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# INDONESIA

## HEALTH SECURITY FINANCING ASSESSMENT





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# Abbreviations and Acronyms

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
APBD	<i>Anggaran Pendapatan dan Belanja Daerah</i> (Regional Government Budget)
APBN	<i>Anggaran Pendapatan dan Belanja Nasional</i> (Central Government Budget)
including RAPBN, and RUU APBN	Rencana APBN and Rancangan Undang-undang APBN State Budget and Revenue Plan/Draft Bill for Annual State Budget
Balitbangkes	<i>Badan Penelitian dan Pengembangan Kesehatan</i> (National Institute of Health Research and Development)
BAPETEN	<i>Badan Pengawas Tenaga Nuklir</i> (Nuclear Energy Regulatory Agency)
BATAN	<i>Badan Tenaga Nuklir Nasional</i> (National Nuclear Energy Agency)
BNPB	<i>Badan Nasional Penanggulangan Bencana</i> (National Agency for Disaster Management)
BNPT	<i>Badan Nasional Penanggulangan Terorisme</i> (National Agency for Counter Terrorism)
BPKAD	<i>Badan Pengelolaan Keuangan dan Aset Daerah</i> (Local Agency for Financial and Asset Management)
BPBD	<i>Badan Penanggulangan Bencana Daerah</i> (Regional Disaster Management Agency)
BPMSPH	<i>Balai Pengujian Mutu dan Sertifikasi Produk Hewan</i> (Institute for Quality Testing and Certification of Animal Products)
BPOM	<i>Badan Pengawas Obat dan Makanan</i> (National Agency for Food and Drug Control) (also see POM)
BPPT	<i>Badan Pengkajian dan Penerapan Teknologi</i> (Technology Assessment and Application Board)
BSL	Biosafety Level
CBNR	Chemical, Biological, Nuclear, Radioactive, and Explosives
CDC	The Centers for Diseases Control
CHE	Current Health Expenditure
CHSM	Center for Health Services and Management (Gadjah Mada University)
COFIS	Consolidated Fiscal
DAK	<i>Dana Alokasi Khusus</i> (Special Allocation Funds)
DFAT	Department of Foreign Affairs and Trade (Australia)
DGB	Directorate General for Budget (Ministry of Finance)
DHO	District Health Office
DIPA	<i>Daftar Isian Pelaksanaan Anggaran</i> (Budget implementation List)
DPA	<i>Dokumen Pelaksanaan Anggaran</i> (Budget Implementation Document)
DPDR	<i>Dewan Perwakilan Rakyat Daerah</i> (Regional People's Consultative Assembly)
DSP	<i>Dana Siap Pakai</i> (On-Call Fund)
EOC	Emergency Operation Centers
EQA	External Quality Assurance
EWARS	Early Warning, Alert, and Response System
FETP	Field Epidemiology Training Program

GHSA	Global Health Security Agenda
Gol	The Government of Indonesia
HSFAT	Health Security Financing Assessment Tool
ICU	Intensive Care Unit
IHR	The International Health Regulations
IHR NFP	International Health Regulation National Focal Point
IKFD	<i>Indeks Kapasitas Fiskal Daerah</i> (Regional Fiscal Capacity Index)
ISIKHNAS	<i>Informasi Sistem Kesehatan Hewan Nasional-Terintegrasi</i> (Integrated National Animal Health Information System)
JEE	Joint External Evaluations
KB	<i>Kejadian Luar Biasa</i> (Extraordinary Event)
KSLN	<i>Kerjasama Luar Negeri</i> (International Cooperation)
KUA-PPAS	<i>Kebijakan Umum Anggaran – Plafon Prioritas Anggaran Sementara</i> (General Budget Policy - Temporary Budget Priority Ceiling)
KEM – PPKF	<i>Kerangka Ekonomi Makro – Pokok-pokok Kebijakan Fiskal</i> (Macroeconomic Policy Framework – and- Fiscal Policy Principles);
MDR-TB	Multidrug Resistant Tuberculosis
MDTF	Multidonor Trust Fund
Menko PMK	Coordinating Ministry for Human Development and Culture
Menko POLHUKAM	Coordinating Ministry of Political, Legal, and Security Affairs
MoA	Ministry of Agriculture
MoFA	Ministry of Foreign Affairs
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MSS	Minimum Service Standard ( <i>Standar Pelayanan Minimal</i> )
Musrenbang	<i>Musyawah Perencanaan Pembangunan</i> (Development Planning Discussion)
NAP AMR	National Action Plan on Antimicrobial Resistance
NAPHS	National Action Plan for Health Security
NHL	National Health Laboratory
OIE (PVS)	World Organization for Animal Health (formerly the Office International des Epizooties) (Performance of Veterinary Services)
OOP	Out-of-Pocket
PADK	<i>Pusat Analisis Determinan Kesehatan</i> (Center for Health Determinants Analysis)
PHEIC	Public Health Emergency of International Concern
PoE	Point of Entry
POM	<i>Pengawas Obat dan Makanan</i> (Drug and Food Control) (also see BPOM)

PPA/PPAS	<i>Prioritas dan Plafond Anggaran (Priority Budget Ceiling)/Prioritas dan Plafond Anggaran Sementara (Temporary Priority Budget Ceiling)</i>
PSBB	<i>Pembatasan Sosial Berskala Besar (Large-Scale Social Restrictions)</i>
RAPBD	<i>Rancangan Anggaran Pendapatan dan Belanja Daerah (Draft of Regional Government Budget)</i>
RAPBN	<i>Rancangan Anggaran Pendapatan dan Belanja Nasional (Draft of State Budget)</i>
Renja K/L	<i>Rencana Kerja Kementerian/Lembaga (Ministry/Agency Workplan)</i>
Renstra K/L	<i>Rencana Strategis Kementerian/Lembaga (Ministry/Agency Strategic Plan)</i>
Renstra SKPD	<i>Rencana Strategis Satuan Kerja Perangkat Daerah (Regional Government Working Unit Strategic Plan)</i>
Rincian APBN	State budget details
RKA SKPD	<i>Rencana Kerja Anggaran - Satuan Kerja Perangkat Daerah (Budget Workplan of Regional Government Unit)</i>
RKA K/L	<i>Rencana Kerja Anggaran - Kementerian/Lembaga (Budget Workplan of Ministry/Agency)</i>
RKP	<i>Rencana Kerja Pemerintah (Government Workplan)</i>
RKPD	<i>Rencana Kerja Pemerintah Daerah (Local Government Workplan)</i>
RMT	Rapid Molecular Test
RPJMN	<i>Rencana Pembangunan Nasional Jangka Menengah Nasional (National Medium-term Development Plan)</i>
RPJPD	<i>Rencana Pembangunan Jangka Panjang Daerah (Regional Long-term Development Plan)</i>
RPJPN	<i>Rencana Pembangunan Jangka Panjang Nasional (National Long-term Development Plan)</i>
SARS	Severe Acute Respiratory Syndrome
SehatSatli	<i>Sistem Informasi Kesehatan Satwa Liar (Wildlife Health Information System)</i>
SiRUP	<i>Sistem Informasi Rencana Umum Pengadaan (General Procurement Plan Information System)</i>
SIZE System	The Information System for Zoonotic and Emerging Infectious Diseases
SNG	Subnational Government
SOP	Standard Operating Procedures
TPAD	<i>Transparansi Pengelolaan Anggaran Daerah (Local Budget Financial Management Transparency)</i>
WHO	World Health Organization
ZDAP	Zoonotic Diseases Action Package

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# Executive Summary

**Indonesia is the second country (after Vietnam) to conduct the health security financing assessment using the Health Security Financing Assessment Tool (HSFAT).** The overarching objective of HSFAT is to generate evidence to inform the national government in developing strategies for health security financing that accelerate and sustain progress towards effective health security. As the primary reference, the tool has been adapted based on Indonesia's specific context and the Vietnam experience in implementing HSFA. The results from the Joint External Evaluations (JEE) 19 technical areas were used as the reference to identify and define health security activities included in the study. The study captured the pre COVID-19 pandemic health security coordination and the financing mechanisms and government budgetary situation for health security functions. The study is increasingly relevant in light of Indonesia's pandemic situation and the inclusion of health security as one of the national development priorities.

**The decentralization of government administrative functions has added additional layers of complexity in the coordination and financing of health security in Indonesia.** The study captured central-level budget allocations, while information from the sampled provinces and districts provided a glimpse of the financing of health security functions at the subnational level. Central-level financial statement documents from 2015 to 2018 were collected from the relevant line ministries and agencies as described in the JEE technical areas. The qualitative part of the study reviewed the public financial management functions of the planning and budgeting process, financial flow mechanisms and their actual implementation, and the monitoring system. Two provinces, each with one district, were selected to describe how the health security financing mechanism operates in a decentralized setting.

**Limited available information on financing for health security makes it very difficult to provide a comprehensive picture of the health security financing landscape.** Health security activities involve multiple sectors and players, and different levels of government that have added layers of complexity in their financing. The study findings at the central level estimated that average annual growth in expenditure for health security activities across the JEE 19 technical areas was around 24 percent during the period of 2015–18. Total central expenditure for health security during the same period was estimated at an average of US\$280

million (ranging from US\$169–US\$334 million) per annum. Total per capita expenditure on health security for 2015–18 was quite small at between IDR 9,000–Rp 17,000 per annum (equivalent to around US\$0.60 to US\$1.20), while the total health security expenditure at the central level was around 0.02 percent to 0.03 percent of the country's total GDP. The majority of health security financing were for prevention functions, with the largest allocation provided by the MoH.

**As is the case with many other national programs, health security expenditure at the local level remains largely unknown due to the existing public financing reporting system.** From the limited purposively sampled observation districts for the HSFAT implementation in Indonesia, however, the average expenditure by the district government was almost Rp 30,000 per capita per annum (equivalent to US\$2.10–US\$2.90). Although the limited sampled sites prevented the extrapolation of the findings to all districts, health security expenditures per capita from the observed districts were larger than those of the central government during the same period (2016 to 2018 were the overlapped observed years). This finding is similar to those in Vietnam which indicates that subnational spending plays a significant role in health security financing. Another similar finding between the two country studies was the share of total health security expenditures to GDP which were around 0.06–0.09 percent across all levels of government.

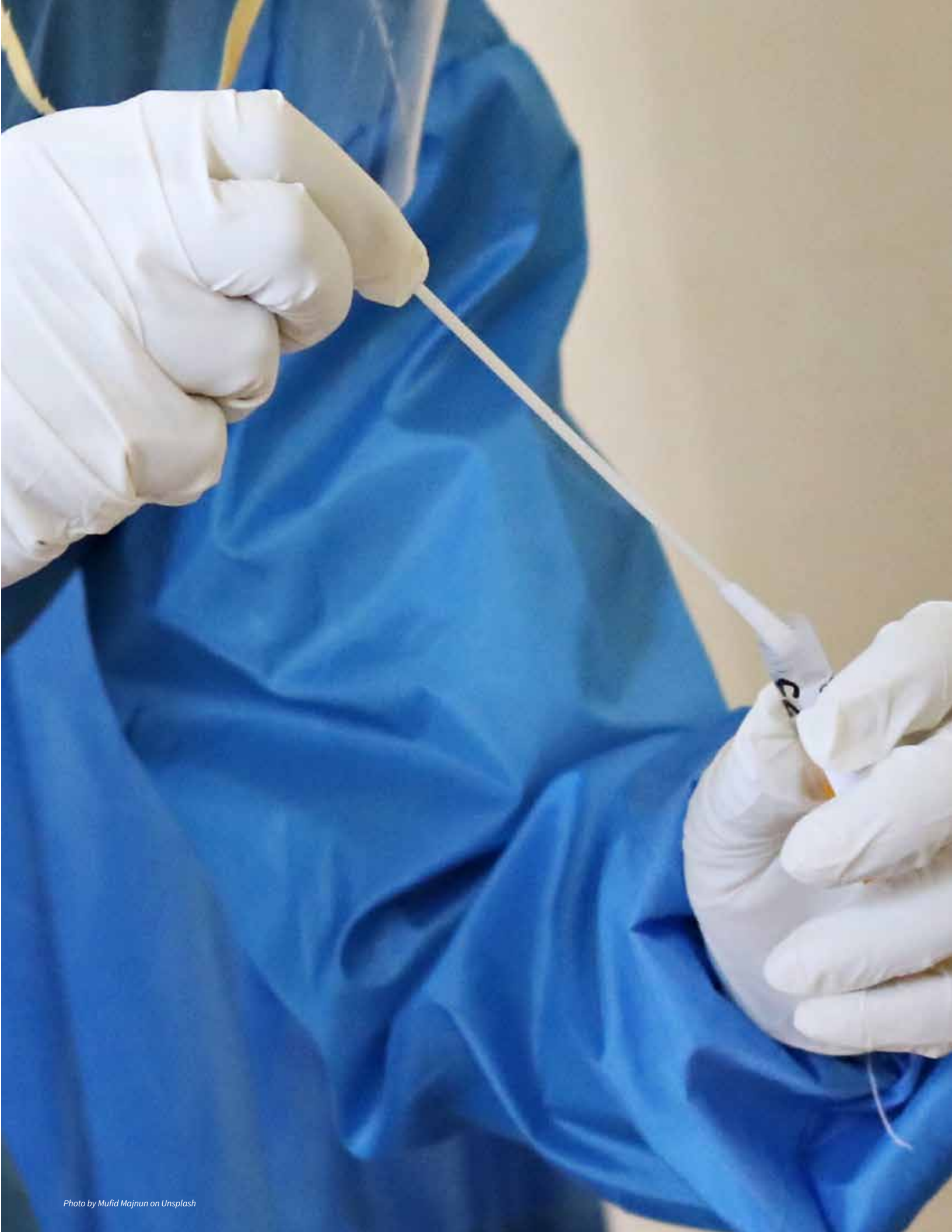
**Different approaches were used for the implementation of HSFAT in Vietnam and Indonesia—the Indonesia study focused on national level expenditures with a small subnational sample, while the Vietnam study included all provinces in the analysis.** There are advantages as well as disadvantages in both approaches. Despite these differences the HSFAT key steps were consistently implemented. These include consensus on the definition of spending and consultations with stakeholders at the central and subnational levels. The decision on which approach to use will depend on the objectives and funding availability. Regardless of approach, HSFAT requires good public financing data.

**There has been a growing awareness among the stakeholders of the need to develop an expenditure tracking system to enable monitoring for quality of spending for the government's health security budget.** The COVID-19 pandemic has triggered the need for the GoI to ensure

accountability in the use of response funds and, in the longer term, to have improved planning and budgeting for health security preparedness. The recommendations in this report are targeting cross-sectoral and interdisciplinary foundational issues to improve the public financial management of health security activities

**Addressing the following fundamental issues will improve the overall quality of public spending:**

1. as a national development priority, health security needs to be translated into multi sectoral and inter agency plans and budgets;
2. there is a need for sensitive and measurable performance indicators;
3. health security should be included in the process to develop a standardized public budget nomenclature system;
4. improve health information and accounting systems by taking into account Indonesia's decentralized context;
5. harmonize budget timelines and procedures between central and local governments, including reporting on all sources of sector financing to present a comprehensive view of resource allocation and spending for health security activities; and
6. strengthen the National Action Plan for Health Security with disaster financing mechanisms learning from the COVID-19 experience.



# 1. Introduction

## Background

Indonesia is strategically located along major sea lanes between the Indian and Pacific Oceans that connect East Asia, South Asia, and Oceania. It has a tropical climate that poses a high risk of emerging infectious disease and endemic infections, including zoonoses from the interaction between humans, animals, and the ecosystem. The risk is even higher for Indonesia, given its large population (around 264 million people), high biodiversity, and massive interconnectedness with the rest of the world, with 129 points of entry for its trade in goods and services, high flow of investments, information, as well as human migration (for example, workers, tourists, and students).

In the last few decades, Indonesia has experienced several infectious disease outbreaks—such as Severe Acute Respiratory Syndrome (SARS) in 2003, avian influenza in 2003, and Zika virus in 2016. Indonesia is also struggling with long-standing health problems such as vaccine-preventable diseases (measles, diphtheria, and polio), Multidrug Resistant Tuberculosis (MDR-TB), rabies, malaria, dengue fever, and others. All those diseases, in certain conditions, can potentially be harmful and lead to a pandemic that needs to be controlled and prevented. With the current trend of globalization, they have become an increasingly severe threat to national and global health, the economy, national security, politics, and social welfare.

Indonesia's geographical location and geological characteristics increase its vulnerability to both natural disasters and health security challenges. As defined by WHO, global health security is defined as a set of both proactive and response activities to mitigate threats and negative impact of public health events to community.<sup>1</sup> Indonesia has adopted the health security agenda as a public health issue and has assumed leadership roles both regionally and globally. Indonesia served as the chair of the Global Health Security Agenda (GHSA) steering group in 2016 and hosted the GHSA Ministerial Meeting in 2018. It is also actively co-leading the Zoonotic Diseases Action Package (ZDAP) and is a member of the GHSA Steering Group. Furthermore, Indonesia provides disaster assistance throughout Southeast Asia.

As a member state of the World Health Organization (WHO), Indonesia has been implementing the International Health Regulations (IHR 2005) since it was first nationally enforced in 2007. The regulations seek to prevent, detect, and adequately respond to global health issues of infectious disease with appropriate measures to limit their risks and impact on human health, migration, and international trade. In 2007, an assessment of the national capacity to implement IHR was conducted as the first step towards its introduction at the national level. In 2014, it was fully implemented, including the monitoring and evaluation (M&E) that refers to the framework established by WHO—that is, the Joint External Evaluations (JEE) which was completed in November 2017.

The Health Security Financing Assessment Tools (HSFAT) developed by the World Bank aim to complement the National Action Plan on Health Security. The specific objective is to inform the government in developing an adequate and sustainable financial strategy for its national health security plan to achieve strong and sustainable financing for the implementation of health security-related programs in a multisectoral setting.

## Objectives

The Indonesia HSFAT has two overarching objectives: (i) assessing the current state of financing for health security and institutional arrangements; and (ii) pilot testing a different HSFAT approach from the Vietnam experience to obtain feedback for its further improvement. The assessment generates vital evidence to: (i) inform health security policy dialogue and strategy development; (ii) establish a baseline on the overall size, sources, and flow of financing for health security; and (iii) describe current institutional arrangements and key stakeholders.

<sup>1</sup> [https://www.who.int/health-topics/health-security#tab=tab\\_1](https://www.who.int/health-topics/health-security#tab=tab_1)

## Health Security Situation in Indonesia

Since its launch in 2005, Indonesia has been very actively involved as a global citizen in the development and implementation of IHR, including in ZDAP and GHSA. Indonesia served as the chair of the GHSA in 2016. Immediately after the launching of the IHR, dissemination was carried out in 2006 to all stakeholders related to the IHR.

In 2013 an assessment was carried out to determine the capacity of the Government of Indonesia (GoI) in implementing the IHR as determined.<sup>2</sup> The assessment found that some “core capacity” in several technical areas, primarily surveillance, emergency response, laboratories, and infection control were still inadequate. Based on the results of the study, the WHO provides recommendations to strengthen capacity through a multisector approach, with particular attention to the technical area of “Point of Entry.”

The GoI continues to develop Health Security capacity by improving systems to support the development and implementation of Health Security, including the preparation of an IHR Implementation Plan and the establishment of a National IHR Committee (multisector) to accelerate the implementation of IHR in all sectors. These ongoing efforts have enabled Indonesia to implement IHR comprehensively since 2014. Some of the latest developments made by the government to improve capacity in implementing Health Security are the issuance of Presidential Instruction No. 4/2019 on Strengthening National Preparedness in the Event of Disease Outbreaks, Global Pandemic, and Biological, Nuclear, and Chemical Disasters and the establishment of Health Security as a priority development program in the National Medium-Term Development Plan 2020-24 (*Rencana Pembangunan Jangka Menengah Nasional: RPJMN*). It is hoped that, through a review of the RPJMN’s technocratic design, Health Security will be established as part of the national development priorities listed in the RPJMN 2020-24.

The most recent JEE conducted in 2017 to measure the capacity of Health Security in Indonesia found that all 19 JEE technical areas have scores of ‘2’ and above, and none of the areas was scored ‘1’ or “without capacity”. Indonesia’s JEE results showed that the country has the capacity to prevent, detect, and respond to health security events, but there are some areas that need to improve. Indonesia scores 63 percent<sup>3</sup> which was higher than the global (61 percent) and regional average (56 percent). The capacity for detection scored the highest (67.7 percent), followed by response capacity (65.7 percent), and chemical events and radiation emergencies (63.3 percent) while

prevention capacity ranked the lowest at 58.7 percent. Point of Entry was considered the strongest technical area scoring 70 percent, while the other elements remained below 70 percent. In comparison, the Global Health Security Index 2021 ranked Indonesia at 45 out of 195 countries with a total score of 50.4 which was up 1.2 points from 2019. Thailand ranked fifth of the 195 countries with 68.2.

As the follow up to the JEE, the GoI published the National Action Plan for Health Security (NAPHS) on December 19, 2019. The document includes a projection of costs needed to meet the health security capacity gaps that were identified in the JEE. The NAPHS was developed in close consultation with stakeholders in health security, including the Ministry of Agriculture (MoA) especially the Animal Health Directorate. The HSFA will provide information on the current state of health security financing which will provide the GoI with an estimate of the financial gap for health security.

The global COVID-19 pandemic that finally reached Indonesia in early 2020 has become one of the greatest public health threats in Indonesia in recent decades. The GoI announced its first positive COVID-19 case on March 2, 2020. As the virus spread rapidly across the world, the WHO declared a global pandemic on March 11, 2020. The Indonesian Government has taken numerous measures to respond to the COVID-19 pandemic. In addition to the health system response with the expansion of confirmatory testing capacity, contact tracing, infrastructure for isolation and critical care, the government also announced the outbreak as a national disaster on April 13 and established a national multisector response team, and financial packages to mitigate the socioeconomic impact of the pandemic.

## Organization of Report

The Indonesia Health Security Financing report starts with an introduction on the roles and position of Indonesia in global health security. Section Two of the report lays out the scope and the methodology used in the assessment which includes data used and the analysis steps for the public financial statement documents, the quantitative part, the consultation process, and in-depth interviews for the qualitative part. The presentation of the results in Section Three starts with a brief summary of the state of JEE19 technical areas based on the November 2017 evaluation. This is then followed by the findings from the desk review and in-depth interviews with stakeholders, and the results from the analysis of public financial statements

<sup>2</sup> [https://apps.who.int/gb/ebwha/pdf\\_files/WHA66/A66\\_16-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_16-en.pdf)

<sup>3</sup> National Action Plan for Health Security – Indonesia, December 2019.

from central ministries and local governments. The last section, Section Four, concludes the report along with a list of recommendations.

## Scope of the Assessment

**Indonesia is the second country to conduct the health security financing assessment (HSFA).** The assessment is a cross-sectional study conducted from February 2018 to November 2019. The study used HSFAT as the primary reference and has been adapted based on Indonesia's specific context and the Vietnam experience in implementing HSFA. The results from the JEE 19 technical areas were used as the reference to identify and define health security activities included in the study.

**The study is national in scope but, given that there are more than 500 district governments in Indonesia and coupled with limited resources, some adjustments were made to collect subnational level information from selected sites.** The study covers the central level and conveniently selected sites in two provinces (East Java and Yogyakarta) with one district in each (Kulon Progo and Banyuwangi respectively) to provide a flavor of subnational level allocations and expenditures on health security financing.

## Methodology

**The HSFAT consists of quantitative analysis, qualitative analysis, desk review, and case studies.** The changes made were, for instance, the implementation of the tool in selected districts considering the large number of districts, and the structure of the qualitative instrument based on the consultations with the technical working group. The adjusted HSFAT was used consistently at both the central and subnational levels.

**The study has both quantitative and qualitative data collection at the central and subnational levels.** For the quantitative part, expenditure data on health security activities across the JEE 19 technical areas were extracted from the available government financial statements and other information sources. Expenditure data are from the fiscal years 2015 to 2017 or, when available, 2018 data although it is budget data only. Access to government financial statements was problematic despite the public information law clearly stating that public information should be disclosed to the public. In the absence of an integrated subnational public financing reporting system, public financial statements are not available from all subnational governments (SNG) and the quality is not always reliable. Qualitative data collection included in-depth interviews

with the relevant sectors that were conducted using semi-structured questionnaires. Key stakeholders involved in financing health security activities at both central and provincial levels were interviewed—including MoH, MoA, and the National Disaster Management Agency (*Badan Nasional Penanggulangan Bencana*: BNPB) (or their local equivalent agencies).

**The fieldwork was conducted in the two selected provinces and two districts for an in-depth assessment of organizational arrangement, and analysis of health security financing at SNG level.** The selection of these SNGs was based on the following criteria: (i) previous experience of health crisis events (historical); (ii) the level of health risks which includes exposure to risks such as geographical location, population density, proneness to infectious diseases, proximity to transportation hub, borders; and (iii) local government's openness and responsiveness to requests for access to public financing statements.

## Limitations

There are some limitations to this review:

- **Sectoral limitations:** Depending on the access to the data, the study is limited to the main sectors, such as health, agriculture, environment and forestry, while detailed expenditures from the Ministry of Defense as well as some agencies were not available.
- **Availability of public financial statements:** These are of limited availability—especially at the subnational level for detailed allocation and expenditures data. In addition, the current Budget Classification and Chart of Accounts structure does not allow for immediate ready-to-use information for the tool.

The contributions from the private sector and community were not included.

## 2. Results

### Health Security Situation and Activities in Indonesia

The GoI has made significant efforts to improve the resilience of the country's health security response system in Indonesia, as already described earlier in the background. A further overview of the situation and implementation of health security in Indonesia that has been extracted from the 2017 JEE Report<sup>4</sup> is described in the following subsection.

#### DESCRIPTION OF ACTIVITIES BY 19 TECHNICAL AREAS

##### *Technical Area 1: National legislation, policy, and financing*

Indonesia started the implementation of the 2005 IHR when it entered into force on June 15, 2007, but the National Committee for IHR was only established four years later. The institutional arrangement for IHR implementation involves two coordinating ministries that reflects the broad scope of the IHR: the Coordinating Ministry for Human Development and Culture (Menko PMK), and the Coordinating Ministry for Political, Legal, and Security Affairs (Menko POLHUKAM). There are, however, relevant IHR ministries that are outside these two coordinating ministries—such as the MoA.

The formulation of implementation regulations becomes a critical activity for the relevant sector to implement IHR as the regulations are the basis for resource allocation. These sectoral regulations refer to the RPJMN that provides the government's strategic direction in terms of human health and animal health, as well as other technical areas of IHR—both at the national and subnational levels. Government regulations for emergency response cover preparedness, response, and public financing mechanisms (for example, as per Government Regulation No. 22/2008 on Disaster Funding). Various technical regulations and policies have been adopted by MoH and other relevant ministries and

agencies to facilitate implementation of the IHR.

##### *Technical Area 2: IHR coordination, communication, and advocacy*

As IHR was implemented in 2014, the GoI established the organizational arrangement to coordinate and ensuring the functioning of the IHR core capacities. The institutional arrangement for IHR coordination at the national level is led by Menko PMK with the Director-General of Disease Control (MoH) as the national focal point (NFP). The arrangement clarifies the roles and responsibilities of the involved ministries/agencies for specific activities in accordance with their technical areas, thus enabling the monitoring of the IHR core capacity framework to ensure accountability.

The national and subnational emergency response procedures have been established and are already in place for public health emergency events due to either natural or 'non-natural' disasters. The 2017 JEE review, however, excluded an assessment on the institutional setup and coordination at the subnational level and the interaction between the central and subnational governments.

##### *Technical Area 3: Antimicrobial resistance*

The GoI has developed and implemented the National Action Plan on Antimicrobial Resistance (NAP AMR) that aims to further enforce the existing government regulations for effective, safe, and affordable antimicrobials. The expectation is high with the inclusion of AMR explicitly in the new RPJMN as one of the health development priorities. This is a much-needed boost to involve relevant ministries/agencies in the development of the new action plan as the previous one expired in 2019. This is also an opportunity to enhance the existing efforts for controlling antimicrobial resistance, including strengthening the institutional arrangement—the Antimicrobial Resistance Control Committee (*Komisi Pengendalian Resistensi Antimikroba*) and its network at the hospital level. More importantly, mainstreaming these efforts as a part of the broader agenda of improving the quality of health services would be key for wider acceptance by health providers. The GoI has rolled out campaigns for

<sup>4</sup> <https://www.who.int/publications/i/item/WHO-WHE-CPI-REP-2018.9> or <https://apps.who.int/iris/handle/10665/272363>

rational drug use since 2015–16<sup>5</sup> with issuance of an MoH decree, but this lacks a supporting environment such as allocated resources, M&E, and an accountability mechanism. The fact that AMR was not previously adopted as part of the national development agenda may be the main reason why its urgency has not been shared among the broader research community and policy makers.

**In terms of the national capacity in AMR, all laboratories in Type A hospitals (national and provincial referral hospitals) can conduct AMR tests with a direct line of reporting to the Directorate General of Health Services (MoH).** The use of rapid molecular tests for MDR-TB is now made available in several referral service points. The AMR prevention and control program has been included as a part of the hospital accreditation. Outside the health sector, AMR pathogen testing for fishery is conducted by the Environment and Fish Diseases Test Laboratory, a vertical unit at the district level, and managed by the Directorate General of Aquaculture Fisheries.

**The Regional Veterinary Laboratory (Laboratorium Kesehatan Hewan Daerah) and Institute for Quality Testing and Certification of Animal Products (Balai Pengujian Mutu dan Sertifikasi Produk Hewan: BPMSPH) have the responsibility to monitor AMR in animals.** The MoA is currently conducting a pilot on integrated surveillance on AMR and antimicrobial use for animals. Regulations and guidelines on antibiotic use are available, such as the requirements for medical professionals (physicians or veterinarians) in the prescription of antibiotics treatment, and the prohibition on the use of antimicrobials as growth promoters in livestock feed. The enforcement of these regulations remains problematic, however, because of polypharmacy practices and the circulation of general knowledge that antimicrobial medicine can be obtained without prescription.

#### *Technical Area 4: Zoonotic diseases*

**Indonesia has declared zoonotic diseases prevention and control as one of its national development priorities.**<sup>6</sup> The zoonotic surveillance system is in place for selected zoonoses and covers the interaction between human health, animal health, and wildlife. A national-level coordination mechanism to address the multisectoral nature of zoonosis response—the National Zoonosis Control Committee—was established in 2016 and comprised representatives from relevant ministries and government agencies. The committee was short-lived, however, with the downsizing of the

government structure in 2017, and its role was shifted to Menko PMK. This integrated multisector system involved four key stakeholders, namely MOH, MOA, and MOHA and the Menko PMK as the coordinator, and was intended to monitor and act upon results from epidemiological and laboratory surveillance on human and animal health. An information system is also in place for surveillance reporting. Under the coordination of Menko PMK, simulation exercises for zoonotic diseases outbreaks were conducted in several sites, such as Bali, Makassar, and South Tangerang from 2017.

#### *Technical Area 5: Food safety*

**The existing regulation framework for food safety has reduced the incidence of food-borne disease outbreaks.** With the implementation of the food safety, quality, and nutrition content regulation in 2004<sup>7</sup>, which was followed by a Menko PMK decree on improved institutional arrangements and networks, Indonesia witnessed a significant decrease in food-borne disease outbreaks from 306 in 2014 to 106 in 2016. Household-prepared food remains the main contributor to food-borne disease events. Despite the disconnect between the central and subnational governments in making food safety a priority activity, the bottom-up outbreak investigations reporting is functioning well.

**Several databases are in place for collecting information related to food safety but these are yet to be connected with the surveillance system.** The Information System for Zoonotic and Emerging Infectious Diseases (SIZE system) is still in the pilot phase. It integrates various surveillance systems—such as the MoA's Integrated National Animal Health Information System (*Informasi Sistem Kesehatan Hewan Nasional-Terintegrasi: ISIKHNAS*) with the MoH's Early Warning, Alert, and Response System (EWARS). The integration helps to ensure prompt responses to outbreaks of food-borne animal diseases. The development of ISIKHNAS, especially between central and subnational government has benefited from external support—especially from the Australian Government through the Australia-Indonesia Partnership for Emerging Infectious Diseases (2015–18).

#### *Technical Area 6: Biosafety and biosecurity*

**Despite the availability of laboratory infrastructure for both human and animal health, integration between the two remains limited.** There are more than 13,000 clinical laboratories in total for humans and veterinary, as well as research laboratories in the country. Integration

<sup>5</sup> Ministry of Health Decree No. 8/2015 on Antimicrobial Resistance Control Program in Hospital Setting, followed by MoH Decree No. 27/2017 on Infection Control and Prevention.

<sup>6</sup> The zoonotic diseases according to Presidential Regulation No. 30/2011 are rabies, anthrax, Avian Influenza, brucellosis, and leptospirosis.

<sup>7</sup> Government Regulation No 28, 2004 on Safety, Quality and Nutrition content of Food



of the two information systems is challenging given the limited availability of infrastructure in remote areas. A central, certified biosafety level three (BSL-3) laboratory is in operation serving both the human and animal health. The National Authority for Containment conducts proper containment measures for biological hazards referring to the national and local institutional guidelines for biosafety. Although advanced biosafety certified training is already available for human laboratories as a part of continuous skill-building efforts across the involved sectors, the high turnover of personnel and a wide variation in laboratory capacity over a vast geographical area continue to be the country's main challenges.

### *Technical Area 7: Immunization*

**The immunization program continues to be a high priority in the national health development agenda with a strong government commitment and budget allocation.** Following a significantly increased budget allocation for the health sector, around 92.2 percent of primary health centers (Pusat Kesehatan Masyarakat: Puskesmas) were equipped with WHO-standard cold-chain equipment in 2017. The maintenance of this equipment, however, will have to rely on local budget allocation which is variable across local governments. The government maintains a stockpile (25 percent buffer stock) of all routine immunization commodities that can be used to mitigate vaccine supply shortages and outbreaks.

**Despite the improvements in the availability of cold-chain and vaccine, ensuring immunization services to reach remote areas remains a challenge.** A Sustainable Outreach Services (SOS) strategy is implemented 3-4 times/year in remote areas in integration with other health programs such as maternal and child health and malaria programs. Improving community awareness has been facing increased resistance, and a more comprehensive and strategic communication and education approach is needed. Recent outbreaks of vaccine-preventable diseases such as measles and diphtheria, and the 2019 polio outbreak in Papua raise concerns over the local governments' commitment and quality assurance mechanism of the program. The participation of local governments to allocate resources is needed for program outreach, and should not be limited to the reactive mobilization of additional resources as their response to these outbreaks.

### *Technical Area 8: National laboratory system*

**As a big and geographically challenging country, Indonesia's reliance on a single reference laboratory for humans—the National Institute of Health Research and Development (*Badan Penelitian dan Pengembangan Kesehatan: Balitbangkes*)—and BPMSPH) for animals in Jakarta causes delays in response.** Both facilities have received BSL-3

certification. A number of peripheral reference laboratories have, therefore, been established to cover the needs for more complex and sophisticated investigations. As of the end of 2019, there are 13 human peripheral referral laboratories and eight veterinary referral laboratories, and a veterinary referral laboratory in Papua just recently started operating in 2018.

**Indonesia's almost 10,000 Puskesmas are the backbone of the health system and they serve as frontline health care services.** Some of these primary health care facilities are also equipped with basic diagnostic capacity. Referral hospitals are well distributed all over the country and almost 98 percent of the 2,813 hospitals are equipped with laboratories. In addition, there are 1,205 public health laboratories. For animal health, there are 962 primary veterinary centers. As with the hospital hierarchy, there are different levels of health laboratory. At the lowest diagnostic capacity level, there are approximately 13,000 laboratories in which the most common diseases (malaria, TB) can be diagnosed at the *puskesmas*. Although the diagnostic capacity has improved significantly in 2020, the objective for 70 percent of laboratories having the capacity to diagnose TB has not been met.

**The regional human referral laboratories have the ability to detect agents or the 23 diseases in the EWARS—from acute diarrhea to avian influenza.** MERS-CoV and BSL-4 agents are restricted to analysis at the central referral laboratory. Diagnostic testing is also available for 25 strategic animal diseases according to the World Organization for Animal Health (OIE) manual. Although laboratories have had to bear the cost for getting the national external quality assurance (EQA) accreditation since 2016, the number of EQA-accredited laboratories continues to increase. The areas for improvement include interoperability of the laboratory information system with the national health (human and/or animal) information system.

### *Technical Area 9: Real-time surveillance*

**Regulations are in place for the implementation of surveillance activities from MoH, MoA, Ministry of Environment and Forestry, and Ministry of Marine Affairs and Fisheries (MoMAF) at all government levels, individual sectors or in collaboration.** Guidelines, Standard Operating Procedures (SOPs), and technical guidance have been developed by the responsible units within each ministry. Staff are trained to collect and verify information and share it with partners and stakeholders. For the health sector, there are routine reporting mechanisms for observed diseases that collect data from *puskesmas* and its network of auxiliary health centers and village midwives. For animal health, notifiable animal disease syndromes are reported in real time. Verified disease information is accessible to the public at the MoA's managed webpage [www.infopenyakit.org](http://www.infopenyakit.org), and [www.skdr.surveillance.org](http://www.skdr.surveillance.org) and [www.sehatsatli.org](http://www.sehatsatli.org).

menhik.go.id, Surveillance data is routinely analyzed, interpreted, and fed back to provinces via the EWARS weekly bulletin, vaccine-preventable disease bulletin, and the ISIKHNAS monthly bulletin. Surveillance staff at all levels can analyze surveillance data.

### *Technical Area 10: Reporting*

**A mechanism for reporting to WHO and OIE is in place, implemented, and operational—the MoA reports to OIE and the MoH reports to WHO.** The IHR NFP and OIE focal points have been trained and domestic and international reporting infrastructure is in place. Indonesia has notified for avian influenza (2015, 2017); Koi herpesvirus (2002); and infectious myonecrosis virus (2006). A tiered reporting system has been developed and operating, reporting up from service to central level (ISIKHNAS, EWARS, a Software Monitoring System for Fish Diseases, and SehatSatli (Wildlife Health Information System or *Sistem Informasi Kesehatan Satwa Liar*). Collaboration and coordination guidelines are available for specific pandemic simulations (for example, influenza pandemic). Communities are empowered to report extraordinary incidents and routine surveillance reports are accessible to the general public. Online systems for reporting include that of MoMAF ([www.impikan.kkp.go.id](http://www.impikan.kkp.go.id)); SehatSatli ([www.sehatsatli.menlhk.go.id](http://www.sehatsatli.menlhk.go.id)), and the MoH EWARS ([www.skdr.surveilans.org](http://www.skdr.surveilans.org)).

### *Technical Area 11: Workforce development*

**The National Center for Human Resource Development (Pusat Pengembangan Sumber Daya Manusia) has facilitated the development of 30 types of functional health positions.** The quality assurance mechanism to ensure the skills of these workers has been operationalized with health professional competency tests. Indonesia has a multidisciplinary workforce available at national and regional levels—partially at the local level. Rapid Response Teams have been established and specific training has been introduced. Indonesia conducts basic, intermediate, and advanced epidemiology training. Epidemiology training is available for staff from other sectors beyond the health sector.

**One of the main challenges across various technical areas is the high turnover rate of those who have received training.** An advanced Field Epidemiology Training Program (FETP) has been in place since 1982 and, by October 2017, more than 500 FETP alumni were working across the country (except in North Kalimantan). According to 2016 data, a total of 1,572 epidemiologically trained public health staff are performing their duties at all levels of the country. A human resource development strategy has been developed,

including short-, medium-, and long-term planning. A related action plan is in place (Action Plan for Human Resources Development and Empowerment Program 2015-2019).

### *Technical Area 12: Preparedness*

**As the national disaster risk management authority, BNPB has developed a multi-hazard national health emergency plan (National Plan of Disaster Management).** In addition, the agency also has established national risk disaster indexes for several hazards but the integrated one is yet to be developed. Decentralization has created an additional layer of complexity and challenges to ensure provinces and districts develop their preparedness and response plans. Around 300 of the subnational governments have these plans in place with support from the Centre for Health Crisis (*Pusat Penanggulangan Krisis Kesehatan*) at the MoH. The target of an additional 174 regencies that have developed response plans by 2020 was hampered by the COVID-19 pandemic. Risk analysis and mapping skill is available at national and provincial levels—for example, avian influenza mapping is used to assist priority provinces in developing contingency plans.

### *Technical Area 13: Emergency response operations*

**Indonesia's BNPB has the authority to develop policies and coordinate a rapid response in the event of a disaster and has a direct reporting line to the president.** A similar arrangement is in place at subnational level—the local agency (*Badan Penanggulangan Bencana Daerah: BPBD*) is under the local government and has no vertical reporting lines to the central agency. Clusters of relevant sectors, or emergency operation centers (EOC), were established to improve collaboration across sectors, as well as management of resources. For instance, the MoH lead the health response cluster in close coordination with the Deputy for Emergency Response. BNPB organizes support such as conducting capacity-building activities and ensuring the availability of implementation guidelines/manuals/SOPs for emergency response. Regular coordination and functional exercises/simulations have been conducted that enable a coordinated emergency response to be activated within 120 minutes. This is especially the case for natural disasters. As a disaster-prone country at least one or two major disasters strike that require national EOC activation.

### *Technical Area 14: Linking public health and security authorities*

**Numerous regulations on the prevention of public health emergencies are already in place, including those related**

**to counter terrorism.**<sup>8</sup> One of the National Agency for Counter Terrorism's (*Badan Nasional Penanggulangan Terorisme*: BNPT) responsibilities is to coordinate related government agencies in implementing counterterrorism policy. SOPs for countermeasures to chemical, biological, nuclear, radioactive, and explosives (CBNR) terrorism exist between the BNPT, the armed forces, and the MoH. Training on countermeasures to CBNR terrorism has been completed in 11 provinces. There is cooperation between human and animal health laboratories, and the national laboratory system can detect pathogens that cause epidemic disease. All CBNR terrorism incidents are reported to the BNPT. Several simulations of public health emergency countermeasures have been completed, the most recent of which was the 2017 simulation of epicenter pandemic influenza countermeasures in South Tangerang, a Jakarta neighboring district.

#### *Technical Area 15: Medical countermeasures and personnel deployment*

**BNPB has developed guidelines on the role of international organizations and foreign NGOs during emergency response.** There are also procedures in place that include administrative and logistical measures related to the handling of national and international medical countermeasures. In general, international assistance is accepted through the Ministry of Foreign Affairs and channelled further via the BNPB to the MoH. Dedicated staff are available in the MoH to process donated countermeasures. There is a stockpile for public health emergencies in each MoH technical unit. Indonesia has developed some level of in-country production capacities for vaccines, antibiotics, and laboratory supplies, but is still highly dependent on external sources for raw materials. Indonesia is an active member of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and has practiced sending and receiving medical countermeasures since 2013 (for example, Nepal, Myanmar), based on AADMER and WHO standards.

#### *Technical Area 16: Risk communication*

**The national plan for disaster management has included a risk communication framework as well as reference to developing plans for communicating risks.** The national regulation framework covers the reporting of hazards including risk communication. The implementation in a decentralized setting has posed challenges for a synchronized

public risk communication strategy between the central and subnational levels of government. The country also benefited from the experience in managing public risk communication during the 2018-2019 measles and polio outbreak with support from UNICEF, WHO, and the Australian Department of Foreign Affairs and Trade (DFAT).

**Coordination across national agencies for cohesive public communication messages requires a more integrated and better aligned communication mechanism.** Each minister and agency has a public communication unit that is responsible for managing risk communication. In the health sector, MoH is the lead institution for the public health emergency response and takes on the coordination role in communicating health risks. The designated unit—the Communication and Public Services Unit—monitors and analyzes mainstream and digital media, public opinion and social media, and feeds recommendations to decision makers. SOPs are in place to guide actions for addressing rumors and misinformation. The Ministry of Informatics and Communications (<https://kominfo.go.id>) also acts to counter hoaxes on social media through a digital literacy campaign program and community initiative that provides search tools to check hoaxes ([the turnbackhoax.id](http://turnbackhoax.id)).

#### *Technical Area 17: Points of entry*

**As the largest archipelagic country that is situated at the bridge across two continents, Indonesia has 304 Points of Entry (PoE)—fourteen of these are designated PoEs under the IHR (six airports, seven seaports, and one ground crossing).** As the busiest airport in the Southeast Asia region, Indonesia's main international gateway, the Soekarno-Hatta Airport in Jakarta, has about 300 commercial flights arriving in a day, and around 67 million passengers in 2019 (Changi comes close with 66 million passengers). The GoI has developed regulations, operational guidelines, and training programs to implement this technical area. The guidelines for health quarantine and management of health events at the PoE have been developed and implemented at all designated airports, seaports, and ground crossings. Routine inspections are carried out for vectors, water, air quality, and food management at PoE. The monitoring of goods and human remains for possible contamination by CBNR agents is coordinated with relevant parties. Public health emergency contingency plans are in place for all 14 designated PoEs. The main challenges to ensure these PoEs function effectively include the availability and capacity of personnel and the capacity of the system to monitor and provide feedback.

<sup>8</sup> In 2003, the Government of Indonesia upgraded government Regulation No. 1/2002 to Law No. 15/2003 on Combatting Terrorism. The National Agency for Counter Terrorism (BNPT) was established under Presidential Regulation No. 46/2010 on the National Agency for Combatting Terrorism (<https://www.bnpt.go.id>)

### Technical Area 18: Chemical events

Indonesia has developed its national regulation framework following the ratification of international conventions on chemical hazards. Several national committees on chemical safety have been established, but these are separate commissions specific to certain chemical substances, such as for pesticides, toxic substances, and chemical weapons. The national chemical emergency and preparedness system has not, however, included an integrated surveillance system that systematically involves the relevant institutions—such as clinical toxicology laboratories. In addition to standards protocol and guidelines, a referral system for intoxication and poisoning, and a national strategy for capacity building for human resources in this area are still needed.

### Technical Area 19: Radiation emergencies

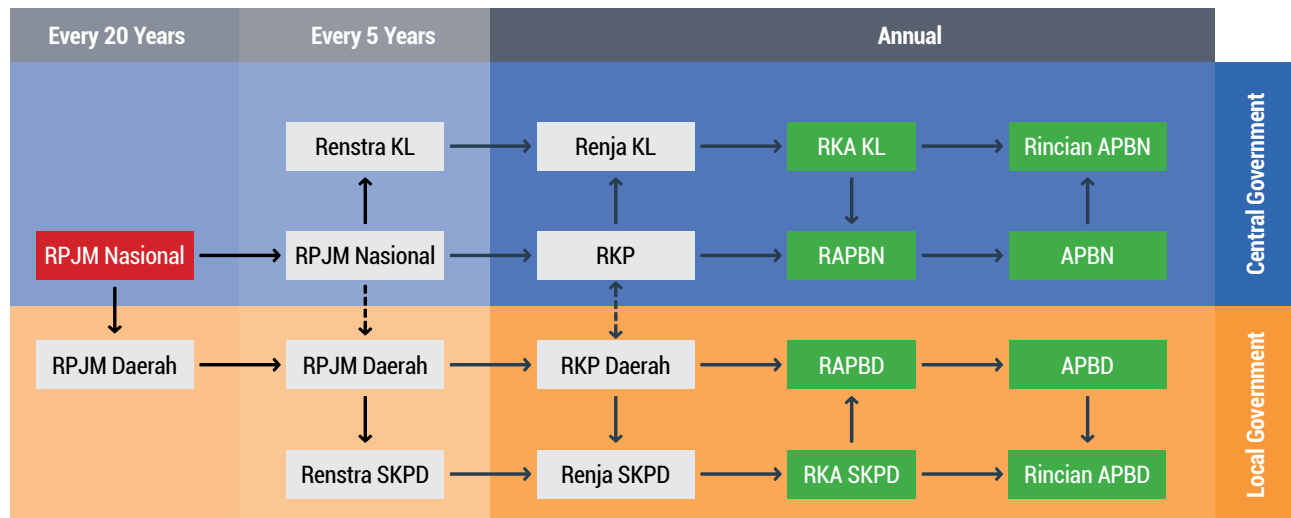
Indonesia has a well-established regulation framework and institutional arrangement for the use of radioactive materials for various purposes, including in industry, medicine, and research. The national agencies are the National Nuclear Energy Agency (*Badan Tenaga Nuklir Nasional*: BATAN) that has been in operation since 1964 and, in 1997, the Nuclear Energy Regulatory Agency (*Badan Pengawas Tenaga Nuklir*: BAPETEN) was established to provide oversight, inspection, and enforcement of safety measures and issue licenses. BNPT periodically conducts simulations of CBNR counter-terrorism measures.

In the case of radiation emergencies, the National Nuclear Emergency Response Organization (*Organisasi Tanggap Darurat Nuklir Nasional*) was established under the coordination of the BNPB. The national plan for emergency response to nuclear and radiation emergencies is not yet developed, although guidelines and operations manuals have been developed and are already in place. Coordination with various stakeholders and subnational governments needs to be improved to better translate the national commitment to involve all relevant sectors and provincial and district governments.

### THE POSITION OF HEALTH SECURITY IN THE CONTEXT OF NATIONAL DEVELOPMENT PRIORITIES

The inclusion of health security in the national planning documents is a key step in ensuring the allocation of public resources. The National Planning Law, No. 25/2004, delineates the framework for the national development prioritization process. The National Long-term Development Plan (*Rencana Pembangunan Jangka Panjang Nasional*: RPJPN which serves as the development guideline for the next 20 years, and the five-year medium-term RPJMN lay out priority development programs. Each ministry/government agency will develop their respective sector's medium-term strategic plan (*Rencana Strategis*: Renstra) which will then be used as the main reference for the annual planning and budgeting (*Rencana Kerja*: Renja) processes (Figure 1).

Figure 1. Development Planning Process at the Central and Local Level Government



RPJPN Nasional = National Long-Term Development Plan; RPJM Nasional = National Medium-Term Development Plan; Renstra K/L = Ministry/Agency Strategic Plan; Renja K/L = Ministry/Agency Workplan; RKP = Government Workplan; RKA K/L = Ministry/Agency Workplan and Budget; RAPBN = State Budget Plan; APBN = State Budget; *Rincian APBN* = State Budget Details; RPJM Daerah = Local Long-Term Development Plan; *RPJM Daerah* = Local Medium-Term Development Plan; Renstra SKPD = Local Government Working Unit Strategic Plan; RKP Daerah = Local Government Workplan; RKA SKPD = Local Government Working Unit Workplan and Budget; RAPBD = Local Government Budget Plan; APBD = Local Government Budget; *Rincian APBD* = Local Government Budget Details

**Health security was not explicitly mentioned as a national health development priority in the previous RPJMN 2015-19, although several JEE Technical Areas (TA) activities were included.** The previous RPJMN document, and the strategic plans of relevant ministries included activities related to JEE technical areas, however, they are not integrated nor framed in the perspective of health security as a comprehensive entity. This may lead to inadequate, inaccurate, unsustainable, and unorganized implementation of health security programs across the ministries/agencies. In response to that, the recently conducted Health Sector Review led by Bappenas with support from UNICEF and DFAT for the development of RPJMN 2019-24 has included health security as an overarching theme that covers various health issues, such as antimicrobial resistance and zoonotic disease. There is a higher likelihood that health security will be included as one of the national development priorities.

**Indonesia's decentralization has created additional layers of complexity for coordination—including for health security—between the central and subnational levels and within the subnational level.** In the current setting, each province and district may have different organizational structures and arrangements, as well as development priorities that reflect their community and local specific needs. These variations of local priorities and institutional arrangements have consequently led to different coordination mechanisms including for prevention, detection, and response functions of health security. To complicate things further, each province or district may have different understanding, or use various technical terms for health security-related issues.

**These variations will potentially complicate the coordination of health security-related activities.** There are, however, avenues to minimize the potential complications by involving the one ministry that has strong administrative influence with the subnational governments—MoHA. For instance, to ensure the consistency of subnational plans with the national development goals, it is stated under the national planning law and the decentralization law that the subnational planning processes—including the production of medium-term development plans and financial management—should refer to MoHA regulations and decrees such as Regulation No. 86/2017 on Planning and Regulation No. 21/2011 on Financial Management.

**Despite the absence of an explicit statement on health security as a national priority, some health security functions and activities were already in the central and subnational plans and budget documents.** Activities such as disease surveillance, immunization, PoE, and zoonotic disease control were regular national programs in the MoH and MoA annual workplan. Similarly, the subnational level governments have included these activities in their annual RKPD, however, the absence of a health security framework resulted in limited activities for coordination and collaboration, and also cross-unit or cross-sectoral programs or activities. The lack of multisectoral programs/activities has become a major obstacle for the country to effectively implement the health security agenda.

### THE CONSISTENCY OF THE NATIONAL HEALTH SECURITY PRIORITIES WITH THE IHR

**The implementation of national health security programs is also a manifestation of Indonesia's commitment as a global citizen.** The translation of health security as a global agenda and commitment into the country's development agenda needs to be applied consistently. The major global threats such as new emerging infectious diseases, other pandemic diseases, and nuclear, biological, and chemical catastrophic events started more as international concerns but the Gol have adopted these issues into the national development agenda.

**The existing Gol regulations have accommodated some of the public health emergency of international concern (PHEIC).** There are some discrepancies—bioterrorism and several infectious diseases that are considered major global health threats are not yet included in the national priority list (Table 1). The possible explanation may include that these are not yet perceived as significant threats to Indonesia. The mechanism to adopt global commitments remains unclear, including the procedures and criteria that can be used to adopt global concerns as national priorities. In addition, there is little information on how often the national list is to be reviewed and updated amidst high intensity mobility and interaction between humans and animals.

**Table 1. National and Global Issues of Health Security Priorities**

NATIONAL PRIORITIES	WHO PRIORITIES	CDC PRIORITIES (BIOTERRORISM)
<p>MoH Regulation 1501 Year 2010: Cholera, pest, dengue hemorrhagic fever, measles, polio, diphtheria, pertussis, rabies, malaria, avian influenza H5N1, anthrax, leptospirosis, hepatitis, influenza A (H1N1), meningitis, yellow fever, chikungunya.</p> <p>MoH Resolution No. 424/Menkes/SK/IV/2003 – SARS</p> <p>MoH Decree No. HK.02.02/Menkes/216/2016 – Zika</p> <p>MoH Decree No. HK.02.02/Menkes/405/2016 – Ebola</p>	<p>Congo fever (CCHF), ebola Marburg virus disease, Lassa fever, Middle East respiratory syndrome coronavirus (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS), Nipah virus and henipavirus disease Rift Valley Fever (RVF), Zika</p> <p>Other diseases put into consideration: Arenavirus diseases other than Lassa fever; Chikungunya; coronavirus diseases other than MERS and SARS; emergent non-polio enteroviruses (including EV71, D68); and Severe</p>	<p>Category A: anthrax, botulism, pest, variola, tularemia, filovirus diseases (Ebola, Marburg) and arenavirus diseases (Lassa, Machupo)</p> <p>Category B: brucellosis, epsilon toxin, food-borne diseases, glanders, melioidosis, psittacosis, Q fever, ricin toxin, enterotoxin Staphylococcus B, typhus, viral encephalitis, water-borne infections</p>
NATIONAL PRIORITIES	WHO PRIORITIES	CDC PRIORITIES (BIOTERRORISM)
<p>MoH Regulation 59 Year 2016: Poliomyelitis; Ebola; MERS; Influenza A (H5N1)/avian flu; hantavirus disease; Nipah virus disease; yellow fever; Lassa fever; congo fever; meningococcus meningitis; Zika</p>	<p>Fever with Thrombocytopenia Syndrome (SFTS). (WHO, 2018. 2018 Annual review of diseases prioritized under the Research and Development Blueprint)</p>	<p>Category C: emerging infectious diseases, such as Nipah and hantavirus (CDC Bioterrorism Agents)</p>

Source: World Bank analysis the aforementioned documents

## Structure and Organizational Arrangement of Health Security

### STAKEHOLDERS IN THE IMPLEMENTATION OF HEALTH SECURITY PROGRAMS

**The key stakeholders of health security in Indonesia are stipulated by government regulations.** The Presidential Instruction No. 4/2019 on Strengthening National Preparedness in the Event of Disease Outbreaks, Global Pandemic, and Biological, Nuclear, and Chemical Disasters was issued mid 2019 after more than a two-year process. As health security events are defined as a “nonnatural disaster”, the roles and responsibilities of the stakeholders are also described in the Disaster Management Law No. 24/2007. The presidential instruction identified 20 ministries and government agencies under the coordination of two coordinating ministries that have the task and function of implementing Health Security at the national government level (See Appendix 3).

**These stakeholders can also be identified from the members of the Cross-sectoral Working Group (National Working Group) at the national level, which was established for**

**the implementation of GHSA.** This multisector working group involves two coordinating ministers: the Coordinating Minister for Human Development and Culture, and the Coordinating Minister for Politics, Law, and Security, and also the Minister of Health as the leading sector. In addition, the Minister of Health has issued a decree<sup>9</sup> to establish an internal health security working group that has expired at the end of 2020, and the new decree is being prepared.

At the subnational level, the governor as the head of a province has the following roles and responsibilities:

- **mobilize resources for health security;**
- **integrate health security efforts into regional development planning documents and ensure the activities are adequately financed;**
- **coordinate and facilitate district-level health security activities;**
- **encourage district heads to allocate a sufficient budget for health security; and**
- **monitor various diseases including zoonoses, and/or events that potentially cause public health emergencies and report to the president through the Coordinating Minister for Human Development and Culture.** At the district/municipality level, these roles are taken by the district heads.

<sup>9</sup> MoH Decree No. HK.02.02/MENKES/273, 2016.

**Table 2.** The mapping of JEE Technical Areas with the National Disaster Coordination

<p><b>1. PRE-DISASTER</b></p> <p>a. Prevent</p> <ul style="list-style-type: none"> <li>• National legislation, policy &amp; financing</li> <li>• Coordination, communication advocacy</li> <li>• Antimicrobial resistance</li> <li>• Zoonotic disease</li> <li>• Food safety</li> <li>• Biosafety and biosecurity</li> <li>• Immunization</li> </ul> <p>b. Detect</p> <ul style="list-style-type: none"> <li>• National laboratory system</li> <li>• Surveillance</li> <li>• Reporting</li> <li>• Human resources</li> </ul>	<p><b>2. DURING OF DISASTER</b></p> <p>a. Respond</p> <ul style="list-style-type: none"> <li>• Emergency preparedness</li> <li>• Emergency response operations</li> <li>• Linking public health and security authorities</li> <li>• Medical countermeasures and personnel deployment</li> <li>• Risk communication</li> </ul> <p><b>3. POST-DISASTER</b></p> <p>a. Recover</p>
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## COORDINATION MECHANISM FOR HEALTH SECURITY

**Regulations and platforms for multisector coordination for the relevant ministries have been established, but the clarity on the leading sector remains.** There are several government regulations and guidelines as reference for the coordination of a national response for different events of disaster or threats, such as for disease outbreaks, and other types of crises.<sup>10</sup> Of these, the Guideline for Cross-sectoral Coordination in Zoonotic and Emerging Infectious Disease Outbreaks developed under the leadership of the Coordinating Ministry for Human Development and Culture in 2018 is considered the most comprehensive document available. It exhaustively lists and uses all of the existing guidelines and policies and clarifies different technical terms and definitions for health security-related issues used in the previous documents, such as epidemic, outbreak, health crisis, and disaster. The document also manages to bring together the previously fragmented coordination mechanisms across various government units at different levels and the One Health approach in the national health security programs. Nevertheless, the legal status of the document remains unclear as it was not supported by a ministerial decree.

### The National Coordination framework

**The national coordination framework for disaster and disease outbreaks has incorporated the WHO's health security implementation framework.** The framework was developed using a disaster management approach that consists of three stages of implementation: (i) pre-disaster; (ii) disaster; and (iii) post-disaster. While WHO classifies 19 technical areas of health

security into three functions: (i) Prevent; (ii) Detect; and (iii) Respond in addition to the specific domain of "IHR Related Hazards and Point of Entry". The WHO framework of health security can be fitted to the national disaster coordination framework (Table 2, and Appendix 6). This framework is expected to be adopted by subnational governments. The diagram in Figure 2 further shows how the national disaster coordination fits with the JEE framework.

Three out of the 19 technical areas: (i) PoE (TA17); (ii) chemical events (TA18); and (iii) radiation emergencies (TA19) are not yet covered by the national framework.

**Figure 2.** Link of the National Coordination and JEE Framework for Health Security



Source: Presidential Decree No. 4/2019 and Joint External Evaluation guideline.

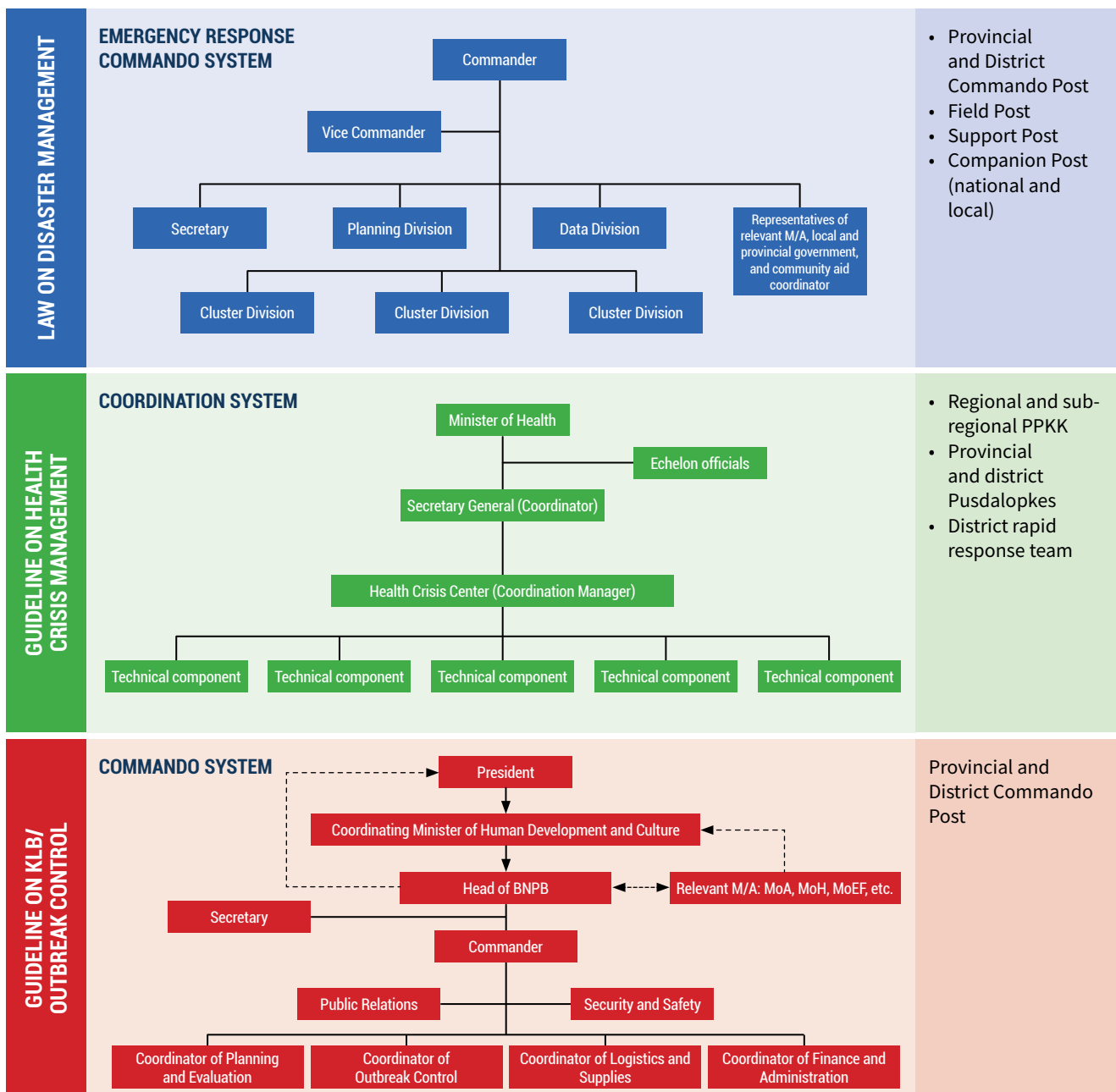
<sup>10</sup> Law No. 24/2007 on Disaster Management; MoH Decree No. 64/2013 on Health Crisis Management; Guideline for Cross-sectoral Coordination in Zoonotic and Emerging Infectious Disease Outbreak published by the Coordinating Ministry for Human Development and Culture, 2018.

**Pre-disaster coordination mechanism (prevent and detect)**

The pre-disaster phase areas include well-established and even national-priority programs for the government. There are seven technical areas that fall under the ‘Prevent’ function and four under ‘Detect’—namely national laboratory system, surveillance, reporting, and human resources. The coordination mechanism for each of these technical areas is regulated by decrees from the relevant technical ministries/agencies—for example, MoH or MoA.

The effectiveness and efficiency of pre-disaster activities would require coordination and integration in planning and budgeting of both the Prevent and Detect functions. The recent RPJMN 2020–24 issued early in the year of 2021 has explicitly acknowledged the importance of health security. In a further elaboration, Bappenas has laid out key strategies to advance the reform of health security in the health sector. As the RPJMN document serves as the primary reference for government ministries/agencies to develop workplans, the recognition of health security as a national priority would encourage, and even enforce, coordination and integration of activities across government entities.

**Figure 3. Comparison of Coordination Mechanisms During a Health Crisis**



Source: The World Bank staff analysis on Health Crisis and Disaster Management regulations



**Table 3.** The distribution of Authority

Authority	Early warning	Area closure	Epidemic	Outbreak	Disaster
President					
Minister of Health					
Minister of Agriculture					
Governor					
Mayor					
Head of Provincial Health			*		
Head of Provincial Animal Health			*		
Head of District Health			*		
Head of District Animal Health			*		

Source: Guideline for Cross-sectoral Coordination in Zoonotic and Emerging Infectious Disease Outbreak, 2018

\*) Technical advisory functions

**The health security pre-disaster regulations are currently not necessarily well synchronized.** An example of this is in ‘food safety’ where each ministry/agency has regulations that describe their roles and responsibilities, such as MoH which has published several decrees related to the production and selling of food for consumption, while MoA has a decree on food safety surveillance, the Ministry of Trade a decree on imported ready-to-consume food products, MoMAF on the safety of fisheries products, and the Ministry of Tourism on street vendors and food courts. These regulations were developed from a sectoral perspective rather than one of broader cross-sectoral coordination.

#### *Coordination mechanism in the event of a disaster*

**The country’s coordination mechanism during emergency response uses multiple government regulations and guidelines as the reference which may bring both advantages and disadvantages at the same time.** The Disaster Management Law (No. 24/2007) has been the main reference for government units both at the central line ministries and subnational levels which minimizes potential confusion. There are, however, coordination issues between these regulations. For instance, although, Law No. 24/2007 stipulates the definition of non-natural disasters to include disease outbreaks, the designation of authority to declare the emergency status for health crises is inconsistent with the Disease Outbreak Law. The multisectoral guideline from Menko PMK has addressed these issues but unfortunately it was not issued under a ministerial decree and, therefore, it lacks legal power (Figure 3). Learning from the COVID-19 experience, BNPB is leading the review of the Disaster Management Law—especially to improve coordination between central and subnational governments.

**The type of response to a non-natural disaster is determined by the magnitude, and/or the level of severity of the event.** In Indonesia the term ‘extraordinary event’ (*kejadian luar biasa*: KLB) is used for epidemic, while *wabah* is used for ‘outbreak’. Although the two terms have a similar meaning from an epidemiological perspective, they have different political and administrative implications, such as on who is leading and coordinating the response and mobilizing resources. When a rapid increase of morbidity and/or mortality of a disease occurs, depending on the magnitude, either a regional or central health authority will officially declare it as an epidemic (KLB).

**An outbreak is defined as the rapid spread of an infectious disease marked with an extraordinary spike of disease incidence with potential catastrophic consequences.**

The declaration of a disease outbreak related to human health lies with the Minister of Health, specifically under the Surveillance Unit (Directorate for Surveillance and Health Quarantine) of the Directorate General for Disease Control and Prevention. The coordination of the emergency response for health falls under the coordination of the Center for Health Crisis (Pusat Penanggulangan Krisis Kesehatan), a unit under the Secretary General.

**When the event escalates and threatens the livelihood of a larger proportion of the population, the authority to declare a disaster is then shifted from the sectors to the head of government (Table 3).** This will trigger a specific coordination mechanism under the command of the BNPB. The official declaration of the emergency status will also allow mobilization of different sources of funding. At the subnational level, the coordination of disaster emergency response follows the national regulations and arrangements.

## COORDINATION IN A DECENTRALIZED SETTING

**Decentralization in Indonesia has amplified the challenges to ensuring local governments' adequate attention to health security issues.** Although the situation is not unique to health security, it has received even less attention from regional governments as these issues are not currently clearly stated in the RPJMN 2015–19. The situation may change in the next five years. The central government has produced a set of national Minimum Service Standards (MSS) that outlays 12 basic services that should be fulfilled by provincial or local governments.<sup>11</sup> Supplementary to these basic services, MoHA has included emergency preparedness requirements at the local level through a ministerial decree.<sup>12</sup> MoH has issued a follow-up regulation to operationalize the MSS in the health sector that contain health security issues although it is limited to disaster-related health risks.<sup>13</sup>

**Knowledge of health security remains quite limited at the subnational level.** Some of the JEE 19 technical areas are long-standing programs and a few local stakeholders were aware they are under a health security framework. The common view among local stakeholders is that health security is still considered the sole responsibility of the health sector rather than being a multisector issue. The central vertical units such as the Port Health Authority (*Kantor Kesehatan Pelabuhan*) tend to be more familiar with the health security concept compared to their local counterparts.

**Most subnational governments have adopted the national-level health security-related institutional arrangement and regulations.** As with the central agency, the BPBD also focus on natural disasters and very few have developed contingency plans for nonnatural disasters (such as infectious diseases, outbreaks, chemical failures). Banyuwangi district has one contingency plan related to infectious diseases which are monitored at the point of entry and initiated by the Port Health Office but this has not been integrated with hospitals, health district office, and other elements in the area (still central handling at the PoE).

**Although, in general, there is lack of coordination in health security, the opportunities to improve this situation is actually provided with the local government's autonomy.** These opportunities, however, would rely on the local leadership. For example, in Banyuwangi, the local government has implemented a series of cross-sector

synergy documents that enable a multisector approach to achieve local development targets although indicators for these targets are assigned to a specific sector or unit. More importantly, the district also recognizes the importance of having the enablers in place such as the local regulations to share resources including budget and human resources.

## THE DOMESTIC COLLABORATION ARRANGEMENT

**The national coordination mechanism is not limited to the public sector, but also involves private elements.** The private sector includes companies and civil society organizations that may contribute to the collaborative disaster management.

The involvement of various elements of in-country nongovernment parties is acknowledged and regulated by government decrees:<sup>14</sup>

- Community groups, civil societies, and private companies may be involved in all phases of the disaster management individually or in collaboration. These involvements should be established under an agreement along with terms of reference, and a workplan.
- Direct channelling of aids from the community to the community is done in coordination with the Local Command Post for Disaster Emergency Management.
- The contribution should be done in accordance with the strategy of BNPB in coordination with the BNPD. The collection of monetary and in-kind donations from nongovernment entities is in accordance with the Minister of Social Affairs Regulation.
- The central and local disaster management agencies, in coordination with the relevant ministries and local governments, have the responsibility to facilitate and monitor the involvement of nongovernment parties in managing monetary and in-kind donations.

## THE INTERNATIONAL COLLABORATION ARRANGEMENT

**Contributions from external parties in the form of monetary, in-kind, and technical support is also allowed and is coordinated by the GoI through a one-gate policy.** As a natural disaster-prone country, Indonesia has extensive experience in coordinating and managing external

<sup>11</sup> The national MSS is regulated by the Government of Indonesia (GoI) Regulation No. 2/2018. MoHA is monitoring its implementation.

<sup>12</sup> MoHA Decree No. 101/2018 on Technical Standards for Basic Services of Subfunctions Disaster Management at the Subnational Level.

<sup>13</sup> MoH Decree No. 4/2019 on Technical Standards for Fulfillment of Basic Service Quality in MSS in Health.

<sup>14</sup> The Head of BNPB Regulation No. 12/2014 on the Involvement of Companies in Disaster Management, Regulation No. 11/2014 on the Involvement of Civil society in Disaster Management, and Regulation No. 23/2010 on the Collection and Management of Community Funds for Disaster Management Aid.

### Box A. Organizational Arrangement for COVID-19 Response

The multisector ‘COVID-19 Mitigation Acceleration Taskforce’ led by BNPB aims to improve coordination and increase the intensity of the national COVID-19 emergency response. The task force mobilizes the relevant government ministries and agencies, and the private sector and community. The central government has also requested local governments establish local coordination units for COVID-19 that would feed into the national task force.

The GoI has adjusted the governance framework of the national COVID-19 emergency response to include oversight functions to the COVID-19 vaccine implementation. At its apex is the new task force, established as per the Presidential Regulation No. 108/2020 (dated 10 November 2020) and called the National Commission for COVID-19 Handling and National Economic Recovery (Komisi Penanganan COVID-19 and Pemulihan Ekonomi Nasional). Despite significant structural changes, the task force retains the whole-of-government approach and has two subtask forces as reflected in its new name, the first one being on the COVID-19 response and the second one being on economic recovery. The former subtask force has the responsibility to continue and scale up the country’s systemic capacity in emergency response, improve testing and tracing, and develop, implement, and monitor the COVID-19 vaccination program, as well as enhance public risk communication. In addition to the important stewardship role of the task force, further oversight of the COVID-19 implementation falls under the responsibility of the MoH as the technical ministry.

contributions in disaster management. International organizations and foreign nongovernment organizations are allowed to participate once the GoI makes an official announcement to accept external assistance. The GoI will coordinate in line with the regulations and requirements in the affected area.<sup>15</sup> International assistance is directed to assist the national disaster management authorities during the emergency response period, including rapid assessment, rescue and evacuation, basic provision of needs, protecting vulnerable groups, and immediate rehabilitation of vital facilities and infrastructure.

**The one-gate policy and the use of an in-country mechanism clearly has the advantage for a more coordinated and efficient response.** This would, however, require a strong leadership and responsive decision-making processes in responding to the reaction from the international community for well-targeted and timely aids distribution. There is little experience and few lessons have been learned on the implementation of this regulation for nonnatural disaster emergencies (public health emergencies, epidemics).

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<sup>15</sup> Government Regulation No. 23/2008 on the Involvement of International and Foreign Nongovernmental Organizations in Disaster Management and operationalized by regulations from the Head of BNPB.

## Financing of Health Security Program

The following section explains the background situation and the general context of health security financing in Indonesia, covering the macrofiscal context, the planning and budgeting process of government programs, the types and sources of funding, and the utilization and flow of funds.

### MACRO FISCAL CONTEXT

#### National fiscal capacity

Understanding the country's macrofiscal context in which health security programs is implemented is critical in future dialogue to finance the programs. Prior to the COVID-19 pandemic and with steady economic growth at a projected rate of 5 percent per year, Indonesia has transitioned to upper-middle-income status in early 2020 (Table 4). The pandemic, however, has changed the projection as Indonesia's economy is expected to contract with negative growth for the first time in two decades (-2.1 percent) in 2020 (World Bank 2020) and has pushed the country's income classification backwards as in 2021 (World Bank 2021).

The government's capacity to mobilize revenue, however, remains low—especially if compared to other Lower-Middle-Income countries (LMIC). In 2018 and 2019, the share of total government revenues to GDP was 14 percent, which was fifty percent lower than the LMIC's average, and tax revenue 11 percent compared to 17 percent for LMICs. The shifts in the Indonesia's health expenditure in recent years were driven by the implementation of national health insurance and an increased government budget for health. Within five years, the share of government expenditure as a share of all CHE increased almost 20 percent to 49 percent in 2019 from 30 percent in 2012.

The government health expenditure has been increasing (Figure 4). Public expenditure on health—at 1.4 percent of GDP, or 7.8 percent of total government expenditure, in 2016. Despite of the increased, Indonesia's health expenditure remains lower, about half, compare to that in countries with a similar level of income (averaging around 2.7 percent of GDP). This amounts to just US\$49 per capita, well below regional and lower middle-income averages.

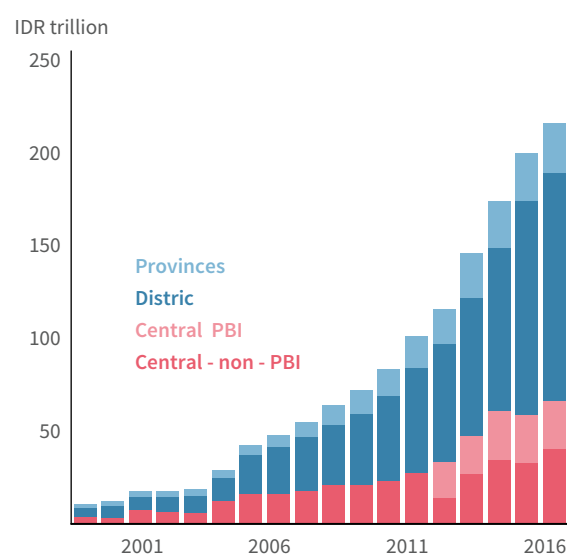
**Table 4.** Macro fiscal indicators (Pre COVID-19)

INDICATOR	VALUE
Economic growth, 2019	5.0%
Gross domestic product per capita, 2018	US\$ 3,894
Government revenue as a share to GDP, 2017	12.5%
Government expenditure as a share of GDP, 2017	17%
Government deficit, 2017	3%
Ratio of debt to GDP, 2017	-2.345%
Ratio of fiscal deficit to GDP, 2015	28.9%
Health expenditure as a percentage of GDP, 2017	3.0%
Share of health in general government spending, 2015	7.8%
Health expenditure per capita, 2017	US\$ 115
% Government expenditure to CHE	48.4%
% Household OOP to CHE	34.6%

Sources: World Bank Development Indicators 2020, Global Health Expenditure Database 2020 based on NHA 2017

**Figure 4.** Trends in public health financing

National public spending on health, IDR trillion, nominal (2001-2018)



Source: COFIS (Consolidated Fiscal Database, World Bank) using data from MoF, 2018.

**Table 5.** IKFD of Four Sample Area from 2016-2018

Regional Fiscal Capacity Index (IKFD)	2016	2017	2018
East Java Province	0.24 (Low)	3.14 (Very High)	3.036 (Very High)
Banyuwangi District	0.36 (Low)	2.11 (Very High)	2.195 (Very High)
Yogyakarta Special Province (DIY)	0.40 (Low)	0.51 (Low)	0.382 (Medium)
Kulon Progo District	0.21 (Low)	0.73 (Medium)	0.762 (Medium)

Source: MOF decree on local fiscal capacity various years

### Sub-national fiscal Capacity

**Subnational governments play a dominant role in health sector spending decisions.** More than two-thirds of total public expenditures on health occurs at the subnational level, while central government through the MoH accounts for only about one-third of total public spending. The bulk of district revenue comes from intergovernmental transfers from central to district level budgets.

**The fiscal capacity of regional government in the selected study sites varies across provinces and time.** The fiscal capacity index for subnational governments (*Indeks Kapasitas Fiskal Daerah*: IKFD) reflects the available fiscal space at the local level based on total revenue (local as well as all central transfers). As the study sites were all in Java, their fiscal capacity tends to be on the medium to high level. This may be as the results from the following reasons, sub national governments in Java in general have better ability to generate own revenues, and receive higher intergovernmental transfer due to population density, and higher shared revenue. Interestingly, the fiscal capacity of the districts mirrored their respective provinces (Table 5). The index formula evolved over the years which explains the fluctuation across time. The index is used as a guideline for the central government (MoF) to determine the intergovernmental transfers, required local matching funds, and also to assess proposals for regional level lending.

### HEALTH SECURITY PLANNING AND BUDGETING

**The planning for health security activities follows the national planning process that accommodates community inputs and national level strategic direction.**<sup>16</sup> The RPJMN and strategic plans of the ministries/agencies are translated into annual budgeted workplans. Similar planning and budgeting processes and timeline are followed at subnational level with an additional key milestone of confirmation on the amount of central transfers around early November (Figures 5 and 6).

**The inclusion of health security as one of the national development priorities in the RPJMN for the health sector allows for a more comprehensive health security planning and budgeting.** As a priority in the health sector, it is a challenge to ensure that health security becomes a shared national priority. Other ministries and agencies may have health security-related activities as their sectoral programs such as prevention of infectious diseases among livestock/animals, immunization, quarantine, food safety, and epidemic prevention. These activities could be planned and budgeted without coordination with other sectors. This fragmented implementation of health security creates ineffectiveness and inefficiency because of inadequate coordination from the preparation of plans and budgets to implementation and M&E.

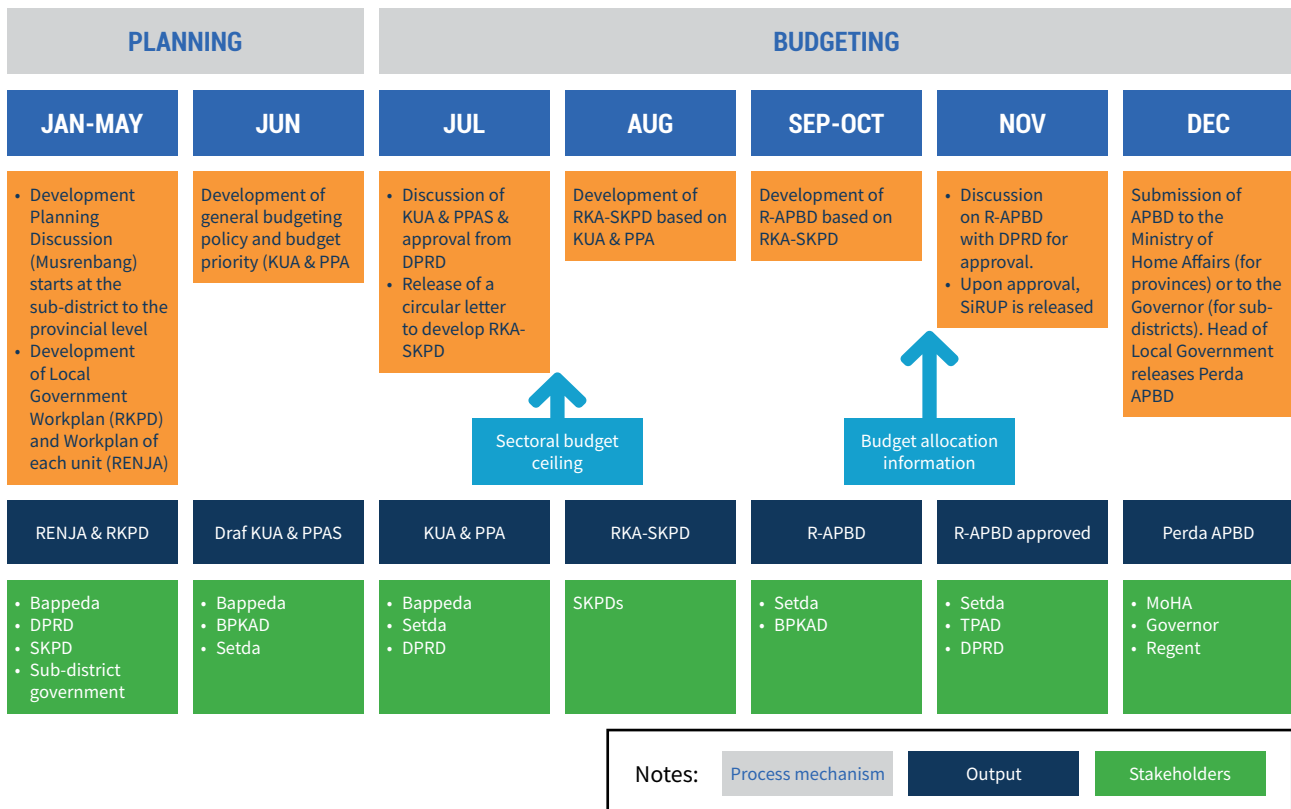
**The issuance of MSS has raised expectations for better alignment of local development activities with the national priorities and improved accountability.** MoH has developed additional instruments to assist local governments to estimate the funding needed to achieve MSS target indicators for the 12 basic services. The costing instrument for disaster management subfunctions, however, is yet to be developed. Coordination across sectors and government levels is the prerequisite of an effective implementation of the health security functions (Figure 7). The lack of synchronicity might be the result of different sector targets and priorities, the absence of coordination platforms, siloed and rigid government budget, and low-level awareness among

<sup>16</sup> Law No. 25/2004 on the National Development Planning System, and Law No. 17/2003 on State Finances.

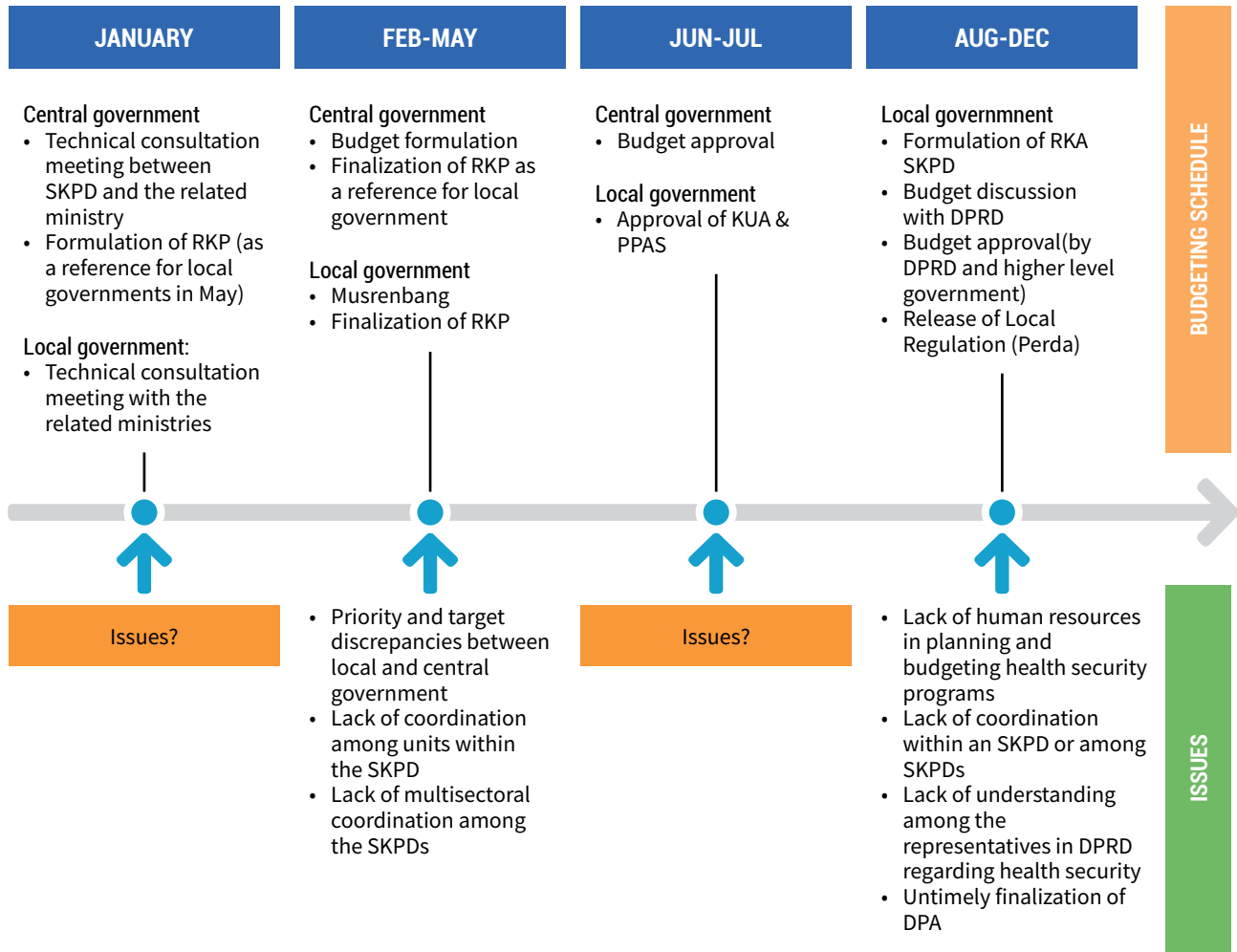
**Figure 5. Annual planning and budgeting process at the national level**

JAN-APR	MAY-JUL	AUG-OCT	NOV-DEC
<ul style="list-style-type: none"> <li>Development of direction, assumption, and national development priority.</li> <li>Development of resource &amp; envelope</li> <li>Development of the Circular Letter on Indicative Ceiling</li> <li>Development of M/A Workplan (Renja K/L)</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary discussion on the National Budget and development of KEM-PPKF and RKP</li> <li>Development of Circular Letter on Temporary Ceiling for M/A</li> <li>Development of M/A Workplan and Budget (RKA-KL)</li> </ul>	<ul style="list-style-type: none"> <li>Development of National Budget Plan (RAPBN), Draft of National Budget Law (RUU APBN), Financial Note, and compilation of M/A Workplan and Budget (RKA-KL)</li> <li>Development of Circular Letter on M/A Budget Allocation (Definitive Ceiling)</li> <li>Adjustment of M/A Workplan and Budget (RKA-KL)</li> </ul>	<ul style="list-style-type: none"> <li>Finalization of SP RKA K/L</li> <li>Development of Presidential Decree on Central Government Expenditure (ABPP)</li> <li>Development of Budget Execution Document (DIPA)</li> </ul>
<ul style="list-style-type: none"> <li>President</li> <li>National Development Planning Agency</li> <li>DGB, Ministry of Finance</li> <li>M/A</li> </ul>	<ul style="list-style-type: none"> <li>House of Representatives</li> <li>DGB, Ministry of Finance</li> <li>M/A</li> </ul>	<ul style="list-style-type: none"> <li>President</li> <li>House of Representatives</li> <li>DGB, Ministry of Finance</li> <li>M/A</li> </ul>	<ul style="list-style-type: none"> <li>President</li> <li>DGB, Ministry of Finance</li> <li>M/A</li> </ul>

**Figure 6. Annual planning and budgeting process at the sub-national level**



**Figure 7. Synchronization issues in the national planning and budgeting**



the lawmakers and policy makers. These problems have not yet been adequately addressed as there is currently no clear coordinator and technical working groups at the national and subnational level in the integrated context of health security.

**SOURCES, TYPES, FLOW, AND USE OF FUNDING**

The sources and types of government funding for health security-related activities are as follows:

- **‘Regular’ fund (Capital and recurrent budget):** The fund is allocated to relevant ministries/agencies at the central

level and implementing units of local government. This type of funding is designated to support preventive and detection activities, but also can be mobilized to finance emergency response in the event of a disaster. This reassignment of purposes is called ‘fund optimization’ and follows the budget revision mechanism.<sup>17</sup>

- **Disaster management fund (Dana Penanggulangan Bencana):** The use of disaster management funds is intended to improve preparedness at various government levels, including the development of disaster management plans, prevention programs, and integration with the broader development planning process. In disaster prone areas, the budget may also be used for building an early warning system.

<sup>17</sup> Regulation of the Minister of Finance No.132/PKM.02/2019 about amendment to Regulation of the Minister of Finance No. 206/PMK.02/2018 on Procedures for Budget Revision of the Budget Year 2019.

The funds can also be used during the emergency response stage, such as for the rapid assessment of damage and loss, for evacuation and shelter activities, implementing protection for vulnerable groups, and emergency infrastructure and facilities recovery. During the post-disaster stage, the fund can be used for both rehabilitation and reconstruction of infrastructure and the recovery of livelihoods of those affected. The use and accountability of these funds is regulated by Presidential Regulation No. 16/2018 on Procurement of Government Goods and Services.

- **Disaster contingency fund (*Dana Kontijensi Bencana*):** In contrast to the disaster management fund above, the use of this fund is limited to improving the country's preparedness. Activities that can be financed include the development and pilot of disaster emergency management plans, the installation of early warning systems, ensuring the availability of materials, goods, supplies, equipment for essential services in case of a disaster strike, and the development of plans and procedures of an emergency response mechanism, and also plans for disaster-ready health infrastructure and a service delivery system.
- **On-Call fund (*Dana Siap Pakai: DSP*):<sup>18</sup>** The fund is specifically attached to the disaster management authorities at different government levels (BNPB/BPBD) for disaster emergency management activities. The fund is triggered after the confirmation of a wide-impact disaster by the regent/mayor, governor, or president. The funds, however, can be used in addition to emergency response activities for transitioning from the emergency to recovery stage.

BNPB will be the budget executor, by implementing the activities themselves or have it channelled to ministries and/or military forces, local governments, (including provincial BPBDs and district BPBDs), and humanitarian organizations upon receiving a formal request for this fund. The funding request mechanism will require the approval from the head of BNPB after a review process that will involve relevant ministries/agencies. The use of the fund is limited to the procurement of goods and services and operational support activities in disaster emergency management.

- **Social assistance grants (*Dana Bantuan Sosial Berpola Hibah*):** BNPB manages the granting of funds to local governments in the event of a disaster. BNPB, however, transfer the grants to local governments upon receiving approval from the parliament. This fund is used for

rehabilitation and reconstruction at the post-disaster stage, including physical, psychological, economic, and social recovery.

**The use and accountability mechanisms of the different types of disaster funds above follow the existing public financial management regulations and guidelines.** They may need to refer to different regulations either from MoF or the BNPB and, at the subnational level, public financial management regulations from MoHA and the local government.

**Besides government and donor funding, there is also domestic nongovernment resources, funds or in-kind assistance that may originate from the community and private sector.** These resources are usually for activities during emergency response, and/or the recovery stage. BNPB has the authority to administer the submission and organize the distribution of these resources to the affected communities either directly or through the local BPBD. Table 6 provides a summary of the various types of disaster funding.

**The decision to mobilize which type of fund and which mechanism to channel depends largely on which stage of the event (disaster), whether it is pre-disaster (for the preparedness), during the event as emergency response, or at the end for the recovery.** For instance, during emergency response the Disaster Management Fund or the On-Call Fund will be most likely the chosen one for their flexibility, although, in practice, there is a lengthy approval process. When the event is declared as a national disaster, BNPB has the authority to request the contingency and decide on the fund flow to the affected areas or beneficiaries. In this particular situation, the priority is the speed to mobilize funds and at the same time ensuring the accuracy of targeting the funds to mitigate impact of the disaster. From the table above, various funds are available for health security events/situations; routine funds through reassignment process, disaster management funds, contingency funds (limited to preparedness) World Bank 2020a), ready to use fund (limited to procurement of goods and services), and the international fund.

<sup>18</sup> At the subnational level, the term Dana Siap Pakai (On-Call funds, or at times 'Ready-to-Use' funds) is used interchangeably with the Dana Kontijensi (Contingency Funds)



**Table 6.** Source, types, and use of health security funding

Type of funding	Source of funding	Placement of funds	Implementer/Provider	Use of funding
Regular (recurrent and capital) fund	Government Central and Sub National (SN)	<b>National:</b> National Disaster Management Agency, relevant ministries/agencies <b>Sub-national:</b> Regional Disaster Management Agency, and relevant local government institutions	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Pre-disaster Emergency response
Disaster management fund ( <i>Dana Penanggulangan an Bencana</i> )	Government Central and Sub National (SN)	<b>National:</b> National Disaster Management Agency, relevant ministries/agencies <b>Sub-national:</b> Regional Disaster Management Agency, and relevant local government institutions	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Pre-disaster Emergency response Post-disaster
Disaster contingency fund ( <i>Dana Kontijensi Bencana</i> )	Government Central and Sub National (SN)	<b>National:</b> National Disaster Management Agency, relevant ministries/agencies <b>Sub-national:</b> Regional Disaster Management Agency, and relevant local government institutions	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Pre-disaster (preparedness)
Ready to use fund ( <i>Dana Siap Pakai</i> )	Government Central and Sub National (SN)	National Disaster Management Agency  Regional Disaster Management Agency	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Emergency response Note: the other most used name is ' <i>Dana Tidak Terduga</i> ' (Funds for Unexpected events)
Social assistance funds ( <i>Dana Bantuan Sosial Berpol a Hibah</i> )	Government	National Disaster Management Agency	National Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Post-disaster
Community and private sector fund	Domestic nongovernment	National Disaster Management Agency Regional Disaster Management Agency	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Pre-disaster Emergency response Post-disaster
International assistance fund	Foreign grant; Unplanned grants	National Disaster Management Agency	National Disaster Management Agency, Regional Disaster Management Agency, relevant ministries/institutions/agencies at central government, and related local government institutions	Emergency response Post-disaster

Source: World Bank Staff summary from various sources

## EXPENDITURES OF HEALTH SECURITY FINANCING ACTIVITIES

### Disaster financing

**Financial preparedness is essential for all types of disasters to enable adequate response and, more importantly, Indonesia's ability to provide a cushion to shocks and to protect development and economic gains.** As a disaster-prone country, Indonesia's central government spent between approximately US\$450 and US\$900 million per year during the period of 2015 to 2018, or 0.03 percent to 0.09 percent in terms of share to GDP for disaster management. The disaster response expenditure amount includes not only that on emergency response, but also spending on social impact mitigation, and rehabilitation or reconstruction of public infrastructure and housing. The expenditure at the subnational level was estimated at approximately 0.4 percent to 1 percent of the total government expenditure, or US\$250 million over the same time period.

### Total health security expenditure

**In the absence of subnational public expenditure information, it is very difficult to have a comprehensive view of Indonesia's total health security expenditure.** At the central level, the overall health security expenditures for four years between 2015 and 2018 fluctuated. The total spending ranged from the lowest in 2015 of Rp 2.3 trillion to the highest in 2017 of Rp 4.5 trillion (the equivalent of US\$169 million and US\$334 million respectively<sup>19</sup>) (Table 7). Over that period, the average annual growth in expenditure for health security activities across the JEE 19 technical areas was around 24 percent. Total per capita expenditure on health security for 2015-18 was quite small between Rp 8,800–Rp 17,000 (equivalent to around US\$0.66 to

US\$1.26), while the total health security expenditure at the central level was around 0.02 percent to 0.03 percent of the country's total GDP.

**Health security expenditures are financed mainly by the government through allocations for recurrent, investment, and national target programs.** The budget allocation for health security activities was estimated at approximately 1 percent of the central government budget, but with an increasing trend between 2015 and 2018. Other sources, such as external aid was negligible, however, nonpublic sector resources, as well as donor financial support, were channelled outside of the national budget process and were, therefore, not captured.

### Composition of health security expenditure – Economic classifications

**At the central level, government through its allocations for recurrent, investment, and national targeted programs financed almost all of the health security expenditures.** The size of external financing remains unknown but it is estimated to be not dissimilar, with the overall share of donor contribution to total health expenditure, which was 0.4 percent in 2016. Of these amounts, around one-half were channelled through an off-government budget mechanism. The government's recurrent budget is the largest single source of health security funding by category of financial source.

**Expenditures by economic classification at the central level were dominated by goods and services after the salary and personnel expenditures were excluded (Figure 8).** The largest health security-related activities expense was for the immunization program which was mostly allocated for the provision of program vaccines—including procurement and distribution. The immunization expenditure is relatively

<sup>19</sup> Official Exchange Rate <https://data.worldbank.org/>

**Table 7.** Total Health Security Expenditure – Central level 2015 – 2018 (current value)

	2015	2016	2017	2018
Total Health Security Expenditure (million, IDR)	2,267,434	4,271,451	4,479,256	4,218,554
Total Health Security Expenditure (million, USD)	169.35	320.96	334.75	296.31
Per capita (IDR)	8,775	16,331	16,925	15,761
Per capita (USD)	0.66	1.23	1.26	1.11
Share to GDP (%)	0.02	0.03	0.03	0.03
Share to Central GoI Budget (%)	0.7	1.2	1.2	1.3

Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

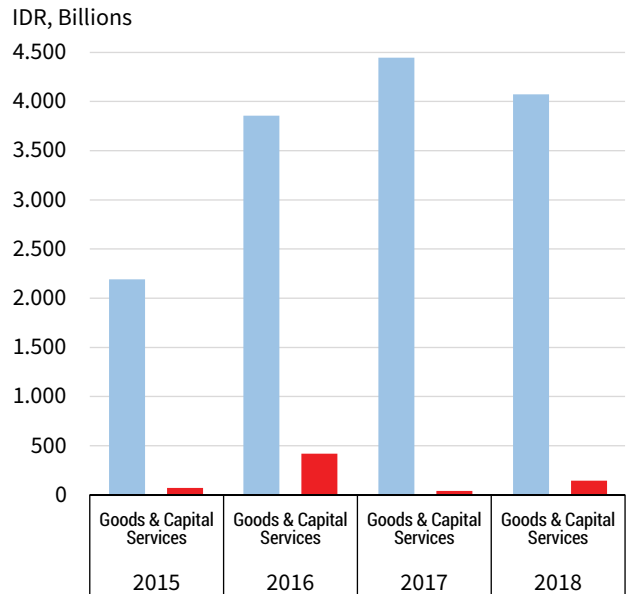
easy to track as it is clearly defined in the public budget unlike many of the other technical areas. The development of a workforce to improve the country’s readiness in the event of a pandemic or other disaster showed an increasing trend in terms of size of expenditures.

**The capital expenditures for health security functions were consistently low despite the increased GoI investment to improve supply-side readiness.** There was a four-fold increase of inter-governmental fiscal transfers for health in 2016 including the Physical Special Allocation Funds (DAK Fisik) which were partly used to refurbish puskesmas’ cold-chain equipment. The absence of an integrated information system for inter-governmental fiscal transfers may have led to the missing of spending for infrastructure and equipment including capturing the aforementioned increase of DAK Fisik and the increased investment for regional laboratory equipment.

*Composition of health security expenditure by JEE functions*

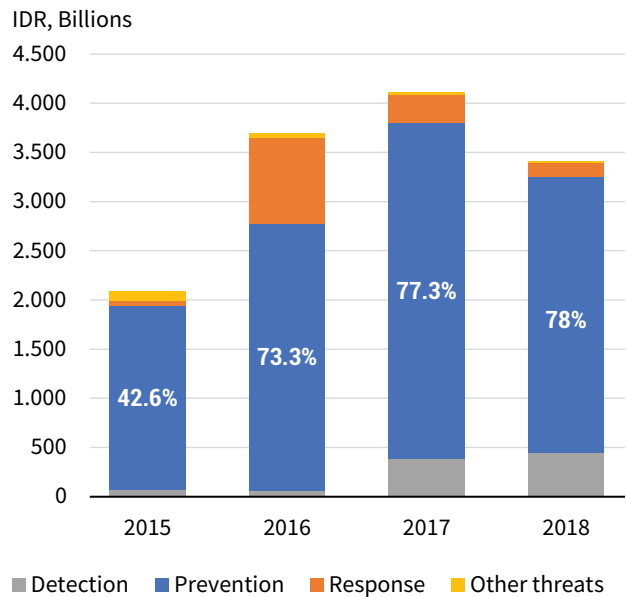
**Health security expenses by the four JEE functions—prevention, detection, response, and other IHR hazards at the national level—was mainly spent for activities that fall under the prevention function (Figure 9).** The share of the prevention function as the largest one was mainly driven by the immunization program. This was consistent throughout the observed period from 2015 to 2018. Spending for the other three functions changed over the years. In 2016, the second largest spending was for response activities but this changed during the following two years with more investment in building the system capacity with workforce development in 2017 and 2018.

**Figure 8. The Central level spending by economic classification, 2015 - 2018**



Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

**Figure 9. Health security expenditure by the JEE functions, 2015 – 2018**



Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

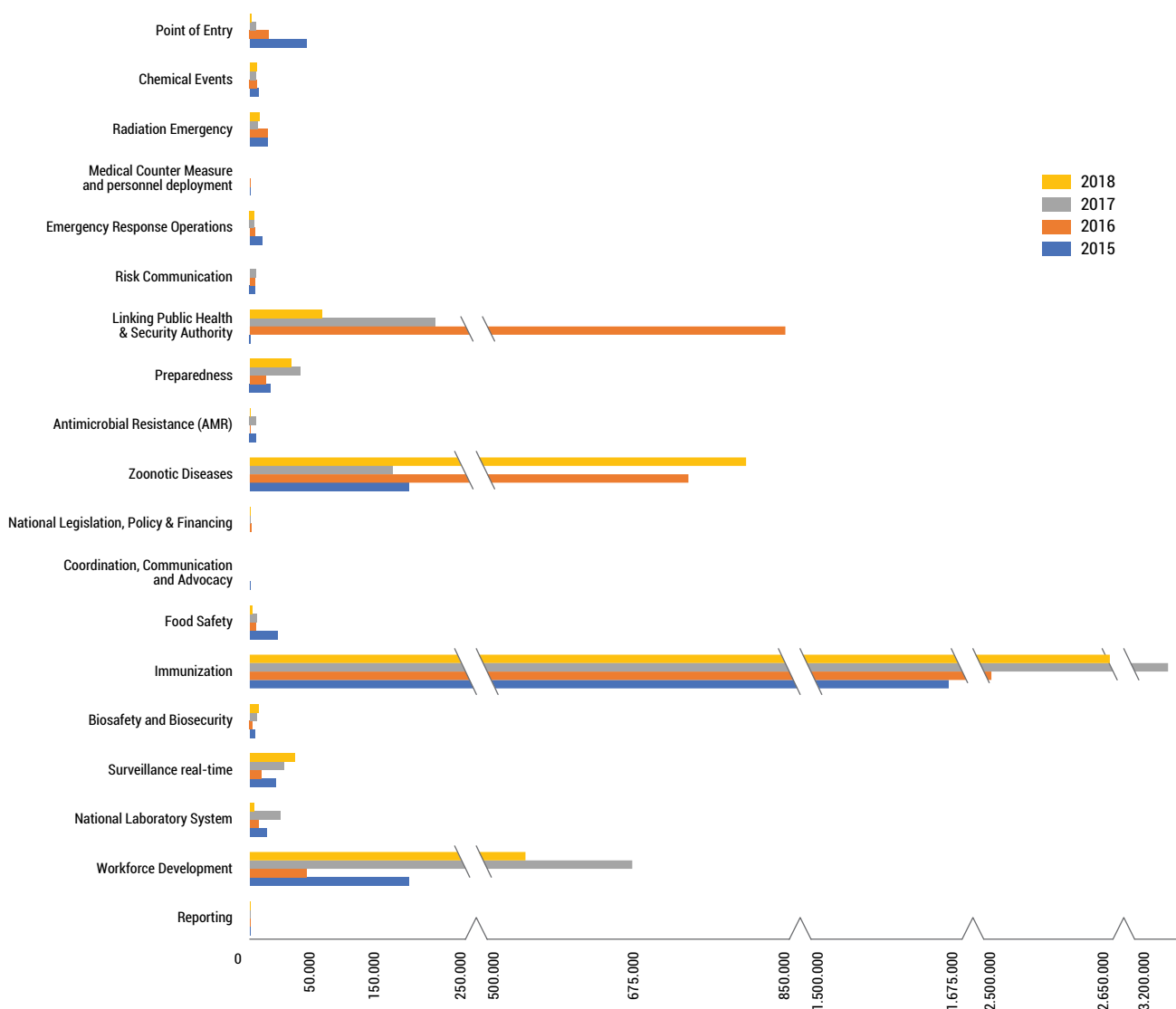
### Health security expenditure across the JEE 19 technical areas

During the observed period, the highest spending at the central level was for immunization, around 90 percent of the Prevention function or between 70-80 percent of total central health security expenditure (Figure 10). The second largest expenditure at the central level changed over time. In 2015, it was zoonotic disease prevention and control, but spending for public health and security authority took over the following year. From the two years, 2017 and 2018, which data is available, the spending on workforce development as a part of detection activity

slipped behind zoonotic diseases. As a vertical program, immunization program funding comes from the central government for the provision of the program vaccines and constituted the largest share of spending. The expenditure is mainly for procurement and, to some extent, supply chain management—for example, distribution to the province level.

The central government's presence was dominant in zoonotic disease control, public health and security links, and workforce development which explained the size of central expenditures. According to the Decentralization Law, local governments have the responsibility for operational costs and outreach activities to beneficiaries, however, in

Figure 10. Health security expenditure by 19 Technical Areas, 2015 – 2018



Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

certain situations such as in the recent Measles outbreaks, the local governments mobilized the Dana Tak Terduga to procure additional vaccines. Further discussion on subnational level expenditures for health security is in the section below.

in zoonotic diseases surveillance and prevention activities (MoH and MoA) was enabled by access to more detailed budget documents, while the budget information from the Ministry of Defense was not disaggregated by program and activities.

### Health security expenditure by the relevant Ministries

**The distribution of expenditures across relevant ministries indicates the multisectoral nature of health security activities.** The share of health security activities expenditures from two main stakeholders, MoH and MoA across the period from 2015 to 2018 ranged from around 96 percent in 2015 to 99 percent (2018) (Table 8). A closer assessment of the expenditures of the two main ministries with authorities

### Health Security expenditures – Ministry of Health

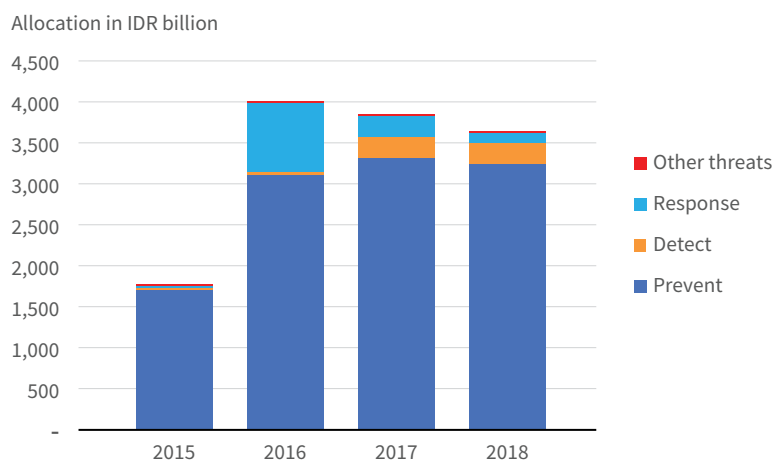
**The share of expenditures for the MoH’s immunization program dominated the overall GoI health security activity expenditure.** The second and the third largest expenses were for zoonotic diseases, and workforce development in 2018. The distribution of health security expenditures by four health security functions indicates increased in the ‘Detect’ function (Figure 11).

**Table 8.** The distribution of JEE 19 Technical Areas expenditures

Central Agency	2015	2016	2017	2018
Ministry of Health	85.5%	94.0%	93.5%	90.8%
Ministry of Agriculture	10.1%	4.3%	5.0%	3.0%
Ministry of Maritime and Fisheries	2.3%	0.6%	0.4%	0.2%
National Nuclear Power Agencies (BATAN)	1.0%	0.6%	0.3%	0.5%
National Disaster Management Agency	0.3%	0.2%	0.2%	0.0%
Other Ministries & Gov’t Agencies	0.7%	0.4%	0.6%	5.4%
	100%	100%	100%	100%

Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

**Figure 11.** Health security expenditures by the Ministry of Health 2015 - 2018 by health security functions



Source: World Bank staff calculation from the MOF public expenditure data 2015 -2018

### Health security expenditure by administrative levels subnational health security financing

There is a wide variation in health security financing at the subnational level and this may not be a reflection of local fiscal capacity. The level of health security financing per capita was quite similar for both districts as well as the two provinces (Figure 12: LHS) although they have different fiscal capacity. Although it is impossible to extrapolate the findings from the study sites to all local governments across the country, it is suggested that there are other factors that may influence the decision to allocate and use resources—such as awareness of health security threats in their area, working surveillance system, and recent outbreaks.

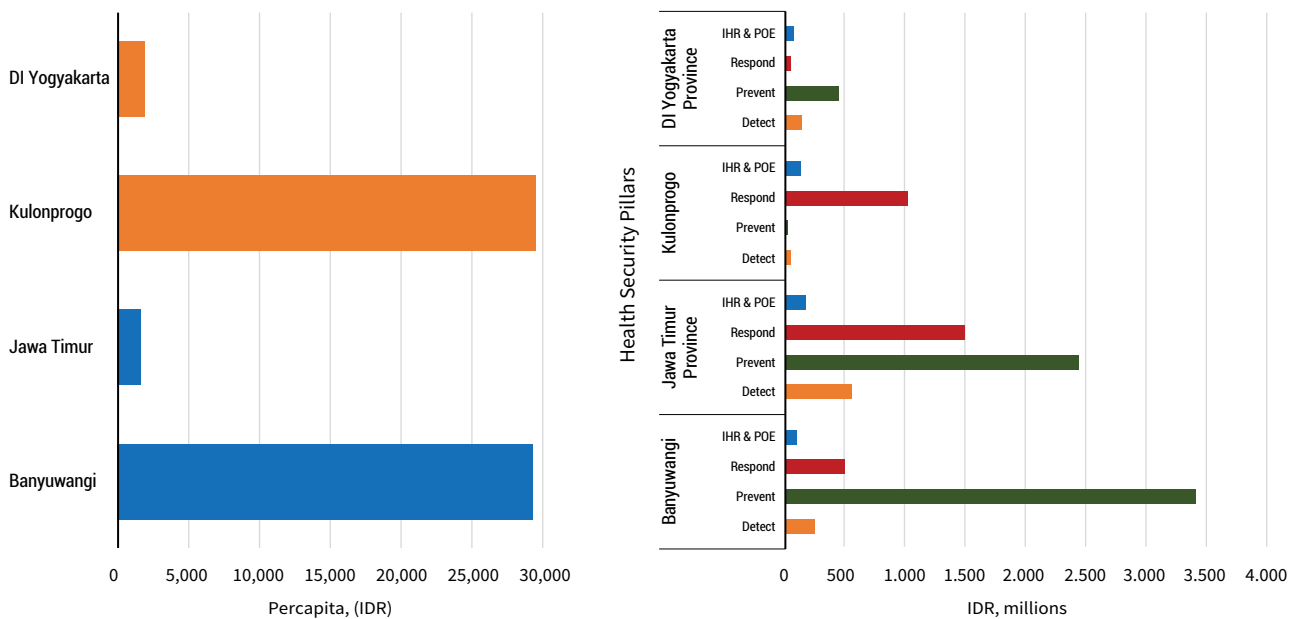
The distribution of financing by health security function in the sampled provinces and districts is shown in Figure 12 (RHS). Although it is difficult to conclude a funding pattern for health security functions, the size of financing for different functions was influenced by, among other factors, local specific health security-related threats or recent events. The outbreaks of measles and diphtheria in several districts in East Java, including Banyuwangi, in 2017 and 2018 explains the high level of financing for response and prevention—for example, through the provision of a special immunization day.

The coordination of financing between provinces and districts remains elusive. The share of responsibility in financing activities between East Java province and Banyuwangi district occurred during the diphtheria outbreaks (see the case study), however, limited understanding of what constitutes health security prevents better-informed resource allocation decisions.

The distribution of expenditure by provinces and districts by health security functions is focusing on prevention and detection. The increase of financing for ‘Respond’ at the district level was actually triggered by the vaccine-preventable diseases outbreaks such as measles, and diphtheria in several districts in East Java province in 2017. From the study sites, the district may finance more respond activities as they directly provide services, while the province put more emphasis on the prevention activities.

The fiscal capacity of local government has been recognized as one of the factors in resource allocation decision making in addition to the local development plan and prioritization. It is difficult to say that this is the case from the four study sites as these areas have different fiscal capacity, high fiscal capacity for East Java and Banyuwangi, while DI Yogyakarta and Kulon Progo have medium capacity.

Figure 12. (a) Health security expenditures per capita at the selected province and district & (b) Health security expenditures by HS Functions 2018



Source: The WB team calculation from the sampled LGs 2016 to 2018 public financial statements

## Efficiency and Sustainability of Financing for Health Security

### EFFICIENCY

**The delays in government budget availability have contributed to inefficiencies in past years.** The availability of government budget resources at the beginning of each new fiscal year—at least at the central level—has improved significantly during the period of 2016 to 2021. Due to their dependency on central transfers, the timeliness of budget availability may vary at the subnational level. This may be caused by delays in, for example, the production or adoption of the transfer fund implementation guidelines, approval by the local parliament.

**The centralized management of these funds by BNPB aims to minimize the potential overlaps and/or missed coverage of funds, hence improving efficiency in disaster management.** BNPB acts as the coordinator for all sectors in the event of health security-related events, including disease outbreaks, pandemics, or other nonnatural disasters. From the messages that can be distilled from the case studies (Appendix 4), it appeared that BNPB/BPBD had not yet optimally functioned as outlined in the regulations. It is probably due to the understanding that disease outbreaks remain to be seen as the sole responsibility of the health sector although the disaster management law (Law No. 24/2007) clearly states that disease outbreak is a nonnatural disaster.

### SUSTAINABILITY

**In addition to strengthening national response and minimization capacity at the national level, a top-down prevention strategy should be in place that focuses on assessing and addressing the threats of epidemics induced by the agro-ecosystems to complement the strategies on minimization in outbreak sites.** This reflects the shift to a long-term prevention strategy as a cost-effective way of managing emerging diseases. It also requires a budget to expand the coordination mechanism to cover partners on a large scale and develop a systematic surveillance program.

# 3. Conclusions and Recommendations

## Conclusions

**As a follow up to the formal evaluation of the implementation of IHR in Indonesia during the JEE in 2017, there is clearly a gap of information in the financing of health security.** There is a, therefore, a pressing need for Indonesia to assess the financing aspect of all health security technical areas to complement information on the country's capacity to implement health security functions and, at the same time, ensure more sustained efforts for the country's preparedness. The study finds that based on the information gathered, the Gol's investment to increase its health security preparedness has been low.

**The term 'health security' had never been explicitly mentioned as a health development priority in national development plan documents, until the current RPJMN 2020-24.** As a result, until now activities or programs that fall under the JEE technical areas are not integrated nor framed in the perspective of health security as a single entity, making planning and implementation across ministries/agencies challenging. The translation of the prioritization of health security in the new RPJMN into multisectoral strategic plans—for instance, through the inclusion of emerging infectious diseases and zoonosis in the plans from relevant ministries—remains to be seen.

**Different guidelines and policy documents offer different perspectives on the involvement of various ministries/agencies in any health security event which may lead to a coordination problem.** There is currently no regulation that orders the establishment of technical working groups for health security implementation or identifies the roles and responsibilities of each ministry/agency in each technical area.

**In terms of priority setting, there are still discrepancies between the international and national priority of diseases that are considered to be major global health threats.** Some international priorities have not yet been included in the national priority list, especially those related to bioterrorism. The NAPHS document has laid out activities with its projection of the financial resources needed to implement the 2017 JEE evaluation recommendations but it is less clear on which areas are to be prioritized.

**The existing regulations do not clearly state the procedures and criteria in disease priority setting at the national**

**level.** There is also little information on how often the list of priority diseases is to be reviewed and how it can quickly respond to the dynamic global situation and the emergence of a PHEIC. The majority of regulations for the implementation of health security-related programs in the pre-disaster phase are developed and issued in silos and, as a result, these regulations are not necessarily synchronized.

**The coordination of response to a health security emergency or an outbreak has been organized using a specific coordination mechanism led by BNPB with a relatively clear chain of command.** Different sources of funding are made available in the event of a national disaster emergency, however, in terms of access, there are bureaucratic hurdles that prevent immediate access to some of these funds. In relation to coordination with international organizations, there is a potential limitation in optimizing their contribution to disaster management related to the decision-making process in receiving the aid for timely disbursement. It is questionable whether a standard set of criteria and procedures for the decision-making process exists.

**The macrofiscal indicators show that Indonesia has an adequate financial capacity to support the implementation of health security programs.** Furthermore, by pooling and managing OOP household expenditure, government health expenditure can be better used to support programs such as health security. In regard to the complex health security and planning and budgeting process at the central and local levels, there is an issue of synchronicity of the programs across different sectors and levels of government which is highly relevant as many health security issues are multisectoral in nature.

**Funding for health security programs comes from various resources. Routine activities that are related to "Prevent" and "Detect" in a non-disaster condition receive regular funding.** Disaster management, however, can mobilize disaster management funds, disaster contingency funds, On-Call funds, and other form of assistance (in-kind assistance). Disaster management funds are allocated to the ministries/agencies at the central level and local government units at the subnational level before being distributed to human and animal health facilities or institutions to support the four domains of health security (prevent, detect, respond, and recover).



## Recommendations

The recommendations in this report are targeting cross-sectoral and interdisciplinary foundational issues to improve public financial management of health security activities. These recommendations are addressing fundamental issues that require medium- and longer-term actions to improve the overall quality of public spending, but there are immediate actions to initiate these recommendations.

**Recommendation One:** Embed health security as a priority of the health sector in the RPJMN and ensure the inclusion of health security activities in the strategic plans of each relevant sector. This inclusion would serve as the basis for the planning, budgeting, and policy making for those sectors.

**Recommendation Two:** Develop sensitive and measurable performance indicators to improve the monitoring of the strategic development plan and the NAPHS. Following the launch of NAPHS, the implementation of the action plan will require a set of indicators that clearly indicate the responsible ministries/agencies.

The complexity of health security problems requires reliable information from surveillance activities and financial or budgeting data to facilitate priority setting. Improved surveillance data for monitored and emerging diseases can be achieved by ensuring coordination across ministries between animal health and human health. Public financial and budgeting data will require improved public financial management measures. The following recommendations are related to Public Financial Management:

**Recommendation Three:** Develop a standardized public budget nomenclature system that includes codes to track health security activities. Exercise expenditure tracking for the COVID-19 emergency response which can be a starting point to establish a health security financing monitoring system.

**Recommendation Four:** Improve health information and accounting systems by taking into account the distribution of roles and responsibility in health security related information system and public financing recording and reporting in accordance with Indonesia's decentralized context.

**Recommendation Five:** Improve the budget timelines and procedures between central and local governments, including reporting on all sources of sector financing to present a comprehensive view of resource allocation and spending for health security activities.

**Recommendation Six:** Strengthen the NAPHS with disaster-financing mechanisms that learn from the global and especially COVID-19 experience.





# Annexes

## Annex 1.

# Methodology

### Quantitative analysis 'Public expenditure on health security'

**Available public financial statements, both from the central level, and SNG levels from 2015 to 2017, (while for 2018 only budget allocation data) were used.** Data sources for the public financial statements at the central level were from the MoF expenditure dataset (Consolidated Fiscal: COFIS) and the detailed budget document from relevant ministries (RKA K/L).

The budget analysis steps to identify health security-related activities are as follows:

- Define the list of 'keywords' of health security activities based on the 19 JEE technical areas to identify health security-related programs and activities from the public financial statements.
- The MoF public expenditure dataset only provides budget information up to the output level, which increases the possibility of overestimating the financing for health security activities. Even using a more detailed budget document (RKA-KL) with subeconomic classifications from the MoH and MoA, the Indonesia HSFAT team was not able to obtain a clearcut identification of health security activities. Considering these issues, the team then applied the attribution step to have a closer estimation of financing for health security activities. The attribution levels are as follows: (i) full (100 percent) attribution of expenditure for programs and activities that are health security specific; and (ii) partial attribution (75 percent, 50 percent, and 10 percent) in spending for programs and activities that are health security sensitive.
- Apply attribution criteria to determine the portion of expenditure for health security.
- Exclusion of programs and activities that fall under recurrent expenditures such as salary and overhead costs and those that are considered more of the nature of general health system activities.
- The analysis of public financing for health security using the keywords and applying attribution to programs and activities. For example, activities containing keywords of emerging new diseases will be automatically fully attributed (100 percent), while for activities that have an indirect contribution to health security (health security sensitive) will be discussed among the team members and will be consulted with the program managers of the respective ministry/government agency.
- Consult with the relevant ministries and government agencies for further clarification, as well as for results validation.

### Qualitative analysis

The qualitative component of HSFA aims to obtain first-hand information from the health security-related program managers and implementers on the actual implementation of activities in the 19 JEE technical areas. During the interview, the information obtained from the desk review was clarified and validated. The in-depth interview was conducted at the central and subnational level using basically the same instrument with some adjustments to accommodate differences in the institutional arrangement between the central and subnational levels.

- In-depth key informants interview of officials from various sectors (Appendix Two: List of participants) using a semi-structured questionnaire.
- Key informants identified or selected following the mapping of HS-related activities to the different ministries, agencies, departments, and units.
- To complement the key informants' interviews, focus group discussions were organized and mainly used to validate and clarify findings from the interviews. It is more a technical discussion than a robust focus group discussion.

### Desk Review

For the desk review, the HSFA team compiled and reviewed existing government policies and regulations, implementation manuals/guidelines, published reports, as well as grey literature on health security. The documents were obtained

from the relevant ministries and/or government agencies and from an internet search using various search engines.

- Review of the general planning and budgeting processes as well as the practice during public health emergencies.
- Review the institutional and coordination arrangements for health security programs and activities.

## Case studies

The two case studies describe the actual response from the country system in the recent health security events

- Two recent public health emergency events selected to document lessons learned on the overall response including rapid mobilization of financing.
- These include an anthrax outbreak in DI Yogyakarta in 2017 and the Diphtheria outbreak in East Java in 2017.



## Annex 2.

## List of interviewees for the qualitative

**Coordinating Ministry for Politics,  
Law and Human Rights**

1. Deputy Assistant for Coordination of International Organization Cooperation

**Coordinating Ministry for Human  
Development and Culture**

2. Assistant Deputy for Disease Prevention and Management

**Ministry of Internal Affairs**

3. Director General for Regional Development

**Ministry of Foreign Affairs**

4. Director of Law and Socio-Cultural Agreements

**Ministry of Defense**

5. Director of Health, Directorate General of Defense Forces

**Ministry of Law and Human Rights**

6. Director of Immigration Cooperation, Directorate General of Immigration

**Ministry of Finance**

7. Director of Budget for Human Development and Culture, Directorate General of Budget

**Ministry of Research, Technology and Higher  
Education**

8. Director of Science and Technology Research and Development, Directorate General of Research and Development Strengthening

**Ministry of Industry**

9. Director of Upstream Chemical Industry, Directorate General of Chemical, Textile and Miscellaneous Industries

**Ministry of Communication and Informatics**

10. Director of Communications Partnership, Directorate General of Information and Public Communication

**Ministry of Agriculture**

11. Head of Planning Bureau
12. Animal Quarantine and Animal Safety Center, Agricultural Quarantine Agency
13. Head of the Indonesian Center for Veterinary Research, Indonesia Agency for Agriculture Research and Development
14. Director of Animal Health, Director General of Animal Husbandry and Animal Health
15. Director of Veterinary Public Health, Director General of Animal Husbandry and Animal Health

**Ministry of Environment and Forestry**

16. Director of Management of Toxic, Hazardous Materials, Directorate General of Waste and B3 Management

**Ministry of Marine and Fisheries**

17. Fish Quarantine Center, Fish Quarantine Agency, Fisheries Product Quality and Safety Control

**National Development Planning Agency (Bappenas)**

18. Director of Community Health and Nutrition

**Indonesian National Army**

19. Head of Health Center

**Indonesian Police**

20. Heads of the Center for Medicine and Health

**National Disaster Management Agency (Badan  
Penanggulangan Bencana Nasional/BNPB)**

21. Head of Planning Bureau, Secretariat General
22. Director of Preparedness
23. Director of Emergency Response

**Drug and Food Control Agency (Badan Pengawasan  
Obat dan Makanan/BPOM)**

24. Legal and Organizational Bureau

**Nuclear Energy Regulatory Agency (Badan  
Pengawas Tenaga Nuklir/BAPETEN)**

25. Director of Nuclear Engineering and Preparedness, Deputy for Licensing and Inspection

### **Technology Assessment and Application Board (Badan Pengkajian dan Penerapan Teknologi/BPPT)**

26. Director of Regional Resource Development  
Technology Center, Deputy for Natural Resources  
Development Technology

### **Ministry of Health**

27. Expert Staff of the Minister for Health, Technology  
and Globalization (Chair of the Prevent Field)
28. Expert Staff of the Minister for Health,  
Decentralization (Chair of the Investigation Division)
29. Expert Staff of the Minister of Health, Law (Head of  
the Response)
30. Expert Staff of the Minister for Health, Economy  
(Chair of Other IHR-related Hazards and PoE)
31. Special Staff of the Minister of Health for  
Development and Health Financing
32. Head of the Center for Health Determinant Analysis,  
Secretariat General (National Field Coordinator  
Legislation, Policy and Financing)
33. Director of Health Surveillance and Quarantine,  
Directorate General of Disease Prevention and  
Control (Coordinator for IHR Coordination,  
Communication and Advocacy, PoE, Immunization,  
Preparedness)
34. Director of Referral Health Services, Directorate  
General of Health Services (Secretariat Anti Microbial  
Resistance, Coordinator of Medical Countermeasures  
and Personnel Deployment)
35. Director of Vector and Zoonotic Infectious Disease  
Prevention and Control, Directorate General  
Disease Prevention and Control (Zoonotic Diseases  
Coordinator)
36. Director of Health Services Facilities, Directorate  
General of Health Services (Field Coordinator  
National Laboratory System)
37. Head of Data and Information Center (Reporting  
Coordinator)
38. Head of Health Human Resource Training Center,  
Agency for Development and Empowerment  
of Human Resources for Health (Workforce  
Development Field Coordinator)
39. Head of Health Crisis Center, Secretariat General  
(Coordinator for Emergency Response Operations)

40. Head of Legal and Organizational Bureau, Secretariat  
General (Coordinator for Public Health and Linking  
Sector Security Authorities)
41. Head of the Communication and Community Service  
Bureau, Secretariat General (Coordinator for Risk  
Communication)
42. Head of the Bureau of International Cooperation,  
Secretariat General (Chair of the Secretariat)
43. Head of the Multilateral Health Cooperation Section,  
Bureau of International Cooperation, Secretariat  
General.
44. Head of Budget Subdivision, Program and  
Information Section, Secretariat of the Directorate  
General of Prevention and Disease Control.
45. Head of Planning and Budget Bureau, Secretariat  
General (Deputy Chair of the Secretariat)

### **Experts**

46. Dr. Untung Suseno Sutarjo, M.Kes (Principal Policy  
Analyst of the Ministry of Health)
47. Dr. I Nyoman Kandun, MPH.
48. Dr. I Nyoman Kumara Rai, MPH.
49. Dr. Indriyono Tantoro, MPH.
50. WHO Representative for Indonesia
51. drh. Pudjiatmoko, Ph.D (Ministry of Agriculture)
52. Dr. Harmein Harun

### **The World Bank**

53. Pandu Harimurti
54. Franciscus Thio
55. Andhika Nurwin Maulana
56. Samuel Josafat Olam

## Annex 3.

# Indonesia JEE Mission Report - 2018

Technical areas	Indicators	Score
<b>National legislation, policy and financing</b>	P 1.1 Legislation, laws, regulations, administrative requirements, policies, or other government instruments in place are sufficient for implementation of IHR (2005)	3
	P 1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies, and administrative arrangements to enable compliance with IHR (2005)	3
<b>IHR Coordination, communication and advocacy</b>	P 2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	3
<b>Antimicrobial resistance</b>	P 3.1 Antimicrobial resistance detection	2
	P 3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	2
	P 3.3 Health care-associated infection (HCAI) prevention and control programmes	3
	P 3.4 Antimicrobial stewardship activities	3
<b>Zoonotic diseases</b>	P 4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	3
	P 4.2 Veterinary or animal health workforce	3
	P 4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	2
<b>Food safety</b>	P 5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	3
<b>Biosafety and biosecurity</b>	P 6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	3
	P 6.2 Biosafety and biosecurity training and practices	3
<b>Immunization</b>	P 7.1 Vaccine coverage (measles) as part of national programme	4
	P 7.2 National vaccine access and delivery	4
<b>National laboratory</b>	D 1.1 Laboratory testing for detection of priority diseases	4
	D 1.2 Specimen referral and transport system	4
	D 1.3 Effective modern point-of-care and laboratory-based diagnostics	3
	D 1.4 Laboratory quality system	3
<b>Real-time surveillance</b>	D 2.1 Indicator- and event-based surveillance systems	3
	D 2.2 Interoperable, interconnected, electronic real-time reporting system	3
	D 2.3 Integration and analysis of surveillance data	2
	D 2.4 Syndromic surveillance systems	4
<b>Reporting</b>	D 3.1 System for efficient reporting to FAO, OIE and WHO	3
	D 3.2 Reporting network and protocols in country	3



Technical areas	Indicators	Score
<b>Workforce development</b>	D 4.1 Human resources available to implement IHR core capacity requirements	3
	D 4.2 FETP <sup>1</sup> or other applied epidemiology training programme in place	4
	D 4.3 Workforce strategy	3
<b>Preparedness</b>	R 1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented	3
	R 1.2 Priority public health risks and resources are mapped and utilized	2
<b>Emergency response operations</b>	R 2.1 Capacity to activate emergency operations	3
	R 2.2 EOC operating procedures and plans	2
	R 2.3 Emergency operations programme	3
	R 2.4 Case management procedures implemented for IHR relevant hazards.	3
<b>Linking public health and security authorities</b>	R 3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	4
<b>Medical countermeasures and personnel deployment</b>	R 4.1 System in place for sending and receiving medical countermeasures during a public health emergency	4
	R 4.2 System in place for sending and receiving health personnel during a public health emergency	4
<b>Risk communication</b>	R 5.1 Risk communication systems (plans, mechanism, etc.)	3
	R 5.2 Internal and partner communication and coordination	3
	R 5.3 Public communication	4
	R 5.4 Communication engagement with affected communities	4
	R 5.5 Dynamic listening and rumor management	4
<b>Points of entry</b>	PoE. 1 Routine capacities established at points of entry	4
	PoE. 2 Effective public health response at points of entry	4
<b>Chemical events</b>	CE. 1 Mechanism established and functioning for detecting and responding to chemical events or emergencies	2
	CE.2 Enabling environment in place for management of chemical events	3
<b>Radiation emergencies</b>	RE. 1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	3
	RE. 2 Enabling environment in place for management of radiation emergencies	3

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity

## Annex 4.

# Health Security Stakeholders according to Presidential Instruction no. 4 of 2019

1. Coordinating Minister for Politics, Law, and Security
2. Coordinating Minister for Human Development and Culture
3. Minister of Home Affairs
4. Minister of Foreign Affairs
5. Minister of Defense
6. Minister of Law and Human Rights
7. Minister of Finance
8. Minister of Research, Technology and Higher Education
9. Minister of Health
10. Minister of Industry
11. Minister of Communication and Information
12. Minister of Agriculture
13. Minister of Environment and Forestry
14. Minister of Marine Affairs and Fisheries
15. Minister of National Development Planning/Head of National Development Planning Agency
16. Cabinet Secretary
17. The Commander of the Indonesian National Army
18. Head of the Indonesian National Police
19. Head of the National Disaster Management Agency (BNPB)
20. Head of the Food and Drug Supervisory Agency (BPOM)
21. Head of the Nuclear Energy Regulatory Agency (BAPETEN)
22. Head of Technology Assessment and Application Board (BPPT)
23. Governors – Head of Provinces
24. Regents/Mayors

## Annex 5. Case studies

### Case Study 1.

#### COVID-19 National Response

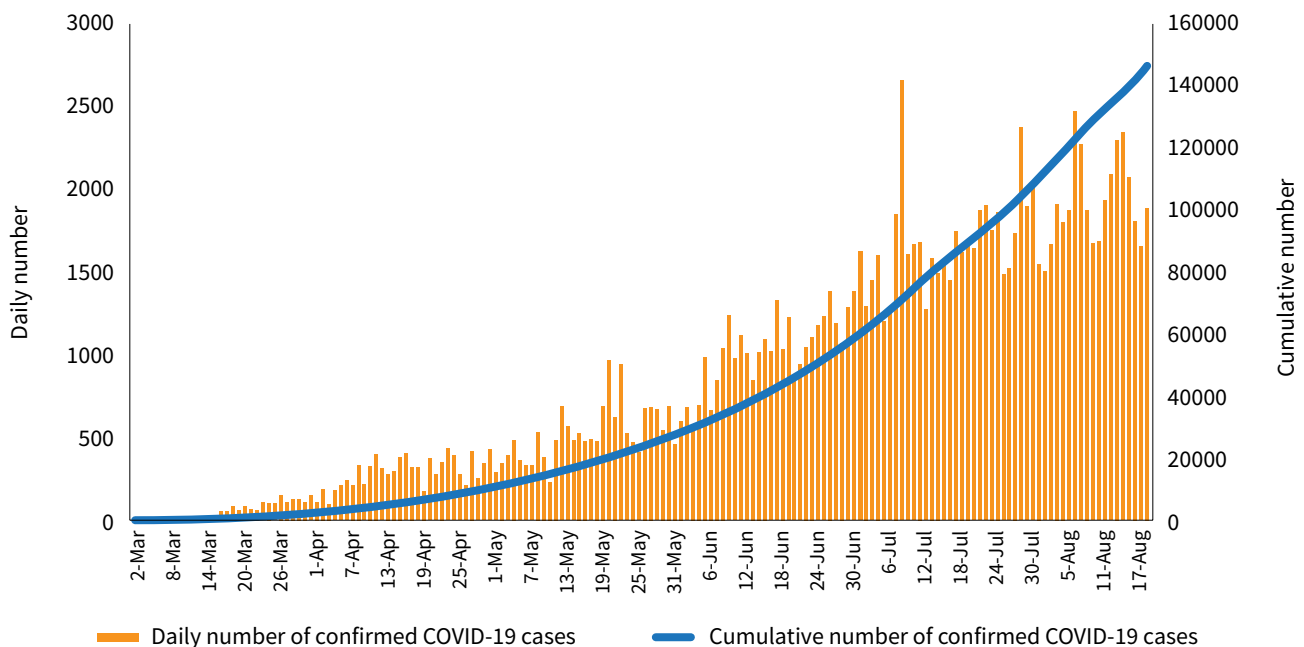
The spread of coronavirus (COVID-19) caused by the novel coronavirus (SARS-CoV-2) is one of the most serious public health threats Indonesia has faced in recent history. The country has been previously exposed to global and regional outbreaks of emerging diseases and public health emergency threats such as SARS and Avian Flu (H5N1) in 2003, Swine Flu (H1N1 in 2009), and more recently MERS. Previous events have never impacted Indonesia at the scale of COVID-19.

The GoI announced its first positive COVID-19 case on March 2, 2020 and by mid August 2020 Indonesia was in the first wave of the pandemic (Figure 1A.1) with a relatively steady daily increase of new cases. High population density provinces and major cities in Java are most affected but cases have spread across the country. The mortality rate of the reported cases has significantly declined from 9 percent in April to less than 5 percent in July, which was

above the global average of 4.2 percent. The GoI ramped up the test capacity from less than 5,000 tests per day in April to reach a PCR test capacity of more than 30,000 per day in July, however, Indonesia lags neighboring countries, thereby contributing to a prediction that the number of undetected cases in the community may be much higher.

At the beginning of the epidemic, public health policy emphasized nonpharmaceutical interventions aimed at managing the spread of the epidemic while enhancing health system capacity. Later on, there have been some shifts of attention to pharmaceutical interventions including the quest for the effective combination of drugs, including the exploration of traditional herbal medicine, and research to develop a vaccine as well as efforts to secure vaccines from external sources. Behavior-change measures were implemented—such as promoting hand washing and mandating face masks in public, together with social restriction measures such as mandating home-based work coupled with temporary business closures and travel restrictions.

Figure 1A.1 COVID-19 daily and cumulative cases Indonesia



**The president declared the pandemic a national health emergency at the end of March 2020, which enabled a more concerted effort across central agencies and between the central and subnational governments.** The national response has considered the decentralized context that allows subnational governments to impose varying degrees of social restriction measures depending on local epidemic conditions, thereby increasing the flexibility of localized responses to outbreaks.

**As with many other LMICs, Indonesia's health system was unprepared to contain the spread of COVID-19, even with the relatively 'slow-burn' progress of the pandemic.** The capacity to provide care for severe acute respiratory cases and other related COVID-19 complications was limited. Indonesia has 2,943 hospitals with a bed capacity of more than 300,000, about 7,000 of which are intensive care unit (ICU) beds which is an average of 2.7 ICU beds per 100,000 population. While there are more than 8,000 ventilators across the entire country, only around 2,200 were available in the 132 COVID-19 designated referral hospitals. Even countries with much better capacity (US, Europe) saw their health care systems become overwhelmed, suggesting that Indonesia's critical care infrastructure will also become quickly stretched.

**The pandemic started in major cities and urban and densely populated areas, such as Jakarta and West Java.** These epidemic centers then imposed the Large-Scale Social Restriction (*Pembatasan Sosial Berskala Besar*: PSBB) policy that seemed to work. With the reduced economic activities in major cities, coupled with the Eid holiday, there was, however, a significant migration back to other parts of the country which then further spread the disease to areas with less capacity for testing and treatment. As Jakarta started to relax PSBB and resumed some economic activities in June, the incidence of new cases in the city has been steadily increasing since early July 2020.

**The capacity for contact tracing and confirmatory diagnostic continues to be limited to meet the growing demand despite efforts to increase capacity.** The country response was initially relying on the National Health Laboratory (NHL) that was designated as the national referral center for confirmatory diagnostics that includes a network of 12 regional surveillance and research center laboratories with a capacity of around 4,000 tests per day (per April 2020). The test capacity increased to 40,000 tests per day by mid October 2020 with an expanded network involving 320 laboratories from public hospitals as well as private laboratories and hospitals.

**Indonesia still needs to more than double its existing capacity to meet the recently adopted WHO recommendation of**

**testing one suspected case per 1,000 population.** Limited contact tracing may also be a contributing factor to low demand for testing. The reliance on the mobilization of primary health care workers in the public sector has not been able to meet the demand. Approaching the end of 2020, the results showed that Indonesia had not performed well in indicators to measure public health surveillance functions—only 30 percent of confirmed cases were traced for their contacts. This has improved with scaled up response including multi sector and community mobilization, and the use of digital reporting system that is integrated with the COVID-19 information system in July 2021.

**The COVID-19 emergency response provides an important lesson on the role of laboratories in the national surveillance system.** Prior to the pandemic, the focus of strengthening the capacity of health laboratories in Indonesia had been mainly for health research purposes rather than surveillance functions.<sup>1</sup> The unequal distribution of capacity of the health system applies as well for health laboratories that are skewed towards major cities, especially Jakarta. The strategy to use the well-distributed Rapid Molecular Test (RMT) was also hampered by the preparedness of the 815 facilities that have received the RMT machines, only 115 of which are equipped with a Bio Safety Cabinet as one of the safety requirements to conduct COVID-19 tests.

**There have been challenges to scale up the confirmatory testing capacity in the middle of a pandemic, such as the availability of high-capacity PCR machines, reagents, and viral transport medium, and cartridges for RMT, and the logistic distribution of these goods.** The training for lab technicians was conducted using long-distance learning platforms which was more challenging for remote areas that have limited internet connection. The rapid expansion of the participating laboratory network raises concern over the capacity for the NHL to implement a rigorous quality assurance mechanism. Although as one technical area of IHR implementation, the national laboratory system received relatively good scores during the 2017 JEE Mission, the identified issues were more pronounced during the pandemic emergency response. This highlights the importance of ensuring a more systematic effort to increase preparedness of the national laboratory.

**The financing of the COVID-19 emergency response uses various existing mechanisms for various sources of funds and for various purposes.** The national health disaster status has allowed the use of the On-call funds or DSP, drawn from the reserve fund for disasters and channelled through the BNPB. The MoH developed and submitted a budgeted health sector plan proposal to the BNPB as the budget holder for the use of the fund. The plan included

<sup>1</sup> Ministry of Health, Strategic Plan for Health, 2015-2020.

the provision of critical care equipment especially for respirators, Personal Protective Equipment, laboratory supplies, and payment for the treatment of COVID-19 cases. At the same time, the central ministries budget document was undergoing revision to mainly repurpose the budget for the COVID-19 response. Meanwhile, subnational governments are permitted to refocus DAK Fisik—the earmarked intergovernmental fiscal transfer for physical infrastructure—to strengthen the district’s response to the COVID-19 pandemic.

**The GoI has allocated a significant financial package for the national emergency response aimed at curbing the pandemic as well as mitigating the economic impact.** The initial emergency response for health was mainly financed through the On-Call Fund mechanism channelled through BNPB in addition to the repurposing of the existing health budget at the central and subnational levels. Additional funding of Rp 75 trillion for health was announced under the third fiscal stimulus package—taking the total allocation for health to Rp 87.55 trillion (US\$6 billion) out of the total fiscal stimulus package for the National Economic Recovery of Rp 625 trillion (or around US\$43 billion).<sup>2</sup>

**Approximately 75 percent of the total amount for the COVID-19 response (Rp 65.8 trillion or US\$4.5 billion) is projected for ‘COVID-19 handling’ that includes readiness of health service.** Although there is no detailed information, it is expected that the majority of funds under this activity classification will be allocated for reimbursement of COVID-19 treatment. The remainder of the fiscal package for the health sector is allocated for incentives for health professionals working on COVID-19, death compensation, operational cost of the Task Force, and premium subsidies for workers in the informal sector. The GoI also has also secured a budget of US\$2.4 billion for multi-year COVID-19 vaccine procurement with implementation projected to start in 2021.

**The pandemic has also brought challenges to the country’s efforts to advance universal health coverage.** The disruption to essential health services such as basic childhood immunization, health services for pregnant women, family planning, and for those with chronic conditions who require regular treatment and care was as a result of the PSBB initiative and concerns over the safety of health services. One-third of primary health care networks reported temporary shutdowns of immunization services in Indonesia, immunization coverage dropped around 30 percent in May for DPT3 but bounced back in August. Reallocation of health resources including budget and personnel was more difficult to quantify, especially at the subnational level. There is anecdotal evidence that the repurposing of priority health programs budget and

reassignment of health personnel for COVID-19 response activities have negatively impacted program coverage.

**A multisector coordination mechanism for the national COVID-19 emergency response has been established and its structure has evolved to reflect the GoI’s priorities.**

The multisector ‘COVID-19 Mitigation Acceleration Task Force’ (the COVID-19 task force) led by the BNPB, aims to improve coordination in scaling up the national COVID-19 emergency response. The task force mobilizes the relevant government ministries and agencies and involvement from the private sector and community. The central government has also requested local governments to establish local coordination units for COVID-19 response to ensure alignment with the national response. At the end of July 2020, as the pandemic progresses, the GoI restructured the national task force with more focus on facilitating the country’s economic recovery while, at the same time, continuing its responsibility to control the epidemic.

**In accordance with the national emergency response, the national task force coordinates various forms of external assistance for the COVID-19 response.** The Task Force in coordination with the MoH’s Center for Disaster Risk Management issued a guidance for external parties including international donors, nongovernmental organizations, the private sector, and community in general to contribute to the national response. Development partners may communicate and work directly with line ministries (for instance, financial development partners with MoF and assistance in form of technical support and in-kind contributions) and were directed to work with the technical ministry and the national task force. The national task force also published the information on contributions from various parties to the public.

**Monitoring the use of financial resources for the pandemic response to improve accountability has been one of the GoI’s main focus areas.** As the coordinator of the national response, the National COVID-19 Task Force publishes regularly (weekly) the amount of financial contributions from external parties including international development agencies, and the private sector. MoF, with support from a group of development partners (DFAT, European Union, and Swiss Government) developed a mechanism that enables government budget expenditure tracking. This includes additional budget codes in the existing budget nomenclature for activities related to the COVID-19 pandemic response, as well as a user-friendly application to track disbursement of COVID-19 budget funds in real-time. The application is to be made available to the public by the end of September 2020.

<sup>2</sup> Advertorial RAPBN 2021, Ministry of Finance <https://www.kemenkeu.go.id/media/15869/advertorial-rapbn-2021.pdf>

## Case Study 2.

### Health Security Function Coordination at the District level – Response to an Anthrax Outbreak

**Background.** In January 2017, Kulon Progo Health Authority received reports of patients with skin symptoms that raises suspicion of anthrax. The diagnosis was confirmed by the Animal Disease Investigation Center in Wates (the capital of the Kulon Progo district) based on the samples and a series of laboratory tests. These findings were announced by a representative from the local government office and picked up by the local mainstream media, however, the District Health Office (DHO) decided to conduct further investigation rather than declare it as an outbreak. The most recent information that we can gather is that there was one suspected anthrax patient being treated at RSUP dr. Sardjito. In accordance with the National Outbreak Law, a suspect case of anthrax, is already a strong basis to declare a local outbreak. The Kulon Progo Health Authority argued that they were in compliance with the local regulation (Local Government Regulation No. 40/1991). This raises questions on the discordance between the central and subnational level in declaring an outbreak.

**Activated Response.** At the district level, the status of an emergency situation that may arise from any types of disaster, such as outbreak, health crisis, or natural disaster is decided by the District Secretary. In doing so, the Secretary will receive recommendations from the relevant sectors from different administration level. The head of the district with the support from the local and central health authorities then issue a regulation including the epidemiological situation assessment and the allocation amount of the DTT. For the latter, the regulation further elaborates not only on the amount, but also a guideline on the use of the funds during the estimated duration of the outbreak. The regulation will automatically designate the BPBD as the coordinator of the emergency response—including as the responsible working unit that manages the emergency funds. Although there is no local regulation on the local emergency response coordination mechanism, in reality, both the health authority and BPBD are working closely together.

**Funding Mechanisms:** During the period of 2015–18 the annual average allocation by the Kulon Progo District Government for the disaster reserve fund (The Unexpected Funds) was around 0.1 percent to 0.2 percent of the total district budget. The fund is set aside to finance any emergency activities outside the regular budgeted activities. This fund

is the last resort at the district level that can be used to finance emergency health security-related issues.

**Coordination Mechanisms:** Once the information on a communicable disease—such as anthrax—is under surveillance, the District Secretary issues an instruction to several agencies that includes the distribution of roles and responsibilities for each sector for the response. The local Agriculture and Food Office has the role of controlling infection sources in animals, while the DHO together with the *puskesmas* conduct an epidemiological investigation which may include central and provincial governments. The involvement of the higher-level health authorities depends on the type of disease and the potential magnitude of an outbreak.

In the case of the suspected anthrax outbreak and why it did not trigger an outbreak declaration in this district, there are several possible explanations. First, the local government through DHO is already capable in the management of anthrax events. This is not the first suspected case of anthrax in Kulon Progo in the past few years. Since November 2016 the veterinary agency had conducted several investigations among the local cattle population, and there had been positive anthrax cultures from soil samples. Secondly, the District may have limited financial capacity for a full-scale response that is required for the outbreak management. Thirdly, the lack of coordination and agreement between veterinary agency/laboratorium with DHO. These are the areas where there is room for improvement to strengthen the District's health security preparedness.

**The Importance of an Outbreak Status:** As the January 2017 anthrax case in this District was not declared as an outbreak, the DHO continued to be the leading sector for the response. The DHO responsibilities include bearing the treatment costs of the suspect cases using the allocated budget (APBD budget). Government budget rigidity may limit the scope of the response. DHO is unable to access the DTT even for emergency operational costs. As a comparison, the neighboring district, Yogyakarta City, recently declared an anthrax outbreak. The decision-making process was initiated by an assessment by the Outbreak and Disaster Fast Response Team (Tim Gerak Cepat) under the Regional Secretary. The results were then conveyed to the relevant cross-sectors which led to the outbreak declaration. The outbreak management from identification, to response, and recovery are assigned to the relevant agencies in accordance with the duties and functions of each agency. This arrangement allows quicker response and ensures involvement of sectors, and mobilization of resources (financial, personnel, facilities) from each agency. This is an example of how different arrangements and policies at the local level have complicated the implementation of health security functions in a decentralized context.



## Annex 7.

# Government Laws, Regulations, Policy Documents, and Guidelines

## National Legislation

Republic of Indonesia. Law No. 4/1984 on Infectious Disease Outbreak.

Republic of Indonesia. Law No. 16/1992 on Animal, Fish, and Plant Quarantine.

Republic of Indonesia. Law No. 10/1997 on Nuclear Energy.

Republic of Indonesia. Law No. 15/2003 on Establishment of Government Regulation in lieu of Law No. 1/2002 on Eradicating Criminal Acts of Terrorism into Law.

Republic of Indonesia. Law No. 17/2003 on State Finances.

Republic of Indonesia. Law No. 25/2004 on National Development Planning System.

Republic of Indonesia. Law No. 24/2007 on Disaster Management.

Republic of Indonesia. Law No. 6/2008 on Openness of Public Information.

Republic of Indonesia. Law No. 18/2009 on Animal Husbandry and Animal Health.

Republic of Indonesia. Law No. 36/2009 on Health.

Republic of Indonesia. Law No. 23/2014 on Local Government.

Republic of Indonesia. Law No. 6/2018 on Health Quarantine

## National Regulations

Republic of Indonesia. Government Regulation No. 40/1991 on Communicable Disease Outbreak Control.

Republic of Indonesia. Government Regulation No. 82/2000 on Animal Quarantine.

Republic of Indonesia. Government Regulation No. 28/2004 on Food Safety, Quality, and Nutrition.

Republic of Indonesia. Government Regulation No. 2/2008 on Disaster Funds.

Republic of Indonesia. Government Regulation No. 21/2008 on Disaster Management Implementation.

Republic of Indonesia. Government Regulation No. 22/2008 on Disaster Aid Financing Management.

Republic of Indonesia. Government Regulation No. 23/2008 on Participation of International and Foreign Non-Governmental Organizations in Disaster Management.

Republic of Indonesia. Government Regulation No. 44/2012 on Emergency Funds.

Republic of Indonesia. Government Regulation No. 18/2016 on Local government devices

Republic of Indonesia. Government Regulation No. 2/2018 on Minimum Services Standard

## Presidential Regulations

Republic of Indonesia. President Regulation No. 8/2008 on the National Agency for Disaster Management.

Republic of Indonesia. President Regulation No. 46/2010 on National Counter-terrorism Agency (BNPT).

Republic of Indonesia. President Regulation No. 30/2011 on Zoonosis Control.

Republic of Indonesia. President Regulation No. 16/2018 on Government Procurement of Goods and Services.



Republic of Indonesia. President Regulation No. 17/2018 on Implementation of Disaster Management in Certain Circumstances.

Republic of Indonesia. Presidential Decree No. 4/2019 on Enhancing the Ability to Prevent, Detect, and Respond to Outbreaks of Disease, Global Pandemic, and Nuclear, Biological, and Chemical Emergencies.

## Ministerial Regulations and Decrees

### Coordinating Ministry of Human Development and Culture

Republic of Indonesia. Coordinating Ministry of Human Development and Culture. 2018. Cross-sectoral Coordination Guideline in Facing Zoonotic and Emerging Infectious Disease Epidemic/Outbreak.

### Minister of Finance

Republic of Indonesia. Minister of Finance Regulation No. 81/PMK.07/2013 on Management of Emergency Funds.

Republic of Indonesia. Minister of Finance Regulation No. 105/PMK.05/2013 on Disaster Management Budget Implementation Mechanism.

Republic of Indonesia. Minister of Finance Regulation No. 168/PMK.05/2015 on the Mechanism for the Implementation of Government Assistance Budget at State Ministries/Agencies.

Republic of Indonesia. Minister of Finance Regulation No. 173/PMK.05/2016 on Amendment to Minister of Finance Regulation No. 168/PMK.05/2015 on the Mechanism for the Implementation of Government Assistance Budget at State Ministries/Agencies.

Republic of Indonesia. Minister of Finance Regulation No. 99/PMK.05/2017 on Administration of Grant Management.

Republic of Indonesia. Minister of Finance Regulation No. 140/PMK.05/2018 on Procedures for Managing Direct Grant Funds in the Form of Money from Foreign Grant Providers for Natural Disaster Management in Central Sulawesi.

Republic of Indonesia. Minister of Finance Regulation

No. 132/PMK.02/2019 on Amendment to Minister of Finance Regulation No. 206/PMK.02/2018 on the Procedures for Revising the 2019 Budget.

### Minister of Health

Republic of Indonesia. Minister of Health Decree No. 424/Menkes/SK/IV/2003 on the Confirmation of SARS as a Disease of Outbreak Potential and its Mitigation Efforts.

Republic of Indonesia. Minister of Health Decree No. HK.02.02/Menkes/273/2016 on the Global Health Security Working Group/Task Force in the Ministry of Health.

Republic of Indonesia. Minister of Health Decree No. HK.02.02/216/2016 on Zika Virus Infection as a Disease of Outbreak Potential and Its Mitigation Efforts.

Republic of Indonesia. Minister of Health Decree No. HK.02.02/Menkes/405/2016 on Ebola Virus Disease as a Disease of Outbreak Potential and Its Mitigation Efforts.

Republic of Indonesia. Minister of Health Decree No. 3/2016 on Command System in Disaster Management.

Republic of Indonesia. Minister of Health Regulation No. 1501/Menkes/Per/X/2010 on the Types of Infectious Diseases with Outbreak Potential and the Mitigation Efforts.

Republic of Indonesia. Minister of Health Regulation No. 64/2013 on Health Crisis Management.

Republic of Indonesia. Minister of Health Regulation No. 8/2015 on Antimicrobial Resistance Control in Hospitals.

Republic of Indonesia. Minister of Health Regulation No. 59/2016 on Cost Waiver for Certain Emerging Infectious Diseases.

Republic of Indonesia. Minister of Health Regulation No. 4/2019 on Technical Standards for Fulfillment of Basic Service Quality for Minimum Service Standards in the Health Sector.

### Minister of Home Affairs

Republic of Indonesia. Minister of Home Affairs Regulation No. 86/2017 on the Second Amendment to Minister of Home Affairs Regulation No. 13/2006 on Guidelines for Regional Financial Management.

Republic of Indonesia. Minister of Home Affairs Regulation No. 86/2017 on Procedures For Planning, Control, And Evaluation Of Regional Development, Procedures For Evaluation Of Regional Regulation Designs About Long Term Development Plan; And Local Mid-Term Development Plan; and Procedures For Changing Local Long-Term Development Plans; Regional Mid-Term Development Plan; and Regional Government Workplan.

### **National Agency for Disaster Management (Badan Nasional Penanggulangan Bencana: BNPB)**

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 16/2009 on Direct Grant Management in the National Agency for Disaster Management.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 22/2010 on the Role of Foreign Institutions During Disaster Response.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 23/2010 on the Guideline for Public Fund Collection and Management for Disaster Management.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 4/2011 on Technical Guidelines for Post-disaster Rehabilitation and Reconstruction.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 6A/2011 on the Guideline for On-Call Fund Utilization in Disaster Emergency.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 14/2011 on A Social Assistance Fund with a Grant Pattern.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 11/2014 on Public Participation in Disaster Management.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 12/2014 on Participation of Business Corporations in Disaster Management.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 04/2015 on Grant from the Central Government to Local Government in the Framework of Funding Assistance for Post-disaster Rehabilitation and Reconstruction.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 1/2017 on Mechanism Guidelines for Implementation of the Government Assistance Budget in National Disaster Management Agency.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 6/2017 on Management of Post-disaster Rehabilitation and Reconstruction.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No.2/2018 on the Utilization of On-Call Funds.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 6/2018 on Acceptance of International Assistance for Disaster Emergencies.

Republic of Indonesia. Head of National Agency for Disaster Management Regulation No. 7/2018 on the Procedure for Using Foreign Direct Grant Funds in Central Sulawesi.

## **Provincial Regulations and Decrees**

### **East Java Province**

East Java Governor Decree No. 188/66/KPTS/013/2006 on the Disaster Management and Disaster Management Coordination Unit (PB Satkorlak) of East Java Province.

East Java Governor Decree No. 188/22/KPTS/013/2016 on the East Java Food and Nutrition Regional Working Group in 2016.

East Java Governor Decree No. 188/352/KPTS/013/2017 on Working Group on Elimination of Measles and Control of Rubella (Congenital Rubella Syndrome) of East Java Province.

East Java Governor Decree No. 188/230/KPTS/013/2017 on the Food Security Council of East Java Province in 2017.

East Java Governor Decree No. 188/31/KPTS/013/2018 on the Working Group on Regional Food and Nutrition Action in East Java Province in 2018.

East Java Provincial Regulation No. 3/2010 on Disaster Management in East Java Province.

East Java Provincial Regulation No. 2/2016 on Health Efforts.

East Java Provincial Regulation No. 2/2018 on Water Quality Management and Water Pollution Control in East Java Province.

East Java Provincial Regulation No. 12/2018 on HIV and AIDS Management.

East Java Governor Regulation No. 3/2007 on Handling of Avian Flu in Anticipating Influenza Pandemic in Humans.

East Java Governor Regulation No. 13/2014 on Food Reserves of the Regional Government of East Java Province.

East Java Governor Regulation No. 126/2016 on Plans for Action on Regional Food and Nutrition in East Java in 2016-2019.

### **Daerah Istimewa Yogyakarta Province**

Daerah Istimewa Yogyakarta Province. Local Regulation No. 13/2015 on Amendments to the Special Province of Yogyakarta Regulation No. 8/2010 on Disaster Management.

Daerah Istimewa Yogyakarta Governor Regulation No. 55/2010 on Details of Tasks and Functions of DIY Province BPBD.

Daerah Istimewa Yogyakarta Governor Regulation No. 49/2011 on Disaster Management SOP.

Daerah Istimewa Yogyakarta Governor Regulation No. 11/2013 on Guidelines for Determining Disaster Potential Status.

Daerah Istimewa Yogyakarta Governor Regulation No. 70/2013 on Guidelines for Preparing Disaster Emergency Operations Plans.

Daerah Istimewa Yogyakarta Governor Regulation No. 71/2013 on Guidelines for Providing Disaster Emergency Assistance.

Daerah Istimewa Yogyakarta Governor Regulation No. 81/2013 on Regional Disaster Management Plans for 2013-2017.

Daerah Istimewa Yogyakarta Governor Regulation No. 67/2014 on the Pattern of Coordination of DIY BPBD in Implementing Disaster Management.

Daerah Istimewa Yogyakarta Governor Regulation No. 70/2014 on Community Involvement in Disaster Management.

Daerah Istimewa Yogyakarta Governor Regulation No. 71/2014 on Provincial Commission on Zoonotic Control.

Daerah Istimewa Yogyakarta Governor Regulation No. 72/2014 on Management of Disaster Management Facilities and Infrastructure at the Time of No Disasters.

Daerah Istimewa Yogyakarta Governor Regulation No. 80/2015 on Details of Tasks and Functions of the Regional Disaster Management Agency.

Daerah Istimewa Yogyakarta Governor Regulation No. 11/2016 on Guidelines for Organizing Search, Relief, and Efforts to Rescue the Health Sector in Disaster Situations.

Daerah Istimewa Yogyakarta Governor Regulation No. 12/2016 on Guidelines for Disaster Emergency Response Command Systems in the Special Region of Yogyakarta.

## **District Regulations and Decrees**

### **Banyuwangi Regency**

Banyuwangi Regency Head Decree No. 188/463/KEP/429.11/2014 on the Resilient Team of Village Facilitators Activities in the Preparation of Disaster Management Mitigation Plans in Banyuwangi Regency for 2014 Budget Year.

Banyuwangi Regency Head Decree No. 188/60/KE/429.011/2016 on Establishment of an Executive Committee that Monitors Early Detection of Disaster Management.

Banyuwangi Regency Local Regulation No. 6/2007 on Prevention and Control of STIs and HIV/AIDS in Banyuwangi Regency.

Banyuwangi Regency Local Regulation No. 10/2013 on Disaster Management.

Banyuwangi Regency Head Regulation No. 15/2012 on Control of Dengue Fever.

Banyuwangi Regency Head Regulation No. 71/2012 on Minimum Service Standards in Food Security in Banyuwangi Regency.

Banyuwangi Regency Head Regulation No. 45/2015 on HIV/AIDS Prevention and Control in Banyuwangi Regency.

Banyuwangi Regency Head Regulation No. 42/2016 on Environmental Health Supervision and Control in Health Facilities, Offices, Industries, and Public Places.

### **Kulon Progo Regency**

Kulon Progo Regency Local Regulation No. 11/2010 on the Establishment of Disaster Management Agencies.

Kulon Progo Regency Local Regulation No. 8/2015 on Disaster Management.

Kulon Progo Regency Local Regulation No. 6/2016 on Domestic Waste Management.

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Kulon Progo Regency Head Regulation No. 1/2010 on Early Awareness of DHF.

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Kulon Progo Regency Head Regulation No. 75/2011 on the Establishment of Organizations and Procedures for the Management of Abattoirs.

Kulon Progo Regency Head Regulation No. 67/2013 on Elimination of Malaria in the Regions.

Kulon Progo Regency Head Regulation No. 92/2013 on AIDS Prevention Commissions in the Region.

Kulon Progo Regency Head Regulation No. 10/2017 on Regional Food Security Council.

Kulon Progo Regency Head Regulation No. 18/ 2018 on Guidelines for Establishing a Disaster Risk Reduction Forum.

Kulon Progo Regency Head Regulation Decree No. 170/2010 on DHF Outbreaks and Prevention.

Kulon Progo Regency Head Instruction No. 1/2007 on Prevention, Control and Eradication of Avian Influenza.

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