Conference

Implementation of Flood and Drought Control for Economic Growth of the Cisadane River Flow in Banten

Risnawati Risnawati[1*], Ira Irawati[1], Nandang A. Deliarnoor[2] and Heru Nurasa[1]

[1]Department of Public Administration, Faculty of Social and Political Sciences, Padjadjaran University
[2]Department of Government Science, Faculty of Social and Political Sciences, Padjadjaran University
ORCID
Risnawati Risnawati: 0000-0002-1921-1911

Abstract. The current growth of water conservation in Indonesia is still not optimally utilized by the community. The government has an important role in flood and drought disaster control to improve the welfare of its population. According to Indonesian Law No. 11 of 1974, water is a basic necessity for humans. However, human activities in agriculture, industry, and household activities can cause pollution, where the necessity for water increases yet its quality decreases. The water resource network in the watershed area of Banten Province, especially in Cisadane, is an old water resource facility and infrastructure, so there is some large and small scale damage, which certainly has an impact on the services to the water users. Related to flood control, the lake has a very important role as a water storage area and in reducing the amount of water runoff/water retention. The decline in the condition of the flow of rivers, lakes, reservoirs and swamps is inseparable from physical predicaments such as land conversion, and non-physical ones such as natural disasters. Therefore, the government's role is important to provide information on flood and drought disaster control management systems so that the community can support their economic stability and be properly maintained.

Keywords: implementation program, optimization, conservation of water resources, flood and drought disasters

Corresponding Author: Risnawati Risnawati; email: risnawati20001@mail.unpad.ac.id

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1. Introduction

Water is a source of life that cannot be replaced by anything. Without water, humans, animals, and plants cannot live. Water on earth is classified into two, namely: 1. Groundwater and 2. Surface water. Groundwater is water below the ground surface. Groundwater can be further divided into two, namely phreatic groundwater and artesian groundwater. Surface water is water on the ground surface and can be easily seen with our eyes. Examples of surface water are seawater, rivers, lakes, rivers, swamps, ponds, and so on. As stated in Indonesian Law No. 11 of 1974, water is a basic necessity for humans where it is needed for drinking, bathing, washing clothes, irrigation in agriculture, and drinks for

animal husbandry. Water is also very necessary for industrial activities and technology development to improve the welfare of human life. But following these benefits, human activities in the field, industry, and household activities can cause pollution, where the water demand will increase yet the quality will decrease. Water conditions and sources to support various necessities have limitations and tend to decline both in terms of quantity and quality, therefore water and its sources must be managed, maintained, utilized optimally for the prosperity of the people, while it must also be protected and preserved.

Conservation of water resources is an effort to maintain the existence, sustainable condition, essence, and function of water resources so that they are always available in sufficient quality and quantity to meet the necessities of living beings both at present and in future generations globally on this earth. Utilization of water resources to manage, provide, employ, develop and cultivate water resources in an optimal, effective, and efficient manner. Control and management of water's destructive power are to prevent and subdue environmental damage caused by water's destructive power which can be in the form of floods, cold lava, waves, tides, and so on.

Management is an effort to plan, implement, monitor, and evaluate the implementation of conservation, utilization of water resources, and control of water's destructive power. The administration of water resources is an effort to determine the utilization zone of water resources and their allocation from water sources. The provision of water resources is an effort to fulfill the necessity for water and its power to meet various demands with suitable quality and quantity. The utilization of water resources is the usage of water resources and their infrastructure as media and/or materials. The development of water resources is an effort to increase the benefit of the function of water resources without damaging the ecological balance. To optimize the utilization and usability according to the existing potential for the benefit of the community, it is necessary to manage water resources.

Programs of water resource development and its management, among Hydrological data collection and processing, are the programs for hydrological data collection and processing.

Daily rainfall data are obtained from BMKG which has collaborated and integrated into the management of SIH3. Rainfall data collection was carried out at 12 (twelve) rainfall points spread across the city and regency of Tangerang.

Measurement of river water discharge is carried out using a current meter. Because of the tool's limitations, the measurement is carried out by measuring the discharge at 14 (fourteen) location points including:

Nama Pos	Bd. Ps. Baru	Elevasi			
No di Database	30 I	Tipe alat	MANUAL	Desa	MEKARSARI
Lintang Selatan	06'.09.563'	Pemilik	BMG	Kecamatan	TANGERANG
Bujur Timur	106'.37.615'	Pengamat	SUTARJO	Kabupaten	TANGERANG

Tahun	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	Mei (mm)	Jun (mm)	Jul (mm)	Ags (mm)	Sep (mm)	Okt (mm)	Nop (mm)	Des (mm)	Rerata Hujan
2010	277	168	261	17	41	214	160	135	154	252	155	154	166
2011	151	177	111	201	165	22	219	0	9	0	65	188	109
2012	255	114	229	222	116	69	3	4	1	88	79	135	110
2013	553	203	101	229	220	34	336	64	112	75	179	308	201
2014	514	512	134	112	93	70	81	26	13	15	44	84	141
2015	163	166	75	116	53	29	0	0	0	0	50	128	65
2016	155	378	137	114	140	140	153	171	125	65	138	89	150
2017	211	273	176	92	79	82	124	18	23	25	34	173	109
2018	98	384	56	273	50	94	0	0	5	19	50	26	88
2019	211	273	176	92	79	82	0	0	0	0	34	54	83
2020	473	485	88	79	45	47	30	14	53	46	7	65	136
Max	553	512	261	273	220	214	336	171	154	252	179	308	201
Rerata	278	285	140	141	98	80	101	39	45	53	83	134	124
Min	98	114	56	17	41	22	0	0	0	0	34	26	65

Figure 1: Data Recap of Total Rainfall for the 10^{th} period of 2020. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

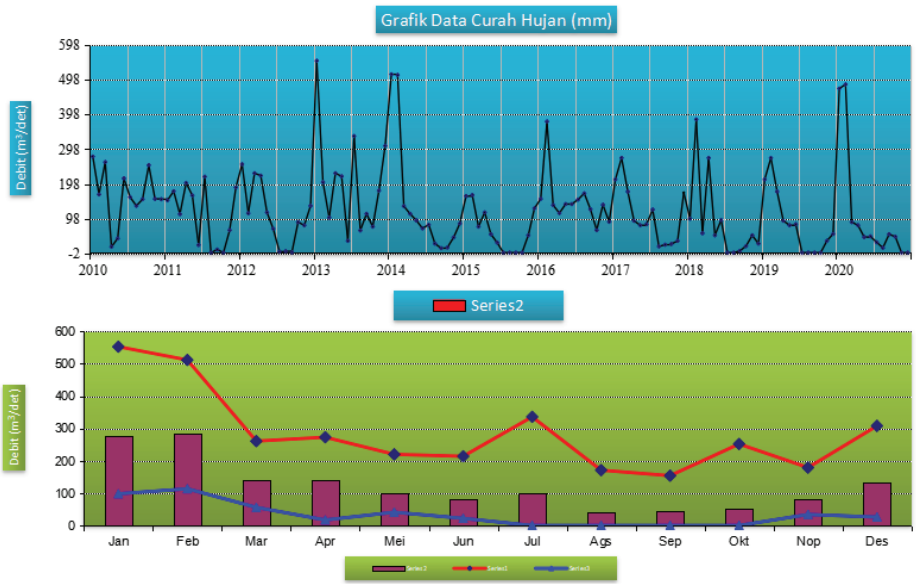

Figure 2: Rainfall Data (mm). (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

Water sampling was carried out at 24 river locations spread across the city/regency of Tangerang.

The water level post is a hydrological post that records the water level in a particular river. Water level recording can be done in two ways/tools, namely, with automatic or manual tools, the data obtained from the AWRL graph reading which is the result of water level recording of the river at a certain time in the form of a hydrograph showing the water level or TMA (meters) and time. While recording the water level manually is

Sungai : Jaletreng
Lokasi pos : T. Kota
Tahun : 2021

No urut	Tanggal	Diukur Oleh	Lebar (m)	Luas (m^2)	Kecepatan (m/dt)	TMA (m)	Debit (m^3/dt)	Jumlah Vertikal (buah)	Perubahan Muka air (m)	Lama pengukuran (menit)	No.Kincir	Keterangan
1	05-Jan-21	0	8,0	20,30	0,73	3,00	14,719	8	0,00	0	1-2101	
2	04-Feb-21	0	8,0	40,30	0,94	6,00	37,920	8	0,00	0	1-2101	
3	04-Mar-21	0	8,0	10,25	0,52	1,60	5,281	8	0,00	0	1-2101	
4	04-Apr-21	0	8,0	7,65	0,41	1,20	3,116	8	0,00	0	1-2101	
5	04-May-21	0	8,0	7,10	0,39	1,00	2,772	8	0,00	0	1-2101	
6	04-Jun-21	0	8,0	10,44	0,45	1,50	4,742	10	0,00	0	1-2101	
7	04-Jul-21	0	8,0	8,28	0,45	1,20	3,753	10	0,00	0	1-2101	
8	04-Aug-21	0	8,0	7,20	0,44	1,00	3,204	10	0,00	0	1474,8	
9	00-Jan-00	0	8,0	0,00	#DIV/0!	DIV/0!	0,000	10	0,00	0	1-2101	
10	00-Jan-00	0	8,0	0,00	#DIV/0!	DIV/0!	0,000	10	0,00	0	1-2101	
11	00-Jan-00	0	9,0	0,00	#DIV/0!	DIV/0!	0,000	10	0,00	0	1-2101	
12	00-Jan-00	0	9,0	0,00	#DIV/0!	DIV/0!	0,000	10	0,00	0	1-2101	
JUMLAH DEBIT							75,507					
JUMLAH RATA-RATA DEBIT							6,292					

Figure 3: Data Recap of River Flow Measurement Results. PSDA Office of Cidurian-Cisadane River Basin. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

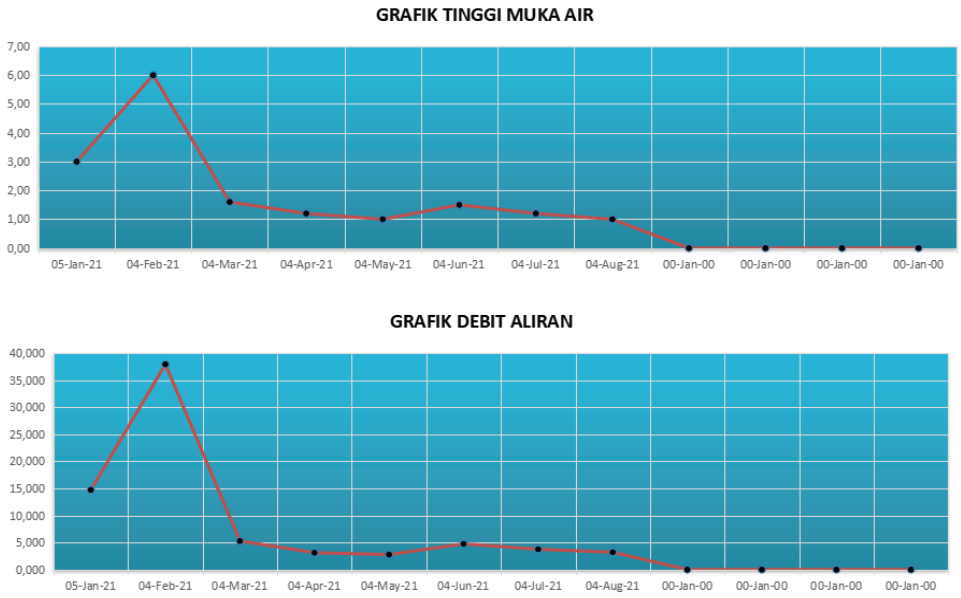

Figure 4: Water Level and Flow Discharge. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

done by observing the water level with a Peilschale board. Water level recording is carried out at 5 (five) points of observation of the water level.

In this benchmark, water meters are recorded from each water user who uses water in the city/regency Tangerang. Surface water users are required to record daily water usage which will be accumulated by the water meter registrar in the form of a monthly water usage report which will be submitted to the tax collector which in this case is carried out by BAPENDA (Banten Provincial Revenue Agency).

Nama Sungai : Angke (Hilir) S = 06°.13'.22.4"
Lokasi : Angke (Hilir) E = 106°.41'.46.9'
Tanggal : 22 Januari 2019
Metode Pengambilan Sample : SNI 06-2412-1991

Baku Mutu Berdasarkan PP No. 82 Tahun 2001 tanggal 14 Desember 2001

No	Parameter	Satuan	Hasil Uji(Ci)	Baku Mutu KLS II (Lij)	(Ci/Lij)	(Ci/Lij)Baru
	FISIKA					
1	Temperatur	°C	26,0	29,75	0,87	0,87
2	Daya Hantar Listrik	umhos	209,1	2250	0,09	0,09
3	Kekeruhan/Turbidity	Ntu	42	25	1,68	2,13
4	Total Disolved Solid (TDS)	mg/l	112	1000	0,11	0,11
5	Total Suspended Solid (TSS)	mg/l	42	50	0,84	0,84
6	Warna	PtCo	52	50	1,04	1,09
7	Sedimen	mg/l	58			
	KIMIA					
1	pH	-	7,64	7,5	1,02	1,04
2	Oksigen Terlarut (DO)	mg/l	6,655	4	1,66	2,11
3	COD	mg/l	9,920	25	0,40	0,40
4	BOD	mg/l	2,381	3	0,79	0,79
5	Nilai Permanganat ($KMnO_4$)	mg/l	9,164	10	0,92	0,92
6	Kesadahan Total	mg/l	96	300	0,32	0,32
7	Clorida (Cl)	mg/l	9,511	600	0,02	0,02
8	Calsium (Ca)	mg/l	19,2	200	0,10	0,10
9	Magnesium (Mg)	mg/l	11,664	150	0,08	0,08
10	Besi (Fe)	mg/l	0,77	0,3	2,57	3,05
11	Timbal (Pb)	mg/l	0,39	0,03	13,00	6,57
12	Tembaga (Cu)	mg/l	0,12	0,02	6,00	4,89
13	Zeng (Zn)	mg/l	1,69	0,05	33,80	8,64
14	Kromium Total (Cr)	mg/l	0	0,05	0,00	0,00
15	Cadmium (Cd)	mg/l	0,031	0,01	3,10	3,46
16	Fenol	mg/l	0,0184	0,001	18,40	7,32
17	Minyak dan Lemak	mg/l	0,175	1	0,18	0,18
18	Nitrat (NO_3-N)	mg/l	0,986	10	0,10	0,10
19	Nitrit (NO_2-N)	mg/l	0,010	0,05	0,20	0,20
20	Sulfat (SO_4)	mg/l	0,368	400	0,00	0,00
21	Amonia	mg/l	0	0,02	0,00	0,00
22	Phospat (PO_4)	mg/l	0,061	0,02	3,05	0,08
	BAKTERIOLOGI					
1	Total Coliform	Angka MPN/100ml	35000	5000	7,00	5,23
2	E.Coliform	Angka MPN/100ml	15000	1000	15,00	6,88
					SUM =	57,49
					RATA =	1,98
					MAX =	8,64
					Pij =	4,43

METODE IP

0 ≤ Pij ≤ 1.0 = memenuhi baku mutu

1.0 ≤ Pij ≤ 5.0 = cemar ringan

5.0 ≤ Pij ≤ 10.0 = cemar sedang

Pij ≥ 10.0 = cemar berat

KESIMPULAN :
1.0 ≤ 4.43 ≤ 5.0 = **CEMAR RINGAN**

Figure 5: Water Quality Assessment in January 2019.

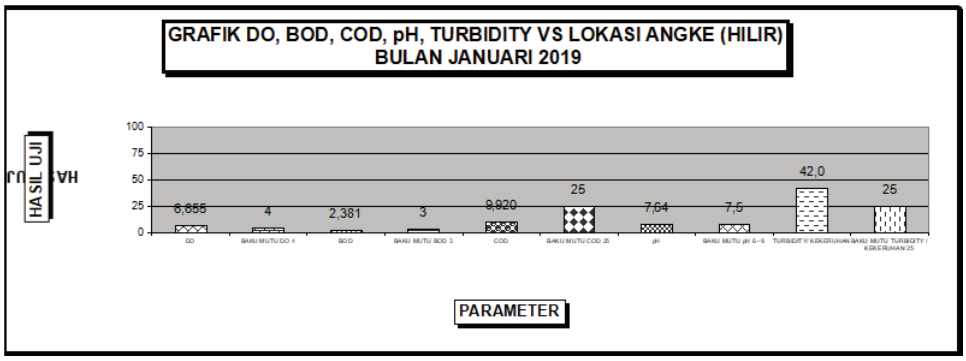

Figure 6: Chart of DO, BOD, COD, Ph, Turbidity vs Angke Locations (Downstream) January, 2019. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province)

Furthermore, a survey of the hydrological post-building inventory, maintenance of hydrological facilities, and infrastructure was carried out. The survey and investigation activities of the hydrological building post function to determine the current condition of the hydrology post whether there was heavy or light damage or the condition of the equipment and buildings are in good condition. The purpose of this activity is to produce report materials or data related to hydrological data. The hydrology post building consists of a water level observation post, a debit measurement post, and a rainfall post.

DATA TINGGI MUKA AIR POS DUGA AIR ANGKE
TAHUN 2020

PROPINSI : BANTEN
KOTA/KAB. : KOTA TANGERANG SELATAN

Kode Pos Duga Air	
Nama Pos Duga Air	ANGKE
Induk Sungai	ANGKE
Lokasi Geografis	DATAR
Luas DAS	
Elevasi	
Tgl. Dibangun	
Dibangun Oleh	PEMERINTAH PUSAT BANTEN
Lokasi	CIATER BSD KOTA TANGERANG SELATAN
Tahun Data	2020

TABEL POS DUGA AIR ANGKE

TANGGAL	JAN	PEB	MAR	APRL	MEI	JUN	JUL	AGUST	SEPT	OKT	NOP	DES
1	1,87	0,73	0,93	0,60	0,56	0,46	0,42	0,42	0,36	0,67	0,85	0,54
2	0,97	0,57	1,00	0,63	0,53	0,41	0,53	0,42	0,51	0,64	0,86	0,55
3	0,83	0,63	0,90	0,50	0,52	0,40	0,68	0,36	0,46	0,56	0,79	0,58
4	0,63	0,70	0,77	0,53	0,65	0,39	0,65	0,38	0,43	0,55	0,77	0,66
5	0,60	0,57	0,67	0,57	0,71	0,37	0,45	0,38	0,43	0,59	0,77	0,94
6	0,70	0,50	0,60	0,50	0,83	0,36	0,44	0,37	0,41	0,68	0,86	0,96
7	0,70	0,77	0,60	0,57	0,76	0,35	0,38	0,36	0,37	0,71	0,86	0,98
8	0,60	0,67	0,53	0,63	0,68	0,37	0,37	0,36	0,36	0,77	0,60	0,63
9	0,60	0,70	0,60	0,63	0,63	0,42	0,47	0,34	0,33	0,81	0,70	0,62
10	0,77	0,70	0,63	0,73	0,51	0,48	0,61	0,32	0,49	0,89	0,66	0,62
11	0,50	0,83	0,73	0,80	0,60	0,48	0,53	0,44	0,48	0,99	0,99	0,62
12	0,53	0,60	0,80	0,73	0,62	0,54	0,53	0,49	0,38	0,85	1,23	0,58
13	0,63	0,60	0,57	0,83	0,51	0,47	0,52	0,62	0,44	0,77	1,18	0,54
14	0,53	0,67	0,50	0,70	0,51	0,45	0,47	0,73	0,48	0,78	1,15	0,52
15	0,60	0,97	0,73	0,67	0,47	0,51	0,44	0,63	0,52	0,73	1,09	0,47
16	0,60	0,80	0,63	1,20	0,55	0,47	0,94	0,45	0,61	0,72	1,09	0,48
17	0,57	0,73	0,70	1,27	0,53	0,46	0,93	0,42	0,50	0,70	1,20	0,45
18	0,77	0,80	0,77	1,07	0,67	0,44	0,92	0,42	0,48	0,79	1,06	0,42
19	0,60	0,83	0,67	0,87	1,93	0,44	1,06	0,40	0,35	0,88	1,17	0,42
20	0,53	0,77	0,97	0,67	0,85	0,41	0,63	0,38	0,55	0,88	1,11	0,42
21	0,50	0,70	0,77	0,70	0,75	0,45	0,94	0,38	0,47	0,94	1,30	0,54
22	0,50	0,87	0,67	0,63	0,72	0,43	0,93	0,37	0,37	0,94	1,26	0,53
23	0,67	0,83	0,60	0,67	0,69	0,42	0,90	0,36	0,39	0,93	1,14	0,52
24	0,73	0,73	0,53	0,67	0,65	0,41	1,04	0,48	0,51	0,95	1,10	0,47
25	0,63	0,87	0,60	0,63	0,82	0,43	1,01	0,44	0,53	0,95	1,06	0,46
26	0,53	0,80	0,63	0,73	0,81	0,43	0,93	0,43	0,48	0,86	1,01	0,46
27	0,73	0,77	0,73	0,63	0,75	0,42	0,87	0,43	0,49	0,77	1,13	0,44
28	0,53	0,73	0,80	0,67	0,47	0,46	0,84	0,41	0,57	0,72	1,32	0,42
29	0,60	0,80	0,57	0,67	0,55	0,43	0,85	0,38	0,67	0,75	1,44	0,48
30	0,83		0,50	0,63	0,53	0,43	0,84	0,36	0,72	0,86	1,14	0,45
31	0,53		0,73		0,67		0,90	0,35		0,89		0,42
JUMLAH	20,93	21,23	21,43	21,33	21,01	12,98	22,05	13,08	14,12	24,51	30,86	17,19
HARI UKUR	31	29	31	30	31	30	31	31	30	31	30	31
RATA-RATA	0,68	0,73	0,69	0,71	0,68	0,43	0,71	0,42	0,47	0,79	1,03	0,55
MAKSIMUM	1,87	0,97	1,00	1,27	1,93	0,54	1,06	0,73	0,72	0,99	1,44	0,98

Figure 7: Water Level Recording Location Points in 2020. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

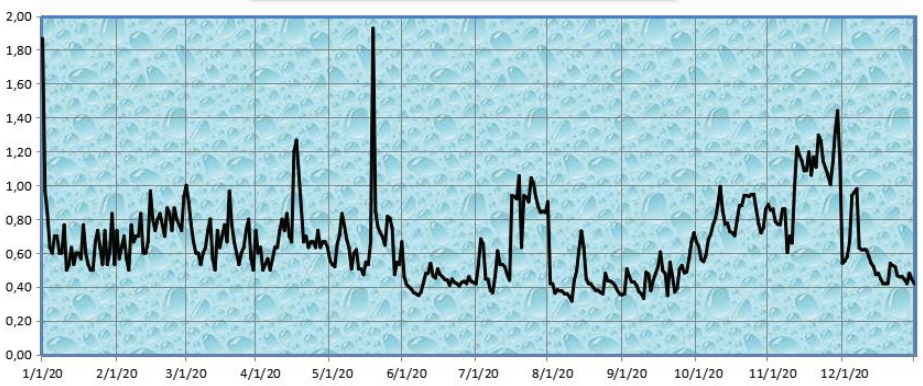

Figure 8: Angke Post Water Level. (Source: Data Book and Information for SDA&P of 2021 & BPS. Banten Province).

Related to this research, the author has searched for previous research to seek out subjects that has been researched related to the topic that the author raises, namely the implementation of programs to optimize flood and drought control in economic growth. This is done to obtain the novelty in research so that completely new findings are obtained, especially in the world of implementing programs to optimize flood and

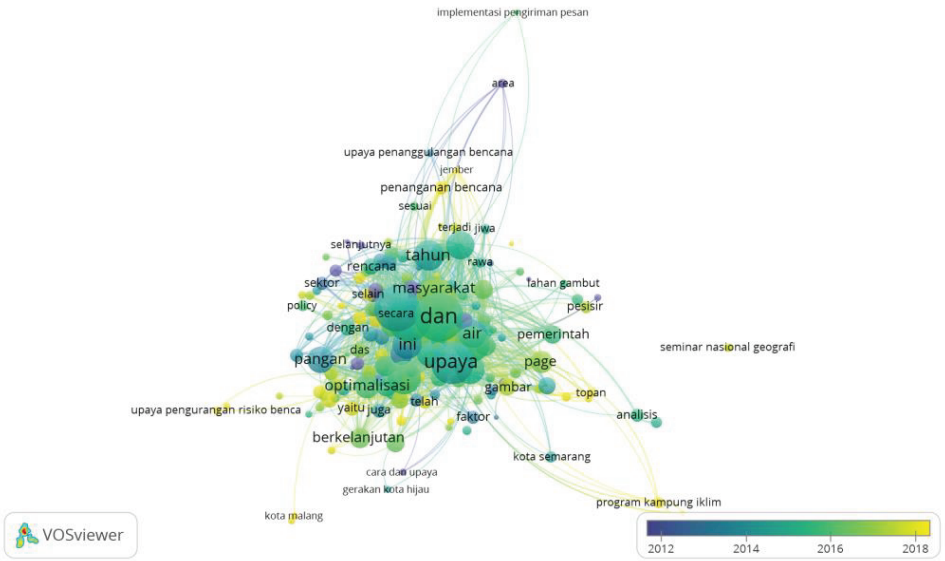

Figure 9: Network Visualization of Previous Research Results Published on Google Scholar During 2016-2021. (Source: Article Data from Google Scholar processed with Vosviewer, 2021).

drought control in economic growth. The following are the results of visualization of previous research data that were processed using VOSviewer.

The picture above is the result of data visualization based on search results regarding the implementation of the program to optimize flood and drought control in economic growth that the author did through VOSviewer. This dataset is sourced from Google Scholar which is limited for the last 10 years with search results of 881 articles. The results found, as shown above, in the last 10 years, articles related to the implementation of programs to optimize flood and drought control in economic growth are related to disaster risk reduction efforts, green city movement, disaster control efforts, and climate village programs. Thus, research that specifically explores the issue of implementing programs to optimize flood and drought control in economic growth is still rarely discussed (1–5).

2. Literature Review

Program implementation can be classified as a form of decision from the results of policy formulations carried out by the government as the real action. This implementation stage is certainly not done arbitrarily without the expected goals. Programs that have been implemented by the government, of course, require factors to be able to see the achievement of a policy or program implementation. Then, Cheema and Rondinelli focused more on program implementation to executing agents and program recipients

in implementing the program. These are certainly important factors that need to be considered by policy or program makers in implementing them in the community. In addition to the above opinion, Korten (Korten 1980, 495) suggests a model of program implementation suitability, that a program will be successful if there is a match between the three elements of program implementation, including:

1. Between beneficiaries and the program The critical fit to be achieved is between beneficiary needs and the particular resources, and services made available to the community as program outputs;

2. Between beneficiaries and the assisting organization The critical fit is between the means by which beneficiaries are able to define and communicate their needs and the processes by which the organization makes decisions.

3. Between the program and the organization The critical fit is between the task requirements of the program and the distinctive competence of the organization. The distinctive competence of the organization relates to the structures, routines, and norms which govern the organization's functioning and the technical and social capabilities it brings to bear in providing the program. (Korten 1980, 496)

The establishment of a program based on the demands and needs of the beneficiary group for the problems or phenomena that occur. The existence of the organization as a bureaucracy that has the power and responsibility in providing services directly will issue decisions based on existing competencies and careful planning. A program has a goal that is expected to be a solution to problems that arise. Therefore, there is a need for coordination within the government bureaucracy in taking a policy needed by the community to achieve certain goals. The following is a conformity chart according to Korten in knowing the success of a program.

Watershed management is basically aimed at realizing optimal conditions of vegetation, soil and water resources so that they can provide maximum and sustainable benefits for human welfare. In addition, watershed management is understood as a process of formulating and implementing activities or programs that manipulate the natural and human resources contained in the watershed to obtain production and service benefits without causing damage to water and soil resources, which in this case includes the identification of linkages between land use. , land and water, and the linkages between upstream and downstream areas of a watershed (6).

In describing the watershed management model, each watershed unit, its substance and strategy, as well as the forms of the watershed must be studied carefully. This needs

to be done because the shape of the watershed is a reflection of bio-physical conditions and is a manifestation of existing natural processes. The implication of this is to show that watershed management is a hydrological system and a production system, and this opens up conflicts of interest between institutions regarding the management of the components of the watershed system. The upstream watershed has an important role, especially as a place to provide water to flow downstream. Therefore, the upstream part of the watershed often experiences conflicts of interest in land use, especially for agricultural, tourism, mining, and settlement activities. Considering that the upstream watershed has limited capabilities, any misuse of utilization will have a negative impact on the downstream area. In principle, upstream watershed conservation efforts can be carried out by covering aspects related to water supply. Ecologically, it is related to the catchment ecosystem which is a series of natural processes of the hydrological cycle.

The problem of watershed management can be done through an assessment of the components of the watershed and the search for the relationship between the interrelated components, so that the management and control actions carried out are not only partial and sectoral, but have focused on the main causes of damage and consequences generated, and carried out in an integrated manner. One of the problems of watershed management in the regional context is the location of the upstream river which is usually located in a certain district and passes through several districts and the downstream area is in other districts. Therefore, the areas traversed must view the watershed as an integrated system, as well as being a shared responsibility. According to Asdak (6), in the biophysical linkage of the upstream-downstream area of a watershed, several things need to be considered, namely as follows: (1) Effective institutions should be able to reflect the interrelationships of the biophysical and socio-economic environment in which the institution operates (6). If management activities in the upstream watershed will have a real impact on the biophysical and/or socio-economic environment downstream of the same watershed, it is necessary to decentralize watershed management involving upstream and downstream parts as an integral part of planning and management. (2) Externalities, are impacts (positive/negative) of an activity/program and/or policy experienced/felt outside the area where the program/policy is implemented. These impacts are often not internalized in activity planning. It can be argued that negative externalities can interfere with the achievement of sustainable watershed management for: (a) people outside the activity area (spatial externalities), (b) people who live for a certain period of time after the activity ends (temporal externalities), and (c) various interests. economic sectors that are outside the location of activities (sectoral externalities). (3) Within the framework of the concept of “externalities”, natural

resource management can be said to be good if the overall costs and benefits arising from the existence of these management activities can be borne proportionally by the actors (government organizations, community groups or individuals) who carry out resource management activities. nature (DAS) and the actors who will benefit from these activities. The management of the upstream watershed is directed at the cultivation area (agriculture) because potentially the degradation process is more likely to occur in this area. For this reason, so that the process of maintaining land (land) resources will be guaranteed, every agricultural or cultivation area is provided with capability classes and land suitability classes. With the availability of this capability class and suitability class, land use that exceeds its capacity and does not match the type of use can be avoided.

The integrated watershed planning methodology has not paid attention to aspects that integrate various interests of development activities, for example between the interests of agricultural development, industrial interests, and the interests of environmental carrying capacity (ecological demands). The development of development in the fields of settlements, agriculture, plantations, industry, exploitation of natural resources in the form of mining, and forest exploitation causes a decrease in the hydrological condition of a watershed which causes the ability of the watershed to function as a water reservoir in the rainy season and then used to release water during the dry season. When rainwater falls in the rainy season, the water will immediately flow into surface runoff which often causes flooding and vice versa in the dry season the water flow becomes very small, even in some cases the river does not have water flow. The importance of the position of the watershed as an integrated management unit is a logical consequence to maintain the sustainable use of forest, land and water resources. Inaccurate planning can lead to watershed degradation resulting in bare land, critical soil/land and erosion on steep slopes. In the end, the degradation process can cause large floods in the rainy season, river discharge becomes very low in the dry season, the soil moisture around the forest decreases in the dry season so that it can cause forest fires, accelerated sedimentation in reservoirs and irrigation networks that cause forest fires. exist, as well as a decrease in water quality. In principle, an integrated watershed management policy is very important in order to reduce and deal with water resource problems both in terms of quality and quantity. This policy is therefore an integrated part of an environmental policy that is based on academic and technical data, various environmental conditions in several regions and economic and social developments as a whole where regional developments are. With the variety of conditions, the various and specific solutions are also. This diversity must be taken into account in planning

and decision-making to ensure that the protection and sustainable use of watersheds is within a framework.

2.1. Program for Optimizing Flood and Drought Control

This program as an effort to improve institutional performance, programs need to be designed to improve the system, conduct flood monitoring training, hydrological and climatological data processing, a comparative test of hydrological data from the Bandung Water Research and Development Center, surface water samples, river discharge measurements, rainfall recording, water balance calculations, and bathymetry training as well as river sedimentation training to facilitate the measurement of data in the field to provide accurate information to the public so that they can anticipate flood disasters and the community can anticipate drought management through rainfed so that the community's economy is not hampered and sustainability continues. Procedures for preparing program plans, analyzing hydrological and climatological data, managing hydrological facilities and infrastructure, measuring discharge, monitoring floods and droughts, monitoring rainfall, and evaluation reporting.

Requirements/equipment:

1. The coordinates of the flood monitoring location
2. Flood picket schedule
3. Monitoring is carried out using a water level measuring instrument
4. The water level is recorded based on the hour
5. Report preparation
6. Documentation of activities

Outputs:

1. Information on the flood picket schedule at the location point
2. Information on water level
3. Documentation report
4. Report on the water level on the information board (video) at the Cisadane dam

3. Method

This study uses a descriptive method with a qualitative approach as the author's effort to further explore relevant informants and the researcher requires to understand deeply the phenomena that the authors examine, especially regarding the process. Data collection techniques carried out consisted of literature studies and field research. The technique used to determine informants with the triangulation techniques. With this research method, it is presumed that the author can explore in depth the implementation of policies on this topic.

4. Results and Discussion

The author can analyze the problem based on the theory put forward by Korten, Korten's adjustment model states that several things require to be present to distinguish the success of a program. The first is the compatibility between the program and the beneficiaries. This correspondence on what is offered by the program with what is needed by the target group (beneficiaries). Second, adjustment between the program and the executive organization, that is, between the tasks required by the program and the capabilities of the organization's executors. Third, adjustment between the beneficiary groups and the organization's executors, namely fulfilling the requirements set by the organization to be able to obtain program outputs with what the target group can do.

The condition of the water resource network in the watershed area in Banten Province, especially in Cisadane, with currently considering the network age which is a quite old water resource facility and infrastructure, some of them are damaged both large and small scale. Certainly, this has an impact on the services to users, especially in this case farmers/communities who use water experience a shortage of water supply when needed. In addition, the existence of these sites as part of the watershed system has an important function, both as water reservoirs for flood control, water resource conservation (groundwater suppliers), local economic development, and recreation areas.

Related to flood prevention, the lake has a very important role as water storage areas (retarding basins) to reduce the amount of water runoff/water retention. Therefore, maintaining the quality of the area and depth of the lake as well as the flow of the river is an inseparable part of flood prevention activities.

The decline in the condition of the flow of rivers or lakes, reservoirs, swamps is inseparable from physical predicaments such as land conversion and non-physical ones such as natural disasters. Increased rainfall can damage the facilities and infrastructure that have been built and vice versa with reduced rainfall, the community also receives the impact of drought on river flows where the water demands of the community are very significant. Therefore, the government's role is important to provide information in flood and drought disaster control management systems so that the community can take advantage of this information to support the community's economic stability and can be properly maintained.

5. Conclusion

Based on the results of data reports in the field, it can be concluded that the necessity for water resources is very important for the community, including for clean water demands, especially by PDAM. Therefore, the implementation of services to the community in the water resources field, monitoring of floods and droughts as well as efforts to conserve water and water sources can be monitored and reported systematically through water resource management information services as support for the implementation of government programs for economic growth in farming communities in general.

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