

BUILDING HEALTHY CITIES



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Makassar Multisector Data Integration Series: Phase 2 Summary



December 2020 – August 2021

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ACRONYMS

ASDK	One Health Data
BHC	Building Healthy Cities
DHIS-2	District Health Information Software
FGD	focus group discussion
JSI	JSI Research & Training Institute, Inc.
MOU	memorandum of understanding
SPM	minimum health standard
UiO	University of Oslo
USAID	United States Agency for International Development

Building Healthy Cities

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Cover Images

Meeting between Building Healthy Cities and University of Oslo DHIS-2 Indonesia team (left). Healthy City Data login screen (right). Both images courtesy of International Organization for Migration Indonesia.

INTRODUCTION

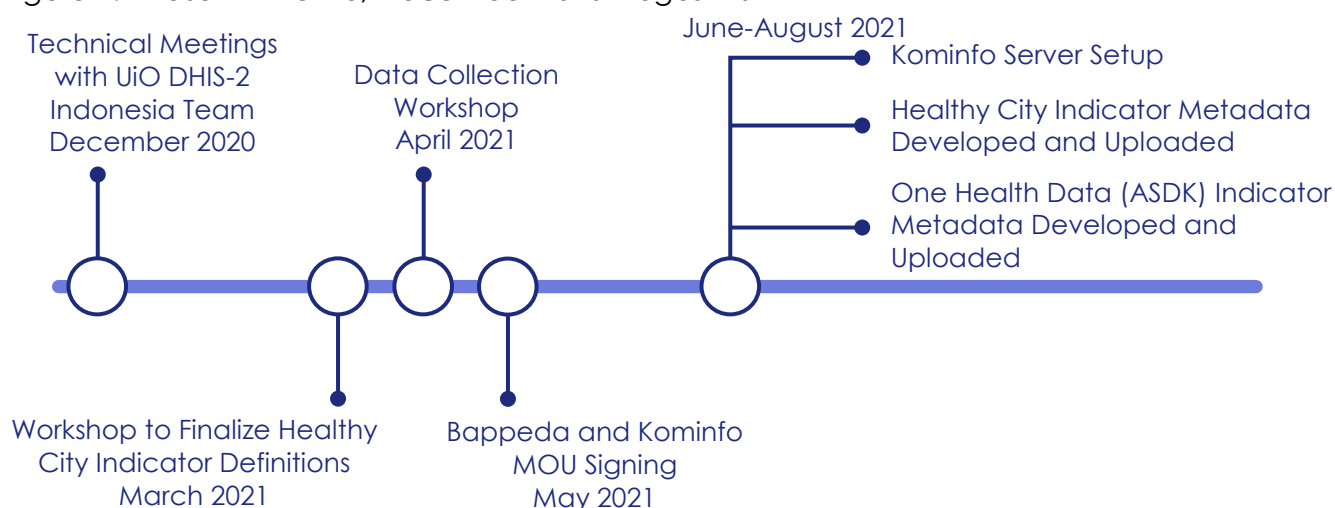
The United States Agency for International Development (USAID)-funded Building Healthy Cities (BHC) project aims to refocus city policies, planning, and services with a health equity lens while improving data-driven decision making for Smart Cities in India, Indonesia, Nepal, and Vietnam. Planning for a Smart City is intrinsically linked to health: transportation, the environment, sanitation, education, recreation, technology, and the built environment all influence the health of an urban population. When decision-making across these areas is harmonized, people will benefit from improved access to health services, decreased environmental and lifestyle risk factors for chronic diseases, a lower burden of infectious diseases, and an increased availability of useful data for decision-making.

BHC engages with sectors that contribute, directly or indirectly, to citizens' health (particularly women and children's health) and quality of life. This multisector engagement, the first core value of BHC, aims to provide all municipal sectors a common understanding of how they contribute to health. The second BHC core value is to strengthen community engagement in municipal decision-making, especially for those most vulnerable to health shocks. BHC's third core value is supporting use of data for planning and decision-making. Informed by these three core values, the project is working to improve healthy urban planning.

In Makassar, Indonesia, BHC works with Bappeda, Kominfo, and other key stakeholders to support the city's long-term goal to become a world class city that is healthy and resilient for all. BHC works in partnership with Smart City initiatives and urban health coordination structures to define and implement actions to achieve this goal via health, infrastructure, and information and communication technology projects; enhance interoperability of data systems; and increase efficiency of multisector urban spending.

BHC supports data integration across sectors to improve data-driven decision making in Makassar, and worked with the city to adapt existing and familiar platforms. This activity was accomplished in 3 phases: stakeholder engagement; data aggregation and preparation; and training and capacity building. This report summarizes the series of workshops and activities conducted as part of Phase 2: Data Aggregation and Preparation, between December 2020 and August 2021. All meetings followed best practices for limiting risk of COVID-19 transmission.

Figure 1. Phase 2 Timeline, December 2020-August 2021



WORKSHOP SUMMARIES

Technical Meetings with UiO DHIS-2 Indonesia Team

BHC organized a series of five technical meetings over two days on December 15-16, 2020. The purpose of these meetings was to work closely with the University of Oslo (UiO) District Health Information Software 2 (DHIS-2) team based in Indonesia, and develop a technical plan for data integration. Three people attended from the UiO DHIS-2 team and met with five representatives from the main stakeholders in the BHC data integration activities - Bappeda, Kominfo, and the Health Department. The meeting costs were shared between BHC and the UiO DHIS-2 team.

Table 1: Agendas for Technical Meetings with UiO DHIS-2 Indonesia Team

Time	Discussion Topic	Attendees
Day 1: December 15, 2020		
10:00-12:00	Discussion with Kominfo How Kominfo can support multisectoral data integration and strengthening of One Health Data (ASDK) in Makassar City.	UiO (3 people) BHC/IOM (2 people) Kominfo (2 people)
13:00-14:00	Discussion with Bappeda Action Plan for multisectoral data integration and strengthening of ASDK in Makassar City using DHIS-2.	Bappeda (1 person) BHC/IOM (2 people) UiO (3 people)
16:00-18:00	Discussion on Technical Plan for Multisectoral Data Integration and Strengthening ASDK in Makassar City Using DHIS-2: Session 1 - How UiO can support multisectoral data integration and strengthening ASDK in Makassar City. - What the city should prepare for this effort. - What BHC should prepare for this effort.	UiO (4 people) BHC/IOM (4 people)
Day 2: December 16, 2020		
10:00-11:30	Discussion with Health Department Strengthening ASDK with additional dashboard for minimum health standard (SPM) indicator data.	Health Department (2 people) UiO (3 people) BHC/IOM (2 people)
13:00-16:00	Discussion on Technical Plan: Session 2 - How the UiO Indonesia team can support multisectoral data integration and strengthening ASDK in Makassar City. - Technical steps to integrate data and strengthen ASDK in Makassar City using DHIS-2 platform.	UiO (3 people) BHC/IOM (3 people)

The meeting schedule included discussions to gather stakeholder perspectives and synthesize them into specific technical next steps. As a result, BHC drafted a general terms of reference for supporting multisectoral data integration and health data.



Meeting between BHC and UiO DHIS-2 Indonesia team.

Virtual Workshop to Finalize Healthy City Indicator Definitions

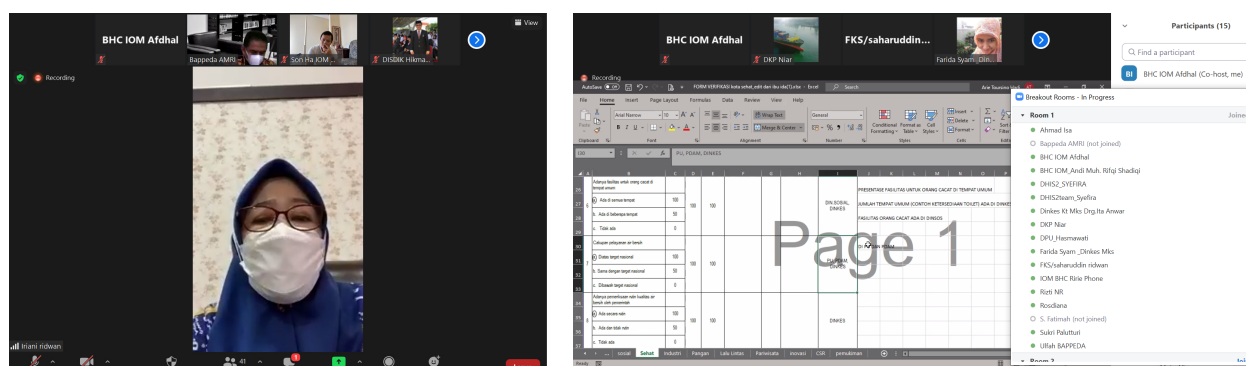
BHC and Bappeda held a two-day online workshop to develop operational definitions for around 160 healthy city indicators. The event was held on March 4-5, 2021, with 35 total participants split into two groups. Group 1 included representatives from the public works, health, and food security departments/sectors, and the Healthy City Forum. Group 2 included representatives from the tourism, social, trade and industry, and transportation departments/sectors, and Bappeda. The workshop costs were shared between BHC and Bappeda.

Table 2. Agenda for Workshop to Finalize Healthy City Indicator Operational Definitions

Time	Discussion Topic	Resource Persons
Day 1: March 4, 2021		
08:30-09:00	Registration	
09:00-09:10	Session 1: Opening by Head of Bappeda	Bappeda
09:10-09:40	Session 2: Focus Group Discussion (FGD) to Develop Operational Definitions for Healthy City Indicators • Group 1 Topic 1: Food Security (8 indicators)	Led by facilitator 1 from UiO
	Session 3: FGD to Develop Operational Definitions • Group 2 Topic 1: Tourism (8 indicators)	Led by facilitator 2 from UiO
09:40-12:00	Session 4: FGD to Develop Operational Definitions • Group 1 Topic 2: Health (48 indicators)	Led by facilitator 1 from UiO
	Session 5: FGD to Develop Operational Definitions • Group 2 Topic 2: Industry (11 indicators) • Group 2 Topic 3: Traffic (16 indicators)	Led by facilitator 2 from UiO
12:00-13:00	Break	

13:00-15:00	Session 6: FGD to Develop Operational Definitions • Group 1 Topic 2 (continued): Health (48 indicators)	Led by facilitator 1 from UiO
	Session 7: FGD to Develop Operational Definitions • Group 2 Topic 4: Social (17 indicators)	Led by facilitator 2 from UiO
15:00	Closing	
Day 2: March 5, 2021		
08:30-09:00	Registration	
09:00-12:00	Session 8: FGD to Develop Operational Definitions • Group 1 Topic 3: Housing (indicators 1-30)	Led by facilitator 1 from UiO
	Session 9: FGD to Develop Operational Definitions • Group 2 Topic 5: Housing (indicators 31-59)	Led by facilitator 2 from UiO
12:00-13:00	Break	
13:00-15:00	Session 10: FGD to Develop Operational Definitions • Group 1 Topic 3 (continued): Housing (indicators 1-30)	Led by facilitator 1 from UiO
	Session 11: FGD to Develop Operational Definitions • Group 2 Topic 5 (continued): Housing (indicators 31-59)	Led by facilitator 2 from UiO
15:00	Closing	

The output of this meeting was a list of around 160 healthy city indicators with operational definitions, numerators, denominators, and details of data needed. These were required to develop metadata for the DHIS-2 application.



Head of Bappedda opening the workshop (left), and group discussion (right).

Data Collection Workshop

Bappedda organized and funded a one-day in person workshop on April 27, 2021, with planning support from BHC. The purpose of the workshop was to collect initial datasets from the government departments required to enter their data into the final DHIS-2 system. Participation in the workshop was limited by COVID-19 social distancing requirements,

and so only 16 participants from the different departments were able to attend the workshop.

Table 3: Agenda for Data Collection Workshop

Time	Discussion Topic	Resource Persons
08:30-09:00	Registration	
09:00-09:10	Opening	Head of Social and Culture Division
09:10-15:00	Discussion: - Sharing the dataset. - Dataset barriers and solutions for sustainability of data integration into DHIS-2.	Facilitated by Bappeda
15:00	Closing	



Department representatives attended the workshop and shared their data.

Bappeda and Kominfo MOU Signing

On May 17, 2021, Bappeda and Kominfo signed a memorandum of understanding (MOU), the purpose of which was to provide a legal standing for Kominfo to install the DHIS-2 application on their server. The MOU specified Bappeda's and Kominfo's roles, and the mechanism and technical procedures for maintaining the DHIS-2 application in the future, in order to sustain data integration efforts in Makassar. BHC supported the drafting and finalization of the MOU document. A draft MOU review meeting was held with four people from the UiO DHIS-2 team, four representatives from city departments (Bappeda, Kominfo, Health Department), and two people from BHC.

Based on the 2018 BHC [Makassar Data Use and Access Assessment](#), there were barriers for data integration in Makassar City. These included different operating procedures for data managers in each department, no universal data sharing procedure, and different data formats that hindered data sharing. To begin addressing these issues, BHC



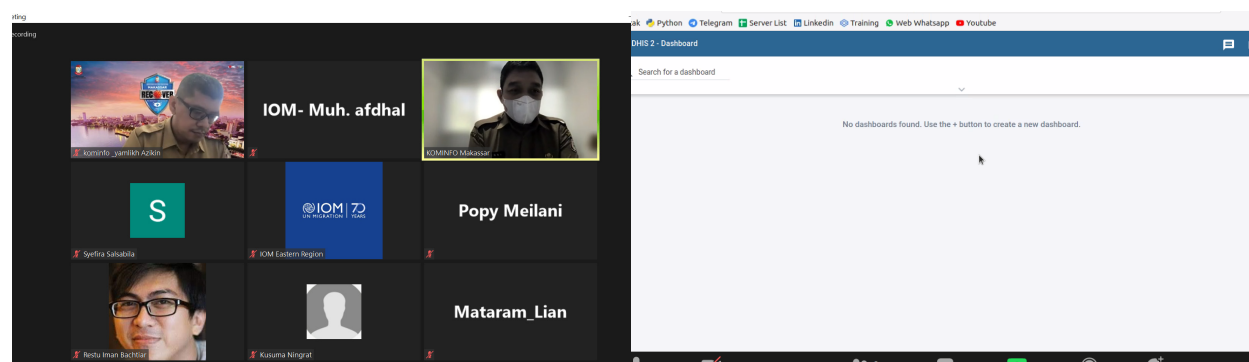
Discussion with Health Department, Bappeda, Kominfo, and DHIS-2 team to review the MOU draft.

successfully lobbied for language to be included in the MOU between Kominfo and Bappeda providing guidance around data managers, procedures, and data elements.

Kominfo Server Setup

Following the MOU signing, the next step was to setup the server. The UiO DHIS-2 team organized a one-day online meeting on August 10, 2021, with support from BHC, in order to install the DHIS-2 app onto Kominfo's server. This direct discussion was necessary in order to ensure the technical specifications of the server required for DHIS-2 were met, and to address some bugs during installation. Participants included five people from the DHIS-2 team and three people from Kominfo.

The meeting was opened by the Head of Kominfo, followed by a DHIS-2 team presentation on the technical specifications for the DHIS-2 app. The participants then worked together to install and troubleshoot the app.



Head of Kominfo presents Kominfo's support for data integration (left). The DHIS-2 app after installation on Kominfo's server (right).

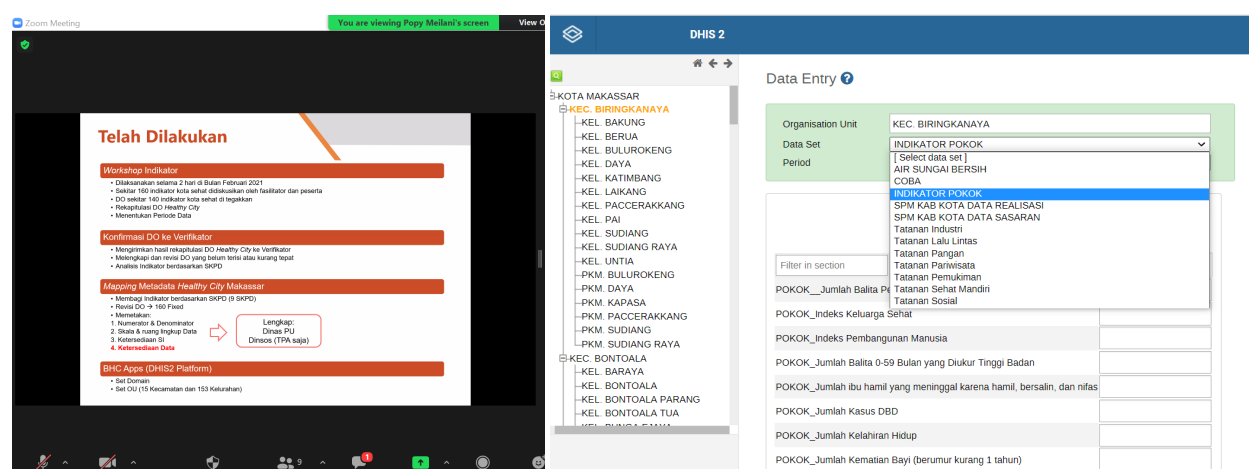
Healthy City Indicator Metadata Developed and Uploaded

The UiO DHIS-2 team and BHC supported the city departments in developing metadata for the healthy city indicators, based on the operational definitions developed at the workshop in March. Metadata development took place in June-July 2021, and included weekly virtual meetings between Bappeda, Kominfo, BHC, and the UiO DHIS-2 team. Approximately eight people attended each meeting. A sample agenda for these

meetings is provided in Table 4. The metadata was developed using Excel, and included organization unit, data elements, and time period. All metadata was successfully uploaded to the DHIS-2 platform on Kominfo's server in August 2021.

Table 4. Agenda for Weekly Metadata Development Meetings

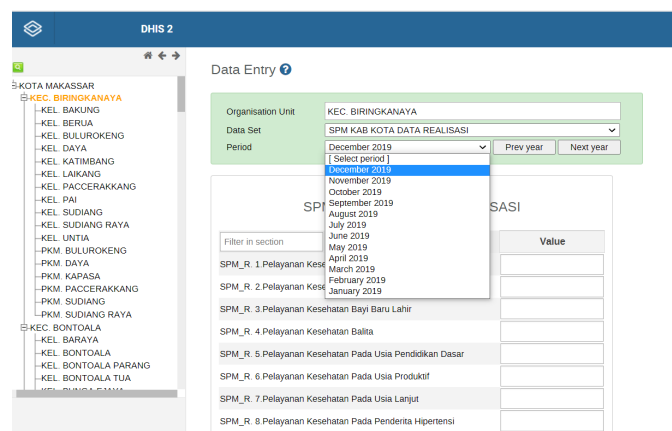
Time	Discussion Topic	Resource Persons
08:30-09:00	Registration	
09:00-09:10	Opening by Head of Bappeda	Head of Bappeda
09:10-9:55	Presentation on Progress for Developing Metadata	UiO DHIS-2 team
09:55-10:40	Discussion	
10:40	Closing	



Virtual metadata development meeting (left). Metadata uploaded into DHIS-2 (right).

One Health Data (ASDK) Indicator Metadata Developed and Uploaded

The UiO DHIS-2 team and BHC supported the Health Department in developing metadata for the 12 minimum health standard (SPM) indicators for One Health Data (ASDK), based on the operational definitions developed at the workshop in March. Metadata development took place in July 2021, and included two in person meetings attended by Health Officers, BHC, and the UiO DHIS-2 team. The metadata was developed using Excel, and included organization unit, data elements, and time period. All metadata was successfully uploaded to the DHIS-2 platform in August 2021.



Metadata for SPM uploaded into DHIS-2.

PARTICIPANTS

	Name	Organization	Technical Meetings with UiO DHIS-2 Indonesia Team	Virtual Workshop to Finalize Healthy City Indicator Definitions	Data Collection Workshop	Bappeda and Kominfo MOU Draft Review	Virtual Meeting for Kominfo Server Setup	Metadata Development Meetings (Healthy City and ASDK Indicators)
1.	Ita Anwar	Health Department		X				
2.	Zainal Mile	Bappeda		X				
3.	Prof. Sukri Palatturi	Hasanuddin University		X				
4.	Ruby Sudikio	FJS (Forum Jurnalis Sanitasi)		X				
5.	Ulfah Ichwani Achmad	Bappeda		X				
6.	S. Fatimah	Bappeda		X				X
7.	Muh. Amri Akbar	Bappeda	X	X		X		X
8.	Nena Ishak	Bappeda		X				
9.	Rosdiana Umarella	Bappeda		X				
10.	Rizti Nadirah	Bappeda		X				
11.	Restu	Kominfo					X	
12.	Lalu Lian Hari Wangi	HRH2030					X	
13.	Syefira Salsabila	DHIS-2 Team/ Esa Unggul University	X	X	X	X	X	X
14.	Taufiq Sitompul	HRH2030 Indonesia and UiO	X		X	X	X	X
15.	Noer Bachry Noor	Hasanuddin University		X				

16.	Sukri	Bappeda		X				
17.	Andi Fajriani	Social Department		X				
18.	Poppy Meilani	DHIS-2 Team	X	X	X	X	X	X
19.	Sulha Kuba	Health Department		X	X			
20.	Sierlinatar	Kominfo						
21.	Yamlikh Azikin	Kominfo	X			X	X	X
22.	Eny Adriyani	Social Department		X				
23.	Sriyenty	Education		X				
24.	Hikmah Manganni	Education		X				
25.	Partono Soemaryo	No affiliation provided		X				
26.	Planning division	Transportation Department		X				
27.	Neny Nuryani	Manpower Department		X				
28.	Indri	Manpower Department		X				
29.	Madariah Noer	Manpower Department		X				
30.	Rahmaniar	Agriculture and Food Security		X	X			
31.	Hasnawati	Public Works Department		X	X			
32.	Farida Syam	Health Department		X	X			
33.	Saharuddin Ridwan	Healthy City Forum		X				
34.	Hasan	Bappeda		X				
35.	Irwandy Wandy	Hasanuddin University		X				
36.	Muflih Himyar	Bappeda		X				

37.	Madaniah Noer	No affiliation provided		X				
38.	Nila	Bappeda		X				
39.	Anang Asjuriansjah	No affiliation provided		X				
40.	Hasmawati	Public Works Department		X				
41.	Agung	DHIS-2 Team						X
42.	Kusumaningrat	DHIS-2 Team					X	X
43.	Denny Hidayat	Kominfo	X			X	X	
44.	Sri Neswati Risamin, SKM. M.Adm.Kes	Health Department	X			X		X
45.	Ina	Health Department	X					X
46.	Muh. Harsani	Bappeda			X			
47.	Dyan Ardayanti	Social Department			X			
48.	Arian Saputra	DHIS-2 Team			X	X		
49.	Fitriana Nur	Environmental Department			X			
50.	Purnamasari Sinotang	Environmental Department			X			
51.	Achi Soleman	Women Empowerment and Child Protection			X			
52.	Hapidah Djalanta	Women Empowerment and Child Protection			X			
53.	Leni Gustiawati	Health Department			X			
54.	A. Ririn	Bappeda			X			

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