Facilitative Leadership in Controlling Pollution and Damage to The Citarum Watershed as well as improving The Community Economy in Karawang, Indonesia

Widodo¹, Nandang Alamsah Deliarnoor², Widya Setiabudi Sumadinata³, Novie Indrawati Sagita⁴ ¹²³⁴Faculty of Social and Political Sciences, Padjadjaran University Jalan Bukit Dago Utara No. 25 Bandung - Indonesia

Abstract

A Watershed (DAS) functions as a storage facility for rain collection and drainage, which often lead to the formation of rivers (Efendi, 2014). Furthermore, it is a unified landscape providing people with physical products and services. In Karawang, the pollution and damage to the Citarum watershed are found to harm the community and endanger the sustainability of the marine ecosystem, as observed to be one of the dirtiest rivers in the world. In this condition, leadership plays an important role in implementing collaboration, because of its central duty in the implementation, development, facilitation, and assessment of ground rules, trust, dialogue, and mutual benefits. According to Ansell & Gash (2007), a comprehensive collaborative leadership need to perform the following, (1) broadly and actively promote participation, (2) ensure broad influence and control, and (3) facilitate group or actor productivity. Therefore, this study aims to evaluate the role of facilitative leadership in controlling pollution within Karawang, Indonesia. It also aims to assess the damage to the Citarum watershed and to improve the economy of this district A qualitative approach was used to understand, explore, and explain facilitative leadership, to control pollution and damage to the Citarum river. In this condition, primary data was directly obtained from the main source, namely the parties or the study object, through observation and interviews. The secondary data was also obtained from the second sources as complements, including related literature books, newspapers, papers, and official documents. The results showed that government needs to be a facilitative leader in controlling pollution and damage to the Citarum watershed, due to being one of the conditions in resolving the cases of environmental pollution. Keywords: Facilitative Leadership, Environmental Pollution, The Role of Government.

Introduction

Citarum River is the largest water body in West Java, which plays a strategic role in the surrounding community, and it is a source of livelihood to over 35 million people. It also extends up to 297 km upstream of Situ Cisanti, which is located at the foot of Mount Wayang, Bandung Regency. It eventually empties into the North Coast of Java Island, Muara Gembong, and Bekasi Regency, where the River Basin (DAS) crosses 13 districts/cities. Furthermore, the presence of the Citarum River is vital as a raw resource and 80% drinking water in Jakarta. It is a source of irrigation water for 420,000 ha of agricultural land, as well as an energy channel for Hydroelectric Power Plants (PLTA), with 1,888 MW of electricity for Java and Bali Islands (Satgas, 2019). Irrespective of these features, the actual condition of the watershed is experiencing degradation based on pollution and extraordinary environmental damage, which causes huge losses of health, economic, social, ecosystem, and societal resources. Regarding wastes, direct disposal into the ecosystem is often the main cause of environmental pollution (Pavita, Widiatmono, & Dewi, 2014), subsequently portraying the Citarum River as the dirtiest water body in the world (Ginkel & Ozerol, 2015).

This is because the amount of waste disposed of in the Citarum watershed is 3,512.2 tons/day, originating from 8 regencies/cities. In this case, a total of 77.7% generated waste originates from the Greater Bandung Metropolitan area, namely Bandung and Cimahi Cities, as well as Bandung and West Bandung Regencies. This is accompanied by the second-largest generation channel (12.7%), namely Karawang Regency, with the remaining 9.6% observed from Bekasi, Purwakarta, and Cianjur Regencies (Satgas, 2019). These conditions are due to high domestic and industrial activities, which are then exacerbated by the weak awareness of the surrounding riverbank communities. In this condition, observations were conducted regarding the practice of river pollution and the widespread behavior of open defecation (BABS) in the Citarum watershed. It is also not surprising that this watershed has a multidimensional complexity of pollution and damage problems, including industrial and domestic wastes (Ministry of Environment, 2018). Consequently, the critical condition of this river requires integrative seriousness and strategic steps in controlling and enforcing the authoritative law between government agencies and relevant stakeholders, for the restoration of the watershed. This led to the establishment of Article 2 of the Presidential Regulation (Perpres) № 15 of 2018, to integratively accelerate the control of pollution and damage to the Citarum watershed through the formation of qualified teams.

The complexity and cruciality of this problem are unable to be solved when only relying on the capacity and role of the government. This was in line with Goldsmith & Eggers (2004), where the government did not

always have adequate resources in dealing with public problems. The problem complexity and the wide coverage of the Citarum watershed also emphasized the absolute need for the active participation of all stakeholders. This led to the need for effective leadership, to ensure the achievement of revitalization goals through a collaborative framework. To optimize the control of pollution and damage to this watershed, present revitalization programs also need to involve the TNI (Indonesian National Army), POLRI (Indonesian National Police), High Court, as well as several ministries and institutions. Through the Presidential Decree № 15 of 2018, the involvement of the TNI was confirmed via the appointment as DCs (Deputy Commanders) for Ecosystem Arrangement I and II, i.e., the Commanders of the III/Siliwangi and Jakarta Regional Military Commands, respectively. This emphasized the effective and educative improvements of the community, village officials, and business actors, through the establishment of Sector Commands. The watershed in Karawang Regency also has a high complexity, due to being one of the busiest and largest industrial cities in Indonesia. This complexity emphasizes the damage and pollution of the water body, which extends over 117 km in this area. These conditions are based on the high content of Chemical and Biological Oxygen Demands (COD and BOD) above the threshold, as well as the presence of the Escherichia coli (E. coli) bacteria in the Citarum River.

According to the Karawang Regency Environmental and Hygiene Service, the watershed was heavily polluted and damaged due to the direct disposal of industrial wastes from more than 50 companies (DLHK Karawang Regency, 2020). Besides this, the behavior of people was also very high regarding the direct indiscriminate waste disposals into the river, gradually adding to the accumulated pollution load. This was because the people's "culture" not to throw garbage into the river was still a classic problem till presently. Based on these conditions, the high pollution and damage to the Citarum river in Karawang Regency have gradually caused a lot of losses. This was directly observed from the following phenomena, (1) the mass fish deaths, (2) the expansion of critical surrounding lands, and (3) the amount of chronic sedimentation regarding uncontrolled domestic, industrial, and medical landfills. These conditions often led to flooding, which had submerged dozens of houses in 89 villages across 29 sub-districts within the Karawang Regency. This was due to the overflowing of the Citarum River, where approximately 14,000 people were still affected by the phenomenon (Yulyanto, 2020).

Many similar previous studies related to pollution and damage to the Citarum watershed (Riyadi, 2020; Afkarina, 2020; Imansyah, 2012; Cahyaningsih & Harsoyo, 2010; Nugraha, 2020; Marganingrum, 2013; Son, 2016; Kurniasih, 2002; Hill & Joseph, 2002; Setiady, 2017; Juniarti, 2020, Brotosusilo et al., 2019; Mulyana & Ginting, 2021; Safitri et al., 2019), however, research is still very rare that examines military leadership in government collaboration, especially in efforts to revitalize

the Citarum watershed through the Citarum Harum Program. In this area, the improvement of problem complexity requires collaborative authority between the local government and all relevant stakeholders, because of the huge environmental losses of water pollution and damage. However, clean river water directly impacts the growth of the economy, especially for surrounding communities. Collaboration requires leadership as a central and crucial part of goal achievements (Ansell & Gash, 2007), to determine sectoral egos, high conflicts, and great distrust between stakeholders. Irrespective of these conditions, a great desire is often observed for the participation of stakeholders, leading to the need for acceptable and trustable leadership. Therefore, this study aims to determine the patterns by which the Indonesian National Army (TNI) facilitative leadership plays a role in overcoming pollution and damage to the Citarum watershed in Karawang Regency. This is to ensure the success of revitalization, which is expected to affect the improvements of environmental aspects, including sustainable economic growth.

Method

A qualitative method was used in this analysis, to understand, explore, and explain the Facilitative Leadership in Controlling Pollution and Damage to the Citarum Watershed in Karawang, Indonesia. Using this method, the study was theoretically and factually evaluated, due to being expected to have a real impact on improving all aspects of people's lives, including the economic sector. Furthermore, the participants were selected through a purposive sampling technique, regarding specific considerations. The qualitative data obtained also emphasized Creswell (2014), which was carried out by direct field observation. This included the performance of in-depth interviews to obtain primary data, with secondary parameters being acquired through library reviews. Based on the analytical technique, the steps proposed by Bungin (2001) were used, namely data collection, reduction, and display, as well as the verification and confirmation of conclusions. The source triangulation technique was also used for the analysis of credibility or the degree of trust (Patton, 2006).

Result and discussion

The Citarum River has become a concern at the national and global level, with the occurrence of problems. As one of the strategic rivers in West Java, the function of this watershed plays an important role in the sustainability of the community's livelihood. After being reported again by the World Bank in 2018, it was tagged as one of the global dirtiest rivers, regarding the level of pollution and extraordinary damage. The critical condition of the Citarum River has been highly considered by the

government, as President Joko Widodo issued the Presidential Regulation (Perpres) Number 15 of 2018 on February 22, 2018. This emphasized the Acceleration of Pollution Control and Ecosystem Damage to the Citarum River Basin, with the declaration of the "Citarum Harum Program" at Cisanti Lake. It also involved all elements such as ministries, local governments, and the Indonesian National Army (TNI), towards revitalizing the damage to the watershed. This level of authoritative seriousness was highly needed in unravelling the problem complexity of the watershed. Before the "Citarum Harum" program, the West Java Provincial Government had repeatedly implemented various rehabilitation models for the longest river in the province. Between 2000 to 2003, the "Citarum Bergetar" program was established, with the term "Bergetar" being an abbreviation of bersih (clean), geulis (beautiful), and lestari (sustainable). This program focused on controlling restoration, conservation, and community empowerment. Irrespective of the strength, it was still not optimal in overcoming the pollution and damage of the rivers supporting approximately 27.5 million residents of West Java and Jakarta. Subsequently, a recovery program was launched in 2013 through the regulation of West Java Governor Regulation Number 75 of 2015, namely "Citarum Bestari". This was an acronym for bersih (clean), sehat (healthy), indah (beautiful), and lestari (sustainable). In this condition, a budget of about IDR80 billion was prepared to meet the target of the program, which stated that river water was to be directly consumed in 2018. Despite the high expectations, the water quality had still not met the consumption requirements.

These failures showed the magnitude of the problems surrounding the Citarum River, which were compounded by the many dissonances between weak networking and inter-institutional cooperation. The implementation of these two programs did not also actively involve various stakeholders, especially from the industry/companies and the community. This led the government to seek the involvement of the Army, Police, ministries, institutions, and the community through collaborative governance, to ensure the successful realization of the "Citarum Harum" program. In collaboration, the involvement of all parties is absolute as a boost to success, leading to the need for facilitative leadership. In this present report, the Citarum Harum program emphasized the facilitation of leadership in controlling pollution and damage to the Citarum watershed. The success is expected to improve people's lives, including the economy. Based on the results, the Indonesian National Armed Forces (TNI) emerged as the dominant collaborative actor, to support the success of revitalization. This was in line with Ansell and Gash (2007), where leadership was an important aspect of implementing government collaboration.

Promote wide and active participation

Using the Citarum Harum program, the government's collaboration strategy provided new hope for the future of the polluted watershed. In Karawang Regency, collaboration was more optimal with the inclusion of the Indonesian National Army (TNI), whose elements were divided into Task Forces (Satgas). These were then divided into four (4) sectors 16, 17, 18, and 19 of the total 23 Sector Task Forces in West Java. In this condition, the sectors were also observed as local government partners, in controlling the pollution and damage to the Citarum watershed. Therefore, the problems surrounding this water body were of high complexity, since Karawang Regency is one of the busiest and largest industrial cities in Indonesia. The actors involved in this collaborative process included the Regional Government, TNI, POLRI, the High Court, industry/companies, and the community. The results showed that the Army (TNI) emerged as a cooperative leader. This was in line with Ansell and Gash (2007), where the Army promoted and mobilized broad participation to encourage the active involvement of all actors, especially the industry/companies and the surrounding community. In the Citarum Harum program, the deployment of TNI was able to encourage the industry in Karawang Regency to actively participate in supporting the revitalization of the Citarum River. Based on these results, it was not uncommon for the TNI to carry out door-to-door outreach and direct appeals to each company, with a total of 97 patrol companies and 3,024 residents' houses observed in one year. This was in line with the aims of the TNI activities, which emphasized the performance of socialization and the encouragement of business actors not to pollute the environment. These were carried out by requiring every company to perform the following, (1) process their wastes, (2) isolate industrial waste sources to enforce commitments, and (3) possess an IPAL.

This was because the liquid waste produced was not processed and did not meet quality standards. Moreover, weak law enforcement was one of the causes of the water quality decline, which affected the destruction of ecosystems. Based on the field data with Watershed Sector 19, more than 152 industries need to be managed, regarding the non-pollution of the water body (Sector 19 Task Force Report, 2022). In line with that, the Government recorded as many as 32 companies, where dozens of factories were engaged in the textile, food, chemical, and paper industries. This supported the failure of the previous program, where the main cause of pollution showed that industry/companies were not directly involved in government systems. In contrast to this present program, several reports proved that the TNI encouraged the activeness of industry/companies in forums, to ensure participation in previous inadequate systems. The involvement was also carried out to ensure a common understanding of achieving the revitalization goals. To boost participation, the TNI often adopt firm

action against violators, such as conducting surprise inspections, direct warnings, and even temporarily closing dangerous waste disposal outfalls. Despite these conditions, the mobilization of TNI in this program was not only in a formal forum. This indicated that most of the companies were directly involved in planting trees along the Citarum River. In this condition, a total of 3,600 donated trees were simultaneously planted on the banks of the river in Telukjambe Village, Telukjambe Timur District, Indonesia. The seven organizations involved in this act are observed as follows, (1) PT Pupuk Kujang, (2) PT Toyota Motor Manufacturing Indonesia, (3) PT Multi Indo Mandiri, (4) PT PLN, (5) KIIC Industrial Estate Management, (6) PT HM Sampurna, and (7) the Inspirasi Anak Bangsa Foundation.

Based on these results, the TNI in its activities encouraged community participation by providing information through direct socialization, which was carried out in villages, mosques, schools, public facilities, and societal housing. They also appealed to them through the installation of banners at strategic points. This centralized socialization was carried out not less than once a month in the community, as the information stage was important due to supporting all other levels of participation. The participation of all parties will encourage solid cooperation. Accordingly, from the perspective of Cooley (2017), cooperation arises when people realize that they have the same interests and at the same time they have sufficient knowledge and control over themselves to fulfill these interests. Awareness of the existence of common interests and the existence of an organization is an important fact in fruitful cooperation. This form of cooperation can develop, if people can be mobilized to achieve common goals and there must be awareness that these goals will benefit them all in the future.

In collaboration with the Citarum Harum program, the TNI had a good image in the community regarding a strong leadership charisma besides being formally legal. This proved that the public's perception of their presence in the problem-solving program was very good. Based on the community's narrative, the presence of the TNI in the Citarum restoration process was highly needed, especially when providing examples and decisive actions in handling domestic and industrial wastes, as well as performing environmental management along the watershed. Furthermore, the community was safe and not intimidated by the activities of the TNI, as their presence fostered more motivation to participate in maintaining and caring for the Citarum River. Therefore, strong, respected, and trusted leadership is needed as a driving force for successful collaboration.

In line with that, leadership is nothing but helping stakeholders in finding solutions that benefit various parties, meaning that leaders act as facilitators of collaborative processes (Kouzes & Posner, 2007: 224). In fact, collaborative leadership is not meant to design strategies to solve

problems, but to create synergies between relevant stakeholders that will lead to innovative solutions. In the context of collaboration, facilitative leaders are not just completing tasks, but looking for new ways to solve problems (Mandell et al., 2017: 275-283).

Ensure broad influence and control

Communication is at the core of collaboration, referring to Huxam & Vangen (2006) in the context of collaboration, communication is an important factor because of the same language and understanding of symbols that can be accepted by every agency/organization. On the application, indicating that the TNI regularly conducts coordination meetings for the Citarum watershed in Karawang Regency. The face-toface meeting was attended by the Regional Military Commander, the Government through the Karawang Regency Environmental and Hygiene Service, the National Police, the Attorney General's Office, as well as the company and community representatives. This was to formulate and solve problems, as well as explain the temporary achievements of the Citarum River revitalization, due to the different issues of each watershed. Based on the results, one of the multidimensional problems of this water body originated from the habits of the people, as acute pollution and damage were caused by the community paradigm considering rivers as giant trash bins and the ultimate destination of dirt (Fuady & Indriani, 2020). Moreover, community behavior towards the environment played an important role because the implementation and success of pollution and damage control were dominantly determined by the direct attitude of the surroundings, especially in waste management (Erianti & Djelantik, 2019). This showed that behavior was a level of concern and commitment towards community participation in the Citarum Harum program. Within the framework of government business cooperation, no commitment and trust were also observed between the actors, especially the community and industry/companies. As a party directly interacting with rivers regularly, the community's commitment to non-pollution was a major concern for the TNI. Another source of concern was the encouragement of companies not to dispose of waste directly into rivers or through WWTP processing, which exceeds quality standards along the water body. The background of these concerns was the key to the success of the Citarum Harum program.

To ensure that this influence and control supported the objectives of the program, the TNI conducted educational procedures and outreach to industry and communities around the watershed. Besides the image and the high level of public trust in the Army, the transformation of people's mindsets was very difficult. This was because they were not used to appreciating the river and considering it as a backyard and waste dump. Through socialization and education, the TNI also provided real examples as community lessons. This was observed in various TNI activities, such as obtaining and dredging the total wastes in the body

and on the banks of the Citarum River, which were then transported to the TPA (Final Disposal Site). In this condition, the generation of the disposed of wastes reached 918 tons per day, with 60% of the total pollution representing domestic pollutants (DLHK Karawang Regency, 2020). Based on the results, the TNI involvement in this program was very effective, as the revitalization processes degraded existing procedures, compared to the government-based procedure which was very slow. This was because the government went through several stages, such as a joint agreement with the Regional People's Representative Council (DPRD) of Karawang Regency and a program budget preparation meeting, which was highly time-consuming. Before total normalization, a major flood disaster was observed in Karawang Regency between 23-29 February 2020, which led to material losses within 94 villages of 30 sub-districts. Based on the Karawang Regional Disaster Management Agency, this disaster affected 84,567 residents and submerged 24,206 houses, with the number of refugees reaching 14,925 people. In this condition, the total loss incurred was also IDR44,220,500,000. Besides houses, 2,493 ha of rice fields and a large number of ponds were flooded, with losses estimated at IDR4.8 billion. A total of 64 roads were also damaged in the affected areas with a loss of IDR12.9 billion. Furthermore, seven bridges and embankment points were damaged with estimated losses of IDR1.7 and 21.3 billion, respectively. These seven points included (1) Lower Kalen Embankment, (2) Cilamaya River, (3) Cikarang Gelam Dawuhan Tengah River, (4) Citarum River, (5) Bentengjaya Hamlet, Tunggakjati Village, (6) Kaligandu SP Turap, SS Banteng Kutawaluya Village, and (7) SS Lemahabang Kedaung Village. A total of 38 schools were affected by the flood with a total loss of IDR2.1 billion, with only IDR1.1 billion damages observed at the village level.

The flood was caused by high rainfall and abnormal water function, leading to the overflow of the Citarum, Ciherang, and Cibeet Rivers. This condition was supported by poor drainage channels and piles of garbage, causing the clogging of the Cikarang Gelam Sifon, as well as poor drainage channels. In this condition, the flood heights also varied between 10-200 cm. After this disaster, the TNI immediately normalized the river, due to having large resources regarding facilities and infrastructure. The normalization carried out by the Sector 19 Task Force was also carried out in the same year, to prevent potential flooding in the rainy season. This was realized by widening the river from a width of 2 to 5 m, such as the Cikarang Gelam-Sipon River along the 500-m flow. In this case, the depth of the river was then deepened to 4 m, with the volume of waste in the three tributaries continuously transported. Within the last three days, the TNI had managed to transport 100 dump trucks of garbage to the landfills. From the total normalization in all watersheds between 2021 until now, Karawang Regency had avoided

flooding via the collaboration of the TNI in the Citarum Harum program, by involving various stakeholders in the processes.

Not limited to river normalization, the encouragement of changes in the application of clean and healthy living behavior (PHBS) was also a priority program goal. This was due to a classic problem regarding the attitudes of people accustomed to directly defecating (BAB) into the river. According to the Ministry of Health's 2018 Community-Based Total Sanitation Data (STBM), the practice of open defecation (BABS) in the Citarum watershed was observed at 82% (Kemenkes STBM, 2018). Besides habit, this is supported by the absence of toilet facilities for the surrounding community. This condition led to the development of illegal latrines above the river called "helicopters", leading to the daily pollution of the water body. To overcome this problem, the TNI and the Karawang District Health Office educated and encouraged community commitment through the Declaration of Stop Open Defecation (BABS). The Task Forces (TNI) in all sectors of Citarum River, Karawang Regency, also carried out the demolition of illegal latrines. These were accompanied by the encouragement to develop appropriate and environmentally friendly public toilets and communal MCK (Public bathing, Washing, and Toilet facilities), to prevent people from defecating indiscriminately. As observed in Amansari Village, the Citarum Harum Sector 19 Task Force constructed 15 MCK or public MCK, which had continuously improved in number. Additionally, the cessation of open defecation gradually minimized sustainable pollution and improved the water quality of the Citarum River.

Irrespective of the accumulation of domestic waste, the TNI also routinely patrolled the day and night, due to the existence of some "naughty" companies that did not comply with the regulations. In Sector 19, river patrols are carried out thrice daily, as well as 84 and 1,068 times monthly and yearly, to minimize pollution. This was because about 86 companies and 54 factories were found to directly dump wastes directly into the Citarum watershed without undergoing a wastewater treatment plant (WWTP). These were in line with the Karawang Environment and Hygiene Service (DLHK), where the laboratory tests of the Citarum River were conducted by acquiring samples from seven places, such as the Citarum banks of the Angadita area, Telukjambe, Alun-alun, and Purwadana. The results showed that the water of the longest river in West Java was heavily polluted with Chemical Oxygen Demand (COD) levels, which were on averagely observed at 60 mg/L. This was highly toxic, as COD contents are not expected to exceed 50 mg/L, according to Government Regulation (PP) Number 82 of 2001. These were subsequently exacerbated by the average level of Biological Oxygen Demand (BOD) at 15 mg/L, with Anggadita reaching a maximum of 38.4 mg/L. The occurrence of this chemical was very toxic, with the normal level expected not to exceed 6 mg/L. For Dissolved Oxygen (DO), 4 mg/L was also detected, which should normally not exceed 3 mg/L

(DLHK Karawang Regency, 2020). In response to this condition, the TNI adopted firm action against all companies or industries that were not committed to the revitalization of the Citarum river. This was accompanied by regular field checks/TKP, as samples of liquid and solid wastes were often obtained by certified officials for subsequent laboratory examination and carried out by the Justice Team. When it is a criminal act, the handling was delegated to the Directorate of Criminal Investigation of the West Java Police for law enforcement. This was in line with the performance of Sector 18 Task Force, where factory patrols were conducted to control the Wastewater Treatment Plant (WWTP) channel at PT. Triguna Pratama Abadi in Gintung Kerta Village, Klari District, Karawang Regency. In this condition, the company engaged in the processing of B3 and Medical wastes, with a thorough check from the TNI indicating that their wastewater treatment did not meet the standards of PT. Eternal Primary Triguna. As a firm measure, an out-fall closure action was adopted until the company met the specified disposal standards.

Based on this collaboration process, positive results were recorded in 2021, where the water quality of the Citarum River has exceeded the target, which is moderately polluted, but today it is slightly polluted at 40.67, according to the target in 2025. To provide clarity, the following is a picture of Time and Citarum River Water Quality Improvement Targets:





Source: PPK DAS Citarum Action Plan, 2019.

The positive achievements above are in line with the research locus, with the telemetry installed at several points on the Citarum River showing a score of -10 with the status of "lightly polluted" in Karawang Regency. This was accompanied by the levels of Biological and Chemical Oxygen Demands (BOD and COD), as well as water temperature at 9.25 mg/L, 145.12 mg/L, and 29.3°C, respectively. Therefore, the DLHK of Karawang Regency acknowledged that the polluter industry had become more orderly in managing its waste since the formation of the Citarum

Harum Task Force (TNI). Irrespective of this condition, monitoring efforts need to be more intensive in preventing secret waste disposal. To ensure this control, the TNI consistently conducted factory patrols to provide guidance and supervision for companies without WWTPs.

Facilitating Group or Actor Productivity

Effective collaboration requires strong and skilled leadership, leading relevant stakeholders into active engagements in results-oriented pragmatic partnerships. In accordance with the substance of the role of leadership in collaborative governance is to help stakeholders find winwin solutions, leaders are facilitators of collaborative processes (Jordan et al., 2016). This is because respected and trusted leadership are very much needed in collaborative processes, towards the achievement of goals. In this condition, the reputable role is often manifested through the duty of the TNI as a key actor. This emphasized the frequent initiation of meetings and mediation between various collaborators, where face-to-face forums became a routine agenda with the community in each area of the Citarum watershed. Besides improving river ecosystems, the TNI also distributed the knowledge that focused on transformation behavior and efforts, to improve people's living standards in surrounding communities. This included community empowerment through the sleeping areas (unproductive land) around the riverbanks. Along the banks of the Citarum River, many unused (nonproductive) lands were also observed, as no party had attempted to facilitate the potential. Through the Citarum Harum program, all sectoral TNI collaborated and strategized with Perum Jasa Tirta II (PJT II), to use the non-productive land in sustainable community empowerment. For example, the development of demonstration plots to preserve and improve community food security on land-owned PJT II.

A demonstration plot is an agricultural extension method used by farmers to observe and prove the object being demonstrated. Through the TNI, this development strategy was distributed around the Citarum watershed in Karawang Regency. Besides this, the demonstration plot is also an innovation in community empowerment, which involves the development of plantations on unproductive land, as a one-way direction to solve problems. This has been proven to increase food security for the surrounding community. Based on the observations in Walahar Village, Klari District, and Karawang Regency, several points had been used by the Citarum Harum Task Force, in collaboration with PJT II, the Regional Government, and the community. Through the formation of a 20-people farmer group, the vacant land was gradually planted with bananas, crystal guavas, corn, mangoes, chilies, water spinach, suri cucumber, cassava, and even live pharmacies (medicinal plants). In this condition, the harvests were sold to increase farmers' income and people's purchasing power, due to the relatively affordable prices of the crops.

Furthermore, the facilitative efforts of the TNI were manifested in the provision of fertilizer assistance to farmer groups. This was to assist the groups in achieving maximum farming results and benefits. The series of empowerment and the magnitude of the TNI's attention to the Citarum watershed were also welcomed with good appreciation from the community. This was due to the assistance being rendered, ranging from normalizing watershed pollution and damage to improving the community's economic standard. Based on these results, a sustainable impact was observed in improving the quality and beauty of the Citarum River. A positive impact was also observed in increasing the enthusiasm of the community, which ensured Walahar watershed as one of the favorite local tourist attractions. This was because not less than 500 residents of Karawang and other surrounding villages visited the watershed, which flowed through the Citarum River daily.

The clean and beautiful Citarum River in the Walahar watershed affected the regional economic growth, regarding the number of traders observed in the area. This contained the street vendors selling various kinds of products, culinary foods, and game rides, such as the Odong-Odong Car ready to take people around. In this condition, visitors also enjoyed the beautiful texture of the oldest dam in Karawang, accompanied by the availability of a children's playground and several pavilions (relaxing areas) for relaxation.

Based on the Wahalar area, the economic growth of the Citarum watershed community positively affected welfare improvement. This emphasized the dominant statement of traders, where increased sales turnovers were claimed after the Citarum River was clean and crowded with visitors. According to Meatball Traders, Chicken Noodles, and others, their daily income often reached IDR600,000 to IDR1,000,000. This condition was subsequently in line with the increased turnovers of odong-odong car drivers, with daily earnings of IDR300,000 to IDR500,000.

Most of these observations were based on the successful collaboration between the TNI and related stakeholders. Besides the occurrences in Walahar Village, Klari District, and Karawang Regency, more assistance was also observed in various patterns and areas. According to the Rengasdengklok area, the TNI, the Village community, and the Karawang Regency Fisheries Service promoted catfish cultivation to ensure food safety for the surrounding residents. To capitalize on the clean condition of the Citarum River (lightly polluted status), a total of 2,000 catfish were cultivated on the riverbank since October 2020, using tarpaulins. To realize food security in fish farming, Sector 19 aims to become a cultivation learning medium and a new livelihood channel to lift the community's economy. This was because the turnover of catfish farming in the Citarum watershed reached IDR1,000,000 to IDR3,000,000 million rupiahs per harvest (Satgas, 2021).

Using the clean potential of this watershed, various innovations showed the success of the TNI leadership in the Citarum Harum collaboration program. This indicated that the TNI was present as a facilitative leadership, in increasing productivity and supporting successful achievements. It is also a new breakthrough that has obtained good appreciation from various stakeholders. The TNI consistency in controlling pollution and damage to the Citarum watershed was also found to be optimal, as observed from their main role as facilitators in collaborative activities. Besides being effective in maintaining cooperation through a great trust, the TNI leadership was also supported by various parties regarding the success of the program's objectives.

Conclusion

Based on the results, the TNI leadership in preventing pollution and damage to the Citarum watershed was found to be optimal, through the collaboration with the Citarum Harum program. This was in line with Ansell and Gash (2007), where the TNI was able to widely and actively promote participation, as observed from the high community enthusiasm. It was also found in the encouragement of company participation in Karawang Regency, to actively participate in supporting revitalization through a commitment not to dump waste directly into the river. To change people's negative mindsets, broad influence and control were ensured through education and outreach to surrounding industry and society. In suppressing industrial pollution, river patrols were also carried out, with strict action being performed by closing the disposal until the company meets the specified waste disposal standards. Furthermore, the community was empowered to use non-productive land in facilitating the productivity of the TNI, PJT II, and the Government. This was carried out by developing demonstration plots and encouraging aquaculture, which sustainably improved the community's economic standard. These were accompanied by the growth of local tourism, regarding the increasing water quality of the Citarum River in Karawang Regency.

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