

The Responsibility of The Indonesian Government to Fulfill the Rights to Water During the COVID-19 Pandemic

Nadia Astriani^{a,*}, Betty Rubiati^b, Yulinda Adharani^c, Siti Sarah Afifah^d,
Rewita Salsabila and Rizkia Diffa^e

^aAssistant Professor and Researcher at The Center of Environmental and Spatial Planning Law of Faculty of Law Universitas Padjadjaran, Bandung, Indonesia

^bAssistant Professor and Researcher at The Center of Agrarian Law of Faculty of Faculty of Law Universitas Padjadjaran, Bandung, Indonesia

^cPh.D Student at Faculty of Law Universitas Padjadjaran, Bandung, Indonesia

^dGraduate Student at Faculty of Law Universitas Padjadjaran, Bandung, Indonesia

^eUndergraduate Student at Faculty of Law Universitas Padjadjaran, Bandung, Indonesia

Abstract. Indonesia has enough access to freshwater resources of the planet. However, uneven distribution together with mediocre water management and a lack of water infrastructures make a significant number of households in this country have inadequate access to safe water. This becomes big issues, because the provision of safe water, sanitation and hygienic conditions are essential to protect human health and save humanity during the Covid-19 pandemic. When this article was written, COVID-19 patients who were confirmed to be infected were in all Indonesian provinces, with the largest numbers of patients located in Java. The purpose of this study is to determine the efforts of the Indonesian government to fulfill its responsibilities in fulfilling clean water during a pandemic. The study collects all regulations and policies concerning clean water and an analyses them using doctrinal method. The result of the study shows that although there are enough regulations governing the use of clean water, they have not resolved the problem of clean water fulfillment. In overcoming water needs during the pandemic, the Indonesian government did not make additional efforts other than those previously planned in the Strategic Plan of the Ministry of Public Works and Housing. The disruption of the economy has an impact on state finance, causing the government to refocus budgeting. As a result, many programs related to clean water are postponed. This minimum effort by government is neglecting its responsibility in fulfilling the right to water. The government must emulate how to fulfill the needs for water during the pandemic from other countries and using this situation to fix the problem of clean water in Indonesia

Keywords: Indonesia, clean water, COVID-19

1. Introduction

Water scarcity is one of the main backgrounds for the recognition of human right to water. The amount of freshwater (fresh water) in the world is only about 2.5%, and 97.5% of water comprises of sea water. The 2.5% of freshwater consists of approximately 87% permanent ice/glaciers, while 13% water consists of groundwater and surface

water with risks of pollution. Based on the configuration of the water distribution and global climate change, water scarcity will increase by 20% in the next 25 years. The increasing global population and the increasing need for agricultural land also trigger water scarcity. A study conducted by the International Water Management Institute (IWMI), a research center under a body called the Consultative Group on International Agricultural Research (CGIAR), found that one third of the

*Corresponding author. E-mail: nadia.astriani@unpad.ac.id.

world's population will experience severe water scarcity in the period up to 2025.¹

The Indonesian Government is aware with the importance of water existence as stated in Article 33 section (3) of the 1945 Constitution of the Republic of Indonesia: "The earth, water and natural resources contained, are controlled by the State and used as much as the amount for the prosperity of the people". The state is responsible for controlling water for the greatest prosperity of the people and fulfilling clean water to every household. However, uneven distribution together with mediocre water management and a lack of water infrastructures make a significant number of households in the country have inadequate access to safe water. Unlike the situation in developed countries where (almost) all households are served by a good piped water system, households in Indonesia rely on a variety of water sources. These water sources can be classified into piped water (metered and retailed), bottled water (branded and refillable) and other water sources include drilled/pumped wells, protected wells, protected springs, rain water, unprotected wells, unprotected springs, rivers, and others. Most of the water from these sources can be obtained freely by households.² In conclusion, the government has lagged far behind the private sector in fulfilling the needs of household drinking water.³

The coronavirus infectious diseases 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS COV-2) that initially occurred in Wuhan, China, have now spread to many countries including Indonesia. In the midst of the COVID-19 pandemic, the need for water appears to have increased dramatically compared to the situation before the pandemic. On a household and community scale, the key to prevent the spread of the COVID-19 pandemic and how to care for people who are confirmed to be infected with COVID-19 at home is to adopt healthy hygienic behaviors. Washing your hands regularly with the right techniques is very important. This practice must be done at home, school, public places such as markets, places of worship, trains and bus terminals. Washing hands regularly should be done before preparing food, before and after eating, after using the toilet or after changing a child's diaper, and after handling animals. A well-functioning hand washing facilities are equipped with soap and running water and must be available at a maximum distance of 5 meters from the toilet. In addition, attention needs to be paid to the safe handling of human faeces

through the sanitation management chain, starting from ensuring that there are functioning and safe toilets/toilets, safe septic tanks, transportation, and disposal processing.

In dealing with the Covid-19 pandemic, WHO stated that "the provision of safe water, sanitation and hygienic conditions is essential to protecting human health during all infectious disease outbreaks, including the COVID-19 outbreak". The human-to-human transmission of the COVID-19 virus could be prevented by applying WASH and waste management in communities, homes, schools, marketplaces, prisons, and health care facilities. The Interim Guidance of Water, Sanitation, Hygienic and Waste Management for the COVID-19 virus which was published by WHO and UNICEF on 23 April 2020 specified briefly about the important matters related to WASH as follows:

1. Frequent and correct hand hygiene is one of the most important measures to prevent infection with the COVID-19 virus. WASH practitioners should work to enable more frequent and regular hand hygiene by improving access to hand hygiene facilities and use multimodal approaches (refer to Hand hygiene practices) to support good hand hygiene behavior. Performing hand hygiene at the right time, using the right technique with either alcohol-based hand rub or soap and water is critical.
2. Existing WHO guidance on the safe management of drinking-water and sanitation services applies to the COVID-19 outbreak. Water disinfection and sanitation treatment can reduce viruses. Sanitation workers should have proper training and access to personal protective equipment (PPE) and in many scenarios, a specific combination of PPE elements is recommended.
3. Many health co-benefits can be realized by safely managing water and sanitation services, and by applying good hygiene practices.

Based on WHO and UNICEF guidelines, clean water is vital for the prevention of COVID-19. In fact, it is estimated that two billion people worldwide do not have access to clean water. UN-Water in 2016 issued a list of countries whose people had difficulties in accessing clean water, and Indonesia was ranked 6th (sixth).⁴ The Indonesian government targets 100 percent of access to safe drinking water for all Indonesian citizens to be

150 achieved in 2019. However, in 2018 the realization
151 only reached 72 percent. Regarding this, the
152 Ministry of Public Works and Housing targeted
153 access to safe drinking water, so the number would
154 increase to 76-77 in 2019.⁵ That means there are
155 still 23% of the populations who do not have clean
156 water and they are susceptible to COVID-19.

157 The epicenter of the spread of the COVID-19 in
158 Indonesia is DKI Jakarta and its supporting areas,
159 and it is spread to other areas. When this article was
160 written, COVID-19 patients who were confirmed to
161 be infected were in all Indonesian provinces, with
162 the largest number of positive patients is located in
163 Java. The coverage of clean water in Jakarta has
164 only reached 60%. This means that the remaining
165 40% of its residents do not have access to clean
166 water.⁶ Despite the improvement in services,
167 low-income groups in Jakarta are the most affected
168 by the outbreak of the COVID-19 today. Significant
169 impact includes services to get clean water at which
170 point many low-income groups of people were
171 unable to keep up with PAM Jaya (drinking water
172 company) earlier. In addition to impartial
173 regulations, there are still a numbers of factors
174 which make people in Jakarta are unable to access
175 clean water easily, and the cause is due to poor
176 water quality which is unsuitable for consumption
177 or use. This condition happened in many areas, such
178 as Rawa Badak and Koja in North Jakarta, whose
179 water condition is turbid and smelly. Examples of
180 other regions that are also experiencing the same
181 conditions are Pegadungan and Kalideres in West
182 Jakarta. In all of these areas, people are forced to
183 consume water that is black, smelly, foamy, while
184 the water supply through the PAM pipeline cannot
185 be obtained smoothly by the people who have paid.⁷

186 During the COVID-19 pandemic, the government
187 must provide clean water for people to keep their
188 hands hygiene and to prevent them from contracting
189 the virus in accordance with WHO instructions.⁸ It
190 is clear that the government is responsible for
191 providing clean water during the pandemic. Based
192 on this background, this article will explain the
193 responsibility of the Indonesian government in
194 providing the need of clean water during the
195 COVID-19 outbreak based on existing laws and
196 regulations and the efforts the government can make
197 to fulfill these responsibilities. The discussion will
198 begin with the need of clean water during the
199 pandemic, followed by the government policies
200 related to the fulfillment of clean water, the
201 arrangements for the fulfillment of clean water and

202 lastly with the government efforts to provide the
203 need of clean water.

204 2. Literature Review

205 Hamid Chalid said that water is a public object
206 given by God to humans to be used and enjoyed in
207 order to carry on their lives.⁹ The right to water, was
208 not only invoked in a legal challenge to the
209 minimum level of free water and use of prepaid
210 meters but was central in an accompanying
211 grassroots political campaign. The Committee on
212 Economic, Social and Cultural Rights (CESCR)
213 also recognizes the political value of the right when
214 it states that, 'in order to create a favourable climate
215 for the realisation of the right, states should take
216 appropriate steps to ensure that the private business
217 sector and civil society are aware of, and consider
218 the importance of, the right to water in pursuing
219 their activities'.¹⁰

220 For human rights to move from recognition to
221 realization, they need to become part of the
222 everyday practice of local government and other
223 service providers. Local governments are the duty
224 bearers with primary responsibility for water and
225 sanitation service delivery in most contexts¹¹ the
226 first time the right to water is explicitly referred to
227 as human rights in General Comments No. 15: The
228 Rights to Water, Article 11.¹²

229 The State basically has 3 (three) obligations in the
230 fulfillment of human rights, namely the obligation to
231 respect human rights, to prevent violations from third
232 parties, and the obligation to guarantee the fulfillment
233 of these human rights.¹³ Furthermore, the three main
234 tasks of the state for the achievement of the right to
235 water are elaborated as follows:¹⁴

- 236 1. respect: by not carrying out unfair
237 interventions related to community's access to
238 water, for example by severing water
239 connections even though the community is
240 unable to pay
- 241 2. protect: protect and secure access to clean
242 water from the threat of other parties, for
243 example water pollution or price increases that
244 are not affordable, carried out by clean water
245 service providers;
- 246 3. fulfill: use all available resources to realize the
247 right to water for the whole community, for
248 example through legislation, affordable pricing
249 policies, programs to expand community
250 access to clean water and sanitation and so on.

3. Research Material and Methods

This study aims to explore the legal research method using a descriptive analysis. The data collection was through library research. The library research was conducted to seek relevant information by collecting secondary data and valid info compiled by researchers between April and August 2020. The regulations and laws which are used in this study are those that regulate rights to access clean water during the Covid-19 pandemic where all the collected data were analyzed using doctrinal method. In addition, the researchers also learned about the provision of clean water by the South African and the government of Ethiopia during the Covid-19 pandemic. Comparisons with South Africa and Ethiopia are needed to show the better measures in meeting water needs during the pandemic and to encourage the Indonesian government to work better in fulfilling water needs during this pandemic.

4. Result and Discussion

4.1. The Need for Clean Water During the COVID-19 Pandemic

World Water Forum at Den Haag in March 2000 predicted that Indonesia was one of the countries that would experience a crisis in 2025. The primary reason is lack of water management, such as inefficient water use. The level of demand for water resources and their potential ability are unbalanced, providing pressure on nature's ability to supply water.¹⁵ Access to safe drinking water in Indonesia barely keeps pace with population growth. Only half urban dwellers have piped water. Water quality and security are under serious threat from pollution, catchment degradation, and over exploitation.¹⁶

The lever of water scarcity is growing higher, meanwhile population growth is accompanied by a lifestyle that demands an extravagant use of water, thus adding a lot of pressure to the quantity of water. Apart from the large volume of water needed by humans to fulfill their needs, it is clear that the most important thing is the quality of the water, because in fact not all water resources have good quality. Lack of clean water has a vicious impact not just for health but also on economic condition, for people have to pay extra to fulfill their need for clean water.¹⁷

The provision of safe water, sanitation and hygienic conditions is essential to protecting human health during all infectious disease outbreaks, including the Covid-19 pandemic. However this becomes a challenge in a country like Indonesia of which access to WASH is still limited. People live in informal settlements. The poorest and the marginalised could be particularly vulnerable as they often rely on communal water points and toilets, private vendors and water tankers. High water costs and limited access could prohibit generous use of water for hand washing, whilst the need to leave home to access communal facilities and to queue for access in close proximity to others makes self-isolation and social distancing are difficult to implement.

According to a survey report that was conducted by the Directorate of Water Supply Development, Ministry for Public Works and Housing, the average water usage of households in Indonesia was around 144 liter (0,144 m³) per day. Water usage for bath occupies the largest usage which requires approximately 60 liter per day or 45% of total water usage. For the minimum basic need, each person uses 121 liter per day, including for drinking and cooking, washing clothes, bathing, cleaning house, and praying. It stated that in relation to the survey report, Indonesia's minimum basic need for each person was 70 liter per day.¹⁸

The data obtained by Statistics Indonesia recorded an increase in the number of people who had access to good and sustainable sanitation. In 2017, 67,54% of households had access to good sanitation. In 2018, the percentage increased to 70,97%, then reached a higher number at 77,39%.¹⁹ Even though it was quite high, the distribution rate still tended to be unbalanced, for we could see that DKI Jakarta was at 92,89%. West Java had a similar calculation to Jakarta, which was 69,64%. However, the proportion of differences that occur was large in contiguous areas such as West Papua that had 76,39%. On the other hand, Papua Province only had 32,87%. Moreover, only 6,8% of the population had gained secure access. Overall, 93,2% of the population still have not gained safe access.

The Directorate General of Public Health, the Ministry of Health, guaranteed the availability of clean water for the public. This guarantee is included in the Ministry of Health's Strategic Plan 2020-2024 through strategies to improve access to clean water and hygienic behavior and to strengthen community-based total sanitation²⁰ which are

349 carried out through The PAMSIMAS (Provision of
350 Community Based Drinking Water and Sanitation)
351 program. The Ministry of Public Works and
352 Housing in the draft of Strategic Plan of the
353 Ministry of Public Works and Housing also supports
354 the execution of the program in the context of
355 improving the quality of water resources. Among
356 the list in the draft of August 8, 2020 is a program to
357 increase the capacity of water resources to
358 60 m³/capita per year, to carry out the construction
359 and new dam areas, constructions of 500,000 ha of
360 irrigation areas, and rehabilitation of 2,500,000 ha
361 of existing irrigation areas.

362 The research by Eko Wiji Purwanto showed that
363 the government budget in the last 5 years for clean
364 water was around Rp3,5–6,5 trillion with an average
365 annual rate of around Rp4,5 trillion. If this number
366 can be maintained every year until 2030, the
367 government funds that would be available are worth
368 around Rp45 trillion. It is this far to reach the need
369 for development in 2024, which could cost Rp147
370 trillion or even Rp238 trillion for the funding needs
371 in 2030. The policy of refocusing the budget during
372 the crisis due to the COVID-19 pandemic has the
373 potential to delay the acceleration of access to drink
374 water in areas which are not yet served by PDAM
375 (local water company), and this would lower the
376 government support to accelerate the expansion of
377 access to PDAM (local water company) drinking
378 water services by the people.²¹

379 The President Director of PAM Jaya (drinking
380 water company) said that during the pandemic, the
381 need for clean water have shifted the composition of
382 consumption, from industrial commercial to
383 household consumption. The addition of
384 handwashing and the installation of a portable sink
385 increased the consumption of clean water. In fact, a
386 significant increase occurred in the distribution
387 process through tank cars for both handwashing and
388 water kiosks that existed in several places which did
389 not have piping networks as well. In discussions
390 with journalists, Prayatno stated that 62% of the
391 people in Jakarta have access to piped water
392 services and 64% of the people in Jakarta have
393 handwashing facilities using soap and water at
394 home.²² Similar with Priyatno's statement,
395 Secretary of the local water company (PDAM)
396 Tirtaraharja, Teddy Setiabudi, when responded to
397 consumer's complaints in Bandung, said they were
398 concerned about the increase in water bills, and he
399 confirmed that there had not been an increase in
400 water rates. However, since the COVID-19

401 pandemic, it had clearly changed the behavior of
402 consumers of local water company (PDAM) Tirta
403 Raharja. This virus outbreak definitely triggered the
404 use of clean water and caused bills increase.²³

4.2. Indonesian Government's Policy to Fulfill Clean Water

405 One of the Sustainable Development Goals/SDGs
406 is to ensure the availability and management of
407 sustainable clean water and sanitation for all. As a
408 form of the government's political commitment in
409 implementing the SDGs, President Jokowi has
410 signed the SDGs Presidential Regulation Number
411 59 of 2017 concerning Implementation of the Goals
412 of Achieving Sustainable Development. The
413 regulation is also a commitment that the
414 implementation and achievement of SDGs is carried
415 out in a participatory manner by involving all
416 parties. The targets related to clean water and
417 sanitation are as follows²⁴:

420 Infrastructure development in 2020–2024 will
421 focus on three main frameworks (Basic Service
422 Infrastructure, Economic Infrastructure, and Urban
423 Infrastructure) which are supported by energy and
424 electricity development and the implementation of
425 digital transformation. Infrastructure development
426 for basic services is prioritized to ensure equitable
427 development in all Indonesian regions in order to
428 reduce inequality between regions. The scope of
429 basic service infrastructure which will be built is
430 included with the provision of adequate housing
431 supported by drinking water and sanitation systems,
432 improvement of on-grid and off-grid network
433 services for electricity access, provision of
434 telecommunications and internet services for public
435 facilities, development of past safety systems
436 transportation, pioneering transportation services
437 (land, sea and air) as well as the construction of
438 multi-purpose and irrigation reservoirs. Infrastructure
439 development for urban area includes
440 improvement of facilities and infrastructures that
441 will support the convenience of living in cities such
442 as the construction of mass public transportation,
443 construction of city gas pipelines, drinking water
444 and sanitation pipes and waste management.²⁵

445 The Sustainable Development Goals (SDGs)
446 target the access to improved drinking water and
447 sanitation as one of the basic needs that must be
448 fulfilled to improve the quality of health, to prevent
449 stunting, to eradicate poverty, and to improve the

No.	Global Targets	National Targets	Managing Institution
1.	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	<ol style="list-style-type: none"> Increased access to improved drinking water services in 2019 to 100% (2014: 70%) Increased capacity of raw water infrastructure to serve households, cities and industries 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Ministry of Public Works and Public Housing, Provincial Government; Regency / City Government</p> <p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Ministry of Public Works and Public Housing, Provincial Government; Regency / City Government</p>
2.	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	<ol style="list-style-type: none"> Increased access to proper sanitation Increasing the number of villages that implement community-based total sanitation 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Ministry of Public Works and Public Housing, Provincial Government; Regency / City Government</p>
3.	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	<ol style="list-style-type: none"> Development of wastewater infrastructure with a centralized system of city, regional and communal scale. Improving the quality of local waste water treatment systems through improving the quality of local management systems through improving urban sludge management and the construction of sludge management installations Management of water quality in rivers, reservoirs, lakes, ponds, river mouths, beaches, including the improvement of hydrological monitoring systems and water quality with indicators of improving water quality in lakes and rivers Improving river water quality as a source of raw water towards the average quality standard of class II river water 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Ministry of Public Works and Public Housing, Provincial Government; Regency / City Government</p>
4.	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	<ol style="list-style-type: none"> Control and law enforcement for excessive use of ground water accompanied by an acceleration of the supply and management of economic area's raw water and the adoption of policies on the imposition of competitive industrial water tariffs Providing incentives for saving agricultural / plantation and industrial water including the application of the principle of reduce, developing reuse and recycle, as well as developing the concept of the use of safe wastewater for agriculture 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Ministry of Public Works and Public Housing, Ministry of Environment and Forestry; Ministry of Agriculture; Ministry of Industry, Provincial Government; Regency / City Government</p>
5.	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	<ol style="list-style-type: none"> Internalization of 108 integrated watershed management plans that have been prepared into the RTRW Updating and revitalizing hydrological and climatological stations in 8 river areas and establishing water resources information networks in 8 river areas Establishment of information networks in 8 river areas Increasing the number of watersheds that have increased the number of springs and 19 watersheds that have cross-border MoU Restoring watershed health through the development of community plantations, community forests, village forests, customary forests, community forests and enhancement of non-timber forest products Increasing community participation in river and lake catchment management in 10 river areas Continuing the institutional arrangement of water resources 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Minister For Public Works and Human Settlements; Ministry of Environment and Forestry; Provincial Government; Regency / City Government</p>
6.	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	<ol style="list-style-type: none"> Increased water quality in 15 lakes Increase of 15 lakes whose siltation up is less than 1% Increased lake which erosion level decreased to 15 lakes Reducing the area of degraded land through rehabilitation in KPH covering 5.5 million hectares Protection of springs and restoration of river health in 5 priority watersheds (Ciliung, Citarum, Serayu, Bengawan Solo and Brantas) and 10 other watersheds. 	<p>Coordinating Ministry for Economic Affairs; Ministry of National Development Planning; Ministry of Finance; Minister For Public Works and Human Settlements; Ministry of Environment and Forestry; Provincial Government; Regency / City Government</p>

quality of human resources. Globally, clean water and sanitation could fit into 17 SDGs, namely Goal 6: Clean Water and Proper Sanitation. Universal access to safe and affordable drinking water is not only achieved by improving proper sanitation, but also by stopping the practice of Open Defecation, good waste management, and reduction of untreated wastewater.²⁶

Indonesia needs to improve the access to safe drinking water and sanitation in order to reach the target of 100% by 2030, along with the commitment to realize the Sustainable Development Goals (SDGs). The 2018 National Socio-Economic Survey conducted by the Central Statistics Agency recorded that the national access to drinking water had reached 61.29%. Meanwhile, the achievement of proper national sanitation access had only reached 74.58% or around 188 million people of Indonesia.

In the National Medium-Term Development Plan 2020–2024, access to proper sanitation development is targeted at 90%, including 20% of safe access and 0% of large waste disposal. For the drinking water development target, 100% is set for proper access, including 30% piping access through the construction of 10 million house connections, whereas fulfilling safe drinking water access is targeted at 15%. The achievement of drinking water and sanitation targets in the National Medium-Term Development Plan 2020–2024 will support the acceleration of Goal 6 in SDGs achievement, and to decrease the prevalence of stunting due to poor water quality and sanitation, and secure drinking water quality.

Targets, indicators and targets in the provision of basic service infrastructure related to water supply: for households that occupy housing with access to safe and safe drinking water base line in 2019, 87.8% feasible and 6.7% safe (the target in the year 2024 would be 100% feasible and 15% safe); for households with access to drinking water from the base line pipeline in 2019, 20% (the target of 2024 would be 30%).²⁷

One of the efforts to achieve this target is the signing of a new agreement between the Governments of Indonesia, the United States and Switzerland to provide clean water to 60,000 Indonesian urban communities by strengthening seven local water companies (PDAM), three of which are located in West Java and four in Central Java.²⁸

Indonesia has a landmark case regarding the community's right to clean water, namely the

Kendeng Case. The case also shows Kendeng women fighting for their access to clean water. The movement began to stir in 2014 when the villagers learned that a state-owned cement company, PT Semen Indonesia, was in the advanced stages of a plan to mine karst. Without the villagers' knowledge, two years earlier, the governor of Central Java, Bibit Waluyo, had issued an environmental license. It was one of the most important licenses the company would need to begin operating. It should have been issued after the community was consulted as part of an environmental impact assessment. Some villagers had seen a draft of the assessment as early as 2010, and raised concerns that it failed to identify the existence of underground springs. After that, though, they were cut out of the process, Indonesia's National Commission on Human Rights reported in 2016. The limestone that gives the Kendeng karst its characteristics is also the key ingredient in cement. The Kendeng Mountains had been targeted by cement companies since the 1990s. Yet, by the 2010s interests had stepped up, stimulated by government investments in infrastructure.

An assessment commissioned by the national government found that the demand for clean water for more than half a million people living throughout the North Kendeng Mountains already exceeded the supply. Karst was crucial for maintaining that supply, acting as a sponge that released clean water through the dry season. But the provincial government had prioritized mining the limestone, threatening to significantly reduce and pollute the water supply as firms ground down through subterranean springs and rivers.²⁹

It is not just a hill, but a karst: a limestone formation that undergirds the North Kendeng Mountains and stretches 180 kilometers (112 miles) east to west. The rock has been eroded over time to form a giant warren of underground caves and rivers, providing clean water to the people of the region throughout the year. The Indigenous people of Kendeng consider the karst to be their *Ibu Bumi* — their Mother Earth. She nurtures and even breastfeeds the land, in their lore, allowing them to grow rice and other crops.

The Supreme Court's Judicial Review won the lawsuit of the Kendeng mountain farmers and the Wahana Lingkungan Hidup Foundation (Walhi) against PT Semen Indonesia. The victory made the environmental permit issued by the Governor of Central Java for PT Semen Indonesia to be

554 canceled. Based on the Supreme Court's official
555 website, the lawsuit was decided on October 5,
556 2016. The verdict granted the lawsuit and canceled
557 the object of the dispute.³⁰

558 In this judge decision, president also asked that
559 during the Strategic Environmental Assessment
560 (SEA) process, no new mining permits were issued.
561 All limestone mining processes and production
562 activities must be stopped. SEA must be open and
563 involve the people actively. Unfortunately, the
564 mandate of the country's top leadership on the
565 ground is very conflicting. New permits have been
566 issued by the local government, limestone mining is
567 continuing and the production of the cement factory
568 in Rembang has also continued until now public
569 access to water are still lacking.

570 4.3. Clean Water Regulation in The Indonesian 571 Legal System

572 Considering the importance of water as the
573 source of life for all living things, since the
574 founding of this country the regulation of water has
575 been incorporated into the Constitution of the
576 Republic of Indonesia as stated in Article 33 section
577 (3) of the 1945 Constitution of the Republic of
578 Indonesia which states that "the Earth, and Water
579 and the natural resources contained therein are
580 controlled by the State and used for the greatest
581 prosperity of the people". From this Article it is
582 seen that there is a mandate given by the people to
583 the State to manage the vital resources for people's
584 lives, one of which is water.³¹

585 The guarantee of the provisions in Article 33
586 section (3) of the 1945 Constitution of The Republic
587 of Indonesia is emphasized in Law Number 23 of
588 2014 concerning Regional Government that the
589 fulfillment of clean water for the community is one
590 of the responsibilities of the government and
591 regional governments as part of public services that
592 must be done. The limited availability of Water
593 Resources on one hand and the increasing need for
594 water on the other hand lead to a competition among
595 users of Water Resources that have an impact on the
596 strengthening of the economic value of Water. This
597 condition has the potential to create conflicts of
598 interest between sectors, regions, and various parties
599 related to Water Resources. For this reason, an
600 arrangement to provide protection of community
601 interests to meet their daily basic needs and the
602 irrigation of people's agriculture is required.³²

603 Based on state control over Water Resources, the
604 Central Government and/or Regional
605 Governments are given the task and authority to
606 regulate and to manage Water Resources, including
607 the task of meeting the minimum daily basic needs
608 of Water for the community,³³ especially clean
609 water availability. Regulations regarding clean water
610 can be found in various 3 Laws in Indonesia
611 consisting of:

612 1. Law Number 17 of 2019 concerning Water 613 Resources

614 It is written explicitly that Water Resources
615 are controlled by the state and are used for the
616 greatest prosperity of the people. For this
617 reason, the state guarantees the people's right
618 to water to meet the minimum daily basic
619 needs for a healthy and clean life with
620 sufficient quantity, good quality, safe,
621 sustainable, and affordable. In addition, the
622 state prioritizes people's right regarding water
623 for (1) daily basic needs, (2) smallholder
624 agriculture, (3) business needs to meet daily
625 basic needs through the Drinking Water
626 Supply System, (4) non-business activities to
627 public interest; and (5) other business
628 requirements for which permits have been
629 determined. The regulation of water resources
630 includes state control and people's rights to
631 water, duties and authority in water resources
632 management, water resources management,
633 licensing, water resources information
634 systems, empowerment and supervision,
635 funding, rights and obligations, community
636 participation and coordination.³⁴

637 Water resources management is based on
638 the principles of public benefit, affordability,
639 justice, balance, independence, local wisdom,
640 environmental insight, sustainability,
641 integration and harmony, as well as
642 transparency and accountability. The purpose
643 of regulating water resources is to provide
644 protection and guarantee of the fulfillment of
645 people's rights to water, to ensure the
646 sustainability of water and water resources
647 availability in order to provide fair benefits to
648 the community, to ensure the preservation of
649 water and water resources functions to support
650 sustainable development, to ensure the
651 creation of legal certainty for the
652 implementation community participation in
653 supervision of the utilization of water

resources ranging from planning, implementation and evaluation of utilization, to ensure the protection and empowerment of communities including indigenous people in efforts to conserve water and water resources, as well as to control the overall destructive force of water which includes prevention and recovery efforts.³⁵

The people's right to water is not a right to own water, but is limited to the right to obtain and use a number of water quotas in accordance with the allocation stipulated by a Government Regulation. The fulfillment of people's rights to water is guaranteed by the State, because water is a minimum daily staple requirement. Aside from being a basic daily necessity, the State also prioritizes people's right to water for people's agriculture, and the use of water resources for business needs through the provision of drinking water.³⁶

2. Law Number 28 of 2002 concerning buildings

The Law on Buildings governs the functions of buildings, building requirements, operation of buildings, including the rights and obligations of owners and users at every stage of building construction, provisions on the role of the community and guidance by the government, sanctions, transitional provisions, and closing. This law also provides provisions to considerate social diverse, economic and cultural conditions of the Indonesian people. In this case, the government continues to encourage, empower and enhance the ability of the community to be able to meet the provisions in this law in stages so that the guarantee of security, safety and public health in organizing buildings and their environment can be enjoyed by all parties fairly and be imbued with enthusiastic humanity, togetherness, and mutual assistance, and imbued with the implementation of good governance.³⁷

The building health requirements include ventilation system, lighting, sanitation, and the use of building materials. The sanitation system is a sanitation need which must be provided inside and outside of the building to meet the need for clean water, disposal of dirty water and/or wastewater, sewage and garbage, and distribution of rainwater.³⁸

The drinking water system in buildings requires things as follows:³⁹

- a. It must be planned and installed by considering the source of drinking water, the quality of clean water, the distribution system, and its storage
- b. Can be obtained from subscribed water sources and or other water sources that meet the requirements in accordance with applicable guidelines and technical standards
- c. Planning for the distribution of drinking water in buildings must meet the minimum water discharge and pressure required
- d. Drinking water storage in buildings is strived in such a way as to ensure water quality
- e. Drinking water reservoirs must meet the requirements for the proper functioning of buildings
- f. Plumbing requirements in buildings must comply with:

- 1) Government Regulation Number 16 of 2005 (drinking water quality); Plumbing Guidelines (pipe installation)
- 2) SNI 03-6481-2000 Plumbing System 2000, or the latest edition

3. Law Number 1 of 2011 concerning Housing and Settlement Areas

Home planning must consider the health aspect. In the long term, this aspect will greatly contribute to the sustainability of the residential process in a building. Some of the issues related to health issues and home building planning are as follows:⁴⁰

- a. Clean Water Adequacy
One of the basic supplies needed to support the activities of human life is clean water. A good house must be built in an area that has an adequate supply of clean water.
- b. Sufficient Light
Sunlight is very important for human life, especially for health. In order to get enough light, each room must have a light hole that allows direct or indirect sunlight.
- c. Sufficient Air
The house will provide freshness and comfort to its residents if the freshness of the air in the house is guaranteed.

757 According to a theory stated by Komarudin,
 758 a healthy home must have the requirements for
 759 environmental health, order and environmental
 760 harmony. The components of the housing
 761 environment that affect public health should be
 762 supplemented as needed including the
 763 provision of adequate environmental
 764 infrastructure in accordance with the number
 765 of occupants, safeguarding the housing
 766 environment against pollution (maintenance of
 767 clean water sources and management of
 768 household and environmental waste
 769 disposal).⁴¹

770 Arrangements for housing and settlement areas
 771 are carried out to provide legal certainty in the
 772 administration of housing and settlement areas,
 773 supporting regional arrangement and development
 774 and proportional population distribution through the
 775 growth of residential and residential areas in
 776 accordance with spatial planning to create a balance
 777 of interest, to increase the use of electricity and
 778 natural resources for housing development while
 779 still paying attention to the preservation of
 780 environmental functions, both in urban and rural
 781 residential environments, and to ensure that housing
 782 is adequate and affordable in a healthy, safe,
 783 harmonious, organized, planned, integrated
 784 environment, and sustainable.⁴²

785 Article 28

- 786 (1) Housing infrastructure, facilities and public
 787 utilities planning include:
 788 a. Plans for providing land plots for housing
 789 as part of the settlement; and
 790 b. Plans for completeness of infrastructure,
 791 facilities and public housing utilities⁴³.
 792 (2) The plan for providing land plots as referred
 793 to in section (1) letter a is used as a basis for
 794 planning infrastructure, facilities and public
 795 utilities.
 796 (3) Plans for providing land plots are intended to
 797 increase the usability and yield of land for plots
 798 ready to build in accordance with building and
 799 environmental planning.

800 The 'infrastructure plan' (Article 28 section (1)
 801 letter b) covers at least roads, drainage, sanitation
 802 and drinking water. In addition, Article 130
 803 stipulates that in the implementation of housing and
 settlement areas, everyone is obliged:

- 804 a. To maintain security, order, cleanliness, hygiene
 805 and health in housing and residential areas;
 806 b. To participate in the prevention of housing and
 807 settlement areas which are detrimental to and
 808 endanger the interests of others and/or the public
 809 interest;
 810 c. To maintain environmental infrastructure,
 811 environmental facilities and public utilities in
 812 housing and residential areas; and
 813 d. To oversee the utilization and functioning of
 814 infrastructure, facilities and public utilities in
 815 housing and settlement areas.)

816 4.4. Government Efforts to Fulfill the Right to 817 Clean Water During the Pandemic

818 Human rights were initially generally regulated.
 819 One of the basic rights regulated in human rights is
 820 the right to life.⁴⁴ The right to water is considered to
 821 be subordinate to the right to life. The determination
 822 of the right to water as an independent human right
 823 is a process of conceptual change in human rights,
 824 where in the past the right to water was conceptually
 825 considered a derivative right that was born from other
 826 fundamental rights.⁴⁵

827 In July 2010, the United Nations General
 828 Assembly (UNGA) had declared clean water and
 829 sanitation as human rights. Through the voting
 830 process, 122 countries approved the resolution of
 831 water as a human right and 41 states declared
 832 abstention. Indonesia became one of the countries
 833 who approved this resolution.⁴⁶ Thus, according to
 834 Hamid Chalid, eliminating one's access to water is
 835 nothing but a violation of human rights related to
 836 the right to life and independence and personal
 837 security which is very fundamental.⁴⁷

838 In the national economic system, the Indonesian
 839 constitution places water as one of the resources that
 840 must be controlled by the State, both physically and
 841 commercially. This can be seen in the two principles
 842 contained in Article 33 of the 1945 Constitution.
 843 First, it is contained in Article 33 section (2) the
 844 1945 Constitution which states that "production
 845 branches which are important for the State and
 846 which control the livelihoods of the public are
 847 controlled by the State". Furthermore, in section (3)
 848 it is stated that: "The earth and water and the natural
 849 resources contained therein are controlled by the
 850 state and used for the greatest prosperity of the
 851 people". In the explanation of Article 33, it is stated
 852 that companies which are important to the state and

853 control the lives of many people must be in the
854 hands of the state.⁴⁸

855 In the midst of the COVID-19 pandemic, the World
856 Health Organization (WHO) recommends everybody
857 who is forced to go out of the house to wash their
858 hands with running water to kill viruses and germs
859 before they arrive at their destination. After arriving
860 back at home, it is recommended to clean yourself
861 and to wash clothes that have been used to prevent
862 the growth of the invisible virus.⁴⁹

863 Although various efforts have been made to
864 support healthy lifestyles to prevent the spread of
865 the virus that is more widespread, there are still
866 several layers of society that have difficulty gaining
867 access to clean water, such as low-income
868 communities and communities where their homes
869 still do not have access to clean water. In slums,
870 people normally purchase water from travelling
871 vendors who carry water containers in
872 wheelbarrows. During the pandemic, this activity is
873 continuing even though most vendors do not wear
874 masks and PPE. This has led to an added risk of
875 transmission in these communities. Those who walk
876 to shops to place orders with water vendors are
877 unable to practise physical distancing due to space
878 constraints, intensifying the pathways of
879 human-to-human transmission. Whilst everyone is
880 urged to wash their hands with soap and water, there
881 is a lack of specific governmental WASH
882 interventions targeting informal settlements.⁵⁰

883 The Ministry of Public Works and Housing
884 (PUPR) supports the handling of COVID-19 by
885 making structural efforts to improve a culture of
886 clean and healthy living. The Ministry of PUPR is
887 developing technological innovations in the Train
888 for Bathing, Washing, Toilet, and Sink (MCK Train)
889 to be applied to areas that do not yet have good and
890 proper sanitation facilities in several areas in
891 Jakarta. The MCK Train Innovation is a
892 development of the Mobile Toilet technology
893 prototype created by the Housing and Settlements
894 Research and Development Center (Puslitbang) of
895 the Ministry of PUPR.⁵¹ The MCK train has a water
896 tank capacity of 7,000 liters, projected to be able to
897 serve up to around 350 people per day with a
898 consumption of 20 liters/person/day.⁵²

899 The Indonesian government chose Large-scale
900 Social Restrictions in handling the COVID-19
901 pandemic. Based on that choice, the government
902 only ordered the limitation of activities on a large
903 scale. In this condition, there is no additional
904 obligation for the Indonesian government in terms

905 of basic services. Related to the provision of clean
906 water which is a community need, the government
907 made efforts to fulfill according to the planning
908 contained in the RPJM⁵³ and Renstra⁵⁴. According
909 to researchers, the government action violates their
910 obligation to fulfill their right to water because, as
911 previously mentioned, the provision of clean water
912 is carried out in stages. Meanwhile, in such an
913 emergency situation as the pandemic, a
914 breakthrough is needed to immediately meet the
915 need for water.

916 As a basic service, clean water is under the
917 authority of the regional government. Therefore,
918 during the pandemic, several regional governments
919 encouraged regional water managers to provide
920 water fare relief. In addition to conduct budget
921 refocusing, the government continued to prioritize
922 the fulfillment of basic services. Water Resources
923 Council stated that in preventing the COVID-19
924 outbreak, tactical solutions were needed to help
925 provide adequate clean water. At least to overcome
926 the temporal problem being faced. Charitable
927 assistance from the state and the community which
928 so far has generally been in the form of groceries is
929 a good idea to be recalculated so that it can be
930 allocated to help supply clean water.⁵⁵ The lack of
931 support in providing clean water against the
932 pandemic by government forces local leaders to
933 initiate the creation of additional handwashing
934 facilities near shared areas such as communal
935 washing areas, communal toilets, markets and
936 places of worship. In dealing with water needs
937 during the pandemic, the Indonesian government
938 needs to learn from the governments of South
939 Africa and Ethiopia.

940 In South Africa, following the announcement of
941 the country's lockdown by President Ramaphosa,
942 the department set up the Covid-19 National
943 Command Centre for Water and Sanitation on
944 March 23, 2020. The center, based at Rand Water in
945 Johannesburg, ensured that areas with no proper
946 water infrastructure received water storage tanks
947 and water tankers (water trucks). This would ensure
948 that no community was left without water and
949 people were able to constantly wash their hands
950 with water and soap and to maintain good hygienic
951 practices. Washing of hands is a practice
952 encouraged among citizens to minimize the spread
953 of the coronavirus, which is mainly transmitted
954 through unhygienic hands. The country is now
955 preparing to enter Level 3 of national lockdown as
956 of today, easing some of the restrictions and

957 allowing people back to work. Most importantly,
 958 learners across the country will also be phased in to
 959 schools. The Department of Water and Sanitation
 960 will play a critical role in supplying water to
 961 schools. The department has entered into an
 962 Implementation Protocol Agreement with the
 963 Department of Basic Education and Rand Water to
 964 ensure that no school will be without water. Since
 965 the country's lockdown, the Department of Water
 966 and Sanitation has delivered 18,262 water storage
 967 tanks and 1,299 water tankers at various district and
 968 local municipalities in all nine provinces. The
 969 Covid-19 National Command Centre for the
 970 department has also delivered 7,405 water storage
 971 tanks and 347 water tankers out of the grand total.⁵⁶

972 The Ministry of Human Settlements, Water and
 973 Sanitation led by Minister Lindiwe Sisulu and her
 974 Deputies, DM David Mahlobo and DM Pamela
 975 Tshwete, was involved with the joint Portfolio
 976 Committee and Select Committee on Human
 977 Settlements, Water and Sanitation to assess the
 978 Committees on the critical work delivered across the
 979 country to curb the spread of the Coronavirus
 980 (COVID-19). Minister Sisulu laid the ground for the
 981 presentation by detailing all the work that led to the
 982 President's declaration of the State of National
 983 Disaster, which then precipitated the actions that
 984 followed and are still continuing by the two
 985 departments, namely Human Settlements and Water
 986 and Sanitation. The declaration of the State of
 987 National Disaster implied the suspension of the
 988 normal workings of Cabinet replaced by the setting
 989 up of the Presidential Coordinating Council and the
 990 NATJOINTS. The Ministry of Human Settlements,
 991 Water and Sanitation set up a Water and Sanitation
 992 Command Centre at Rand Water co-chaired by the
 993 Acting DG at DWS and the CE of Rand Water. This
 994 Centre allows us to link up daily with the DWS
 995 Provincial Heads, Water Boards across the country,
 996 as well as Municipalities. Connected with the
 997 association of water tanks and tankers
 998 manufacturers that allowed us to purchase these
 999 directly from them, this is possible to allow bulk
 1000 purchases and therefore realizes huge savings whilst
 1001 acquiring these for the state. Whilst everything is
 1002 being done to ensure the response to the pandemic is
 1003 driven from this amount, it is also obvious that it
 1004 would not be enough. This has led to current
 1005 discussions between the DWS and National
 1006 Treasury to find a further R831 million that would
 1007 then augment the current funding but, more
 1008 critically, will ensure the response continues and is

1009 sustainable. 7,698 water tanks had been installed
 1010 across the country, whilst 1,239 water tankers
 1011 (trucks) had been delivered as well. These figures
 1012 are moving targets which change on a daily basis as
 1013 more delivery occurs. The point is that the use of
 1014 water tanks and tankers is not seen as the ultimate
 1015 solution to the issues of water availability and
 1016 services. Therefore, a number of solutions have to
 1017 be considered. It will be important to broaden the
 1018 water mix to incorporate under-utilized water
 1019 resources, e.g. groundwater, return-flows, Water
 1020 Conservation and Water Demand, as well as water
 1021 tanks for households.⁵⁷

1022 In Ethiopia, the International Water Management
 1023 Institute has mobilized trained members of the
 1024 public, known as para-hydrologists, to collect data
 1025 on household knowledge of the coronavirus and to
 1026 assess how the current access and use of water
 1027 affects disease mitigation measures. This
 1028 information will help scientists and public agencies
 1029 identify, among other things, more effective ways of
 1030 implementing mitigation measures such as social
 1031 distancing. This might include finding alternatives
 1032 to communal water points where people from
 1033 several households might gather at the same time
 1034 and risk spreading the virus. Even in the midst of
 1035 water shortage, new technologies have provided
 1036 struggling families to cope with water shortage. For
 1037 instance, the expansion of relatively low-cost
 1038 solar-powered irrigation pumps in low-income
 1039 countries can provide new ways for farmers to
 1040 access more reliable water supplies, not only for
 1041 irrigation but also for their daily use. The pumps
 1042 cost around \$1,000, and some governments have
 1043 experimented with financing models to subsidize
 1044 the cost and make them affordable for farmers.
 1045 Solar pumps and other water-lifting technologies
 1046 could be scaled up to reduce potential knock-on
 1047 effects from the pandemic in remote areas by
 1048 increasing access to safer and more reliable
 1049 groundwater. Other low-cost technologies include
 1050 simple hand-pump designs and rainwater harvesting
 1051 structures, including from rooftops. The challenge,
 1052 however, remains one of balancing water
 1053 availability with water quality, including suitability
 1054 for consumption at a domestic level.⁵⁸

1055 5. Conclusion

1056 The Indonesian Government has not made
 1057 additional effort to fulfill clean water sector during

the COVID-19 pandemic other than those previously planned in the Medium Term Development Plan or the Strategic Plan of the Ministry. Although realizing that the need for clean water is very important in dealing with the COVID-19 pandemic, the disruption of the economy has an impact on state finances so that the government needs to refocus on the budget. As a result, many programs do not go according to plan. Nevertheless, as part of basic services, clean water remains a priority program so that the development of pipeline infrastructure as a clean water facility is still being carried out. Apart from that, the awareness of the importance of clean water makes the community maintain existing clean water and sanitation facilities.

The minimum efforts made by the government are not enough. The COVID-19 pandemic period should be optimally utilized by the government to fix the problem of clean water in Indonesia. The Indonesian government could learn a lesson from other countries such as South Africa that have built 41 thousand additional clean water supply points throughout the country in overcoming the pandemic, or from Ethiopia, which introduces new technologies to help struggling families cope with water shortage. In addition, as a form of responsibility, the government can also ask assistance from other countries, the private sector and the community to support clean water supply.

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