

The Right to Water in Jakarta: Limitation in a Sinking City

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Abstract

Unsustainable groundwater extraction in Jakarta has resulted in the subsidence of its land. Said effect had prompted the Regional Government to limit groundwater extraction. Consequently, the limitation threatens Jakarta residents' minimum core enjoyment of the Human Right to Water (HRTW). People who live in coastal areas are the most affected. Northern Jakarta have considered the limitation as a burden that force them to spend more on necessities. Since there are no safeguards nor alternatives and that the limitation is from the Regional Government is disproportionate, this study argues that there is a violation of Jakarta residents' Human Right to Water since their access towards water has been impeded, especially in areas without piped water. The Human Right to Water is a fundamental right, a foundation of the enjoyment of other rights. Like other human rights, it can be limited if the alternatives have already been installed. This study argues that, in the case of Jakarta, the safeguards that are supposed to be put into place is the progressive realization of Human Right to Water. It is the installation of a holistic piped water network. Indonesia has an obligation to provide piped water as a safeguard to its limitations otherwise international human rights law will be violated.

Keywords: 1966 International Covenant of Economic, Social, and Cultural Rights (ICESR), limitation, right to water (HRTW).

A. Introduction

The Government Regulation Number 43 of 2008 on Groundwater forbids the extraction of groundwater in coastal areas¹ due to a phenomenon called 'land subsidence'.² Blisteringly, this phenomenon affects the Special Capital Region of Jakarta. The limitation is regulated in the Governor Regulation Number 93 of 2021 on Groundwater Free Zones. The Regulation prohibits groundwater access in certain areas by 2023 and further its holistic prohibition.³ Groundwater is the pillar

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¹ Article 62 Paragraph (1) of Government Regulation Number 43 of 2008 on Groundwater.

² Samsuhadi, "Pemanfaatan Air Tanah Jakarta", *Jurnal Air Indonesia* 5, No. 1 (2009): 19.

³ The Governor Regulation Number 93 of 2021 on Groundwater Free Zones.

of the soil on which Jakarta stands.⁴ There are many experts who predict that the majority of Jakarta's landmass will be under sea level by 2030.⁵ In the era of Governor Sutiyoso (1997-2007), experts state that groundwater extraction should be slowly prohibited for public use.⁶ Taxes are used as a means to conserve groundwater and are targeted specifically for businesses.⁷ However, in March 2018, Jakarta's Governor conducted a series of abrupt and unannounced investigations towards residential buildings, threatening administrators with license revocation if groundwater taxes are not settled immediately.⁸ On the other hand, the PAM Jaya, the region-owned water company, is slow in the distribution of the piped water network. In fact, it is the appropriate and necessary safeguard. On the meantime, the Pam Jaya also continuously raises water tariffs for consumers.⁹

Unfortunately, the limitation is done without ensuring alternative access to water for Jakarta citizens. It leaves Jakartans with the option of acquiring expensive bottled or merchant water, whilst low-income Jakarta opt to utilize the polluted surface, risking infection from water-borne parasites.¹⁰ The highest concentration of low-income residents is at the North Jakarta and the Administrative Regency of Kepulauan Seribu,¹¹ coincidentally the coastal area of Jakarta is barred from groundwater extraction. This impediment to the enjoyment of an already existing water source is counter-productive with the progressive realization of the Human

⁴ Hasanuddin Abidin (et.al.), "Land Subsidence of Jakarta (Indonesia) and Its Relation with Urban Development", *Natural Hazards* 59, No. 3 (2011): 1756. See also Commentary (*Penjelasan*), Government Regulation Number 43 of 2008 on Groundwater.

⁵ Armida Alisjahbana, (et.al.), "Scientific Basis: Analysis and Projection of Sea Level Rise and Extreme Weather Event", *Indonesian Climate Change Sectoral Roadmap*, (March, 2010), https://www.bappenas.go.id/files/2013/5229/9917/analysis-and-projection-of-sea-level-rise-and-extreme-weather__20110217130224__1.pdf. See also Hayati Nupus. "Jakarta Could Be Underwater by 2030: Experts". Anadolu Agency. <https://www.aa.com.tr/en/asia-pacific/jakarta-could-be-underwater-by-2030-experts/1017878> (accessed on October 20, 2021).

⁶ Mila Yefriza. "Peneliti Geoteknologi Buka Suara Soal Jakarta akan Tenggelam". Tagar.id. <https://www.tagar.id/peneliti-geoteknologi-buka-suara-soal-jakarta-akan-tenggelam> (accessed on October 21, 2021).

⁷ Article 3 Paragraph (1) of Regional Regulation of the Special Capital Region of Jakarta Number 17 of 2010 on Groundwater Tax.

⁸ Muhammad Ridhoi. "Apa Langkah Anies Tindak Pelanggar Eksploitasi Air Tanah DKI", Tirto. <https://tirto.id/apa-langkah-anies-tindak-pelanggar-eksploitasi-air-tanah-dki-cNVd> (accessed on September 18, 2021).

⁹ Chandra Utama, "Manajemen Kenaikan Tarif PAM untuk Peningkatan Akses Air Bersih bagi Seluruh Masyarakat", *Jurnal Administrasi Bisnis* 6, No. 2, (2010): 151.

¹⁰ Apip (et.al.), "Overview of Jakarta Water-Related Environmental Challenges", (working paper for Water and Urban Initiative, United Nations University, Tokyo, 2015), 5.

¹¹ Central Statistics Body of Jakarta. "Garis Kemiskinan, Jumlah, dan Persentase Penduduk Miskin di Daerah Menurut Kabupaten/Kota di Provinsi DKI Jakarta 2018-2020". Badan Pusat Statistik Provinsi DKI Jakarta. <https://jakarta.bps.go.id/indicator/23/645/1/garis-kemiskinan-jumlah-dan-persentase-penduduk-miskin-di-daerah-menurut-kabupaten-kota-di-provinsi-dki-jakarta.html> (accessed on July 03, 2021).

Right to Water since alternatives are not installed leading to many Jakartans without access to water.¹²

This study starts with the nature of Human Right to Water from the perspectives of some international human rights instruments. Although the Regional Government aims to limit the groundwater extraction to prevent Jakarta's land subsidence, the proportionality of the limitation must be clear. Therefore, this study aims to determine Indonesia's responsibility as a party to the 1966 International Covenant of Economic, Social, and Cultural Rights¹³ in conjunction with the failure to enact lawful safeguards in the limitation of Human Right to Water and to progressively realize the said right for decades. Some previous studies mention the unequal treatment towards Jakartans regarding water access according to international human rights law.¹⁴ This study has a different paradigm of human rights law, but it assesses the problem of safeguarding limitations prescribed by the regional government and possible Indonesian violations of the 1966 International Covenant of Economic, Social, and Cultural Rights (ICESCR).

Due to the *prima facie* progressive nature of the obligation,¹⁵ this study provides an explanation to the exact obligatory nature of Human Right to Water as a standalone human right and a part of a broader network of rights. As a party to the 1966 International Covenant of Economic, Social, and Cultural Rights, Indonesia has an obligation to realize all levels of Human Right to Water. The implementation of Human Right to Water can be observed in the specific case of Jakarta. The act of limiting a right that depends on other rights and one that is essential *per se* will have adverse effects to the overall population. Having established obligations to safeguard the limitations of Human Right to Water and to progressively realize Human Right to Water as a minimum core obligation to other human rights, this study lists the possible violations to Human Right to Water of Jakartans. This study also shows the effects of the government carelessness and the apathy of the PAM Jaya towards Human Right to Water, making Indonesia to contravene to Human Right to Water in all relevant instruments.

B. The Right to Water as a Human Right

¹² United Nations ("UN") Economic and Social Council ("ECOSOC"). "Resolution 12/2, General Comment No. 15: The Right to Water, E/C.12/2002/2, (January 20, 2003) ("General Comment 15")". https://www2.ohchr.org/english/issues/water/docs/CESCR_GC_15.pdf.

¹³ International Covenant on Economic, Social and Cultural Rights. "International Covenant on Economic, Social and Cultural Rights, Opened for Signature December 16, 1966 United Nations Treaty Series Vol. 993". https://treaties.un.org/doc/treaties/1976/01/19760103%2009-57%20pm/ch_iv_03.pdf.

¹⁴ Anindrya Nastiti and Teddy Prasetiawan, "The Progressive Realization of Human Rights to Water: Legal Basis, Policy Implications, and Monitoring Challenge", *MATEC Web of Conferences* 147, (2018): 2. See also Yunani Abiyoso, "Pemenuhan Hak atas Air oleh Negara: Studi Yuridis Terkait Air di Jakarta" (Master Thesis, Universitas Indonesia, 2012), 14.

¹⁵ ICESCR Arts. 3 and 12.

Human Right to Water is not stated explicitly within the International Bill of Rights but it is recognized as a necessity by the international community.¹⁶ Some resolutions in the 2000s even affirms it.¹⁷ In 2010,¹⁸ the UNGA Resolution 64/292 solidifies Human Right to Water as a human right; and the Human Rights Council Resolution 15/9 legally binds it.¹⁹ It entitles everyone to safe, acceptable, accessible, and sufficient water for personal and domestic use.²⁰ The Human Right to Water is a human right that correlates to other human rights. It is also a standalone human right that permits limitations. Limitations of the right and the safeguards from states will be explored in the following. However, the study does not cover the regional human rights instruments.

1. Interdependence with Other Human Rights

The interdependence of human rights has been parleyed in the UN circles since the 1950s.²¹ It is the main agenda in many events that has been affirmed since 1968.²² Shue explains that basic rights, such as Human Right to Water, are the prerequisites to the fulfillment of other rights.²³

a. Water and the Right to Health

Water is fundamental to realize the right to health.²⁴ The World Health Organization (WHO) states that water, as the essence of life, must always be accessible. Lack of access can cause illness. For instance, diarrhea kills over two million people annually, most of which are children in developing countries.²⁵ From a hygiene standpoint, Knox and Pejan highlight that,

*“a healthy environment is necessary for the full enjoyment of human rights and, conversely, the exercise of rights...”*²⁶

¹⁶ World Conference on Human Rights, Vienna Declaration and Programme of Action, 47, U.N. Doc. A/CONF.151/23 (June 25, 1993).

¹⁷ Jootaek Lee and Maraya Best, "The Human Right to Water: A Research Guide & Annotated Bibliography" (research paper, Law, Northeastern University, Boston, 2017), 10.

¹⁸ General Assembly ("GA") Res. 64/292, UN. Doc. A/64/L.63/Rev.1 (August 3, 2010).

¹⁹ Human Rights Council ("HRC") Res. 15/9, U.N. Doc A/HRC/RES/15 (October 6, 2010).

²⁰ General Comment 15.

²¹ Ramcharan, *Human Rights: Thirty Years after the Universal Declaration*, (The Hague: Martinus Nijhoff, 1979), 21-37. See also Hurst Hannum, International Law Association LXVI Conference held in Buenos Aires", (Final Report on the Status of the Universal Declaration of Human Rights in National and International Law, Doc. CIDH/12393, August 14-20, 1994), 525-551.

²² United Nations, Document 32/41. "Final Act of the International Conference on Human Rights, U.N. Doc. A/CONF.32/41 (April-May 1968)". https://legal.un.org/avl/pdf/ha/fatchr/Final_Act_of_TehranConf.pdf.

²³ Henry Shue, *Basic Rights: Subsistence, Affluence, and U.S. Foreign Policy*, (New York: Princeton University Press, 2020), 139.

²⁴ World Health Organization ("WHO"), *Safer Water, Better Health*, (Geneva: World Health Organization, 2019), 22. See also WHO, *Technical Guidance on Water-related Disease Surveillance*, (Copenhagen: WHO Regional Office for Europe, 2011), 89.

²⁵ WHO, *Right to Water*, 6.

²⁶ John H. Knox and Ramin Pejan, *The Human Right to a Healthy Environment*, (London: Cambridge University Press, 2018), 1.

States failure to ensure the right to health by preserving the environment and water can be a form human rights violation.²⁷ Water is important for sanitation and food.²⁸ On the other hand, water quality can be affected by industrial or agricultural runoff caused by non-compliance towards environmental regulations could adversely affect the health of the population.²⁹

b. Water and the Right to an Adequate Standard of Living

The Human Right to Water is a subsidiary to the right to an adequate standard of living based on Article 11 of 1966 International Covenant of Economic, Social, and Cultural Rights. It is also a basic right and necessary for the enjoyment of other rights. The 1979 Convention on the Elimination of All Forms of Discrimination against Women confirms the steady supply of water as a prerequisite to adequate living conditions.³⁰ This fundamental nature is due to the importance of water for subsistence. For instance, if a people or group living in a certain area have enough water, the core obligation for the State had been fulfilled.³¹ However, the 1966 International Covenant of Economic, Social, and Cultural Rights also imposes progressive realization.³² Affirmation of this progressive realization takes the guise of acceptability, equal access for differently abled persons, and, most relevantly, sustainability.³³ On the other hand, access and availability of water gives the opportunity of social mobility to lower-income persons since it is the basic structure for health and in turn any practice of rights within a given society, *inter alia*, education, employment, and cultural life.³⁴

2. Water as a Standalone Human Right in Human Rights Instruments

Article 11 of the 1966 International Covenant of Economic, Social, and Cultural Rights obliges states to recognize the right to an adequate standard of living including adequate food, clothing and housing. The word “including” implies that

²⁷ European Court of Human Right, *López Ostra v. Spain*, Application No. 16798/90, Judgment, 1994; African Commission on Human and Peoples’ Rights, *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v Nigeria*, Communication 155/96, 2002; European Court of Human Rights, *Öneryildiz v. Turkey*, Application No. 48939/99, Judgment, 2004; European Court of Human Rights, *Fadeyeva v. Russia*, Application No. 55723/00, Judgment, 2005; European Court of Human Rights, *Cordella and Others v. Italy* (2019), Application No. 54414/13 and No. 54264/15, Judgment, 2019; Human Rights Committee, *Portillo Cáceres v. Paraguay*, Communication No. 2751/2016, UN Doc. CCPR/C/126/D/2751/2016, 2019.

²⁸ WHO, *Right to Water*.

²⁹ Arianto Patunru, “Access to Safe Drinking Water and Sanitation in Indonesia”, *Asia & the Pacific Policy Studies* 2, No. 2, (2015): 234-244.

³⁰ Article 15(1)(h) of United Nations Convention on the Elimination of All Forms of Discrimination Against Women.

³¹ General Comment 15. See also Philip Alston, “Out of the Abyss: The Challenges Confronting the New U.N. Committee on Economic, Social and Cultural Rights”, *Human Rights Quarterly* 9, No. 14, (1987): 332, 352.

³² ICESCR Art. 11(3).

³³ General Comment 15. See also Abdurrahman, “Socially Sustainable Management of Groundwater Mining from Aquifer Storage - Development in Saudi Arabia”, GW-MATE/UNESCO Expert Group Meeting, (Paris, France, 2002), 6.

³⁴ WHO, *Right to Water*, 8.

the list is incomplete.³⁵ The General Comment Number 6 confirms that the Human Right to Water is a human right.³⁶ According to the principle of interdependence, the Human Right to Water is a prerequisite of the right to health³⁷ and the right to life since water is necessary to sustain both.³⁸

The 1979 Convention on the Elimination of All Forms of Discrimination against Women explicitly mentions the Human Right to Water for the first time, suggesting it as an immediate obligation.³⁹ Parallel to Covenant, the 1989 Convention on the Rights of the Child focuses on the obligation of pursuing full implementation of providing clean drinking water. The Convention is then seen to have linked the Human Right to Water to the right to health.⁴⁰

Water is an inextinguishable right in the light of limiting other rights, such as the right to the freedom of movement in the case of prisoners of war.⁴¹ The non-discrimination principle is even valid towards migrant workers. For instance, the 1994 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families require its parties to provide equal treatment in fulfilling the health and fitness needs of migrant workers as nationals.⁴² Inclusivity is highlighted in the Convention on the Rights of Persons with Disabilities. The member-states must ensure equal access to water services, economic accessibility, and assistance via devices for disability-related necessities.⁴³

3. Character of Legal Obligation on Water

The General Comment Number 3 states that the 1966 International Covenant of Economic, Social, and Cultural Rights “*provides for progressive realization..., it also imposes various obligations which are of immediate effect*”.⁴⁴ The General Comment Number 15 also states that there are entitlements and freedoms within

³⁵ General Comment 15, 3.

³⁶ UN ECOSOC, “Resolution 22, General Comment No. 6: The Economic, Social and Cultural Rights of Older Persons, Res. E/1996/22 (December 8, 1995)”, <https://social.un.org/ageing-working-group/documents/ohchr-outcome-paper-olderpersons12.pdf>.

³⁷ UN ECOSOC, “Resolution 12/4, General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12), Res. E/C.12/2000/4 (August 11, 2000)”, <https://digitallibrary.un.org/record/425041>.

³⁸ Adele Kirschner, “The Human Right to Water and Sanitation”, *Max Planck Yearbook of United Nations Law* 15, No. 10, (2011): 445, 460-61.

³⁹ Committee on the Elimination of Discrimination against Women, General Recommendation CEDAW/C/GC/34 (March 4, 2016), 14.

⁴⁰ Article 24 (2) (c) and (e) of United Nations Convention on the Rights of the Child, November 20, 1989, U.N.T.S. Vol. 1577, 3.

⁴¹ Articles 20, 26, 29, and 46 of Geneva Convention Relative to the Treatment of Prisoners of War (Third Geneva Convention), August 12, 1949, U.N.T.S. 135, 75.

⁴² Article 70 of United Nations International Convention on the Protection of the Rights of All Migrant Workers, December 18, 1990, U.N.T.S. Vol. 2220, 3.

⁴³ Article 28 (2) (a) of UN GA, Convention on the Rights of Persons with Disabilities, January 24, 2007, U.N.T.S. Vol. 2515, p. 3.

⁴⁴ ECOSOC Res. E/1991/23 (December 14, 1990) (“General Comment 3”), 1.

Human Right to Water. The former being the right to a non-discriminatory water supply and management system, whilst the latter refers to the right to maintain access to existing water supplies free from disconnections and contamination.⁴⁵

Kalantry, et.al explain the categories of obligations arising from legal instruments of Human Right to Water. Obligations are categorized as immediate, minimum core, and progressive.⁴⁶ This study have categorized the obligation to take deliberate steps toward full realization and to guarantee the non-discriminatory provision of water as immediate obligations of the Human Right to Water. Taking steps include adopting legislation to fully realize the Human Right to Water. The frameworks must be in a certain timespan whilst governments continually report their performance to the Committee.⁴⁷ The non-discrimination principle also provides the obligation to refrain from any practice that is counterintuitive with Article 2, specifically water assets under the control of private entities.⁴⁸ Further, there are minimum core obligations that range from ensuring access to a minimum amount of water to measures preventing diseases linked to water. The Committee highlights that States must adopt low-cost targeted water programs to ensure equitable distribution.⁴⁹ Thus, access to water must be free from all socio-economic persuasions, *inter alia*, level of income and legality of housing.

Due to the progressive nature of the Human Right to Water, the involvement of private actors need to be controlled to ensure that water facilities operated by them do not endorse non-equitable provision and focus on equal distribution.⁵⁰ It is in equal value, both as an economic and social assets.⁵¹ In other words, investments by state should not disproportionately favor those in higher positions in the socio-economic hierarchy.⁵² National water strategies must also be considered. The strategies may include reducing unsustainable extraction of water resources.⁵³

Lastly, there are obligations to be progressively realized, *inter alia*, ensuring social adequacy towards the water being distributed and extending sanitation services towards at-risk individuals or communities both in urban and rural areas.⁵⁴ Minimum core obligations diverge in this sense as it entails the assurance of

⁴⁵ General Comment 15, 10.

⁴⁶ Sital Kalantry, (et.al.), "Enhancing Enforcement of Economic, Social, and Cultural Rights Using Indicators: A Focus on the Right to Education in the ICESCR", *Human Rights Quarterly* 32, No. 13, (2010): 253-311.

⁴⁷ Phillip Alston, "The International Covenant on Economic, Social and Cultural Rights", in United Nations, *Manual on Human Rights Reporting under Six Major International Human Rights Instruments, 2nd Edition*, (Geneva: United Nations, 1997), 65-67.

⁴⁸ General Comment 15, 21, 23.

⁴⁹ General Comment 3, 13. See General Comment 14, 18. See also General Comment 15, 13.

⁵⁰ United Nations, *The Human Rights to Water and Sanitation in Practice*, (Geneva: United Nations Economic Commission for Europe, 2019), 54.

⁵¹ General Comment 15, 3.

⁵² General Comment 15, 14.

⁵³ General Comment 15, 28.

⁵⁴ General Comment 15, 51.

continued access to existing water supplies. States must progressively replace existing water supplies with more sustainable ones, such as in the case between groundwater and piped water.

4. Permissible Limitation to the Right to Water

Article 4 of the 1966 International Covenant of Economic, Social, and Cultural Rights provides that States may subject certain rights to limitations by law only as far as said limitations are compatible with the nature of the rights and to promote the general welfare of society.⁵⁵ The term 'limitation' in this study refers to the physical or legal obstacle placed by states to prevent the enjoyment of water from an already existing source due to an arising emergency.

The Human Right to Water can be limited in a few ways. All of which must adhere to certain conditions, such as sustainability concerns; and as far as the rights have been safeguarded beforehand.⁵⁶ Safeguards ensures the enjoyment of human rights.⁵⁷ Safeguards must protect the already enjoyed human rights from potential risks such as policy reversals.⁵⁸ Nonetheless, the limitation should be align to immediate nor minimum core obligations.⁵⁹ For example, in the 2011 case of *Mosetlhanyane & Matsipane v. Attorney General* in Botswana, the Appeals Court ruled that the government cannot block access to existing groundwater boreholes due to wildlife sustainability goals if alternatives (re: safeguards) are not yet installed, citing UNGA Resolution 64/292.⁶⁰ Next, the case of *Liliana Assenova Naidenova and others v. Bulgaria* in 2011 shows the importance of replacing water sources with more sustainable ones due to the lack of piped water infrastructure, while it did not undermine core obligations in Article 11 of the 1966 International Covenant of Economic, Social, and Cultural Rights, including to those who lack housing certification.⁶¹ The case law above highlights the importance of sustainable extraction of water resources since its finite nature was confirmed, as the depletion of freshwater will render the fulfillment of other human rights impossible.⁶²

⁵⁵ ICESCR, art. 4.

⁵⁶ United Nations, Document 151/26, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex I (Aug. 12, 1992), principles 1, 9, 12, and 15. See also General Comment 15.

⁵⁷ Prosecutor v. Anto Furundzija, Case No. IT-95-17/1, judgment, 147-157 (Int'l Crim. Trib. for the Former Yugoslavia Dec 10, 1998).

⁵⁸ Olivier De Schutter, *International Human Rights Law: Cases, Materials, Commentary*, (New York: Cambridge University Press, 2010), 183. See also United Nation Development Programme, *Human Development Report 2000*, (London: Oxford University Press, 2000), 23.

⁵⁹ Sital Kalantry, *Enhancing Enforcement*, 295-296.

⁶⁰ Court of Appeal of the Republic of Botswana, *Mosetlhanyane & Matsipane v. The Attorney General*, Judgment, 2011, 22, [Bushmen-water-appeal-judgement-Jan-2011.tif](#) ([escr-net.org](#)).

⁶¹ Human Rights Committee, *Liliana Assenova Naidenova et al. v. Bulgaria*, Communication No. 2073/2011, 2012.

⁶² See High Court of Kerala, *Perummaty Grama Panchayat v. State of Kerala*, Judgment Reference No. 2004 (1) KLT 731, 2003.

Conclusively, the limitation of a human right is allowed in certain circumstances to fulfill other rights of a more fundamental nature. The Human Right to Water is then considered as both a standalone human right and one that is depended upon by other rights for their fulfillment that allows limitations of access after the safeguards are installed beforehand. In Jakarta, groundwater had been a staple for most domestic and industrial uses. However, land subsidence has prompted its limitation.

C. The Implementation of Human Right to Water in Jakarta

The Government has prohibited the extraction of groundwater in areas near the shore.⁶³ Further, the Governor of Jakarta had tried to limit the use of groundwater in residential and office buildings through taxes and has forbidden groundwater usage in other areas in 2023.⁶⁴ Assessments of the effects of these rules and the content within will adhere to the contextual framework in Section 2.

1. The Government Regulation Number 43 of 2008 as a Limitation of Human Right to Water in Jakarta and its Developments

Article 62 of Government Regulation Number 43 of 2008 forbids the extraction of groundwater in coastal areas.⁶⁵ This is due to fears of saltwater intrusion that could damage the soil structure leading to more land subsidence. Although the limitation is due to a just cause, there are no provisions within Government Regulation Number 43 of 2008 that require the regional government to provide an alternative access to water. The limitation is then implemented further in Jakarta through the Government Regulation Number 93 of 2021. It targets more areas to be without groundwater extractions.⁶⁶ The target of Government Regulation Number 93 of 2021 is to forbid all groundwater usage by 2030.⁶⁷

Despite the Government Regulation Number 93 of 2021 is adequate in deciding which areas to be considered 'groundwater free zones', the piped water network coverage as a safeguard also needs to be considered.⁶⁸ It holds no provisions requiring the PAM Jaya to be indiscriminate in expansion. No exclusive regulations are held remedying the effects of Government Regulation Number 43 of 2008 enforced 13 years prior. The affirmative action needed to rectify living conditions and water access specified towards the most adversely affected North Jakartans are seemingly not an obligation in the turn of legal events pertaining to Human Right to Water in Jakarta.

⁶³ Article 62 Paragraph (1) of Government Regulation Number 43 of 2008 on Groundwater.

⁶⁴ Governor Regulation Number 93 of 2021 on Groundwater Free Zones.

⁶⁵ Article 62 of Government Regulation Number 43 of 2008 on Groundwater.

⁶⁶ Governor Regulation Number 93 of 2021 on Groundwater Free Zones.

⁶⁷ Iqbal Dwi Purnama. "Warga DKI Jakarta Dilarang Konsumsi Air Tanah pada 2030". OkeZone. <https://economy.okezone.com/read/2022/01/04/470/2527047/warga-dki-jakarta-dilarang-konsumsi-air-tanah-pada-2030> (accessed on August 28, 2021).

⁶⁸ Article 4-5, Governor Regulation Number 93 of 2021 on Groundwater Free Zones.

2. Effects of Limitations to Jakartans Health

There are three main effects of water scarcity in Jakarta. Firstly, the limitations have barred Jakartans near the coast and threatens to hinder Jakartans in general from already existing groundwater sources. It leaves them with the option of acquiring expensive bottled or merchant water. In some cases, many Jakartans utilizes the polluted surface water leading them to contract diseases caused by water parasites.⁶⁹ Secondly, the lack of appropriate safeguards that are also considered as the appropriate progressive realization of Human Right to Water in Jakarta have decreased groundwater quality. Thirdly, land subsidence leads to floods filled with industrial affluent⁷⁰ that affect the health of Jakartans. It is different compared to the case of the haze where multiple experts say that omission to control intentional forest fires cause violations in human rights.⁷¹ Conclusively, disproportionate limitation and failure to progressively fulfill Human Right to Water in Jakarta causes a breakdown of public health.

3. Effects of Limitations to Jakartans Standard of Living

Before forbidding access to groundwater entirely, the initial plan to avert Jakarta's sinking was the creation of a 40-kilometer sea wall.⁷² However, experts conclude that the project can leave Jakarta with much lower water quality if extraction is not restricted. Experts conclude that building the sea wall will increase inequality between Jakarta residents, especially for the fishing communities in the northern area.⁷³ It leads to the limitations opted by the government now. However, it is without the necessary safeguards to protect the minimum core enjoyment of the right to an adequate standard of living. Since many low earning communities find it difficult to replace groundwater with expensive bottled or merchant water.⁷⁴ The limitations affect low-income Jakartans to automatically hinder social mobility. It also increases cost of life.

4. Effects of Limitations to the Enjoyment of Human Right to Water as a Standalone Human Right

⁶⁹ Apip, (et.al.), "Overview of Jakarta", 10.

⁷⁰ Nicola Colbran, "Piped Water in Jakarta: A Political, Economic or Social Good?" in Malcolm Langford and Anna Russel, *The Human Right to Water: Theory, Practice and Prospects*, (New York: Cambridge University Press, 2017), 509.

⁷¹ Yordan Gunawan, "Transboundary Haze Pollution in the Perspective of International Law of State Responsibility", *Jurnal Media Hukum* 21, No. 2, (2014): 172.

⁷² Huda Bachtiar, (et.al.), "Optimized Jakarta Outer Sea Dike Plan of NCICd Program to Wave Run-Up of a Possible Anak-Krakatau Tsunami", *Jurnal Sumber Daya Air* 13, No. 2, (2017): 3.

⁷³ Aris Widodo, "Analyzing Indonesia's NCICD Project to Stop the Capital City Sinking", *Jurnal Ilmu Pemerintahan* 7, No. 2 (2017): 3.

⁷⁴ Apip, (et.al.), "Overview of Jakarta", 71.

The 1966 International Covenant of Economic, Social, and Cultural Rights, the 1989 Convention on the Rights of the Child, and the 1979 Convention on the Elimination of All Forms of Discrimination against Women had been very clear of the repercussions of the trespass towards the Human Right to Water as a standalone human right. The specific right to the highest attainable standard of health from clean drinking water (the 1989 Convention on the Rights of the Child) and adequate living conditions (the 1979 Convention on the Elimination of All Forms of Discrimination against Women) are affected in an area where limitations are set without safeguards. According to General Comment Number 15, a direct trespass is not only a violation, freedoms to existing water sources in the form of non-interference is also breached.⁷⁵ The current (the Government Regulation Number 43 of 2008) and future limitations (the Government Regulation Number 93 of 2021) without the guarantee of the installation of alternative sources by the government and a reform of the PAM Jaya's corrupt practices⁷⁶ interfere with all levels of Human Right to Water obligations. The real effects towards the health and living conditions of Jakartans is threatened. Both the government and PAM Jaya provides no equal opportunity.

Therefore, Government Regulation Number 43 of 2008 and Government Regulation Number 96 of 2021 without the installation of safeguards beforehand had rendered the fulfillment of other human rights in Jakarta, such as the right to an adequate standard of living and the right to health, impossible. As a standalone human right, the Human Right to Water's enjoyment had also been hindered. Providing a more sustainable alternative to Jakartans' water needs, as had been mentioned in the above case law, is not only an obligation, but also a necessity for the sake of all Jakartans' welfare.

D. Violation of Human Right to Water towards the Jakartans

Over the last two decades, All Jakarta surface had sunk for 2 meters with an average rate of subsidence reaching 7 centimeters a year.⁷⁷ North Jakarta is the most affected. Coincidentally, said region has the greatest number of informal housing than any other district in Jakarta. It holds most of 65% Jakartans who are not connected to a piped water network.⁷⁸ Being the hardest struck by depleting water resources and the worst floods in recent urban history, a flood in February

⁷⁵ General Comment 15, 10.

⁷⁶ Indonesian Supreme Court Decision Number 31 K/Pdt/2017.

⁷⁷ Hasanuddin Abidin, (et.al.), "Land Subsidence of Jakarta (Indonesia) and its Geodetic Monitoring System", *Natural Hazards* 23, No. 23 (2001): 369.

⁷⁸ Rivan Lingga. "Slums Remain a Fact of Life in Jakarta, Ministry Finds". Jakarta Post. <https://www.thejakartapost.com/news/2019/05/28/half-of-jakarta-is-slum-ministry-says.html> (accessed on September 10, 2021). See also Nicola Colbran, "Piped Water in Jakarta", 505.

2007 forced evacuations upon hundreds of thousands of residents.⁷⁹ It caused IDR 11 trillion of lost.⁸⁰ It causes the Government limiting groundwater usage.

1. The Limitation by the Regional Government is Disproportionate

Despite the justifications, these safeguards are necessary for the limitation to be lawful based on international human rights law. The cases conclude that the limitations to pursue the protection of another right must not interfere with the existing minimum core rights already possessed by citizens. Jakarta is the object of this internationally wrongful act since the omission is not providing safeguards in the strictest sense. The government could provide a defense since they have dispatched efforts, albeit abysmal. Nonetheless, the efforts are not adherent to the rules of non-discrimination prescribed in international human rights law.

a. Failure to Commit to Non-Discriminatory Dispatch of Water Access Alternatives

PAM Jaya has not been able to distribute sustainable alternative via piped water that is supplied to cover the whole of Jakarta, including the slums and lower income households, such as in North Jakarta.⁸¹ The informal housing settlements in North Jakarta have been left with no choice but to depend on street vendors for water. Ultimately, they have to pay more than the price of piped water.⁸²

The discrimination in the dispatch of the piped water network had always taken a socio-economic justification. The construction of new dams for water production had increased the volume and water pressure to existing networks in affluent areas with no effort of extending coverage to poorer areas.⁸³ In 2005, the PAM Jaya and the Government officially estimated that the coverage had reached 46-54% of the province.⁸⁴ However, surveys by some NGOs and other independent bodies that include informal housing settlements show that it only covers 25%.⁸⁵ This practice

⁷⁹ Indonesian Ministry of National Planning and Development, "Report on the Estimation of Damages and Losses Post-Flood in Early February 2007 in the Greater Jakarta Area (Jakarta, Bogor, Depok, Tangerang, and Bekasi)", https://www.bappenas.go.id/files/3713/5462/9576/laporan-banjir__20081123055830__995__0.pdf, 3.

⁸⁰ Ari Muliarta Ginting, "Dampak Ekonomi dan Kebijakan Mitigasi Risiko Banjir di DKI Jakarta dan Sekitarnya Tahun 2020", *Info Singkat Bidang Ekonomi dan Kebijakan Publik DPR-RI*, Vol. 12, No. 01 (2020): 21.

⁸¹ Pingping Luo, (et.al.), "Water Quality Trend Assessment in Jakarta: A Rapidly Growing Asian Megacity", *PLoS ONE* 14, No. 7 (2019): 2.

⁸² Nicola Colbran, "Piped Water in Jakarta", 512.

⁸³ Nicola Colbran, "Piped Water in Jakarta", 526.

⁸⁴ Karen Bakker, (et.al.), "Disconnected: Poverty, Water Supply and Development in Jakarta", (Occasional Paper, Human Development Report, United Nations, 2006), 9.

⁸⁵ Karen Bakker, 13.

contravenes the General Comment Number 15 and the Indonesian Constitutional Court's decision on the 2004 Water Resource Law.⁸⁶

PAM Jaya is essentially a Regional-Owned Company of Jakarta. Its partnership to Lyonnaise and Aetra to serve Jakarta residents has started since 1998 and is predetermined for 25 years. Aside from its nepotism riddled tender process, with the then President's son allegedly influencing said process, the tender is just barely touching a 15% increase in network coverage, according to the Vice-Governor in 2020,⁸⁷ reflecting the poor performance of the privatization of the water sector.⁸⁸ A lack of pro-poor initiatives had also been the barrier to increase the coverage. Both private partners take heavier considerations on cost-returns rather than actual service.⁸⁹ Despite good international reputation, both private water companies seem to be careless in pipe maintenance resulting in thousands of liters every second lost due to leaking pipes.⁹⁰

Related to cost recovery, claimants to the judicial review of the Law Number 14 of 2004 on Water Resources had warned that leaving water services under the purview of private entities allows greater economic discrimination.⁹¹ It is reaffirmed by the Indonesian Constitutional Court in their decision to cancel the 2004 Water Resources Law, citing unconstitutionality.⁹² The considerations of the decision use the 1966 International Covenant of Economic, Social, and Cultural Rights General Comment Number 15. The General Comment also leaves no justification for not dispatching water services based on a lack of legal housing status, explaining that as a fundamental right water should be served in an absolutely indiscriminate manner.⁹³

b. No Adequate Safeguards

In its active years, the PAM Jaya had only contributed a small progress in the realization of Human Right to Water for Jakartans.⁹⁴ Indonesia had neglected its obligation to dispatch water services as a safeguard to ensure Human Right to Water for the citizens. There have been some adverse effects to the Jakarta

⁸⁶ General Comment 15, 16(c). In 2005, Indonesia ratified the ICESCR. It is also contrary to the statement by Indonesia's Constitutional Court that 'a person's need for water does not depend on their residence'. See Indonesian Constitutional Court, Decision No. 85/PUU-XI/2013, Judicial Review of Water Resources Law, 488.

⁸⁷ Ratu Rina and Samuel Pablo. "Siapa Aetra-Palyja, Pengelola Air Jakarta yang Didepak Anies?". CNBC Indonesia. <https://www.cnbcindonesia.com/news/20190211143532-4-54823/siapa-aetra-palyja-pengelola-air-jakarta-yang-didepak-anies> (accessed on August 18, 2021).

⁸⁸ Indonesian Ministry of National Development Planning, *Ironi Air di Indonesia: Menyikapi Potensi Perang Air-Belajar tentang Air dari Swedia*, (Jakarta: Sustaining Partnership Media, 2011), 6.

⁸⁹ Nicola Colbran, "Piped Water in Jakarta", 526.

⁹⁰ Andreas Harsono. "Water and Politics in the Fall of Suharto". International Consortium of Investigative Journalists. <https://www.icij.org/investigations/waterbarons/water-and-politics-fall-suharto/> (accessed on August 3, 2021).

⁹¹ Indonesian Constitutional Court, 33-34.

⁹² Kusumaputra A, Perwira, I, Nurlinda, I, "Village Autonomy: The Main Road to Fulfill Right to Water", *Hasanuddin Law Review* 4, No.3 (2018): 284.

⁹³ General Comment 15, 16(c).

⁹⁴ Indonesian Ministry of National Development Planning, 91.

population. Firstly, there is the decreasing health of lower-income residents. The Asian Development Bank had found deadly bacteria in the water surface used by Jakartans who has no access to the piped water network.⁹⁵ Some areas in Jakarta are polluted by industrial affluent. Its utilization poses a danger towards the health of residents.⁹⁶

The limitation challenges many communities. The fishing communities in North Jakarta faces more challenges due to the restricted access to water, hindered in prospering their own economic. No access to the piped water network forces Jakartans to buy water from street vendors.⁹⁷ Now, piped water does not only offer sustainability but also an alternative before restrictive measures is conducted. The study is of the position to view that without the safeguards in the form of piped water, the limitation is disproportionate, especially towards the lower socio-economic Jakartans.

2. The Causal Link of the Regional Government's Negligence and the Damages Suffered Incurred by Jakartans: State Responsibility

The Inter-American Court of Human Rights declares that a causal link between a State's negligence and the damage suffered must be proven.⁹⁸ Such burden of proof is necessary to mitigate wrongful judgments that might hold States liable for damages that are not their responsibility.⁹⁹ Consistent with the decisions of international courts, a causal link is established where the damages would normally flow from the state's act or negligence, taking into account whether the state knew or should have known of the damages from its conduct or lack thereof.¹⁰⁰ There is causal link between Indonesia's failure to provide appropriate safeguards with a breakdown in the health and welfare of Jakartans; and between the failure to prevent unsustainable groundwater extraction and the effects of the subsequent land subsidence and pollution. Therefore, this study is of the position that there is a

⁹⁵ Asian Development Bank, *Indonesia – Country Water Assessment*, (Mandaluyong: Asian Development Bank, 2016), 23.

⁹⁶ Douglass M, "Mega Projects and the Environment Urban Form and Water in Jakarta", *Environment and Urbanization Asia* 1, No. 1 (2010): 49.

⁹⁷ Kathryn Furlong and Michell Kooy, "Worlding Water Supply: Thinking Beyond the Network in Jakarta", *International Journal of Urban and Regional Research* 41, No. 6 (2017): 889.

⁹⁸ Inter-American Court of Human Rights, *The Environment and Human Rights as Requested by the Republic of Colombia*, Advisory Opinion OC-23/17, 2017, para. 101. See also Harlan Cohen and Angeliki Papantoniou, "Rights to Life and to Personal Integrity in Environmental Matters - Environmental Rights-Extraterritorial Jurisdiction - Principles of Prevention, Precaution, Cooperation", *American Journal of International Law* 112, No. 3 (2018): 465.

⁹⁹ Erik Roxstorm and Mark Gibney, "Human Rights and State Jurisdiction", *Human Rights Review* 18, No. 2 (2017): 146.

¹⁰⁰ León Castellanos-Jankiewicz, "Causation and International State Responsibility" (Research Paper, Law, University of Amsterdam, No. 2012-56), 52. See Olivier de Schutter, (et.al.), "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights", *Human Rights Quarterly* 34, No. 4 (2012): 1112-1114. See also Dinah Shelton, *Remedies in International Human Rights Law*, (London: Oxford University Press, 2015), 279.

causal link between state's negligence and damages suffered by Jakartans due to lack of safeguards and progressive realization. Indonesia is responsible for this.

3. Practical Solutions

The contract between the PAM Jaya and the two private companies overseeing the network expansion is close to the end. Proven to be ineffective, both practically¹⁰¹ and legally,¹⁰² the PAM Jaya's management should find the delicate balance between its public service obligations and its commercial aspects, like the inputs towards the government-owned electricity company, the PLN (*Perusahaan Listrik Negara* –State Electric Company).¹⁰³ Based on a legal standpoint, Government Regulation Number 96 of 2021 needs an expansion to cover affirmative action for Jakartans who are experiencing damage from the limitations set in the Government Regulation Number 43 of 2008. Further, some clauses that guarantee the non-discriminate expansion of the piped water network should be included to ensure access of all Jakartans regardless of level of income and housing status or other socio-economic settings.

The solutions shall tackle the matters of safeguards, damages incurred, and past discriminatory practice holistically. Indonesia has been negligent to prevent discrimination and provide a safeguard to which it is a direct cause of suffered by the Jakartans.

E. Conclusion

Indonesia, as a state party to 1966 International Covenant of Economic, Social, and Cultural Rights, has an obligation to fulfill the Human Right to Water as a legally binding human right of residents at all levels. The obligation prescribed by international human rights instruments reflects the existence of various levels of obligations. All of which can be limited with safeguards put into place. Although land subsidence can be a justification, it does not excuse limitations set in Jakarta that have had adverse effects to the population's Human Right to Water, especially in coastal areas, of lower-income, and/or without housing legitimacy. It is because there is a lack of safeguards as an essential element in the legitimacy of a human rights limitation. The PAM Jaya's functions to provide an alternative to groundwater a decade before the limitations. However, its practices fail in the non-discriminatory obligation in the dispatch of the piped water network expansion due to cost recovery concerns.

The lack of safeguards and discriminatory dispatch of the progressive realization of the Human Right to Water put into place then renders the limitations

¹⁰¹ Putri Oktaviani, "Public-Private Partnerships in Water Supply of DKI Jakarta", *Jurnal Manajemen Pelayanan Publik* 4, No. 1 (2020): 118.

¹⁰² Indonesian Constitutional Court, Judicial Review of Water Resources Law, 461.

¹⁰³ Muhammad Ansari, "State-Owned Enterprises and State Control in the Field of Electricity", *Jurnal Konstitusi* 14, No. 1 (2017): 121.

in the Government Regulation Number 43 of 2008 and the Government Regulation Number 96 of 2021 disproportionate. The planned limitations in the Government Regulation Number 96 of 2021 also does not guarantees affirmative actions towards the damages already suffered by the people to health and living conditions due to the discriminatory practices of the PAM Jaya. There is a causal link between the Indonesia's omission to realize safeguards before limiting access and the expansion of a piped water network and the damages suffered by Jakartans. Applying these legal standards to Jakarta's Land Subsidence, there is a causal link between Indonesia's failure of its obligation to non-discriminately execute the realization of networked water services and the increasing rates of damage to areas affected by land subsidence, both as a progressive realization and safeguard, in North Jakarta. It fulfills the threshold that Indonesia has the obligation to protect the right to a safe and healthy environment of Jakarta residents via a progressive fulfilment of Human Right to Water. The Government Regulation Number 96 of 2021 should include clauses including affirmative action as well as a guarantee to expansion of a piped water network before limitations are set in each area. Along with this, there should be a reform of management systems in PAM Jaya to increase cost-effectivity and put greater emphasis towards its public obligations. The government should supplement it by funding as affirmative action.

The article established the legal instrument for holding Indonesia accountable. However, this study does not cover an analysis of the forums in which affected states or individuals can file a claim. By placing greater importance towards sustainability in coastal cities across the globe, there is an expectation that Indonesia will soon increase individual or joint action to alleviate the issue of land subsidence that may lead to the doom of Indonesia's capital.

References

Books

- Asian Development Bank. *Indonesia – Country Water Assessment*, Mandaluyong: Asian Development Bank, 2016.
- Colbran, Nicola, "Piped Water in Jakarta: A Political, Economic or Social Good?" in *The Human Right to Water: Theory, Practice and Prospects*, eds. Malcolm Langford & Anna Russel, New York: Cambridge University Press, 2017.
- De Schutter, Olivier, *International Human Rights Law: Cases, Materials, Commentary*, New York: Cambridge University Press, 2010.
- Knox, John H. & Pejan, Ramin, eds, *The Human Right to a Healthy Environment*, London: Cambridge University Press. 2018.
- Ramcharan, *Human Rights: Thirty Years after the Universal Declaration*, The Hague: Martinus Nijhoff Publishers, 1979.
- Shelton, Dinah, *Remedies in International Human Rights Law*, London: Oxford University Press, 2015

- Shue, Henry, *Basic Rights: Subsistence, Affluence, and U.S. Foreign Policy*, New York: Princeton University Press, 2020.
- United Nation Development Programme, *Human Development Report 2000*, London: Oxford University Press, 2000.
- _____, *Manual on Human Rights Reporting under Six Major International Human Rights Instruments*, Geneva: United Nations, 1997
- _____, *The Human Rights to Water and Sanitation in Practice*, Geneva: United Nations Economic Commission for Europe, 2019.
- WHO, *Right to Water*, Geneva: WHO, 2003.
- _____, *Technical Guidance on Water-related Disease Surveillance*, Copenhagen: WHO Regional Office for Europe, 2011.

Other Documents

- Abdurrahman, "Socially Sustainable Management of Groundwater Mining from Aquifer Storage - Development in Saudi Arabia", GW-MATE/UNESCO Expert Group Meeting, (Paris, France, 2002).
- Alston, Phillip, "Out of the Abyss: The Challenges Confronting the New U.N. Committee on Economic, Social and Cultural Rights", *Human Rights Quarterly* 9, No. 14 (1987).
- Andreas Harsono. "Water and Politics in the Fall of Suharto". International Consortium of Investigative Journalists. <https://www.icij.org/investigations/waterbarons/water-and-politics-fall-suharto/>.
- Anindrya Nastiti and Teddy Prasetiawan, "The Progressive Realization of Human Rights to Water: Legal Basis, Policy Implications, and Monitoring Challenge", MATEC Web of Conferences 147, (2018).
- Apip, (et.al.), *Overview of Jakarta Water-Related Environmental Challenges*, Water and Urban Initiative Working Paper Series - United Nations University, Number 04, 2015.
- Ari Mulianta Ginting, "Dampak Ekonomi dan Kebijakan Mitigasi Risiko Banjir di DKI Jakarta dan Sekitarnya Tahun 2020", Info Singkat Bidang Ekonomi dan Kebijakan Publik DPR-RI, Vol. 12, No. 01 (2020).
- Arianto Patunru, "Access to Safe Drinking Water and Sanitation in Indonesia", *Asia & the Pacific Policy Studies* 2, No. 2 (2015).
- Aris Widodo, "Analyzing Indonesia's NCIcD Project to Stop the Capital City Sinking". *Jurnal Ilmu Pemerintahan* 7, No. 2 (2017).
- Armida Alisjahbana, (et.al.), "Scientific Basis: Analysis and Projection of Sea Level Rise and Extreme Weather Event", *Indonesian Climate Change Sectoral Roadmap*, (March, 2010), https://www.bappenas.go.id/files/2013/5229/9917/analysis-and-projection-of-sea-level-rise-and-extreme-weathe__20110217130224__1.pdf.

- Bakker, Karen, (et.al.), "Disconnected: Poverty, Water Supply and Development in Jakarta", (Occasional Paper, Human Development Report, United Nations, 2006).
- Castellanos-Jankiewicz, León. "Causation and International State Responsibility," Amsterdam Law School Research Paper No. 2012-56, University of Amsterdam, 2012
- Central Statistics Body of Jakarta. "Garis Kemiskinan, Jumlah, dan Persentase Penduduk Miskin di Daerah Menurut Kabupaten/Kota di Provinsi DKI Jakarta 2018-2020". Badan Pusat Statistik Provinsi DKI Jakarta. <https://jakarta.bps.go.id/indicator/23/645/1/garis-kemiskinan-jumlah-dan-persentase-penduduk-miskin-di-daerah-menurut-kabupaten-kota-di-provinsi-dki-jakarta.html>.
- Chandra Utama, "Manajemen Kenaikan Tarif PAM untuk Peningkatan Akses Air Bersih bagi Seluruh Masyarakat", Jurnal Administrasi Bisnis 6, No. 02 (2010).
- CNN Indonesia. "Amblas Tanah DKI, Ancaman Jakarta Tenggelam 2050". CNN Indonesia. https://www.cnnindonesia.com/teknologi/20210621143654-199-657279/ambblas-tanah-dki-ancaman-jakarta-tenggelam-2050_
- Cohen, Harlan & Angeliki Papantoniou, "Rights to life and to Personal Integrity in Environmental Matters - Environmental Rights- Extraterritorial Jurisdiction - Principles of Prevention, Precaution, Cooperation", American Journal of International Law 112, No. 3 (2018).
- De Schutter, Olivier, (et.al.), "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights", Human Rights Quarterly 34, No. 4, (2012).
- Dhio Faiz. "Izin Penggunaan Air Tanah di Lima Gedung DKI Terancam Dicabut". CNN Indonesia. <https://www.cnnindonesia.com/nasional/20180710113856-20-312927/izin-penggunaan-air-tanah-di-lima-gedung-dki-terancam-dicabut>.
- Furlong, Kathryn & Kooy, Michell. "Worlding Water Supply: Thinking Beyond the Network in Jakarta". International Journal of Urban and Regional Research 41, No. 6 (2017).
- Hasanuddin Abidin, "Land Subsidence of Jakarta (Indonesia) and Its Geodetic Monitoring System", Natural Hazards 23, No. 23 (2001).
- _____, (et.al.), "Land Subsidence of Jakarta (Indonesia) and its relation with Urban Development". Natural Hazards 59, No. 3 (2011).
- Hayati Nupus. "Jakarta Could Be Underwater by 2030: Experts". Anadolu Agency. <https://www.aa.com.tr/en/asia-pacific/jakarta-could-be-underwater-by-2030-experts/1017878>.
- Huda Bachtiar, (et.al.), "Optimized Jakarta Outer Sea Dike Plan of NCICd Program to Wave Run-Up of a Possible Anak-Krakatau Tsunami", Jurnal Sumber Daya Air 13, No. 2, (2017).

- Hurst Hannum, International Law Association LXVI Conference held in Buenos Aires", (Final Report on the Status of the Universal Declaration of Human Rights in National and International Law, Doc. CIDH/12393, August 14-20, 1994).
- Indonesian Ministry of National Planning and Development, "Report on the Estimation of Damages and Losses Post-Flood in Early February 2007 in the Greater Jakarta Area (Jakarta, Bogor, Depok, Tangerang, and Bekasi)", https://www.bappenas.go.id/files/3713/5462/9576/laporan-banjir_20081123055830_995_0.pdf.
- Jootaek Lee and Maraya Best, "The Human Right to Water: A Research Guide & Annotated Bibliography" (research paper, Law, Northeastern University, Boston, 2017).
- Kalantry, Sital (et.al.), "Enhancing Enforcement of Economic, Social, and Cultural Rights Using Indicators: A Focus on the Right to Education in the 1966 International Covenant of Economic, Social, and Cultural Rights ", Human Rights Quarterly 32, No.13 (2010).
- Kirschner, Adele J., "The Human Right to Water and Sanitation", Max Planck Yearbook of United Nations Law 15, No. 10 (2011).
- Kusumaputra A, Perwira, I, Nurlinda, I, "Village Autonomy: The Main Road to Fulfill Right to Water", Hasanuddin Law Review 4, No.3 (2018), 284.
- Lingga, Rivan. "Slums Remain a Fact of Life in Jakarta, Ministry Finds". Jakarta Post. <https://www.thejakartapost.com/news/2019/05/28/half-of-jakarta-is-slum-ministry-says.html>.
- Luo, Pingping, (et.al.), "Water Quality Trend Assessment in Jakarta: A Rapidly Growing Asian Megacity", *PLoS ONE* 14, No. 7 (2019).
- M., Douglass. "Mega Projects and the Environment Urban Form and Water in Jakarta", Environment and Urbanization Asia 1, No. 1 (2010).
- Mila Yefriza. "Peneliti Geoteknologi Buka Suara Soal Jakarta akan Tenggelam". Tagar.id. <https://www.tagar.id/peneliti-geoteknologi-buka-suara-soal-jakarta-akan-tenggelam>.
- Muhammad Ansari, "State-Owned Enterprises and State Control in the Field of Electricity", Jurnal Konstitusi 14, No. 1 (2017).
- Muhammad Ridhoi. "Apa Langkah Anies Tindak Pelanggar Eksploitasi Air Tanah DKI". Tirto. <https://tirto.id/apa-langkah-anies-tindak-pelanggar-eksploitasi-air-tanah-dki-cNVd>.
- Putri Oktaviani, "Public-Private Partnership in Water Supply of DKI Jakarta", Jurnal Manajemen Pelayanan Publik 4, No. 1 (2020).
- Ratu Rina and Pablo, Samuel. "Siapa Aetra-Palyja, Pengelola Air Jakarta yang didepak Anies?". CNBC Indonesia. <https://www.cnbcindonesia.com/news/20190211143532-4-54823/siapa-aetra-palyja-pengelola-air-jakarta-yang-didepak-anies>.
- Roxstorm, Erik & Gibney, Mark., "Human Rights and State Jurisdiction", Human Rights Review 18, No. 2 (2017).

- Samsuhadi, "Pemanfaatan Air Tanah Jakarta", *Jurnal Air Indonesia* 5, No. 1, 2009.
- Yordan Gunawan, "Transboundary Haze Pollution in the Perspective of International Law of State Responsibility", *Jurnal Media Hukum* 21, No. 2 (2014).
- Yunani Abiyoso, "Pemenuhan Hak atas Air oleh Negara: Studi Yuridis Terkait Air di Jakarta" (Master Thesis, Universitas Indonesia, 2012).

Legal Documents

- Court of Appeal of the Republic of Botswana. *Mesetlhanyane & Matsipane v. The Attorney General*, Lobase, 27 Januari 2011.
- African Commission on Human & Peoples' Rights. *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v Nigeria* (2002), Communication No. 155/96, 27th of May 2002.
- ECOSOC. Res. E/1991/23, December 14, 1990. Committee on Economic, Social and Cultural Rights, *General Comment No. 03 (1990): The Nature of States Parties' Obligations (Article 2, para. 1, of the Covenant)*.
- ECOSOC. Res. E/1996/22, December 8, 1995. Committee on Economic, Social and Cultural Rights, *General Comment No. 6 (1996): The Economic, Social and Cultural Rights of Older Persons*.
- ECOSOC. Res. E/C.12/2000/4, August 11, 2000. *Substantive Issues arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights - General Comment No. 14 (2000): The Right to the Highest Attainable Standard of Health*.
- ECOSOC. Res. E/C.12/2002/11, November 29, 2002. *General Comment No. 15: the Right to Water in Articles 11 and 12 of the International Covenant on Economic, Social and Cultural Rights*.
- ECtHR. *López Ostra v. Spain* (1994), Application No. 16798/90, 9th of December 1994.
- ECtHR. *Cordella and Others v. Italy* (2019), Application No. 54414/13 and No. 54264/15, 24th of January 2019.
- ECtHR. *Fadeyeva v. Russia* (2005), Application No. 55723/00, 9th of June 2005.
- ECtHR. *Öneryildiz v. Turkey* (2004), Application No. 48939/99, 30th of November 2004.
- Government Regulation Number 43 of 2008 on Ground Water.
- Governor Regulation of DKI Jakarta Number 20 Year 2013 regarding Infiltration Wells.
- Governor Regulation of DKI Jakarta Number 93 Year 2021 regarding Groundwater Free Zones
- High Court of Kerala. *Perummaty Grama Panchayat v. State of Kerala*, Judgment Reference No. 2004 (1) KLT 731, 16 December 2003.

- HRC. *Liliana Assenova Naidenova et al. v. Bulgaria*, Communication No. 2073/2011, November 24, 2012.
- HRC. *Portillo Cáceres v. Paraguay* (2019), Communication No. 2751/2016, July 25, 2019.
- ICJ. *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (2010), ICJ Reports 2010.
- Indonesian Constitutional Court. Decision No. 85/PUU-XI/2013, Judicial Review of Water Resources Law.
- Indonesian Supreme Court. Decision No. 31 K/Pdt/2017,
- Inter-American Court of Human Rights. *The Environment and Human Rights*, Advisory Opinion OC-23/17, November 15 2017, Requested by the Republic of Colombia.
- International Committee of the Red Cross. *Geneva Convention Relative to the Treatment of Prisoners of War (Third Geneva Convention)*, U.N.T.S. 135, p. 75, 12 August 1949.
- International Criminal Tribunal for Former Yugoslavia. *Prosecutor v. Anto Furundzija*, Judgment IT-95-17/1, 10 December 1998.
- Regional Regulation of the Special Capital Region of Jakarta Number 17 of 2010 on Ground Water Tax.
- United Nations. *Report of the United Nations Conference on Environment and Development*. A/CONF.151/26/Rev.1 (Vol. I). Rio de Janeiro, 3-14 June 1992.
- United Nations. *Vienna Declaration and Programme of Action*. U.N. Doc. A/CONF.151/23. Vienna, June 25, 1993.
- UN GA. Res. A/RES/64/292, 3rd of August 2010. *The Human Right to Water and Sanitation*, 64th Session.
- UNHRC. Res. A/HRC/RES/15/, October 6, 2010. *Human Rights and Access to Safe Drinking Water and Sanitation*.
- UN GA. *Convention on the Elimination of All Forms of Discrimination against Women*. U.N.T.S. Vol. 1249, p. 13, 18 December 1979
- UN GA. *Convention on the Rights of the Child*. U.N.T.S. Vol. 1577, p. 3, 20 November 1989.
- UN GA. *Convention on the Rights of Persons with Disabilities*. A/RES/61/106, 24 January 2007.
- UN GA. *International Convention on the Protection of the Rights of All Migrant Workers*. A/RES/45/158, 18 December 1990.
- UN GA. *International Covenant on Economic, Social and Cultural Rights*. U.N.T.S. Vol. 993, p. 3, 16 December 1966.