POSITION PAPER

INPUT FROM *AMPL* NETWORK TO PEOPLE'S REPRESENTATIVE COUNCIL OF THE REPUBLIC OF INDONESIA REGARDING WATER RESOURCES BILL

(This input is based on 23 April 2018 version of the Water Resources Bill)

EXECUTIVE SUMMARY

On 17 September 2018, a Focus Group Discussion (FGD) entitled "Multi-party Recommendations on Water Resources Bill (RUU SDA)" was organized by AMPL Network (Drinking Water and Sanitation Network) at Akmani Hotel, Jakarta. AMPL Network was formed on 8 October 2007 in Jakarta to addres the issue of low service accessibility, weak coordination and synergy in the water and sanitation (AMPL) sector. Members of the AMPL Network comprises actors and observers in the water and sanitation sector in Indonesia.

Discussions in the FGD produced inputs and revisions to the articles in the Water Resources Bill (RUU SDA). To follow up on the results of the discussion, a workshop with the same title was held to present the discussion results to responders and participants from the civil society, NGOs, government stakeholders, working partners and mass media. The workshop was held at The Park Lane Hotel on 20 September 2018.

Below is a summary of inputs from the AMPL Network to the People's Representative Council of the Republic of Indonesia from the discussion results at the FGD and Workshop.

1. **Water Resources Bill (RUU SDA) does not sufficiently accommodate Community-Based Drinking Water Supply**. To date, around 12,254 (twelve thousand two hundred fifty-four) community-based water systems have been built through the Community-Based Drinking-Water Supply and Sanitation Provision Program (*PAMSIMAS*) serving around 15.6 million Indonesians across 33 provinces and 365 Districts. In 2020, 20,000 Drinking-Water Supply System (*SPAM*) will be built, with a target of 22.1 million people being served safe drinking water. This number excludes non-*PAMSIMAS* Drinking-Water Supply System (*SPAM*) built. In the 2015-2019 National Medium-Term Development Plan (*RPJMN*), community-based systems are projected to serve up to 60 percent of Indonesia's population and the remainder will be served through Regional Drinking-Water Company (*PDAM*) pipeline system. In spite of the above, community-based systems are not explicitly addressed in Water Resources Bill (RUU SDA).

   We recommend that the community-based system be explicitly stated in the Water Resources Bill (RUU SDA), especially in the main body and elucidation to Article 45 and in the main body and elucidation to Article 51.

2. **The Water Resources Bill does not guarantee sanitation as part of human rights to water** as mandated by the Constitutional Court (MK); stated in the Covenant on Economic, Social and Cultural Rights that has been ratified by Indonesia and is a target of Sustainable Development Goals (SDG). 70 (seventy) million people do not have access to proper sanitation services. 30 (thirty) million Indonesians still practice open defecation, placing Indonesia as the second country contributing to open defecation in the world after India (2017 JMP Data). The loss to Indonesia's economy from bad sanitation reaches IDR 56 Trillion annually, all while the Government continues to invest trillions of Rupiah through various sanitation programs each year. This condition requires a legal basis.

   We recommend the phrase "wastewater **services**" to be included in Article 23(7). The term "service" is important to guarantee sanitation as a basic service for human rights

to water. Meanwhile, elucidation to Article 23(7) should explicitly stipulate the two domestic wastewater systems, namely local system and centralized system.

3. **The mention of *AMDK* (Bottled Water) as Drinking Water may undermine the achievement of piped water targets**. Elucidation to Article 51 of Water Resources Bill states that drinking water includes piped drinking water and *AMDK* (Bottled Water). Meanwhile, from constitutional, human rights and regulatory aspects, drinking water is defined as piped water. We are concerned about the negative consequences of drinking water companies doing bottled water business, which would ultimately neglect the core of the business in terms of expanding access to piped water.

   We recommend the term Bottled Water (*AMDK*) to be removed from the elucidation to Article 51 of the Water Resources Bill.

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1. INTRODUCTION

On 18 February 2015, through the Decision of the Constitutional Court (MK) Number 85/PUU-IX/2013, the Constitutional Court has repealed Law Number 7 of 2004 concerning Water Resources. The Constitutional Court considered that the 2004 Water Resources Law opened the opportunity for privatization and commercialization, thus contradicting Article 33 of the 1945 Constitution. Due to the repeal of 2004 Water Resources Law, several implementing regulations from 2004 Water Resources Law, including Government Regulation Number 16 of 2005 regarding Development of Drinking-Water Supply Systems (*PP SPAM*) and Government Regulation Number 43 of 2008 regarding Groundwater have been declared null. Thus, there are currently no regulations serving as the basis for conservation and management of Water Resources in Indonesia.

To prevent a legal vacuum, the Constitutional Court temporarily re-enacted Law Number 11 of 1974 regarding Irrigation until a new Water Resources Law is passed. To support the Law regarding Irrigation, in December 2015, the government issued Government Regulation Number 121 of 2015 regarding Exploitation of Water Resources and Government Regulation Number 122 of 2015 regarding Drinking-Water Supply Systems (*PP SPAM*).

The Law regarding Irrigation is no longer considered relevant to current conditions, thus it cannot be used as a guideline for management of water resources in Indonesia, thus the design of the new Water Resources Law must be able to accommodate current conditions and needs and consider the social, economic and environmental functions.

This position paper builds on the discussions in Policy Paper 01, 02 and 03 of 2018 prepared by the Center for Regulation, Policy and Governance (CRPG).

2. WATER RESOURCES BILL HAS NOT ACCOMODATED COMMUNITY-BASED WATER SYSTEMS

a. 2015 Decision of the Constitutional Court

Through its decision in 2015, the Constitutional Court (MK) has stipulated six Basic Principles of the Constitutional Court (MK), namely:

*"Pursuant to the above considerations, there must be very strict restrictions in the exploitatino of water to preserve and sustain the availability of water for life of the nation [vide Article 33 paragraph (4) of the 1945 Constitution (*UUD 1945*)];*

***[3.19]** Considering as the first restriction, any exploitation of water must not disrupt, exclude, and more so negate people's right to water because the earth and water and natural wealth contained within must be controlled by the state, and it shall, to the fullest extent, be intended for people's prosperity;*

***[3.20]** Considering as the second restriction, the state must fulfill people's right to water. As considered above, access to water is a specific fundamental right, therefore Article 28I paragraph (4) stipulates, "Protection, advancement, enforcement and fulfillment of human rights shall be the responsibility of the state, specifically the government."*

[3.21] *Considering as the third restriction, recalling environmental preservation as one of the human rights, Article 28H paragraph (1) of 1945 Constitution stipulates, "Every person shall have the right to live in physical and mental prosperity, to have residence, and have a good and healthy environment and shall be entitled to health services."*

[3.22] *Considering as the fourth restriction, that as an important production branch, one that controls the livelihood of many people that must be controlled by the state [vide Article 33 paragraph (2) of 1945 Constitution] water according to Article 33 paragraph (3) of 1945 Constitution must be controlled by the state and used to the fullest exitent for the prosperity of the people, thus the supervision and control by the state over water shall be absolute;*

[3.23] *Considering as the fifth restriction that as an extension of the state's control rights and because water controls the livelihoods of many people, priority for exploitation of water shall be given to State-Owned Enterprises or Region-Owned Entreprises;*

[3.24] *Considering that if all of the above restrictions have been fulfilled and water supply is still availabile, it is possible for the Government to issue permits to private businesses to exploit water with certain strict conditions"*

The 2015 Constitutional Court Decision cites several actors in water exploitation, namely the state, State-Owned Enterprises/Region-Owned Business Entreprises (BUMN/BUMD), and the private sector. In this decision, it is clear that State-Owned Enterprises/Region-Owned Business Entreprises are given the priority to conduct water explotation, while the private sector can conduct water exploitation with certain and strict conditions provided the five restrictions above have been met and water supply is still available. Furthermore, the 2015 Constitutional Court Decision does not define the notion of "private" – whether the concept of "private" also includes cooperatives, individual enterprises, or small-scale industries. This is different from the stipulation in the 2005 Constitutional Court Decision that included more actors, such as the State, Regional Drinking-Water Company (PDAM), Cooperatives, "Private Business Entities", and Customary Law Societies. The Legal Considerations in the 2005 Constitutional Court Decision does not explicitly refer to State-Owned Enterprises/Region-Owned Entreprises (BUMN/BUMD).

b. Participation in Community-Based Drinking Water Provision

To date, around 15,000 community-based water systems have been built through Community-Based Drinking-Water and Sanitation Provision Program (PAMSIMAS) serving around **15.6 million** people in Indonesia. This figure does not include other community-based systems outside the PAMSIMAS Program that have been operating for more than 15 years.

The important role of this community-based water systems in meeting the daily water needs is in line with the government's strategy in drinking-water provision, as stated clearly in the 2015-2019 National Medium Term Development Plan (RPJMN) where **community-based systems will serve up to 60 percent of Indonesia's population** and the rest will be served through Regional Drinking-Water Company (PDAM) pipeline systems. However, as explained below, the April 2018 version of the Water Resources Bill has notsufficiently accommodated the role of community groups as managers of natural resource.

c. Community-Based Water Systems cannot exploit Water for Drinking-Water

Article 1 point 7 of the April 2018 version of the Water Resources Bill defines the management of water resources as an effort to plan, implement, monitor, and evaluate Water Resources conservation, Water Resources utilization, and control of Water destructive powers.

The Parties eligible to be given the task of managing water resources are regulated in Article 19 paragraph (2) as follows:

"*Water Resource Managers as stipulated in paragraph (1) can be in the form of a* ***ministerial technical implementation unit/regional technical implementation unit*** *or a* ***state-owned enterprise/region-owned enterprise*** *in the field of Water Resource Management."*

Furthermore, Article 46 paragraph (1) letter e stipulates that for water resource exploitation activity, priority shall be given to ***state-owned enterprises, regional-owned enterprises, or village-owned enterprises.***

Additionally, Article 52 paragraph (1) stipulates that if there are areas that ***are not yet covered*** by drinking-water supply system organized by state-owned enterprises (BUMN) and/or region-owned enterprises (BUMD), drinking-water organization of the area **may be done** by **technical implementation units/regional technical implementation units, cooperatives, village-owned enterprises, private enterprises engaged in the drinking-water industry and/or the *community*.**

The phrase "***not yet covered***" in Article 52 (1) of the Water Resources Bill could also present problems in its implementation. Coverage could have a variety of meanings: is it pipe network coverage, service coverage or administrative coverage? There are many situations where communities are, actually, within an administrative area of a Regional Drinking-Water Company (PDAM), however, there is no service connection. There are also many who have their pipes connected to the Regional Drinking-Water Company (PDAM) but the water does not flow. Would this fall under the "not yet covered" category? Conversely, if a Regional Drinking-Water Company (PDAM) connects its pipeline to areas served by community-based systems, would the area then considered covered and the community must therefore switch to the PDAM system?

As discussed earlier, drafters of the Bill have added village-owned enterprises (BUMDes) as providers of drinking-water supply systems through exploitation permits. However, there are inconsistencies between the provision in Article 46 paragraph (1) letter e and Article 52 paragraph (1) in prioritizing BUMDes as provider of drinking-water systems. The provision of Article 46 paragraph (1) letter e explicitly gives priority to BUMDes as a provider of drinking-water supply systems, but the provision of Article 52 paragraph (1) places BUMDes as a secondary provider, that is, in the event that the drinking-water system within the area is not yet covered by State-Owned Enterprises (BUMN) and/or Region-Owned Enterprises (BUMD). This shows inconsistency of the water policy between villages (rural) and cities (urban).

Finally, Article 51 paragraph (1) stipulates that: "*Permit for Use of Water Resources for business purposes using Water and Water power as material that produces* ***products in the form of drinking water for daily needs*** *shall be given to* ***state-owned enterprises, region-owned enterprises, or village-owned enterprises*** *and may involve private parties engaged in drinking water industry by fulfilling the principles as stipulated in Article 46*". With this Article

51, it is not possible for community-based systems to ***exploit*** *Water and Water power as material that produces products in the form of drinking-water for daily needs*.

d. Issues Around the Concept of "Non-Business Needs" and Its Derivative Concepts

With Article 51 above, does it mean that community-based water systems can no longer operate? In the September 20th Workshop in Jakarta, several participants expressed that the "entry point" for community-based water systems is through "non-business purposes". We will examine whether this concept is adequate for community-based water systems.

This "non-business" purpose is regulated in several Articles in the Water Resources Bill, which will be described below. Articles that relate directly are Article 8, Article 28 (2), Article 44, Article 45, Article 46, Article 49. To understand further, see the mindmap in ***appendix 4***.

Article 8:

- Provides "guaranteed" categories, namely minimum daily basic need of 60 liters per person per day, less than 2 hectares smallholder agriculture and no more than 2 liters per day as well as "non-business activities"
- Explains that the without-permit "non-business" category is, for example, for social, religious and cultural purposes
- Explains that permit is required (the category is not explicitly stated) if done in large quantities, changes the natural conditions of water sources and located outside the irrigation system.

In principle, Article 45 along with its elucidation (for criticism on the norms of Article 45 please refer to **appendix 3** point 6):

- States that Permit for Use of Water Resources for Non-Business Purposes shall be required if the activity is done in the context of **fulfilling daily basic needs** conducted by changing natural conditions of the water sources; or is intended for **groups requiring water in large quantity**.
- Explains that the definition of "water in large quantity" is Surface Water quota that exceeds the daily basic needs for 150 (one hundred and fifty) people from one collection point or more than 60 (sixty) liters per person per day. Whereas "water in large quantity" for Groundwater is if Groundwater is taken from bore wells with a diameter of more than 2 (two) inches or more than 5 (five) centimeters or more than 100 (one hundred) cubic meters per month per head of household.

What is the definition of **daily basic needs**? The Bill does not provide an elucidation. Nevertheless, we could interpret that daily needs include, for example, bathing, washing, toilet and drinking-water.

i. Article 45 may still lead to multiple interpretations for community-based systems

The ensuing legal question is: are communities allowed to manage **drinking-water** systems for their daily basic needs? If so, what is the legal basis?

Article 51 stipulates "*Permit for Use of Water Resources for business purposes by using Water and Water power as material that produces products in the form of drinking-water for daily needs shall be given to state-owned enterprises, region-owned enterprises, or village-owned enterprises*." Referring to Article 51, any provision of drinking-water, whether by Regional

Drinking-Water Company (PDAM) or SIMAS Drinking-Water Program (PAMSIMAS), shall be regulated by Article 51 and must be done through an exploitation permit because the output is "drinking-water" and the provision that explicitly regulates drinking-water is Article 51.

Doesn't Article 45 regulate daily needs and drinking water is a daily need? It does, but Article 51 is even more explicit because it also regulates daily needs stating "*… Water power as material that produces* ***products in the form of drinking-water for daily needs***", whereas drinking-water is not explicitly mentioned in Article 45 and can only be inferred. As a result, **Article 51 becomes *lex specialis* – regulating drinking-water – compared to Article 45** that is general (water for daily needs). This can lead to legal uncertainty and repeal of derivative regulations of the Water Resources Law. This can be avoided if Article 45 specifies the same matter as Article 51. That is, if Article 51 regulates permit for business purposes where the product is drinking-water for daily needs, then **Article 45 shall also regulate the permit for "non-business" needs where the product is drinking-water for daily needs and specify "community groups" or individuals within it.**

ii. Dualism in Drinking-Water Regulation: Village-Owned Enterprise (*BUMDes*) and Community-Based

Another matter that begs a question is why Village-Owned Enterprise (BUMDes) is **explicitly regulated** with Article 51 (Exploitation Permit) while community-based systems are not explicitly regulated in either Article 51 or Article 45? In other words, if PAMSIMAS or other community-based programs are run through a Village-Owned Enterprise (BUMDes) business unit it may be regulated by Article 51, whereas if it is run through cooperatives, foundations or without a legal entity then it is regulated by Article 45. Despite both systems are drinking-water for rural areas (rural water supply), their permit regulation and implications are different.

iii. Priority and Bureaucracy of Permits

Some arguments view that the regulations in the April 2018 Version of the Bill as more beneficial for community-based systems. The first reason is in the order of priority (see Article 49 (3)), where daily basic needs for groups with large demand for water shall have the first priority. Meanwhile, drinking water for business purposes is in the fourth place. [For general criticism of systematics of Article 49, see **Appendix 3**]

The above argument is correct. Normatively, it means that if community-based water is categorized as "daily basic needs for groups with large water quantity requirements" then pursuant to the order of Article 49 (3), it will be in the first priority. However, as proposed above, there needs to be explicit recognition that community-based water shall be within the coverage of Article 45.

Although normatively the priority for "daily basic needs for groups with large Water quantity requirements" is a top priority, this category needs to be anticipated for those not requiring a permit (no more than 150 people). As there is no need for permits, there is no written evidence that can be used as a reference in the Court. Therefore, for those not requiring permits, the Regional Government shall be given the obligation to record all water use in the category of "daily basic needs for groups with large Water quantity requirements". This recording may later be used as evidence before the court.

e. Explicit recognition in Government Regulation 122

Compared to the April 2018 version of the Water Resources Bill, Government Regulation Number 122 of 2015 regarding Drinking Water Supply System (PP SPAM) explicitly stipulates

that “community groups” are amont those who may conduct drinking water management. Article 42 paragraph (1) of PP SPAM stipulates that implementation of Drinking-Water Supply System (SPAM) shall be done by:

a. State-Owned Enterprises (BUMN)/Region-Owned Enterprises (BUMD);
b. Technical Implementation Unit (UPT)/Regional Technical Implementation Unit (UPTD);
c. **Community Groups**; and/or
d. Business Entities.

“Community Groups” are defined in Article 1 number 16 as: “***groups, associations, or community*** *formed by the community as [a form of] community participation in the Implementation of Drinking-Water Supply System (SPAM) to fulfill their own needs.*”

Provisions of Article 42 paragraph (1) of Government Regulation regarding Drinking-Water Supply System (PP SPAM) are more accommodating to community-based water systems because they have recognized the existence of Community Groups as a party that organize Drinking-Water Supply System (SPAM) that in practice has indeed provided access to water for communities.

Implementation of SPAM by Community Groups, according to Article 49 paragraph (1), shall be done to provide drinking water services to people outside the service coverage of State-Owned Enterprises/Region-Owned Enterprises (BUMN/BUMD) and Technical Implementation Unit (UPT)/Regional Technical Implementation Unit (UPTD). Implementation of SPAM by Community Groups is intended to fulfil the daily Drinking-Water Basic Needs for people in the region.

Although the existence of Community Groups is recognized in Government Regulation regarding Drinking-Water Supply System (PP SPAM), provisions of Article 49 paragraph (1) of PP SPAM continue to show preference for State-Owned Enterprises/Regiona-Owned Enterprises (BUMN/BUMD) in providing drinking water services to communities. Community Groups are positioned as secondary providers of drinking-water that only play a role when BUMN/BUMD services **cannot reach** an area.

f. Conversion to BUMDes could trigger problems

There are suggestions that all community-based systems be converted into Village-Owned Enterprises (BUMDes). However, in practice, many community-based water associations do not want to be converted into Village-Owned Enterprises (BUMDes) because they are laden with village politics. In a previous study, there were cases where the conversion of community-based systems into Village-Owned Enterprises (BUMDes) actually triggered conflicts which eventually caused the existing built system to not function (AIIRA, 2015). In addition, there are also conceptual differences between Village-Owned Enterprises (BUMDes) and community-based water systems. As a business entity, Village-Owned Enterprises (BUMDes) could be more profit oriented, while community-based water systems are not profit oriented.

g. The concept of “Private Party” in the April 2018 version of the Water Resources Bill Undermineds Community-Based Water Systems

The 2015 Decision of the Constitutional Court (MK) uses the terms “private” and “private business” but does not define it. According to KBBI, a Indonesian Language Dictionary, “private” is defined as anything that “does not belong to the government”. The definition of “private” also includes definition of “private business entity”. *Memorie van Toelichting Rencana Undang-Undang Wetboak van Koophandel* according to Khairandy (2003) defines a company

as "… the entirety of actions carried out continuously, openly in a certain position, and to bring profit for itself".[1] This element of profit and loss seems vital to the definition of "company".[2]

Referring to the concept, it can be concluded that "private business entities" include any profit-oriented actors, including Limited Liability Company (PT), Cooperatives, Firms, Limited Partnership Company (CV), etc., but do not include associations and foundations because they are not profit oriented, although PT, Firms, Cooperatives, CVs, Foundations and Associations can be categorized as "forms of business".[3] Thus, it is clear that "private" is not always in the form of large corporations. In fact, mass organizations or NGOs are also categorized as "private".

The concept of "community-based" requires an element of "locality" where people can meet each other and participate in decision-making process. In this concept, the community acts as the decision maker and manager of water resources. Community-based water systems are not always legal entities, and the beneficiary of the services provided is the local community. Funding for infrastructure development is also obtained from various sources, such as donors, the government, private sector, and community.

Juridically, community-based water systems that have provided tens of thousands of water systems to the community are also included in the "private" concept in the form of associations (legal entities or otherwise), foundations, and cooperatives.

Referring to Article 46 paragraph (1) letter f, granting a Permit for Use of Water Resources for business purposes to private parties can be done under certain and strict conditions. As stipulated in Article 47, the certain and strict conditions that must be met by the private parties shall at least include:

a. *in line with Water Resources management scheme and Water Resources management plans;*
b. *being a legal entitiy;*
c. *fulfilling administrative technical requirements;*
d. *in collaboration with the Central Government and or the Regional Government;*
e. *getting recommendations from stakeholders in the Water Resource area;*
f. *providing a bank guarantee the amount of which to be adjusted to the volume of water use; and*
g. *setting aside at least 10% (ten percent) of business profits for conservation of Water Resources.*

The provision regarding private sector in Article 47 of the April 2018 version of the Water Resources Bill are not in accordance with the community-based water system concept, consdiering the fact that some community-based water systems are legal entities while others are not. Most take the form of associations or legal entity associations, and a small portion are foundations. Hence, the provision that a private party must be a legal entity is not relevant if applied to community-based water systems.

[1] Ridwan Khairandy, 'Karakter Hukum Perusahaan Perseroan Dan Status Hukum Kekayaan Yang Dimilikinya' (2013) 20 Jurnal Hukum Ius Quia Iustum 81

[2] Abdulkadir Muhammad and PT Citra Aditya Bakti, 'Hukum Perusahaan' [1999] Bandung: Citra Aditya Bakti; Ryan Sanjaya, Etty Susilowati and Siti Mahmudah, 'Kajian Terhadap Kepailitan Notaris Di Indonesia' (2016) 5 16

[3]

In addition, the provision of letter g regarding setting aside of "business profits" for conservation of Water Resources does not with the concept of community-based water systems given that associations and foundations are not-for-profit oriented business entities.

Furthermore, referring to Article 51 paragraph (4) of April 2018 version of the Water Resources Bill, it is stipulated that the involvement of private parties engaged in drinking water industry as stipulated in paragraph (1) can be done through:

a. *a form of partnership with a certain time period according to investment period of private party;*
b. *establishment of a company between a state-owned enterprise, region-owned enterprise, or village-owned enterprise and a private party engaged in drinking-water industry;*
c. *capital participation of state-owned enterprises, region-owned enterprises, or village-owned enterprises in other companies engaged in drinking-water industry; and*
d. *private capital participation in state-owned enterprises, region-owned enterprises, or village-owned enterprises according to provisions of statutory laws.*

Based on provisions of Article 51 paragraph (4), it seems that the regulation is more suited for business entities in the form of a limited liability company (PT), and not suitable if applied to community-based water systems. Thus, the concept of "private parties" in the April 2018 version of the Water Resources Bill is not yet able to accommodate community-based water systems.

h. Recommendation

The April 2018 version of the Water Resources Bill tends to overlook community-based water systems, although in reality community-based water systems have been providing water resources to Indonesians in remote areas. We, therefore, propose that the April 2018 version of the Water Resources Bill **should specifically regulate community-based water systems** that shall at least include definitions, rights and obligations, as well as entity forms of the community-based water systems.

In the FGD, the **most important recommendations** to this question were:

- **To introduce the phrase "Community Groups"** into Article 51, in addition to other entities such as State-Owned Enterprises (BUMN), Region-Owned Enterprises (BUMD) and Village-Owned Enterprises (BUMDes). There are several ideas and recommendations regarding community-based water in the Water Resources Bill, for example community-based drinking-water supply should not be commercial, not a business, intended only for the community and their daily activities. This shall be added in the Elucidation to Article 51 (1).
- Regarding legal entity requirement, almost all agree that community-based water providers need to be legal entities, as it pertains to accountability as well as protection for administrators and users. The only problem is that the majority community-based water systems are currently in the form of associations that are not legal entities.
- There was a range of opinions in the FGD regarding the placement structure of legal entities regulation for community-based water systems. According to the *first* opinion, the legal entity provision is best placed in the main body of the Law. The *second* opinion suggests that the legal entity provision shall be included in the Elucidation section. In practice, however, no community has thus far succeeded to become commercial. Therefore, the term "legal entity" should be omitted then moved to the

Elucidation. There were also suggestions that in the elucidation a period of no more than 5 years should be provided for community-based water institutions that are not legal entities to convert into legal entities. However, if conversion is required, then the provision on legal entity shall be included in the body (as in the *first* opinion) to be regulated further through transition rules. The Ministry of Public Works will have to provide funds for conversion into legal entity. In addition, there was a suggestion to further elucidate the definition of legal entity. In the Elucidation to Article 51, several legal entity options that support the community-based water concept should be elaborated, such as Cooperatives, Foundations and Associations with Legal Entities and Customary Law Societies.

- On the matter of community-based concpet, there should also be a strict separation of functions: for example, between regulators, owners and operators. The role of village governments in the provision of community-based drinking-water services shall be as a regulator, while service providers are operators. This regulator role may be discharged through Village Regulations.

In the September 20 workshop, there was a discussion about community-based water being incorporated into Article 45. However, Article 45 is still multi-interpretative as it does not specify community-based water supply explicitly. Therefore, if Article 45 is to function as an entry point for the legal basis for community-based water systems, our recommendations are:

- To add in the body of Article 45 a: "*Permit for use of Water Resources for the fulfillment of basic daily needs including drinking-water supply, if:* ...."
- To add in the elucidation to Article 45 number 3: If the criteria in number 1 and number 2 above are met, the provision of drinking-water for daily needs shall require a non-business permit. An example of this is the provision of drinking-water through community-based drinking-water systems where communities are involved in the decision making, planning, development and management of the infrastructure. Community-based water systems shall be in the form of cooperatives, foundations, legal entity and non-legal entity associations as well as customary law communities.

3. WATER RESOURCES BILL SHALL GUARANTEE SANITATION AS A BASIC RIGHT

a. Sanitation in Water Resources Bill

The body of the Water Resources Bill does not mention the word sanitation and/or domestic wastewater, despite data indicating domestic wastewater pollution potential to be much higher than non-domestic wastewater pollution potential. Susenas 2017 recorded that **70 million people** currently have no access to proper sanitation services.

Data released by UNICEF and WHO through their Joint Monitoring Program in 2017 shows that almost 30 million Indonesians still practice open defecation. This untreated household wastewater is then discharged into rivers, lakes, or absorbed without adequate treatment, potentially polluting both groundwater and surface water sources. In addition to disturbing the environment, domestic wastewater pollution has health, social, cultural and economic effects. For this reason, domestic wastewater must be regulated and covered by the Water Resources Law (UU SDA), especially in the article regarding Water Resources pollution control.

Article 23 of the April version of the Water Resources Bill states:

"*(3) Conservation of Water Resources as stipulated in paragraph (1) shall be carried out by referring to Water Resources Management Plan through:*
a. protection and preservation of water sources;
b. water preservation;
c. water quality management; and
d. water pollution control.

(4) Protection and preservation of water sources as stipulated in paragraph (3) letter a is intended to protect and preserve water sources and the environment from damage or disturbance caused by natural forces and by human actions. "

Then elucidation to Article 23 (4) of the Water Resources Bill states:

"*Paragraph (4)*

The protection and preservation of Water Resources includes Protection and preservation of Surface Water Resources and Protection and preservation of Groundwater Resources. Protection and preservation of surface Water Resources shall be done through:

a. maintenance of sustainability of water sources, water absorption and water catchment area functions;
b. control of water sources use;
c. replenishment of water at the water source;
d. regulation of sanitation infrastructure and facilities;
e. protection of water sources in relation to development activities and land use in water sources;
f. control of land treatment in upstream areas;
g. regulation of water source riparian zones;
h. forest and land rehabilitation; and/or
i. preservation of protected forests, nature reserves and nature conservation areas"

It is evident that in the paragraph above sanitation is only mentioned once in the elucidation about surface water conservation. Because it is only briefly mentioned in the elucidation, there is a question whether sanitation infrastructure development is obligatory. Furthermore, in the elucidation to Article 23 (4) of the April version of the Water Resources Bill, the purpose of sanitation is solely to protect and preserve surface water sources, whereas sanitation functions as a **basic service** and is a human right besides the right to water. Additionally, many areas have seen Escherichia coli contamination in the groundwater from non-watertight septic tanks. For this reason, limiting sanitation *only* to protect surface water is not appropriate.

b. Definition of Sanitation and Wastewater

Although the definition of sanitation in international academic literature is strongly related to domestic wastewater management, in the 2015-2019 Roadmap for Accelerating the Development of Settlement Sanitation, sanitation is understood as an effort to manage wastewater, solid waste and drainage. For the purpose of this position paper on the Water Resources Bill, sanitation shall be limited to domestic wastewater.

Management of **non-domestic** wastewater has been regulated clearly through Law Number 32 of 2009 regarding Environmental Protection and Management, and Regulation of the Minister of Environment Number 5 of 2014 regarding Wastewater Quality Standards. I tis also regulated with Law Number 36 of 2009 regarding Health that does not specify the definition of liquid waste. As such, existing laws and regulations only regulate wastewater for industries and hospitals, but there is yet to be a specific regulation for household waste (domestic wastewater).

c. Sanitation in the Human Rights to Water

Sanitation is an integral part of human rights to water. General Comment 15 to the Covenant on Economic, Social and Cultural Rights (ratified by Indonesia through Law Number 11 of 2005) stipulates that a guarantee for all people to have access to proper sanitation is not only part of protecting human dignity, but also a means to protect the quality of drinking-water:[4]

"*Ensuring that everyone has access to adequate sanitation is not only fundamental for human dignity and privacy, but is one of the principal mechanisms for protecting the quality of drinking-water supplies and resources. In accordance with the rights to health and adequate housing (see General Comments No. 4 (1991) and 14 (2000)) States parties have an obligation to progressively extend safe sanitation services, particularly to rural and deprived urban areas, taking into account the needs of women and children.*"

The right to sanitation is also the core obligation of states in the Covenant on Economic, Social and Cultural Rights (ICESCR). States are:

"To take measures to prevent, treat and control diseases linked to water, **in particular ensuring access to adequate sanitation**;"[5]

d. Sanitation as an SDG target

In accordance with goal 6 of Sustainable Development Goals (SDGs), by 2030 the Government of Indonesia will guarantee the availability and management of sustainable clean water and sanitation for all. In detail, the following are goals related to sanitation to be achieved by 2030:

- 6.2 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.
- 6.3 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 .

Statistically there are 460 Districts/Cities in Indonesia that have committed to implement the settlement sanitation development acceleration program (PPSP) with target of Universal Access (100-0-100). According to 2015-2019 National Medium-Term Development Plan

[4] United Nations Committee on Economic Social and Cultural Rights, 'General Comment No. 15 (2002), The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)' (UN 2003).
[5] ibid.

(RPJMN), the Universal Access target launched by the government for sanitation is 100% sanitation access with a composition of 85% adequate access and 15% basic access. The 2017 National Social Economic Survey (Susenas) states that the achievement for adequate access was at 67.54% and 9.37% for basic access.

A 2008 World Bank study through Water and Sanitation Program noted that Indonesia has the potential to experience an **economic loss of Rp. 56 Trillion per year due to poor drinking-water and sanitation conditions**. This economic loss was calculated, among others, from water pollution burden, high health costs due to diseases caused by poor sanitation, the burden of disease, the loss of comfort, absence from school or work, and reduced revenue at tourist destinatinos. Poor sanitation also adds to clean-water processing costs.

e. Government programs and funding for sanitation

Funding sources for sanitation development may come from sources available at every level of government (central, provincial, district/city). Government funding sources for sanitation include Special Allocation Fund for Physical Development (*DAK Fisik*). There are several components of *DAK Fisik* that can be utilized for sanitation sector development, such as *DAK Fisik* for sanitation Sector that includes physical development for regular sanitation, communal Wastewater Treatment Plant (IPAL), Centralized Domestic Wastewater Management System (SPALD-T), communal-scale septic tanks, and rural-scale individual septic tanks. Additionally, there are several *DAK* schemes that can also be used for sanitation development, such as the *DAK Fisik* for Small Scale Energy Sector, *DAK Fisik* for Education Sector, through construction and rehabilitation of school latrines, and *DAK Fisik* for Environment and Forestry Sector, through construction of waste management facilities and infrastructure, reduction and control of weight of liquid wastewater pollution, monitoring of water quality, and laboratory equipment for water quality testing.

Based on Regulation of the Minister of Village, Development of Disadvantaged Regions, and Transmigration Number 19 of 2017, one of the village development priorities that can be financed through village funds is sanitation, through the construction of public latrines and washing facilities (MCK) and family latrines.

Recommendations

In the FGD, there was spirited discussion about sanitation/wastewater. All participants understood and saw the need for inclusion of sanitation/wastewater into the body of the Water Resources Bill. The discussion in the FGD was around the following issues:

- *First,* on the matter of terms, almost all agree that the term to be used should be wastewater, not sanitation.

- *Second,* on the matter of how much detail to be stipulated, a small number of participants reminded that this Water Resources Bill actually only regulates water resources, not services. However, a counter-argument arose as to why drinking-water is regulated in more detail if the intention is only to regulate on the matter of resources. The response to that was this is due to the Constitutional Court decision. Nevertheless, it means that the Water Resources Bill does not exclusively regulate on the matter of resources, but also on drinking water.

- Ideally, according to some FGD participants, the issue of sanitation shall be regulated in an article governing the Right to Water, because according to both the General Comment 15 and the Constitutional Court, both of these matters must be done by the state. There are problems regarding this recommendation, namely that if it were to be regulated in the article about the Right to Water, then it should be regulated in greater detail, and this could change structure of the law. For this reason, some parties agreed that for the time being, it is important that there is an article mentioning the term wastewater within the main body, so it can be used as a "hook" for derivative regulations. This inclusion is considered important, because the government has a target of 100-0-100 by 2019 (100 percent sanitation access) and a lack of regulation will hinder the fulfillment of this target, while social and health costs that must be borne due to bad sanitation are very high.
- *Third,* as the "hook", FGD participants proposed changes to draft article 23 paragraph 6 and paragraph 7 (as attached), namely to change article 23 (7) to read "*Water pollution control as stipulated in paragraph (3) letter c is intended to improve services of domestic wastewater and prevent entry of water pollution into water sources and water resource infrastructure*." This short paragraph contains two concepts, firstly the concept of wastewater as a **basic service** and the concept of wastewater infrastructure as a tool to **prevent pollution**. Wastewater as a basic service is part of human rights to water. The expected regulatory derivative from the phrase is around the minimum service standard, gender-friendly designs and so on. Meanwhile, wastewater as a means for preventing pollution can be a legal basis for stipulation of technical designs related to quality of wastewater as well as its infrastructure.
- Next, FGD participants also proposed additional elucidation to Article 23 (7), i.e.: *"domestic wastewater service" is a systematic activity in conducting domestic wastewater treatment consisting of local domestic wastewater management system (SPALD-S) and centralized domestic wastewater management system (SPALD-T)*

4. REFERRING TO BOTTLED WATER AS DRINKING WATER MAY CAUSE DISINCENTIVES FOR PIPELINE WATER

Elucidation of Article 51 of the Water Resources Bill (April 2018 version):
Paragraph (1)
products in the form of drinking water include, among others, drinking water organized through drinking water provision systems and bottled water.
Paragraph (2)
Self-explanatory.

As explained in CRPG Policy Paper 01/2018 the article above is not appropriate because:

Bottled Drinking Water is not a drinking water product. Drinking water products are only water originating from the Water Supply System (SPAM) provided by SOEs (BUMN), Region-Owned Enterprises (BUMD), Village-Owned Enterprises (BUMdes), Private Sector, Cooperatives, Individuals and/or Community groups. Bottled drinking water should be categorized as Food and Beverages product.

According to the Constitutional Court (MK):

"It means that, if water for daily needs and smallholder agriculture is taken from distribution channels, then the principle of "user of water shall pay for the cost of water resources management services" shall apply. However, this shall not be used as the basis for imposing expensive fees for people who depend on Regional Drinking-Water Company (PDAM) through distribution channels to fulfill their daily basic needs. "

Furthermore, the Constitutional Court (MK) in its 2005 decision mentioned the role of Regional Drinking-Water Companies (PDAM):

"Regional Drinking-Water Companies (PDAM) shall be positioned as a state operational unit in realizing the state's obligations as stipulated in Article 5 of the Water Resources Law, and not as an economically profit-oriented company."

From the viewpoint of the Constitutional Court (MK) above,[6] drinking-water exploitation shall be subject to two restrictions: (i) fees may not be high, and (ii) may not make profit. Consequently, SOEs (BUMN), Region-Owned Enterprises (BUMD) and Village-Owned Enterprises (BUMDes) that charge expensive fees or make profit from drinking-water industry will be contravening the constitution.

From the Human Rights point of view, Drinking-Water has four requirements:

a. Quality

   One of the parameters in the GC-15 is *"safe" water for personal and domestic uses.* GC-15 further explains what "safe" means:

   (b) Quality. The water required for each personal or domestic use must be safe, therefore free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health. Furthermore, water should be of an acceptable colour, odour and taste for each personal or domestic use.

b. Quantity
   According to GC-15 water for daily needs must be "sufficient". That means enough for drinking, food preparation, sanitation, washing of clothes and bathing:

   (b) Availability. The water supply for each person must be sufficient and continuous for personal and domestic uses. These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene. The quantity of water available for each person should correspond to World Health Organization (WHO) guidelines. Some individuals and groups may also require additional water due to health, climate, and work conditions;

[6] Decision of the Constitutional Court (MK) Number 058-059-060-063/PUUII/2004 regarding Review of Law Number 7 of 2004 regarding Water Resources.

GC-15 refers to the scientific work of Bartram and Howard (which was also used as WHO standard, 2003)[7] where they assert that the ideal amount received per person per day is 100 liters and **this is only possible if obtained through pipelined water** with several water taps in one house (optimal access):

Table 6: Service level descriptors of water in relation to hygiene

Service level description	Distance/time measure	Likely quantities collected	Level of health concern
No access	More than 1000m or 30 minutes total collection time.	Very low (often less than 5 l/c/d).	Very high as hygiene not assured and consumption needs may be at risk. Quality difficult to assure; emphasis on effective use and water handling hygiene.
Basic access	Between 100 and 1000m (5 to 30 minutes total collection time).	Low. Average is unlikely to exceed 20 l/c/d; laundry and/or bathing may occur at water source with additional volumes of water.	Medium. Not all requirements may be met. Quality difficult to assure.
Intermediate access	On-plot, (e.g. single tap in house or yard).	Medium, likely to be around 50 l/c/d, higher volumes unlikely as energy/time requirements still significant.	Low. Most basic hygiene and consumption needs met. Bathing and laundry possible on-site, which may increase frequency of laundering. Issues of effective use still important. Quality more readily assured.
Optimal access	Water is piped into the home through multiple taps.	Varies significantly but likely above 100 l/c/d and may be up to 300l/c/d.	Very low. All uses can be met, quality readily assured..

Bottled water cannot meet the quality standards of Human Rights to Water because in the human rights and health perspective, **this standard of 100 liters of water per person can only be met through piped water**.

c. Continuity

GC-15 provides that: "*The water supply for each person must be sufficient and continuous for personal and domestic uses*". GC-15 elaborates, "*Continuous*" *means that the regularity of the water supply is sufficient for personal and domestic uses.*

It can be concluded that bottled water does not fulfil the continuity standard in Water services. **Continuity could only be fulfilled by pipeline water, not bottled water (AMDK).**

d. Accessibility

[7] Guy Howard and Jamie Bartram, 'Domestic Water Quantity, Service Level and Health' (World Health Organization 2003) WHO/SDE/WSH/03.02.

GC-15 establishes two kinds of accessibility criteria. Firstly, the price of water must be affordable, and secondly, the distance to get water must also be accessible.

a. Economic Accessibility
According to GC-15:

(i) Economic accessibility: Water, and water facilities and services, must be affordable for all. The direct and indirect costs and charges associated with securing water must be affordable, and must not compromise or threaten the realization of other Covenant rights;

This economic accessibility is difficult to fulfill through bottled water. For example, the average tariff of Regional Drinking-Water Company (PDAM) in DKI Jakarta per cubic meter (1000 liters) is Rp 7025.00.[8] Thus, the price per liter is Rp 7.02. Compared to other regions, this tariff is quite expensive. The price of quality bottled water (19 liters) is Rp 19,000 (Rp 1,000 per liter).[9] **It can be concluded that the lowest price of bottled water of good quality is around 143 (one hundred forty-three) times the price of Regional Drinking-Water Company (PDAM) at an already expensive tariff.**

b. Physical Accessibility

(b) Physical accessibility: water, and adequate water facilities and services, must be within safe physical reach for all sections of the population. Sufficient, safe and acceptable water must be accessible within, or in the immediate vicinity, of each household, educational institution and workplace. All water facilities and services must be of sufficient quality, culturally appropriate and sensitive to gender, lifecycle and privacy requirements. Physical security should not be threatened during access to water facilities and services;

GC-15 mandates that "water facilities and services" must be inside the house or at least near the house. Each of these "water facilities and services", in addition to being close, must also have adequate quality and continuous.

According to Bartram (WHO) if a distance to get water is more than 1 km, it is considered that there is no access. It can only be said that there is the most basic water access if the distance is 100 meters to 1 km. It can only be said that there is optimal access is if water is flowed through several taps into the house. Under these WHO categorization, bottled water will be under the "no access" or "basic access" categories.

[8] 'Badan Regulator PAM DKI' <http://www.brpamdki.org/tariff-info/detail/87/> accessed 7 May 2018.
[9] Nurina Thirafi, 'Info Terbaru Harga Air Kemasan AQUA Gelas, Botol dan Galon (Eceran dan Kardus) 2017' (Daftar Harga & Tarif) </harga-air-kemasan-merk-aqua-gelas-botol-galon-per-1-dus-dan-ecer.info> accessed 7 May 2018.

Thus, according on human rights, there are four requirements for drinking-water: Quality, Quantity (minimum 100 liters per person per day), Continuity (must be available whenever needed, uninterrupted) and Accessibility, both in terms of price and physical source. Bottled water may meet quality requirements but cannot meet other requirements.

According to FGD participants:

"*It should be noted that according to the Basic Health Research (Riskesdes) survey, there is an increase in bottled water coverage. This shows that there is a continuously increasing demand for bottled water*"

"*Drinking water should be in a food/beverages group, not drinking-water as discussed in the Water Resources Bill. Drinking water also does not fulfill 4K – Kualitas, Kuantitas, Kontinuitas, dan Keterjangkauan [the four requirements: Quality, Quantity, Continuity, Affordability]*."

"*Definition of drinking water is already firm. Bottled water is not part of drinking water.*"

From a regulatory point of view, water services (drinking and sanitation) is a natural monopoly industry, whose *regulatory approach differ* from Fast Moving Consumer Goods such as bottled water. The inclusion of bottled water into drinking water will result in regulatory confusion. This was also agreed by FGD participants:

"*A formulation is needed to strengthen the definition of drinking water because the regulation is already firm. Permit issues should not be normative anymore but must be pragmatic.*"

"*At present, the Ministry of Home Affairs is drafting an SP (Service Standards) on provisions of drinking water.*"

However, the most important thing is that defining bottled water as "Drinking-Water" could provide a negative incentive for pipeline water. Because the price of bottled water is far more expensive than pipeline water while its production costs can be kept low, pipeline water providers, whether State-Owned Enterprises (BUMN), Region-Owned Enterprises (BUMD) or Village-Owned Enterprises (BUMDes), could be tempted to run a bottled water business and sacrifice efforts to expand their pipeline network. This could potentially interfere with drinking water achievement target. As practiced in many countries, drinking water companies may not do business other than the drinking water business.[10]

Recommendation

In the FGD, participants proposed that draft Article 51 (paragraph 1) eliminate "bottled water" as part of the definition of drinking water, as this can disincentivise the government from provide access to drinking water through pipelines.

[10] M Cortez and others, 'Guide to Ring-Fencing of Local Government-Run Water Utilities' [2010] World Bank Water and Sanitation Program (WSP) and Public-Private Infrastructure Advisory Facility (PPIAF); Steven L Schwarcz, 'Ring-Fencing' (2013) 87 S. Cal. L. Rev. 69.

5. ARTICLE 63 LETTER F COULD POTENTIALLY UNDERMINE PROTECTION OF WATER RESOURCES

a. Obligation to Open Access is not Clearly Defined

As stipulated in Article 63 of the Water Resources Bill, there are nine community obligations in using Water Resources, namely:

Article 63
In using Water Resources, communities are obliged to:
a. protect and maintain the continuity of Water Resource functions;
b. protect and secure Water Resource infrastructure;
c. make water-saving efforts in water use;
d. make efforts to control and prevent water pollution;
e. restore environmental damage caused by resulting activities;
f. **provide access for Water Resource use of water sources that are on the land they control for the community;**
g. facilitate other water users to channel water through the land they control;
h. consider public interests; and
i. fulfill other obligations according the statutory laws.

Furthermore, what is meant by "giving access" as stated in Article 63 letter f, is explained in the Elucidation of Article 63 letter f as follows:

"… does not physically and non-physically close off water sources that may result in people who use water around the water sources not being able to reach the water source directly to fulfill their basic daily needs. Closing physically is, for example, by building a fence around the water source that may prevent people from getting water. Closing non-physically is, for example, by creating prohibitions to get water to meet basic daily needs. "

Based on the elucidation to Article 63 letter f, people who have water sources on land they control are not allowed to build fences or prohibit people from getting water from these water sources. It should be noted that several points are multi-interpretive in the Elucidation of Article 63 letter f, namely:

- It is unclear what is meant by "around" as well as its scope. Does "around" cover a certain radius (several meters or kilometers) or a certain area (village, sub-district)
- "Water Source" according to Article 1 paragraph (5) of the Water Resources Bill is defined as *"… a place or natural or artificial holder of Water found on, above or below the surface of the land".* Thus, water sources can be in the form of springs, wells, ponds or even water taps or water catchment facilities in every house. This raises concerns, whether every house in Indonesia must open access for everyone to wells, catchments, or water taps? In the FGD, there was a clarification that what is meant by "water source" is not a tap or water tower. There is also a clarification that the article on the definition of water sources does not mention wells.
- In addition, it should be explained whether this article applies in any condition or only certain conditions, such as in the event of drought or even during rainy seasons.

Potentially endangering water users who get water from the water source

Based on CRPG field research in Klaten and Sukabumi, communities physically protect water sources used for daily needs such as by building fences, demarcation, and even erecting buildings like houses. Communities do this to ensure cleanliness and security. In addition, springs that are open and accessible to many people have the potential to harm water users of these water sources.

b. Obligation to Open Access Disrupts the Licensing system

Licensing of water business in Indonesia is based on Government Regulation Number 121 of 2015 regarding Water Management (GR on Water Management). Meanwhile, its implementation is regulated in Regional Decrees or Governor's Regulations of each region with different arrangements at the technical level. The substance of water retrieval permits in Indonesia is basically the same, such as temporary water quotas that may change after a Water Resources Management Plan is determined (Article 5 paragraph (5) of GR on Water Management). In addition, Permit for Exploitation of Water Resources also specifies the identity of permit holder, method of retrieval, purpose and objectives, water quota, retrieval schedule, provisions on rights and obligations, and other provisions (Article 22 paragraph (2) of GR on Water Management. The permit holder also has the obligation to protect, maintain, secure, control pollution and provide access to use of Water for the fulfillment of daily basic needs of the community around the activity location.

In addition, the licensing system is also connected with a monitoring system. Permit holders are required to periodically report to the Technical Department (Ministry of Energy and Mineral Resources) of the government for monitoring debits and conservation and to Regional Revenue Services for payments of water acquisition value (NPA). The government will also examine water meters to ensure the compliance of debit according to permit. Therefore, the prohibition on physically protecting water sources will disrupt the licensing system because the government cannot monitor the water taken from these water sources.

c. Obligation to Open Access is Contradictory to Water Safety Plan concept

In the Water Safety Plan (WSP) concept, good drinking-water provision is done by minimizing water source contamination, reducing contamination through processing and preventing contamination during storage, distribution and handling of the drinking water. This objective includes provision of drinking water using large pipes, and provision for communities and households.[11]

According to WHO, the main reason that WSP is important is because the quality of drinking water is related to public health. WHO records show that 1/10 of diseases globally could be prevented by improving the quality of water and sanitation. Poor water quality has resulted in the deaths of millions of people.[12]

WHO stipulated that effective water source protection standards shall include: "*Developing and implementing a catchment management plan, which includes control measures to protect*

[11] A Davison and others, 'Water Safety Plans: Managing Drinking-Water Quality from Catchment to Consumer' (World Health Organization 2005).https://goo.gl/sb8CWJ

[12] ibid.

surface water and groundwater sources; b) Ensuring that planning regulations include the protection of water resources (land use planning and watershed management) from potentially polluting activities and are enforced; and c) Promoting awareness in the community of the impact of human activity on water quality."[13]

Therefore, the provision of "… does not physically and non-physically close off water sources…" as required by the 2018 Version of the Water Resources Bill is not consistent with the international WSP standards as established by WHO to maintain water quality for human health.

d. Obligation to Open Access is Contradictory to Human Rights to obtain safe quality water

General Comment 15 of the International Covenant on Economic and Social Cultural Rights (ICESCR) (GC-15) specifies Human Rights to water. ICESCR has been ratified by Indonesia through Law Number of 2005. In the GC-15, states are required to protect "access" to water as follows: "*The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses*". Then, General Comment 15 defines access into several categories: physical, economic (affordable prices), free of discrimination and access to information.

GC-15 also states that environmental Health, as part of the right to health in Article 12 paragraph 2(b) of the Covenant also includes taking steps to prevent health hazards from unsafe and toxic water. For example, member states of the Covenant must ensure that water sources are protected from contamination by hazardous substances and pathogenic microbes. At the same time, member states must monitor and combat conditions where water ecosystems become a habitat of disease vectors wherever there is a risk to humans.[14]

Based on the above review, the state has an obligation to take steps to avoid contamination of pathogens and ensure that water sources are not contaminated. Taking steps means, for example, making regulations. According to human rights standards, regulations made by a country must ensure protection so that water sources are not contaminated. Therefore, prohibitions to protect water resources is a violation of human rights to water, because everyone has the right to water with guaranteed quality.

e. Obligation to Open Access May Lead to conflicts between communities and between users

Making all water sources open will only lead to conflicts between communities and between users of water sources, and cause the existing water supply systems to fail, because people will take water directly at the water source. Several studies show that problems with access to water resources has a direct relationship with conflicts over water use. One such study was CIFOR and USAID (2004) research showing that the direct relationship between water and

[13] ibid.Hal. 58, accessed on 10 June 2018

[14] United Nations Committee on Economic Social and Cultural Rights, 'General Comment No. 15 (2002), The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)' (UN 2003).

conflict lies in the dispute over access to water sources.[15] Conflicts may occur between upstream and downstream communities or fellow water users.

f. Recommendation

In relation to Article 63 letter f, there is an interest in providing access while maintaining the quality of drinking water. To balance these two interests, it is necessary to:

a. Explain that the ban on closing access only applies to "water sources" that are "surface water" and "springs".

b. Under certain conditions, the obligation to provide access to a well (not its aquifer) may be applied to surrounding communities. Further provisions are elaborated in regulations under the law.

c. Explain the conditions that allow opening of access, such as a natural disaster or prolonged dry season, that causes surrounding communities to not have access to clean water.

d. Provide a definition of "surrounding communities" that are allowed to access using radius or distance.

In the FGD, there were several opinions regarding Article 63f. Some did not consider this article to be problematic, while others saw problems in the elucidation.

Some also thought that the elucidation of article 63f should be read as one with the previous sentence, namely the phrase *"… which causes the community using the water around the water source to not be able to reach the water source directly to fulfill their daily basic needs"*. According to this analysis, fencing/closure is problematic if it prevents communities from accessing water in the water source. There were also arguments that it would be difficult to determine the intentions of building the fence, whether it is to prevent people from taking water or there are other intentions.

Another recommendation contained in the FGD is the emphasis on access to water, not access to the water source. An example given was providing a pipeline from a water source to the community. According to one participant: *"To get access to water, you don't have to come to that location. It is okay to have it fenced off so long as there are pipes that distribute it. Access can be obtained in a variety of ways, as long as access to get the water is not closed".*

In general, in the FGD, participants understood that there were two interests in this article, namely the interest of access on one hand, and the importance of maintaining the quality of drinking water on the other. However, there are problems with turning/converting the concept or idea into norms/articles. For example, there is a debate as to whether the norms should be positive (it is obligatory to provide a pipeline or channel, but then it may burden the land owner) or negative (may not fence off – but then it may cause problems with water quality protection).

[15] Annika Kramer; Water and Conflict; CIFOR, Woodrow Wilson International Center for Scholars, Adelphi research, USAID, 2004.

AS no agreement was reached between the FGD participants, there is no direct drafting recommendation for this article in the April version of the Water Resources Bill.

6. Appendix 1: About *AMPL* Network Organization

With the working principle based on the principle of mutual interest, the *AMPL* Network was formed on 8 October 2007 to address the issue of low service coverage and weak coordination and synergy between actors in Drinking Water and Environmental Health Improvement (AMPL) sector. To date, the *AMPL* Network has played active role in various activities related to development of water and sanitation services throughout Indonesia.

History of the *AMPL* Network staretd during a communication strategy workshop for national policy for Community Based Drinking-Water and Environmental Health Improvement (AMPL BM) which took place at Bappenas and Hotel Akasia. At that time, several institutions got together, including Bappenas, Waspola/World Bank, *Jaringan Air dan Sanitasi*, *Forum Komunikasi Air Minum*, CK-net INA, Tri Sakti University, and *Yayasan Air Kita*, and agreed to establish a Drinking-Water and Environmental Health Improvement Network in early 2007.

AMPL Network is an independent Association, not a political organization, and is not-for-profit. This association may establish representatives, both inside and outside the territory of the Republic of Indonesia as stipulated in the General Meeting of Members and is established for an unlimited period of time.

The initial purpose for establishing the *AMPL* Network is integration of data, information, knowledge and programs for drinking water and sanitation, availability of access to quality information for all members of *AMPL* Network and stakeholders, to have harmonization of cooperation and collaboration among stakeholders, and strengthening and empowerment of communities in the development of sustainable drinking water and sanitation.

Members of *AMPL* Network are Indonesian Citizens who are interested in being involved in improving quality and productivity of individuals/organizations, who register and are accepted as Members. Each member has the right to participate in all activities of the Association which are declared open to all members. Each member has voting rights, to elect and be elected. Each member is obliged to assist the Association according to their respective abilities, comply with and complete obligations as stipulated in the Association's By-Laws. Each member must attend in full the General Meeting of Members and the Annual Meeting of Members or be represented by another Member if unable to attend. To date, *AMPL* Network has 100 members, both individuals and institutions all across Indonesia.

Since 2011, the focus of *AMPL Network* has been to work together to encourage and contribute to the achievement of 2015 MDGs and Universal Access 2019. Working with the vision of “Encouraging synergy and cooperation to achieve universal access in 2019 (100-0-100) and 2030 SDGs”, the role of *AMPL* Network includes:

1. Initiating ideas for communication and advocacy on *AMPL* issues and other related programs.
2. Sharing knowledge and information among *AMPL* members.
3. Mediating synergy of joint projects/programs to expand the reach of *AMPL* programs.

Executive Structure of *AMPL* Network 2015-2018

In the Management of *AMPL* Network, the Management is an organ of the Association whose members consist of individuals appointed by the Management Deliberation for a period of 4 (four) years and could be reelected only for one subsequent period. The Management consists of at least a Chairperson, a Secretary, a Treasurer, and a member. In carrying out its activities the Management conducts its functions in accordance with the policy of the Management Deliberation

Advisory Board	: Oswar Mungkasa
Chairperson of Steering Board	: Handy B. Legowo and Syarif Puradimadja
General Chairperson	: Eko Wiji
Deputy Chairperson I	: Heri Ferdian
Deputy Chairperson II	: Dormaringan Saragih
General Secretary	: Wiwit Heris
Treasurer	: Ika Fransisca
Capacity Building Unit	: dr. Agustini Raintung and Hony Irawan
Communication Advocacy Unit	: Huseyn Pasaribu, Reza Hendrawan
Partnership Unit	: Mita Sirait, and Asken Sinaga

Record and Achievement of *AMPL* Network 2015-2018

Role	Achievement
Communication and Advocacy Role	1. Realization of drinking-water communication and advocacy activities (Forum Air Jakarta), 5 pillars of STBM, inclusion and disability, Urban Sanitation, school sanitation and MKM. 2. Encouraging sanitation advocacy in indicators for *Kota Layak Anak* (Suitable for Children City) to KPPPA, together with GKIA network 3. Involved in coordination and drafting of RPAM concept (Plan for Safeguarding Drinking Water) 4. Distribution of media/policy briefs to support AMPL issues, universal access, STBM (Community-Based Total Sanitation), Review of RPJMN 2020-2024, school sanitation media and guidelines. 5. Involved in advocacy (promotion) of school sanitation and MKM included in TP UKS/M consisting of 4 Ministries.
Knowledge Sharing and Capacity Building Role	1. Distribution of the best learning in the field of drinking-water, 5 Pillars of STBM, Inclusion and Disability, Sanitation Marketing, *Sanisek*, and MKM. 2. Moderation and facilitation of RPJMN 2020-2024 Review on water and sanitation in several provinces in Indonesia 3. Discussion forums and initiating joint pilot programs.

Synergy and Partnership Role	1. Activities done with members (HR, material, and funding). 2. Encourage involvement of private sector and mass media in achieving *AMPL*-related programs 3. Agreements established from members meeting 4. Addition of new members (30 institutions)

Secretariat of *AMPL* Network:

- Menteng Square Tower B, lantai 22 /11 Matraman Raya no. 30E Jakarta Pusat. Telephone number: 021- 29614348, email: Jejaring.ampl@gmail.com
- Website: www.jejaringampl.org

7. Appendix 2: Summary of FGD on Water Resources Bill, 17 September 2018

Activity: FGD Activities of Multi-Party Recommendations on Water Resources Bill
Location: Hotel Akmani, Jakarta
Time: 08.00 – 17.00
Number of Participants: 42 people

On 17 September 2018, *AMPL* Network conducted a Focus Group Discussion (FGD) entitled "Multi-party Recommendations on the Water Resources Bill" at Akmani Hotel, Jakarta. The FGD was attended by approximately 40 participants from civil society and government.

Participants represented elements of civil society and NGOs such as *Asosiasi* KP-SPAM PAMSIMAS, YPCII, KRUHA, SPEAK Indonesia, CPRG, donor/International NGOs such as Unicef, GWP-SEA, World Bank, ADB, USAID/IUWASH PLUS, USDP, as well as representatives from the government such as the Directorate General of Water Resources, Directorate General of Housing and Human Settlements of the Ministry for Public Works and Housing (Kemen PUPR), including P-SPAM and PPLP, BPPPSPAM, Directorate of Urban Affairs, Housing and Settlements of Bappenas.

FGD yielded several inputs and revisions related to articles and elucidation in the Water Resources Bill. Other important issues highlighted by discussion participants, include the position of community-based water service systems, forms of duties and authority of central and regional governments, issues of sanitation and wastewater services, and bottled water.

Following is a list of inputs from the FGD for the articles and elucidation in the Water Resources Bill:

1. Community-based Drinking Water Supply System (SPAM) needs to have a place in the Water Resources Bill

Most drinking-water in rural areas is supplied through community-based systems (community groups). There are around 12,254 community groups or 15.6 million people affected if this community-based water supply system is not regulated in the Water Resources Bill.

2. Drinking Water and Domestic Wastewater: Two Sides of a Coin

About 80% of drinking water consumption will become wastewater. 30 million people in Indonesia do not have latrines, placing Indonesia as the second highest country with a population that do open defecation. This has the potential to pollute ground and surface waters. Management of domestic wastewater needs to be an integral part of integrated water resource management.

3. Bottled Water is Not Drinking Water

Based on operational definition of SDGs, bottled water is not categorized as access to drinking water. Bottled water is in the category of beverages regulated by BPPOM. While the quality of drinking water is regulated through the Minister of Health Regulation (Permenkes) 492/2010.

In addition, the definition of bottled water as “drinking water” creates a disincentive for supply of pipeline water systems which may undermine the achievement of SDG targets.

8. Appendix 3: Workshop Activity on Water Resources Bill, 20 September 2018

Activity: Workshop on Multi-Party Recommendation on Water Resources Bill
Location: Hotel Park Lane, Jakarta
Time: 08.30 WIB – 12.30 WIB
Participants: 57 people

To follow up on the FGD on 17 September 2018, AMPL Network held a Workshop entitled "Multi-party Recommendation on the Water Resources Bill" on 20 September 2018. In this Workshop, a summary of the discussion results were presented in front of participants and respondents.

The respondents and participants included the Chairperson of Commission V of the Indonesian House of Representatives and TA team, Director of Water Resources Stewardship Management, Directorate General of Water Resources, Director of Drinking Water Supply System Development, and Directorate of Development of Human Settlement Sanitation, Directorate General of Housing and Human Settlements (*Cipta Karya*), and BPPSPAM Secretariat, Ministry of Public Works and Housing). Other relevant ministries such as Directorate of Urban Affairs, Housing, and Settlements, Deputy of Regional Development Division, Bappenas, Directorate of Environmental Health, Directorate General of Public Health, Ministry of Health, Directorate of Village Community Development and Empowerment, Directorate General of Village Community Development and Empowerment, Ministry of Villages, Development Disadvantaged Areas and Transmigration of the Republic of Indonesia, Ministry of Public Works and Housing. Besides government stakeholders, the workshop was also attended by the Executive Director of AKKOPSI (Association of Districts/Cities for Sanitation). DPP PERPAMSI (Association of Indonesian Drinking Water Companies), Regulatory Agency for Drinking Water Services of DKI Jakarta, Unicef, GWP-SEA, CRPG, USAID/IUWASH PLUS, YPCII, SPEAK Indonesia, and KOMPAS, ANTARA News, Kumparan.com, Trubus and other online media.

Based on the presentations, the important issues that were input in the Water Resources Bill were community-based SPAM, sanitation and wastewater, and bottled drinking water, community-based SPAM. For concrete recommendations: Article 51 (drinking-water) priority to SOEs (BUMN), Region-Owned Enterprises (BUMD), Village-Owned Enterprises (BUMDes)) shall included "community groups" such as in PP 22, because the fate of 15.6 million people who depend on community-based systems depends on licensing. Then, community-based systems with no legal entity to be immediately made legal entities no later than 5 years after the Law is ratified.

The second issue is Sanitation. In point 6 of the Sustainable Development Goals (SDGs), clean water and sanitation always appear together. Point 6.1 regarding drinking-water, point 6.2 regarding sanitation, and point 6.3 regarding wastewater. In Indonesia, 30 million people still practice Open Defecation. Because sanitation is a basic right, the Government has disbursed large funds for sanitation, thus it requires a legal umbrella. However, the Water Resources Bill does not guarantee sanitation rights. There is no mention in the Bill's body about sanitation, in this case wastewater. An article for sanitation is needed so derivative regulations could be made. It is positioned in the Bill was in the elucidation and only to prevent pollution, whereas sanitation is a *service*. For concrete recommendations: Article 23 text shall be changed to:

- Article 23 (paragraph 6): replace the text with “Management of water quality as stipulated in paragraph (3) letter c shall be intended to improve quality of water at the water sources and infrastructure of water resources.”
- Article 23 (paragraph 7): replace the text with “Control of water pollution as stipulated in paragraph (3) letter c shall be intended to improve domestic wastewater services and prevent entry of water pollution into water sources and water resources infrastructure.”

Finally, the issue of bottled water. The recommendation, to take out bottled water from article 51 from the definition of drinking water. Bottled water does not fulfill WHO standards for access. Even the regulatory system is different because bottled water is included in beverages. According to Human Rights approach, bottled water does not meet the 4K – *Kualitas, Kuantitas, Kontinuitas, dan Keterjangkauan* (Quality, Quantity, Continuity, and Affordability). Inclusion of bottled water as a definition of drinking-water will also have negative consequences, namely *underinvestment* in pipeline water and proliferation of plastic waste. From to constitutional aspect, pursuant to the decision of the Constitutional Court, drinking water companies should not take profits. Bottled water is expensive and is clearly for-profit.

Respondents have recorded recommendations for the Water Resources Bill and so are advised to make more detailed arguments, especially for the issue of bottled water. This has been described in this position paper.

9. Appendix 4: Legislative Technical Recommendations

General Recommendations Regarding Legislation, Systematics and Interpretation of Articles Relating to Rights and Licensing

Note: This recommendation is <u>not</u> a direct part of the multi-party recommendations discussed in the FGD and Workshop due to its more technical nature. However, this general recommendation is closely related and provides a context for multi-party recommendations.

Several Articles in the Water Resources Bill are less systematic, which could lead to multiple interpretations and ambiguities. For Lawmakers, the Articles below are perhaps already clear. However, the Law is often applied and interpreted by other parties – such as Courts, Prosecutors' Office, Police and Local Governments – which are not involved in drafting the Bill. To avoid problems in the future, we recommend that the systemtics of the following Articles be reconsidered and their context clarified.

1. Article 8(1)(a) regarding minimum daily basic needs. Paragraph (a) is not clear on its meaning; 60 liters per person per day whether it is taken from natural water sources or also from pipeline water (SPAM). Looking at paragraphs (b) and (c), it seems that paragraph (a) only regulates on issue of rights to water from natural water sources (because the two paragraphs deal with natural water sources). Whereas, protection of General Comment 15 and the Constitutional Court includes water from natural water sources and Drinking Water Supply System (SPAM).[16] If this Article guarantees human rights to water in both contexts (pipeline and natural sources), then it should be explained in the elucidation. If the intention is only to guarantee surface water, then the question would be where is the guarantee of the right to "drinking-water"/pipeline in the Water Resources Bill? If it is not there, then it could be used as a basis for Judicial Review.
2. Because the words 'basic daily needs' are repeated in various articles, for example daily needs in large groups, it may be necessary to emphasize that in this Article 8(1)(a) it means "daily needs of individuals."
3. Article 8(1) talks about things that are "guaranteed". Article (3) should be stating about certain categories, especially since this article is referenced by other Articles.
4. Article 8(4) reads: *"Right to obtain, use, or **<u>exploit</u>** an amount of water quota as stipulated in paragraph (3) for **<u>non-business</u>** activities shall be done without permits for religious, cultural and social activities."* The word "exploit" in this article could be ambiguous. It is necessary to explain what it means to "exploit" the water quota for activities that should be "non-business/exploitation". Does it mean only obtaining and using it? Or is there a certain category of exploitation for non-business activities?

[16] Catarina de-Albuquerque, 'Report of the Independent Expert on the Issue of Human Rights Obligations Related to Access to Safe Drinking-Water and Sanitation, A/HRC/15/31' (2010) <http://www2.ohchr.org/english/issues/water/iexpert/docs/A-HRC-15-31-AEV.pdf> accessed 11 February 2011; Catarina de Albuquerque, 'Report of the Special Rapporteur on the Human Right to Safe Drinking-Water and Sanitation, Catarina de Albuquerque Addendum Mission to Thailand (1-8 February 2013)' (United Nations General Assembly 2013) A/HRC/24/44/Add.3. See also United Nations Committee on Economic Social and Cultural Rights (n 9); United Nations, 'Subtantive Issues Arising in The Implementation of The International Covenant on Economic, Social and Cultural Rights, General Comment No. 15 (2002) The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights) E/C.12/2002/11, 20 January 2003'.

5. Interpretation of Article 8(5) could be ambiguous. The article states: *"(5) Right to obtain, use, or exploit an amount of water quota as stipulated in paragraph (3) shall be based on permits if done in large quantities, changing natural conditions of Water Resources, and is outside an irrigation system."*
    a. The question would be, does this Article intend to only regulate non-business activities or also exploitation? If it regulates non-business activities, then it is better to delete the word exploitation. Because exploitation of water most certainly will require permits, except for small volumes.
    b. As mentioned above, the article mentions that permits are needed if: *"… exploit an amount of water quota… done in large quantities, changing natural conditions of the Water Resources, and is outside an irrigation system"*. The counter-interpretation would be that when exploiting water in a small amount, not changing the natural conditions and is within an irrigation system, there is no need for a permit. Is that what it means? For example, for interests of small industries and home industries, no permit is needed? If so, then the elucidation should inform that certain exploitation categories do not require permits.

6. According to Elucidation of Article 45 (2), "water in large quantities" in the context of **surface water** means *"… Surface Water quota exceeding daily basic needs for 150 (one hundred and fifty) people from one extraction point or more than 60 (sixty) liters per person per day",* and in the context of **groundwater** means *"… if Groundwater is taken from a borewell with a diameter of more than 2 (two) inches or more than 5 (five) centimeters or more than 100 (one hundred) cubic meters per month per family head"*. Restrictions based on the number of people on surface water and diameter in terms of groundwater are clear, however restrictions based on liters/person/day could lead to multiple interpretations. For example, in the context of surface water, if there are 1000 people, but it does not exceed 60 liters per day per person, is it classified as "large amount"?
7. Article 49 (3) leads to multiple interpretations. Viewed from systematics, Article 49(3) is included in the third part which regulates "business purposes". Article 48, as referred by Article 48 also regulates business purposes. Beginning of of Article 49(2) sentence is use of natural resources (SDA) **for business purposes,** which – combined with paragraph (3), **granting permits for business purposes** – shall be carried out strictly in the priority of:
    a. fulfillment of daily basic needs for groups requiring Water in large amounts;
    b. fulfillment of daily basic needs that change natural conditions of the Water Sources;
    c. smallholder agriculture outside the existing irrigation system;
    d. use of Water Resources for business purposes to meet basic daily needs through Drinking Water supply system;
    e. non-business activities for public interest;
    f. use of Water Resources for business purposes by state-owned enterprises, region-owned enterprises, or village-owned enterprises; and
    g. use of Water Resources for business purposes by business entities
    h. private or individual

    Now the question is whether daily basic needs, smallholder agriculture, **non-business/exploitation** activities are all included in category of permit for business purposes? If the purpose is to regulate the priority of meeting water needs in general,

either for business or other purpose, then this article should be excluded from articles that regulate business purposes and should stand alone outside of the third part.

8. Priority in Article 49(3) above also needs to be reviewed because it puts business purposes for drinking-water under smallholder agriculture outside irrigation. Whereas, for example, 1 kg of beef requires 15,500 liters of water, while 1 kg of rice requires 3,400 liters of water.[17] The order in this article could give an interpretation that the Water Resources Bill is more concerned with water for livestock and crops than for human drinking water. Likewise, several Constitutional Court decisions have focused heavily on water for human needs.

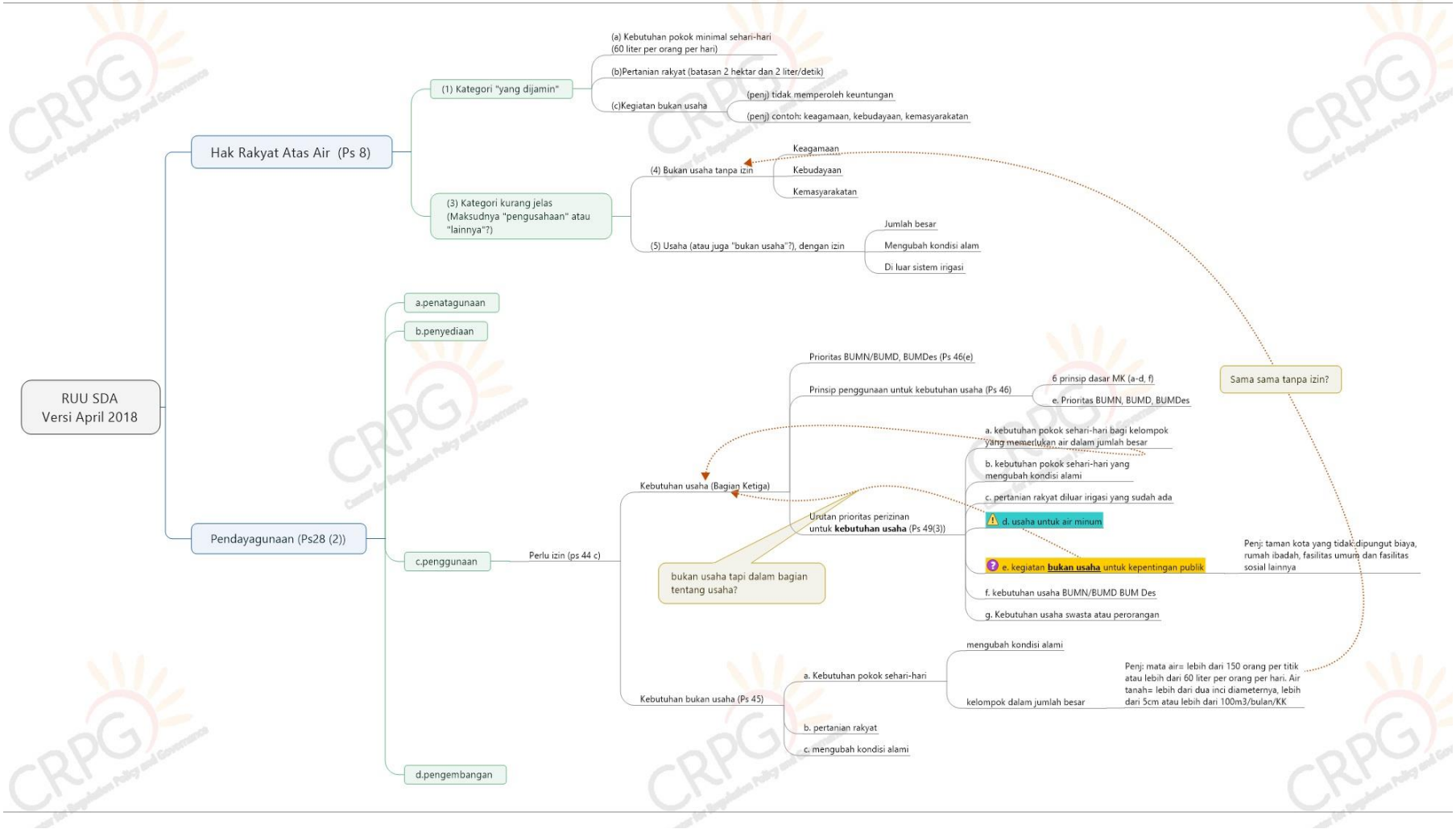
9. The relationship between Article 45 and Article 8 needs to be clearer. Article 8(1)(c) talks about "non-business **activities**". Article 8 paragraph (4) talks about examples of "activities", namely: religious, cultural and social. Article 8(5) talks about need for permits for "large amounts", changing natural conditions and outside irrigation systems.

10. Relationship between Article 52 and Article 45 and Article 8 needs to be clarified. Governing of Article 52 gives permission to private sector, cooperatives and community to carry out drinking-water systems *"If an area is **not yet covered** by operation of a drinking water supply system by a state-owned and/or region-owned enterprise".* Meanwhile Article 45 juncto Article 8(5) talks about granting permits for "non-business" needs, including requirement in "large amounts". Does it mean Article 8(5) junto Article 45 only applies in the context of Article 52? If indeed Article 52 means to **limit** Article 45 junto Article 8(5), then it is necessary to emphasize. If not, then Article 45 and Article 8(5) will be interpreted separately.

    Case study: a group of people or private sector submits a water permit for "large amount" based on Article 8 (5) and Article 45 even though there is already a Regional Drinking Water Company (PDAM) in that area. The reason is that article 52 regulates business purposes (because systematically it is in the third section regarding Permit for Use of Water Resources for Business Needs). Therefore, for "non-business" needs it is not regulated/not limited in Article 52. This argument could convince judges because Article 52 does not expressly limit Article 8(5) and Article 45 and even regulate different matters. They will argue that they are not engaging in the business of water. However, as a result, within one SOE (BUMN)/Region-Owned Enterprise (BUMD)/Village-Owned Enterprise (BUMDes) service area there could be other services in the "non-business" category.

[17] Arjen Y Hoekstra, *The Water Footprint of Modern Consumer Society* (Routledge 2013); Arjen Y Hoekstra and Ashok K Chapagain, *Globalization of Water: Sharing the Planet's Freshwater Resources* (Blackwell Pub 2008).

10. Appendix 4: Water Resources Bill Road Map



11. Appendix 5: Documentation of FGD on Water Resources Bill (17 September 2018)

12. Appendix 6: Documentation of Workshop on Water Resources Bill (20 September 2018)