

The Environmental Security and International Relations: The Case of Citarum River Water Pollution

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Abstract

Environmental security as part of human security is a very significant global issue. Environment security became the concern of the Sustainable Development Goals (SDGs) achievement, namely securing the source of ground water which is an important problem in developing countries. This paper analyses the Citarum River, the longest river in West Java, Indonesia, which is heavily polluted due to various economic activities along the riverbanks. The process of industrialization, development and demands to meet the needs of life, as well as population growth have not succeeded in maintaining the river as a source of life. Economic interests and various political conflicts were unable to maintain environmental sustainability. The river pollution comes from factory waste operating along the river, without a process through the Wastewater Treatment Plant (WTP). The research would focus on the government securitization programs in Citarum River, by implementing four components of securitization namely referent objects, scope, mean, and actors. The analysis observed various government efforts and private sectors to restore the river. The research started in 2000, which is the beginning of "Citarum Harum" restoration until the end of the program in January 2025. The research found that securitisation efforts failed due to three issues; the corruption, collusion and nepotism (CCN) issues, lack of law enforcement, and weakness of bureaucracy and leadership. As a conclusion, various securitisation efforts need to be carried out more firmly and earnestly by providing adequate legal sanctions for the perpetrators of environmental damage.

Keywords: security, environment security, Citarum River, restoration

Abstrak

Keamanan lingkungan sebagai bagian dari keamanan manusia merupakan isu global. merupakan isu global yang sangat penting yang merupakan bagian dari keamanan manusia. Keamanan lingkungan menjadi perhatian dalam Tujuan Pembangunan Berkelanjutan (SDGs), yaitu mengamankan sumber air tanah yang merupakan masalah penting di negara berkembang. Makalah ini menganalisis Sungai Citarum, sungai terpanjang di Jawa Barat, Indonesia, yang sangat tercemar karena berbagai kegiatan ekonomi di sepanjang bantaran. Proses industrialisasi, pembangunan dan tuntutan untuk memenuhi kebutuhan hidup, serta pertumbuhan penduduk belum berhasil mempertahankan Citarum sebagai sungai yang menjadi sumber kehidupan. Kepentingan ekonomi dan berbagai konflik politik telah mengalahkan keinginan untuk menjaga kelestarian lingkungan. Polutan berasal dari limbah pabrik yang beroperasi di sepanjang sungai, tanpa proses melalui Instalasi Pengolahan Air Limbah (IPAL). Penelitian ini memfokuskan pada bagaimana pemerintah menjalankan program-program sekuritisasi di Sungai Citarum, dengan menerapkan empat komponen sekuritisasi objek referent, ruang lingkup, cara dan pelaku. Analisis mengobservasi berbagai upaya pemerintah dan swasta untuk mengembalikan fungsi Sungai Citarum sebagai sumber kehidupan. Penelitian dibatasi pada tahun 2000 ketika program revitalisasi Citarum dimulai hingga akhir program di Januari 2025. Temuan penelitian adalah terjadi kegagalan proses sekuritisasi yang disebabkan 3 hal utama: korupsi, kolusi dan nepotisme (KKN), lemahnya penegakan hukum, dan lemahnya birokrasi dan kepemimpinan.

Kesimpulannya adalah berbagai upaya sekuritisasi perlu dilakukan secara tegas dan bersungguh-sungguh serta menerapkan sanksi tegas bagi para pelaku pelanggaran lingkungan.

Kata Kunci: keamanan, keamanan lingkungan, Sungai Citarum, restorasi

INTRODUCTION

Environmental security is one of the benchmarks of achievement in the Sustainable Development Goal (SDG), namely securing water sources in developing countries. Repairing environmental damage and protecting nature for human survival is also part of environmental security. The problems of water scarcity, pollution, and freshwater pollution have become important global issues. Environmental security is defined as the relative safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design originating within or across national borders (Glenn, Gordon, & Perelet, 1998: 15; Montanari & Bracker, 1986). The concern of environmental security is to protect people from short and long-term ravages of nature, man-made threats in nature, and deterioration of the natural environment. In developing countries, lack of access to clean water resources is one of the greatest environmental threats.

Water scarcity, pollution and groundwater contamination are among the most significant environmental issues. The elements clustered around two central concepts: repairing damage to the environment for human life support and for the moral value of the environment itself. Another element is preventing damage to the environment from attacks and other forms of human abuse. The environmental damage mostly happened in developing countries, as the environment was

considered as less important than the economic development and industrialization process. Population pressure and the city's development led to environmental degradation. Indonesia has a lot of environmental issues, including deforestation, water pollution, water scarcity, etc. An example of environmental insecurity occurred in Citarum, the longest river in West Java, Indonesia. The river flows over an area of 12,000 square kilometers; from Mount Wayang in Southern Bandung and flows to the Java Sea. The River reaches two provinces, West Java and Jakarta, and crosses nine administrative areas. The river is a centre of freshwater fisheries, irrigation, and transportation besides for daily activities (Bolo & Suhendar, 2012). The significance of the river increases with the existence of three dams that receive direct water supply, namely Jatiluhur, Saguling, and Cirata. The source of livelihood also indicated by the river function to irrigate 420,000 hectares of rice fields, affecting and benefiting approximately 28 million people in two mentioned provinces (Dwisusanto et al., 2013).

The Citarum River is considered as one of the world's most polluted as the result of various economic activities along the riverbanks. The industrialization process, infrastructure development and demands to meet the needs of life, as well as population growth have degraded the water quality. In addition, deforestation and land clearing for agriculture purposes, combined by sedimentation, flooding, and various

waste further led to environmental damage. Economic interests coupled with various political conflicts have defeated various efforts to preserve the water. To make it worse, the community culturally considers the river as a giant rubbish dump and the ultimate destination for all types of waste. The littering to the river basin causes severe flooding every year during the rainy season and turbid water in the dry season. The people living along the riverbanks always adapt to flood disasters as they have no option rather to survive.

The pollutants also derived from plant waste operating along the river, which was disposed of without the Wastewater Treatment Plants (WTP) process. The river bank is the home to 3,236 industries, most of which are textile factories. Of the many factories, only 20% have WTP, while about 80% illegally dispose of wastes directly to the river (Haryadi, 2018). Even though a small percentage of industries have WTP, however, still dump waste carelessly into the river. This condition led to the river turning into a giant garbage that houses all types of waste and pollutants (Husodo, 2017; Putra, 2017). The government data indicated that a number of factories along the river watershed were suspected of circumventing WTP installations; having non-functioning/damaged equipment, or reluctance to operate purposely to decrease production costs.

The biggest responsibility to restore the river lies on to the government as policy maker and budget allocator. Securitization process should be conducted to return the river as the source of life. This paper answers the question: "how is the government's securitisation program in Citarum River?" The analysis would implement

four securitisation components namely referent objects, mean, scope and actors. The research started in 2000, which marked the launching of Citarum restoration and ended in January 2025, as the end of the programme. Theoretically, this paper aims to provide a better understanding on the concept of environment security. Practically the research will contribute to provide a better understanding on the success and failure of an environment management program. Moreover, it gave a better understanding on the role of government and its policies on environment restoration. Hopefully other regions experiencing similar problems can implement better securitisation programmes based on Citarum experiences.

Human Security

Several researches on security provided a significant basis to this research, with the most prominent being the book "Security: A New Framework for Analysis" (Buzan, Wæver, & de Wilde, 1998). The book introduces the traditional and non-traditional security while advocating for an intersubjective conceptualization of security. The authors broadened the traditional security understanding that should encompass a wider array of issues, such as environmental threats and challenges to societal identities.

The United Nations Development Programme (UNDP) further developed the non-traditional security concept in 1994 by the publication of the Human Development Report. The concept of Human Security concerns mainly to ensure all people enjoy a "freedom from want" and a "freedom from fear". These freedoms best tackle the problem of

global insecurity (UNDP, 1994). The scope of human security expanded to threats in seven areas: economic, food, health, environment, personal, community, and political issues. Human security is people-centered and focuses on protecting individuals with important dimensions to entail its well-being and respond to ordinary people's needs in dealing with sources of threats. The scope of protection also includes threats of environmental pollution, infectious diseases, and economic deprivation (Greaves, 2014).

The concept of human security is complementary to human rights that includes the “freedom to live in dignity” and “freedom to inherit a pro-nature environment for forthcoming generations”. All individuals, particularly those who are vulnerable and marginalized, must have equal and unrestricted opportunity to enjoy rights and freedoms in order to develop their potential optimally. Human security is focused on the betterment of human lives by conquering poverty, hunger, disease, illiteracy, armed conflict, and terrorism through mutual respect. All governments should realize their primary responsibility toward human security for all the people by ensuring their survival, livelihood, liberty, and dignity.

Further step towards safeguarding human security declared by the United Nations General Assembly (UNGA) resolution 66/290. It stated that “human security is an approach to assist member states in identifying and addressing widespread and cross-cutting challenges to the survival, livelihood and dignity of their people.” It further calls for “people-centred, comprehensive, context-specific and prevention-oriented responses that strengthen the protection and

empowerment of all people” (UNDP, 2024). The human security principles addressed for 2030 Agenda for Sustainable Development Goals (SDGs) which emphasizes a “world free of poverty, hunger, disease and want, free of fear and violence. The 2023 SDGs further aims for equitable and universal access to quality education, health care and social protection to safe drinking water and sanitation”.

The above concepts are complemented by research “Globalization and Environmental Issues: A New Framework for Security Analysis”. (Henry, 2014). The finding provided a basic explanation on the importance of environmental issues in globalization as well as a vital sector in international security. Henry implemented a game theoretic approach while making hypothetical assumptions on how the impact of globalization on the environment will lead to future security problems. Further research analyses the need to react and adapt to these emerging threats (Markushina, Sboychakova, & Tikhonova, 2022). This new wave of interest in environmental issues leads to a rethinking of environmental security in world policy, the development of programs and the institutionalization of “green” movements. This approach played a role in filling the concept under study. Further articles provided a better understanding on the global concern on environmental security (Glenn, 2012). The research discussed the adverse impacts of human activities to the environment, as well as analysed the direct and indirect effects of various forms of environmental change. Insecurity experienced by individuals and groups due to environmental change was also his concern.

Further study by Graeger (1996), focused on the military involvement in environment protection. The regular non-war military activities can also have negative impacts on the environment. As applied in the Citarum issue, the use of the military to protect rivers is an example of a positive relationship between the military and the environment (Ramadhan, 2018). These researches provided a better understanding on environmental security concept and implementation. However, none of these discussed Indonesia as a developing country that was challenged by several environmental issues with a direct impact to people. Environmental damage and pollution turned as consequences to industrialization process and population pressure. Therefore, the case study of the heavy pollution in Citarum River indicated that the environment is a significant global concern that needs to be addressed properly.

Research Methods

A structured and elaborated research methodology is applied for this research. The concept of security and human security are used to analyse environmental damage under the case study of Citarum River. The implementation of four aspects of securitization as introduced by Buzan et al. (1998) would be analyse, they are referent objects, scope, mean, and actors. Human security issues would be analysed based on the implementation of government securitization programs. To analyse securitization scope, emphasized would be on people as a referent object.

Securitization activities will discuss how the government has implemented programs to protect the people. The well

being of the people as an important dimension of the securitization program will be analysed when dealing with sources of threats. To analyse the scope, elaboration would be given on government programs for environment protection, and to analyse the mean, the focus would be on the government program and solutions. To analyse the actors, the discussion would be using the “pentahelix” concept, both government and non-government organizations to overcome the problems. The performance of four securitization processes then concluded based on the performances of government securitization programs.

RESULTS AND DISCUSSION

Securitization in Citarum River Water Pollution

Problems in the Citarum River basin are related to population pressure, such as the conversion of water catchment forests into secondary crop plantation areas. For economic reasons, residents convert government’s owned forest into vegetable gardens and other purposes. The most significant result is environmental damage strongly caused by floods that occur every year. To minimize flood victims, the government had initiated a relocation program, to the area far from the river basin. However, the program was unsuccessful due to the nature of majority agrarian communities which have strong ties to land. Another problem is sedimentation, floating cage fisheries in three reservoirs (Saguling, Cirata, and Juanda), and heavy metal, hazardous and toxic pollution. In the downstream area, problems include industrial, medical, and household waste, sedimentation and mangrove destruction.

Based on unresolved problems during seven years of “Citarum Harum” program (2018-2025), the river will remain named as “the world dirtiest and most polluted river”. The government had managed several programs and actions to securitize the issues with a minimal result. Securitization should be implemented on people as referent objects, scope, mean, and actors. Below is the discussion on those four aspects and followed by the securitization performances.

Individual as a Referent Object

As environmental damage could become a serious threat to the nation, a serious treatment and policies should be implemented. Pollution of the Citarum causes more costs to families living along the river. For low-income people who cannot afford clean water, they are forced to bear amid various health risks (Pikiran Rakyat, 2018a). The people have the right to be protected from consuming polluted water which directly affects health. Based on parameters in the environmental quality index, the Citarum water was categorized as moderately to heavily polluted. These hazardous substances are consumed directly and indirectly by residents in West Java and Jakarta. Most of Jakartan’s drinking water and fish consumption come from this river. The pollutants come from factory waste operating along the river, without being processed through the Wastewater Treatment Plant (WTP) (Saputra, 2018). The source of pollution are 20,462 tons of organic and inorganic waste dumped into the river, as well as 35.5 tons per day of human waste, 56 tons/day of livestock and medical wastes. The river pollutants are around 70 percent from domestic waste, 30 percent from industrial,

agricultural and livestock waste. The pollutants that increased sharply in the Citarum River are coli bacteria from human feces. The natural habitat of this bacteria is in the human intestine. A good drinking water should have zero bacteria.

The Citarum River heavily polluted and carried infectious diseases that led to economic deprivation. The quality of life decreased as the people’s income was used for medication of mild to severe diseases. As a result of contaminated water, research indicated that agricultural land in the Bandung Regency, particularly horticultural land, is contaminated with organochlorine pollutants (Sukarjo, Zu’amah, & Handayani, 2022). The medical costs increased significantly as incurred by the Health Social Security Administration Agency (BPJS). The health budget for West Java was Rp 1.9 trillion for health treatment. These budgets are mostly for community treatment in the Citarum watershed.

If environmental management was carried out properly, the state budget allocation for the health sector would be decreased. Data from 2013 indicated that the waste produced as much as 500 thousand cubic meters per year from factory and household waste. Polluted water is dangerously impacted to health in the short and long term, according to the substances or bacteria contained. The direct impact is digestive diseases, which are exacerbated when consuming water containing hazardous chemicals such as mercury, cadmium or lead. The content of these heavy metals reacts directly to the body, with a rapid impact, to skin diseases, including dry and cracking skin. Most residents affected various types of skin diseases as a result of heavy metals exposures from water used for daily

activities. The most dangerous indirect impact is seen in the long term, when the deposits of these substances settle in the body and cause various diseases including nervous system disorders. Number of stunting and other growth disorders within residents along the Citarum River basin is also high. Growth disorders had increased by 6 times, and respiratory disorders by 23 times. Various studies have demonstrated that heavy metal pollution affects body functions including increasing the possibility of circulatory system disorders by 3 times, and nervous system disorders by 4 times. Although the effects of river water pollution are very real, government policies have failed to address various health problems.

The Securitization Scope: River Restoration Programmes

As a securitization agent, the government had designed and implemented various programs. The first program launched in 2000-2003, known as "Citarum Bergetar", abbreviated for "clean, beautiful, and sustainable". The program focuses on control, recovery, conservation, and community empowerment. Given the strategic position of the river, the Indonesian central government in 2008 allocated a restoration fund from the Asian Development Bank (ADB) worth USD 500 million (or around Rp 6.7 trillion) for 15 years instalment. Until the termination of the program, the river was still heavily polluted. As a continuation, in 2011 the new program called "the Citarum Integrated Water Resources Management (IWRM)" launched. The program aims to achieve the goals (vision) set by stakeholders (government agencies, community, private sectors and

NGO's) through various meetings and consultations. The program is also funded by ADB with an estimated cost of Rp 9.1 trillion. Although involved various stakeholders, the program fails to restore the water catchment areas upstream and to improve water quality.

In 2014, the "Citarum Bestari" program was launched by Governor Ahmad Heryawan. Under the Governor Regulation Number 75 of 2015, the program supported by around Rp 80 billion budget targeted in 2018, or 3 years after it launched, the river water can be directly drunk. "Citarum Bestari" means "good ethics" in addition to the abbreviation of "clean, healthy, beautiful, and sustainable". The program was followed by the "Citarum Terpadu", which emphasized a joint movement commitment from upstream to downstream. This program was designed without applying a "project" approach, but rather in the form of "a multistakeholder Action Plan for Work Implementation" (Pikiran Rakyat, 2018b). One of the program flagships was the establishment of the "ecovillages" or environmentally cultured villages along the river. The "ecovillage" was community centered and led by leaders with a strong concern on environment protection. The community leaders trained and educated to protect and to maintain water cleanliness. Their task was to conduct and promote community service activities to clean the river from garbage and to advocate an environment friendly way of life.

During the two periods of Heryawan's leadership (2008-2018), the program was unable to improve the river condition. Tempo Daily on May 6, 2018, recalled Heryawan's promise during his political campaign that the river water

could be drunk directly. Heryawan re-election to his second term as a Governor indicated the people's willingness to support the programs. However, up to the end of his term, the river's water remained dirty, heavily polluted, and far from the initial target. At the beginning of the Citarum Harum programme, the water quality was very poor or heavily polluted, in 2023 the condition only slightly improved and classified as light pollution (Citarum Harum Juara, 2023).

The central and regional governments also launched programs to increase the capacity of the upstream region while normalizing number of streams (Citapus, Cinambo, Cilember, and Cibeureum), as well as tributaries of the Citarum (Cikijing, Cikeruh, Cimande). In addition, the government has constructed 266 check dams as sediment control, which makes the total check dam number of 146 check dams. Other physical infrastructures include the water resource management, liquid and solid waste management, and resettlement area on banks and flood-prone areas. However, the results have not been significant as a result of lack of coordination between various stakeholders. The failure occurred despite the full support of the central government, international donor agencies (like IMF or World Bank), and community involvement.

The Means of Securitization: Program implementation and Solutions

The internationalization of Citarum issues started in April 2014, when an international media published a critical condition in Citarum River. The broadcasted entitled: "The River of Rubbish" (Channel 4 Entertainment, 2014), "Unreported World: The World's

Dirtiest River" (The Process, 2018). The video successfully attracted thousands of viewers, portraying Seyi Rhodes kayaking along the River. Even though the broadcast went viral, the Indonesian government did not pay a serious attention until the British Broadcasting Corporations (BBC) broadcast a video in 2017. The show depicts two Frenchmen, Gary and Sam Benchehib, wading through a river filled with garbage and sewage (Anindita, 2018). The broadcast attracted the attention of President Joko Widodo, who followed by an intervention to deal with the problem. The President followed up by launching the "Citarum Harum" program in January 2018, involving the Indonesian army (TNI), the government, and various stakeholders. Under this program, the river was divided into 22 sectors, each led by a military officer with Major rank.

The Securitization Actors through "Pentahelix" Involvement

The environment securitization program involved the "Pentahelix" actors; the government, academics, businessmen, media and community (Amrial, Muhammad, & Muhamad, 2017). The ministerial supports include the National Planning and Development Agency (Bappenas), Public Works, Agriculture, Health and Environment. The government has political power, to formulate a policy through decisions, supported by the second element which is the community with social power. The academics have the power of knowledge, to present research and education that accelerate various programs to be more affordable and more impactful. The fourth element is businessmen or entrepreneurs, with the capital power,

and the last is the media that controls publication and communication.

The other actors beside the government have only been involved since the “Citarum Harum” program in 2018. Previously, various elements worked individually, with an overall minimum result. For example, the role of academics which could be involved in environment education programs was not recognized before 2018. The idea to involve the education element was introduced in 2018, when environment education became part of school curriculum from Early Childhood Education (PAUD) up to university level. The failure of previous programs was due to the lack of awareness and involvement of actors outside the government. In fact, the community had a direct impact on the existing river. Previously the people were only treated as the object of various programs.

Data in 2014 indicated a cooperation between the government and the NGO's with strong environmental concern. The Citarum.com website records several NGOs with a significant role, including the Independent Youth Group, Bina Mitra Foundation, Driya Media Studio, Perkumpulan Keluarga Peduli Pendidikan (KERLIP), Wanadri, EKOLINK, OIKOS, Greeneration, ICORD, Bangkit Bersama Cooperative, and Kanumayasa. They cooperate on environment programs including the Environmental Elements (“Elingan”), which is actively engaged to provide community assistance. The “Elingan” group, among others, conducted a waste recycling training, while launching environmental advocacy actions. In 2010, the Citarum Watershed Working Group Association (WGA) was established which consisted of 120 grassroots

communities in the river upstream. The Citarum WGA expands its network to cooperate with various stakeholders, such as government and private agencies. Several communities were also actively involved in the socialization of river boundary arrangement with the Citarum River Region Center (CRRC).

Education institutions and universities also take part in river management and restoration programs. As an example, the Parahyangan Catholic University (Unpar) conducted environment education using films to schools and communities in Citarum River basin (Cita-Citarum, 2017). Unpar community service program focused on 9th Sector around Batujajar Village, beside the Islamic Boarding School (Pesantrens) especially in the upstream river in Gunung Wayang region (Djelantik, Manurung, & Hartono, 2021). Other universities also conducted community development service programs and research. The research implementation became a basis for designing various changes and policy improvements.

The business group has also taken part in supporting community empowerment and environmental conservation. These programs are usually carried out through Corporate Social Responsibility (CSR) schemes of private companies and State-Owned Enterprises (SOEs). Various CSR forums were established under the provincial government coordination (Bappeda). The CSR activities are coordinated by the Corporate Forum for Community Development (CFCD).

Advocacy is also conducted by organizations such as the "Coalition Against Waste", which consists of Greenpeace, WALHI, Pawapeling, LBH

Bandung and the Indonesian Center for Environmental Law (ICEL). This coalition is against the granting of Wastewater Disposal (IPLC) permits to 3 companies considered as the largest river polluters (PT Kahatex, PT Insan Sandang Internusa and Five Star Textile Indonesia). The coalition believed that the government had inappropriately granting permits to wrong receivers. This decision has permanent legal force through Cassation Decision No. 187 K/TUN/LH/2017 by the Supreme Court on May 17, 2017. The panel eventually canceled these three permits. Despite the strong support by various "Pentahelix" elements, the pollution control by the Ministry of Environment (KLH) and local governments remain inefficient. The regulations suspected of containing unlawful elements that led to environmental degradation.

Analysis on Securitization Program

The government securitization program performances will be analysed horizontally and vertically. A vertical coordination example is to prevent the people transferring forest as a vegetable garden or when an environment supportive NGO advocating the communities against the government. A horizontal action happened between government institutions, such as the Ministry of Environment and Public Work. Horizontal coordination indicated by program implementation is sometimes not synchron between institutions. The government and non-government actors often demonstrated ego and self-interests of their respective institutions at the cost of environmental damage.

A policy to accelerate pollution control and river damage was designed

through relocation of residents and a number of companies. The purpose is to centralize waste disposal to a single location away from the river. Relocation planned to move a number of industries to more flood prone locations and less dense areas. As many as 360 habitable houses were built, however they were not fully utilized (Damanik & Maulana, 2018). The people preferred to stay in their old homes even though they were prone to natural disasters. The thick kinship system in Sundanese culture and family closeness is very important and they prefer to stay close amid any circumstances. Further discussion will be on factors that prevent the success of the river restoration program; the Corruption, Collusion and Nepotism (CCN) issues, weak law enforcement, and lack of leadership and bureaucracy.

The Issues of "Corruption, Collusion and Nepotism" (CCN)

To support the restoration program, several donor institutions were involved, such as the ADB, the Japan International Cooperation Agency (JICA) and the Global Environment Facility (GEF) (Facette, 2018). Report suggested that the amount of budget allocated for the river revitalization program was not proportional to the results (Putri & Zuraya, 2018). Based on the suspicion of budget leakage, the West Java Public Relations Office reported that the central government evaluation involved the Corruption Eradication Commission (KPK). The action is based on several indications on budget losses and inefficiency during the river rehabilitation process.

Various efforts and programs involved the government disbursed funds amounting to Rp 22 trillion over

the past 20 years. This relatively abundant fund is considered the biggest in terms of river restoration. However, the allocated budget was asynkron compared to the results. Although there is no exact figure on the amount of fund leakages from the previous programs, there were real indications of CCN. For example, the "Integrated Citarum Program" (ICP) demanded re-evaluation by the academics and the People's Coalition for the Right to Water (KruHA) only three years after operation (Launa, 2011). A letter to ADB Board of Directors (BoD) required a discontinuation of financing until the publication of a report on measurable improvement. KruHa found a mismatch in the number of affected communities on the first ICP project. The program was considered detrimental to residents, lack of budget transparency, and did not meet the initial goal.

Although the amount of budget allocation on Citarum was excessive, the outcome was imbalance. The program performance was reported as wasteful, unproportional, and doubled (Bayu, 2018). Budget inefficiency indicated by the allocation which focused on removing waste from the river while the polluters remain unpunished. As an illustration of the budget allocation for revitalization program, the environmental news website, "Mongabay" reported that since December 2008, ADB has provided USD 500 million. The fund was divided into four stages during 15 years of installment and used a multitranche financing facility (MFF) scheme. The first phase of ADB allocation loans was Rp. 50 billion. Further report by "Republika" in September 2014 stated that the total budget of "Citarum Bestari" increased to Rp. 90 billion in 2015. Compared to 2014,

the budget increased by around 50 percent, which excluded the budget from the central government and the company's Corporate Social Responsibility (CSR). The central government provided Rp. 20 billion outside the company's CSR funds.

In 2016, "Pikiran Rakyat" daily reported that Rp120 billion budget installments for "Citarum Bestari" program (Wulandari, 2016). The funds allocated for programs with "massive movements", or mobilize advocacy to impacted communities, factories, farmers, and households. The fund was allocated to the third phase of normalization of Citarum upstreams (Cisarea River in Majalaya), Cimande, Cikijing, and Cikeruh. Meanwhile, the allocation of grants from GEF through ADB was USD 3.75 million for installment during 2010-2013. The fund used for conservation programs in the river upstream, includes biological natural resources and ecosystems. The budget is particularly focused on forest conservation under the Ministry of Forestry (Citarum.org, 2013). The fast amount of budget allocation for river preservation was a great opportunity to support and fulfill a clean and beautiful river. However, as the budget was not properly used, the result was that until 2018, only about 50% of the river water was restored. The river is still heavily polluted with garbage and waste in addition to floods that are still unresolved (Solehudin, 2017).

Regarding the government funding, "Pikiran Rakyat" on December 29, 2016, reported that the "Citarum Bestari" budget allocation should be used for conservation, water management, and damage control (Wulandari, 2016). The budget was Rp. 90 billion in 2015,

increased to Rp. 120 billion in 2016, and Rp. 280 billion in 2017. The program involves several ministries including fisheries, livestock, health, environment, agriculture, and public works and regional planning.

Egeham (2017) stated that each of these agencies has individual programs and budgets such as providing livestock businesses, the procurement of latrines, tree planting, and providing garbage trucks and motorcycles for waste transportation (Sulaksono, 2018). Further budget was Rp. 110 billion for physical infrastructure and facilities construction in river tributaries. The budget is distributed to five agencies, such as environment and hygiene, housing, settlement, land and landscaping, regional planning, health, and education. The Bandung City Government obtained a budget for maintenance of construction of water facilities and infrastructure (Mujahidin, 2018). Further budget for the provision and management of sanitation related to water resources, education, research and development. The People's Coalition for Water Rights (Kruha) in 2018 demanded to stop the ADB debt of USD 500 million for a long-term program for 2008-2023. The February 2019 "Kompas" reported on an audit of the Financial Audit Agency (BPK), which indicated the "Citarum Harum" program was ineffective. BPK's criticism highlights that the program implementation did not address the root of the problem.

Weakness of Law Enforcement

Another failure of the river restoration program was the weakness of law enforcement. For decades, factories that illegally operated and polluted the water remain unpunished. The West Java

Environment Agency found that a significant number of factories that did not comply with legal aspects have survived for years as a result of collusion with the government officials. The government officials and law violators gained mutual benefit at the cost of the community. The Environment Forum ("Walhi") published a survey on a significant number of companies in Majalaya District of Bandung Regency that dumped hazardous and toxic materials such as coal and medical waste into watersheds (CNN Indonesia, 2019). The disposal of toxic, hazardous, and medical waste enacted by the Government Regulation Number 101 (2014) on waste management. Another contradiction is the companies which deliberately against the law were granted a "green" status from the Ministry of Environment and Forestry. The green status indicated it complied with requirements to protect the environment.

Socialization to promote waste management conducted through Online Single Submission (OSS) as stated by the Government Regulation Number 24 of 2018. Regulations regarding waste treatment are also enacted by the Government Regulation (PP), number 19 (1999), concerning the Control of Marine Pollution and/or Destruction as indicated in articles 8, 9, 10, 12, and 13. However, weak government supervision causes companies or business actors to ignore the provisions. Moreover, article 104 stated clearly that everyone who discharges waste illegally as stated by article 60, would be sentenced to a maximum of 3 years in prison and a maximum fine of Rp. 3 billion. The document issued by Law Number 32 of 2009 on Environmental Protection and

Management (article 106) stated that every person who throws hazardous and toxic waste into the Indonesian territory is sentenced to 5–15 years in prison, in addition to Rp 5-15 billion penalty (Presiden RI, 2009). These rules and sanctions should be the basis for the government to have the authority to take strict action against the perpetrator.

Weak of Bureaucracy and Leadership

A strong leader and effective bureaucracy are two forces that support the program's success. In Citarum cases, the provincial leaders who came and went were unable to resolve the problems. The Governor of West-Java was directly elected by the people and gained a strong legitimacy to mobilize all potentials under his control. A document of the West Java General Election Commission in 2013 indicates the strong legitimacy of Ahmad Heryawan, having 40% votes in 2008 and 33% votes in 2013. Unfortunately, this strong legitimacy and majority support did not demonstrate during his governorship during two periods of leadership (2008-2018). "Tempo" reported on May 6, 2018, that the governor admits his failure on Citarum River management programs while arguing that his failure was due to the large number of government and non-government institutions and actors involved and taking profits from the allocated budget.

Threats of pollution in Citarum River have been reported by "Tempo" in 1981 (Erianti & Djelantik, 2019). On April 2018, or after almost four decades, the same media reported a similar issue on the same river. Tempo (2018) report highlights the failure of the West Java Governor to overcome the problems. Ahmad Heryawan explicitly stated that

Citarum was "not under his authority", and the provincial government is only the coordinator, while each institution works without a commander. He further stated that "The river is managed by the Ministry of Public Works, while the position of forest upstream is the responsibility of the Ministry of Environment and Forestry". The statement indicated lack of coordination and management as if the Governor denied his authority means the river does not belong anywhere.

Based on the provisions in the Regional Autonomy (Otda), a local government has stronger and greater authority compared to during the New Order era (1964-1998). The Regional Autonomy enact Law No. 22 of 1999 concerning Regional Government, states that the existence of regional authority covers all areas of government (chapter 4 article 7). Furthermore, paragraph 2 Otda stated that the authority includes policies on national planning and macro control of national development, financial balance funds, state administration systems and state economic institutions. The authority also covered human resource development and empowerment, utilization of natural resources and strategic high technology, conservation, and national standardization. The laws demonstrated a broad authority for local governments to manage regional resources. For natural resources utilization, have authorization to issue business licenses in order to have ability to supervise the implementation of the program in respective regions.

Bureaucratic weaknesses are also shown through lack of coordination with other stakeholders. The "Pikiran Rakyat" published a statement of Doni Monardo,

as follows: "Many of our natural resources are not managed properly. He further stated: "We have abundant natural resources, but not useful without balancing it with human resources development". Another problem on bureaucratic weaknesses is the absence of synergy or cooperation between the government and other supporting sectors. Lack of cooperation has caused the handling of environment-related problems to exclude many experts in various fields.

CONCLUSION

The government securitization programs in Citarum River, as analyzed through four components of securitization; referent objects, scope, mean, and actors, indicated a failure of management. The government with authority and budget allocation did not effectively act as a coordinator, communicator, and facilitator. Political legitimacy has not transformed various potentials and supporting forces into weapons in overcoming problems. Financial and budgetary support from international donors also did not follow a strong vision and leadership, in addition to ineffective bureaucracy. To overcome the problem in Citarum River, the following are some securitization recommendations.

To elaborate the environment education program. As the Citarum River problem is closely related to lack of awareness on human and nature connections, the education should not only cover the community living along the river basin, but to broader scope. The education should include eliminating the river as a giant garbage dump, or

otherwise various physical programs and infrastructure development would be in vain. Although it takes a long time, residents living in the Citarum watershed need to have an understanding that the river as the front yard of the house needs to be kept clean and sustainable. No less important is to change the culture so that they do not live in disaster-prone locations.

To empower the government officials and bureaucracy. The government with the power to plan and implement policies has the most significant actor to rehabilitate the river as a source of life. The governor should act as an effective leader with a clear vision on the environment. The military personnel directly involved in the river should gradually be taken over by civilian apparatuses, which have more relevant duty and functions. The military personnel could be returned and focus on security issues.

To eradicate the CCN culture and to implement a strict rule of law. Government, non-governmental organisations, and individuals must receive the same treatment before the law. With the application of three points above, the dream of making Citarum a clean river and drinkable water is quite possible.

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REFERENCES

- Amrial, A., Muhammad, A., & Muhamad, E. (2017). Penta helix model: A sustainable development solution through the industrial sector. *Conference Paper: 14th Hokkaido Indonesian Student Association Scientific Meeting in Sapporo, Japan*. Accessed from URL https://www.researchgate.net/publication/321106743_Penta_helix_model_A_sustainable_development_solution_through_the_industrial_sector.
- Anindita, A. G. (2018, 11 June). "Gary Benchehib: the Environmental Filmmaker who Makes a Difference by Cleaning the Citarum River." *Prestige*. Accessed from <https://www.prestigeonline.com/id/people-events/gary-benchehib-environmental-filmmaker-makes-change-cleaning-citarum-river/>.
- Buzan, B, Wæver, O. & de Wilde, J. (1998). *Security: A New Framework for Analysis*. Boulder, London: Lynne Rienner Publishers.
- Bolo, A. D. & Suhendar, H. E. (2012). *Potret Kebudayaan Masyarakat Penghuni Bantaran Sungai Citarum: Studi Kasus di Desa Citeureup-Kec. Dayeuhkolot*. Bandung: Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM), Universitas Katolik Parahyangan.
- Channel 4 Entertainment. (2014, 8 April). "The River of Rubbish, Unreported World, Channel 4." *Youtube*. Accessed from <https://www.youtube.com/watch?v=XzvKgxrIQ84>.
- Cita-citarum. (2017, 15 May). "Mendengar Citarum." Accessed from <https://www.citarum.org/info-citarum/berita-artikel/2228-mendengar-citarum.html>.
- Citarum Harum Juara. (2023, 30 August). "Ridwan Kamil: Citarum Harum Harus Berlanjut." Accessed from <https://citarumharum.jabarprov.go.id/ridwan-kamil-citarum-harum-harus-berlanjut/>.
- Damanik, D. A. & Maulana, Y. (2018, 27 January). "Ratusan Unit Rumah Disiapkan untuk Relokasi Warga yang Tinggal di Bantaran Sungai Citarum." Accessed from <https://jabar.tribunnews.com/2018/01/27/ratusan-unit-rumah-disiapkan-untuk-relokasi-warga-yang-tinggal-di-bantaran-sungai-citarum>.
- Djelantik, S., Manurung, E. M., Hartono, I. J. (2021). Program "Citarum Harum"; Edukasi Pengelolaan Lingkungan Melalui Film. *Prosiding Seminar Nasional, Universitas Islam Indonesia*, 452-462. Accessed from https://dspace.uui.ac.id/bitstream/handle/123456789/33947/452-462_Sukawarsini%20Djelantik_PROGRAM%20CITARUM%20HARUM%20EDUKASI%20PENGELOLAAN%20LINGKUNGAN%20MELALUI%20FILM.pdf?sequence=1.
- Dwisusanto, Y. B., Pujiyanto, F., Hansen, C., & Nawang, M. N. (2013). *Tatanan Permukiman Sepanjang Sungai sebagai Perwujudan Ekologi Masyarakat*. Bandung: Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM), Universitas Katolik Parahyangan.
- Egeham, L. (2017, 8 July). "Citarum Bestari, Jurus Aher Atas Masalah Sungai di Jabar." *Liputan 6*. Accessed from <https://www.liputan6.com/news/>

- read/3015885/citarum-bestari-jurus-aher-atasi-masalah-sungai-di-jabar.
- Erianti, D. & Djelantik, S. (2019). Program Revitalisasi Sungai Citarum; Sebuah Analisis *Strength, Weakness, Advocates, Adversaries* (SWAA). *Jurnal Ilmu Administrasi*, 16(1), 81-96.
- Facette, F. F. (2018, 12 January). "Ada Uang Rp 200 Triliun Loh untuk Benahi Citarum, Ini Pemasok Dananya!" Jawa Pos. Accessed from <https://www.jawapos.com/read/2018/01/12/180918/ada-uang-rp-200-triliun-loh-untuk-benahi-citarum-ini-pemasok-dananya>.
- Glenn, J. C., Gordon T., & Perelet, R., (1998). Defining Environmental Security: Implications for the U.S. Army. Georgia: Army Environmental Policy Institute. Accessed from <https://apps.dtic.mil/sti/tr/pdf/ADA593191.pdf>.
- Glenn, J. C., Gordon T., & Perelet, R. (2012). Environmental Security. In J. C. Glenn, T. J. Gordon, & E. Florescu (Eds.), *2012 State of the Future*. Washington, D.C.: The Millenium Project. Accessed from https://millennium-project.org/wp-content/uploads/2023/08/Chapter-9_2-ES-definitions.pdf.
- Greaves, W. (2014). Naturally insecure: critical environmental security and critical security studies in Canada. *Critical Studies on Security*, 2(1), 81-104.
- Henry, U. (2014). Globalization and Environmental Issues: A New Framework for Security Analysis. *Humanities and Social Sciences Letters, Conscientia Beam*, 2(4), 209-216.
- Husodo, H. S. (2017, 10 October). "Pikiran Rakyat: Jumlah Sampah Konon Berkurang, Sungai Citarum Tetap Tercemar." Accessed from <http://www.pikiran-rakyat.com/bandung-raya/2017/10/10/jumlah-sampah-konon-berkurang-sungai-citarum-tetap-tercemar-berat-411260>.
- Launa, L. (2011, 24 March). "Hak Rakyat atas Air (Catatan Hari Air Sedunia, 22 Maret 2011)." *Koalisi Rakyat untuk Hak Atas Air (KruHa)*. Accessed from <https://kruha.org/hak-rakyat-atas-air-catatan-hari-air-sedunia-22-maret-2011/>.
- Markushina, N., Sboyshakova, A., & Tikhonova, V. (2024). Approaches to "Environmental Security" in the Theory of International Relations, Proceedings of Topical Issues in International Political Geography. *Proceedings of Topical Issues in International Political Geography (TIPG 2022)* (pp. 507-514). Cham, Switzerland: Springer Nature Switzerland AG.
- Montanari, J. R. & Bracker, J. S. (1986). The Strategic Management Process at The Public Planning Unit Level. *Strategic Management Journal*, 7(3), 251-265.
- Mujahidin, M. (2018, 21 February). "Pemkab Bandung Alokasikan Dana Rp 95 Miliar untuk Mendukung Program Citarum Harum." *Tribun Jabar*. Accessed from <http://jabar.tribunnews.com/2018/02/21/pemkab-bandung-alokasikan-dana-rp-95-miliar-untuk-mendukung-program-citarum-harum>).

- Pikiran Rakyat. (2018b, 10 May). "Aher Ungkap Solusi Penanganan DAS Citarum dalam Sidang Promosi Doktor di Unpad." Accessed from <https://www.pikiran-rakyat.com/pendidikan/2018/05/10/aher-ungkap-solusi-penanganan-das-citarum-dalam-sidang-promosi-doktor-di-unpad>.
- Pikiran Rakyat. (2018a, 18 January). "Pemkot Bandung Kucurkan Rp110 Miliar untuk Penataan Fisik Sungai Citarum." Accessed from "http://www.pikiran-rakyat.com/bandung-raja/2018/01/18/pemkot-bandung-kucurkan-rp110-miliar-untuk-penataan-fisik-sungai-citarum".
- Presiden RI. (2009). Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup. Accessed from [https://jdih.esdm.go.id/common/dokumen-external/UU%2032%20Tahun%202009%20\(PPLH\).pdf](https://jdih.esdm.go.id/common/dokumen-external/UU%2032%20Tahun%202009%20(PPLH).pdf).
- Putra, W. (2017, 18 July). "Horor Sampah di Sungai Citarum Masih Menghantui." *Detik News*. Accessed from <https://news.detik.com/berita-jawa-barat/d-3563781/horor-sampah-di-sungai-citarummasih-menghantui>.
- Putri, M. R. & Zuraya, N. (2025, 25 March). "Rp 1,6 Triliun untuk Revitalisasi Sungai Citarum." *Republika*. Accessed from <http://nasional.republika.co.id/berita/nasional/daerah/18/03/25/p64th0383-rp-16-triliun-untuk-revitalisasi-sungai-citarum>.
- Ramadhan, D. I., (2018, 26 January). "Cara Prajurit Kodam Siliwangi Bikin Hulu Sungai Citarum Jadi Asri." *Detik News*. Accessed from <https://news.detik.com/berita-jawa-barat/d-3834504/cara-prajurit-kodam-siliwangi-bikin-hulu-sungai-citarum-jadiasri>.
- Saputra, Y. (2018). "Misi Besar Mengatasi Pencemaran di Sungai Citarum." Accessed from <https://www.rappler.com/indonesia/berita/194162-misi-besar-atasi-pencemaran-sungai-citarum>.
- Solehudin, M. (2017, 19 July). "DLH Jabar: Citarum Bestari Berhasil Kurangi Sampah Sungai 50 Persen Baca." Accessed from <https://news.detik.com/berita-jawa-barat/d-3565168/dlh-jabar-citarum-bestari-berhasil-kurangi-sampah-sungai-50-persen>.
- Sukarjo, S., Zu'amah, H., & Handayani, C. O. (2022). Organochlorine Pesticide Residues on The Holticultural Land of The Bandung Regency, Indonesia: Assessment of Spatial Distribution and Human Health Risks. *Jurnal Kesehatan Lingkungan*, 14(4), 246-256.
- Sulaksono, H. (2018, 22 February). "Jokowi Bakal Tanam 1.000 Pohon di Citarum." Accessed from <https://www.ayobandung.com/bandung/pr-79629634/jokowi-bakal-tanam-1000-pohon-di-citarum>.
- Tempo. (2018, 29 April). "Gubernur Jawa Barat Ahmad Heryawan: Citarum Bukan Wewenang Saya." Accessed from <https://www.tempo.co/arsip/gubernur-jawa-barat-ahmad-heryawan-citarum-bukan-wewenang-saya-128545>.
- The Process. (2018, 29 November). "The World's Dirtiest River Unreported

World." *Youtube*. Accessed from
[https://youtu.be/KVCt7m-
nZnk?si=BXzACncPe7J9QTpP](https://youtu.be/KVCt7m-nZnk?si=BXzACncPe7J9QTpP).
Wulandari, C. R. (2016, 29 December).
"Walhi Jabar Khawatir Anggaran
Besar untuk Citarum tak Selesaikan

Masalah." Accessed from
[https://www.pikiran-
rakyat.com/bandung-
raya/2016/12/29/walhi-jabar-
khawatir-anggaran-besar-untuk-
citarum-tak-selesaikan-masalah](https://www.pikiran-rakyat.com/bandung-raya/2016/12/29/walhi-jabar-khawatir-anggaran-besar-untuk-citarum-tak-selesaikan-masalah).