,247,637	191,350,154	DLI 11; DLI 12; DLI 13; DLI 14	
		Standards and Management of New Emerging Diseases	622,942	44,095	DLI 11; DLI 12; DLI 13; DLI 14	
		AEFI Surveillance (Adverse Events Following Immunization)	2,017,312	142,796	DLI 11; DLI 12; DLI 13; DLI 14	
		Surveillance and Early Detection of New Emerging Diseases	408,134	28,890	DLI 11; DLI 12; DLI 13; DLI 14	
		Prevention and Control of Directly				

	Tranmissible Diseases				
		Coordination and Implementation of TB Prevention and Control	3,686,444	260,946	DLI 12/DLR 12.3
DIRECTORATE GENERAL PHARMACEUTICAL SERVICES AND MEDICAL DEVICES	Improvement of Supervision for Medical Devices and Medical Supplies				
		Additional essential pharmaceuticals (essential drugs, vaccines, supplies) including buffer during COVID-19 pandemic	772,546,032	54,684,891	
		Distribution of Vaccine	3,102,299,241	219,597,136	DLI 11; DLI 14
		COVID-19 Vaccine Acquisition	10,355,668,962	733,028,978	
NATIONAL INSTITUTE FOR HEALTH RESEARCH AND DEVELOPMENT	Research and Development of Laboratories and Biotechnology				
		001 Laboratory Infrastructure and Equipment	13,139,530	930,085	DLI 7/DLR 7.3; 7.4; 7.5
		002 Laboratory Supplies	4,720,384,588	334,133,768	DLI 7/DLR 7.3; 7.4; 7.5
BOARD FOR PLANNING AND EMPOWERMENT OF HUMAN	Management Support for Human Resource for		7,266,554,867	514,365,156	DLI 1/DLR 1.2

RESOURCE FOR HEALTH	Health Development, Planning, and Empowerment				
	Human Resource for Health Training				
		Development of Capacity Building Standards (Norms, Standards, Protocol, and Criteria)	28,324,324	2,004,945	DLI 2
		038 Training for COVID-19	4,484,613	317,445	DLI 2