Vol. 6 No. 1 January 2025, pp.248-257
EISSN 2722-2861
Progress in Social Development

ECOSYSTEM MANAGEMENT AND IMPACT OF JATIGEDE RESERVOIR CONSTRUCTION ACTIVITIES IN THE POLITICAL ECOLOGY PERSPECTIVE

Rinrin Haryanti[1], Kunkun Kobul Kurniawan[2]
[1]Universitas Lambung Mangkurat, Kalimantan Selatan, Indonesia
[2]Badan Perencananaan Pembangunan, Penelitian, dan Pengembangan Daerah Kabupaten Sumedang, Indonesia

Email Correspondence: rinrin@ulm.ac.id

ABSTRACT:
Jatigede Reservoir construction activities in Sumedang Regency have an impact on various aspects. The purpose of this research is to reveal the impact of Jatigeda reservoir development on ecological and community socio-economic aspects. The research method is descriptive with a qualitative approach through observation and in-depth interviews. The results of the research show that significant changes occurred in the conversion of agricultural land and settlements to stagnant water flows. Meanwhile, changes in society lives have been identified as changes in livelihoods, shifts in living habits and cultural customs, as well as psychological impacts. This especially happens to directly affected communities. So that management can be carried out through a political ecology perspective approach, namely with an integrated collaborative pattern between the central government, regional governments and affected communities. The political ecology approach used in this research focuses on environmental political aspects with ecological and social impacts.

Keywords: Political Ecology, Ecosystem Management, Social Economic Impact, Jatigede Reservoir

Article Info		
Received	:	January 23rd , 2025
Accepted	:	January 28th, 2025
Published	:	January 30th, 2025

1. INTRODUCTION

A reservoir is defined as an artificial lake created by damming a river to store large amounts of water for a specific purpose (Baldassarre, 2018; Sabtya, 2021; Sisinggih et al., 2021). One of the reservoirs in West Java Province is Jatigede Reservoir in Sumedang Regency. Jatigede Reservoir is the second largest reservoir in Indonesia (Putra et al. 2022 which aims to overcome the water deficit for irrigation which causes drought and flooding in the rainy season, especially in the Pantura region of West Java (Regency). (Majalangka, Cirebon and Indramayu). Meanwhile Therefore, to carry out the construction of the Jatigede Reservoir, 4,891.13 hectares of land is needed covering five sub-districts and 28 villages, including Jatigede District. (751.45 ha), Jatinunggal (229.25 ha), Wado District (461.22 ha), Darmaraja District (1,606.36 ha), Cisitu District (73.45 ha), forest land (1,200 ha), Large areas of land (107 ha) and dozens of historical sites have also been removed (Sumedang Regency Government, 2009). This case, Warsa (2016) added, The land that was flooded for the construction of the reservoir was 18,598.6 ha, consisting of forests, agricultural land, villages and rivers. The very long process of building the Jatigede Reservoir gave rise to various problems and changes, including problems related to the impacts resulting from the development.

On the other hand, Jatigede Reservoir construction activities will certainly have an impact on changes in the ecosystem, climate and weather, social changes and other aspects related to the ecology and socio-economics of communities that are directly or indirectly affected. This situation shows that the issues of sustainability and ecological development are often two sides of the same coin, namely two contradictory concepts. The main argument for development is based solely on the aspect of economic growth. This situation has led to aggressive industrialization programs that do not take into account the impact of compression of

access space due to ecological damage (Salim 2010). Restricting access to space (Low 2009) is a form of marginalization of poor communities and local wisdom in the name of development

Changes in environmental problems experienced as a result of Jatigede watershed development activities (Fadli *et al.* 2019) were identified by ch6anges in environmental temperature which seemed warmer (in the dry season) and erratic rainfall intensity. This is thought to be because usually in the dam construction planning process there will be a hydrological design where the characteristics of the dam building will influence the flow and volume of the water surface (Fitriana *et al*. 2020). According to Nurmalia and Susilawati 2019, there have been changes both ecologically and in people's lives affected by the construction activities of the Jatigede Reservoir.

This situation is complemented by impacts arising from these development activities, namely economic, social, cultural and ecological impacts. One of them concerns land acquisition and its implementation from 1982 until now which has not been completed, as well as reservoir management. Jatigede is not managed by the Sumedang Government, which has an impact on limited public and government access to the Jatigede reservoir. This is an obstacle and limitation for all Jatigede Reservoir development activities. The impact of this problem also gave rise to raging differences of opinion, as if the construction of the Jatigede Reservoir was not intended to improve people's living standards, but the construction of the Jatigede Reservoir would actually provide two benefits at once. and the losses. loss among people. stable. Ultimately, this creates both advantages and disadvantages for those affected by eviction or those directly affected. This direct impact is supported by the statement that the Jatigede reservoir construction activities mostly have an unfavorable impact, especially for the directly affected communities (Nurmalia and Susilawati 2019), while ecological changes from agriculture to reservoir flooding in large areas will cause changes in activity (Rostiyati 2014), as well as the important impact felt by society, namely social change (Purnama 2015). The social changes experienced are related to psychology, such as stress, confusion and others, so the changes and impacts of reservoir construction activities must be prepared carefully and systematically (Schermerhorn *et al*. 2010). So a research approach is needed that can combine ecological and social aspects of society, one of which is through a political ecology approach.

The political ecology view provides a solid theoretical basis for understanding the significance of environmental and social justice in the context of sustainable development. Ecological politics sees humans as an integral part of an interconnected ecosystem, where human activities in meeting their daily needs interact with the natural environment (Elvianita 2023). In this view, sustainable development is not only related to economic growth, but also to maintaining ecological balance and social welfare.

Changes in conditions before and after the construction of the Jatigede reservoir are expected to have an impact on various sectors. These various changes are very problematic and constitute a very serious threat that will affect various aspects. This condition shows that these changes are interrelated in one component called the Jatigede Reservoir ecosystem. This is in line with Hidayat and Safitri's statement in 2020 which stated that green politics is based on interests. just economics. Development and the environment have a complex, contradictory and ironic relationship. Green development actually creates a paradox: it eliminates participation and creates new threats to the environment. So ecosystems cannot be separated from humans, which shows that humans are an inseparable part of the ecosystem which will be in harmony with increased food use and the need for clean water. To overcome this situation, comprehensive ecosystem management efforts are required from various parties, both government, non-government and society, to meet the economic needs of society and the sustainability of natural water resources with the principles of sustainable development through a political ecology perspective approach.

2. METHOD

The method used in this research is descriptive with a qualitative approach. The data collection techniques used in this research were observation, in-depth interviews, and literature study. In accordance with the approach used, the data analysis technique is qualitative analysis. Determining informants was carried out using a purposive sampling approach, namely a combination of snow bowl sampling and interview guidelines (questionnaires), which were based on considerations. informant who was directly involved in the construction of the Jatigede reservoir. In this case there are two elements, namely the Sumedang Regency Government and Non-Governmental Organizations (communities affected directly or indirectly). The respondent criteria are as follows:

a. Direct respondents (WTL) in this study are respondents whose land was flooded, whether they currently live around the reservoir, relocated, or outside Sumedang.
b. Indirect respondents (WTTL) in this study are respondents whose land is not flooded even though they currently live near the reservoir or far from the reservoir (Sumedang and non-Sumedang)

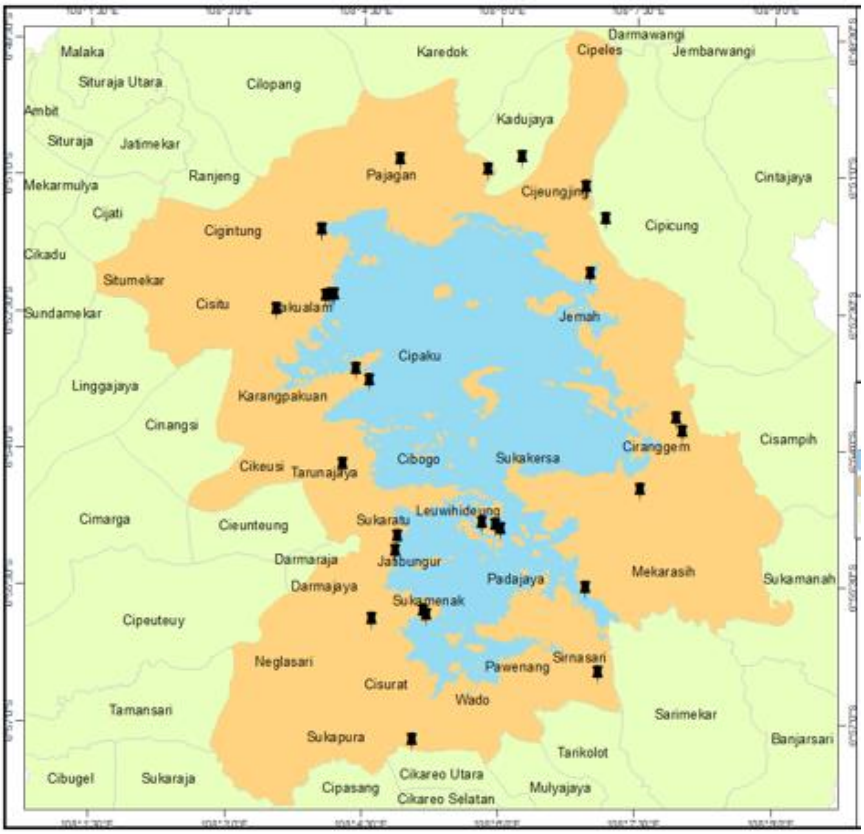

Figure 1 Research location map

On the other hand, the selection of the Jatigede Reservoir research location in Sumedang Regency was based on considerations of reservoir construction which had an impact on many sectors such as social, economic, ecological and cultural. One of them is reflected in significant changes in ecosystems and society. This shows that the research approach, namely the political ecology approach used in this research, is focused on environmental political aspects with ecological and social impacts. Meanwhile, the management of the Jatigedes Reservoir has not been carried out comprehensively, causing conflict in the community. Therefore, it is necessary to formulate a management strategy. Jatigede Reservoir globally through a political ecology perspective approach.

3. RESULT AND DISCUSSION

3.1 Historical Existence of the Jatigede Reservoir

The idea for building the Jatigede Reservoir was first proposed by the government in 1963 and continued with a detailed design in 1986 by consultant SMEC, Australia. The results were reviewed in 2004 by consultant PT. Indra Karya JO and PT. Wiratman and received a design certificate from the Minister of Public Works on February 23 2006 (Ministry of Public Works, Directorate General of Water Resources, Jatigede Reservoir Development 2011). It is hoped that the Jatigede Reservoir can function as a raw water provider, especially for agricultural areas which are one of the regional and national rice providers, in addition to other strategic interests, such as electricity generation, fisheries and tourism (Putra et al., 2022). The Jatigede Reservoir area, Sumedang Regency began operating on August 31 2015, covering 28 villages in five sub-districts. The area of land flooded for the construction of the reservoir is 18,598.6 hectares, consisting of: forests, villages, rivers and agricultural land. The area of agricultural land that was flooded reached 9,303.4 hectares or around 50.2% of the total area. The number of families affected by the construction of this reservoir is 6,955 families spread across 28 villages in 5 sub-districts. The percentage of displaced household heads who work in agriculture is 71.3%.

Jatigede Reservoir is the second largest reservoir after Jatiluhur with an area of 4,896.22 hectares. Geographically, the Jatigede area is located at 6o49'0" South Latitude - 7o04'0" South Latitude and 107°60'0" East Longitude - 108°15'0" East Longitude. Administratively, Jatigede Reservoir is located in six sub-districts, namely Situraja, Cisitu, Darmaraja, Wado, Jatinunggal and Jatigede. The administrative boundaries of the Jatigede Reservoir area are to the north, namely Paseh District and to the east of Tomo District. is Majalengka

Regency, to the south is Cibugel District and Garut Regency and to the west is Cisarua, Ganeas and South Sumedang.

On the other hand, Jatigede Reservoir has a reservoir area (El +262) of 41.22 km^2. with a dam height of 110 m and a dam length of 1,715 m. This reservoir is able to accommodate the water discharge from the Cimanuk River Basin with an effective storage capacity (between El +221 to +260) of 877 x 106 m^3. The Cimanuk River Watershed (DAS) covers an area of 358,400 hectares. Administratively, the Cimanuk watershed is located in several districts, namely Garut Regency (31.54%), Sumedang (29.04%), Majalengka (27.53%) and Indramayu (10.87%). The climate type in the Cimanuk river basin generally includes climate type C, with an average rainfall of 1500 mm $year^{-1}$ to 2000 mm $year^{-1}$. The potential available water resources are around 2.6 x 109 m^3 s^{-1}, with very large discharge fluctuations as recorded at Rentang Dam, namely maximum discharge (Q) reaching 1,004 m^3 s^{-1} and minimum Q 4 m^3 s^{-1}. 1. Meanwhile, the useful life of the Jatigede Reservoir is 32 years and reaches a reservoir base elevation of +221 m with a sedimentation rate of 5.32 mm. $year^{-1}$ or 7.77 million m^3 $year^{-1}$ (BBWS, 2010; Bappeda, 2013). One form of utilizing the Cimanuk River flow is the construction of the Jatigede Reservoir.

Jatigede Reservoir was built as a flood control area in the Indramayu and Cirebon Regencies with an area of 14,000 hectares. Other advantages are (1) irrigation of an area of 90,000 hectares, (2) provision of raw water of 3,500 L/second-1 with service targets for the districts and cities of Cirebon, Indramayu Regency, Majalengka Regency, and Sumedang Regency, and (3) as power source. 110 MW Hydroelectric Power Plant (BBWS Cimanuk Cisanggarung, 2010). Thus, many parties will benefit from the existence of the Jatigede Reservoir. The construction of the Jatigede reservoir has a very long history. Planned during the Dutch colonial period. However, due to opposition from the local community, construction was canceled.

3.2. Impact of Jatigede Reservoir Development Activities

The impact of the existence of the Jatigede Reservoir before the flood (2014) and after the flood (2018) was identified as the loss of part of the area or village. Disappeared countries are divided into two categories, namely partially lost and totally lost. The areas that were totally lost (six villages) were the villages of Jatibungur, Leuwihideung, Cibogo, Cipaku, Padajaya and Sukakersa, while 22 other villages were partially affected (BPS, 2015 and 2019).

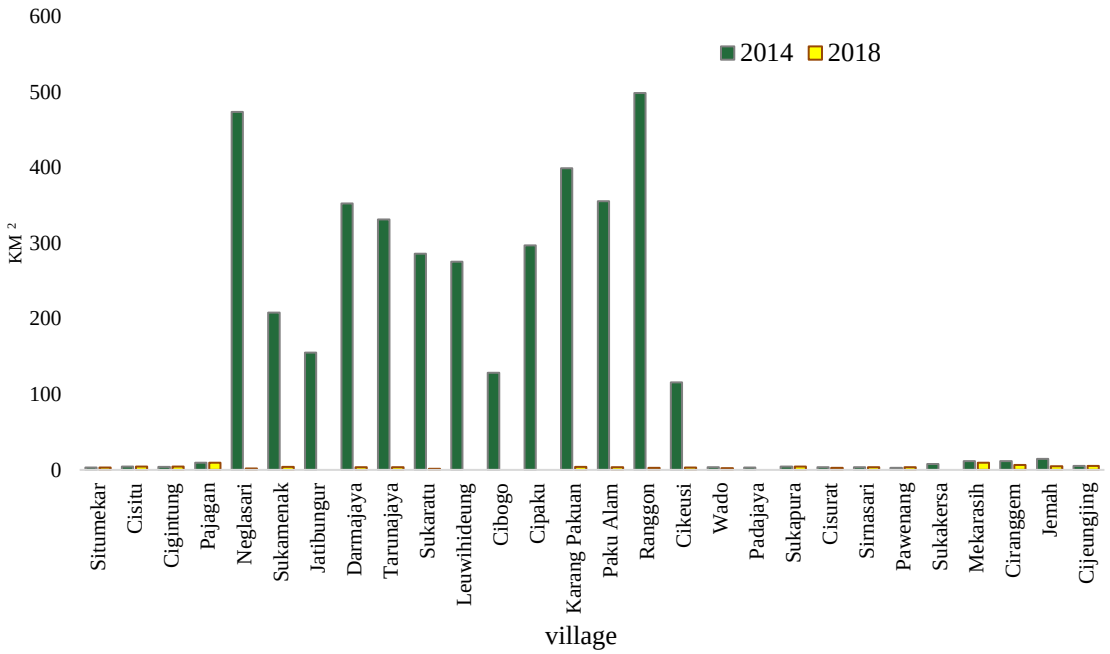

Figure 2 The size of the area affected by the Jatigede Reservoir

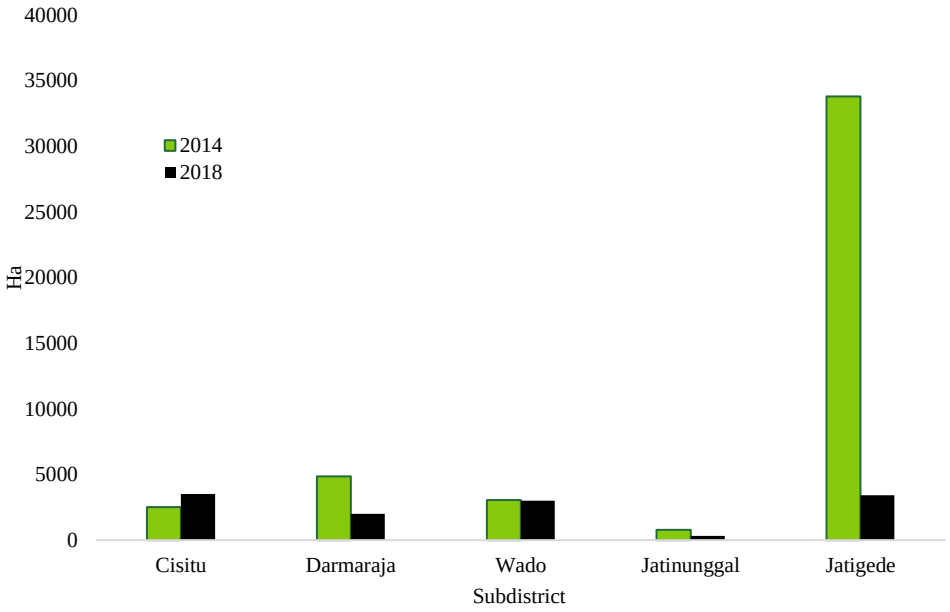

Figure 3 Total harvested area before and after flooding of the Jatigede Reservoir

The specificity of ecosystem changes from an ecological perspective, both spatially (Chu et al., 2018; Bi et al., 2020; Anisa, 2023) and data, is the change in agricultural land that is flooded covering an area of 9,303.4 Ha or around 50.2% of the total land area. The potential for agricultural land before and after the Jatigede Reservoir flood changed significantly. This condition was identified, namely that the largest total rice harvest area was in Jatigede District and the lowest was in Jatinunggal District in 2014. Meanwhile, in 2018, Cisitu District was recorded as having the highest and lowest rice harvest area in the district. Jatinangor. Changes in the area of agricultural land, especially rice fields, affect the productivity of rice production. The rice productivity of Jatigede District in 2014 was > and Wado District in 2018 was >. Meanwhile, the lowest rice productivity was in Cisitu District (2014) and Jatinunggal District (2018) (BPS, 2015 and 2019). This is in line with the statement of Fadli et al. (2019), that the social impact of the construction of the Jatigede Reservoir has an impact on farming communities. This statement is reinforced by statements from interviewees from directly affected communities:

Statement:
"*nya suganteh moal jadi ieu the, boro basa menang artos the dipeserkeun kanu lahan di ujungjaya da lami teuing jadina waduk the jadi we dijuak deui lahan sawah di Ujungjaya. Atuh ayeuna pas jadi nya bingung. Basa itu mah pare teh teu kudu sieun, da aya kanggo tuangeun mah. Ayeuna mah kudu meser. Alhamdulillah bapa mah di relokasi jadi sadesa cipaku didieu. Tah genah keneh basa itu tempat dagang the ngajejer rapih di sisi. Ayeuna dirapihkeun malah kieu. Cenah janjina nu dagang the diatur kumaha tapi teu sasuai sareng kanyataanna matak hoream. Tah basa eta aya bayar tiket ku kp. Makmur diatur mah pan atuh ku warga the didemo. Maenya ayeuna nu OTD korban kudu bayar sewa tempat kanggo jualan terus deuih nu ngaturna warga lain*".
Sources: Karja (informant)

This condition shows that most of the rice fields have been flooded, forming a reservoir. Changes in the ecological order caused by ecosystem dynamics have caused affected communities to rely on the use of water to survive. At the same time, when the natural environment changed from agricultural areas to large reservoirs, it brought changes to people's activities.

On the other hand, the social aspects of society change as the number of household heads increases. The number of families affected by the construction of this reservoir is 6,955 families spread across 28 villages in 5 sub-districts. The percentage of displaced household heads who have agricultural work is 71.3%. This shows that the construction of the Jatigedes Reservoir has had a positive impact on the land, cultural, social and economic infrastructure of the people who are directly or indirectly affected by its construction, both positive and negative. One of the socio-economic impacts that arises is the emergence of changes and/or losses in life. This is the result of environmental changes from agricultural land to flooded reservoir areas. Economic activities after the construction of the reservoir are expected to generate the same or even greater income than

before the Jatigede reservoir. Communities directly affected have largely shifted their livelihoods (Fadli et al., 2019) from the agricultural sector to the freshwater sector, such as fishermen, fish cultivators, Many people also find themselves unemployed. The following are statements from respondents from communities directly affected by the construction of the Jatigede Reservoir who have experienced changes in their livelihoods:

Statement:
Kekengingan na ge sakeudik ayeuna mah neng. Abi ka laut ti tabuh 1 an nembe banyat ieu. Alat-alat na nganggo ban sareng keucrik we".
Source: Ahmad (informant)

"*Abi mah penjaga atau pemelihara teh. Ieu tambak na kagungan orang wado. Tapi nu di gigir eta gaduh nu raka jadi sakalian we diurus. Nu abi dijaga mah eta system na 40:60 system ganda (nila sareng mas) tina per 3 sasih paling kenging dibawah 9jt bersih teh. Pami gaduh modal mah hoyong ngadamel nyalira. Da abi mah sakola mung SD*".
Source: Doni (KJA keepers)

This shows that socially the conditions of the people affected by the construction of the Jatigede Reservoir have been affected and changed significantly. This condition can also be seen in the psychological condition of people who are experiencing shock and quite a few are experiencing mental disorders. According to Rahmat *et al.* 2019 states that social support such as emotional, affection, interaction and social support is really needed by communities affected by the construction of the Jatigede Reservoir.

Figure 4 Conditions of communities directly affected (changes in livelihoods, accessibility and infrastructure conditions)

The construction of the Jatigede reservoir also has negative impacts, especially socio-economic impacts for communities affected by reservoir construction in the development area. One of the socio-economic impacts caused is the change and/or loss of people's livelihoods due to changes in the physical environment and land function, from agricultural land to reservoir flood plains (Kirchherr, 2016). The social impacts resulting from the Jatigede Reservoir development plan include: A total of 5,686 other families had to be relocated (Nopianti et al., 2018). Based on presidential decree no. 1 article 3 of 2015, the government provides solutions regarding managing the social impacts of the construction of the Jatigede reservoir

People who are evicted will receive new housing in the form of cash replacement houses and will receive compensation for the costs of demolishing the house, mobilization, house rent, and compensation for loss of income. Even the government is trying everything. affected communities through local transmigration programs in West Java and outside Java. Migration patterns are patterns carried out of one's own volition, choosing to move across river basins and/or regulated by the government in groups (village migration) or separately by parents, siblings or neighbors. Those who choose to pass through flood areas are mostly middle to upper class people who still own land in non-flood areas. When, people who take part in the government's transmigration program in West Java and outside Java are those who have an average of only 0.3 hectares of land/family with the hope of obtaining 2.5 hectares of land/family to develop their agricultural activities.

Regional Regulation (Perda) of Sumedang Regency Number 2 of 2012 concerning RTRW Sumedang Regency for 2011-2031, Article 54 point (4), explains that the general provisions of zoning regulations for the

development of reservoir/dam infrastructure are prepared with reference to Regional Regulations with the following notes: (a) fishing activities are permitted, as long as they do not harm the environment and natural scenery, and affect the quality and quantity of water; (b) prohibit the use of space and the implementation of activities around reservoirs/dams and spillways that could endanger the quality of water resources; and (c) limiting the use of space around reservoirs/dams and spill areas to maintain sustainability. In accordance with Sumedang Regency Regional Regulation No. 2 of 2012 concerning RTRW. Therefore, floating net cages are not permitted. That is why the people around Jatigede Reservoir carry out fishing activities. It is very important that the management of public water resources in reservoirs involves all stakeholders, starting from planning, implementation, evaluation and monitoring by local and central governments.

3.3. Jatigede Reservoir Ecosystem Management Based on a Political Ecology Perspective

The activity of creating the Jatigede Reservoir by damming the river flow will essentially change the river and land ecosystem into a reservoir ecosystem. These changes have both positive and negative impacts on resources and the environment. The positive and negative impacts that generally result from reservoir construction are in accordance with the function of the reservoir. In general, the most important negative impact and problem of reservoir construction is settlement. The return of residents from inundated areas, the creation of jobs, the loss of land, forests, plantations and other resources, including flora and fauna, as well as other negative ecological impacts will only be felt "in the long term" (Rahmat et al., 2019). Therefore, the preventive action and strategy that can be taken is to develop a comprehensive and sustainable reservoir management strategy using a political-ecological approach, in this case the Jatigede Reservoir, in order to achieve optimal results. minimize negative or undesirable effects. So that ecosystem management due to environmental changes resulting from Jatigede watershed development activities is carried out from a political ecology perspective.

Political ecology emerged as an approach that views environmental problems as structural and material problems. One of the structuralist approaches is the actor approach introduced by Bryant and Beiley (2001) in Satria (2006) which states that the concept of the political environment means that the environmental perspective cannot be separated from economic and political perspectives. Therefore, environmental problems can never be solved by considering only technical aspects. This political ecology explores the various interests that arise in managing environmental policy. In an effort to preserve the Jatigede Reservoir water ecosystem from free use of ecology, which means being fair or preserving life in the presence of socio-economic changes in communities directly affected by reservoir construction activities, this political ecological approach has a role, namely creating ecological and social prosperity. One way is through identifying the relationships and dynamics of actors in managing the Jatigede Reservoir ecosystem. So that the management of the Jatigede Reservoir water ecosystem is created which covers these two interests, namely: 1) supporting economic development that prioritizes community welfare, 2) improving and maintaining the quality and sustainability of the ecosystem, 3) integrated collaboration between stakeholders. On the other hand, differences in interests mean that there is no single, definitive understanding, as each actor is determined by their own interests. A political ecology approach can help describe phenomena by linking environmental conditions to political and economic processes (Peet and Watts, 1996).

Natural resource management is closely related to economic and ecological aspects. Because the economic sector tends to clash with environmental (ecological) problems, natural resource management still presents big challenges (Herdiansyah, 2018). Economic development and ecological conservation are like two different but closely related sides of a coin. Because on the one hand, economic development must be achieved for the welfare of society, but on the other hand, economic development... the economy will more or less have an impact on ecological conservation (Burhanuddin, 2016). Development must pay attention to the interests and participation of the community so that they can play a direct or indirect role in improving their welfare and not exclude them from the development process. This includes the impact of Jatigede Reservoir construction activities on the socio-economic conditions of affected communities, both directly and indirectly. This case is in accordance with Moh's statement. Fadli et al. (2016) stated that development and growth must not be eliminated, but meaningful solutions must be sought to reduce the various impacts that arise and to ensure that the environment and natural resources are not damaged or depleted in development programs. Thus, Shiva (1988) and Jati (2013) state that politically, clear rules and policy decisions are needed in natural resource management mechanisms. From a political ecology perspective, this involves two main elements, namely management of community (shared) resources and environmental justice.

In the case of the Jatigede Reservoir, it is necessary to develop a management strategy for the Jatigede Reservoir, namely by identifying the problems that exist in the Jatigede Reservoir from various sectors and different stakeholders. The stakeholders involved in this research are stakeholders from communities directly and indirectly affected, local government stakeholders, Jatigede Reservoir management staff and related SKPD as policy makers, as well as stakeholders from all global universities. This is expected. can produce complete results. The results of this research are largely determined by the accuracy of stakeholder sources in identifying

problem variables, problem priorities and management strategies as well as their impact on the management and development of the Jatigede Reservoir. To achieve this, in the initial stage of FGD or socialization with the Sumedang Regency Government SKPD, the participants were provided with an orientation to existing conditions, such as social, economic, cultural and social. others are the results of the first research. A list of variables is then created in the form of a questionnaire and submitted to be completed and completed based on the participants' understanding, knowledge and experience. This is also done for other actors, including academic experts. These academic experts come from various universities and have areas of expertise in fisheries resource management, technology, management and economics, and policy.

According to Endah and Nadjib (2017), the ideal management model for shared resources such as lakes is a collaborative management model. According to Conley and Moote (2003), the appropriate narrative to define a collaborative management model is a way to reduce conflict between stakeholders; strengthening social capital; while environmental, social and economic problems are handled simultaneously; and produce better decisions. This means that this model is an ideal natural resource management system from a political ecology point of view and can be proposed as a water management model for the Jatigede Reservoir.

As a reference for implementation guidelines, Gunton (2003) explains that collaborative management planning and implementation occurs in three main stages. The first is pre-negotiation. This step takes place in three phases, namely 1) context preparation (building a professional team, identifying potential stakeholders, conflict assessment which assesses the nature of the conflict and its resolution options); 2) identify stakeholder groups participating in the process cooperation; 3) prepare draft basic regulations, terms of reference for work, description of objectives, regulations or procedures, rules of responsibility, deadlines and logistics. Everything must go through the approval of the interested parties; and 4) identify various facts and related information. The second step is negotiation. The tasks that must be carried out in this phase are: 1) identifying the desires of stakeholders; 2) group the different options and summarize the results of the discussion; 3) enter into an agreement with interested parties. The final step is after negotiation. This step begins with an agreement to start implementation. Then they prepare follow-up steps to evaluate implementation, accompanied by renegotiation of agreement points that can be measured again.

4. CONCLUSION

Jatigede Reservoir construction activities have an impact on various sectors, such as ecological changes (rice fields and residential areas become stagnant water), socio-economic changes (livelihoods, economic conditions and even psychological conditions of the community are especially directly affected). Based on this, comprehensive management between ecology and economics is needed, namely through a political ecology perspective. The management aspects of the Jatigede Reservoir are carried out through a collaborative and integrated approach.

BIBLIOGRAPHY

[BBWS] Balai Besar Wilayah Sungai Cimanuk – Cisanggarung. 2010. Pola Pengelolaan Sumber Daya Air Wilayah Sungai Cimanuk Cisanggarung Tahun 2010. Cirebon (ID): Balai Besar Wilayah Sungai Cimanuk Cisanggarung.

Anisa AN. 2023. Dinamika Vegetasi dan Suhu Permukaan Lahan Berbasis Remote Sensing di Waduk Jatigede Provinsi Jawa Barat: Studi Pendahuluan. JGRS. Doi: https://doi.org/10.23960/jgrs.ft.unila.112.

Anonimous. 2012. Peraturan Daerah Nomor 2 Tahun 2012 tentang ren-cana tata ruang Wilayah Kabupaten Sumedang tahun 2011-2031. Sumedang: Bupati Sumedang.

Anonimous. 2015. Peraturan Presiden Nomor 1 tahun 2015 tentang Pe-nanganan Dampak Sosial Kemasyarakatan Pembangunan Waduk Jatigede.

Baldassarre GD, Wanders N, AghaKouchak A, Kuil L, Rangercroft S, Veldkamp TIE, Garcia M, Oel PRV, Breinl K, Loon AFV. 2018. Water Shortages Worsened by Reservoir Effectc. *Nat Sustain*. 617-622.

Bappeda Kabupaten Sumedang. 2013. Rencana Induk Pengembangan (RIP) Wilayah Jatigede Kabupaten Sumedang [Laporan Akhir]. Sumedang (ID): Bappeda Kabupaten Sumedang.

Bi, X., Li, B., Zhang, L., Nan, B., Zhang, X., & Yang, Z. (2020). Response of grassland productivity to climate change and anthropogenic activities in arid regions of Central Asia. Perr Journal 8, https://doi.org/10.7717/peerj.9797.

BPS.2015. Kabupaten Sumedang Dalam Angka. Jakarta

BPS.2019. Kabupaten Sumedang Dalam Angka. Jakarta

Chu, H., Venevsky, S., Wu, C., & Wang, M. (2018). NDVI-based vegetation dynamics and its response to climate changes at Amur-Heilongjiang River Basin from 1982 to 2015. Science of the Total Environment, 2051-2062. https://doi.org/10.1016/j.scitotenv.2018.09.115.

Cockburn, A. & Ridgeway, J. (1979). Political Ecology. New York: Times Book.

Elvianita N.2023. Pentingnya Keadilan Lingkungan dalam Pembangunan Berkelanjutan:Perspektif Politik Ekologi. *Literacy Notes.* 1(2).

Fadli R, Noor TI, Isyanto AY. 2019. Dampak Sosial Ekonomi Pembangunan Waduk Jatigede Terhadap Masyarakat Tani di Kabupaten Sumedang (Suatu Kasus di Blok Pasirkanaga Desa Tarunajaya Kecamatan Sumedang). Jurnal Ilmiah Mahasiswa: Agroinfo Galuh. 6(3). Doi http://dx.doi.org/10.25157/jimag.v6i3.2517.

Fadli R, Noor TI, Isyanto AY. 2019. Dampak Sosial Ekonomi Pembangunan Waduk Jatigede terhadap Masyarakat Tani di Kabupaten Sumedang (Suatu Kasus di Blok Pasirkanaga Desa tarunajaya Kecamatan Darmaraja Kabupaten Sumedang). *Jurnal Ilmiah Mahasiswa Agroinfo Galuh.* DOI: 10.25157/jimag.v6i3.2517.

Fitriana VA, Suripin, Sriyana I. 2020. Kajian Ulang Desain Hidrologis Cofferdam Hulu Bendungan Karian terhadap Perubahan Cuaca di DAS Ciberang. SIKLUS: Jurnal Teknik Sipil. 7(1):31-42.

Hidayat A, Safitri P. 2020. Politik Ekologi Kehutanan: Kebijakan Hutan Tanaman Industri di Sambelia, Lombok Timur (The Ecological Politic of Forestry: *Industrial Plantation Forest Policy in Sambelia, East Lombok).* Jurnal Penelitian Sosial dan Ekonomi Kehutanan Vol. 18 No.3, Desember 2021: 205-218.

Kirchherr, J., & Charles, K. (2016). The Social Impact of Dams: A New Framework for Scholarly Analysys. Environmental Impact Assessment Review 1 (1), 1-49.

Low, N. (2009). *Politik hijau. Justice, society and nature : an exploration of political ecology*. Terjemahan Dariyatno. Bandung: Nusa Media.

Nopianti R, Melinda T, Harahap J, 2018. Strategi Adaptasi Masyarakat Terdampak Pembangunan Waduk Jatigede di Dusun Cipondoh Desa Pawenang Kecamatan Jatinunggal Kabupaten Sumedang. *Jurnal Artikel Patanjal.* Doi 10.30959/patanjala.v10i1.338.

Nurmalia N, Susilawati T. 2019. Persepsi Perangkat Kecamatan dan Perangkat Desa terhadap Keberadaan Waduk: Kasus Waduk Jatigede Kabupaten Sumedang. *Jurnal Penyuluhan Perikanan dan Kelautan (*JPPIK). 13(1):43-58.

Peet, R. & Watts, M. (1996). *Liberation Ecologies: Environment, Development, Social Movements*. London: Routledge.

Peraturan Daerah No 2 Kabupaten Sumedang. (2012). Tentang Rencana Tata Ruang Wilayah Kabupaten Sumedang Tahun 2011-2031.

Purnama Y. 2015. "Dampak Pembangunan Waduk Jatigede Terhadap Kehidupan Sosial Budaya Masyarakatnya." *Patanjala : Jurnal Penelitian Sejarah dan Budaya* 7(1):131.

Putra P, Putrianika P, Nurhidayah S, Basri H, Ridwan R, Widyowati DD. 2022. Gerakan Ecovillage Berbasis Sabilulungan Konservasi Lahan Greenbelt Waduk Jatigede. Devosi Jurnal Pengabdian Masyarakat. 3(2). https://doi.org/10.33558/devosi.v3i2.4584.

Rahmat A, Komariah K, Setiawan W. 2019. Komunikasi dan Dukungan Sosial di Lingkungan Masyarakat Terdampak Pembangunan Waduk Jatigede, Sumedang. Jurnal Kajian Komunikasi. 7(1). 110-120.

Rostiyati, Ani. 2014. "Upacara Tradisional pada Masyarakat Tradisional Jatigede Kabupaten Sumedang. Bandung." Hal. 28–57 in *Bunga Rampai Kehidupan Sosial Budaya Masyarakat Sumedang*, diedit oleh M. Muhsin dan B. Rudito. Bandung (ID): Kementrian Pendidikan Dan Kebudayaan Balai Pelestarian Nilai Budaya Bandung.

Sabtya SAS. Kawasan Wisata Waduk Logung dengan Pendekatan Heterotopia di Kudus Jawa Tengah. UNS.

Satria, A. (2006, 13 April). Krisis Ekologi Politik. *Tempo*.

Schermerhorn, John R., J. G. Hunt, dan R. N. Osborn. 2010. *Organizational Behavior*. John Wiley & Sons.

Sisinggih D, Wahyuni S, Hidayat F. 2021. *Sedimentasi Waduk*. UB Press.