



## **THE URGENCY OF DETERMINING THE BENGAWAN SOLO RIVER AS A SUBJECT OF INTERNATIONAL LAW**

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### **Abstract:**

*The Bengawan Solo River holds historical, social and economic wealth for the Javanese people. From the pre-literate period to the Mataram and Majapahit kingdoms, the Bengawan Solo River was the center of civilization in Java. The flow is functioned as a trade route and the water is used as a standard for drinking water and irrigation for agriculture and plantations. Meanwhile, Javanese people generally have a belief in several springs of the Bengawan Solo River as a sacred place with various rituals. The shift in the view of human relations to nature and reinforced by increasingly severe climate change forces humans to change habits that are detrimental to the balance of nature. Ganges, Yamuna and Whanganui rivers in India and New Zealand are designated as legal subjects with regard to environmental conservation and local wisdom. By looking at the legal precedents that occurred in India and New Zealand as well as the degradation of the function of the Bengawan Solo which was originally a "source of life" to become a "source of disaster", then the determination of the Bengawan Solo River as a Subject of International Law can restore its function as before, : the center of civilization of the land of Java.*

### **Keywords:**

Determining, River, Subject of International Law

### **1. Introduction**

The river is the axis of life. In the river contained fresh fresh water and other sources of life that are needed not only by humans but by all other living things. For humans, the area flowed by the river is a fertile area so that because of that it is very easy to carry out agricultural activities and continue life. History records that rivers were the basis of the development of civilizations since ancient times, for example, the Nile River in ancient Egypt and the Hoang Ho Yellow River the center of ancient Chinese civilization.

In Indonesia, especially on the island of Java, the Bengawan Solo River has become an integral part of the history of the Indonesian nation. The people around the Bengawan Solo River formed a culture and preserve it to this day. The song "Bengawan Solo" by Gesang Martohartono in 1940 became the Zeitgeist or "spirit of The Times" of the Asian nation after World War II (Syamsu, 2020). The splendor of Bengawan Solo is told in Gesang's song lyrics, even the song "Bengawan Solo" became a nationalistic symbol and a legendary song (Lucky Ir., 2014).

The longest river on the island of Java flows as far as 548.53 km across the provinces of Central Java and East Java has a very strategic role for the life of the people of Java since ancient times. In the 13th century, when Majapahit was at its peak, the bengawan Solo River was a bustling transportation hub. It is proven that once Gresik and Tuban, which are still known as Ujung Galuh, became the place where large ships leaned. Even the Majapahit kingdom paid special attention to the Bengawan Solo River by issuing the Canggu inscription in 1358 which lists the villages through which the Bengawan Solo stream passes as tax-free villages because of the crossing services that improved the village's economy (Poesponegoro, 2008).

In addition, during the Dutch colonial period until now the agricultural and plantation sectors, especially in East Java and Central Java, depended on irrigation from the Bengawan Solo River. Even now the area traversed by the Bengawan Solo stream is almost entirely a food barn area. Bengawan Solo utilization is very large to sustain life on the island of Java is in fact not accompanied by the maintenance of water quality. The hydrological Data of the Bengawan Solo River Region center throughout 2018-2019 showed the quality of polluted water on a light to heavy

scale at six monitoring posts, including Nguter Post (Wonogiri), Bacem Post (Sukoharjo), Pepe River Post (Surakarta), Jurug Post (Karanganyar-Surakarta border), Kedungupit Post (Sragen), and Bojonegoro Post. Even data from the Bojonegoro Environment Agency said that water in Bengawan Solo was not suitable for consumption.

Polluted water contains many chemicals, pathogenic bacteria and diseases that are dangerous to humans. In addition, soil impregnated with polluted water will result in a decrease in soil fertility and damage the soil structure so that agricultural products from polluted water will have an impact on reducing the quality of agricultural production (Baskoro Adi Prayitno, 2008). This is a domino disaster whose impact spills over everywhere.

Based on this, of course, it needs joint awareness and bold and revolutionary actions to protect the preservation of the Bengawan Solo River. Regarding the development of law today, there is a development of the subject of law, namely nature, which is recognized as an entity that holds rights and obligations. Rights are a basic need (Michael, 2017). The countries of India and New Zealand specifically in 2017 established the river as a subject of law through the establishment of a trial. These rivers are the Ganges and Yamuna rivers in India and the Whanganui River in New Zealand (Rian Adhivira Prabowo \*, 2020). The two legal precedents that occurred on the Ganges and Yamuna rivers and the Whanganui River were new legal steps that initiated future legal habits. Basically the law grows and develops with society along with its habits (Rosana, 2013). So on this occasion the researchers will do a comparison by applying it to the Bengawan Solo River.

So based on that, with this the author will carry out research is “The Urgency Of Determining The Bengawan Solo River As A Subject Of International Law”. Where in this writing hopefully can contribute the uniqueness of the science of law tertutama in international law and can also contribute ideas so that it can become a material of scientific literature and reference material for Legal Practitioners, stakeholders and to all people who care about the preservation of nature.

## **2. Research Methods**

This legal research is included in normative legal research. Normative legal research is a study to find and formulate legal arguments through analysis of problem issues (Bachtiar and Yanto, 2018). The approach used is historical and Comparative. Then, to this study using legal materials collection techniques that use medote inventory and categorization. While the analytical techniques used are prescriptive normative analysis techniques by interpreting, hermonisasii, systematization and legal invention by using deductive logic reasoning.

### **2.1. The Ganges and Yamuna Rivers**

The Ganges and Yamuna rivers were designated as subjects of law through case rulings Mohd. Salim vs. State of Uttarakhand & Others (Ahmad Omar, 2017). The case was decided by judges Rajiv Sharma and Alok Singh, who declared the Ganges and Yamuna rivers to be living persons or legal entities, referring to Articles 48 A and 51A (g) of the Constitution of India as a solution to the problem of high pollution and protection of both rivers. The judge on this decision also rests on several facts and existing jurisprudence (Salim and Petitioner, 2017) The first case was in the case of Jogendra Nath Nascak v. Commission of Income Tax, Calcutta which states that hindu gods are recognized as juristic entities who are able to control property and are taxed through their benefactors.

Judges also hold the right to the concept of juristic entity that has developed over time and the needs of human civilization. The Shiromani Gurdwara Parbandhak Committee, Amritsar v. Shri Som Nath Dass & Others. P. In the case said that if the law requires then the subject of law is very likely to be given to non-human entities (“Mohd Salim v. State of Uttarakhand & Others, No,126,” 2014). Another point the judge referred to was that of Moorti Shree Behari ji v. Prem Dass & Others who claim that hindu gods can also be sued as forma-pauperis by their benefactors (Rian Adhivira Prabowo \*, 2020).

The decision on the protection and recognition of the Ganges and Yamuna rivers was then followed by another decision, namely the expansion of the legal person, namely in the case of Lalit Miglani v. State of Uttarakhand & Others (“Lalit Miglani v. State of Uttarakhand & others,” 2016) so that it also covers the entire surrounding ecosystem up to the Gangotri and Yamunotri glaciers which are the source of both rivers. Based on the ruling, it can be stated that rivers, lakes, and also forests have the right not to be polluted, and any pollution is equivalent to harming humans (Salim and Petitioner, 2017) the panel of judges stated the situation of Gangotri and Yamunotri glaciers is increasingly concerning due to the consequences of human activities and the drastic decline in Environmental Quality.

In addition to being important as a storage source of clean water, these two glaciers are the source of the Ganges and Yamuna rivers which have religious value for The Hindu community (Rian Adhivira Prabowo \*, 2020). In addition, the judges also stated Gautama Buddha and Mahavira get an enlightenment by sitting under a tree which is also a practice of the people in India that worship nature such as trees and forests (“Lalit Miglani v. State of Uttarakhand & others,” 2016)

## 2.2. The Whanganui River

Based on Law Number 7 of 2017 on Te Awa Tupua (Whanganui River Claims Settlement) provides protection and recognition of the position of the Whanganui River in New Zealand. On Subpart 2 about Te Awa Tupua paragraph 12 Te Awa Tupua recognition states that ”Te Awa Tupua is an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating its tributaries and all its physical and metaphysical elements—“ (“Te Awa Tupua (Whanganui River Claims Settlement),” 2017) from the chapter it is explained that Te Awa Tupua is an indivisible and living whole, consisting of the Whanganui River from the sea, combining all physical and metaphysical elements.

The Whanganui River case began with the record for the longest dispute in New Zealand legal history, for more than 160 years, between a Maori tribe and The New Zealand government (the Crown) (Rian Adhivira Prabowo \*, 2020). According to the Maori, the Whanganui River has a sacred value for daily and spiritual life. Thus, the legal recognition of Te Awa Tupua that the mention of the Whanganui River does not only include the natural physical aspects of the Whanganui River, but also the cultural and spiritual aspects of the Maori population. This is explained in Paragraph 13 of the Te Awa Tupua (“Te Awa Tupua (Whanganui River Claims Settlement),” 2017) which recognizes its intrinsic values, among others :

- a. Te Awa Tupua is a spiritual and physical entity that supports and sustains both the life and natural resources within the Whanganui River and the health and well-being of the iwi, hapū, and other communities of the River.
- b. Ko Te Kawa Tuarua, Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the Whanganui River and all of its physical and metaphysical elements.
- c. Ko Te Kawa Tua Toru, The iwi and hapū of the Whanganui River have an inalienable connection with, and responsibility to, Te Awa Tupua and its health and well-being.
- d. Ko Te Kawa Tuawhā, Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua.

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 has granted the Whanganui river full legal status with its representation through indigenous authorities. From the explanation of Paragraph 13, the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 the status of the Whanganui River as a legal subject includes: foundation institutions, public institutions, public authorities, registered collectors in terms of taonga, resource management authorities, corporate bodies for the purpose of preservation of Maori cultural heritage, as well as public access affairs agencies. The recognition of the Whanganui River as a subject of law was a breakthrough. This legal breakthrough not only had an impact on the transformation of the status of the river from "object" to "subject", but also on the reconceptualization of the legal personality itself (Rian Adhivira Prabowo \*, 2020).

Unlike what happens in India where environmental aspects and ecosystem preservation come first, the determination of the Whanganui River as a subject of law relates to the Maori community. So it can be said that what happened in New Zealand with the Whanganui River was nothing more than the expropriation of river control in the form of assistance to government representatives and from Maori tribes (Rian Adhivira Prabowo \*, 2020) in this legal precedent the rights of indigenous peoples to the Whanganui River are more emphasized than environmental aspects.

### 2.3. The Bengawan Solo River

Bengawan Solo River has accompanied the life of the island of Java for millions of years. Bengawan which means this great river has also witnessed the journey of Javanese life whose flow not only crosses the area but also crosses the development of time from time to time. Bengawan Solo River has existed since the pre-script era and then passed through the Hindu and Buddhist kingdoms, Islamic kingdoms, colonial times until the independence revolution and until modern times. Initially, millions of years ago the Bengawan Solo stream did not flow into the Java Sea but into the Indian Ocean, which is precisely on Sadeng Beach, Yogyakarta (Wijaya, 2022). However, due to the lifting on the south side due to the pressure of the Indo-Australian plate so that the island of Java is leaning North which resulted in the flow of the Bengawan Solo River reversing direction and then looking for a “new” flow to the north side.

In the pre-script period Bengawan Solo became the center of civilization, especially on the island of Java (Savitri, 2015). Evidenced by the discovery of ancient human fossils in the Bengawan Solo River Valley such as *Pithecanthropus Erectus*, *Meganthropus Paleojavanicus*, *Homo Soloensis*, *Homo Mojokertensis* to *Homo erectus* (Ari Wlianto, 2022). Ancient humans at that time were very dependent on the flow of the Bengawan Solo River, because of its need for fresh water sources for the needs of life, especially drinking. In addition, game animals usually gather close to water sources. In later times the Bengawan Solo River functioned not far from the daily needs of humans such as drinking, bathing, farming and livestock.

Entering the Kingdom period, Bengawan Solo River held a strategic function in supporting business activities since the days of ancient Mataram (Wijaya, 2022). It is proven that the placement of the capital of the ancient Mataram Kingdom was placed based on the consideration of its location close to Bengawan Solo, namely in Surakarta, which is in accordance with the concept of Javanese cosmology (Savitri, 2015). In addition, merchant ships from the kingdoms in Java took advantage of the Bengawan Solo flow for business. There is a port that became the city where the city has a strategic role for the development of the economy in the 17th century. The city was named Wulayu which later became known as Bandar Semanggi in Sala Village, Surakarta (Soeratman, 2000) Traders from China also utilize the Bengawan Solo stream to load wood that will meet the sea as a water transportation route (Savitri, 2015).

While in the colonial period precisely in 1880 Hulu Bengawan Solo by the Dutch colonial government was changed so that the estuary that originally existed in the Madura Strait was transferred to the area now known as Ujungpangkah District in Gresik Regency (BBWS Bengawan Solo, 2020). This was done as an effort to avoid sedimentation in Tanjung Perak port. During this time, the Bengawan Solo River became the main trade route on the island of Java which was passed by merchant ships from the VOC (*Vereenigde Oostindische Compagnie*).

Historical traces that contain the vital function of the Bengawan solo River one of them is the Canggal inscription in 1358 is a historical record that reveals that the Bengawan Solo River is the center of civilization on the island of Java (Poesponegoro, 2008). It is further explained that this inscription by The King of Majapahit Hayam Wuruk recorded villages that were given the title *Sima*, namely the title of services to the surrounding community through Bengawan Solo. One of them is the village of Medanten which is now known as Bedanten village. The village in the past had a *tambangan* or river crossing service. Culturally and economically, Bengawan Solo has become an important point towards cultural transformation in Java, especially as a transportation route, Bengawan Solo connects coastal Java and inland Java (Wijaya, 2022).

Bengawan Solo river sustains the sustainability of people's lives on the island of Java, especially East Java and Central Java with its use as agricultural and plantation irrigation. The area through which the Bengawan Solo stream passes is more or less dependent on river water to drain agriculture and plantations. Even until now the area traversed by the Bengawan Solo stream is almost entirely a food barn area including Bojonegoro, Lamongan and Gresik. Reached 25 thousand hectares of irrigated areas flowed by the Bengawan Solo River (Labib Zamani, 2017). There are at least 20 regencies 3 cities in 3 provinces that depend on the Bengawan Solo stream, which consists of : Yogyakarta, Central Java, and East Java provinces including Kab. Gunung Kidul, Surakarta City, Kab. Boyolali, District. Klaten, Kab. Sukoharjo, Kab. Wonogiri, Kab. Karanganyar, Kab. Sragen, Kab. Blora, Kab. Rembang, Kab. Pacitan, District. Ponorogo, District. Madiun, Madiun City, Kab. Ngawai, Kab. Bojonegoro, Kab. Tuban, Kab. Lamongan, District. Mojokerto, Kab. Trenggalek, Kab. Gresik and Surabaya City (BBWS Bengawan Solo, 2017). In addition to the use of Bengawan Solo water as agricultural and plantation irrigation, the Regional Water Company (PDAM) itself utilizes bengawan solo River water as a raw material for drinking water.

Not only seen from the functional aspect-its history alone. The Javanese community is proven to consider water, especially Springs as something sacred. The Bengawan Solo River itself cannot be separated from its origin, namely

its springs. Here are some Bengawan Solo springs that are considered to have religious-spiritual value for the people of Java. Dianataranya (Purwadi, 2020):

- Kahyangan Dlepih Tirtomoyo Wonogiri

The Bengawan Solo stream geographically originates from the Seribu Mountains “Gunung sewu” located in kab. Wonogiri. According to the Javanese people, the springs that flow into Bengawan Solo come from Kahyangan Delpih Tirtomoyo Wonogiri. The location is believed to be the place of pesanggrahan Panembahan Senopati and Kanjeng Ratu Kidul. No wonder the location is often used to perform rituals. Many people still believe that if they pray and do ‘lelaku ’ at that location, their prayers will be answered.

- Grojogan Sewu

Grojogan Sewu precisely on the slopes of Mount Lawu is also a water supplier in Bengawan Solo. the water in grojogan sewu is considered sacred so it is used “sesuci ” by Prabu Brawijaya and the Kings of Majapahit.

- Kali Larangan

Kali or this small river is mixed with very clean water and is considered sacred from Umbul Cokro Pengging which was built in 1547 by joko Tingkir or Sultan Hadiwijaya, raja Pajang. In ancient times by the Surakarta palace, the cleanliness of the Prohibition Times was very closely guarded. Called as Kali larangan in Javanese ‘larang ’ means expensive, luxurious, istimewa. One of the Bengawan Solo Springs is very tightly guarded because of its luxury. The Kings of Mataram run the ritual flush jamas in Umbul Cokro Pengging, in addition to major figures such as Ki Ageng Pengging, Joko Tingkir, Sheikh Siti Jenar, and Ronggowarsito once lived around Umbul Cokro Pengging.

- Kaliworo Kemalang Klaten

Kaliworo Kemalang Klaten it is also the source of Bengawan Solo spring which is no less important. The source comes from the foot of Mount Merapi. The source of Kaliworo Kemalang Klaten, whose flow gathered into the Dengkeng River, grew a prosperous and fertile civilization. Throughout the flow of complex community life of the arts such as gamelan, karawitan, gending, dance, batik, pottery, industry is there.

In some areas where the Bengawan Solo River flows, there are rituals that are believed and exist to this day. One of them is the tradition of sowing seeds for the balance of nature. The activity of sowing the seeds has become a great tradition that has now begun to be abandoned. It is believed that the people of Java that sowing seeds into the Bengawan Solo River is also a form of throwing bad luck and seducing nature to give hospitality to humans (Med, 2021). Meanwhile, people living on the banks of Bengawan Solo there is a tradition of "Tuku Banyu Nggawan", precisely in Kebomlati Village, Kec. Plumpungan District. Tuban. The tradition has been carried on for generations. In the ritual, children under five will be bathed by the river and then the parents will sprinkle coins into the middle of Bengawan Solo. As the name implies “Tuku Banyu Nggawan ” or buying river water the ritual is believed to be a form of purchasing Bengawan Solo water so that children are bathed and the whole family gets salvation from God (Munthohar, 2022).

The longest river on the island of Java that has passed through millions of years has waded through various periods of life in Java since pre-script, Hindu-Buddhist kingdoms, Islamic kingdoms, colonial Era, and the independence Revolution. Unfortunately, in this post-modern era there is a decline in the quality and social function of Bengawan Solo to Javanese society. Bengawan Solo River which was originally considered as a” source of life “degraded function into a”source of disaster”. Disasters that are not caused by natural cycles such as tidal floods and water increases due to the rainy season but disasters due to globalization and human activities around the river.

Along the Bengawan Solo River currently stand private companies that open land (Wijaya, 2022). The study found that the upper reaches of the Bengawan Solo River contain heavy metals, copper and compounds that are harmful to living things. Among the content of Bengawan Solo River water contains chromium compounds (Cr) that have passed the threshold. Chromium in general comes from waste metal, textile, paper industry (Djoko Utomo et al., 2010). Industrial waste that is not processed properly will certainly have a bad impact on the quality of Bengawan Solo Water. The impact is that agricultural land and plantations are threatened with death and crop failure. At least in 2021, hundreds of hectares of rice in Lamongan suffered severe damage due to water contaminated by waste (Tatang Adhiwidharta, 2021). n the same year the regional Drinking Water Company (PDAM) of Solo and Blora ceased operations to extract water from Bengawan Solo because it was polluted by alcohol, textile waste, and pig farms (Labib Zamani, 2021).

Also found in the upper reaches of the Bengawan Solo River has an abundant content of microplastics. This is because along the upstream flow of Bengawan Solo stand industries, especially the textile industry. Based on water quality testing data conducted at UPT Environmental Quality Testing Laboratory of the District Environmental Office. Gresik in 2021 found that the Bengawan Solo River was positively polluted with heavy metals chromium VI, cadmium, copper and lead. Further explained that Bengawan Solo water quality standards are not feasible to use for Fisheries and plantation irrigation activities because it does not meet the water quality standards as stipulated in regional Regulation No. 2 of 2008 on Water Quality Management and Water Pollution Control in East Java province (Yusron and Asroul Jaza', 2021).

The content of microplastics in Bengawan Solo Water certainly has an impact on other living things, especially River biota, namely fish. As evidenced by the findings of fish that are often consumed by the community such as Cork fish, keeper, keting and grouper that live in the downstream flow of the Bengawan Solo River are also identified to contain microplastics (Rizqiyah et al., 2021). Meanwhile, Belanak fish that live in the Bengawan Solo River, especially in the river flow in Kab. Gresik found that the digestive tract of mullet fish contains microplastics consisting of films, fibers and fragments that endanger the quality of human life (Neily Qurrata A'yun, 2019). The entry of microplastics in the body of living things will damage the digestive tract and interfere with growth in addition, microplastics can interfere with hormone development and affect reproduction (Rizqiyah et al., 2021). Also found in brooms fish meat that lives in the upper reaches of the Bengawan Solo River has a heavy metal content (Djoko Utomo et al., 2010).

#### **2.4. The Bengawan Solo River as a Subject of International Law**

From the beginning, an entity holding rights and obligations is always evolving. After human equality where women were recognized as subjects of law and the emergence of the concept of corporation as a non-human subject of law. This is because the law evolves with the Times and human conscience. In international law, there is the highest norm in international law, *Ius Cogens*. The norm can change according to the will of the human conscience which in international law is represented by the legal conviction held by the state (Fajri Matahati Muhammadiyah, 2015). In accordance with this according to J.J. Rousseau quoted from Tomy Michael that the general will or belief held by the general public can decision making (Michael, 2016).

The designation of rivers as subjects of law by the state of India and the state of New Zealand indicates that there has been a shift in human views towards nature. Not only that some countries like Ecuador and France put Nature specifically in their constitutions. In Ecuador's own constitution natural rights are explicitly recognized in an amendment to the Ecuadorian constitution in 2008 (Whittemore, 2011). The Environmental Charter of 2004 was added to the Constitution of France of 2006 in line with the Declaration of human and Citizen rights of 1789. Article 1 of the Environmental Charter of 2004 states that "Everyone has the right to live in a balanced environment which shows due respect for health" ("Charter for the Environment of 2004," 2004). Everyone has the right to live in a balanced environment that shows respect for health. Human rights and the environment have an interdependent relationship with each other (Michael and Noviar Ramadhany, 2022).

When referring to the legal precedent that occurs in the world today where in India by designating the Ganges and Yamuna rivers as subjects of law, then also in New Zealand by designating the Whanganui River as a subject of law. Considering in India that the environmental and ecosystem conditions of the Ganges and Yamuna rivers are getting worse with the high pollution, mining activities, and disturbances so that the establishment of both rivers from upstream along with other attributes becomes the subject of law. In addition, the Ganges and Yamuna rivers are believed to have religious value for The Hindu community, which is also a consideration for their determination (Rian Adhivira Prabowo \*, 2020). Thus, the determination of the Ganges and Yamuna rivers as legal subjects is more focused on the urgency of environmental and religious aspects. Meanwhile, what happened in New Zealand with the Whanganui River was related to the aspect of "river control" in the form of pengampu to government representatives and Maori tribes. In this legal precedent indigenous peoples' rights over the Whanganui River are more emphasized than their environmental aspects.

Based on these two legal precedents, the Bengawan Solo River can be used as a legal subject with the urgency of determining the aspects of environmental sustainability, ecosystem restoration and socio-economic and religious functions of Bengawan Solo Springs which are believed to have been in the past. Where the level of water pollution of the Bengawan Solo River has crossed the threshold, the river biota is exposed to microplastics so it is very

dangerous for consumption. In addition, it also needs to be ranked if the Javanese people in general have confidence and local wisdom to Bengawan Solo Springs as a sacred place so that rituals are often carried out there. Bengawan Solo Water Quality decline is inversely proportional to the beginning of the utilization of fresh water sources. The water is not suitable for consumption and adversely affects agriculture and plantations due to the high level of waste contained in the river. In addition, the river biota inhabiting Bengawan Solo which is polluted can endanger health if consumed by humans. Not only that, Bengawan Solo's endemic biota is also threatened with extinction. Based on this, the determination of the Bengawan Solo River as a subject of international law needs to be considered. With the determination of the Bengawan Solo River as a subject of international law so that the river biota and other living things that live in Bengawan Solo remain sustainable. In addition, the Prevention of worsening water quality degradation is one of the considerations in order to restore its social function as irrigation for agriculture, plantations and raw water sources.

### 3. Conclusion

An entity holding rights and obligations is always expanding. After human equality where women were recognized as subjects of law and the emergence of the concept of corporation as a non-human subject of law. This is because the law evolves with the Times and human conscience. In international law, there is the norm of *Ius Cogens* which is considered the highest norm and is constantly changing according to the will of human conscience which in international law is represented by the legal beliefs held by the state.

The designation of rivers as subjects of law by the states of India and New Zealand indicates that there has been a shift in human views towards nature. Reinforced by increasingly severe climate change forces humans to change habits that are detrimental to the balance of nature. The view of man as the natural center of human-centered "anthropocentrism" was replaced by the view of deep ecology, namely the awareness of a series of interconnected ecosystems. Deep ecology is an approach to the environment that sees the importance of understanding the environment as a whole of life that supports each other, so that all elements have the same meaning and significance (Miftachul et al., 2019).

The designation of the Ganges and Yamuna rivers in India as legal subjects is related to the urgency of preserving nature including its influence on people's lives and refers to local wisdom and culture and spiritual values in India. Like The Hindu gods. Meanwhile, in New Zealand the designation of the Whanganui River as a subject of law relates to the Maori people. It could be said that what happened in New Zealand with the Whanganui River was nothing more than a takeover of control of the river in the form of *pengampu* to government representatives and from the Maori tribe.

Despite having different root causes, basically the two legal precedents have an urgency that is a shared anxiety globally, namely : the climate crisis. Because it cannot be denied that the climate crisis is a global problem that needs joint efforts to overcome it. In this regard, the Bengawan Solo River, which is the longest river on the island of Java, deserves to be considered as a subject of international law. The level of pollution and water quality degradation is very worrying resulting in degradation of function for the people of Java to the Bengawan Solo River which was once a" source of life "turned into a"source of disaster". Whereas the Bengawan Solo River which has been flowing for millions of years has played a strategic role for the life of the Javanese people, especially for trade routes, agricultural irrigation and plantations and supporting the economy. Meanwhile, Bengawan Solo spring is a place that is believed to be sacred so that rituals are often carried out by Javanese people in general.

By determining the Bengawan Solo River as a subject of international law, so as to preserve the environment and ecosystems there. The socio-economic function of Bengawan Solo as agricultural and plantation irrigation can also improve the economy of the surrounding community. More than that, the local wisdom of the area through which the Bengawan Solo stream can continue to live together with the community and Bengawan Solo can return to what it used to be : the center of Javanese civilization.

## References

- Ahmad Omar, 2017. Uttarakhand's case points to the challenges of giving a river the rights of a human.
- Ari Wlianto, 2022. Lembah Bengawan Solo, Tempat Tinggal Manusia Purba di Pulau Jawa.
- Bachtiar, S.H., Yanto, O., 2018. Metode Penelitian Hukum, Dr. Oksidelfa Yanto. ed. UNPAM PRESS, Tangerang Selatan.
- Baskoro Adi Prayitno, 2008. Dampak Penggunaan Air Tercemar Untuk Irigasi Pertanian dan Rekomendasi Penangannya. [WWW Document]. Baskoro Cyndicate2008. URL <https://baskoro-cyndicate.blogspot.com/2008/03/dampak-penggunaan-air-tercemar-untuk.html> (accessed 11.6.22).
- BBWS Bengawan Solo, 2017. Wilayah Adiminstratif DAS Bengawan Solo [WWW Document]. Situs Resmi Balai Besar Wilayah Sungai Bengawan Solo, Direktorat Jenderal Sumber Daya Air, Kementerian Pekerjaan Umum dan Perumahan Rakyat. URL <https://sda.pu.go.id/balai/bbwsbengawansolo/portal/index.php/wilayah-admisitratif-2/> (accessed 11.6.22).
- BBWS Bengawan Solo, 2020. Sejarah Singkat Bengawan Solo [WWW Document]. Kemernnrian PUPR Ditjen Sumber Daya Air BBWS Bengawan Solo.
- Charter for the Environment of 2004 [WWW Document], 2004. URL [https://en.wikisource.org/wiki/Charter\\_for\\_the\\_Environment\\_of\\_2004#Article\\_1](https://en.wikisource.org/wiki/Charter_for_the_Environment_of_2004#Article_1). (accessed 9.18.22).
- Djoko Utomo, A., Ridho, M.R., Saleh, E., Dwi, D., Putranto, A., 2010. PENCEMARAN DI SUNGAI BENGAWAN SOLO ANTARA SOLO DAN SRAGEN, JAWA TENGAH.
- Fajri Matahati Muhammadin, 2015. Seputar Ius Cogens [WWW Document]. Fajri Al-Mudarris. URL <https://fajrimuhammadin.staff.ugm.ac.id/2015/10/01/seputar-jus-cogens/#:~:text=Dalam%20bahasa%20Latin%2C%20Jus%20Cogens%20berarti%20%E2%80%98hukum%20memaksa%E2%80%99.,Cogens%2C%20maka%20peraturan%20hukum%20tersebut%20dianggap%20batal.%20%5B1%5D> (accessed 11.8.22).
- Labib Zamani, 2017. BBWS Bengawan Solo Tangani Irigasi 25 Ribu Hektar Pertanian. Solo.
- Labib Zamani, 2021. Bengawan Solo Tercemar Ciu, PDAM Toya Wening Berhenti Operasi Sementara. Solo.
- Lalit Miglani v. State of Uttarakhand & others [WWW Document], 2016. URL <https://www.casemine.com/judgement/in/5b1a21784a932631a5a08cfc> (accessed 9.26.22).
- Lucky Ir., 2014. Bengawan Solo Kebesaran Jiwa Gesang yang Tertuang Dalam Lagu [WWW Document]. Kompasiana. URL <https://www.kompasiana.com/stratofennder/54f93cb8a33311ba078b48c0/bengawan-solo-kebesaran-jiwa-gesang-yang-tertuang-dalam-lagu> (accessed 10.27.22).
- Med, 2021. Tradisi Buang Sial Tebar Benih Ikan di Sungai Bengawan Solo [WWW Document]. KORANURI.com. URL <https://koranjuri.com/tradisi-buang-sial-tebar-benih-ikan-di-sungai-bengawan-solo/> (accessed 11.8.22).
- Michael, 2016. Memaknai Pemikiran Jean-Jacques Rousseau Tentang Kehendak Umum Menciptakan Keadilan. Prosiding Seminar Nasional Multi Disipin Ilmu & Call For Papers Unisbank, Surabaya.
- Michael, T., 2017.
- Michael, T., Noviar Ramadhany, 2022. 1.
- Miftachul, A., Husamah, H., Rahardjanto, A., 2019. ETIKA LINGKUNGAN (Teori dan Praktik Pembelajarannya).
- Mohd Salim v. State of Uttarakhand & Others, No,126 [WWW Document], 2014. . casmine. URL Mohd Salim v. State of Uttarakhand & Others, Writ Petition (PIL) No, 126 of 2014 (accessed 9.26.22).
- Munthohar, 2022. beritajatim.com.
- Neily Qurrata A'yun, 2019. ANALISIS MIKROPLASTIK MENGGUNAKAN FT-IR PADA AIR, SEDIMEN, DAN IKAN BELANAK (Mugil cephalus) DI SEGMENT SUNGAI BENGAWAN SOLO YANG MELINTASI KABUPATEN GRESIK. Surabaya.
- Poesponegoro, M.D., 2008. Sejarah Nasional Indonesia: Zaman Kuno. Balai Pusataka, Jakarta.
- Purwadi, 2020. Sejarah Bengawan Solo Dalam Prespektif Budaya [WWW Document]. SUKUH.COMmunity. URL <https://sukuh.com/sejarah-bengawan-solo-dalam-perspektif-budaya/> (accessed 11.8.22).
- Rian Adhivira Prabowo \*, A.S.\*\*, F.A.S.\*\*\*, U.P.H.\*\*\*\*, E.R.E.\*\*\*\*\*, G.P.G.\*\*\*\*\*, 2020. Jurnal Hukum & Pembangunan 50, 106.
- Rizqiyah, Z., Listya Nurina, V., Rahmania, 2021. Environmental Pollution Journal 1, 167–174.
- Rosana, E., 2013. HUKUM DAN PERKEMBANGAN MASYARAKAT.



- Salim, M., Petitioner, . . . . ., 2017. IN THE HIGH COURT OF UTTARAKHAND AT NAINITAL Writ Petition (PIL) No.126 of 2014.
- Savitri, M., 2015. PERAN MAGIS-RELIGIUS BENGAWAN SOLO DALAM PENDIRIAN KOTA SURAKARTA ABAD KE-18 The Magical-Religious Role of Bengawan Solo in the Establishment of Surakarta City in 18th Century.
- Soeratman, D., 2000. Kehidupan dunia Kraton Surakarta 1830-1939. Yayasan Untuk Indonesia, Yogyakarta.
- Syamsu, B., 2020. Bengawan Solo: Bagaimana Lagu Folk Indonesia menjadi Zeitgeist Asia Pasca-Perang Dunia II [WWW Document]. studies of music society. URL <https://laras.or.id/bengawan-solo-bagaimana-lagu-folk-indonesia-menjadi-zeitgeist-asia-pasca-perang-dunia-ii/> (accessed 10.27.22).
- Tatang Adhiwidharta, 2021. Petani Lamongan Resah, Ratusan Lahan Pertanian Terancam Mati Akibat Air Bengawan Solo Tercemar Limbah Berbahaya. Lamongan.
- Te Awa Tupua (Whanganui River Claims Settlement) [WWW Document], 2017. URL <https://www.legislation.govt.nz/act/public/2017/0007/latest/whole.html> (accessed 9.15.22).
- Whittemore, M.E., 2011. THE PROBLEM OF ENFORCING NATURE'S RIGHTS UNDER ECUADOR'S CONSTITUTION: WHY THE 2008 ENVIRONMENTAL AMENDMENTS HAVE NO BITE, Washington International Law Journal.
- Wijaya, D.A., 2022. Jurnal Inovasi Penelitian 2.
- Yusron, M., Asroul Jaza', M., 2021. Analisis Jenis dan Kelimpahan Mikroplastik serta Pencemaran Logam Berat pada Hulu Sungai Bengawan Solo.