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Report No: PAD00155

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF EURO 1,391.6 MILLION
(US\$1,484 MILLION EQUIVALENT)

TO THE
REPUBLIC OF INDONESIA

FOR AN
INDONESIA HEALTH SYSTEMS STRENGTHENING PROJECT

November 17, 2023

Health, Nutrition, and Population Global Practice
East Asia and Pacific Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective October 31, 2023)

Currency Unit

IDR 15,854= US\$1

US\$1 = EURO 0.93769

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
ANC	Antenatal Care
APA	Alternative Procurement Arrangement
APBN	State Budget (<i>Anggaran Pendapatan dan Belanja Negara</i>)
ASPAK	Application of Facilities, Infrastructure, and Medical Devices (<i>Aplikasi Sarana, Prasarana, dan Alat Kesehatan</i>)
Bappenas	National Development Planning Agency (<i>Badan Perencanaan Pembangunan Nasional</i>)
BKPK	Health Development Policy Agency (<i>Badan Kebijakan Pembangunan Kesehatan</i>)
BPJS-K	Social Security Administrator for Health (<i>Badan Penyelenggara Jaminan Sosial - Kesehatan</i>)
BPK	Supreme Audit Institution
BPPK	Financial Education and Training Agency (<i>Badan Pendidikan dan Pelatihan Keuangan</i>)
BPPSDMK	Health Human Resources Development and Empowerment Agency (<i>Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan</i>)
BRIN	National Research and Innovation Agency (<i>Badan Riset dan Inovasi Nasional</i>)
CCDR	Country Climate and Development Report
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CPMO	Central Project Management Office
CPMU	Central Project Management Unit
CPU	Central Procurement Unit
DA	Designated Account
DAK Fisik	Special Physical Allocation Fund for the Health Sector (<i>Dana Alokasi Khusus Fisik Bidang Kesehatan</i>)
DAU	General Allocation Fund (<i>Dana Alokasi Umum</i>)
DFAT	Department of Foreign Affairs and Trade
DHO	District Health Office (<i>Dinas Kesehatan, or Dinkes</i>).
DIPA	List of Entries of Budget Execution (<i>Daftar Isian Pelaksanaan Anggaran</i>)
DPL	Development Policy Loan
DRG	Diagnostic-Related Group
DTO	Digital Transformation Office
ECRI	Emergency Care Research Institute
ENDC	Enhanced Nationally Determined Contribution
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESS	Environmental and Social Standards
FETP	Field Epidemiology Training Program
FM	Financial Management
FMA	Financial Management Assessment
GCRF	Global Crisis Response Framework
GDP	Gross Domestic Product
GoI	Government of Indonesia
GRID	Green, Resilient and Inclusive Development
GRM	Grievance Redress Mechanism

HAQ	Health Access and Quality
HEIS	Hands-On Expanded Implementation Support
HFC	Hydrofluorocarbon
HNP	Health, Nutrition, and Population
HRH	Human Resources for Health
HSS	Health Systems Strengthening
HSTA	Health System Transformation Agenda
IEC	International Electrotechnical Commission
IFMIS	International Financial Management Information System
IFR	Interim Financial Report
ILP	Primary Health Care Integration (<i>Integrasi Pelayanan Kesehatan Primer</i>)
INEY	Investing in Nutrition in Early Years
INEY	Investing in Nutrition and Early Years
InPULS	Indonesia - Public Laboratory System Strengthening
IPF	Investment Project Financing
IsDB	Islamic Development Bank
I-SPHERE	Indonesia - Primary and Referral Healthcare Reform
IT	Information Technology
IUFR	Interim Unaudited Financial Report
JEE	Joint External Evaluation
JKN	National Health Insurance System (<i>Jaminan Kesehatan Nasional</i>)
Kemkes	Public Health (<i>Kesehatan Masyarakat</i>)
KfW	Reconstruction Credit Institute (<i>Kreditanstalt für Wiederaufbau</i>)
KIA	Mother and Child Health (<i>Kesehatan Ibu dan Anak</i>)
KJSU	Cancer, Heart, Stroke, and Uronephrology Disease (<i>Kanker, jantung, stroke, and uronefrolofi</i>)
LAPOR	People's Online Aspirations and Complaints Service (<i>Layanan Aspirasi dan Pengaduan Online Rakyat</i>)
LTS-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience
M&E	Monitoring and Evaluation
MDB	Multilateral Development Bank
MDTF	Multi-Donor Trust Fund
MFD	Maximizing Finance for Development
MMR	Maternal Mortality Ratio
MoF	Ministry of Finance
MoH	Ministry of Health
MRI	Magnetic Resonance Imaging
MTR	Midterm Review
NAP	National Adaptation Plan
NCD	Noncommunicable Disease
OOP	Out-of-Pocket
OPCS	Operations Policy and Country Services
PA	Procurement Assessment
PASA	Programmatic Advisory Services and Analytics
PCM	Private Capital Mobilized
PDO	Project Development Objective
Permenkes	Regulation of the Minister of Health (<i>Peraturan Menteri Kesehatan</i>)
PforR	Program for Results

PHC	Primary Healthcare
PHLN	Foreign Loans and/or Grants (<i>Pinjaman dan/atau Hibah Luar Negeri</i>)
PHO	Province Health Office
PIA	Project Implementation Agreement
PIU	Project Implementation Unit
PMU	Project Management Unit
PODES	Village Potential (<i>Potensi Desa</i>)
POM	Project Operations Manual
Posyandu	Integrated Service Posts (<i>Pos Pelayanan Terpadu</i>)
PP	Procurement Plan
PPE	Personal Protective Equipment
PPK	Commitment Making Officer (<i>Pejabat Pembuat Komitmen</i>)
PPR	Pandemic Prevention, Preparedness, and Response
PPSD	Project Procurement Strategy for Development
PPSPM	Payment Verification Officer (<i>Pejabat Penandatanganan Surat Perintah Membayar</i>)
Puskesmas	Community Health Center (<i>Pusat Kesehatan Masyarakat</i>)
Pustu	Auxiliary Puskesmas (<i>Puskesmas Pembantu</i>)
QSDS	Quantitative Service Delivery Study
RfB	Request for Bid
RfQ	Request for Quotation
Rifaskes	Health Facility Research (<i>Riset Fasilitas Kesehatan</i>)
RPJMN	National Medium-Term Development Plan (<i>Rencana Pembangunan Jangka Menengah</i>)
SAKTI	Ministry Financial Application System (<i>System Aplikasi Tingkat Instansi</i>)
SARA	Service Availability and Readiness Assessment
SC	Steering Committee
SHI	Social Health Insurance
SIHREN	Strengthening Indonesia's Healthcare Referral Network
SILNAS	National Laboratory Information System (<i>Sistem Informasi Laboratorium Nasional</i>)
SIRS	Hospital Information System (<i>Sistem Informasi Rumah Sakit</i>)
SisDMK	Health Human Resource Information System (<i>Sistem Informasi Sumber Daya Manusia Kesehatan</i>)
SNG	Subnational Government
SOPHI	Strengthening of Primary Healthcare in Indonesia
SPAN	International Financial Management Information System (<i>Perbendaharaan dan Anggaran Negara</i>)
SPSE	e-Procurement System (<i>Sistem Pengadaan Secara Elektronik</i>)
STEP	Systematic Tracking of Exchanges in Procurement
TA	Technical Assistance
TB	Tuberculosis
TCO	Total Cost of Ownership
ToR	Terms of Reference
UHC	Universal Health Coverage
VfM	Value for Money
WB	World Bank
WHO	World Health Organization
Yankes	Directorate General of Health Services (<i>Pelayanan Kesehatan</i>)

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**DATASHEET****BASIC INFORMATION**

Project Beneficiary(ies)	Operation Name		
Indonesia	Indonesia Health Systems Strengthening Project		
Operation ID	Financing Instrument	Environmental and Social Risk Classification	
P180811	Investment Project Financing (IPF)	Moderate	

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input checked="" type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
08-Dec-2023	30-Jun-2029
Bank/IFC Collaboration	
No	

Proposed Development Objective(s)

To increase the availability of functional equipment in public health facilities and improve the utilization of public health services across Indonesia

Components

Component Name	Cost (US\$)
Component 1: Public primary care equipment provision across Indonesia ("SOPHI")	615,200,000.00
Component 2: Public referral hospital equipment across Indonesia ("SIHREN")	455,000,000.00



Component 3: Public health laboratory equipment across Indonesia ("InPULS")	275,400,000.00
Component 4: Project Management, Administration, Digitization and Training	138,400,000.00

Organizations

Borrower: The Republic of Indonesia
 Implementing Agency: Ministry of Health

PROJECT FINANCING DATA (US\$, Millions)**Maximizing Finance for Development**

Is this an MFD-Enabling Project (MFD-EP)? Yes
 Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	3,982.70
Total Financing	3,982.70
of which IBRD/IDA	1,484.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	1,484.00
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Non-World Bank Group Financing

Other Sources	2,495.00
Asian Infrastructure Investment Bank	999.00
Asian Development Bank	650.00
Islamic Development Bank	846.00
Counterpart Funding	3.70
Borrowing Country's Fin. Intermediary/ies	3.70



Expected Disbursements (US\$, Millions)

WB Fiscal Year	2024	2025	2026	2027	2028	2029	2030
Annual	10.00	276.00	270.00	270.00	258.00	250.00	45.00
Cumulative	10.00	286.00	556.00	826.00	1,084.00	1,334.00	1,379.00

PRACTICE AREA(S)

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Governance

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Moderate

POLICY COMPLIANCE

Policy



Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

ENVIRONMENTAL AND SOCIAL

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
ESS 8: Cultural Heritage	Not Currently Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description

The Co-financing Deadline for the effectiveness of the ADB Co-financing Agreement and the AIIB Co-Financing Agreement is one hundred and twenty (120) days after the Signature Date

The Borrower, through the MOH, shall cause the Secretary General of the MOH, not later than three (3) months after the Effective Date, to establish and thereafter maintain, throughout Project implementation, the National Steering Committee to be responsible for the provision of inter-ministerial strategic guidance, policy advice and coordination to the Project, with a composition, institutional framework, functions, and resources satisfactory to the Bank for such purpose.



The Borrower, through the MOH, shall cause the Secretary General of the MOH, not later than two (2) months after the Effective Date, to establish and thereafter maintain, throughout Project implementation, a Central Project Management Unit (CPMU) at the Office of the Secretary General of the MOH, with the composition, institutional framework, functions and resources satisfactory to the Bank.

The Borrower, through the MOH, shall cause the Secretary General of the MOH, not later than three (3) months after the Effective Date, to establish and thereafter maintain, throughout Project implementation, a Central Procurement Unit at the Office of the Secretary General of the MOH, to be responsible for procurement activities under the Project.

5. The Borrower, through the MOH, shall cause the Project Implementing Agency and Project Executing Agency each to: (a) not later than three (3) months after the Effective Date, establish and thereafter maintain, throughout Project implementation: (i) a Project Management Unit (PMU) within the Project Implementing Agency, to be responsible for implementation of Parts 1 and 4 of the Project; (ii) a PMU within the Project Executing Agency, to responsible for implementation of Parts 2 and 4 of the Project; and (iii) a PMU under the Project Implementing Agency, to responsible for implementation of Parts 3 and 4 of the Project; (b) ensure that respective PMUs are: (i) staffed with competent staff and experts, all with experience and qualifications, in numbers and under terms of reference acceptable to the Bank; (ii) provided with such power, financial and other resources, functions and competences acceptable to the Bank, as shall be required for it to implement Project activities and coordinate among each other.

To ensure that the health facilities receiving Equipment are adequately prepared to receive, operate and maintain the Equipment, the Borrower, through the Project Executing Agency, shall ensure that, prior to the receipt of the Equipment, the selected health facilities meet the selection criteria set forth in the Project Operations Manual (“POM”), including, without limitation, the following: (a) results of the health facility’s Equipment needs gap assessment have been verified by the Ministry of Health prior to placing a dispatch order with the respective vendor for delivery and installation of Equipment, in accordance with the protocol set forth in the POM; (b) adequate human resource capacity of the personnel who will operate and maintain the Equipment in the health facility; (c) adequacy of the infrastructure and reliable and uninterrupted access to utilities to support the operation of the Equipment in the health facility; and (d) compliance by the health facility with local and national regulations on management and disposal of medical waste.

The Borrower, through the Project Executing Agency, shall monitor selected health facilities’ continuous compliance with the criteria referenced in paragraph B.1 above, during Project implementation, as further specified in the POM.

1. No later than thirty (30) days after the Effective Date, the Borrower, through the Project Executing Agency, shall: (a) prepare and furnish to the Bank for its review and no-objection, the POM, in form and substance acceptable to the Bank, which shall include: (i) the description of: (A) implementation arrangements including delineation of roles and responsibilities of various entities, institutions and agencies involved in Project implementation and their coordination; (B) the procurement procedures and standard procurement documentation; (C) disbursement arrangements, reporting requirements, financial management procedures and audit procedures; (D) procedures for preparing and reviewing a consolidated annual work plan and budget for each Fiscal Year; (E) the Project performance indicators and monitoring and evaluation arrangements; (F) arrangement and procedures for the management of environment and social aspects; and (G) such other administrative, financial, technical and organizational arrangements and procedures as shall be required for the Project; and (H) the eligibility criteria and procedures for identifying and selecting (and excluding) eligible health facilities to receive the Equipment; (b) afford the Bank a reasonable opportunity to review the proposed POM; and (c) promptly adopt the POM as accepted by the Bank.

Conditions

Type	Citation	Description	Financing Source



I. STRATEGIC CONTEXT

A. Country Context

1. **Indonesia's remarkable economic growth and substantial poverty reduction in the past two decades was partially reversed by the coronavirus disease 2019 (COVID-19) pandemic.** Indonesia's gross domestic product (GDP) grew by an average of 5.4 percent¹ per year between 2000 and 2019, accompanied by a 9.7 percent² decline in poverty during the same period. However, the COVID-19 pandemic induced the worst recession since the 1997–98 Asian financial crisis, pushed 2.7 million additional people below the poverty line between 2019 and 2020,³ and more than doubled the share of households experiencing moderate to severe food insecurity between 2019 and 2022.⁴ Although Indonesia has since shown encouraging signs of recovery (for example, 5.31 percent GDP growth in 2022⁵), this process has not been even, with most disadvantaged households yet to experience an improvement in their livelihoods.⁶

2. **The pandemic highlighted enduring challenges associated with Indonesia's complex geographic landscape, low government revenues, and unequal subnational capacities.** With a population of 273.8 million and comprising 17,500 islands,⁷ Indonesia is the fourth most-populous country globally. This, combined with persistently low government revenues,⁸ has made it difficult for the Government of Indonesia (GoI) to achieve equitable economic growth across the country, with wealth, public services, and essential infrastructure largely concentrated in the west of Indonesia, particularly urban centers located on Java, Sumatra, and Bali.⁹

3. **Indonesia's 2045 Vision aims for the country to become a developed nation by 2045, which will require significant investments in human capital.**¹⁰ Indonesia is an early demographic-dividend nation, yet it has a low human capital index of 0.54 (2020), which means that a child born in Indonesia today will only be 54 percent as productive as if s/he had achieved a benchmark of complete education and full health (see details in annex 2).

B. Sectoral and Institutional Context

4. **Indonesia has achieved momentous gains in its health outcomes and progress toward achieving Universal Health Coverage (UHC) in recent years.** Between 2000 and 2020, life expectancy rose from 66 to 72 years. Under-five mortality rate more than halved between 2000 and 2020 (52 to 23 per 1,000 live births). Infant mortality also declined by half over this same period and stood at 20 per 1,000 live births in 2020. Similarly, the national stunting rate decreased from 42.4 percent in 2000 to 21.6 percent in 2022.¹¹ In addition, owing to the introduction in 2014 of the National Health

¹ World Bank. 2022a. *GDP Growth (annual %) - Indonesia*. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ID>.

² World Bank. 2022b. *Poverty Headcount Ratio at National Poverty Lines (% of population) - Indonesia*. <https://data.worldbank.org/indicator/SI.POV.NAHC?locations=ID>.

³ UNICEF (United Nations Children's Fund), UNDP (United Nations Development Programme), Prospera, and SMERU. 2022. *The Social and Economic Impact of COVID-19 on Households in Indonesia: A Second Round of Surveys in 2022*. <https://www.unicef.org/indonesia/reports/social-and-economic-impact-covid-19-households-indonesia>.

⁴ UNICEF, UNDP, Prospera, and SMERU 2022.

⁵ Cabinet Secretariat of the Republic of Indonesia. 2023. *Indonesia's Economy Grows by 5.31% in 2022*; Consulate General of the Republic of Indonesia in Vancouver, Canada. [n.d.]. *Indonesia at a Glance*. <https://setkab.go.id/en/indonesias-economy-grows-by-5-31-in-2022/>.

⁶ UNICEF, UNDP, Prospera, and SMERU 2022.

⁷ Encyclopedia Britannica. 2023. *Indonesia*. <https://www.britannica.com/place/Indonesia#ref22833>;

https://kemlu.go.id/vancouver/en/pages/indonesia_at_a_glance/2016/etc-menu.

⁸ MoF (Ministry of Finance of the Republic of Indonesia). 2023. *Recent Macroeconomic and Fiscal Update: April 2023*.

https://www.fiskal.kemenkeu.go.id/files/red/file/1683775269_fpa_red_april_2023.pdf; OECD (Organisation for Economic Co-operation and Development). 2022. *Revenue Statistics in Asia and the Pacific 2022: Strengthening Tax Revenues in Developing Asia*. <https://www.oecd.org/tax/tax-policy/revenue-statistics-in-asia-and-the-pacific-5902c320-en.htm>.

⁹ PBS (Central Bureau of Statistics of the Republic of Indonesia). 2023. *Produk Domestik Regional Bruto Per Kapita (Ribu Rupiah), 2020–2022*.

<https://www.bps.go.id/indicator/52/288/1/-2010-version-per-capita-gross-regional-domestic-product-by-province.html>.

¹⁰ Bappenas (Ministry of National Development Planning of the Republic of Indonesia). 2019. *Indonesia 2045: Berdaulat, Maju, Adil, dan Makmur*. https://perpustakaan.bappenas.go.id/e-library/file_upload/koleksi/migrasi-data-publikasi/file/Policy_Paper/Ringkasan%20Eksekutif%20Visi%20Indonesia%202045_Final.pdf.

¹¹ BKPK (Health Development Policy Agency). 2018. *RISKESDAS 2018 (National Basic Health Survey)*.

<http://repository.bkpk.kemkes.go.id/3514/1/Laporan%20Risikesdas%202018%20Nasional.pdf>; MoH (Ministry of Health of the Republic of Indonesia). 2022a. *SSGI 2022 (Survey Status Gizi Indonesia)*. <https://kesmas.kemkes.go.id/assets/uploads/contents/attachments/09fb5b8ccfd0f88080f2521ff0b4374f.pdf>.



Insurance (*Jaminan Kesehatan Nasional*, JKN)—one of the largest single-payer social health insurance (SHI) programs in the world, health coverage and utilization of healthcare services rose dramatically. Having covered over 90 percent of the Indonesian population as of May 2023,¹² the introduction of JKN and overall growing public health spending have together led to a dramatic drop in the share of out-of-pocket (OOP) expenditures of the total health expenditure, from 45.3 percent in 2014 to about 25.0 percent in 2021.

5. **However, Indonesia continues to trail its regional and economic peers in most health outcomes and is faced with a complex ‘double burden’ of enduring communicable diseases and increasing noncommunicable diseases (NCDs).** At 173 deaths per 100,000 live births (2020 data),¹³ Indonesia’s maternal mortality ratio (MMR) remains significantly higher than the average for the East Asia and Pacific region of 77 deaths per 100,000 live births. Likewise, it compares unfavorably in life expectancy and infant, under-five, and neonatal mortality, pointing to an urgent need for improved mother and child health services (*kesehatan ibu dan anak*, KIA). In addition, undernutrition continues to remain a priority issue, with close to 1 in 5 children under 5 years of age being stunted in 2022, and 1 in 14 wasted.¹⁴ Furthermore, the country is the third-largest contributor to the global tuberculosis (TB) burden, accounting for 8.4 percent¹⁵ of all estimated incident cases worldwide in 2020. Between 2000 and 2019, the share of deaths due to NCDs in Indonesia has also increased from 61 percent to 76 percent,¹⁶ with cancer, heart, stroke, and uronephrology diseases (*Kanker, jantung, stroke, and uronefrologi*, KJSU) accounting for the highest mortality rates and health costs. These trends are increasingly straining Indonesia’s health system, which is currently still unprepared to diagnose, treat, and adequately manage chronic conditions. They are also straining JKN, which, as of the end of 2019, had incurred a substantial cumulative deficit of US\$3.5 billion.¹⁷ National averages, moreover, mask wide variations in health outcomes across regions and socioeconomic status.

6. **Historically low government spending on health, coupled with varied spending capacities at the subnational level, further hamper an effective and equitable implementation of national health policies.** Indonesia’s total government health expenditure only amounted to US\$73 per capita¹⁸ in 2020—below the US\$110 needed to finance a minimum package of essential UHC services. Moreover, over two-thirds of public health spending happens at the subnational level, where the Ministry of Health (MoH) has limited influence. The bulk of district revenue comes from intergovernmental transfers from central- to district- (Regional Revenue and Expenditure Budget *Anggaran Pendapatan dan Belanja Daerah*) level budgets. However, most of these transfers, primarily comprising the Revenue Sharing Fund (*Dana Bagi Hasil*), General Allocation Fund (*Dana Alokasi Umum*, DAU), and central grants,¹⁹ are unconditional. Budget allocations to the health sector remain therefore at the discretion of local governments. Investments in health infrastructure vary widely between regions, which, coupled with unequal subnational accountability, monitoring, evaluation, and quality assurance capacities, leads to disparities in health infrastructure and access to quality healthcare.

7. **Moreover, regional disparities in healthcare access and quality persist, leading to widely varied health outcomes.**²⁰ In an effort to increase access to health services, the MoH has mandated that each subdistrict should have

¹² BPJS-K (Social Security Administrator for Health of the Republic of Indonesia). 2023. *BPJS Kesehatan Presents JKN Program Updates to Commission IX DPR RI*. <https://www.bpjs-kesehatan.go.id/bpjs/post/read/2023/2618/BPJS-Kesehatan-Paparkan-Update-Program-JKN-Ke-Komisi-IX-DPR-RI>.

¹³ World Bank. 2020a. *Maternal Mortality Ratio (modeled estimate, per 100,000 live births) – Indonesia*. <https://data.worldbank.org/indicator/SH.STA.MMRT?locations=ID>.

¹⁴ MoH. 2022a. <https://kesmas.kemkes.go.id/assets/uploads/contents/attachments/09fb5b8ccdf088080f2521ff0b4374f.pdf>.

¹⁵ WHO (World Health Organization). 2021. *Global Tuberculosis Report 2021*. <https://www.who.int/publications/i/item/9789240037021>.

¹⁶ World Bank. 2020b. *Cause of Death, by Non-Communicable Diseases (% of total) - Indonesia*. <https://data.worldbank.org/indicator/SH.DTH.NCOM.ZS?locations=ID>.

¹⁷ Indonesia-Investments. 2023. *Indonesia’s National Healthcare Program Expected to Swing Back to Deficit by 2024*. <https://www.indonesia-investments.com/finance/financial-columns/indonesia-s-national-healthcare-program-expected-to-swing-back-to-deficit-by-2024/item9607>.

¹⁸ World Bank. 2022c. *Domestic General Government Health Expenditure Per Capita (current US\$) - Indonesia*. <https://data.worldbank.org/indicator/SH.XPD.GHED.PC.CD?locations=ID>.

¹⁹ Mostly used for funding the salaries of public health personnel.

²⁰ Indonesia has an extensive primary healthcare (PHC) network, which is expected to provide a standardized set of essential services across the country. It is composed of community health centers (*Puskesmas*) that provide 55 essential health and nutrition services at the subdistrict level, complemented by auxiliary health posts (*Pustu*) and integrated service posts (*Posyandu*) that provide a defined set of basic services including health promotion at the village and hamlet levels, respectively.



at least one *Puskesmas* (community health center) that meets minimum clinical standards for service readiness.²¹ Out of 7,230 subdistricts, 171 lack at least one service-ready *Puskesmas*; 90 percent are in two eastern provinces: Papua and West Papua.²² Eastern Indonesia has the lowest percentage of *Puskesmas* with a complete health workforce, with Papua, West Papua, Maluku, and North Maluku having less than 20 percent of their *Puskesmas* fully staffed, with significant shortages also observed in western and northern provinces.²³ This disparity in access to quality care in turn contributes to widely varied life expectancies across provinces. In 2019, the difference in life expectancy for males between the highest-ranked (Bali) and lowest-ranked (Papua) provinces was 9.9 years. For females, the difference in life expectancy between the highest-ranked (North Kalimantan) and lowest-ranked (North Maluku) provinces was 13.7 years.²⁴ Access to appropriate quality of primary care will also, in the medium to long term, reduce the need for referral for complications that need to be attended at the referral level of care, and will considerably help reduce costs and improve outcomes.

8. Insufficient and unequal access to referral-level health services also persists across Indonesia, contributing to low health outcomes and high healthcare costs.²⁵ There is widespread lack of access to referral-level hospital services. Currently, the facilities with the capability to deliver standardized services for KJSU and KIA are still concentrated on the island of Java.²⁶ This has led to delayed detection, faster disease progression, lower survival rates, and losses in quality of life and productivity elsewhere. Latest figures from the MoH indicate that 2.5 out of every 1,000 Indonesians are at risk of having a stroke each year, with a 15 percent mortality rate. One in every 1,000 citizens risks a heart attack each year, with an 11 percent associated risk of dying. Despite these figures, patients must wait up to 12 months to receive crucial heart surgeries. This dire situation affects not only adults: nearly 50,000 Indonesian children have untreated congenital heart disease.²⁷ Additionally, over 70 percent of cancer cases were detected at later stages of disease progression.²⁸ In addition to the limited referral services in rural and remote areas, the quality of health services in these areas is still low, with limited diagnostic capacity and long waiting times for treatment. Remote and low-income regions, particularly in the east, therefore, face a double burden of not only lower access to referral-level care but also lower quality of care.

9. Indonesia's public health laboratory system requires strengthening to support pandemic prevention, preparedness, and response (PPR) and public health service delivery. Indonesia scored low on indicators that assess real-time surveillance on the latest Joint External Evaluation (JEE) report in 2017.²⁹ Although the JEE assessed that Indonesia is in principle able to detect, prevent, and respond to critical pandemic risks, the country does not possess a single coordinated health surveillance system. This critical gap undermines the country's early warning capacity and situational awareness of biological events that can lead to grave consequences for public health. This became clear during the COVID-19 pandemic, which the GoI struggled to contain in the early days due to limited capacity for public health surveillance and testing. Indonesia was one of the worst-hit countries globally, having reported 6.8 million confirmed COVID-19 cases and 161,918 COVID-19-related deaths as of August 26, 2023.³⁰ Key persisting gaps include spatial disparities in the distribution of laboratories and limited or out-of-date diagnostic tools in lower-income and remote areas, hampering a

²¹ A *Puskesmas* is considered service ready when it is fully staffed and equipped and has adequate access to essential utilities (electricity and, where necessary, internet connectivity) to deliver a standardized list of essential health services.

²² MoH. 2022b. *Partners Meeting on Strengthening Primary Health Care in Indonesia*.

²³ Defined by the MoH as having at least one of each of the following: (a) doctor or primary care physician, (b) dentist, (c) nurses, (d) midwife, (e) public health worker, (f) environmental sanitation worker, (g) laboratory technician, (h) nutritionist, and (i) pharmacy staff.

²⁴ Institute for Health Metrics and Evaluation. 2019. *Global Burden of Diseases (GBD) Study 2019*. <https://www.healthdata.org/gbd/gbd-2019-resources#:~:text=GBD%202019%20incorporates%20major%20data,of%20369%20diseases%20and%20injuries>.

²⁵ Hospitals are classified into two categories—specialized and general—based on their functions, services, and infrastructure, with general hospitals further subdivided into four classes based on their capabilities and expertise in providing specialized medical services. This is further complemented by three levels of accreditation—Madya, Utama, and Paripurna, from lowest to highest—based on the quality and safety of the healthcare services provided.

²⁶ Bappenas. 2023. List of Planned Priority External Loans or Greenbook (*Daftar Rencana Prioritas Pinjaman Luar Negeri, DRPPLN*).

²⁷ MoH. 2022c. *Development of Referral Network: Heart, Stroke, Cancer and Kidney Referral Hospital*. PowerPoint presented by MoH in October 2022.

²⁸ MoH. 2022d. *Dirjen Menganangkan Gerakan Bulan Deteksi Dini Penyakit Tidak Menular (Director General Launches the Movement for Early Detection of Non-Communicable Diseases)*. <http://p2p.kemkes.go.id/dirjen-menganangkan-gerakan-bulan-deteksi-dini-penyakit-tidak-menular/>.

²⁹ WHO. 2018a. *Joint External Evaluation of IHR Core Capacities of the Republic of Indonesia: Mission Report, November 20–24, 2017*. <https://apps.who.int/iris/handle/10665/272363>.

³⁰ MoH. 2023a. *Infeksi Emerging: COVID-19 Monitoring Data*. <https://infeksiemerging.kemkes.go.id/dashboard/covid-19>.



networked laboratory approach. Although there was a 140 percent increase in public health laboratory availability in Indonesia since the end of 2020, most of these laboratories are located on the island of Java.³¹

10. **The MoH engaged a consulting firm to conduct a detailed and comprehensive gap assessment in 2022, relying on the 2019 Health Facility Research (*Riset Fasilitas Kesehatan, Rifaskes*) data (annex 4), building upon the original analysis supported by the World Bank in 2019–20.** These cover facility-level data in all 514 district/city health offices,³² to identify the existing equipment gaps at the facility level. These data have subsequently been regularly updated with data from the facility-level reporting Application of Facilities, Infrastructure, and Medical Devices (*Aplikasi Sarana, Prasarana, dan Alat Kesehatan, ASPAK*³³), with the latest iteration stemming from June 2023. The gap assessment revealed that the total equipment needs for the public health system facility amount to IDR 59.681 trillion, equivalent to US\$3.98 billion (using the US dollar to Indonesian rupiah exchange rate of US\$1: IDR 15,000). Of this, the primary care facility needs amount to IDR 23.799 trillion (US\$1.59 billion), hospital care facility needs amount to IDR 27.038 trillion (US\$1.80 billion), and laboratory facility needs amount to IDR 8.844 trillion (US\$590 million). This amount will be sourced from foreign/external lending, building on investments for the 2022–2023 period from other sources, including the State Budget (*Anggaran Pendapatan dan Belanja Negara, APBN*), Special Physical Allocation Fund for the Health Sector (*Dana Alokasi Khusus Fisik Bidang Kesehatan, DAK Fisik*), and other Foreign Loan and/or Grant Sources (*Pinjaman dan/atau Hibah Luar Negeri, PHLN*).

11. **While there is a rapid growth in private healthcare and laboratory facilities, many private facilities remain unaccredited and do not cooperate with the Social Security Administrator for Health (*Badan Penyelenggara Jaminan Sosial – Kesehatan, BPJS-K*).** Latest available data from the MoH in 2021 show that private hospitals make up 63.4 percent of all hospitals in Indonesia—up from 52.0 percent in 2010. Private laboratories constitute only 12 percent³⁴ of all laboratory facilities but are rapidly growing due to the rise in health expenditure and increase in NCDs. Many Indonesians prefer to seek care at private facilities, citing shorter wait times, better service, and perceived higher quality of care.³⁵ However, the significant non-participation in JKN leads to higher OOP expenses and affects lower-income individuals disproportionately. Additionally, accreditation of facilities in the private sector remains low, with 84 percent of private laboratories and 20 percent of private hospitals not accredited.³⁶ Therefore, there is an urgent need to ensure affordable, equitable, and standardized care for all across the public healthcare system, as the safety and quality of hospitals in Indonesia have been shown to increase with accreditation.³⁷

12. **Against this backdrop, the MoH, based on the mandate of President of Indonesia, launched an ambitious Health System Transformation Agenda (HSTA) with the aim of establishing a well-structured public health system that integrates and standardizes all levels of public health facilities and laboratories.** To meet the HSTA’s ambition, outlined in the Regulation of the Minister of Health (*Peraturan Menteri Kesehatan, Permenkes*) Number 13, 2022, the MoH has allocated a sizeable portion (US\$5.96 billion) of the 2024 government health budget (US\$11.32 billion) for efforts toward HSTA acceleration. This ambitious agenda, with the aim of establishing a “healthy, productive, independent, and just people,” centers around six pillars: (a) primary care transformation, (b) secondary care transformation, (c) health resilience transformation, (d) health financing and system transformation, (e) health workforce transformation, and (f) health technology transformation. Underpinned by the directions and policies of the health development strategy in the GoI’s National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah, RPJMN*) for 2020–2024, the focus is on establishing a well-structured public health system that integrates and standardizes all levels of public health facilities

³¹ MoH. 2023b. *Strengthening Public Health Laboratories (Labkesmas) in Indonesia (InPULS) Foreign Loan Readiness Criteria*.

³² MoH. 2019a. *Riset Fasilitas Kesehatan (RIFASKES) Tahun 2019*. <https://labmandat.litbang.kemkes.go.id/riset-badan-litbangkes/menu-risikesnas/menu-rifaskes/432-rifas-2019>.

³³ MoH. 2023c. *Aplikasi Sarana, Prasarana, dan Alat Kesehatan*. <https://aspak.kemkes.go.id/aplikasi/>.

³⁴ MoH. 2021a. *Profil Kesehatan Indonesia 2021 (Indonesia Health Profile 2021)*. <https://www.kemkes.go.id/id/profil-kesehatan-indonesia-2021>.

³⁵ Faculty of Public Health, Diponegoro University. 2022. *Utilization of Primary Health Care Facilities in Urban Areas Based on Economic Status and Ownership of Health Insurance*.

³⁶ Faculty of Public Health, Diponegoro University 2022.

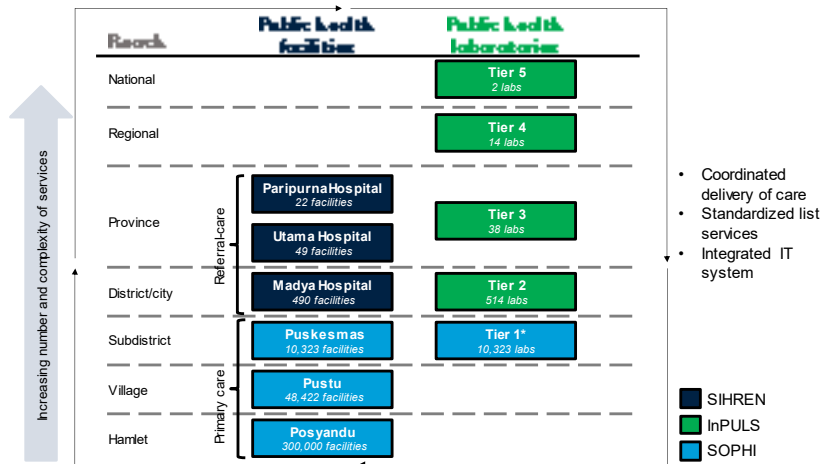
³⁷ Medika Husada Journal. 2023. *The Impact of Accreditation on the Improvement of the Quality of Health Services at Hospitals*.



and laboratories (figure 1). Additionally, the agenda places significant emphasis on standardization to ensure that all public health facilities and laboratories adhere to common guidelines, protocols, and quality standards.

13. **Health providers in Indonesia are burdened not only by over 400 different health information systems developed by various national and regional governments but also by significant overlaps in the data collected.**³⁸ Health workers often spend hours recording duplicate data instead of delivering quality care. Moreover, especially at the *Posyandu* level, there are significant gaps in the availability of equipment for data collection, further slowing down workflows.³⁹ This reduces the quality and timeliness of service delivery and prevents the GoI from making effective policies based on real-time evidence and data. To address these shortcomings, the GoI adopted a dedicated One Data Policy in 2019, as well as created a Digital Transformation Office (DTO) within the MoH, to establish an integrated, open government. One key achievement has been the launch of the *SATUSEHAT* ('One Health') platform by the MoH in July 2022, which aims to integrate patient health data from hospitals, clinics, laboratories, pharmacies, and, in the future, potentially even data from BPJS-K in a standardized, electronic format. Initially only implemented in a limited set of priority regions located in Java and Bali, the MoH has since begun expanding the rollout nationwide, with the aim of integrating 30,000 health facilities across Indonesia by the end of 2023.

Figure 1. Structure of Public Health Facilities and Laboratories in the HSTA⁴⁰



*Tier 1 lab facilities are part of the Puskesmas and therefore included under the SOPHI project

Note: InPULS= Indonesia - Public Laboratory System Strengthening; IT = Information technology; SIHREN = Strengthening Indonesia's Healthcare Referral Network; SOPHI = Strengthening of Primary Healthcare in Indonesia.

C. Relevance to Higher Level Objectives

14. **The proposed Project is closely aligned with the World Bank Group's Indonesia Country Partnership Framework (CPF) for FY2021–2025 (Report No. 157221-ID),⁴¹ and the World Bank's Evolution Roadmap seeking to support long-term development at greater scale in middle-income countries and to leverage partnerships for increased development finance.**⁴² The proposed Project resonates strongly with *CPF Objective 3.2 on strengthening the quality and equity in nutrition and health*. Further, the Project responds closely to the evolving World Bank mission and vision as set out in the Evolution Roadmap, including, effectively engaging with other multilateral development banks (MDBs), providing financial and analytical support to middle-income countries for reducing poverty and addressing global challenges, such as climate

³⁸ MoH. 2021b. *Blueprint of Digital Health Transformation Strategy 2024*. <https://oss2.dto.kemkes.go.id/artikel-web-dto/ENG-Blueprint-for-Digital-Health-Transformation-Strategy-Indonesia%202024.pdf>.

³⁹ Interviews with health and volunteer workers in several *Puskesmas* and *Posyandu* in Surabaya and Solo.

⁴⁰ MoH. 2023d. *SIHREN, SOPHI and INPULS PROJECT PREPARATION PROGRESS*. PowerPoint Presented by the Bureau of Planning and Budgeting, MoH, during the HSS Joint-Preparation Mission, which was held in August 2023.

⁴¹ World Bank. 2021a. *World Bank - Indonesia 2021–2025 Country Partnership Framework (CPF)*. <https://www.worldbank.org/en/country/indonesia/brief/indonesia-country-partnership-framework-2021-2025>.

⁴² World Bank. 2023a. *World Bank Group Statement on Evolution Roadmap*. <https://www.worldbank.org/en/news/statement/2023/01/13/world-bank-group-statement-on-evolution-roadmap>.



change and pandemic preparedness resilience; and leveraging partnerships and engaging the private sector. This is also aligned with the World Bank's Global Challenge Program, part of the new One World Bank playbook following the 2023 WB-IMF Annual Meetings, which will be launched shortly, based on country need, greater speed to deliver, scale, and impact, specifically with the thematic focus on *Enhanced Health Emergency Prevention, Preparedness and Response*⁴³ through strengthening health systems at country level. Moreover, the explicit attention to gender and climate change matches the CPF's objectives, and is aligned with the Green, Resilient and Inclusive Development (GRID) approach envisioned by the CPF. Many of the identified health sector challenges are compounded by gender disparities—both for males and females. Closing gender gaps, which were deepened during the COVID-19 pandemic, is therefore a central consideration of the Project. The Project is a high priority for the GoI, considering its ambition to meet the national development goals, as stated in RPJMN 2020–2024.

15. **The Project also seeks to reduce the potential health-related losses in alignment with health sector infrastructure objectives of Indonesia's National Adaptation Plan⁴⁴ (NAP), aiming to increase health facility capacity, enhance compliance with infrastructure health standards, improve data and information systems, and ensure Paris Alignment.** This will be achieved by ensuring robust energy efficiency and disaster resilience of the equipment, according to strict Energy Star, International Electrotechnical Commission (IEC) energy efficiency, or similar relevant energy efficiency standards, opting for the highest energy efficiency rating or labeling that allows to perform quality medical and laboratory services adequately. This ensures full alignment not only with Criteria 9.5 of the Multilateral Development Bank Mitigation Finance Methodology⁴⁵ but also with Indonesia's 2022 Enhanced Nationally Determined Contribution (ENDC)⁴⁶ and the Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR) 2050.⁴⁷ The introduction of strict energy efficiency standards for equipment is consistent with the ENDC's mitigation goals, specifically in improving energy efficiency of equipment as part of the overall energy efficiency measures exceeding mandatory minimum energy performance standards set in Indonesia. This is also consistent with the LTS-LCCR, in which implementation of energy efficiency measures is identified as one of four pillars of the energy sector in achieving its long-term vision. On adaptation, the ENDC also has an explicit health focus by recognizing the need for improved basic health service provision at the community level as part of its objective to ensure archipelagic climate resilience by 2030. The health sector has been identified as a priority field to address the drivers of vulnerability to climate change impacts and ensure enhanced stakeholder participation and improved community adaptation capacity. In particular, the NAP identifies increasing the capacity of health facilities as an important intervention under health sector infrastructure, which this operation will directly support. Implementation of telemedicine-enabled care, as also highlighted in the Indonesia Country Climate and Development Report (CCDR),⁴⁸ demonstrates how telemedicine can ensure continued service delivery during climate-related disasters, while bridging human resource gaps, tailored to climate-sensitive disease prevention and diagnosis.

⁴³ World Bank. 2023b. *Ending Poverty on a Livable Planet: Report to Governors on World Bank Evolution*. DC2023-0004, World Bank.

<https://www.devcommittee.org/content/dam/sites/devcommittee/doc/documents/2023/Final%20Updated%20Evolution%20Paper%20DC2023-0003.pdf>.

⁴⁴ Kementerian PPN/Bappenas. 2019. *National Adaptation Plan - Executive Summary*. <https://lcdi-indonesia.id/wp-content/uploads/2020/05/Executive-Summary-NAP.pdf>.

⁴⁵ World Bank et al. 2021. *Common Principles for Climate Mitigation Finance Tracking*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/514141645722484314/common-principles-for-climate-mitigation-finance-tracking>.

⁴⁶ Republic of Indonesia. 2022. *Enhanced Nationally Determined Contribution: Republic of Indonesia*. https://unfccc.int/sites/default/files/NDC/2022-09/23.09.2022_Enhanced%20NDC%20Indonesia.pdf.

⁴⁷ Republic of Indonesia. 2021. *Long-Term Strategy for Low Carbon and Climate Resilience 2050*. https://unfccc.int/sites/default/files/resource/Indonesia_LTS-LCCR_2021.pdf.

⁴⁸ World Bank. 2023c. *Indonesia Country Climate and Development Report*. <https://openknowledge.worldbank.org/entities/publication/c6b1d872-f487-4579-be3a-3cb6ba55dffa>



II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

16. The proposed Project Development Objective is to increase the availability of functional equipment in public health facilities and improve the utilization of public health services across Indonesia.

17. The proposed Project and its PDO respond to the challenges experienced across Indonesia's public health and laboratory system. In particular, it responds to the observation that public health and laboratory facilities across all levels of the public healthcare system and across Indonesia currently face significant gaps in the availability of critical equipment, without the necessary operational skills and maintenance capacity for this equipment, which is also a key driver of the severe underutilization of these facilities.

PDO Level Indicators

18. The PDO indicators respond to each outcome area of the proposed PDO. These are also closely aligned with the Results Framework being used internally by the Government of Indonesia.

I. Increased availability

- (a) Percentage of *Puskesmas* (including Labkesmas Tier 1) for which equipment meets 80 percent of minimum requirements (percent)
- (b) Number of districts in Indonesia with at least 1 Madya-level referral hospital for KJSU (number).

II. Functionality of equipment

- (a) Number of instances in the last 6 months where equipment downtime exceeded the benchmarks set under the Project contracts.

III. Improved utilization of health facilities:

- (a) Number of annual outpatient visits, disaggregated by gender.
- (b) Number of annual laboratory examinations for ILI-SARI diagnostics (Labkesmas Tier 1–5).

B. Project Description and Components

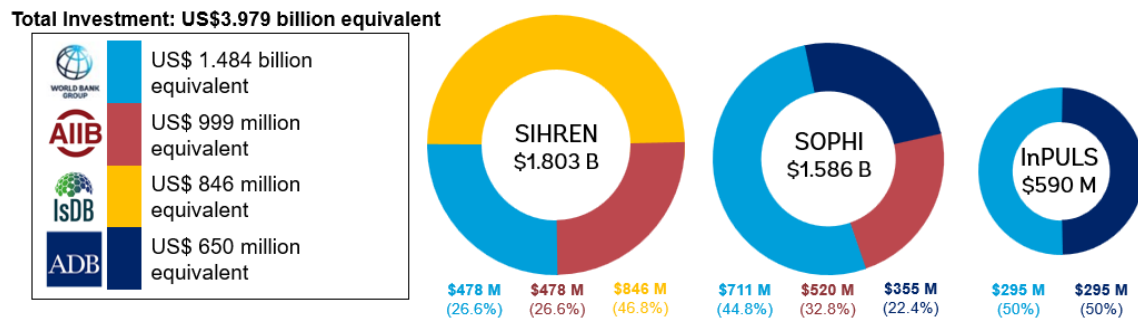
19. **The proposed Project is designed to support Indonesia in addressing critical supply-side gaps in medical and laboratory equipment in public health facilities nationwide.** The Project is a coordinated investment in partnership with four co-financing MDBs, as requested by the GoI, to enable the large-scale transformation of Indonesia's health system rooted in the principles of resilience and responsiveness in the wake of the COVID-19 pandemic and closely aligned with the World Bank's Evolution Roadmap (box 1).

20. **Given the pressing equipment needs of the Indonesian public health facilities, the proposed Project seeks to contribute to the provision of equipment to all levels of public health facilities across Indonesia to ensure critical service delivery gaps are filled, aligned with both the Indonesian HSTA and RPJMN for 2020–2024.** The MoH envisages three components for this work: (a) a primary care component seeking to close equipment gaps at the three levels of primary care facilities in Indonesia: *Posyandu*, *Pustu*, and *Puskesmas*, including the Tier 1 public health laboratories in the *Puskesmas*—this component is included in the national medium-term and annual planning documents (Blue and Green Books) as the 'Strengthening of Primary Healthcare in Indonesia' (SOPHI) component; (b) a referral network component seeking to close equipment gaps at the three levels of hospital care in Indonesia: Madya-, Utama-, and Paripurna-level hospitals—this component is included in the Blue and Green Books as the 'Strengthening Indonesia's Healthcare Referral Network' (SIHREN) component; and (c) a public health laboratory component seeking to close equipment gaps to strengthen a networked approach across the Tier 2, 3, 4, and 5 laboratory facilities in Indonesia—this component is included in the Blue and Green Books as the 'Indonesia - Public Laboratory System Strengthening' (InPULS) component.



21. The MoH has opted for a partnership with four co-financing MDBs to deliver the Project, with the World Bank as coordinator. The partnership of four MDBs—the World Bank, Asian Infrastructure Investment Bank (AIIB), Asian Development Bank (ADB), and Islamic Development Bank (IsDB)—will jointly support the Government to deliver on this transformative operation. The Project amount and the respective share of financing have been determined by the MoH, with the financing share allocated to the World Bank through the Project standing at US\$1.484 billion equivalent. AIIB’s share stands at US\$999 million equivalent, with IsDB contributing US\$846 million equivalent and ADB contributing US\$650 million equivalent. The percentage shares and joint and parallel co-financing arrangements are captured in figure 2.

Figure 2. Co-Financing Arrangements among MDBs for SIHREN, SOPHI, and InPULS Project Components



22. The World Bank has spent considerable efforts leading the MDB coordination, which continues throughout project preparation and implementation (details in annex 1 and box 1). Given the Gol’s request for a coordinated approach and effective communication among the MDBs, the MDBs have committed to align on core MDB processes and corporate requirements in the following areas: procurement, financial management (FM), environmental and social framework (ESF), climate change, gender, and citizen engagement. The World Bank and AIIB alignment is governed by the existing Co-financing Framework Agreement (co-signed on May 15, 2021), allowing AIIB to use the World Bank’s procurement policy and regulations. In the case of ADB, the existing Procurement Framework Agreement (co-signed on December 3, 2018) and its subordinate Project Implementation Agreement (PIA) are applied, allowing ADB the use of alternative procurement arrangements (APAs). Based on these existing agreements, both the MDBs undertaking joint co-financing with the World Bank have agreed to rely on the World Bank’s procurement policy and procedures and the World Bank’s monitoring and implementation support. In addition, ADB and the World Bank intend to sign an agreement outlining their alignment in terms of FM, disbursement, and ESF. This harmonization is particularly important considering the significant demand on the MoH’s capacity for this Project, which will also require strategic and coordinated technical assistance (TA) from the co-financing MDBs throughout project preparation and implementation. Despite the parallel financing arrangements, IsDB has committed to seek harmonization with the co-financing arrangements where possible and is actively involved in the MDB coordination efforts.

Box 1. Alignment with Evolution Roadmap for Partnerships, Scaling Up, and Private Sector Engagement

The Project aligns closely with the World Bank’s Evolution Roadmap, which strives for enhanced partnerships and solutions at scale in response to demand from middle-income countries. The recent report ‘Strengthening MDBs - Triple Agenda (G20 IEG Report on June 2023)’ also outlines the need of MDBs to (a) commit to coordinated efforts to strengthen and engage in the country’s transformational plan linking sustainable development agenda such as private sector engagement and climate change and (b) advance harmonization and mutual recognition of processes concerning fiduciary, procurement, safeguards, and so on toward single rules. The Health Systems Strengthening (HSS) Project is a pioneer project with full commitments by four co-financing MDBs on playing a key role to support the needed reforms and resources in client countries. Recent joint co-financing experience between AIIB and World Bank on COVID-19 support to Indonesia created an opportunity to repeat it on a larger scale under the HSS. The World Bank has been assigned by the MoH to lead this Project jointly with other co-financing MDBs, with the ambition of enabling private sector solutions and full commitment to align on core MDB processes and corporate requirements, which is particularly important considering the significant demand on the MoH’s capacity for this Project. The Project is expected to enable Maximizing Finance for Development (MFD) by building strong capacity within the MoH to undertake a large-scale, performance-based contracting model with a much-



deepened scope than hitherto undertaken in Indonesia. It pioneers and leverages private sector solutions at scale to create a model that makes it viable and attractive for private sector entities to bundle equipment sale with decentralized equipment maintenance and repair services over the useful life of the medical and laboratory equipment. It will build a network of in-country biomedical engineering capacity with engineers trained and managed by private sector entities and deployed under performance-based contracts to serve public health facilities and laboratories across Indonesia. The Project will also support the MoH to develop digital information systems that are capable of monitoring equipment functionality. Thus, the design addresses the long-standing bottleneck of the non-availability of functional medical equipment in Indonesia's public health facilities in a sustainable and cost-effective manner.

23. **The Project financed by the Loan consists of three parts, as reflected in the issued *Daftar Kegiatan* (letter No. B-971/D.8/PD.01/11/2023) by Minister of National Development Planning/Head of Bappenas, dated November 3, 2023:** (i) Strengthening of Primary Healthcare in Indonesia (SOPHI); (ii) Strengthening Indonesia's Healthcare Referral Network (SIHREN); and (iii) Indonesia-Public Laboratory System Strengthening (InPULS).

24. The project's design comprises the following four mutually reinforcing components:

- (a) **Component 1: Procurement, installation, operation, and maintenance of equipment to primary care facilities across Indonesia, 'SOPHI' component (IBRD financing US\$615.2 million equivalent).** Through this component, the Project seeks to procure energy-efficient equipment and tools for all *Posyandu*, *Pustu*, and *Puskesmas*, as well as Tier 1 public health laboratories across Indonesia (numbers as per figure 1). This includes the delivery and installation of this equipment and, where relevant, extended operation and maintenance service agreements and knowledge transfer to facility staff, as well as consumables and upgrades applying a total cost of ownership (TCO) approach. Where applicable, equipment will be foreseen with telemedicine functionalities, to enable the possible future rollout of an expanded digital health system—even though building such an expanded system is beyond the scope of the Project. Comprehensive equipment and services contracts with vendors are seen as the primary modality under this component, though some non-consulting services such as those related to human resource capacity development and equipment or consumable deliveries could be beyond the scope of the contracts of the equipment vendors and will be procured separately under this component.
- (b) **Component 2: Procurement, installation, operation, and maintenance of equipment to referral hospital facilities across Indonesia, 'SIHREN' component (IBRD financing US\$455.0 million equivalent).** Through this component, the Project seeks to procure energy-efficient and, where applicable, telemedicine-enabled equipment for all Madya, Utama, and Paripurna hospitals across Indonesia (numbers as per figure 1). This includes the delivery and installation of this equipment and, where relevant, extended operation and maintenance service agreements and knowledge transfer to facility staff, as well as consumables and upgrades applying a TCO approach. A focus on specialized KJSU and KIA equipment in this component ensures the closing of gender gaps. This component is financed in coordination with IsDB's parallel financing of the residual subset of hospital-level equipment. Like component 1, comprehensive equipment and services contracts as well as some contracts for non-consulting services will be procured under this component.
- (c) **Component 3: Procurement, installation, operation, and maintenance of equipment to tier 2, 3, 4, and 5 public health laboratory facilities across Indonesia, 'InPULS' component (IBRD financing US\$275.4 million equivalent).** Through this component, the Project seeks to procure energy-efficient and, where applicable, telemedicine-enabled equipment for all Tier 2, 3, 4, and 5 public health laboratories (*laboratorium kesehatan masyarakat* or *Labkesmas*) across Indonesia (numbers as per figure 1). This includes the delivery and installation of this equipment and, where relevant, extended operation and maintenance service agreements and knowledge transfer to facility staff, as well as consumables and upgrades applying a TCO approach. Like components 1 and 2, comprehensive equipment and services contracts as well as some contracts for non-consulting services will also be procured under this component.
- (d) **Component 4: Project Management, Administration, Digitization and Training across the SOPHI, SIHREN, and InPULS components (IBRD financing US\$138.4 million equivalent).** This component covers activities related to project management administration and soft activities for a Project Management Unit (PMU) for three components,



as well as project management and administration costs for the establishment and operationalization of Central Project Management Unit (CPMU) and Central Procurement Unit (CPU). This Component 4 consists of three sub-components corresponding to each of three components:

- Sub-component 4.1: Project Management, Administration, Digitization and Training for SOPHI (US\$95.6 million equivalent)
- Sub-component 4.2: Project Management, Administration, Digitization and Training for SIHREN (US\$23.4 million equivalent)
- Sub-component 4.3: Project Management, Administration, Digitization and Training for InPULS (US\$19.4 million equivalent)

Support under each of the above three sub-components include, among others, the provision of TA and incremental operating costs for (a) IT support teams; (b) project management and administration; (c) monitoring and evaluation (M&E) activities; (d) FM and audit; (e) procurement; (f) environmental and social risk management; (g) interventions designed to promote gender inclusion and equity in health service availability, accessibility, and quality; (h) development of integrated data systems for facilities readiness assessment and managing inventories; (i) development of data systems and monitoring of health facilities readiness and equipment functionality; and (j) essential human resources for health (HRH) trainings. The specific fund allocation for the three PMUs, CPMU and CPU will be detailed in the Project Operations Manual (POM).

25. **A fourfold set of readiness criteria is proposed to ensure that the health facilities are adequately prepared to receive and sustainably operate and maintain the new medical devices provided by the Project:**

- Prior availability of equipment in the facility.** This criterion ensures that the results of the gap assessment of health facilities are verified, to confirm the equipment needs of each public health and laboratory facility.
- Human resource capacity.** This criterion ensures that the health facility has the necessary personnel who are trained and skilled to operate and maintain the medical devices and deliver services.
- Infrastructure and utility access.** This criterion ensures that the health facility has the infrastructure to accommodate the equipment and operate it sustainably and has access to reliable utilities as required by the type of equipment and appropriate for the level of public health and laboratory facility to support its operation.
- Adherence to local and national regulations on medical waste.** This criterion ensures that the health facility is compliant with local and national regulations on the safe management and disposal of medical waste.

26. **Annex 4 describes how these readiness criteria are designed and will be implemented across project preparation and implementation and recorded and monitored through the expansion and enhancement of ASPAK to all public health facilities in Indonesia.** The GoI, through the MoH, has committed to fulfilling the human resource, infrastructure, utility availability, and waste management requirements, to be funded from APBN and PHLN. An increase in health service utilization is expected due to the successful installment and functioning of procured equipment in facilities from the latter half of the Project period and will be tracked accordingly as per the Project's Results Framework.

27. **Considerations related to climate change mitigation and adaptation and innovation cut across the SOPHI, SIHREN, and InPULS components (details in table 8.1).** The equipment will be energy-efficient by applying Energy Star, IEC, or similar relevant energy efficiency standards for medical equipment exceeding mandatory minimum energy performance standards set in Indonesia, to be included in the equipment specifications. This is critical to ensure a low greenhouse gas emission pathway for the Indonesian public health sector.

28. **The Project seeks to close the equipment gaps in all public health and laboratory facilities across Indonesia, with box 2 illustrating the wide-ranging procurement innovations the project introduces to the Indonesian public health sector.** This is aimed to mitigate any risk of remote regions, and ultimately citizens, especially in rural, remote communities, missing out, ensuring significant equity in the Project and the closing of spatial and socioeconomic gaps in health service availability, accessibility, and quality. These considerations of spatial equity are captured in box 3. Single-



phase procurement without slicing, where feasible, also reduces the Project’s risk to changes in political priorities. The World Bank’s research during the COVID-19 pandemic has also shown that procurement in larger quantities and procurement bundling are essential in lowering the cost of medical equipment, pharmaceuticals, and medical supplies, with cost savings of well over 10 percent seen in Latin America with a sound procurement strategy.⁴⁹

Box 2. HSS Procurement Innovations

The HSS Project introduces several procurement innovations at an unprecedented scale. Overall, procurement is informed by a TCO approach and considers effectiveness, efficiency, equity, and sustainability dimensions. Over the last two decades, several lessons emerged from the global public and private procurement of medical equipment, which this Project builds upon. Multifaceted challenges in keeping equipment functional; prolonged delays in repair and maintenance; lack of trained personnel beyond the larger urban centers; risk of exacerbating inequity; and high costs of proprietary, expensive consumables are far too common. The Project leverages its scale and attractiveness to vendors by bundling responsibilities for transportation, installation, repairs, maintenance, and operational skills transfer to health workers by the vendor; ensuring up-front and predictable pricing for multi-staged delivery; linking payments to functionality of equipment; and requiring a commitment to maintenance and repairs over five years (where applicable), consisting of a plan for two years of uptime-based payments for the equipment followed by three years of extended warranty, which includes the full service package of operational support, maintenance and repairs, and consumables and upgrades as relevant. The cost of maintenance and operational skills transfer by the vendor to health workers upon installation of the equipment at the facility will be included in the bidding documents where feasible. Periodical payments are planned to be linked to timely maintenance and under the conditionality of specific uptime targets. The transfer of operational skills training to health workers also benefits the public sector well beyond the project implementation period. The need to maximize overall value for money (VfM) for the Government and ensure optimum functionality of the equipment are core principles. Recommendations from a multi-country analysis and pilot testing of a VfM framework suggest a preference for an all-inclusive business model for service delivery, over capital purchase of equipment.

A single-phase procurement is expected to continue being attractive for vendors and bring better competition and more competitive pricing by combining locations with varying levels of geographical challenges. It also ensures economies of scale for vendors, especially to provide decentralized operations and maintenance services across Indonesia, which will be more cost-effective compared to fragmented supplies of different types of equipment by multiple vendors. Centralized, single-phase procurement under the Project, where feasible, for 561 hospitals, 10,338 *Puskesmas*, 50,543 *Pustu*, 300,000 *Posyandu*, 231 Tier 2 laboratories, 38 Tier 3 laboratories, 14 Tier 4 laboratories, and 2 Tier 5 laboratories is thereby projected to deliver considerable cost savings for the GoI and increase the appetite for vendors to serve remote areas especially for operations and maintenance services bundled within the contracts. It will help foster a culture of strong vendor presence and develop domestic engineering capacity for maintenance and repairs of sophisticated equipment in Indonesia. The rollout of the delivery of this equipment is planned to be staggered based on facility readiness. Direct delivery to the facility will also reduce the need for storage and ensures that any safeguards and security risks to equipment between point of origin and destination is minimized. The bidding documents will specify the service-level agreements, including the required minimum uptime share and maximum turnaround time for repairs for each equipment type, with differentiation by region recognizing that the geography of Indonesia might require some differentiation in the turnaround time for remote areas of the country.

The Project is also the first in Indonesia to use hands-on expanded implementation support (HEIS) for procurement, which has allowed the World Bank to successfully mobilize global technical expertise and provide immediate specialized procurement support to the MoH’s project preparation and implementation. Thorough and rigorous preparation of the PPSD, which was based on the findings from multiple market sounding activities including vendor conferences, informed the PP detailing the procurement methods and market approaches. Probity assurance providers, both government officials and international experts funded by the World Bank, are also being engaged to increase the transparency of the procurement process and enhance vendor confidence in the credibility of the process.

Advance procurement modalities are being pursued in parallel to the project preparation process to meet the ambitious timeline of a December 2023 World Bank Board approval and the signing of vendor contracts in early 2024. The Project aims to keep equipment in a functional status by ensuring continuous maintenance beyond the Project period and foster a culture of strong

⁴⁹ FAZEKAS, Mihály, BORGES DE OLIVEIRA, Alexandre, and REGÖS, Nóra. 2021. *Lowering Prices of Pharmaceuticals, Medical Supplies, and Equipment - Insights from Big Data for Better Procurement Strategies in Latin America*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/110791622827821491/lowering-prices-of-pharmaceuticals-medical-supplies-and-equipment-insights-from-big-data-for-better-procurement-strategies-in-latin-america>.



vendor presence and domestic engineering capacity for maintenance and repairs of sophisticated equipment in Indonesia. The World Bank team also coordinated with the International Finance Corporation (IFC), tapping into the knowledge and experience to leverage its unique expertise and experience with the private sector, including for the process of market analysis.

C. Project Beneficiaries

29. **The primary beneficiaries are the 273.8 million Indonesians, who will directly benefit from improved access to quality public health and laboratory services from the grassroots village level up to the highly specialized national-level health facilities.** This Project particularly benefits 43 percent of the population living in rural areas with significantly poorer health service readiness, access, and quality.⁵⁰ The second group of primary beneficiaries are the public healthcare workers, who will work in better maintained and operated facilities to deliver essential care, while also benefitting from operational and technical training to use the delivered equipment safely and sustainably.

D. Results Chain

30. **The results chain (figure 3) for the Project considers a comprehensive approach to improving health outcomes for all Indonesians through the increased availability of functional public health and laboratory facilities with improved equity in distribution of equipment and HRH, which is expected to lead to increased and more equitable utilization of these facilities by the public.** Additionally, the Project aims to (a) improve the input, interoperability, and use of health information systems across facilities and (b) conduct targeted training sessions and capacity-building initiatives to empower healthcare professionals in utilizing the new medical equipment effectively. The expected intermediary outcomes of these activities are the supply-side readiness of public health and public laboratory systems and a more efficient healthcare system through improved health surveillance and diagnostic systems.

E. Rationale for Bank Involvement and Role of Partners

31. **The World Bank has a long, proven track record of supporting the GoI in its reform agenda for Indonesia's health sector through analytics and operations, which have also informed the design of the proposed Project.** The GoI's reform agenda reflected in the six pillars of the HSTA are fully in line with the recommendations from the comprehensive analytical knowledge base on supply-side readiness provided by previous World Bank analytical work. The analytics identified capacity gaps of healthcare facilities to respond to the needs for the epidemiological transition, growing needs to diagnose and treat NCDs, and the increased demand due to SHI coverage. These studies also highlighted that gaps in supply-side readiness to deliver basic health services at different levels of care persist despite some improvements over the years. The recommendations from these analytics also focused on ensuring adequacy of financial resources for health and strengthening the governance within the sector in a decentralized context.

32. **The Project is an important complement to the existing World Bank Health, Nutrition, and Population (HNP) portfolio in Indonesia (annex 3 for details), providing the necessary infrastructure investments to fully realize improvements in the Indonesian health system.** The HNP portfolio aims at achieving results across primary care governance, quality, and information systems, focusing on the Indonesia - Supporting Primary Health Care Reform (I-SPHERE, US\$150 million, Program for Results [PforR]) Program; improved pandemic response and vaccination rollout focus of the COVID-19 Emergency Response PforR (US\$750 million); results focus on service quality and provider payment reforms under the JKN Reforms and Results PforR (US\$400 million); improved coordination and funding flow across sectors and levels of government to reduce stunting through the Investing in Nutrition and Early Years PforR Phases 1 and 2 (INEY, US\$400 million and INEY 2, US\$600 million); improved availability of HRH (Indonesia UHC Development Policy Loan [DPL], US\$1 billion); and development of health systems tools to strengthen national TB response PforR (US\$300 million). Together these efforts aim to achieve impact across a wide range of critical health sector reforms that contribute to all pillars of the HSTA, as depicted in figure 4.

⁵⁰ World Bank. 2021b. *Rural Population (% of total population) - Indonesia*. <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=ID>.



Box 3. Equity Dimensions

The Project design integrates multiple considerations to significantly enhance spatial equity and the closing of gaps in health service availability, accessibility, and quality, with a particular focus on the lagging regions of Indonesia. The starting point for the project design is the assessment of equipment gaps in health facilities conducted by the MoH in 2022, compared to national benchmarks, and the required investments to fill in equipment gaps that help equalize service readiness across all levels of public health facilities. Thus the Project, by design, addresses the need for equipment in areas that are currently disadvantaged in terms of availability, access to, and quality of care, compared to the locations where the subnational governments (SNGs) had already invested adequately and the benchmark equipment needs were already fulfilled.

Further, as detailed in box 2, the project design features make it remunerative for vendors to offer installation and maintenance services nationwide, including in remote and difficult areas, by offering very large quantities and bundling them with the more attractive locations. Using ‘staggered delivery’ approaches gives additional time to disadvantaged facilities to meet readiness criteria without missing out on the chances of being included in the procurement process. The differentiated application of readiness criteria, depending on the complexity of equipment, also allows early receipt of primary care equipment at facilities in lagging regions.

The appointment of focal points in the CPMU and PMUs further ensures added attention to the needs of lagging regions— called ‘DTPK’ (Daerah Tertinggal, Perbatasan, dan Kepulauan, or Disadvantaged Areas, Borders and Islands) in Indonesia. These focal points support facilities in remote areas to meet the readiness criteria, providing hands-on guidance to these lagging districts in planning for and implementing activities to meet the readiness criteria; helping monitor the status; and coordinating the timely mobilization of additional stakeholders where necessary, through their dedicated support and attention.

By enabling telemedicine capability in the procured equipment, the Project also supports continued health service delivery in remote areas and during climate-related or other disasters. Improved service readiness at all levels is expected to promote equity in access to healthcare services and reduce the disproportionate financial burden and impact on health outcomes on poor households, as detailed in the economic analysis for the Project (see Annex 5 for details on the economic analysis).

33. **The UHC DPL is centered around the recently approved Health Omnibus Law and supports major policy reforms in HRH.** The operation supports important policy reforms that (a) address entry barriers for domestic and foreign-trained medical doctors, (b) enable increased production capacity and deployment for specialist doctors through hospital-based residency programs, and (c) improve health system resilience through the establishment of a healthcare worker reserve. These policy reforms are deemed critical to ensure adequate human resources for the efficient utilization of medical and laboratory equipment financed under this Project.

34. **Additionally, analytical and knowledge work are conducted through two Programmatic Advisory Services and Analytics that support all pillars of the HSTA.** The Project supports the necessary health infrastructure investments that will complement this portfolio. Further, the Project will be supplemented by recipient-executed TA from the newly established programmatic stand-alone Health Transformation Multi-Donor Trust Fund (MDTF), which explicitly aims to contribute to and be a key enabler of the HSTA, including this project.

35. **The World Bank’s proven convening and coordination ability to organize financial contributions from development partners for health projects led the MoH to request the World Bank to be the lead coordinator among the co-financing MDBs.** The World Bank recently played a similar coordination role in mobilizing resources from development partners for the COVID-19 Emergency Response PforR, combining US\$750 million in World Bank financing with contributions from AIIB (US\$750 million), Germany’s Reconstruction Credit Institute (*Kreditanstalt für Wiederaufbau*, KfW) financing for EUR 200 million, and grant from the Australian Department of Foreign Affairs and Trade (DFAT) for US\$9.9 million.

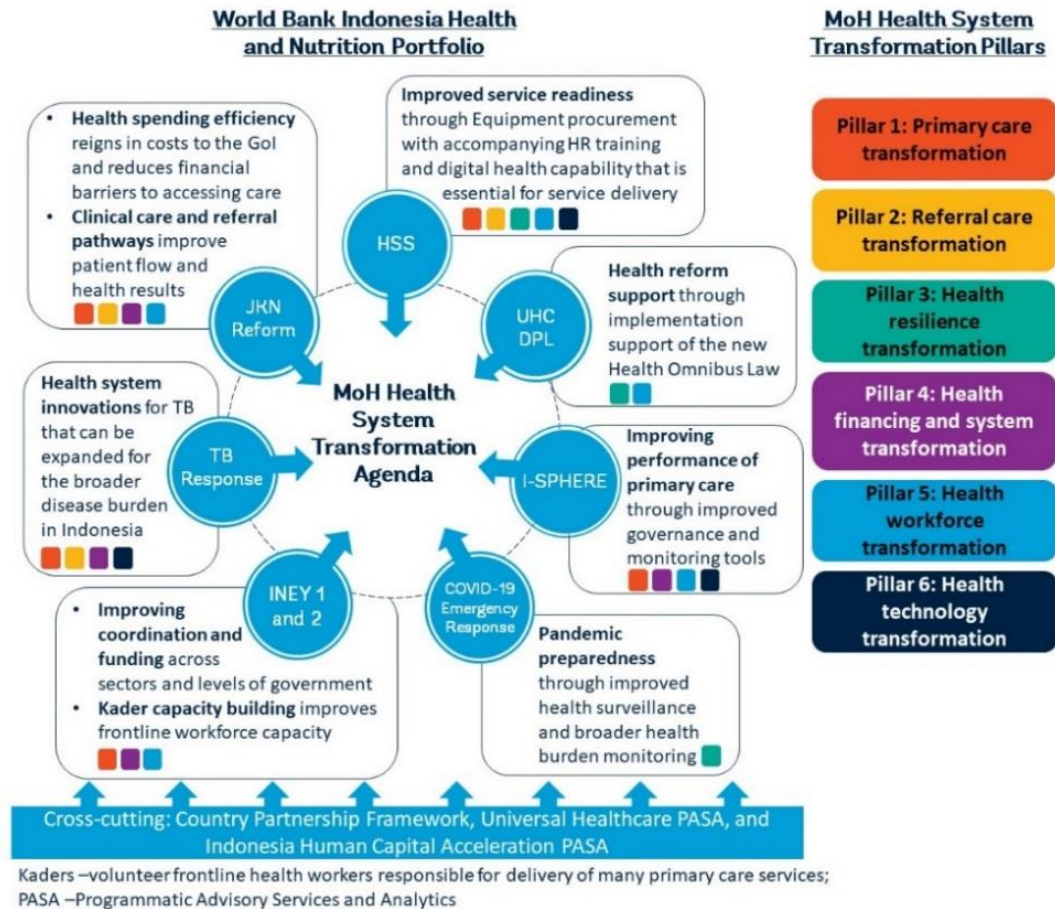
F. Lessons Learned and Reflected in the Project Design

36. **This Project will draw on several lessons learned from the procurement of medical equipment across countries** (see annex 5). The need to maximize overall value-for-money (VfM) is incorporated, meaning that decisions need not be made based solely on lowest purchase price of the equipment. A key consideration of the equipment purchase process is the TCO, especially for closed systems, which can only use proprietary consumables and supplies. Another lesson is the



importance of ensuring that the purchased equipment is maintained properly, repaired in time when needed, kept functional, and thereby utilized optimally. Considering facility-level information in the procurement product profile is also critical. All these aspects are suitably incorporated in the project design.

Figure 4. HSS as a Complement of the Broader Indonesia HNP Portfolio



G. Gender

37. The Project seeks to address persistent gaps around access to reproductive health services in Indonesia, which have contributed to a high MMR. The MMR in Indonesia is nearly double the regional average at 173 deaths per 100,000 live births.⁵¹ Low levels and quality of high-risk pregnancy screenings⁵² conducted at health facilities play a major role in these numbers, with many maternal deaths being preventable if preexisting conditions were identified and treated. Conditions such as anemia, hypertension, and gestational diabetes are identifiable and treatable in pregnant women through routine screenings but are highly associated with maternal mortality and morbidity if left untreated. However, many health facilities lack the equipment necessary to carry out these screenings. The Project will seek to address this gap by procuring equipment needed to screen for high-risk pregnancies in PHC and lab facilities. Gender gaps and barriers also remain around the detection and treatment of cancer, with low outcomes in both men and women. Procuring cancer screening equipment to fill these gaps is an essential part of the broader gender action through the IsDB parallel financed part of the Project. Moreover, the World Bank’s gender action has an unprecedented multiplier effect through the joint

⁵¹ World Bank. 2023d. *Indonesia Gender Data Portal*. <https://genderdata.worldbank.org/countries/indonesia/#:~:text=173%20women%20die%20per%20100%2C000,higher%20than%20its%20regional%20average.>

⁵² The Indonesian Association of Obstetrics and Gynecology defines a pregnancy as high risk when there are preexisting conditions in the mother that can cause birth complications, resulting in death or disability of the mother or fetus. Conditions include (a) obesity or underweight/malnutrition, (b) hypertension, (c) anemia, (d) sexually transmitted diseases, (e) gestational diabetes, and (f) physical abnormalities in the reproductive area or in the fetus.



co-financing by ADB and AIIB, adding 110 percent, or US\$1.649 billion equivalent, on top of the World Bank’s US\$1.484 billion equivalent gender-sensitive investment. The Project is on track to be gender tagged and further detail on the gender gap assessment, gender entry points, and results chain is captured in annex 7.

H. Citizen Engagement

38. **The Project recognizes the importance of engaging citizens and communities in the decision-making process to ensure that the Project is aligned with their needs and priorities.** To achieve this, the Project will employ strategies such as continuous engagement, information dissemination, and citizen feedback through Halo Kemkes. Halo Kemkes is a service by the MoH that provides health-related information and a space for the general public to raise complaints and provide suggestions. The service operates 24 hours a day, seven days a week, and is free of charge. Citizens can use Halo Kemkes to obtain information about the healthcare services and HSS Project and provide feedback. Additionally, the Project will use the People’s Online Aspirations and Complaints Service (*Layanan Aspirasi dan Pengaduan Online Rakyat*, LAPOR) system, a citizen feedback mechanism developed by the Gol, to report progress and receive feedback from citizens. LAPOR allows citizens to report complaints, suggestions, and feedback directly to the relevant government agencies, including the MoH, for appropriate action. Complaints filed under these systems are verified and forwarded to the competent authority within three days of being submitted. The concerned ministries or agencies are required to follow up within five days, and the complaint is not closed until the issue raised is resolved. Further, by incorporating satisfaction feedback into the Halo Kemkes system and using LAPOR, the MoH can assess the effectiveness of health services, identify areas for improvement, and take appropriate actions to address any issues or concerns raised by citizens. By including citizen engagement through Halo Kemkes and LAPOR as a Project indicator, the systems will be subject to enhanced monitoring. The Project Operations Manual will clarify how these two systems will benefit the Project beneficiaries in citizen feedback. Full details on citizen engagement mechanisms in the Project are captured in annex 9.

I. Maximizing Finance for Development (MFD)

39. **The Project is expected to be MFD-enabling.** It builds strong capacity within the MoH to undertake a large-scale, comprehensive TCO contracting model with a much-deepened scope than hitherto undertaken in Indonesia. Learning from experience in other countries, poor maintenance and repair services for medical and laboratory equipment prevent public health facilities from providing sustained health services to citizens. These bottlenecks in public health facilities identified by the Gol led to requesting the MDBs to finance the procurement of large volume of medical and laboratory equipment for the entire country. To address the challenges, the Project will pioneer private sector solutions at scale, to support a model that makes it viable and attractive for private sector entities to bundle equipment sale with decentralized equipment maintenance and repair services over the useful life of the medical and laboratory equipment to be procured for public primary care facilities under SOPHI, SIHREN, and InPULS. These private sector entities will need to build in-country biomedical engineering capacity to provide after-sales operations and maintenance services across 6,500 inhabited islands. Thus, the proposed Project design will address the long-standing bottleneck of the non-availability of functional medical equipment in Indonesia’s public health facilities and that too in a sustainable and cost-effective manner within and beyond the closing date of the Project.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

Implementation Capacity Assessment

40. **The project executing agency is the Directorate General of Health Services (*Pelayanan Kesehatan, Yankes*) in MOH, and the project implementing agency is the Directorate General of Public Health (*Kesehatan Masyarakat, Kesmas*) in MoH.** Under the current leadership, the MoH has been applauded for embarking on the ambitious HSTA in the wake of the COVID-19 pandemic. Reflecting the sustained, strong leadership and stewardship demonstrated by the Gol, the MoH has substantially gained management and technical capacity. Its proven track record of successful implementation of several large foreign loan-financed operations includes the World Bank-financed I-SPHERE, INEY,



COVID-19, JKN, and TB PforRs described earlier. Notably, the GoI also has experience with implementing programs where multiple MDBs come together: the COVID-19 PforR is co-financed with AIIB, KfW, and DFAT. It has been over two decades that the MoH has not worked with the World Bank on an Investment Project Financing (IPF) operation, having mostly worked through PforRs. The MoH has, however, been implementing traditional investment financing operations with other MDBs, such as those funded by IsDB in recent years, and therefore is familiar with the investment lending instrument. In addition, the MoH has some experience in working for IPF component implementation under the ongoing TB PforR and INEY. Given the unprecedented large-scale operation, a much-needed TA will be provided under Component 4, as well as additional technical support from the World Bank and development partners, during project preparation and implementation. The Health Transformation MDTF will also be an important supporting resource for the MoH during implementation.

Implementation Arrangements

41. **The Project will continue to benefit from the MoH’s established leadership, management, and technical capacity during implementation.** Under the office of the Secretary General, a CPMU will be established to oversee overall Project implementation, linking to three PMUs in the executing agency and implementing agency as described below, to ensure smooth and effective coordination and collaboration between project management functions. The GoI is hiring the CPMU Lead position in recognition of the already substantially increased workload during preparation due to advance procurement and foreseen implementation. In addition, the CPMU will be staffed by experts in the following technical areas: FM, procurement, ESF, gender, equity, biomedical engineering, and M&E. Each Project component—SIHREN, SOPHI, and InPULS—will have a separate PMU headed by a Project Director, supported by the MoH-staffed technical working groups for day-to-day activities. The PMU for SIHREN will be established under the executing agency- Yankes, while the other two PMUs for SOPHI and InPULS will be established under Kemas, supported by the MoH-staffed technical working groups for day-to-day activities. Critical contract management capacity will be housed at each of the three PMUs, to closely monitor vendor contracts and the resolution of any issues for smooth implementation of the agreed procurement activities. A Central Procurement Unit (CPU) will also be formed under the Secretary General, allowing the MoH to efficiently deal with the upcoming large-scale procurement activities under each of the components. The necessary TA, especially around medical equipment procurement, will be provided by the contributing MDBs, with a focus on the CPU to jointly support its efforts without fragmentation and duplication. Adoption of the POM within 30 days from the Project effectiveness date will be a dated legal covenant.

42. **Given the high-profile and high-volume nature of the Project, project implementation is proposed to be guided by a combined Steering Committee (SC) to be established.** Other SC members will include representatives of the MoF, Ministry of Planning, and MoH management. The SC will provide overall strategic guidance, discuss progress, and solve challenges in any key area during implementation, meeting at least biannually.

43. **Indonesia’s decentralized context poses challenges for project implementation, mainly due to the varied capacity of SNGs in public sector management.** Within the health sector, the MoH already has developed mechanisms to monitor the implementation of central transfers for infrastructure and equipment and supplies, especially for DAK Fisik. Under this Project, the centrally procured medical equipment will be transferred to SNGs in the form of in-kind asset transfers. Although the MoH has experience in managing asset transfers for its vertical health facilities, the larger scale of this Project will require a more systematic approach. First, the responsibility for delivery and installation of the equipment will lie with the suppliers, except for select low-technology equipment under SOPHI as discussed earlier. This will demand strong management and monitoring capacity of the CPMU, with monitoring mechanisms to be set up at subnational levels too by strengthening existing monitoring arrangements, routinely monitored and with data verification mechanisms in place. Implementation arrangements across levels of governance from the central MoH to subnational levels down to facility levels in the decentralized context will be detailed in the POM.



B. Results Monitoring and Evaluation Arrangements

44. **The MoH, through the CPMU, will be responsible for overall monitoring of Project implementation, including reporting on the Project.** The Project aims to use an enhanced version of the existing ASPAK (*Aplikasi Sarana Prasarana Alat Kesehatan* - 'E-report application for building, infrastructure, and equipment') system, which will be updated at least once every six months as the main data source for readiness criteria and monitoring for Project implementation. Enhancement of the ASPAK system for this purpose will require (a) improved data quality that includes updated equipment at health facilities and variables of readiness criteria; (b) established interoperability with other existing applications, such as the human resource for health information system (*Sistem Informasi Sumber Daya Manusia Kesehatan*, SisDMK), Hospital Information System (*Sistem Informasi Rumah Sakit*, SIRS), and National Laboratory Information System (*Sistem Informasi Laboratorium Nasional*, SILNAS), during project implementation; (c) the inclusion of a 'shopping cart' functionality to monitor procured and distributed equipment; (d) a utilization monitoring function that records the utilization of equipment; and (e) established links with a Computerized Maintenance Management System-like module to enable monitoring of uptime, downtime, and maintenance response time for the equipment distributed under the Project. The ability of ASPAK to monitor the equipment's functionality is aimed to be in place by the signing of the first batch of contracts by April 2024. This will allow the system to monitor in real time, reporting downtime against the contractually agreed maximum downtime periods and alerting vendors to the need for repairs and/or maintenance. Vendor performance under the operation and maintenance arrangements will be monitored and penalized when exceeding downtime agreements through reduced payment.

45. **Enhancing ASPAK will involve all relevant MoH working units with respective information systems and/or databases and will be under the CPMU coordination.** This will be led by the Directorate of Health Facilities (Dit. Fasyankes) and will involve units including, but not limited to, SIRS, SILNAS, SisDMK, and the Center for Data and Information, along with the DTO. The leading and participating working units will be adjusted accordingly if there are changes in the organizational arrangement for the ASPAK system over the Project's lifespan.

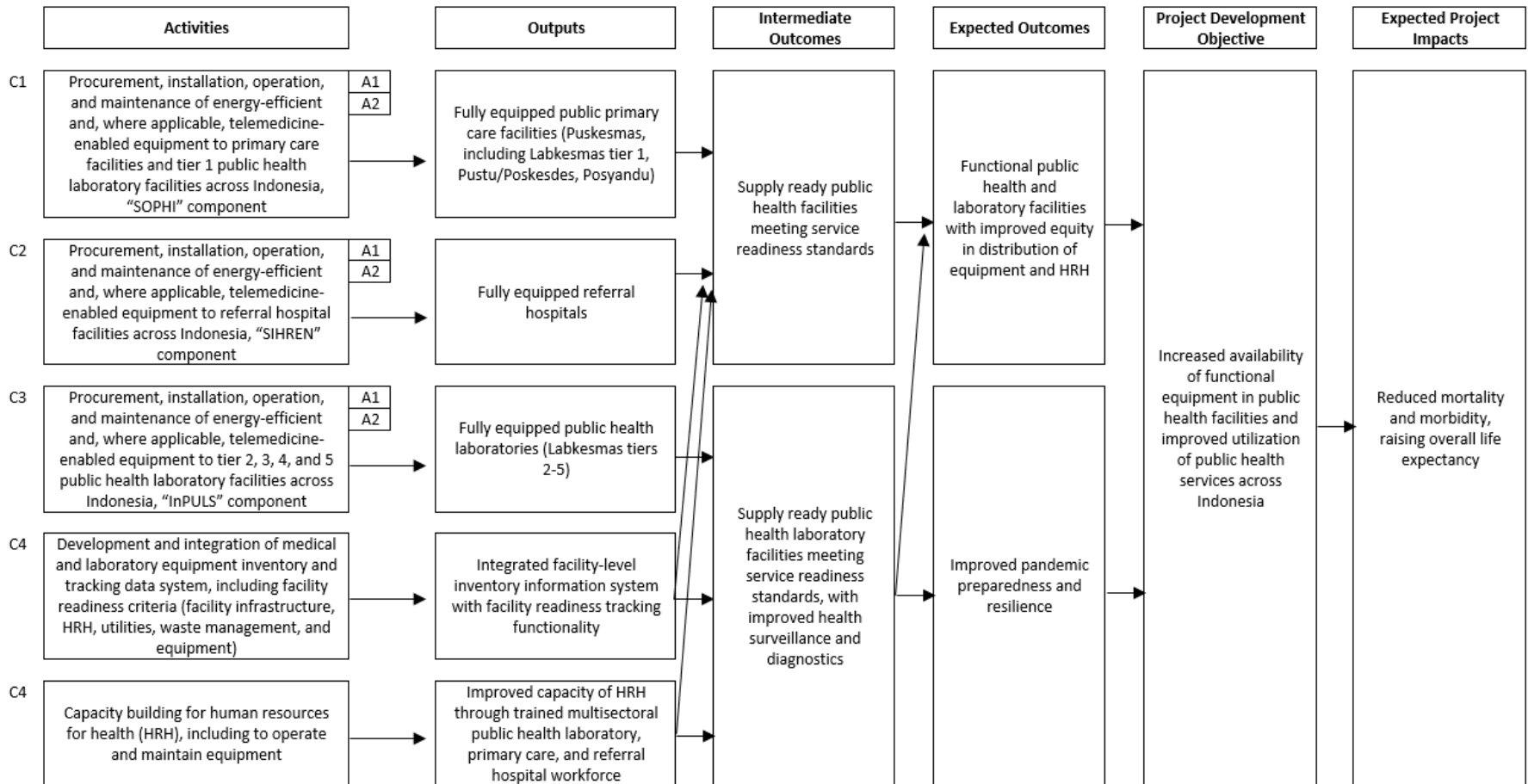
46. **The development of data verification and counter verification for ASPAK data to ensure the quality of Project implementation will be organized by the CPMU.** The integration of health logistics data system is one of the measures to minimize inaccuracies and inconsistencies of ASPAK. Steps for data verification and a counter verification mechanism will be needed for quality planning. Currently, the first step of verification and validation of ASPAK data is the responsibility of the District Health Office (DHO, *dinas Kesehatan*, or *Dinkes*). Additional verification for the annual DAK Fisik planning is done through a desk review mechanism, whereby healthcare facilities' compliance to meet the readiness criteria to receive equipment is adopted for the Project. A counter verification mechanism based on randomly selected sample districts to ensure the quality of this mechanism is to be developed and will be conducted either as a part of the internal audit system within the MoH or by the BPKP to improve implementation of the health policy. Additional supervisory attention from the World Bank will be provided as well. By consolidating and enhancing the quality of health information systems and relying on existing systems, the Project will avoid further proliferation of data systems. The World Bank is committed to conducting rigorous impact evaluations to assess the Project's long-term effects on healthcare access, quality, and health outcomes.

47. **Furthermore, the CPMU and each PMU will continuously assess Project performance through the use of well-defined performance indicators, with dedicated M&E personnel.** These indicators will measure the increase in the availability of functional medical equipment central to the overall enhancement of health service delivery. These indicators are part of the Project's Results Framework.



Figure 3. Proposed Results Chain for the Indonesia Health System Strengthening Project

Problem Statement: Public health and laboratory facilities across all levels of the public healthcare system and across Indonesia currently face significant gaps in the availability of critical equipment, without the necessary operational skills and maintenance capacity for this equipment, which is also a key driver of the severe underutilization of these facilities.



Assumptions

- A1 Infrastructure, utility, HRH, and waste management readiness ensured through domestic budget
- A2 Land ownership for facilities ensured



48. **Throughout Project implementation, the M&E plan will be developed by a senior M&E officer in the CPMU to measure progress against the PDO and intermediate-level indicators.** By leveraging the expertise of the senior M&E officer and building upon Indonesia's experience, the Project will be better equipped to evaluate its impact on strengthening the health system, particularly in terms of medical equipment availability and functionality, and effectively contribute to the advancement of healthcare services in the country.

C. Sustainability

49. **The Project relies on transparent, competitive, and cost-effective procurement processes that leverage economies of scale to ensure maximum VfM and economic sustainability.** The use of bulk procurement and inclusion of maintenance services in equipment purchase contracts will help reduce procurement costs and maximize VfM. By purchasing equipment in large volumes, significant economies of scale are expected. By bundling provision of maintenance services, the risk of equipment downtime is minimized. The goal is to reduce the risk of cost escalation by considering the cost of supplies and consumables in closed or proprietary systems such as laboratory equipment. If the proposed modality of including maintenance services in equipment purchase contracts is implemented successfully, the Government could continue such performance-based contracts for operations and maintenance, with transfer of operational capacities to the public sector workers beyond the Project's implementation period.

50. **The JKN program plays a critical role in supporting the sustainability of the Project by ensuring that public health facilities have the resources they need to keep equipment operational and provide quality healthcare services.** Public and private primary care facilities are paid under capitation and about 40 percent of the capitation payment can be used by these facilities to meet operational costs, including medical supplies. This is an important source of funding to ensure sustainable use of the Project's investment. At the hospital level, payment is based on a diagnostic-related group (DRG), where the tariff depends on the disease group. The calculation of tariffs for each DRG is based on the average cost of providing services, including maintenance and depreciation of medical equipment, as well as supplies. The financing required to sustain the operation of the new equipment is, thus, indirectly contributed by JKN.

51. **The Project is expected to lead to increased demand for diagnostic and treatment services, which might affect the financial position of JKN negatively in the short term, although the longer-term outlook is expected to be positive.** It is expected that successful implementation of this Project may contribute to increased outlay for JKN, as the investment in diagnostic services equipment will allow for the diagnosis of more cases and therefore require treatment of more patients. However, the long-term financial implication is expected to be positive, as early diagnosis reduces the probability of complications and hospitalizations. As of 2021, nearly 80 percent of the JKN spending was incurred at the hospital level compared to 16 percent at the primary care level, and about 51 percent of total JKN spending was for inpatient curative care only. This is partly because people bypass the primary care level due to unavailability of equipment and because of genuine demand for higher-level care once an unidentified health condition becomes complicated.

52. **Increased utilization resulting from investment on medical equipment will have implications on operational cost such as cost of maintenance, consumables, and human resources.** While the cost of maintenance and consumables for the first five years of the project period is already accounted for in the project investment value, the fiscal implication of associated operational costs after the Project closes is an important consideration, as this needs to come from the regular public health budget. The estimated operational cost between 2029 and 2033, as a share of projected public health expenditure, ranges between 1.1 and 1.6 percent. The operational cost



comprises (a) cost of maintenance and consumables assumed at 10 percent of the total Project value⁵³ and (b) cost of salary and functional allowance for additional specialists needed to operate the equipment, estimated at 10 percent of the total estimated HRH cost of meeting the WHO recommendation for specialist-population ratio by 2030.⁵⁴ With efficiency gains from the initial project period and/or some reprioritization of health in the overall budget, this additional cost is expected to be comfortably absorbed in the general government health budget.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

53. **The proposed Project was prepared responding to strong demand from the MoH in line with the HSTA to address critical health and laboratory equipment gaps, which contribute to underutilization of public health and laboratory facilities across Indonesia, disadvantageous health outcomes, and high healthcare costs.** The large-scale procurement incorporates lessons learned and international industrial best practices in the advance procurement process to meet the GoI's ambitious timeline for delivery of equipment. Co-financing MDBs are committed to harmonization of the MDBs' own internal requirements and policies to avoid creating additional work for the MoH.

54. **The World Bank has brought in global and in-depth experience and arrangements benefiting Indonesia for the procurement of medical and laboratory equipment, which is the main activity of the Project.** The GoI's conscious choice of financing instrument demonstrates its confidence in the World Bank's governance and procurement regulations and policies when dealing with such unprecedented and complex procurement activities. The application of HEIS to mitigate the MoH's immediate technical and procurement capacity constraints and expedite advance procurement is also a unique instrument that the World Bank provides, in addition to extensive technical and operational support, to the client countries.

55. **The Project is deemed to be economically viable.** An assessment of the implications of the Project components on the efficiency and equity of the health system as well as on access and quality shows that it is a worthwhile investment. The Project is expected to improve healthcare access and quality across Indonesia and lead to better health outcomes with reduced spatial and socioeconomic disparities, which is critical to maximize the economic benefit of existing human capital. Providing key services at the lowest appropriate level of the health system decreases the need for unnecessary hospital admissions and reduces potentially preventable readmissions. The Project will therefore contribute to improved technical and allocative efficiency in the delivery of service in the health sector. Improved service readiness at all levels is expected to promote equity in access to healthcare services and reduce the financial burden on poor households. The investments, particularly on the laboratory strengthening component, also generate strong positive externalities at the national and global levels. A detailed economic and financial analysis of the Project—with conservative estimates—produces a net present value of US\$8.5 billion and a benefit-cost ratio of 3.1, showing that the investments are economically viable (see annex 5).

56. **The Project has been screened for exposure to and impact of long- and short-term climate disasters and risks, and residual risks to Project outcomes are considered to be moderate after mitigation measures have been accounted for.** This risk stems primarily from the Project's focus on equipment investments in facilities across the country with high exposure to natural hazards, including those exposed to climate-induced disasters, and the country's developmental, environmental and health sector-specific context with particular challenges in rural,

⁵³ In 2021, spending on non-pharmaceutical medical goods stood at IDR 2 trillion (US\$133 million or 0.29 percent of total health spending). This is roughly 3.4 percent of the total HSS Project cost. So, the 10 percent cost of maintenance and consumables assumed in this analysis is an upper bound estimate.

⁵⁴ The total number of public health facilities in the health system is roughly 2,000. Meeting the WHO recommendation for specialist-population ratio will cater to all public hospitals. The team considers that 10 percent of the cumulative cost to meet this recommendation is attributable to this project (as only 200 of these approximately 2,000 public hospitals are supported by this project).



remote areas. The HSS Project intends to implement activities to adapt to the impact of climate change and mitigate greenhouse gas emissions as detailed in table 8.1, which also captures the detailed vulnerability context.

57. The Project activities are considered to be aligned with the goals of the Paris Agreement on both mitigation and adaptation:

- (a) **Assessment and reduction of mitigation risks:** All the activities financed under this operation are related to the procurement of equipment for health facilities in Indonesia. None of the equipment proposed to be procured will be powered by fossil fuels and thus are considered universally aligned under the category of human health and social work activities. In addition, the Project minimizes the risk of additional greenhouse gas emissions stemming from the health sector through the provision of equipment to public health and laboratory facilities following IEC, EnergyStar, and similar relevant energy efficiency standards in line with ENDC and LTS-LCCR objectives. Thus, the operation is not at a material risk of having a negative impact on Indonesia's low-greenhouse gas emissions development pathway and is considered aligned.
- (b) **Assessment and reduction of adaptation risks:** The Project procures equipment with technical specifications tailored to the Indonesian context, including its climatic conditions, that is set to strengthen the capacity of Indonesia's health system to diagnose and treat an important set of climate-related conditions. The Project has moderate risk to risks from climate hazards having a material impact to the operation and its development objectives, particularly from investment in equipment for facilities with high exposure to natural hazards (see *Annex 8* for detailed vulnerability context). However, these risks have been reduced to an acceptable level through incorporation of measures in the project design. These include the infrastructure facility readiness criterion, requiring facilities to meet validated GoI infrastructure standards before the delivery and installation of equipment, including the GoI earthquake resistance planning regulations for public buildings, and regulations on public building standards from the Ministry of Public Works and Public Housing, which removes the need for storage before equipment installation. Risks are also reduced through implementation of capacity building of staff, who will be trained by vendors to operate the equipment sustainably. It is also important to refer to the UHC DPL, which will help build additional human resource capacity for climate and health emergencies through dedicated training for staff based on local needs, including on climate shocks and natural disasters, as appropriate. Moreover, the introduction of telemedicine specifications in the equipment in line with the Indonesia CCDR allows continuous service delivery during climate shocks, with facilities better equipped to meet new disease patterns. Thus, risks from climate hazards have been reduced to an acceptable level and the operation is considered aligned.

B. Fiduciary

(i) Financial Management and Disbursement

58. **A Financial Management Assessment (FMA) was conducted on the MoH that will host the CPMU under the Secretary General and the three PMUs under Yankes for SIHREN and Kemas for SOPHI and InPULS.** The FMA was done in line with the Bank's FM Manual (2010) and Bank Directive for Investment Project Financing (March 13, 2023).

59. **The initial FM risk is assessed as Substantial before mitigation and Moderate after mitigation.** The procurement risk after mitigation is substantial, therefore, the combined fiduciary risk is rated as substantial after mitigation. Key FM risks arising from the assessment include (a) limited capacity of the MoH to implement projects with the IPF modality, as FM staff need to be assigned to account for the project funds and a POM needs to be developed with adequate FM arrangements; (b) weaknesses related to procurement process and payment



verification based on the review of MoH FY2020 and 2021 audit reports,⁵⁵ and (c) risk that the medical equipment purchased may not be functional in accordance with the PDO. To mitigate the associated risks, (a) the CPMU and three PMUs should be established with sufficient FM-certified⁵⁶ staff including qualified commitment making officer (PPK), payment verification officer (PPSPM), and assets management staff who will be responsible for updating the ASPAK and central government assets registry (BMN); (b) FM consultants (as part of management consultant) should be hired to support project implementation by providing assistance to prepare the Project's accounts, verify payments, and prepare interim financial reports (IFRs) and annual financial statements; (c) the borrower will prepare a POM that will need to be agreed by the World Bank and MDBs with adequate FM arrangements that include asset management to have a record of all assets, insurance requirements to safeguard assets and strengthen the internal control systems for the issues raised in the MoH FY2020 and 2021 audit reports not to reoccur; (d) POM socialization, including FM training, will need to be conducted before the project implementation commences; and (e) performance audits should be carried out by the IG MoH during the midterm and end of the Project to assess the functionality of purchased medical equipment.

60. **The World Bank and AIIB will use the World Bank disbursement arrangements, using the same withdrawal application processed through the Client Connection system.** The main disbursement methods that will be used are direct payment, advances, and reimbursements. Details of the World Bank and AIIB disbursement arrangements will be included in the Disbursement and Financial Information Letter of the Project. ADB and IsDB will use their own disbursement arrangements processed through their respective e-disbursement systems.

61. **A consolidated IFR will be prepared by the MoH's CPMU and submitted to the MDBs within 45 days after the end of the quarter.** Similarly, a consolidated annual financial statement will be prepared for all MDBs' funding, which will be audited by the Supreme Audit Institution (BPK) and submitted to all MDBs within six months after the end of the financial year. The audit TOR will be agreed between the CPMU and all MDBs. The audit report for the Project will be made available publicly. There is no provision of retroactive financing under the Project.

(ii) Procurement

62. **Applicable Procurement Framework.** Procurement under the Project will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers, dated September 2023 (hereinafter referred to as 'Procurement Regulations'), relevant provisions of the Loan Agreement, and the Procurement Plan (PP) agreed with the World Bank. It was agreed between the MoH, AIIB, and ADB that the World Bank will be the lead co-financier for this Project, alongside the parallel financing of SIHREN by IsDB. For joint co-financing by the World Bank, ADB, and AIIB, the MDBs agreed that all procurement processes will be governed by the World Bank's Procurement Regulations through Alternative Procurement Arrangements (APAs), including reliance on the World Bank for monitoring, supervising, and providing implementation support to the MoH during project implementation. The Project shall use the Systematic Tracking of Exchanges in Procurement (STEP) to plan, record, and track procurement transactions and contract implementation.

63. **Use of National Procurement Procedures.** When approaching the national market as per the PP, Indonesia's Government Procurement Regulations set out through Presidential Regulation (Perpres) No. 16/2018, as amended in Perpres No. 12/2021, may be used, subject to meeting the conditions stipulated in the World Bank Procurement Regulations, section V - paragraph 5.4, National Procurement Procedures. It is expected that several packages of low value and low risk, such as the procurement of oximeters or patient beds, will follow national open competitive bidding subject to the use of national bidding documents acceptable by the World Bank.

⁵⁵ MoH FY2022 detail audit reports will be available after they are submitted to the parliament or after September 30, 2023.

⁵⁶ PPK and PPSPM with certification from BPPK Financial Education and Training Agency (*Badan Pendidikan dan Pelatihan Keuangan* or BPPK).



64. **Procurement capacity and risk assessment.** The procurement residual risk is rated Substantial. While the MoH has sufficient experience in handling several World Bank-financed PforRs and IPFs from other MDBs, it has limited experience in handling an operation financing with large value and complex procurement activities such as those financed under the Project. The MoH has no experience in carrying out procurement processes through international open competitive procurement funded by the World Bank and other MDBs. The MoH requested the World Bank for HEIS, to which the World Bank agreed on August 25, 2023. The World Bank has engaged with the Emergency Care Research Institute (ECRI), nonprofit, independent medical and laboratory equipment organization, to support the World Bank in delivering this HEIS. In addition, to foster integrity and transparency on procurement, an external probity assurance provider will be engaged to provide probity in procurement, which demonstrates propriety in dealings with the market and builds confidence to encourage market participation. Moreover, the MoH Inspectorate General and BPKP will also be engaged.

65. **Procurement arrangements for the proposed Project.** The MoH, assisted by the World Bank, has prepared the draft Project Procurement Strategy for Development (PPSD) and PP for the Project to inform fit-for-purpose procurement arrangements that will support PDO achievement. The PPSD, which includes findings from the market analysis and vendor conference, informed the PP, which details the procurement methods and market approaches. During project implementation, the borrower shall submit updates of the PPSD and PP to the World Bank for its review and approval. The procurement activity under the Project, mainly the procurement of medical devices, follows international open competitive procurement using Request for Bids, single stage two envelopes. Economic, environmental, and social considerations agreed with the MoH will be integrated into the procurement processes using rated criteria. Under the Project, the national open competitive method is expected to procure low-value, low-risk equipment when there are sufficient local vendors who can supply the equipment or goods. Consulting services, including project management consultants, who will assist the MoH in overseeing overall project implementation and several individual consultants of various technical expertise, will also be hired. Advance procurement is also expected, especially for the first batch of procurement of large-scale medical equipment. More details on the procurement assessment, procurement arrangement, procurement risk, mitigation measures, and capacity-building measures are provided in annex 10.

C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

D. Environmental and Social

66. **Environmental risk rating is Moderate.** The key environmental concern is associated with the procurement, installation, operation, and maintenance of equipment in primary care, referral hospitals, and public health laboratory facilities across Indonesia. This expansion is expected to increase the volume of medical and other types of waste (including e-waste); energy consumption; quantities of chemical and hazardous substances to be managed; and occupational health and safety risks such as chemical exposure, noise, electrical safety, and infection control. To address these risks effectively, an Environmental and Social Management Framework (ESMF) has been prepared by the MoH to provide guidance/tools for the facility readiness criteria especially on the existing waste management system ensuring their consistency with the ESF and explore various avenues for continuous training; capacity



building; and maintenance, including providing best practices on occupational health and safety and construction waste management in the Environmental and Social Code of Practice for civil works supported by the Government. Facility readiness criteria will be reviewed at least on an annual basis through the enhanced ASPAK system with double verification by the District Health Office and Inspectorate. For equipment that required HR readiness, waste management, and infrastructure/utility readiness, it will only be included in the delivery list if the facility meets all verified criteria. A first version of the environmental documentation was publicly disclosed by the MoH on October 5, 2023, and re-disclosed by MoH on October 20, 2023.⁵⁷

67. **Social risk rating is Moderate.** Social risks are minor and may involve health and safety risks to primary supply workers during the distribution, installation, and maintenance of the equipment and to project beneficiaries (healthcare staff and patients) due to potential operation failure of the new medical equipment. The fact that activities will be undertaken nationwide, in a large number of facilities, increases the potential risks. The Project design already considers and mitigates this by including vendor responsibility to ensure worker safety during the distribution, installation, and maintenance of the equipment and provides capacity building to health staff in operation and maintenance of new equipment in bid documents and vendor contracts. To ensure meaningful consultation and inclusive engagement of the Project, a Stakeholder Engagement Plan (SEP), as part of the ESMF, has been prepared by the MoH for an effective stakeholder engagement, including the establishment of project grievance redress mechanism (GRM) prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and capacity building activities. The revised Environment and Social Commitment Plan (ESCP) and ESMF were disclosed by MoH on October 20, 2023.

68. **Following discussions between the MDBs' safeguards specialists, it was agreed that each co-financing MDB uses its respective safeguards policies while cooperating to achieve objectives materially consistent with each co-financier's safeguards policy in the coordination, implementation, monitoring, and disclosure of the safeguards documents.** The co-financiers confirmed that the Project would be prepared and carried out pursuant to, and in compliance with, the environmental and social policies, practices, procedures, and guidelines of each co-financier. While applying their own safeguards policies to the Project, World Bank and ADB agreed to cooperate with each other to achieve objectives materially consistent with their respective Environment and Social Framework in the coordination, implementation, monitoring and disclosure of the relevant documents.

V. GRIEVANCE REDRESS SERVICES

69. **Grievance redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. Information on how to submit complaints to the Bank's Grievance Redress Service (GRS), is available at <http://www.worldbank.org/GRS>. Information on how to submit complaints to the Bank's Accountability Mechanism is available at <https://accountability.worldbank.org>.

⁵⁷ MoH. 2023e. *Publikasi Dokumen Environmental and Social Management Framework (ESMF), Environmental and Social Commitment Plan (ESCP) dan Stakeholder Engagement Plan (SEP)*. <https://sehatnegeriku.kemkes.go.id/baca/umum/20231020/5344074/publikasi-dokumen-enviromental-and-social-management-framework-esmf-environmental-and-social-commitment-plan-escp-dan-stakeholder-engagement-plan-sep/>.



VI. KEY RISKS

70. **The magnitude of the Project required rapid project preparation/advance procurement, and substantial volumes of contract management increase the Project risk.** Though the operation offers considerable rewards, if delivered successfully, risks also have to be assessed considering the rewards. Identification of potential risks and mitigation measures associated with the Project has been done at an early stage of project preparation jointly with the GoI and co-financing MDBs, to ensure that mitigation measures are an effective and integral part of the Project design. Reflecting this careful process, the proposed overall Project residual risk is Moderate, after a series of actions that mitigate the impact and likelihood of the key identified risks are incorporated to ensure achievement of the PDO. The descriptions of key Project risks with mitigation measures are described in the following paragraphs.

71. **Political - Moderate.** A change in the Government in the 2024 election cycle could see the health priorities shift, which may affect implementation of this unprecedented, highly visible Project with the large-scale procurement of medical equipment. However, the HSTA enjoys broad political support. Project interventions, which are an integral part of the HSTA, are in line with the health reform priorities of all major players gearing up to next year's election. The MoH has been working closely with the MoF and Bappenas to deliver the single largest IPF in the country's history. At the Project level, the single-phase procurement without slicing also reduces the Project's risk to changes in political priorities. Moreover, risk will be further mitigated by aligning Project objectives and targets with the new GoI RPJMN and MoH's strategic plan in close consultation with Bappenas and the MoH.

72. **Technical Design of the Project - Substantial.** Central procurement of standardized medical equipment and distribution and installation may pose critical risks of widening inequitable availability of essential health services between well-off and lagging regions due to delayed fulfilment of the facility readiness criteria and subsequent delivery of medical equipment. A key mitigation factor is the single-phased procurement covering the whole of Indonesia, with rollout staggered to allow facilities that require longer preparation time to meet facility readiness criteria, particularly important in more remote provinces. Learning from other similar projects and international industrial practices elsewhere, the layers of the following mitigation measures are incorporated in the procurement design: (a) the application of readiness criteria will be differentiated depending on the complexity of equipment to allow early recipients of lower-level equipment even at facilities in lagging regions, (b) the large volumes of procured equipment will be bundled into a few comprehensively packaged lots and sourced from a single vendor, to commit vendors to a five-year maintenance period; (c) the cost of maintenance and operational skills transfer from the vendor to health workers upon installation of the equipment at the facility will be included in the vendor contract and made as a condition for payment with penalties for noncompliance; and (d) the bidding documents will specify the required service-level agreements such as minimum uptime share and maximum period for repairs for each equipment type by region to receive payments from the Project. In addition, the recently passed Health Law No 17/2023 omitted the requirement for 10 percent local budget allocation to the health sector, increasing the challenges of securing budget allocation for the sector. For this particular risk, the MoH plans to require recipient districts to provide a statement of commitment for local budget allocations for the elements that ensure sustained functionality of the transferred equipment. As decentralization limits the Central Government's ability to influence budget allocation at subnational levels, close monitoring of health expenditure at those levels is warranted. Lastly, availability of required human resources to properly operate equipment, which is one of four readiness criteria for receiving equipment under the Project, could pose a challenge in timely fulfilment of such requirements due to chronic shortage of human resources. Designated persons in the CPMU and each PMU will ensure that risks are minimized in the lagging regions that may not be able to meet the readiness criteria by providing dedicated support, while HRH capacity building is strongly supported by the UHC DPL.

73. **Fiduciary - Substantial.** Residual fiduciary risk for the Project is rated Substantial based on the fiduciary assessment, implementation arrangements, and limited capacity of the MoH that would be carrying out the



procurement and FM responsibilities. It may contribute to potential delays in advance procurement process at the MoH. The MoH has limited experience in handling complex IPFs, including associated procurement processes that follow international open competitive procurement as per the World Bank's Procurement Regulations. FM capacity constraints at the MoH also stem from the observation that local governments will undertake some critical responsibilities, such as budget allocation, monitoring of equipment delivery and installation, ASPAK data verification, asset management, and infrastructure, which require close attention. Other fiduciary risks include the Nomor Izin Edar (NIE, Distribution Permit Number) requirements for vendors, which guarantee equipment safety but have the potential of delaying contracting and equipment handover at facility. Weaknesses related to procurement process and payment verification were also noted based on the review of the MoH FY2020 and 2021 audit reports. Mitigation measures include (a) provision of immediate procurement support through the application of HEIS during preparation; (b) preparation of evidence-based and well-informed PPSD guiding complex, large-scale procurement, (c) ensuring of sufficient and qualified staffing in FM and procurement in the CPMU, CPU, and PMUs; (d) preparation and adaptation of the POM by the MoH with adequate procurement and FM arrangements that include assets management to safeguard assets; and (e) performance audits by the Inspectorate General of the MoH during the mid-term and end of the Project to assess the functionality of purchased medical equipment; and (f) a probity assurance provider is being retained to demonstrate propriety in dealings with the market, build confidence to encourage market participation, and foster suppliers' confidence that their offers will compete fairly on their merits and promote accountability in procurement.



ANNEX 1: Implementation Arrangements and Support Plan and MDB Collaboration

Strategy and Approach for Implementation Support

1. **The World Bank's implementation support strategy for the Project has been developed based on its ambitious scope and timeline, risk profile, capacity of the implementing agency, and lessons learned from other relevant operations in the Indonesia HNP portfolio.** Implementation support will be provided by the World Bank team consisting of staff with relevant competencies in public health, public procurement, health systems, health financing, quality of care, hospital administration, medical equipment procurement, operations, finance, and safeguards. The World Bank team will undertake periodic field missions throughout Project implementation as required. Experience under previous sectoral operations has shown that, given the complex, sensitive, knowledge-intensive, and challenging nature of such projects, specific World Bank responsibilities require higher-than-normal supervision, TA, and client support requirements, including the transfer of knowledge that the World Bank has gained over the past decade in similar operations around the world.

Implementation Support Plan and Resource Requirements

2. **MoH, in collaboration with the co-financing MDBs under the coordination of the World Bank, will conduct joint implementation support missions at least twice a year to monitor progress and hold discussions on any issues raised during Project implementation.** These missions aim to assess the Project's performance, identify areas of success, and uncover potential bottlenecks that may hinder achievement of project objectives. Following each mission, an Aide Memoire will be prepared, summarizing the findings and recommendations. The report will be shared with all relevant stakeholders to facilitate evidence-based decision-making and guide future actions.

3. **The plan includes frequent review of implementation performance and progress. Information from various sources will be used, including data generated through the Government's M&E systems, World Bank reviews of findings, and results of third-party assessments that will be undertaken during implementation.** The TA needs, supported by the World Bank's analytical work program that will closely support this Project, will be a key enabling factor to augment MoH capacity.

4. **The task team will also build on the relationships and experience that the World Bank has gained over the past decade in similar operations to support effective knowledge transfer and sustained capacity in the MoH.**

5. **No later than 30 months of Project implementation, the MoH and co-financing partners under the coordination of the World Bank will jointly conduct a midterm review (MTR).** It will include in-depth interviews and/or focus group discussions with key informants from Project beneficiaries. The MTR will provide an opportunity to (a) identify challenges and/or problems in design, implementation, and management, for adjustment if needed, and (b) reinforce successful initiatives that have demonstrated the potential for positive outcomes. Upon completion, a comprehensive MTR report will be generated and shared with the MoH for review and recommendations. This will allow to adjust and inform the Project's strategy and implementation for the remaining period and ensure the Project continues to make tangible contributions to the improvement of healthcare services in Indonesia.

MDB Collaboration

6. **The World Bank has been tasked to lead the coordination among the contributing MDBs and has spent considerable efforts leading this coordination, which will continue throughout project preparation and implementation.** Given the GoI's request for a coordinated approach and effective communication among the MDBs, the MDBs have committed to align on core MDB processes and corporate requirements in the following areas: procurement, FM, ESF, climate change, gender, and citizen engagement. The rationale for this harmonization between four co-financing partners stems from the need to reduce the burden on the MoH in terms of the variable



corporate guidelines and requirements from the MDBs. A lack of alignment would imply a multiplication of efforts from counterparts to adhere to these varying procurement regulations, financial reporting, safeguards, gender, climate, and citizen engagement documentation requirements, while the MoH is confronted with significant time, resource, and capacity constraints. Upon implementation, a request for multiple reporting, monitoring, and evaluation formats would entail a further unnecessary burden on the MoH throughout the Project.

7. **The MDBs' harmonization efforts, both internally and in the interaction with counterparts, are coordinated during preparation and agreed for implementation.** All missions are jointly carried out by the World Bank, ADB, AIIB, and IsDB, with Mission Announcement Letters, Aide Memoires, and Management Letters co-created and co-signed by all partners. This ensures that the agreements reached with the MoH and the broader Gol are collectively recorded. This includes important decisions on project financing, setting up of the Loan Agreements, preparation and implementation timelines, procurement arrangements, FM, and the ESF taken throughout preparation. This joint engagement allows to identify at an early-stage areas where harmonization can be achieved and where differences remain so appropriate solutions can be devised. On a day-to-day basis, the MDBs, led by the World Bank, and MoH also coordinate through dedicated working groups on procurement, FM, ESF, as well as the mapping of equipment needs and facility readiness criteria. This focused engagement allows the resolution of outstanding queries and ensures that the project designs of all the MDBs are timely and aligned.

8. **Aside from this MDB-Gol interface, frequent bilateral meetings are also held between the World Bank and ADB, AIIB, and IsDB, to specify the arrangements governing MDB coordination during preparation and implementation.** These arrangements differ according to the nature of MDB partnership. The World Bank and AIIB joint co-financing arrangement is governed by the AIIB-IBRD/IDA Co-financing Framework Agreement, co-signed on May 15, 2021, which stipulates the agreement between both parties on preparation arrangements including general information sharing, missions, and negotiations, as well as for implementation including environmental and social, FM and disbursement services to be performed by the World Bank in exchange for a fee charged to AIIB, which holds a review and approval function. AIIB thereby adopts and aligns itself fully with the World Bank's rules and regulations, including the World Bank's Procurement Regulations through its APA. Such comprehensive framework agreement is not in place with ADB. The harmonization between the World Bank and ADB is governed by the ADB-IBRD/IDA Procurement Framework Agreement, which forms the basis of a dedicated, tailored PIA for the HSS Project between both the MDBs, which is currently under development. While this bilateral agreement commits ADB to align with the World Bank Procurement Regulations, a separate agreement in addition to a PIA details the intention of alignment between ADB and the World Bank on non-procurement aspects, namely, FM, disbursement, and ESF. This results in the agreement upon the performance of one, single audit for the development of one, joint IFR. On ESF, given that ADB still relies on the 2009 safeguards framework in anticipation of its adoption of the ESF in 2025, it requires separate reporting. However, the MoH's report will be used to feed into both the World Bank's and ADB's social and environmental documentation throughout implementation. This considerably reduces the burden on the MoH in terms of reporting duties during project implementation. Given that ADB maintains its own monitoring and due diligence processes, no fee will therefore be paid to the World Bank for the services provided. Arrangements also differ with IsDB. Due to its Shariah-compliant financing structures, including with regard to procurement, no APAs are possible, resulting in parallel financing arrangements for SIHREN. Despite these parallel financing arrangements, IsDB has committed to seek harmonization with the co-financing arrangements where possible and is actively involved in the MDB coordination efforts, adopting the joint mission structure. Nonetheless, for the distinct set of equipment under IsDB's remit for SIHREN, IsDB's procurement, FM, disbursement, environmental and social requirements, and corporate requirements apply.

9. **Given the fast-paced project preparation, unparalleled procurement requirements, and partnership of four MDBs supporting the Gol's coordination by the World Bank, adequate resources are required by the World Bank team to manage this coordinating role, build Government capacity through TA, and deliver this Project**



within the short timelines. The MDBs have come together to jointly support the MoH on the market analysis, while HEIS has been requested by and approved for the GoI to gain the necessary financial and in-person resources to support and grow its procurement capacity within the short time frame to successfully carry out the procurement activities.



ANNEX 2: Country and Sectoral Context

Country Context

1. **Indonesia has undertaken government decentralization since the 1990s.** Although granting wide-ranging autonomy to Indonesia's SNGs, decentralization has also led to a diffusion of governance and significant variations in the administrative and fiscal capacities of SNGs.⁵⁸ Geographic challenges further contribute to considerable inequalities in wealth, service availability and accessibility, and infrastructure across the country. Spanning 5,100 km from west to east⁵⁹ and with a population of over 273 million, Indonesia is the largest and most populous archipelagic nation in the world. Against this backdrop, it has been difficult for the Gol to achieve economic growth equitably across the nation. Although wealth inequality predictably exists between urban and rural areas, it is also heavily centralized in the west of Indonesia, especially on the islands of Java, Sumatra, Southern Borneo, and Bali.⁶⁰ There is a nearly 14-fold difference in the 2022 GDP per capita of the wealthiest province (the Special Capital Region of Jakarta, with a GDP per capita of approximately US\$20,000) and the poorest province (East Nusa Tenggara, approximately US\$1,400 per capita).⁶¹

2. **Indonesia's strong national economic recovery from the COVID-19 pandemic masks disparities in recovery rates, as lower-income families are recovering slower.** COVID-19 significantly affected livelihoods, with a national household study⁶² of nearly 11,000 households finding that 34.7 percent of sampled households reported a decline in their income between 2020 and 2022, with the wealthiest 20 percent of households on average experiencing a 7.9 percent lower incidence of income reduction compared to the bottom 20 percent of households. Additionally, the Gol has reported that over 78 percent of the GDP growth was generated by two of the five main islands in Indonesia: Java and Sumatra. By contrast, Papua, located in the easternmost region of Indonesia, only contributed to 2.5 percent of economic growth.⁶³ Compounded by rising inflation, reaching 4.33 percent as of April 2023,⁶⁴ as well as an expected attenuation of Indonesia's GDP growth rate to an average of 4.9 percent over the next three years, economic disparities are thus expected to rise across the country in the medium term.

Climate Change

3. **Indonesia is vulnerable to the impacts of climate change, with significant impacts on the economy, lives, and livelihoods of its population, particularly vulnerable communities in rural, remote parts of the country.** The broad set of disasters to which the country is exposed includes cyclones, earthquakes, tsunamis, heavy rainfall, droughts, sea level rise, floods, landslides, and soil erosion, which together make Indonesia the 49th most climate-vulnerable country out of 191 around the globe.⁶⁵ Projections estimate that potential economic losses from climate change impacts in Indonesia will reach as high as IDR 554 trillion (approximately US\$37.8 billion) over 2020–2024 across the marine and coastal, water, agriculture, and health sectors—this last one alone contributing IDR 31 trillion (approximately US\$ 2.1 billion).⁶⁶ Climate change is set to deepen this cost, with losses anywhere between 2.5 and 7.0 percent of GDP by 2100, and the poorest bearing the brunt of this burden.⁶⁷ The climate disaster risk index is

⁵⁸ World Bank. 2014. *Indonesia: Avoiding the Trap*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/664831468044651624/indonesia-avoiding-the-trap>.

⁵⁹ World Bank. 2021c. *How Indonesia Strengthened its Disaster Response with Risk Finance and Insurance*. <https://www.worldbank.org/en/news/feature/2021/11/17/how-indonesia-strengthened-its-disaster-response-with-risk-finance-and-insurance>.

⁶⁰ PBS 2023.

⁶¹ PBS 2023.

⁶² European Commission. 2023. *INFORM Risk Index 2023*. <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Risk-Facts-Figures>.

⁶³ European Commission 2023.

⁶⁴ European Commission 2023.

⁶⁵ European Commission 2023.

⁶⁶ Antara. 2022. *Climate Change Losses Could Touch Rp544 trillion in 2020–2024: Government*. <https://en.antaranews.com/news/243525/climate-change-losses-could-touch-rp544-trillion-in-2020-2024-govt>.

⁶⁷ World Bank and ADB (Asian Development Bank). 2021. *Climate Risk Profile Indonesia*. <http://hdl.handle.net/10986/36379>.



considered 'high' in 221 out of the 514 districts of Indonesia (43 percent).⁶⁸ Nearly 80 percent of the disasters that occurred in Indonesia between 1998 and 2018 were attributable to climate change, among which 39 percent were flooding, 26 percent heavy winds or storms, 22 percent landslides, and 8 percent droughts.⁶⁹

4. **Natural hazards and extreme events, set to worsen in frequency and severity due to climate change, pose particularly significant threats to population health and challenge Indonesia's health system.** Without effective adaptation, the population's exposure to natural hazards is set to rise. The population exposed to an extreme river flood is forecasted to grow by 1.4 million by 2035–2044, up from over 880,000 in 2020, and the total population likely to be exposed to permanent flooding by 2070–2100 could reach over 4.2 million people.⁷⁰ Indonesia has also been identified as one of the countries set to contend with a severe increase in extreme temperatures and is facing an extreme heatwave as often as once every two years by the end of the twenty-first century under a high greenhouse gas emission scenario.⁷¹ The combination of deforestation and climate change in Indonesia is already creating deeply unsafe working conditions, especially for people in rural areas, with one study in Berau Regency pointing to an increased mortality of 101–118 additional deaths per year (between 7.3 and 8.5 percent of all-cause mortality) due to human-induced climate change and environmental degradation.⁷² Under a high-emission scenario, it is also projected that approximately 35.1 climate-related deaths per million population could occur because of scarce food availability in Indonesia by 2050.⁷³ Changing temperatures and rainfall patterns also have a significant effect on climate-sensitive vector-borne diseases such as dengue and malaria. In Indonesia, for instance, a 10 mm rainfall increase was found to be associated with a 1 percent increase in dengue incidence in the next three months.⁷⁴ These trends will create a significant demand for healthcare, both at the primary care level for essential frontline clinical and preventative services where *Puskesmas* and *Posyandu* need to be strengthened, especially in times of crisis faced with peak demand, and in hospitals if patients are referred for specialist care. This increased demand thus needs to be addressed urgently, especially through a strengthened primary care system.⁷⁵

Sectoral context

5. **In an effort to increase access to health services, the MoH has mandated that each subdistrict should have at least one community health clinic, called *Puskesmas*, that meets minimum clinical standards for service readiness.**⁷⁶ Eastern Indonesia by far has the lowest percentage of *Puskesmas* with a complete health workforce, with the easternmost provinces of Papua, West Papua, Maluku, and North Maluku having less than 20 percent of their *Puskesmas* fully staffed⁷⁷ (figure 2.1). Low access to quality primary care is particularly concerning for the double burden of disease that Indonesia faces. The disparity in access to quality care contributes to widely varied life expectancies across provinces. In 2019, the difference in life expectancy for males between the highest-ranked

⁶⁸ BNPB (National Disaster Management Agency of the Republic of Indonesia). 2022. *Indeks Risiko Bencana Indonesia (IRBI) Tahun 2022 (Indonesia Disaster Risk Index 2022)*. <https://bpbpd.sukabumikota.go.id/buku-irbi-2022/>.

⁶⁹ HARYANTO, Budi, LESTARI, Fatma, and NURLAMBANG, Triarko. 2010. *Extreme Events, Disasters, and Health Impacts in Indonesia*. https://link.springer.com/chapter/10.1007/978-3-030-23773-8_16.

⁷⁰ World Bank and ADB 2021.

⁷¹ World Bank and ADB 2021.

⁷² WOLFF, Nicholas, ZEPPELLO, Lucas Vargas, PARSONS, Luke et al. 2021. "The Effect of Deforestation and Climate Change on All-Cause Mortality and Unsafe Work Conditions due to Heat Exposure in Berau, Indonesia: A Modelling Study." *The Lancet Planetary Health*. 5(12). [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(21\)00279-5/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(21)00279-5/fulltext).

⁷³ SPRINGMANN, Marco, MASON-D'CROZ, Daniel, ROBINSON, Sherman et al. 2016. "Global and Regional Health Effects of Future Food Production under Climate Change: A Modelling Study." *The Lancet*. 387 (10031): 1937–1946. <https://www.sciencedirect.com/science/article/pii/S0140673615011563?via%3Dihub>.

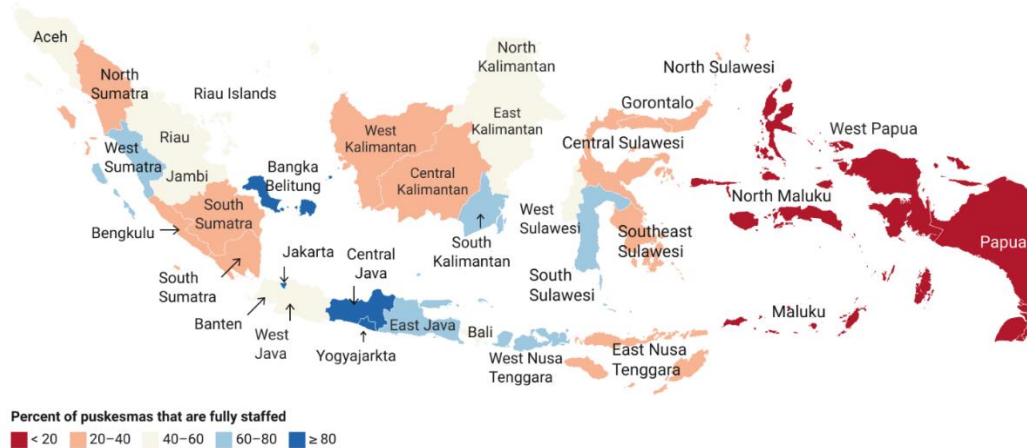
⁷⁴ FATMAWATI, Fajar and SULISTYAWATI, Sulistyawati. 2019. "Climate Change and Dengue in Indonesia: A Systematic Review." *Epidemiology and Society Health Review*. 1(1). <http://journal2.uad.ac.id/index.php/eshr/article/view/938>.

⁷⁵ RIEFKY, Teuku, MOEIS, Faizal Rahmanto, SOFIYANDI, Yusuf et al. 2021. "Resilient Infrastructure in Indonesia: A Way Forward." LPEM-FEB UI Working Paper 064. <https://www.lpem.org/id/resilient-infrastructure-in-indonesia-a-way-forward/>.



(Bali) and lowest-ranked (Papua) provinces was 9.9 years. For females, the difference in life expectancy between the highest-ranked (North Kalimantan) and lowest-ranked (North Maluku) provinces was 13.7 years.⁷⁸

Figure 2.1. Percent of Fully Staffed *Puskesmas* by Province, 2021⁷⁹



6. **Insufficient access to referral-level health services also exists across Indonesia, contributing to low health outcomes and high healthcare costs.** Equitable access to referral-level care is particularly important to manage the rise in burden of NCDs, yet there is widespread lack of access to referral-level hospital services, especially in remote and rural areas of Indonesia. Currently, the facilities with the capability to deliver standardized services for KJSU and KIA are still concentrated on the island of Java. This has led to delayed detection, faster disease progression, lower survival rates, and losses in the quality of life and productivity. Latest figures from the MoH indicate that 2.5 out of every 1,000 Indonesians are at risk of having a stroke each year, with a 15 percent mortality risk rate. One in every 1,000 citizens risks a heart attack each year, with an 11 percent associated risk of dying.⁸⁰ Despite these figures, patients must wait up to 12 months to receive crucial heart surgeries. This dire situation affects not only adults: nearly 50,000 Indonesian children have untreated congenital heart disease. Additionally, over 70 percent of cancer cases were detected at later stages of disease progression.⁸¹

7. **The MoH, based on the mandate of President Joko Widodo, has initiated a Health Transformation Agenda (2021 to 2024) in the wake of the COVID-19 pandemic.** This comprehensive transformation of the country's health system comes in response to the pressing gaps in the Indonesian public health and surveillance system that, although previously in existence, were highlighted by the pandemic. The HSTA centers around six core pillars (figure 2.2). Essential to this six-pillar approach is the integration and standardization of all levels of the Indonesian public health and surveillance systems.⁸² The HSTA also establishes a well-structured public health system that integrates and standardizes all levels of public health facilities and laboratories. This means creating a cohesive framework and standardization where different levels of public health facilities, including primary health centers, district hospitals, and specialized hospitals, work together in a coordinated manner.

⁷⁸ GBD 2019 Indonesia Subnational Collaborators. 2022. "The state of health in Indonesia's provinces, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019". *Lancet Glob Health*. 10(11), pp. e1632-e1645. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9579357/>.

⁷⁹ MoH 2021a.

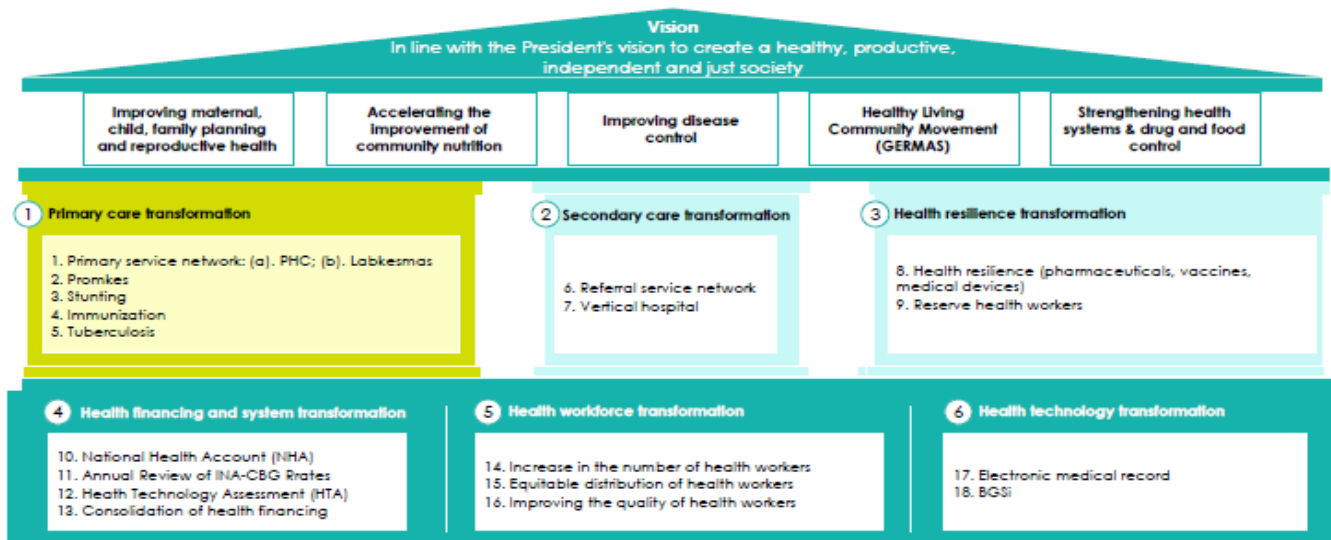
⁸⁰ MoH 2022c.

⁸¹ MoH 2022d.

⁸² MoH 2022b.



Figure 2.2. The Six Pillars of the MoH Health Transformation Agenda



8. **Primary Health Care services in Indonesia are predominately delivered by a vast network of over 10,000 community health centers, known as *Puskesmas*, which offer over 30 essential preventive and curative health care services at the sub-district level.**⁸³ These are further complemented by auxiliary puskesmas, known as *Pustu*, as well as integrated service posts, known as *Posyandu*, which provide a limited set of services provided at the Puskesmas, at the village and hamlet levels, respectively. In 2022, the MoH launched the Primary Health Care Integration initiative, also known as *Integrasi Pelayanan Kesehatan Primer* (ILP). It aims to improve access, quality, and coordination of healthcare delivery at the community level, with a particular focus on integrating various PHC services, especially preventive and promotive care approaches. The ILP approach for life cycle services emphasizes the importance of strengthening PHC services at the village level, particularly through the reinforcement of *Pustu* and *Posyandu*.

9. **For referral-level care, based on the *Permenkes* Number 30, 2019, concerning the Classification and Licensing of Hospitals, hospitals in Indonesia are classified into two types based on their functions, facilities, and services provided.** The classifications are general and specialized hospitals. General hospitals offer comprehensive healthcare services across various fields and for different types of diseases. Specialized hospitals provide primary services in a specific field or type of disease based on disciplines, age groups, organs, specific types of diseases, or other specializations. To establish a tiered healthcare system and referral function, general hospitals and specialized hospitals, as referred to in Article 6 in *Permenkes* No. 30, 2019, are classified based on criteria such as building and infrastructure, service capabilities, human resources, and equipment. This classification aims to ensure that hospitals are categorized and evaluated according to their physical facilities, the range of services they can provide, the expertise of their staff, and the availability of medical equipment.

10. ***Permenkes* No. 12, 2020, focuses on the accreditation of hospitals in the country stating that all hospitals, both public and private, must undergo the accreditation process to ensure they meet the required quality standards.** The accreditation process involves a comprehensive evaluation of various aspects of hospital operations, including infrastructure, facilities, medical equipment, human resources, patient care, infection control, and management systems. Hospitals are assessed based on predefined criteria and performance indicators set by the

⁸³ BENOTTI, Emily, HIRSCHHORN, Lisa, SUGIYARSO, Saraswati and AHMAD, Jet. 2021. "Indonesia: Puskesmas and the Road to Equity and Access". *Primary Health Care Performance Initiative*. <https://www.improvingphc.org/indonesia-organisation-services>.



MoH. It also provides guidelines for monitoring and surveillance of accredited hospitals to ensure their continued compliance with the standards. In addition to the Regulation, the Minister of Health issued a 2022 decree concerning hospital accreditation standards (Decree No. HK.01.07/MENKES/1128/2022), which aims to provide clear guidelines and criteria for assessing the quality and safety of healthcare services provided by hospitals. It also introduces a tiered system for hospital accreditation, emphasizing different levels of achievement based on the abovementioned standards. The tiers are Paripurna (also known as full accreditation, is the highest level of accreditation that a hospital can achieve under the standards outlined in the decree), Utama, and Madya accreditation.

11. **Based on the circular letter Number HK.02.01/MENKES/1254/2022 concerning the establishment and management of community health laboratories (*Labkesmas*), the purpose of *Labkesmas* is to provide essential laboratory services and support for public health programs.** To ensure effective implementation and coverage, *Labkesmas* is categorized into five tiers or levels (following guidelines by the WHO) and is planned to be available at every level of administrative region, with Tier 5 as the highest level of *Labkesmas* establishment as national referral center for specialized laboratory services, research, and expertise. These tiered levels ensure that *Labkesmas* is structured and implemented in an approach that covers all administrative regions effectively, providing comprehensive laboratory services and support for public health programs.

12. **The HSTA also includes a digital transformation component, based on a blueprint⁸⁴ developed by the MoH.** On the patient side, this transformation starts with converting the *PeduliLindungi* mobile app, which was implemented during the pandemic and mainly used for contact tracing and managing vaccination records, into the SATUSEHAT mobile app. During the pandemic, all Indonesians were mandated to download the *PeduliLindungi* app to their smartphones, and so the SATUSEHAT app, called *PeduliLindungi* at the time, already had 105 million users in 2022.⁸⁵ The app has telemedicine functions for virtual doctor visits, enables patients to store their health records on their phones (simplifying the patient's ability to move between health facilities), and tracks treatment adherence. On the government side, the SATUSEHAT dashboard supports data- and evidence-driven policy making. At the backend is the SATUSEHAT platform that integrates inputs from the patients' mobile app, the government's dashboard, and the hundreds of existing health IT systems across the Indonesian healthcare industry—laboratories and both the public and private sector included.

⁸⁴ MoH 2021b.

⁸⁵ SETYOWATI, Desy. 2023. *PeduliLindungi Ganti Nama Jadi Satu Sehat, Berapa Jumlah Pengguna?*.

<https://katadata.co.id/desysetyowati/digital/63fde766013d4/pedulilindungi-ganti-nama-jadi-satu-sehat-berapa-jumlah-pengguna>



ANNEX 3: The HSS Project Complements the Overall Indonesia HNP Portfolio

1. The HNP portfolio provides comprehensive support across all six pillars of the MoH HSTA, with its programs and projects collectively making a major contribution to its success. The portfolio's contributions are as follows:
 - (a) **The Indonesia - Supporting Primary Health Care Reform (I-SPHERE, US\$150 million, PforR)** Program supports Pillar 1 of the HSTA by strengthening the Gol's governance of the primary care system through improved performance monitoring of local governments and facilities. It develops guidelines and tools for performance monitoring of facilities, implements a national standard for PHC facilities, and improves the performance orientation of DAK and JKN. It lays the foundation for strengthening of PHC facilities, with improved service readiness through the procurement of necessary equipment by the HSS Project.
 - (b) **The COVID-19 Emergency Response operation (US\$750 million, PforR)** contributes to Pillar 3 of the HSTA by strengthening pandemic preparedness and broader health monitoring. It improves multisectoral coordination and develops surveillance protocols at public hospitals and laboratories, which are needed to fully utilize the laboratory equipment procured through the HSS Project.
 - (c) **National Health Insurance (JKN) Reforms and Results Program (US\$400 million, PforR)** supports Pillar 4 of the HSTA. Utilization of health services is expected to drastically increase as facilities become more service ready due to the HSS Project. The JKN Program seeks to rein in soaring healthcare costs for the Gol while reducing financial barriers to accessing care by improving the health spending efficiency of JKN. It utilizes JKN claims data to improve the benefits packages, capitation rates, and payment methods. It also supports Pillars 1 and 2 by developing clinical care and referral pathways to improve patient flow through the health system, thereby improving patient results.
 - (d) **The Investing in Nutrition and Early Years Program (US\$400 million, PforR)** supports Pillar 1 of the HSTA by improving coordination across sectors and levels of the Government to increase the coverage and quality of nutrition services among mothers and children. It also supports Pillar 5 by training health development workers to support growth monitoring of children at the village level.
 - (e) **The Investing in Nutrition and Early Years Program Phase 2 (US\$600 million, PforR)** expands the scope of INEY Phase 1 by increasing its focus on health interventions in response to the launch of the HSTA. It supports Pillar 5 of the HSTA through training of frontline health workers to improve the coverage and quality of maternal and child essential nutrition and health services. It also contributes to Pillar 1 by supporting PHC facilities to achieve service readiness to deliver essential health and nutrition services, as defined in the HSTA. The training delivered through INEY Phase 2 is expected to enable the *kaders* to accurately utilize the equipment procured through the HSS Project.
 - (f) **The National TB response (US\$300 million, PforR)** sets out to improve service delivery, health financing, and digital tools in the primary care system. It focuses on the TB response in Indonesia, but lessons learned can be adapted to the overall health system in Indonesia. It supports Pillars 1, 4, and 6 of the HSTA, and these tools can be expanded to cover the broader disease burden in Indonesia.
 - (g) **Universal Healthcare Development Policy Loan (UHC DPL, US\$1 billion)** supports implementation of the new Health Omnibus Law, which revises current laws to reform Indonesia's health system. It has a strong focus on health system resilience, improving quality of and access to care and increasing the capacity of the health workforce in Indonesia. The Omnibus Law includes revisions that enable specialists trained abroad to practice in Indonesia and support domestic manufacturing of medicine.



ANNEX 4: Facility Readiness, Gap Assessment, and Data and Field Verification

Overview

1. **To identify healthcare facility readiness in providing health services during the preparation of the Project, a series of analyses was undertaken for PHC facilities, referral health facilities, and public health laboratories using health facility-based data managed by the MoH.** The main source of data is the MoH's facility-based information system building, infrastructure, and equipment or ASPAK, triangulated with other health facility data from other reports and surveys such as *Rifaskes* 2019 and rapid primary data collection. The MoH's HRH data base (SisDMK) was used to fill gaps in the main facility data sources. At the referral health services, the gap assessment for key KJSU and KIA NCDs also included direct data validation using the Fostering Hospital System.⁸⁶ The assessment for public health laboratories follows a similar modality: the lowest level (Tier 1) relies fully on ASPAK, while Level 2 and above mainly relies on special primary data collection.

Primary Healthcare Readiness and Capacity Gap Assessment

2. **Indonesia's health system focus on PHC is reflected in multiple data sources that capture the availability of, and capacity to deliver, essential basic health services at the primary care level.** The MoH has conducted two rounds of *Rifaskes* in 2011 and 2019,⁸⁷ which focused on public PHC facilities, as well as a sample of private clinics and hospitals. In between these two censuses, the World Bank conducted a national-representative sample health facility survey: the Quantitative Service Delivery Survey in 2016. The MoH and World Bank have collaborated to produce analyses from these data sources using the WHO Service Ability and Readiness Assessment (SARA) tool. The results have informed the planning and budgeting processes as well as program and policy development within the MoH and other ministries such as Bappenas and MoF. The *Rifaskes* health facility census is scheduled every 10 years. The latest 2019 *Rifaskes* data are indicative of the equipment gaps at the facility level during Project preparation only, complemented by the comprehensive data collection to assess precise equipment gaps at each facility across Indonesia to build the accurate list of equipment needs, numbers, and loci for their installation.

3. **As facility and service readiness are key to the Project, an analysis of key findings from analytics using *Rifaskes* 2019, multiyear health profiles, and special data collection has been performed, demonstrating the following:**

- (a) There has been notable improvement in general service readiness at the PHC level across the years. Compared to *Rifaskes* 2011, most of the health services show an improvement in *Rifaskes* 2019. However, *Rifaskes* 2019 found gaps in multiple areas for general service readiness such as some basic equipment, healthcare waste management, and patient safety systems, as well as for specific services such as availability of guidelines and training, medicines and commodities, and diagnostics. There were also areas that saw regressions from *Rifaskes* 2011 such as availability of blood pressure apparatus and Hemoglobin test that are a cause of concern (figure 4.1).⁸⁸

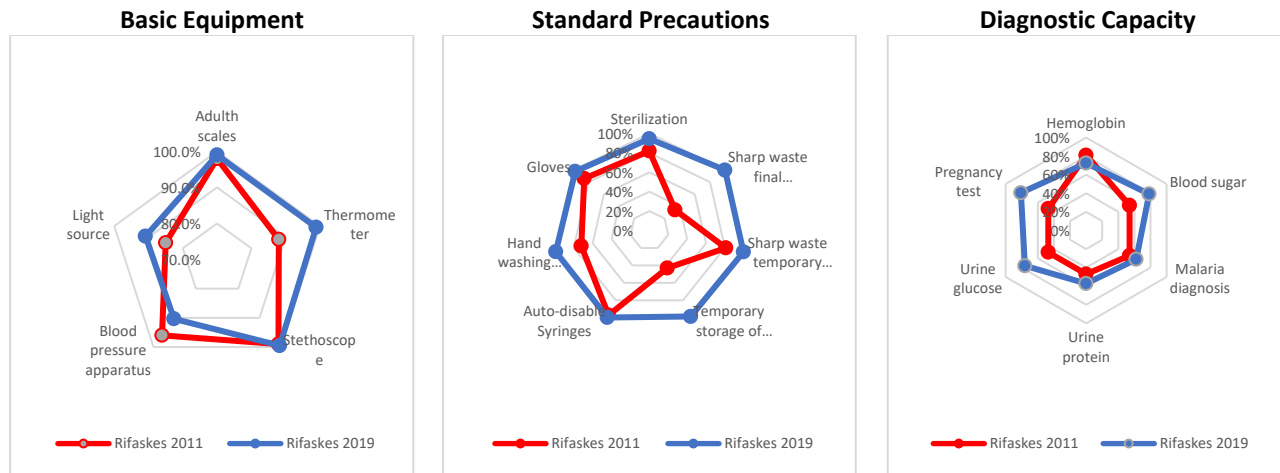
⁸⁶ The fostering hospital network (*Jejaring Rumah Sakit Pengampu*) was created to improve the quality for specialist services by teleconsultation, mentoring, and other capacity-building activities from the more advanced hospitals (the foster hospital) to a network of other, usually lower-level, hospitals. Similar modality has been developed for public health laboratories.

⁸⁷ MoH 2019a.

⁸⁸ World Bank and MoH. 2022. *Do Indonesians get better access and receive better quality for health care?: An analysis of Indonesia's primary healthcare supply side readiness Health Facility Census (Rifaskes 2019)*. PowerPoint developed and presented by Balitbangkes-Kemenkes and the World Bank in April, 2022.



Figure 4.1. General Health Service Readiness at PHC Level by Dimension



Source: World Bank and MoH 2022.

- (b) **These data show that, in terms of general service readiness, the mean readiness index⁸⁹ rose from 71 percent to 79 percent in almost 10 years following *Rifaskes 2011*.** While some components of general services readiness such as the availability of basic amenities and adherence to standard precautions show a major positive shift, there was not much change in the availability of medicines and needed equipment in the facility. In both surveys, lack of availability of basic diagnostics was a cause of concern. This overall positive trend is also shown for the general service readiness index disaggregate by province, with many provinces showing a percentage rise from 2011 to 2019.⁹⁰
- (c) **Various data sources indicate improved availability of primary care services over time, but significant disparities or inequities across provinces and districts persist.** Overall, there was a net gain of 511 *Puskesmas* nationally between 2013 and 2021. As Indonesia is a large country with a wide range of population density, the service availability assessment considered both factors. In terms of the density, the number of *Puskesmas* per square km increased between 2013 and 2021 in most provinces. Provinces with low facility-to-population and area ratios are among those with higher additional new *Puskesmas*.⁹¹
- (d) **Overall, the level of service readiness of *Puskesmas* in providing basic health services has increased** (figure 4.2). From two rounds of *Rifaskes* (2011 and 2019), supply-side readiness using WHO SARA showed improvements across the country, but provinces in the eastern region, however, are still lagging.⁹²

⁸⁹ The index of health services availability and readiness is calculated using key tracer indicators based on the WHO SARA guidelines, which are adjusted to national guidelines and the availability of data in *Rifaskes*. The service readiness dimension consists of guidelines, training, equipment, diagnostic capacity, and drug components. Each dimension component is given the same weightage—assuming each component is equally important.

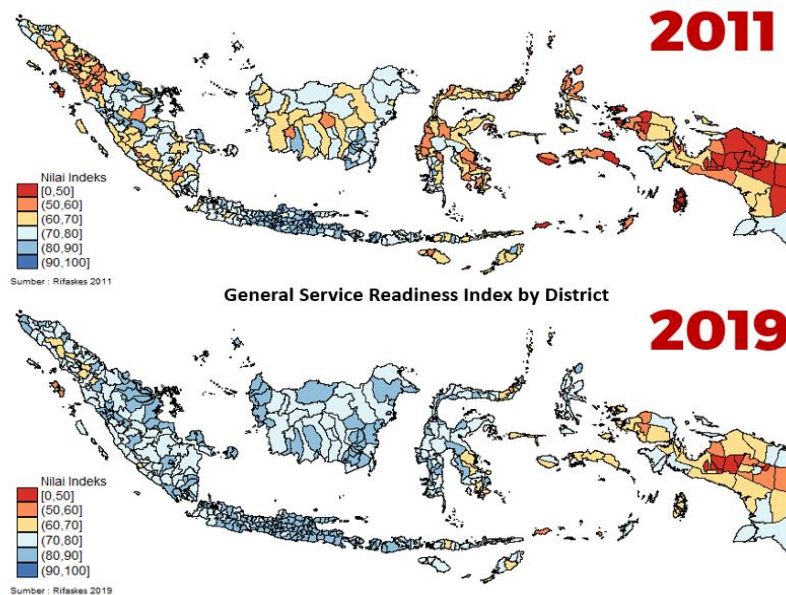
⁹⁰ World Bank and MoH 2022.

⁹¹ World Bank team analysis from the MoH's Health Profile for multiple years, conducted in 2023.

⁹² World Bank and MoH 2022.



Figure 4.2 General Service Readiness Index of *Puskesmas* by District



Source: World Bank and MoH 2022.

4. **Further analysis focusing on *Puskesmas* has been carried out in collaboration with the MoH using ASPAK.** The gap assessment for PHC was done twice, using the raw data extracted on a certain date and time (August 23, 2022, and April 5, 2023). The World Bank provided TA to present the data in a web-based interface that allows the MoH team to produce equipment gaps by province and district (in graphs) and at the *Puskesmas* level (in Microsoft Excel). The interface can provide the costs of equipment gaps at different levels, including ranking them by the cost magnitude. The cost data were derived from a rapid health equipment market price survey in 2021, which the World Bank team adjusted with the 2022 and 2023 inflation rate for the analysis. The information is presented in an interactive web-based dashboard.⁹³

5. **On average, many districts face equipment gaps of over 60 percent of what is needed at the PHC level, especially those in eastern Indonesia.** The figure shows slightly different numbers in central regions, especially Java where many districts are in the category of lacking 30 to 60 percent of the required equipment.

Referral Health Facilities (Hospitals) Gap Assessment

6. **Based on the high and increased cost of NCDs highlighted in the sectoral context and to strengthen and improve healthcare service at hospitals, the GoI has set out to focus on KJSU and KIA.** Similar to the PHC analytics, the GoI has identified the need to improve hospital service readiness to ensure the availability of services for KJSU and KIA citizens. Based on the gaps analysis mapping done by MoH, the GoI will need to ensure the availability of health facilities to provide adequate treatment for these conditions. In 2023, only about 40 hospitals could provide cathlab service and only about 10 hospitals could provide surgery for heart diseases⁹⁴, again with large disparities across the country. Similar observations are made for hospitals that can provide stroke treatment. The GoI will therefore need to procure a high quantity of equipment to treat heart diseases, such as Cathlab and CT scans, and cancer treatment, such as Mammography, Linac, PET-CT scan, Brachithery, Simulator/CT, SPECT-CT scan, Flowcytometer, IHK set, and CUSA equipment.

⁹³ MoH. 2023f. *Keadaan Alat Kesehatan di level Puskesmas Berdasarkan data ASPAK (State of Medical Devices at the Puskesmas level Based on ASPAK data)*. <https://wb-alkes.my.id/>; MoH 2023c.

⁹⁴ MoH 2022c.



Public Health Laboratories Gaps Assessment

7. **Indonesia's public health system faces significant challenges, with one of the most pressing challenges being the limited availability of fully operational public health laboratories.** Despite the growth in public health laboratories during COVID-19, as detailed in the sector context, there are major concerns related to optimization of the laboratory functionality. These include the following: (a) health laboratories are not yet integrated into the overall public laboratory system, and the new concept is just being introduced; (b) laboratory-based diseases and public health surveillance shows major gaps, also as outlined by the JEE for International Health Regulation implementation;⁹⁵ (c) there is no fostering system in which higher tier labs provide mentorship and support to lower tiers labs in strengthening human resource capacity and ensuring timely regular calibration and overall quality assurance; and (d) the digital information systems are highly siloed and lack integration.

8. **Experience from the COVID-19 pandemic provides lessons, especially related to preparedness for new emerging diseases and a swift and comprehensive response to public health emergencies.** The GoI plans to expand access to laboratory services across the country through the HSS Project. Therefore, it is important for public health laboratories to have the appropriate equipment, facilities, infrastructure, and healthcare workers with competent skillset to detect diseases and risk factors accurately and in a timely manner. In the absence of a laboratory facility database, as SILNAS is not yet established, the MoH conducted a special data collection comprehensive gap assessment. Data from all 514 districts were then used to develop a detailed plan for the equipment needed to provide standard services for each tier of the public health laboratory system.⁹⁶

Readiness Criteria Measurement

9. **The readiness criteria are key to determine the distribution of equipment to facilities to ensure smooth project implementation.** The staggered distribution approach will be based on the four readiness criteria, as currently being proposed: (a) availability of the equipment in the facility, (b) availability and capacity of human resources related to the equipment, (c) availability and functionality of infrastructure and basic utilities, and (d) medical waste management in accordance with existing local and national regulations. The main source of information for these criteria will be derived from ASPAK, especially for equipment and basic amenities. While SisDMK serves as the source for health personnel availability and capacity, the Medical Waste Management Information System (SIKELIM) provides the facility's status on waste management. Challenges arise as these systems operate separately. For Project preparation, the MoH relied on ad hoc data collection mechanism, using Google Form surveys to close information gaps needed to finalize the lists of equipment and assess the readiness of public healthcare facilities. Yet the established data mapping working group is working toward building an integrated data system, to be operational before project effectiveness.

10. **While a more sustainable mechanism for data collection to assess the readiness criteria needs to be established, an immediate approach is also needed:**

- (a) **Short term:** The readiness criteria will be assessed using data from both ASPAK and the ad hoc data collection. The MoH will conduct a series of meetings to review submitted proposals and triangulate its data with the ASPAK database and against readiness criteria indicators. This activity follows the budget planning cycle and is referred to as 'Desk' that is organized by the Central MoH and involves DHOs and all healthcare facilities. The 'Desk' process produces information needed to map facility readiness and finalize the budget planning especially for DAK Fisik. This approach is envisaged to inform the first-year distribution plan while the improvement of ASPAK is happening in parallel.

⁹⁵ A periodic independent evaluation from external international organizations on a country's implementation of the International Health Regulation. WHO definition: A JEE is a voluntary, collaborative, multisectoral process to assess country capacities to prevent, detect, and rapidly respond to public health risks whether occurring naturally or due to deliberate or accidental events.

⁹⁶ MoH. 2022e. *Pemetaan Kebutuhan Anggaran Sarana Prasarana Alat Labkesmas Tahun 2023 2024*. PowerPoint presented by MoH in September 2022.



- (b) **Medium term:** For ASPAK to serve as the primary data source for project implementation planning and monitoring, enhancements are necessary. These should encompass the integration of equipment variables related to medical equipment performance and ensure interoperability with other data sources, specifically those concerning SiSDMK, SILNAS, and SIKELIM. The improved and integrated ASPAK reduces the need for ad hoc data collection, and in the end will be able to entirely replace the ad hoc mechanism and may serve as the main source for allocation, distribution planning, and monitoring of Project implementation. This approach aims to develop a reliable and valid data collection system not only for the duration of the Project's life-span but well beyond that.

Data Verification

11. **ASPAK⁹⁷ is designed to produce the most updated and comprehensive information on health facilities infrastructure and equipment under the purview of the MoH and subnational health authorities** (Province and District Health Offices - PHO and DHO). ASPAK covers general and specialized hospitals, specialized clinics, *Puskesmas* and their network including auxiliary *Puskesmas* or *Pustu*, and all public health laboratories. ASPAK captures equipment information from lower-level public health laboratories under *Puskesmas* as Tier 1 labs is one of the *Puskesmas* service units. Each public health facility is required to report, through a web-based ASPAK application, the latest status of their infrastructure and equipment at minimum once a year. Information from ASPAK is used to monitor the availability and readiness of public health facilities to provide services according to national standards. The information is also a key input for the planning and budgeting of DAK Fisik. ASPAK relies on public health facilities to submit their latest updates on the abovementioned elements of health service delivery. The reporting and data update is scheduled twice a year, on June 30 and by December 31.

12. **In addition to ASPAK, there are other health information systems within the MoH that also record infrastructure and equipment of public health facilities that are yet interoperable.** Hospitals regularly report their service capacity (number of beds, types of health personnel, and services); performance indicators (bed occupation rate, turnover rate, length of stay, and so on); and specifically, coverage of the four key NCDs relevant to this Project through SIRS, which is an established reporting system. It is envisioned, however, that registries for KJSU will be established as the main information sources for Project indicators related to service coverage. The national public health laboratory system is currently developing SILNAS.

13. **The responsibility to monitor the data entry and quality of data of ASPAK falls under the DHO for all types of public health facilities within its catchment area.** The use of ASPAK data as the basis for the development of the local proposals for DAK Fisik is the strongest incentive for health facilities to report the most updated status of the facility readiness in timely manner. In practice, the verification mechanism of ASPAK, however, remains weak. For PHC and hospital gap assessments, the MoH used, mainly, ASPAK *Puskesmas* as the primary source of data for the PHC-level readiness for the Project preparation. The analysis uses *Permenkes* No. 43/ 2019 on *Puskesmas* standards and *Permenkes* 56/2014 for hospital standards as the benchmark. The decrees lay out the standards of services including minimum building requirements, infrastructure availability, equipment, and HRH for those facilities. ASPAK continues to improve. For instance, the ability of the system to record equipment at the *Pustu* level was added early in 2023. Additional information needed for Project monitoring could be included in the next ASPAK iteration during the preparation and implementation of the Project.

14. **A more systematic data verification mechanism will use an improved ASPAK as the main data source.** This will replace the ad hoc mechanisms, such as special survey and data collection using Google Forms, conducted during the Project preparation to fill in data gaps and ensure rapid verification. The use of existing fostering mechanisms (hospitals and labs) can be complementary and hence, needs to be sustained. As an illustration, for the hospital gaps assessment, the MoH extracts available equipment data for four key NCD priorities from ASPAK.

⁹⁷ MoH. 2018. *MoH Regulation No. 13/2018. ASPAK information board.* <https://aspak.kemkes.go.id/aplikasi/infoboard>.



The MoH (health facility team) then verifies the data from each public hospital through its designated foster hospitals (*Rumah Sakit Pengampu*) for each health priority subject as mentioned above.

15. **The strengthening of ASPAK will include ensuring interoperability with other information systems.** Establishing ASPAK's links with SisSDMK will enable the MoH to monitor readiness of facilities to receive the procured equipment. Interoperability of ASPAK with SIRS and SILNAS needs to be established in the coming months and, hence, is mapped under the digital transformation agenda.

16. **The MoH acknowledges that the existing ASPAK data validation mechanism can be further strengthened and expanded.** The requirements to update the ASPAK data twice every year has low compliance, and there are known issues associated with data quality related to timeliness, consistency in data entry, absence of clear definition and standard names of medical devices, and high turnover rate of asset management personnel at the facility and subnational levels. Therefore, for the Project, a comprehensive ASPAK analysis will be performed for all PHCs, referral facilities/hospitals, and laboratory facilities, which also includes information on HRH availability and utility access, to precisely define equipment gaps and facility readiness to receive the equipment procured under HSS. This will entail the following components:

- (a) A completed ASPAK will be set as the requirement for submitting a proposal for the Central-Subnational fiscal transfer. The MoH has been using the budgeting and planning process for one of the intergovernmental fiscal transfer schemes as an incentive to improve ASPAK data. During the planning process to allocate DAK Fisik between June and August every year, the MoH requires districts to submit the most updated and complete ASPAK data. The verification will be mainly checking the consistency between ASPAK data and the proposal during the consultation and document review process.
- (b) The verification for the hospital level will also use ASPAK as the primary source of information for referral facility readiness.
- (c) Field verification: The MoH will develop field verification arrangements for infrastructure and equipment for all health facility levels including hospitals; *Puskesmas*, *Pustu*, and *Posyandu*; and subnational labs to complement the document review. This approach can draw on valuable lessons learned from several World Bank-financed projects such as I-SPHERE and the Local Government and Decentralization Project.

Environmental Safety-Related Readiness Criteria

17. **Medical and laboratory waste management in Indonesia is an area of critical focus but is also facing significant challenges.** The Indonesian government aims to minimize environmental pollution and health risks by implementing regional-based medical waste management, through MoH Regulation 18/2020, which includes internal and external processes. Medical waste management can be performed both internally (within the healthcare facility) and externally (outside the facility, by third-party authorized companies). The internal process includes steps such as waste generation reduction, sorting, internal transport, temporary storage, and internal processing, while the external process includes external transport, collection, processing, and final disposal. Additionally, the ministerial regulation stipulates that local governments are responsible for facilitating the medical waste management for those healthcare facilities that are unable to manage their waste independently, while M&E reports are to be submitted to provincial and district health offices.

18. ***Puskesmas* located in the Java-Bali region, especially in urban areas and on the main islands, tend to separate medical waste.** They generally do not practice open burning. Health centers with appropriate waste disposal systems show a tendency to practice medical waste separation and avoid open burning. On the other hand,



health centers in rural areas often do not separate their waste and tend to manage it by burning.⁹⁸ Therefore, several challenges and risks associated with the current system remain:

- (a) **Inadequate segregation.** Many facilities in Indonesia are reported to struggle with proper segregation of waste at the source, leading to potentially infectious waste being mixed with general waste, posing significant health and environmental risks.
- (b) **Inadequate treatment facilities.** There may not be enough suitable treatment facilities to handle the volume and different types of waste produced, particularly in remote or less developed areas of the country.
- (c) **Lack of training and awareness.** Medical and laboratory personnel may lack sufficient training in appropriate waste handling procedures, leading to accidental exposure or improper disposal.
- (d) **Inappropriate disposal.** Even when treated, medical waste can have residual risks. If not disposed of correctly, it can still pose hazards to public health and the environment.
- (e) **Limited monitoring and tracking.** Tracking the journey of waste from generation to final disposal is crucial for ensuring proper handling and disposal but can often be challenging.
- (f) **Quality-gap across regions.** While region-based systems offer flexibility in adapting medical waste management procedures to local contexts and challenges, variations in fiscal capacity and local governance can lead to inconsistencies in the quality of medical waste management across different regions.

19. **Hazardous and toxic waste from healthcare facilities is externally transported to either a collection point or a final processing site, depending on the quantity of waste and the accessibility of the facility.** According to MoH Regulation No. 18/2020, medical waste transportation from these facilities to collection points is managed by the facilities themselves. In contrast, the direct transportation to the final processing sites from these facilities or from the collection points requires licensed business units or third parties.

20. **The possibility of an increase in medical waste is likely to be a concern with the rise in health facility utilization due to the increased number of medical equipment.** MoH (2019) has indicated that 297 tons of medical waste are generated each day. This figure was projected to have risen by up to 30 percent due to the impact of the COVID-19 pandemic. Additionally, it was documented that an approximate 60 million tons of hazardous and contaminated waste was generated in 2021. Ensuring that healthcare facilities comply with these regulations will not only help mitigate potential hazards posed by this waste but also foster a responsible and legally compliant approach to handling medical waste.

21. **In line with national and subnational regulations that have been put in place, the following points may help guide health facilities adhere to MoH Ministerial Regulation No. 18/2020:**

- (a) **Reduction, segregation, and storage facilities.** Health facilities should prioritize medical waste minimization through effective source segregation. Moreover, health facilities must have designated areas for the segregation and storage of medical waste. These areas must be able to accommodate the increased volume of waste generated by the additional medical equipment.
- (b) **Waste management plan.** Health facilities must have a waste management plan that considers the increased volume of waste generated by the additional medical equipment. The plan must be regularly reviewed and updated to ensure compliance with regulations.

⁹⁸ IRIANTI, Sri and PRASETYOPUTRA, Pugh. 2019. "Waste Management in Indonesian Public Health Centres: Factors Associated with Waste Segregation Practices and Disposal Methods". *Jurnal Ekologi Kesehatan*. 18(1): 1–14. <http://ejournal2.bkpk.kemkes.go.id/index.php/jek/article/view/1831>.



- (c) **Trained staff.** Health facilities must have trained staff who are responsible for the proper handling and disposal of medical waste. Staff must be trained on the proper use of personal protective equipment and the handling of hazardous waste and must be able to handle the increased volume of waste generated by the additional medical equipment.
- (d) **Proper transportation.** Health facilities must ensure that medical waste is transported in accordance with regulations, considering the increased volume of waste generated by the additional medical equipment.
- (e) **Disposal facilities.** Health facilities must have access to appropriate disposal facilities for the increased volume of medical waste generated by the additional medical equipment.



ANNEX 5: Economic Analysis and Lessons Learned

1. **The proposed Project is expected to improve healthcare access and quality across Indonesia and lead to better health outcomes with reduced spatial and socioeconomic disparities.** The tri-faceted Project presents significant population health benefits that are likely to drive improved human capital and economic growth, including the following:
 - (a) **Benefits associated with strengthened PHC systems.** In low-income to middle-income countries, an expanding body of evidence shows the cost-effectiveness of strengthening PHC systems, including through the procurement of appropriate equipment. A 2018 analysis classified 198 (91 percent) of 218 essential UHC interventions as PHC and another report estimated that up to 75 percent of the projected health gains from the Sustainable Development Goals could be achieved through strengthened PHC. Expanding access to a core set of integrated interventions for maternal and child health (narrower than PHC), including through the provision of needed equipment to primary health centers, is calculated to generate economic and health benefits valued at 7.2 to 11.3 times more than the costs of the interventions.
 - (b) **Benefits associated with strengthened laboratory systems.** Expanding access to laboratories and standardizing services will improve public health status, especially by increasing the early detection of a disease before it becomes serious. Effective and timely testing through a multi-tier public laboratory system integrated with primary care offers the potential for substantial savings by enabling rapid delivery of results and reducing facility costs. The benefits of a more comprehensive and accessible lab system can also be seen by considering the impact on quality of care and patient outcomes, as well as the impact on resource utilization. By making lab testing more accessible and efficient, the management of both communicable and noncommunicable diseases will improve, leading to reduced mortality and morbidity for Indonesians. Providing equipment to new and existing *Labkesmas* and the necessary HRH through domestic funds to operate *Labkesmas* will increase access and quality of care for Indonesians and will make the health system more patient centered. This will translate to more efficient detection and control of emerging and reemerging infectious diseases and better management of NCDs, which drive most of the disease burden in Indonesia. Gains from improved health outcomes are, in turn, expected to ameliorate and build stronger human capital in the country. Furthermore, proposed activities related to the strengthening of the detection capacity of *Labkesmas* to increase Indonesia's PPR will ensure that pathogens causing avoidable mortality and illness are detected early on, especially those with pandemic potential, and that people, the health system, and the economy are better protected against emerging pandemics.
 - (c) **Benefits associated with strengthened hospital systems.** Access to timely care, particularly timely hospital care, is essential for the management of complex diseases, especially in costly conditions. Achieving timely hospital care requires having systems and equipment in place that minimize wait times and abate barriers to accessing care. Waiting times are a key performance indicator for many healthcare systems and are used to encourage improved performance in healthcare institutions with the aim of delivering high-quality care without unnecessary delay. Many patients who wait a long time for their surgery, such as the 4–12 months for cardiovascular patients in Indonesia, are more likely to report problems, which have been associated with reduced quality of life. Prolonged pain, discomfort, anxiety, and disability are initial consequences for waiting patients. The hospital component would make hospitals more accessible, effective, and streamlined, thus leading to improved health outcomes in the population (decrease in mortality and morbidity). Gains from improved health outcomes are in turn expected to ameliorate and build stronger human capital in the country—a key driver of economic growth.
2. **A detailed economic and financial analysis of the Project—valuing economic benefits (gained productive life years) and financial benefits (such as gains from lab test fees) with conservative estimates—produces a net**



present value of US\$8.5 billion and a benefit-cost ratio of 3.1. Considering the present value of project costs (estimated at US\$4,618,545,526) and the present value of expected benefits (estimated at US\$13,093,845,597), the net present value of the proposed Project is expected to be US\$8,475,300,072. The positive net present value indicates that benefits outweigh costs, making the HSS Project a sound investment. The benefit-cost ratio resulting from the analysis is estimated at 3.1, meaning that for each US\$1 of investment through the proposed Program, a return of US\$3.1 is expected. These results are based on conservative assumptions and likely underestimate the total benefits. They also fail to account for positive spillovers that will arise from gains due to improved technical and allocative efficiency. For example, economic benefits from the early detection and treatment of diseases are not considered in the calculations. Table 5.1 contains the detailed calculations of the costs and benefits of the Project.

3. The Project will contribute to improved technical and allocative efficiency in the delivery of service in the health sector. First, by providing key services at the lowest appropriate level of the health system, PHC can decrease the need for unnecessary hospital admissions, reduce potentially preventable readmissions, and limit inappropriate use of emergency departments—thus improving the allocative efficiency of the health system. The proposed primary care-focused component will therefore contribute to saving healthcare costs related to disease treatment by focusing on cost-effective preventive and curative measures and saving the socioeconomic burden that is related to the extra care needed for potentially preventable diseases. Furthermore, as the institutional capacity of PHC centers is strengthened and the availability and quality of key inputs are improved, more facilities will be pushed to the production function frontier and will therefore deliver better services at a given cost—an improvement in technical efficiency. Furthermore, increasing the capacity and efficiency of lab testing also yields efficiency gains for the health sector. In terms of allocative efficiency, more prompt lab testing linked to primary care would divert funds from more costly testing at higher levels of care and would reduce unnecessary referrals and wait times for diagnosis. Furthermore, easier access to lab testing would make the process of care shorter and more efficient. Lastly, given resource constraints, improving the efficiency of hospital systems and referral systems has the potential to improve the quality of NCD management and other illnesses and generate significant financial savings. This is especially the case as numerous referral interventions, such as injuries or diagnostic procedures, could be provided at a much lower cost, if efficient referral systems would be in place to direct patients to more appropriate facilities.

4. The Project is also expected to promote equity in access to healthcare services and reduce the financial burden on poor households. Evidence shows that strong primary care is correlated with a more equitable distribution of health services: a finding that holds true in both cross-national and within-national studies.⁹⁹ The component that strengthens the primary care system is expected to redirect resources from expensive hospital care to relatively inexpensive basic primary care and reduce spending on higher levels of care, along with OOP payments, which are predominately incurred by disadvantaged population groups. Additionally, increased availability of *Labkesmas* would improve accessibility for poor households and reduce indirect OOP spending on health such as those related to travel costs. Lastly, evidence also indicates that patients in lower socioeconomic categories report worse outcomes in quality-of-life parameters when faced with long wait times for hospital referrals or when they are assigned to long surgical queues.¹⁰⁰ Higher marginal benefits are therefore expected for the poor and vulnerable from strengthening hospital systems to ensure supply-side readiness and accommodate increased demand.

5. The Project is an investment in a public good that generates strong positive externalities at the national and global levels. A public good, in the economic sense, are services and functions that are both non-rival and non-

⁹⁹ WHO. 2018b. *Building the Economic Case for Primary Health Care: A Scoping Review*. <https://www.who.int/publications/i/item/WHO-HIS-SDS-2018.48>; Benotti et al 2021.

¹⁰⁰ SUTHERLAND, Jason Murray, CRUMP, Trafford R., CHAN, Angie et al. 2016. "Health of Patients on the Waiting List: Opportunity to Improve Health in Canada?". *Health Policy*. 120(7): 749–57. <https://www.sciencedirect.com/science/article/pii/S0168851016301105?via%3Dihub>.



exclusive, generating strong positive externalities. The Project, which aims to strengthen the supply-side readiness of Indonesia’s health system, will lead to positive economic externalities at the country and global level because of the close links with Indonesia’s leadership in the areas of One Health and PPR. The laboratory strengthening component would, for example, improve testing, detection, and prevention of new or reemerging pathogens, thus enabling early detection and control of potential pandemics. Benefits gained from such systems have been shown to significantly outweigh initial investment costs.

6. **A sensitivity analysis confirms that the HSS Project remains economic viable under stricter and more conservative assumption.** With adjustments including a higher discount rate, higher maintenance and management costs, and lower expected health benefits to the population, the Project’s net present value (NPV) and Benefit-Cost Ratio remain positive.

Table 5.1: Sensitivity analysis for the economic viability of the HSS project

Sensitivity analysis	Present scenario	Higher discount rate (increase in 2 percentage points - 8% instead of 6%)	Higher maintenance and management costs beyond project period (increase in 10 percentage points - 20 % instead of 10%)	Lower estimated gained productive life years per person from SOPHI and SIHREN (0.10 instead of 0.25 years for SOPHI and 0.05 instead of 0.10 years for SIHREN)	Combined revised assumptions
NPV (in US\$ billions)	8.5	7.7	7.3	2.9	1.5
Benefit-Cost Ratio (US\$ gained for every dollar invested)	3.05	3.05	2.29	1.74	1.31



Table 5.2. Economic and Financial Analysis for the HSS IPF (US\$)

	Under Project Period					Beyond Project Period				
Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Projected costs										
Estimated SOPHI costs	(283,584,026)	(381,333,222)	(442,395,881)	(125,137,392)	(102,229,810)	(133,468,033)	(133,468,033)	(133,468,033)	(133,468,033)	(133,468,033)
Estimated InPULS costs	(118,422,224)	(95,752,648)	(178,555,004)	(101,056,512)	(95,214,568)	(58,900,096)	(58,900,096)	(58,900,096)	(58,900,096)	(58,900,096)
Estimated SIHREN costs	(792,321,633)	(396,160,817)	(396,160,817)	(198,080,408)	(198,080,408)	(198,080,408)	(198,080,408)	(198,080,408)	(198,080,408)	(198,080,408)
Total estimated costs of HSS	(1,194,327,883)	(873,246,687)	(1,017,111,702)	(424,274,312)	(395,524,787)	(390,448,537)	(390,448,537)	(390,448,537)	(390,448,537)	(390,448,537)
Projected benefits										
Estimated SOPHI benefits	683,823,282	688,610,045	693,430,315	698,284,328	703,172,318	708,094,524	713,051,186	718,042,544	723,068,842	728,130,324
Estimated InPULS benefits	383,733,535	386,419,670	389,124,608	391,848,480	394,591,420	397,353,559	400,135,034	402,935,980	405,756,531	408,596,827
Estimated SIHREN benefits	661,916,649	666,550,065	671,215,916	675,914,427	680,645,828	685,410,349	690,208,222	695,039,679	699,904,957	704,804,292
Total estimated benefit from HSS	1,729,473,467	1,741,579,781	1,753,770,839	1,766,047,235	1,778,409,566	1,790,858,433	1,803,394,442	1,816,018,203	1,828,730,330	1,841,531,443
Net projected cash flow	535,145,584	868,333,094	736,659,137	1,341,772,923	1,382,884,779	1,400,409,896	1,412,945,905	1,425,569,666	1,438,281,793	1,451,082,906
Discount rate	6%									
Net present value of the proposed Project	8,475,300,072									
Benefit-cost ratio (US\$ gained for every dollar invested)	3.1									



Lessons Learned

7. **This section outlines the key lessons learned from the procurement of medical equipment across countries.** It describes what is required to optimize VfM in health systems, particularly as it relates to the purchase of high-value and high-volume medical equipment.
8. **A key part of the equipment purchase planning process should involve estimation of the TCO.**¹⁰¹ The concept of TCO for medical equipment recognizes the importance of planning, preparing, monitoring, managing, and funding the complete equipment life cycle.¹⁰² Considering only the purchase price and delivery cost in medical equipment purchase decisions will not maximize VfM. Central planners also need to account for indirect costs related to installation, operation, maintenance, and disposal. Relying on TCO in central planning of medical equipment purchase will ensure reliable access to functional medical equipment and patient benefits. These considerations improve sustainable use of medical equipment, improve budgeting process, improve planning for installation and maintenance, and ensure safe disposal of the equipment at the end of the life cycle. Comparison of the TCO of different equipment types, models, or ownership models is critical for value-based procurement decision-making. VfM is ensured when a medical equipment with a lower TCO is prioritized over equipment that offers lower initial purchase price but has a high TCO over the lifetime of the equipment.
9. **Alternative procurement methods should be considered by central planners when acquiring complex and expensive medical equipment.** These basic options include capital asset purchase, leasing (capital lease or operating lease), and renting. Leasing agreements could include bundling the equipment lease with an all-inclusive service agreement or bundling the equipment lease with a 'reagent rental' agreement. These procurement models that offer an alternative to buying the medical equipment directly are becoming more common in public and private laboratories and hospitals in developed countries. A key advantage of these models is that they can ensure the provision of services needed to install, operate, and maintain complex and expensive laboratory equipment to manufacturer specifications. Determining the optimal model should consider several factors including the pace of technology change; expected life-span of the equipment; frequency of operation; frequency of maintenance, inspection, and calibration services and potential risks of malfunction; and the TCO.¹⁰³
10. **The capacity of the health facility receiving the equipment needs to be assessed to ensure that the equipment purchased will be functional and utilized optimally.** Suboptimal preparation in the readiness of facilities to operate medical equipment purchased often leads to wastage. It is estimated that between 40 percent to 70 percent of medical equipment in low- and middle-income countries is broken, unused, or unfit for purpose.¹⁰⁴ This is often due to inadequate considerations of the operational needs and constraints in the planning and procurement processes. Key considerations to ensure optimal utilization and VfM include (a) analysis of installation site characteristics; (b) end user and technician skills; (c) availability and stability of power supply and other amenities; (d) availability of spare parts and funding sources; (e) planning for consumables supply and funding; (f) ownership of the total cost of equipment; and (g) the performance and functional requirements of the equipment being purchased.

¹⁰¹ TCO is the sum of the cost to procure, cost to operate, maintain and manage, cost to decommission and dispose minus resale value.

¹⁰² The Access and Delivery Partnership. 2020. *Value-Based Procurement of Medical Equipment*.

https://adphealth.org/upload/resource/VBP_Guide_EN_June2020.pdf.

¹⁰³ The Access and Delivery Partnership 2020.

¹⁰⁴ The Access and Delivery Partnership 2020.



ANNEX 6: Results Framework and Monitoring

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Improved utilization	
Number of annual outpatient visits, disaggregated by gender (Number)	
Oct/2023	Dec/2028
Puskesmas: 295,358,582 visits; KJSU Hospitals: 4,848,075 visits	25% above. Puskesmas: 370,000,000 visits; KJSU Hospitals: 6,060,000 visits
Number of annual laboratory examinations for ILI-SARI diagnostics (Labkesmas level 1-5) (Number)	
Oct/2023	Dec/2028
708 tests	8500 tests
Improved availability	
Percentage of Puskesmas (incl. Labkesmas tier 1) for which equipment meets 80 percent of minimum requirements (Percentage)	
Oct/2023	Dec/2029
6.6%	90%
Number of districts in Indonesia with at least 1 Madya-level referral hospital for KJSU (Number)	
Oct/2023	Dec/2028
1 district	514 districts
Functionality	
Number of instances in the last 6 months where equipment downtime exceeded the benchmarks set under the Project contracts (Number)	
Oct/2023	Dec/2029
N/A	Less than 10% of devices procured under the project

Intermediate Indicators by Components

Baseline	Closing Period
Component 1: Public primary care equipment provision across Indonesia ("SOPHI")	
Percentage of target Puskesmas under the project for which key energy-efficient equipment types have been procured, delivered, installed, and HR in facilities received operational training from vendor (Percentage)	
Oct/2023	Dec/2029
0%	90%
Percentage of under-5 children, receiving growth monitoring and promotion (GMP) services, disaggregated by gender (Percentage)	



Oct/2023	Dec/2029
80%	90%
Percentage of Pustu/Poskesdes within the scope of this project for which equipment meets minimum requirements (Percentage)	
Oct/2023	Dec/2028
13%	80%
Percentage of adolescent girls tested for anemia in the target facilities (disaggregated by gender, in Puskesmas and Pustu) (Percentage)	
Oct/2023	Dec/2028
45.8%	60%
Component 2: Public referral hospital equipment across Indonesia ("SIHREN")	
Percentage of target public hospitals under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational (Percentage)	
Oct/2023	Dec/2028
0%	90%
Component 3: Public health laboratory equipment across Indonesia ("InPULS")	
Percentage of target public laboratories under the project for which key energy efficient equipment types have been procured, delivered, installed, and HR in facilities received operational training (Percentage)	
Oct/2023	Dec/2028
0%	80%
Percentage of facilities (Labkesmas) in which DM tests are regularly reported (Percentage)	
Oct/2023	Dec/2028
0%	80%
Component 4: Project Management, Administration, Digitization and Training	
Number of high-risk pregnancy screenings reported by facilities (Number)	
Oct/2023	Dec/2029
4,221,115 reported screenings	4,500,000 reported screenings (Annual)
The share of feedback, grievances, inquiries, and other interactions submitted using LAPOR that have been adequately responded remains above 90 percent throughout project implementation (Yes/No)	
Oct/2023	Dec/2029
Yes	Yes



Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Improved utilization	
Number of annual outpatient visits, disaggregated by gender (Number)	
Description	A utilization indicator to measure the change in the number of outpatient visits to a healthcare facility over a specific period compared to a baseline or reference period. The total number of outpatients will be counted for all healthcare services at Puskesmas, as well as for KJSU services, defined based on the leveling of the hospital's capacity and competency to provide services as set by MoH.
Frequency	Annual
Data source	Puskesmas: DJSN SISMONEV dashboard; Hospital: SIRS Online
Methodology for Data Collection	Reports
Responsibility for Data Collection	Directorate of Health Facilities; Information and Public Relations Working Team, Secretariat Directorate General of Health Services; Directorate of Referral Health Services
Number of annual laboratory examinations for ILI-SARI diagnostics (Labkesmas tiers 1-5) (Number)	
Description	"Number of annual laboratory examinations for ILI-SARI diagnostics (Labkesmas level 1-5)" measures the annual number of diagnostic laboratory tests (molecular tests) for influenza-like illness (ILI) and severe acute respiratory infections (SARI) conducted in Labkesmas tiers 1-5. ILI is an acute respiratory infection with (i) measured fever of measured fever of $\geq 38\text{ C}^\circ$; and (ii) cough; with (iii) onset within the last 10 days. SARI is an acute respiratory infection with: (i) history of fever or measured fever of $\geq 38\text{ C}^\circ$; and (ii) cough; with (iii) onset within the last 10 days; and (iv) requires hospitalization.
Frequency	Annual
Data source	Online ILI-SARI and COVID-19 surveillance reporting system
Methodology for Data Collection	Reports
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate of Public Health Management; Data and Information Center (Pusdatin); Secretariat Directorate General of Prevention and Control (P2P), and Directorate of Disease Prevention and Control of Infectious Diseases (P2PM).
Improved availability	
Percentage of Puskesmas (incl. Labkesmas tier 1) for which equipment meets 80 percent of minimum requirements (Percentage)	
Description	The indicator refers to the proportion of Puskesmas facilities (including Labkesmas Tier 1) that have been provided with all the necessary medical equipment, supplies, and facilities to meet at least 80% of the standard requirements, as defined by the applicable regulation (Permenkes 43 of 2019, as of October 2023), for delivering comprehensive healthcare services.
Frequency	Semiannual
Data source	Enhanced ASPAK; SPSE/Procurement Biro (PBJ) MoH
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate of Public Health Governance; Directorate of Health Facilities; Goods and Services Procurement Bureau; Bureau of Finances; State Property; Data and Information Center; Digital Transformation Office
Number of districts in Indonesia with at least 1 Madya-level referral hospital for KJSU (Number)	
Description	Used to measure the availability of specific medical services or specialties in hospitals in various districts over a given period
Frequency	Annual
Data source	RS Online
Methodology for Data Collection	Report
Responsibility for Data Collection	Directorate of Health Services; (Information and Public Relations Working Team, Secretariat Directorate General of Health Services); Directorate of Referral Health Services
Functionality	
Number of instances in the last 6 months where equipment downtime exceeded the benchmarks set under the Project contracts (Number)	
Description	This indicator measures the number of times equipment downtime exceeded the benchmarks set under the Project contract. It aims to ensure procured equipment remain function after delivery and throughout the lifetime of the Project.



	Downtime can occur for various reasons, including maintenance, repairs, technical failures, or system upgrades.
Frequency	Semiannual
Data source	Enhanced ASPAK (including ad hoc arrangement)
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health (Planning Program and MonEv Working Team); Directorate of Public Health Governance; Directorate of Health Promotion; Directorate of Health Facilities; Information Working Team, Secretariat Directorate General of Health Services Public Relations; Directorate General of Referral Health Services; Data and Information Center; Digital Transformation Office

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Component 1: Public primary care equipment provision across Indonesia ("SOPHI")	
Target Puskesmas under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training from vendor (Percentage)	
Description	It refer to specific types of energy-efficient equipment that has been identified as crucial for reducing energy consumption and promoting sustainability in healthcare facilities. Human resources received operational training from the vendor, where applicable. This indicator evaluates the percentage of facilities where the necessary human resources have received operational training from vendor.
Frequency	Semiannual
Data source	Enhanced ASPAK
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate General of Public Health Governance; Data and Info Center; Digital Transformation Office; Secretariat Directorate General Human Resources; Goods and Services Procurement Bureau
Percentage of under-5 children, receiving growth monitoring and promotion (GMP) services, disaggregated by gender (Percentage)	
Description	It refers to the proportion of children under the age of 5, disaggregated by gender, who have received growth monitoring and promotion services. Growth monitoring and promotion (GMP) services aim to monitor normal development and identify potential issues or development delays as early as possible.
Frequency	Annual
Data source	e-PPGBM
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate of Nutrition, Maternal and Child Health; Directorate of Health Promotion and Community Empowerment; Data and Information Center; Digital Transformation Office
Percentage of Pustu/Poskesdes within the scope of this project for which equipment meets minimum requirements (Percentage)	
Description	It refers to the proportion of Pustu/Poskesdes covered by the project that is equipped with medical equipment meeting the predefined minimum standards or criteria, as defined by the applicable MoH regulation (ILP Guideline - KMK no 2015 of 2023).
Frequency	Semiannual
Data source	Enhanced ASPAK, SPSE/Procurement Biro (PBJ) MOH
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate of Public Health Governance; Data and Information Center; Digital Technology Office; Procurement of Goods and Services
Percentage of adolescent girls tested for anemia in the target facilities (disaggregated by gender, in Puskesmas and Pustu) (Percentage)	
Description	The count of screenings conducted to identify cases of anemia within the Puskesmas and Pustu
Frequency	Annual
Data source	Komdat Kesmas
Methodology for Data Collection	Report



Responsibility for Data Collection	Secretariat Directorate General of Public Health (Planning Program and MonEv Working Team); Directorate of Public Health Governance; Directorate of Nutrition, Maternal and Child Health; Directorate of Health Promotion; Directorate of Health Equipment; Data and Information Center; Digital Transformation Office
Component 2: Public referral hospital equipment across Indonesia (“SIHREN”)	
Percentage of target public hospitals under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational (Percentage)	
Description	Percentage of target public hospitals under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training from the vendor, where applicable.
Frequency	Semiannual
Data source	Enhanced ASPAK
Methodology for Data Collection	Report
Responsibility for Data Collection	Information and Public Relations Working Team, Secretariat Directorate General of Health Services; Directorate of Health Facilities; Directorate of Referral Health Services; Data and Information Center; Digital Transformation Office
Component 3: Public health laboratory equipment across Indonesia (“InPULS”)	
Target public laboratories under the project for which key energy efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training (Percentage)	
Description	Percentage of target public laboratories under the project for which key energy efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training from the vendor, where applicable
Frequency	Semiannual
Data source	Enhanced ASPAK
Methodology for Data Collection	Report
Responsibility for Data Collection	Information and Public Relations Working Team, Secretariat Directorate General of Health Services; Directorate of Health Facilities; Directorate of Referral Health Services; Data and Information Center; Digital Transformation Office
Facilities (Labkesmas) in which DM tests are regularly reported (percent) (Percentage)	
Description	The "Percentage of facilities (Labkesmas tier 2) in which DM tests are regularly reported through the dedicated Data Recording and Reporting System" refers to the proportion of Labkesmas (tier 2) where test results for Diabetes Mellitus (DM) (including zero case/sero test) are regularly, according to the relevant regulation, reported through the dedicated data recording and reporting system.
Frequency	Annual
Data source	Database SATU SEHAT (Database SIKN)
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health; Directorate of Health Facilities; Directorate General of Public Health Governance; Digital Transformation Office
Component 4: Project Management, Administration, Digitization and Training	
Number of high-risk pregnancy screenings reported by facilities (Number)	
Description	It refers to the screenings for pregnant individuals that are conducted in healthcare facilities to identify pregnancies that may have an increased risk of complications. These screenings are performed to assess factors such as maternal age, medical history, and specific conditions that may increase complications during pregnancy, allowing healthcare providers to appropriate care/monitoring.
Frequency	Annual
Data source	Komdat Kesmas; Satu Sehat
Methodology for Data Collection	Report
Responsibility for Data Collection	Secretariat Directorate General of Public Health (Planning Program and MonEv Working Team); Directorate of Public Health Governance; Digital Transformation Office; Data and Information Center; Directorate of Nutrition, Maternal and Child Health; Directorate of Health Promotion; Directorate of Health Equipment
The share of feedback, grievances, inquiries, and other interactions submitted using LAPOR that have been adequately responded remains above 90 percent throughout project implementation (Y/N)	



Description	It aims to ensure 90% or above of cases of feedback, grievances, inquiries, and other interactions submitted using LAPOR in relation to their interactions with healthcare services provided by the primary care centers, hospitals, and laboratories, to which an adequate response has been given. The details will be clarified in the POM.
Frequency	Annual
Data source	LAPOR
Methodology for Data Collection	Report
Responsibility for Data Collection	Bureau of Communication and Public Services



ANNEX 7: Gender Entry Points

1. Over the past two decades, Indonesia has made significant strides in improving gender equality outcomes; however, Indonesia’s MMR remains high. On the 2022 Global Gender Gap Index Ranking, Indonesia scores 0.97 on the Health and Survival Index, above the regional average of 0.95.¹⁰⁵ Yet, the nation’s MMR at 173 deaths per 100,000 live births is far greater than the East Asia Pacific average of 69 deaths per 100,000 live births. A study conducted in East Java found that the most common causes of maternal mortality were (pre-)eclampsia (30.1 percent) and hemorrhage (24.7 percent).¹⁰⁶ The majority of these cases are preventable through high-risk pregnancy screening conducted during antenatal care (ANC) visits. For example, hypertension is a key risk factor for both pre-eclampsia/eclampsia and hemorrhage and is detectable and treatable through routine ANC. Additionally, ultrasounds can detect physical abnormalities in the pregnancy that could lead to high-risk births. High adolescent anemia rates also play a role in high MMR, as the effects on health carry over into adulthood and pregnancy.

2. Low quality of ANC at PHC facilities is a key determinant of maternal mortality, with many facilities ill-equipped to conduct high-risk pregnancy screenings. The GoI has guidelines recommending that all pregnant mothers complete six ANC visits. These ANC visits include screenings that help identify high-risk pregnancies, which are characterized by the presence of one or more of the following conditions: (a) obesity or underweight/malnourished, (b) hypertension, (c) anemia, (d) sexually transmitted diseases, (e) gestational diabetes, and (f) physical abnormalities in the reproductive area or in the fetus. Despite 88 percent of women completing four ANC visits across Indonesia in 2021,¹⁰⁷ maternal health services provided are often poor quality, with many health facilities ill-equipped to adequately detect high-risk pregnancies for referral care and closer monitoring. Considering these findings, the Project will finance the procurement of medical and laboratory equipment to strengthen service delivery of high-risk pregnancy screenings (table 7.1).

3. The Project aims to address critical gender gaps in the area of maternal health services, namely low levels and quality of high-risk pregnancy screening and high adolescent anemia rates by equipping primary care facilities with the requisite medical equipment to identify high-risk pregnancies and anemia. The proposed gender actions are described in Table 7.1 below – the following two indicators in the Project’s results framework will be used to monitor the progress in closing the identified gender gaps during project implementation: (1) Number of high-risk pregnancy screenings reported by facilities (Number), and (2) Percentage of adolescent girls tested for anemia in the target facilities (disaggregated by gender, in Puskesmas and Pustu) (Percentage). In addition, gender disaggregation will be done to also monitor gender inclusiveness under the Project: (1) Number of annual outpatient visits, disaggregated by gender (Number), (2) Percentage of under-5 children, receiving growth monitoring and promotion (GMP) services, disaggregated by gender (Percentage).

Table 7.1. Gender Results Chain Entry Points to Address High MMR in Indonesia















Gender Gap	Gender Actions	Results Indicators
Cross-cutting: Primary Care (SOPHI), and Laboratory (InPULS)		
Low levels and quality of high-risk pregnancy screening delivered plays a significant role in high maternal mortality, in large part due to a lack of medical equipment	Equipping primary care facilities with the requisite medical equipment to identify high-risk pregnancies through presence of the following conditions:	Percentage of adolescent girls tested for anemia in the target facilities (disaggregated by gender, in Puskesmas and Pustu)

¹⁰⁵ WEF (World Economic Forum). 2022. *Global Gender Gap Report 2022*. <https://www.weforum.org/reports/global-gender-gap-report-2022/>.

¹⁰⁶ MAHMOOD, Mohammad Afzal, HENDARTO, Hedy, LAKSANA Muhammad Ardian Cahya et al. 2021. "Health System and Quality of Care Factors Contributing to Maternal Deaths in East Java, Indonesia." *PLoS ONE* 16(2). <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247911>.

¹⁰⁷ MoH. 2021c. *Laporan Akuntabilitas Kinerja Instansi Pemerintah (LAKIP) Direktorat Kesehatan Keluarga Tahun 2021 (Performance Report of the Directorate of Family Health for 2021)*. <https://kesmas.kemkes.go.id/assets/uploads/contents/others/KESGA.pdf>.



Gender Gap	Gender Actions	Results Indicators
	<p>Underweight/malnourished</p> <p>1.  Measuring tape</p> <p>Hypertension</p> <p>2.    Blood pressure monitors</p> <p><u>Anemia, sexually transmitted diseases, and gestational diabetes</u></p> <p>3.   Hematology analyzers</p> <p>4.  Portable blood test machines</p> <p><u>Detection of abnormalities in the pregnancy that are risky to mother and fetus</u></p> <p>5.   Ultrasound machines</p>	<p>Number of high-risk pregnancy screenings reported by facilities</p>
<p style="text-align: center;">  Hospital  Labkesmas  Puskesmas  Pustu  Posyandu </p>		



ANNEX 8: Climate Change Adaptation and Mitigation - Climate Co-Benefits

Vulnerability Context

1. Indonesia is significantly exposed to a broad set of disasters, including cyclones, earthquakes, tsunamis, heavy rainfall, droughts, sea level rise, floods, landslides, and soil erosion, which together make Indonesia the 49th most climate-vulnerable country out of 191 around the globe.¹⁰⁸ Projections estimate that potential economic losses from climate change impacts in Indonesia will reach as high as IDR 554 trillion (approximately US\$37.8 billion) over 2020–2024 across the marine and coastal, water, agriculture, and health sectors—this last one alone contributing IDR 31 trillion (approximately US\$2.1 billion).¹⁰⁹ Climate change is set to deepen this cost, with losses anywhere between 2.5 and 7 percent of GDP by 2100, and the poorest bearing the brunt of this burden.¹¹⁰ The climate disaster risk index is considered ‘high’ in 221 out of the 514 districts of Indonesia (43 percent).¹¹¹

2. Natural hazards and extreme events, set to worsen in frequency and severity due to climate change, pose particularly significant threats to population health and challenge Indonesia’s health system. Under a high greenhouse gas emission scenario, Indonesia is, for example, projected to face extreme heatwaves as often as once every two years by the end of the twenty-first century,¹¹² along with a surge in deaths due to climate-related food scarcity, estimated to reach 35.1 deaths per million population by 2050.¹¹³ Changing temperature and rainfall patterns are moreover projected to significantly increase climate-sensitive vector-borne diseases, such as dengue and malaria,¹¹⁴ thereby further straining an already-overexerted health system, which needs to be endowed with the additional capacity to tackle a steep increase in climate-related diseases and health conditions as well as peak demand in case of climate change-induced natural disasters. Furthermore, climate change will likely also have a considerable impact on health facilities, with climate-related events causing approximately US\$16.8 billion in infrastructure damage and having affected nearly 8 million lives across Indonesia in the decade leading up to 2016 alone. Health infrastructure was particularly adversely affected, as many facilities do not meet resilience standards. Thus, there is an urgent need to address the double burden of increased demand and damage to infrastructure through a strengthened primary and referral care and laboratory system, with significantly increased early diagnosis and adequate treatment capacity and high-quality, robust, and energy-efficient equipment suitable to sustainably operate in the diverse Indonesian climate and environmental context.¹¹⁵

Climate Activities

3. Considering this vulnerability context, the Project intends to implement the following activities to adapt to the impact of climate change and mitigate against greenhouse gas emissions:

¹⁰⁸ European Commission 2023.

¹⁰⁹ Antara 2022.

¹¹⁰ World Bank and ADB 2021.

¹¹¹ BNPB 2022.

¹¹² World Bank and ADB 2021.

¹¹³ Springmann et al. 2016.

¹¹⁴ Fatmawati and Sulistyawati 2019.

¹¹⁵ Riefky et al. 2021



Table 8.1. Climate Adaptation and Mitigation Activities in the HSS Project

Project Component and Activity	IBRD Financing (US\$ equivalent, millions)	Climate-Related Action and How It Will Adapt to or Mitigate against Climate Change
Component 1: Procurement, installation, operation, and maintenance of equipment to primary care facilities across Indonesia, "SOPHI" component	615	<p>Aligned with Criteria 9.5 of the Multilateral Development Bank Mitigation Finance Methodology¹¹⁶ and in collaboration and harmonization with all participating MDBs for the SOPHI component, medical equipment purchased through this component for the <i>Puskesmas</i>, <i>Pustu</i>, and <i>Posyandu</i> will apply energy efficiency standards to ensure substantial reduction of energy consumption, resource consumption, or CO₂e emissions compared to the current context in Indonesia, where such guidelines are absent. The cost of this equipment will be an estimated US\$615 million from IBRD, part of the larger US\$1.59 billion co-financed with AIIB and ADB. This demonstrates the greenhouse gas substantiality of this Project component in line with Box F.4 of the World Bank's Interim guidance on demonstrating substantial net greenhouse gas emissions reduction (internal draft), as this introduces, and thereby surpasses, national standards. By introducing energy efficiency requirements into equipment specifications, the Project thus goes above and beyond current technology performance benchmarks. Energy Star efficiency standards, IEC energy efficiency standards, and similar viable standards for medical equipment will be used, exceeding mandatory minimum energy performance standards set in Indonesia, with particular reference to IEC 60601-1-9, 'Medical Equipment – General requirements for basic safety and essential performance – Collateral Standard: Requirements for environmentally conscious design'.¹¹⁷ The highest energy efficiency rating or labeling that allows to perform quality medical and laboratory services adequately will be pursued. Particular attention is also paid to the reduction of use of cooling agents with low global warming potential where relevant while adopting technologies that minimize hydrofluorocarbon (HFC) leakages. Non-fluorinated gases with low global warming potential will be used where relevant, with amounts limited by applicable international standards, as these are flammable refrigerants (for example, Haier S0003108 ultra-low temperature freezers, which use hydrocarbon refrigerants R290 - propane and R170 - ethane), and with a refrigerant charge that is sufficiently small so that flammability risks associated with the equipment are considered acceptable. The operation and maintenance of this equipment is also foreseen as part of the procurement contracts, ensuring the continued and sustainable use of this equipment, reducing material and energy waste generation over the equipment's lifecycle. This will help contribute to reduced greenhouse gas emissions. While the pricing of equipment will depend on the bidding process and contract setup, a conservative estimate of the value share of equipment for which energy efficiency criteria will apply is 40 percent, or US\$246 million out of US\$615 million for this component (mitigation).</p>

¹¹⁶ World Bank et al. 2021.

¹¹⁷ IEC (International Electrotechnical Commission). 2020. *IEC 60601-1-9:2007+AMD1:2013+AMD2:2020 CSV - Consolidated version*. <https://webstore.iec.ch/publication/67382>.



Project Component and Activity	IBRD Financing (US\$ equivalent, millions)	Climate-Related Action and How It Will Adapt to or Mitigate against Climate Change
		The equipment procured under SOPHI ensures Indonesia’s health sector adaptation to new disease patters driven by climate change and ensures continued life-saving and essential care during climate-related disasters, particularly through the introduction of telemedicine-enabled equipment where relevant in line with the Indonesia CCDR recommendations (adaptation).
Component 2: Procurement, installation, operation, and maintenance of equipment to referral hospital facilities across Indonesia, “SIHREN” component	455	Aligned with Criteria 9.5 of the Multilateral Development Bank Mitigation Finance Methodology and in collaboration and harmonization with all participating MDBs for the SIHREN component, medical equipment purchased through this component for the referral hospitals will apply energy efficiency standards to ensure substantial reduction of energy consumption, resource consumption, or CO ₂ e emissions compared to the current context in Indonesia, where such guidelines are absent. The cost of this equipment will be an estimated US\$455 million from IBRD, part of the larger US\$918 million co-financed with AIIB. This demonstrates the greenhouse gas substantiality of this Project component in line with Box F.4 of the World Bank’s Interim guidance on demonstrating substantial net greenhouse gas emissions reduction (internal draft), as this introduces, and thereby surpasses, national standards. By introducing energy efficiency requirements into equipment specifications, the Project thus goes above and beyond current technology performance benchmarks. Energy Star efficiency standards, IEC energy efficiency standards, and similar viable standards for medical equipment will be used exceeding mandatory minimum energy performance standards set in Indonesia, with particular reference to IEC 60601-1-9, ‘Medical Equipment - General requirements for basic safety and essential performance - Collateral Standard: Requirements for environmentally conscious design’. ¹¹⁸ The highest energy efficiency rating or labeling that allows to perform quality medical and laboratory services adequately will be pursued. Particular attention is also paid to the reduction of use of cooling agents with low global warming potential where relevant while adopting technologies that minimize HFC leakages. Non-fluorinated gases with low global warming potential will be used where relevant, with amounts limited by applicable international standards, as these are flammable refrigerants (for example, Haier S0003108 ultra-low temperature freezers, which use hydrocarbon refrigerants R290 - propane and R170 - ethane), and with a refrigerant charge that is sufficiently small so that flammability risks associated with the equipment are considered acceptable. The operation and maintenance of this equipment is also foreseen as part of the procurement contracts, ensuring the continued and sustainable use of this equipment, reducing material and energy waste generation over the equipment’s lifecycle. This will help contribute to reduced greenhouse gas emissions. Energy efficiency criteria will apply to the full set of equipment under this component—hence a 90 percent share of equipment (US\$410 million) will be expected to comply with these requirements. (mitigation)

¹¹⁸ IEC 2020.



Project Component and Activity	IBRD Financing (US\$ equivalent, millions)	Climate-Related Action and How It Will Adapt to or Mitigate against Climate Change
		The equipment procured under SIHREN ensures Indonesia’s health sector adaptation to new disease patters driven by climate change and ensures continued life-saving and essential care during climate-related disasters, particularly through the introduction of telemedicine-enabled equipment where relevant in line with the Indonesia CCDR recommendations (adaptation).
Component 3: Procurement, installation, operation, and maintenance of equipment to tier 2, 3, 4, and 5 public health laboratory facilities across Indonesia, “InPULS” component	276	Aligned with Criteria 9.5 of the Multilateral Development Bank Mitigation Finance Methodology and in collaboration and harmonization with all participating MDBs for the InPULS component, medical equipment purchased through this component for the referral hospitals will apply energy efficiency standards to ensure substantial reduction of energy consumption, resource consumption, or CO ₂ e emissions compared to the current context in Indonesia, where such guidelines are absent. The cost of this equipment will be an estimated US\$276 million from IBRD, part of the larger US\$590 million co-financed with ADB. This demonstrates the greenhouse gas substantiality of this Project component in line with Box F.4 of the World Bank’s Interim guidance on demonstrating substantial net greenhouse gas emissions reduction (internal draft), as this introduces, and thereby surpasses, national standards. By introducing energy efficiency requirements into equipment specifications, the Project thus goes above and beyond current technology performance benchmarks. Energy Star efficiency standards, IEC energy efficiency standards, and similar viable standards for medical equipment will be used exceeding mandatory minimum energy performance standards set in Indonesia, with particular reference to IEC 60601-1-9, ‘Medical Equipment - General requirements for basic safety and essential performance - Collateral Standard: Requirements for environmentally conscious design’. ¹¹⁹ The highest energy efficiency rating or labelling that allows to perform quality medical and laboratory services adequately will be pursued. Particular attention is also paid to the reduction of use of cooling agents with low global warming potential where relevant while adopting technologies that minimize HFC leakages. Non-fluorinated gases with low global warming potential will be used where relevant, with amounts limited by applicable international standards, as these are flammable refrigerants (for example, Haier S0003108 ultra-low temperature freezers which use hydrocarbon refrigerants R290 - propane and R170 - ethane), and with a refrigerant charge that is sufficiently small so that flammability risks associated with the equipment are considered acceptable. The operation and maintenance of this equipment is also foreseen as part of the procurement contracts, ensuring the continued and sustainable use of this equipment, reducing material and energy waste generation over the equipment’s lifecycle. This will help contribute to reduced greenhouse gas emissions. While the pricing of equipment will depend on the bidding process and contract setup, a conservative estimate of the value share of equipment for which

¹¹⁹ IEC 2020.



Project Component and Activity	IBRD Financing (US\$ equivalent, millions)	Climate-Related Action and How It Will Adapt to or Mitigate against Climate Change
		<p>energy efficiency criteria will apply is 70 percent, or US\$193 million out of US\$276 million for this component (mitigation).</p> <p>The equipment procured under InPULS ensures Indonesia’s health sector adaptation to new disease patters driven by climate change and ensures continued life-saving and essential care during climate-related disasters, particularly through the introduction of telemedicine-enabled equipment where relevant in line with the Indonesia CCDDR recommendations (adaptation).</p>
Component 4: Project Management, Administration, Digitization and Training across the SOPHI, SIHREN, and InPULS components	138	This component will monitor the Project’s climate mitigation and adaptation aspects and should be assessed at the same rate as the Project’s other climate activities (adaptation and mitigation).

4. **The Project will monitor the progress on the planned activities to adapt to the impact of climate change and mitigate greenhouse gas emissions during the implementation using the following indicators in the Project’s results framework:** (1) Target Puskesmas under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training from vendor (Percentage); (2) Target public laboratories under the project for which key energy efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational training (Percentage); and (3) Percentage of target public hospitals under the project for which key energy-efficient equipment types have been procured, delivered, installed, and human resources in facilities received operational.



ANNEX 9: Citizen Engagement Entry Points

1. **The Project recognizes the importance of engaging citizens and communities in the decision-making process to ensure that the Project is aligned with their needs and priorities.** The following strategies will be employed to engage citizens and promote transparency and accountability throughout the HSS Project. Further, the Project will monitor the performance of the two existing Government systems described below using the following CE indicator in the Project's results framework: Percentage of feedback, grievances, inquiries, and other interactions submitted by community members in the project area using LAPOR that have been adequately responded to.

- (a) The Project will ensure continuous engagement, information dissemination, and satisfaction feedback through *Halo Kemkes*. The Project will leverage *Halo Kemkes* to provide citizens with information and guidance related to health and medical issues, as well as where to seek care. Citizens will be encouraged to call, send text messages, or use the mobile application to obtain information about the healthcare services and the HSS Project, and provide feedback. *Halo Kemkes* is a service by the MoH to provide health-related information, complaints, and suggestions for the general public. The service operates 24 hours a day, seven days a week and is free of charge. *Halo Kemkes* was launched in 2015 as part of the MoH's efforts to improve access to health information and services for the Indonesian public. The service is available to all Indonesians and provides information on a wide range of health-related topics, including disease prevention, maternal and child health, nutrition, and mental health. *Halo Kemkes* has been instrumental in providing timely and accurate health information to the Indonesian public, especially during the COVID-19 pandemic. The service is staffed by trained health professionals who can answer questions, provide information, and refer callers to appropriate health services as needed. The service has helped dispel myths and misinformation about the virus and provided guidance on prevention measures and vaccination.¹²⁰
- (b) *Halo Kemkes* can be used to both disseminate information to citizens and actively collect satisfaction data. *Halo Kemkes* not only provides health-related information and guidance but also serves as a platform for citizens to ask questions and seek information on health and medical issues. This allows for the dissemination of accurate and reliable health information to the public such as the availability of services at different facilities. In addition, *Halo Kemkes* can also be utilized to gather satisfaction feedback from citizens. Users of the service can provide feedback on their experience, satisfaction, or concerns related to health services, which can help the MoH understand the public's perception and improve the quality of services provided. By incorporating satisfaction feedback into the *Halo Kemkes* system, the MoH can assess the effectiveness of health services, identify areas for improvement, and take appropriate actions to address any issues or concerns raised by citizens.
- (c) In addition, to ensure that all beneficiaries have the opportunity to present complaints, a transparent and inclusive GRM will be used: the LAPOR system, a citizen feedback mechanism developed by the GoI, to report progress and receive feedback from citizens. The LAPOR system was developed by the GoI to allow citizens to report complaints and provide suggestions and feedback directly to the relevant government agencies, including local governments, ministries, and other public institutions. Launched in 2011, LAPOR has since become a widely used platform for citizens to voice their concerns and provide feedback on a range of issues, including public services, corruption, and human rights violations. The system enables citizens to report their grievances in a user-friendly manner, and the reports are then forwarded to the relevant government agency for action and resolution. One of the

¹²⁰ MoH. 2021d. *Halo Kemkes*. <https://www.kemkes.go.id/halokemkes/>.



key benefits of LAPOR is that it promotes transparency and accountability in government. By enabling citizens to report grievances directly to the relevant government agencies, it fosters a culture of responsiveness and accountability among public officials. Additionally, the system enables citizens to track the progress of their reports and receive updates on their status, which promotes transparency in the resolution process.¹²¹

(d) *Halo Kemkes* and LAPOR are two separate systems in Indonesia and are not directly linked to each other. *Halo Kemkes* is a service provided by the MoH that allows citizens to obtain information and ask questions related to health and medical issues. It serves as a platform for citizens to seek reliable health information and guidance from trained health professionals. On the other hand, LAPOR is an online public complaint handling system developed by the GoI. It allows citizens to report complaints and provide suggestions and feedback directly to relevant government agencies. While both initiatives aim to engage citizens and improve governance, they serve different purposes and operate independently. *Halo Kemkes* focuses on providing health-related information and guidance, while LAPOR focuses on enabling citizens to report grievances and provide feedback on various issues. Citizens can use LAPOR to report complaints or provide feedback related to health services or issues encountered through the MoH. In such cases, LAPOR serves as a channel to raise concerns to the relevant government agency, including the MoH, for appropriate action.

2. **The Project Operations Manual will clarify how information on the systems described above will be disseminated to enhance awareness and knowledge on the systems, how information on queries and concerns pertaining to project activities will be handled and reported on, and how the Project will make use of the information from the cases received to strengthen project implementation.**

¹²¹ KURNIAWATI, S. and SITORUS, R. 2020. "The Effectiveness of LAPOR! As a Public Complaint System in Indonesia". *Jurnal Dinamika Manajemen* 11(1): 35–43. <https://doi.org/10.24815/jdm.v11i1.15988>; World Bank. 2016. *LAPOR! One Year After: Feedback Mechanism to Strengthen Service Delivery*.



ANNEX 10: Procurement Arrangements and Equipment Lists

1. **Procurement under the Project will be governed by the World Bank's Procurement Regulations, September 2023, and the provisions stipulated in the Loan Agreement and approved PP.** The partnership of MDBs, comprising the World Bank, AIIB, ADB, and IsDB, will jointly support the Government to deliver this transformative operation. The MoH and MDBs have agreed on (a) a joint co-financing between the World Bank, AIIB, and ADB for the SOPHI component; (b) a joint co-financing between the World Bank and ADB for the InPULS component; and (c) a joint co-financing between the World Bank and AIIB, as well as parallel co-financing from IsDB, for the SIHREN component. It was also agreed between the MoH, AIIB, and ADB that the World Bank will be the lead co-financier for this Project. For joint co-financing with ADB and AIIB, the MDBs agreed that all procurement processes will be governed by the World Bank's Procurement Regulation through APAs, including reliance on the World Bank for monitoring, supervising, and providing implementation support to the MoH during project implementation.

2. **Use of National Procurement Procedures.** When approaching the national market approach as agreed in the PP, the GoI's Procurement Regulations set out to follow Presidential Regulation (Perpres) No. 16/2018, as amended in No. 12/2021, may be used, subject to meeting conditions as stipulated in the World Bank Procurement Regulations, section V - paragraph 5.4, National Procurement Procedures. It is expected that several packages of low value and low risk will follow national open competitive subject to the use of national bidding documents acceptable by the World Bank.

3. **The use of the Government's e-procurement system (*Sistem Pengadaan Secara Elektronik, SPSE*) may only be the procurement of goods and non-consulting services through the Open National Competitive Procurement.** The modified SPSE, named SPSE_ICB, may be used only for the selection of consultant firms under the Quality- and Cost-Based Selection (QCBS) method using the World Bank's Standard Request for Proposal document adjusted satisfactorily for electronic use. Procurement under all other methods, including Open International Competitive Procurement, shall be carried out through non-electronic processes with manual issuance of invitation for bids and receipt of bids and proposals, until such time that the modification of the National Public Procurement Agency (LKPP) SPSE_ICB e-procurement system has been completed by LKPP and deemed acceptable to the World Bank.

4. **The PPSD and PP for the Project have been finalized by the implementation agency with the support of the World Bank and ECRI as part of HEIS, which forms the basis for the PP of the contract packages to be procured under the Project.** The PPSD identifies the risks and sets out relevant mitigation measures. The PP will be subsequently published through the STEP tool. The PPSD and PP will be updated annually, or as needed, during Project implementation to reflect the Project needs, improvements in institutional capacity, and adjustments in procurement risk. It will also be published on the website of the United Nations Development Business (UNDB) and on the World Bank's external website. As part of the PPSD, the major procurement categories have been assessed. The procurement packages are designed to ensure that there will be sufficient competition based on supply positioning and suppliers' preference. TCO comparison will be enabled by including delivery and installation; transfer of operational skills to health facility and laboratory staff for the correct use of the equipment; equipment annual maintenance and repair requirements (as appropriate for each package of equipment); and the estimated volume of consumables, spares, and upgrades required over the tenure of the Project. Bidders will be advised to expect some variation in final quantities to be delivered, with staggered delivery based on facility readiness on an annual basis under a multiyear contract. Based on market analysis including vendor conference, the following are key features of the procurement approach for the Project:

- (a) Use of the World Bank's Standard Procurement Document for RFB for goods, single stage two envelope (1S 2E), under open international competition. As appropriate, economic, environmental,



and social considerations could be integrated into the procurement packages using rated criteria.

- (b) The first envelope containing the technical proposal will be reviewed by the technical team to assess suppliers' capacity to deliver the required product or service. If the technical proposal meets the requirements, the pricing proposal will be evaluated by a separate team to recommend a supplier for the Project. The bidding documents need to be customized especially on terms of payment, delivery schedule, warranty, and operation and maintenance period to fit with the Project needs.
- (c) A weighting system is used to evaluate the technical and financial proposal. The objective is to determine the vendor awarded for each category. Based on supply positioning, the medical equipment that is largely dependent on technical requirements, especially in high-end equipment, should have a balanced importance (T60/F40) between the technical and financial proposals. Medical equipment such as glass and metal goods with less emphasis on technical requirements have a heavier weightage on the financial aspect compared to the technical aspect (T10/F90).
- (d) The MoH is conducting advance procurement for a first batch of medical equipment to enable timely completion of procurement that meets the MoH's target contract award date in April 2024.
- (e) Considering the magnitude of equipment required for the Project, bidding activities will be carried out in batches. The announcement for the first batch bid is scheduled for November 15, 2023. The subsequent batch is expected to be conducted in the first week of December 2023. In very high-value packages, where there may be limitations in production capacity at one vendor, a two-vendor approach may also be considered. A single package may be awarded to a vendor, provided they commit to supplying within the stipulated time frame. In cases where none of the participating vendors can fulfill the supply capacity for a package within the stipulated time frame, multi-vendor contracts or lot system for a package will be considered.
- (f) The World Bank is advising the MoH on options for these technical inputs and on rated criteria options that include relevant sustainability criteria consistent with the ESMF and market best practice.

5. **In terms of procurement category under the Project, the following is a summary of the expected procurement activities** (all infrastructure facilities will be funded by government budget and thus there will be no procurement of works under the project):

- (a) **Procurement of medical and laboratory devices (Goods).** Procurement of medical and laboratory equipment will follow international open competitive method, RFB method, and single stage two envelope using the World Bank's Standard Procurement Documents. Other procurement activities may follow the national open competitive procurement method subject to the use of national bidding document acceptable by the World Bank. Based on the assessment of several large medical equipment types to be procured under the Project, such as cath labs, it has been determined that these will follow international open competitive procurement, while for low-value goods, a procurement approach that minimizes transaction cost while maximizing value, such as a framework agreement or e-catalogue, would be suitable.
- (b) **Procurement of non-consulting services.** Service provision is envisaged under the Project especially for socialization, trainings, and workshops under the project management component. The procurement method will mainly follow national open competitive procurement. The other method that may be used is Request for Quotations (RFQ) for small-value contracts as agreed in the PP. The MoH may conduct trainings and workshops using its own resources (self-management/swakelola).
- (c) **Consulting services.** These will be provided by both consulting firms and individuals to be hired under



the Project. Consulting firms procured through the QCBS method will include, but not be limited to, (i) project management consultant to provide overall support to the MoH in implementing the Project and (ii) several individual consultants who may also be hired through competitive selection method and all consulting services including its procurement method is stipulated in the PP.

6. **MoH understands that the mandatory requirement of local content is not aligned with the MDBs' core procurement principles and, therefore, cannot be included in the bidding documents.** As appropriate, the bidding documents could grant a margin of preference in evaluating bids in open international competitive procurement to bids offering certain goods manufactured in Indonesia when compared to bids offering such goods manufactured elsewhere (domestic preference). In addition, some economic aspects in this industry could be considered as part of sustainable procurement. The use of domestic preference, economic consideration of sustainable procurement, and the market approach will be further assessed when the MoH finalizes the list of equipment to be procured.
7. **The procurement method and market approach** will be determined based on (a) market analysis (that is, market structure, supplier specialism, and cost competitiveness); (b) market engagement strategy (including pre-market engagement); and (c) procurement risk analysis (including complexity and criticality of the procurement and whole-life cost analysis). All open international competitive procurement methods will use rated criteria as the default evaluation approach.
8. **World Bank's STEP tool.** The Project shall use the STEP tool to plan, record, and track procurement transactions, as well as monitor contract implementation. The applicable method of procurement for each specific contract and the World Bank's review requirements (prior or post review) will depend on the nature, value, and risk of each contract and are specified in the PP approved by the World Bank. STEP will help the World Bank monitor procurement progress and take appropriate supportive actions in due course. All relevant procurement and contract documents will be recorded in STEP.
9. **Disclosure of procurement information.** The following documents shall be disclosed on the websites of procuring entities/implementing agencies and SPSE, the Government's e-procurement system: (a) the PP and updates; (b) an invitation for bids for goods and non-consulting services for all contracts through open competitive procurement; (c) request for expression of interest for selection/hiring of consulting services; (d) contract awards of goods and non-consulting services procured following international and national procedures; (e) a list of contracts/purchase orders placed following RFQ procedures on a quarterly basis; and (f) a list of contracts following direct selection on a quarterly basis. For open international competitive procurement method, in addition, international publication will be done in accordance with the requirements in the World Bank's Procurement Regulations.
10. **Procurement capacity and risk assessment.** The MoH would be responsible for carrying out procurement and contract management under the Project. The procurement activities will be done at the central level by Pokja UKPBJ under the MoH's Procurement Bureau. The World Bank team conducted the procurement capacity and risk assessment of the implementing agency and rated the residual procurement risk as substantial. The MoH has limited resources and lacks sufficient staff with experience to support this large additional workload and conduct international competitive procurement, which is anticipated to be the bulk of procurement under the proposed Project. Even though the Procurement Bureau of MoH (UKPBJ MoH, which is staffed with limited resources) has experience in carrying out large number of packages/contracts under the national budget, the MoH's Procurement Bureau has no experience in carrying out procurement process according to the World Bank's Procurement Regulations and has limited experience in conducting international open competitive procurement of large-value activities. The MoH requested the World Bank for HEIS for which the World Bank has assessed and agreed on HEIS through a letter sent to the MoH on August 25, 2023. For this, the World Bank has engaged ERCI to help the World Bank in providing support to the MoH during project preparation and implementation. HEIS mitigates the MoH's



immediate technical and procurement capacity constraints and expedites advance procurement to improve the quality and effectiveness of the recipient’s procurement processes through knowledge transfer. In addition, an external probity assurance provider will be engaged to provide probity in procurement, demonstrate propriety in dealings with the market, and build confidence to encourage market participation. Moreover, the MoH Inspectorate General and BPKP will also be engaged.

11. **Key procurement risks and mitigation measures.** The risks related to procurement aspects have been assessed based on the procurement assessment and proposed mitigation measures as shown in table 10.1.

Table 10.1 Procurement Risks and Mitigation Measures

Risk Description	Mitigation Measures
1. Conflicts between the World Bank’s Procurement Regulations and the provisions of the Government Perpres procurement rules and documentation	<ul style="list-style-type: none"> • The POM will consist of a procurement chapter to clarify that procurement will follow the World Bank Procurement Regulations, as specified in the Loan Agreement. • For open national competitive procurement, the Indonesian National Procurement Procedures can be applied subject to the conditions specified in PPSD and in the Project textual part of the PP.
2. Delays in procurement process due to capacity constraints (weak procurement capacity, lack of experience in the World Bank’s Procurement Regulations, and constraints of staffing resources for procurement and contract management)	<ul style="list-style-type: none"> • Recruit project management consultants including a procurement expert or hire a qualified Individual procurement specialist with experience in World Bank-funded projects, especially those large and complex, to support procurement implementation. • Early in the Project, set up exclusive Pokja for the World Bank Project and accelerate the Government’s internal approval of procurement documents. • World Bank will provide training on its Procurement Regulations and the use of STEP. • World Bank’s prior and post review, regular implementation support missions, hands-on operational/fiduciary advice and guidance. • HEIS does apply.
3. Lack of procurement readiness to conduct advance procurement under the Project	<ul style="list-style-type: none"> • Enhance procurement readiness by mobilizing resources to prepare ToRs of critical consultancy services, specifications/draft bidding documents of key goods packages, training on procurement procedures and STEP before Project effectiveness. • World Bank and ECRI will provide support on preparation of bidding documents and technical specifications and any other related to readiness for conducting advance procurement.
4. Improper packaging plan, inappropriate technical requirements/design, and low levels of interest from market attracted, which may result in bidding failure or low quality of procured goods, and low VfM of concerned procurement activities as well as readiness at the district level to receive the equipment	<ul style="list-style-type: none"> • Prepare a PPSD to work out appropriate procurement packaging arrangements, detailed and realistic procurement schedules, and contract management plan. • Prepare technical specifications/ToRs based on market survey and engagement activities. • Conduct market engagement/vendor conference to obtain feedback from potential suppliers/vendors. • The World Bank engaged ECRI to support the MoH in carrying out market analysis, developing technical specification, making procurement arrangements, and drafting bidding document.
5. Uncertainty over capacities of procurement committee members (Pokja) and the Project Implementation Unit	<ul style="list-style-type: none"> • Competent and experienced staff will be assigned as Pokja and PIUs. Procurement consultants may be hired by the PIU to support procurement activities under the Project. The World Bank will provide procurement training and hands-on support during Project implementation.



Risk Description	Mitigation Measures
(PIU)	
6. Potential complaints from bidders related to technical specification, bid evaluation result including recommendation to contract award	<ul style="list-style-type: none"> • Prepare and ensure technical specifications are neutral. • Prepare clear evaluation criteria including weight/score in the bidding documents. • Evaluation shall be carried out by the MoH according to the evaluation criteria, as stipulated in the issued bidding documents.
7. Lack of availability in the local and international markets of the required medical devices and goods due to high quantity and disruptions in supply chains	<ul style="list-style-type: none"> • The MoH with support by the MDBs to carry out market analysis to identify potential suppliers in the local and international markets, conduct market engagement/vendor conference to get feedback and input from market players.

12. **Frequency of procurement supervision.** The World Bank’s procurement oversight will be done through increased implementation support, HEIS. In addition, a procurement post review of a sample of contracts awarded based on risk will be conducted. All contracts not covered under prior review by the World Bank will be subject to post review during implementation support missions and/or special post review missions, including missions by consultants hired by the World Bank.

Equipment List

(As of November 10, 2023, extracted from the latest PPSD; *NB:* Equipment lists are subject to change over the project period.)

Table 10.2 - Equipment list SOPHI

SOPHI Equipment Type
Adult Resuscitator
Adult Scale
Analytical Balance
Automated external defibrillator (AED)
Automated hemoglobin system/hematology analyzer
Bassinet (Infant)
Binocular Microscope (Lab)
Chemistry Analyzer, Centrifugal (for Clinical Use)
Dental Chair (Complete System)
Digital Infant Weighing Scale
Electrocardiograph (ECG)
Electrocautery Unit
Examination Light, Stand Alone
Examination Table (Clinic)
Fetal Stethoscope/Fetoscope
Gynae Examination Table/Chair
Head lamp
Hygro-thermometer
Infant Incubator
Infant radiant warmer



SOPHI Equipment Type
Infant T piece resuscitator
Infant T piece resuscitator with PEEP
Infantometer
Infusion pump
Mayo Table or Instrument Table
Micro pipette 5-50, 100-200, 500-1000 ul
Microhematocrit Centrifuge
Nebulizer
Neonatal Duplex Stethoscope
Neonatal Resuscitator
Neonatal Straight Blade Laryngoscope
Ophthalmoscope
Otoscope
Oxygen Tank 1 Metercube & Regulator
Oxygen Tank 6 Metercube & Regulator
Patient Beds
Photometer
Point-of-care Blood Analyzer (For Hb, glucose, uric acid, cholesterol)
Portable Aspirators (Infant)
Pulse Oxymeter
Refrigerator (Vaccine)
Rigid Laryngoscope
Spirometer/Diagnostic Spirometer
Stretcher (Emergency)
Syringe Pump
Tensimeter
Thermometer
Ultrasonic Scaler (Dental)
Ultrasound Doppler (Fetal)
Urine analyzer (Semi-automated)
Vaccine Carrier / Coolbox
Wheelchair
Steam Sterilizer/Equipment Boiler

Table 10.2 Equipment List – SIHREN

SIHREN Equipment Type
3D Ablation System
4D Ultrasound (OBGYN)
3D Ultrasound (OBGYN)
Analyzers, Laboratory, Molecular Assay, Infectious Microorganism
Anesthesia Unit (Paeds)
Auditory Function Screening Devices - Brain Evoked Response Auditory (Neonate)
Auditory Function Screening Devices - Otoacoustic (Neonate)



Automated Peritoneal Dialysis
Blanket Warmer (Forced air)
Cardiotocography (CTG)/Fetal Monitor
C-Arm
Cathlab (Bi Plane)
Cathlab (Single Plane)
Continuous Positive Airway Pressure (CPAP), Transport
Continuous Renal Replacement Therapy (CRRT), Neonate
Digital Mobile X-Ray
Echocardiography
ECMO Set
ECMO Set (NICU)
Electrical Beds with Scale
ESWL (Lithotripter)
Fractional Flow Reserve (OCT and IVUS compatible)
Heart Lung Bypass Unit
High Flow Oxygen Delivery Unit (NICU)
High Flow Oxygen Delivery Unit (PICU)
High Frequency Ventilator (NICU)
High speed drill power system (for neurosurgery)
Infant Incubator (NICU)
Infant Incubator with Radiant Warmer (NICU)
Intra-aortic Ballon Pump (IABP)
Intravascular Ultrasound (IVUS)
Optical Coherence Tomography (OCT)
Invasive Blood Pressure Monitor (Paeds & Neonate)
Invasive Hemodynamic Monitor
Laser Holmium (Ho:YAG Laser urology)
MRI 1.5 T
ND:Yag Ablation Laser for TTTS (Obgyn)
Near Infrared Spectroscopy (NIRS) NICU/Cerebral Oximeter
Neonatal Electroencephalography (EEG) (NICU)
Neonate Invasive Patient Monitor (NICU)
Neonate Patient Monitor (NICU)
Neurosurgery microscope
Nitric Oxide Delivery Unit
Non-invasive Ventilator (Adult & Paeds)
Non-invasive Ventilator (Neonate)
Ophthalmic Diode Laser (810nm)
Ophthalmoscope Indirect
Point-of-Care Bilirubinometer, Blood Sample
Portable Blood Gas Analyzer (NICU)
Portable Echocardiography (Neonate)



4D Portable Echocardiography (Neonate)
Portable Respiratory Monitor (Capnography + Oximetry)
Pulse Co-Oximeter (Neonate)
Radiofrequency Therapy System (Puncture Generator)
Rotablator (Cardiac)
Spectrometers, Mass, Laboratory
Thromboelastogram (TEG)
Transcutaneous Non Invasive Blood Gas Monitor
Transport Infant Incubator
Transport Ventilator (Adult & Paeds)
Transport Ventilator (Neonate - NICU)
Ultrasonic Cardiac Output Monitor
Ultrasound Doppler (Nephro)
Vein Finder
Ventilator (Adult & Paeds)
Ventilator (Neonate)
Video Flexible Bronchoscopy (Portable Handheld)
Warming/Cooling Units, Patient, Circulating-Liquid (Blanket)
Warming/Cooling Units, Patient, Circulating-Liquid (Pad)

Table 10.3 Equipment List - InPULS

InPULS Equipment Type
Analytical Balance
Atomic Absorption Spectrophotometry (AAS, Flame & Graphite Furnace)
Autoanalyzer (Blood Chemistry)
Autoclave (Lab Use)
Automatic Device for Multi Channel Pipette Calibration
Automatic Extractor (To isolate RNA and DNA from sample)
Biosafety Cabinet (Class 2A)
Blood Pressure System Calibrator
Centrifuge
Chemi Luminescence Immuno Assay (CLIA)
Colony counter
Defibrillator Analyzer
Digital Calliper
Digital Pressure Meter
ECG Simulator
Electrical Safety Analyzer
Electrosurgical (ESU) Analyzer
ELISA Set (ELISA Reader, ELISA Washer)
Enzyme Immuno Assay (EIA)
Fetal Simulator



InPULS Equipment Type
Flammable Liquid Storage Cabinet
Freezer -20 Celsius
Freezer -80 Celsius
Fume Hood
Gas Analyzer
Gas Chromatography Mass Spectrometry (GCMS)
Gas Flow Meter/Ventilator Analyzer
HbA1C Analyzer (Hemoglobin Analyzer)
Hematology Analyzer
High Performance Liquid Chromatography (HPLC)
Hotplate + magnetic stirrer
Hygro-thermometer
ID-AST automated (Bacterial/Fungi Identification and sensitivity test) (True MIC)
ID-AST semi-automated (Bacterial Identification and sensitivity test)
Incubator Analyzer
Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
Infusion Device Analyzer
Laboratory incubator
Laboratory Incubator CO2
Laboratory oven
Laboratory Refrigerator
Laminar Air Flow
Luxmeter
Mercury Analyzer
Microbe Analyzer
Micropipette & Tips (size: 5-10 Micron, 20-100 Micron, 100-10000 Micron)
Micropipette Set 10, 100, 200, 1000
Mini centrifuge (Spindown)
Multichannel Pipette (size: 10,100, 200, 1000 micron)
Nephelometer
Next Generation Sequencing (NGS)
Non-Invasive blood pressure simulator
Oligosynthesizer
Oxygen Analyzer
PCR
pH meter include temperature
Photo or Contact Tachometer
Photometer
Phototherapy Radiometer
Pipette Dispenser
Pneumatic Test Pump
Pulse Oxymeter Simulator



InPULS Equipment Type
Refrigerated Centrifuge (Highspeed)
Refrigerated Centrifuge (Ultra Highspeed)
Rotator Plate
RT-PCR
Sound Level Meter
TDS Meter
Test lung
Ultrasound Phantom
Ultraviolet-visible Spectrophotometer
Urine Analyzer (Semi-automated)
Vital Sign Simulator/ Multi Parameter Simulator
Vortex



ANNEX 11: Financial Management

Budgeting

1. In Indonesia, financing arrangements for World Bank projects implemented by Central Government agencies are governed by integrated budget or DIPA.¹²² The sources of financing for project activities, including financing percentage, are detailed in DIPA and strictly followed. Project activities identified to be jointly financed by IBRD, ADB, IsDB, and AIIB on a financing split proportional to respective contributions. The budget of the Project will be included in the MoH's budget documents (DIPA). DIPA will be prepared by each PMU, consolidated by the CPMU, and integrated into the MoH DIPA, which is then provided for approval to the Director General Budget, MoF through the MoF's budget application system.

Internal controls

2. As regulated in PMK 62 FY2023, PPK in the CPMU and PMUs will be responsible for signing contracts based on their authorized amount. PPSPM will be responsible for verifying all requests for contract payments. The CPMU and PMU should have sufficient staff with qualified PPK and PPSPM. PPK and PPSPM working for the Project are expected to have individual certification from the Financial Education and Training Agency (*Badan Pendidikan dan Pelatihan Keuangan*, BPPK). FM consultants will be hired as part of management consultants to support PPK and PPSPM during project implementation to ensure more robust payment verification.

3. The POM with adequate FM arrangements agreed by the World Bank and all MDBs will be used to guide project implementation and monitor project progress, covering organization structure, inclusion of program budget into DIPA of the MoH, payment verification mechanisms, internal control (including safeguard of all assets procured under the Project and insurance of the assets as well as aspects to have strong control to mitigate issues raised in MoH FY2020 and 2021 audit reports), funds flow mechanisms, IFRs and financial statements, formats that will be applicable for all the MDBs and the detailed preparation and disbursement mechanisms, and internal and external audit arrangements that will also be applicable for all the MDBs.

Internal Audit

4. Project implementation will be subject to annual internal audits by the MoH Inspectorate General. The MoH Inspector General has also agreed to conduct performance audits during the midterm and end of the Project to assess the functionality of purchased medical equipment. Reports on internal audits, including the performance audit conducted for Indonesia HSS Project, is expected to be accessible by the World Bank during Project supervision.

Accounting and Financial Reporting

5. The Project plans to finance mostly goods (energy-efficient and telemedicine-enabled equipment). Based on the Minister of Finance Regulation No. 62 FY2023 (the latest update), Project accounting will follow the Government accounting system, which records all project expenditures. PPKs and PPSPMs in the CPMU and PMUs will upload the contract information and verification results in the Ministry Financial Application System (*System Aplikasi Tingkat Instansi*, SAKTI), which feeds into the Central Government International Financial Management Information System (IFMIS) (*System Perbendaharaan dan Anggaran Negara*, SPAN). SPAN facilitates accounting and financial reporting in the Central Government. Indonesia's accounting standards that will be used for the Project are consistent with international standards.

¹²² MoF (Ministry of Finance of the Republic of Indonesia). 2023. *Minister of Finance Regulation (PMK) No. 62 FY2023 (the latest update) regarding planning, budgeting, budget implementation, accounting, and reporting*. <https://jdih.kemenkeu.go.id/in/dokumen/peraturan/19110cc5-3b4e-47c3-79a8-08db7d39e63c>



6. For reporting to the World Bank, the CPMU will appoint staff who are responsible for preparation of quarterly IFRs. IFRs should be received by the World Bank no later than 45 days after the end of each calendar quarter. Quarterly IFRs will be used as reporting for all the MDBs. The IFR format will be agreed with the CPMU and all MDBs.

7. The CPMU will also prepare an annual unaudited financial report complete with notes of the financial statements for auditing purposes. Only one annual financial report needs to be prepared covering project implementation with financing from all the MDBs. The annual financial report should be reviewed by the Inspectorate General of MoH before submission to the auditor (BPK).

8. FM consultants will be hired as part of management consultant to support PPK and PPSPM during project implementation to ensure more robust payment verification and assist in the preparation of IFRs and annual financial statements for all the MDBs. The FM consultant hired should have an accounting, finance, or management degree, with sufficient experience in supporting donor-financed projects. The FM consultant will assist in the preparation of quarterly IFRs and annual financial statements. The CPMU staff and FM consultant will receive training to get familiar with World Bank procedures. The IFR and financial statement formats, and guidelines for their preparation, as agreed by all the MDBs, will be available in the POM.

Flow of Funds

9. The HSS Project plans to finance mostly procurement of medical equipment for distribution to health centers, hospitals, and public health laboratories across Indonesia. Consequently, the payment method used will mostly be direct payment. In addition, a Designated Account (DA) denominated in US dollars will be opened at the Central Bank under the name of MoF. The DAs will be a segregated account with fluctuated ceiling for the World Bank. Advances from the World Bank will be deposited in this DA and will be solely used to finance eligible expenditures identified under the Project for IBRD financing. IsDB has agreed to open separate DA for financing of SIHREN soft expenditures and project management. AIIB has indicated that it will focus on procurement of goods, which will use the direct payment disbursement method. No DA will be opened by AIIB. ADB has indicated commitment to recontribute on financing of soft expenditures and project management only when necessary and a separate DA will be opened. Applications for the replenishment of the DA advance may be submitted through quarterly IFRs, which consist of (a) DAs' activity statement, (b) statement of expenditures under the World Bank's prior review and non-prior review, (c) Project cash forecast for six months, and (d) Project sources and uses of funds. Subsequent transfers shall be based on IFRs submitted by the Project.

10. Three flow of funds options are available for the Project:

- (a) Direct payment is available for contracts with minimum value of US\$100,000 per withdrawal application.
- (b) The Project may also use the advance method; the flow of funds is as follows:
 - (i) DA will be opened under the name of MoF for the HSS Project
 - (ii) The PMU submits a request for an advance to the World Bank.
 - (iii) The World Bank will transfer initial deposit (advance) to DA based on request (using IFR format, which includes projection of project needs for the six-month period).
 - (iv) The Project makes the payment to consultant/contractor.
 - (v) Additional transfer can be made based on request (using IFR format, which includes projection of the project needs for the six-month period).

11. The Project may opt for the pre-financing method, where instead of transferring the funds to the DA, the World Bank transfers the funds to the MoF's account as reimbursement for the pre-financing amount.



12. The CPMU will be assisted by the FM consultant to prepare the withdrawal application submission. The World Bank FM specialist will provide FM training to Project staff and the FM consultant familiar with World Bank procedures.

13. The above arrangement will be reflected in the POM.

Disbursement Arrangements

14. The applicable disbursement methods are direct payment, advance, and reimbursement. Direct payment is available for contracts with minimum value of US\$100,000 per withdrawal application. Additional disbursement arrangements for the Project will be included in the Disbursement and Financial Information Letter of the Project.

15. For disbursement, AIIB will follow the World Bank disbursement processes, whereas ADB and IsDB will require their disbursements to be processed separately through their e-disbursement system. Only one withdrawal application will be prepared for the World Bank and AIIB through the World Bank Client Connection, with clear information on amount financing by the World Bank and AIIB based on the Loan Agreement. Request for payment using the direct payment method will be sent directly by the CPMU for approval by the treasury office and World Bank. Withdrawal application using the advance method will be made through quarterly IFR submission. The GoI is already implementing e-disbursement for all submissions of the World Bank’s withdrawal applications.

16. The disbursement category and allocation for activities financed by the World Bank are described in table 11.1.

Table 11.1. Allocation of the Loan Proceeds

Category	Amount of the IBRD Loan Allocated (Expressed in US\$ equivalent)	% of Expenditures to Be Financed (inclusive of taxes)
(1) Goods, consulting services and non-consulting services for PART 1 of the Project (SOPHI)	615,200,000	Up to 100% of the Loan’s agreed share of the cost specified and agreed upon in the AWPB
(2) Goods, consulting services and non-consulting services for PART 2 of the Project (SIHREN)	455,000,000	Up to 100% of the Loan’s agreed share of the cost specified and agreed upon in the AWPB
(3) Goods, consulting services and non-consulting services for PART 3 of the Project (InPULS)	275,400,000	Up to 100% of the Loan’s agreed share of the cost specified and agreed upon in the AWPB
(4) Goods, consulting services, non-consulting services, training, Incremental Operating Costs under components 4 of the Project	138,400,000	100%
TOTAL	1,484,000,000	

Arrangements with MDBs

17. The World Bank will lead the coordination of project FM arrangements for ADB, AIIB, and IsDB. The counterpart funding for the Project from the MDBs are as shown in table 11.2.

Table 11.2. Counterpart Funding

No.	Multilateral Development Bank (MDB)	Contribution (in US\$ equivalent)
1	Asian Infrastructure Investment Bank (AIIB)	998,800,000
2	Asian Development Bank (ADB)	650,200,000
3	Islamic Development Bank (IsDB)	846,000,000
	Total	2,495,000,000



18. As described above in the flow of funds, the HSS Project plans to finance mainly the procurement of medical equipment for distribution to health centers, hospitals, and public health laboratories across Indonesia. The payment method used will mostly be direct payment. In addition, a DA will be opened to finance operational cost under the Project for IBRD financing. Should other MDBs decide to contribute to financing operational costs, a separate DA will be opened.

19. Each MDB contributes the percentages as shown in table 11.3 to the Project components.

Table 11.3. Percentage of Financing

Component/Part	MDB	% financing
1. SOPHI	World Bank	44.8
	AiIB	32.8
	ADB	22.4
2. SIHREN	IsDB	46.8
	World Bank	26.6
	AiIB	26.6
3. InPULS	World Bank	50.0
	ADB	50.0

MDBs’ Disbursements

20. In line with the co-financing agreement between the World Bank and AiIB, the World Bank will provide disbursement services for AiIB. The World Bank will process withdrawal applications based on the World Bank’s disbursement-related policies and procedures. On the other hand, as no co-financing agreement between the World Bank and IsDB and ADB. Both the MDBs require the borrower to process its disbursements using their own systems. While only one withdrawal application is needed for AiIB and the World Bank, separate withdrawal applications are necessary for both ADB and IsDB in line with the financing split arrangements. However, the same set of IFRs will be used as the basis for advance requests or expenditure documentation.

External Audit Arrangements

21. The HSS Project will be subject to external audits. Each audit will cover a period of one fiscal year of the recipient. Audits will be conducted by BPK with ToR agreed by the World Bank and all the MDBs. It has been agreed by all the MDBs that the Project’s audited financial statements will be furnished to the World Bank and other MDBs not later than six months after the end of the concerned fiscal year and shall be made available to the public. There will be one audit report for the Project covering all the MDBs. While the World Bank will accept the audit report in Bahasa, ADB and IsDB will require the audit report to be translated into English.

Supervision Plan

22. Risk-based supervision of the HSS Project FM will be conducted. This will involve desk supervision, including the review of IFRs and audit reports and field visits. The FM supervision will be conducted every six months together with the task team as part of the project implementation support.



ANNEX 12: Indonesia Map

