The Role of Ascription of Responsibility on Pro Environmental Behavior in Jakarta Communities

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Abstract: The purpose of this research is to see the role of ascription of responsibility towards the behavior of the environment in society and how it is reviewed in Islam, using correlational associative research design, namely research conducted to find the relationship between one variable and another variable. The population is taken from the citizens of Jakarta with the characteristics of young men and women up to middle adulthood (20-65 years) with a sample of 80. Research sites in Jakarta, because based on IKLH data (2014) the environmental damage experienced by the city of Jakarta is already in vigilant research results indicate that the Ascription Of Responsibility correlates with pro-environmental behavior. Which is known r table = 0.2159 and pearson correlation is 0.307. And it can be concluded that the Ascription Of Responsibility is positively related to the Environmental Pro Behavior (GEBS) with a low degree of correlation. Jakarta people who have an Ascription Of Responsibility can have good pro-environment behavior, so that with the good pro-environment behavior that is owned by the community, it can help the Government in maintaining the sustainability and environmental cleanliness of the City of Jakarta.

1 INTRODUCTION

Compared to other regions in Indonesia, the Special Capital Region of Jakarta is an area that has the most complex environmental problems. Based on a research report from the study of the green open space (RTH) of DKI Jakarta Province, in 2000, the environmental quality of the city of Jakarta was in the third place in the world (after Mexico City and Bangkok) whose pollution level was quite high, both in terms of air, water and also land. Taken from (http://www.tribunnews.com/topic/banjir-di-jakarta).

In addition to air, water and soil pollution, in the city of Jakarta there are also problems with the temperature of the air starting to heat which is caused by the effects of glassy buildings which exacerbate environmental conditions. Based on the 2014 Environmental Quality Index (IKLH) report issued by the Indonesian Ministry of Environment, the environmental damage experienced by the city of Jakarta is already on the alert level. This is due to the shrinking of green open space, water pollution, air pollution from motorized vehicles and burning of forest or garbage, industrial or home industrial waste, and garbage accumulation (Dhewanthi, 2015).

Another phenomenon of environmental problems that often occurs in Jakarta is flooding. Floods in Jakarta can be said to occur every year because Jakarta is in the downstream area or Ciliwung River Basin area. Some areas in Jakarta are even lower than sea level. The head of the Jakarta National Disaster Management Agency (BNPB) said that there were a number of factors that caused the Jakarta area to be flooded. One of them is caused by changes in the annual rainfall cycle in Indonesia (Kompas, 2017). Reports in Kompas news (2017) explain that rainfall patterns before being affected by climate are 6 months of rain and 6 months of dry season, but now change to 4 months of rain and 8 months of dry season. Although 4 months are raining, the rain volume is equal to 6 months of rain. In addition to rainfall, flooding in Jakarta is also caused by several other factors, such as natural conditions, which include the geography, topography, and geometry of the location of river flows, tides and decreasing land surface as well as silting-silting, and human activity factors such as throwing away litter, etc. Taken from

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http://megapolitan.kompas.com/read/2017/02/22/15564111/faktor.penyebab.jakarta.banjir.aktif.warga.ikut.berperan

Environmental pollution of DKI Jakarta is characterized by high levels of air, water and marine water pollution, due to poor and correct waste and waste management. Based on research conducted by the Institute for Social, Environmental & Urban Studies (LS2LP) in 2013, environmental damage was marked by reduced water catchment areas, shrinking green open areas (RT), damage to blue open areas (rivers, situ, waterways, and coastal waters), exploitation of underground water with various negative impacts (land subsidence, seawater intrusion, etc.), coastal abrasion due to reduced mangrove forests on the north coast, and poor city drainage systems. Taken from (http://www.tribunnews.com/topic/banjir-di-jakarta).

Various environmental problems that threaten environmental sustainability include global warming, urban air pollution, lack of water, environmental noise, and loss of biodiversity. If this condition persists like this then Jakarta will continue to deteriorate in terms of environmental quality, and the people of Jakarta will feel the loss due to these things. Psychologically, someone who lives in a bad environment will more easily experience stress, emotional disturbances, and even can cause aggressive actions due to mental exhaustion due to poor environmental quality (Farisy, 2015; Kuo & Sullivan, 2001).

Environmental damage can be minimized by fostering concern for the environment that is realized by pro-environmental behavior. Pro-environmental behavior is a behavior that is carried out consciously and aims to minimize the negative impacts caused by one's activities on the environment (Kollmuss & Agyeman, 2002). Ramus and Killmer (2007) argue that pro-environmental behavior is part of prosocial behavior, because this behavior has benefits for others and the environment. Stern (2000) says that pro-environmental behavior can provide benefits for others and the environment. Pro-environment behavior is also a behavior that is consciously carried out to safeguard the environment and minimize the negative impacts caused by one's activities on the environment. For example, efforts to reuse used goods, prevent the occurrence of waste or garbage, energy conservation efforts, as well as the behavior of using transportation that tends to be free of air emissions (Gamal, 2009).

Several studies have examined the factors that influence pro-environment behavior by using various theoretical models that seek to explain and predict pro-environmental behavior in society. These theories attempt to understand environmental behavior through causal models. According to Stern (2000), there are four types of causal variables that influence pro-environment behavior, namely: 1. Attitudes (including norms, beliefs and values), 2. contextual, 3. personal capacity, 4. Habits and routines. individual.

Research conducted by Bronfman, et al (2015) also suggests several factors that can support pro-environment behavior, namely values, new ecological paradigm, a awareness of consequences, ascription of responsibility and personal norms. Meanwhile, Clayton & Myers, (2009) revealed that there are several factors that can change people's behavior towards pro-environment behavior. These factors are: 1. personal factors 2. situational factors. As for personal factors in the form of a sense of responsibility towards the environment and feelings / values that arise from within to protect the environment well, a sense of responsibility arises from personal values. Whereas situational factors in the form of regulations made by the city government prohibit and fine people who do things that can damage the environment and harm many people such as penalties given to people throwing garbage to the river or culverts. Another situational factor is cooperation between the community and the government in overcoming the environment, such as: problems of flooding, air pollution, garbage, etc. The existence of this collaboration makes the people in the surrounding environment follow the situation that exists to help protect the environment and not do things that can harm the environment and the people.

The explanation above explains the need for the responsibility of every community and government to protect the environment. These responsibilities are carried out by individual individuals and some are the responsibility of the government. Every individual has their own opinions, perceptions or assumptions about who should be responsible for protecting the environment. Opinions, perceptions or assumptions about who should be responsible for a matter are also called the term "ascription of responsibility". Stern (2000)

According to Stern (2000) ascription of responsibility is an opinion, perception or assumption about who should be responsible for something. In the context of Jakarta society, ascription of responsibility means the assumption of who should be responsible for environmental problems in Jakarta to avoid all disasters such as floods, water pollution, air pollution, etc.

In the previous research conducted by Rahab (2015), previous researchers wanted to examine the antecedents and consequences of personal norms in the context of pro-environmental behavior. Which is where researchers see the effect of 3 variables, namely the assumption of responsibility, subjective norms, and the ability to participate in the waste bank program. The results of the study indicate that the assumption of responsibility, subjective norms, and abilities has a significant effect on the process of activating personal norms. Which results show that waste bank customers are more likely to feel a personal obligation to act, if they believe in environmental sustainability is a shared responsibility, assume that others expect them to protect the environment, and believe that they have the ability to protect the environment. Furthermore, personal norms and abilities have a positive influence on community participation in the waste bank program. Taken from a paper (Testing the Activation Model of Personal Norms in a Social Marketing Perspective).

In this study, researchers want to know the opinion of the people of Jakarta about who should be responsible for protecting the environment in Jakarta, the community or the government that must be responsible and its role in pro-environment behavior. Research related to this matter is still rarely held in Indonesia before, therefore researchers are interested in knowing the role of ascription of responsibility for pro-environment behavior in the people of Jakarta.

2 LITERATURE REVIEW

2.1 Ascription of Responsibility

Ascription Of Responsibility is opinions, perceptions or assumptions about who should be responsible for something (Stern, 2000). In psychology, ascription of responsibility can be interpreted as the tendency of someone to exercise authority and responsibility in every dimension of life explicitly. The purpose of this concept is to measure a person's willingness to assume specific and broad responsibilities.

Ascription of Responsibility is someone's assumption towards other people / other parties who are more responsible for something that happens. AOR is a value that is in every person and often appears when the person is faced with something that requires assumptions related to responsibility. So that it can be concluded that the ascription of responsibility is the assumption of who is more authorized and responsible for a matter or assumption about who is more authorized and responsible in doing something. Because of the limited theory about ascription of responsibility and because the ascription of responsibility has the meaning of perception, the researcher links the ascription of responsibility with perception theory.
An expert named Robbins (2001: 88) reveals that Perception can be defined as the process by which individuals organize and interpret the impression of their senses in order to give meaning and assumptions to their environment.

In line with the definition above, an expert named Thoha (1998: 23), reveals that perception is essentially the cognitive process experienced by everyone in understanding information about their environment both through vision and hearing.

So from some definitions above, the researcher concludes that perception is someone's assumption and interpretation based on data obtained from the environment that is absorbed by the human senses as a result of taking the initiative from the communication process. From some of the above understandings, it can be concluded that the ascription of responsibility and perception have meanings that are not much different, which both contain the meaning of presumption. In this study, the assumption referred to here is the assumption about who is more authorized and responsible for something that happens.

2.2 Pro-environmental Behavior

Kollmuss and Agyeman in Stern (2000) define pro-environmental behavior as a behavior that is carried out consciously and aims to minimize the negative effects caused by one's activities on the environment. According to Kurisu (2015) the Pro-environmental Behavior (PEB) is often referred to as ecological behavior, environmentally friendly behavior or otherwise, such as micro-environmental behavior, environmental behavior, ecological behavior, environmentally responsible behavior, environment-friendly behavior, environmentally significant and behavior environmentally related behavior . Definition of Pro-environmental behavior or pro-environmental behavior is environmental conservation or cultivation of environmental awareness (Kurisu, 2015).

Pro-environmental behavior is reducing and minimizing behavior that leads to damage to natural resources at the local and global level. For example, pollution of waste in the soil (garbage and chemical

contamination), in the water (pollution of rivers and lake and sea water sources), in the air (gas emissions, noise and harmful radiation to natural processes, greenhouse effects and climate change, acid rain, holes in the ozone layer), or anything that is harmful to the welfare and health of living things. In general, when all behavior oriented towards the maintenance of natural resources is referred to as environmentally friendly behavior (Bechtel & Churchmandalam Dzakiyah, 2016). Pro-environment behavior is a concern, awareness, and understanding of the consequences that a person has to protect and protect his environment (Bronfman, et al, 2015).

Based on the explanation described above, the researchers concluded that pro-environmental behavior is reducing behavior that leads to damage or behavior of the culture of environmental awareness that understands the consequences of reducing environmental damage that is owned by an individual.

2.3 Dimensions of Pro Environmental Behavior

According to Kaiser (in Bronfman et al., 2015) there are six dimensions of pro environmental behavior or Environmental Behavior Subscale (EBS) that have been identified which consist of:

1. Power Conservation: behavior that focuses on the efficiency and savings of energy resources, such as saving household electricity.
2. Ecologically Aware Consumer behavior: behavior that focuses more on the selection of products that are environmentally friendly to consume, such as choosing food products from organic ingredients.
3. Biodiversity Protection: behavior that focuses on protecting biodiversity, such as picking up trash or cleaning up places outside the home as before
4. Water Conservation: behavior that focuses more on minimizing water use or saving water use.
5. Rational Automobile Use: behavior that focuses on selecting vehicles to reduce the impact of pollution and reduce fuel use, such as choosing to use public transportation for everyday use.
6. Ecological Waste Management: behavior that focuses on minimizing the use of goods that produce waste, such as the use of plastic.

The Dynamics of the Role of the Ascription of Responsibility for the Pro-Environmental Behavior
The community is sometimes filled with a sense of full dependence on the government in protecting the environment, in which the public believes that the government is more responsible for protecting the environment than the community. Even if the community is filled with a sense of full dependence on the government in safeguarding the environment, the community is also expected to not always depend on the government, but must have its own responsibility in safeguarding its environment if it increases its capacity as an individual or as a member of society (Sujanto, 1996: 173) The public should no longer be able to throw responsibility for what it receives or for what it does to the government or other people. Whatever happens to the environment, either because of the actions of the people themselves or because of the actions of others, who are responsible for the community itself.

Based on the explanation above, we can see the relationship between ascription of responsibility towards pro-environment behavior in Jakarta society and as in previous studies which prove that the assumption of responsibility to protect the environment, social expectations and the ability to protect the environment activates individual personal norms for participate in the waste bank program where the bank's waste program is included in the pro-environment behavior. Thus, researchers want to see the role of ascription of responsibility for pro-environment behavior in DKI Jakarta residents.

3 RESEARCH METHODOLOGY

3.1 Research Design

This study uses correlational associative research design, which is research conducted to find the relationship between one variable with another variable.

3.2 Research Question

Based on the background that has been explained, the researcher formulates the following problems:

Is there a role ascription of responsibility for pro-environment behavior in the people of Jakarta?

Population

The population is an area of generalization of objects that have the quality and characteristics that have been determined by the researcher to be studied and drawn conclusions (Sugiyono, 2013). The

population of this study is Jakarta residents with characteristics of young men and women up to middle adulthood (20-65 years). Researchers will take the population in Jakarta, because based on IKLH data (2014) the environmental damage experienced by the city of Jakarta is already in the alert level.

Sample

In this study, researchers took 80 samples of participants, with characteristics of young men and women up to middle-aged adults (20-65 years) living in the DKI Jakarta area.

Analysis Method

Normality Test

Before testing the hypothesis, normality is tested first. Test for normality is done using the Kolmogorov-Smirnov technique. The normality test in this study is whether the data is normally distributed or not. Data is normally distributed if data is significantly higher than 0.05 (Sugiyono, 2013).

Linearity Test

Linearity test is a variable test to see the independent variable and the dependent variable has a linear or straight line relationship (Sugiyono, 2013). Linear testing is the main requirement for regression testing, meaning that the regression test does not show a linear relationship, the regression test cannot be used. The linear test results are seen from the significant value of> 0.05 which means linear, whereas if the data has a value of <0.05 it means that it is not linear.

Correlation Test

Correlation test is used to determine the relationship between variables in the sample. If the data is normally distributed then use the Pearson Product Moment technique. Meanwhile, if the data is not normally distributed, then use Spearman's non-parametric technique and the results of the correlation test if a variable is said to be related if it has significance <0.05 (Sugiyono, 2013). In the correlation test assisted by SPSS for Windows 20.0. And if the significance value is higher than 0.05, then it can be seen from the Pearson correlation that must be higher than r table.

Hypothesis Test

In this study, hypothesis testing is done by simple regression test. Regression analysis is used to predict how far the value of the dependent variable changes when the independent value is manipulated or changed or raised down (Sugiyono, 2013).

Simple Regression Test

Simple regression testing is based on the functional or causal relationship of one independent variable with one dependent variable (Sugiyono, 2003). Simple regression testing is done once. Regression test was carried out between Ascriptiom of Responsibility variables on pro-environmental behavior. The researcher uses a simple regression test to determine whether there is a significant effect of the Ascriptiom of Responsibility variable on the pro-environment behavior variables. The equation is as follows:

$$\mathbf{Y = a + bX}$$

Information:

Y = Ascriptiom of Responsibility

X = Pro-environmental behavior

Research Result

In this chapter the researcher explains the results obtained from the study. The results of the study were obtained from questionnaire data processing using Microsoft Ecxel and SPSS programs.

1.1 General Overview of Respondents

The number of subjects in the study was 332. Subjects in this study were individuals who lived in Jakarta and had ages 21-65 years. The following is a description of the research subject's demographic data:

Table 1: Demographics in general

Demographic	**Sum**	Percentage
Age		
21-30 years	292	88%
31-40 years	19	5,7%
41-50 years	14	4,2%
51-60 years	5	1,5%
<60 years	2	0,6%
Gender		
Man	125	37,7%
Woman	207	62,3%
Residence		
Jakarta	270	81,3%
North Jakarta	9	2,7%
East Jakarta	13	3,9%
Central Jakarta	30	9%
South Jakarta	6	1,8%
west Jakarta	4	1,2%

In this study, most of the subjects were women with a percentage of 62.7%, while the highest age was aged 21 years to 30 years with a percentage of 88% and most of them lived in Jakarta without explaining which part of Jakarta was 81, 3%.

4 RESEARCH DATA RESULTS

Normality test

Table 2: Correlations

		Ascription Of Responsibility	GEBS
Ascription Of Responsibility	Pearson Correlation	1	.307**
	Sig. (2-tailed)		.006
	N	80	80
GEBS	Pearson Correlation	.307**	1
	Sig. (2-tailed)	.006	
	N	80	80

**. Correlation is significant at the 0.01 level (2-tailed).

The normality test in this study was conducted to find out whether the data obtained was normally distributed or not. Data that is normally distributed if significant data> 0.05 (Sugiyono, 2013). The normality test is done using Kolmogorov-Smirnov technique with the help of SPSS 20.0 for Windows software.

Variable Normality

Table 3: Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		80
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	13.25968989
Most Extreme Differences	Absolute	.077
	Positive	.077
	Negative	-.049
Kolmogorov-Smirnov Z		.687
Asymp. Sig. (2-tailed)		.734

a. Test distribution is Normal.

Based on the results of the normality test in table 4.1 above, it is known that the significance value is 0.734> 0.05, so it can be concluded that the residual value is normally distributed.

Linearity Test

The next stage is the linearity test which is a variable test to see the independent variable and the dependent variable has a linear or straight line relationship (Sugiyono, 2013). In this study using the person product moment using SPSS Windows 20.0. The linear test results are seen from the significant value of> 0.05 which means linear, whereas if the data has a value of <0.05 it means that it is not linear. Here are the results of SPSS processing:

Table 4: Linearity test

ANOVA Table

			Sum of Squares	Df	Mean Square	F	Sig.
GEBS * Ascription Of Responsibility	Between Groups	(Combined)	4118.150	11	374.377	2.269	.020
		Linearity	1449.819	1	1449.819	8.786	.004
		Deviation from Linearity	2668.331	10	266.833	1.617	.120
	Within Groups		11221.400	68	165.021		
	Total		15339.550	79			

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.307[a]	.095	.083	13.34442

a. Predictors: (Constant), Ascription Of Responsibility

Based on the results of the linearity test in table 4.2, it is known that the value of sig. deviation from linearity is 0.120> 0.05, so it can be concluded that there is a linear relationship between Ascription Of Responsibility and Pro Environmental Behavior.

Because the significance value is above 0.05, the Pearson correlation must be compared with r table. If the Pearson correlation> r table = relates. And if the Pearson correlation <r table = is not related. Known r table = 0.2159 and Pearson correlation is 0.307. Then it can be said that the Pearson correlation> r table = relates. And it can be concluded that the Ascription Of Responsibility is positively related to the Environmental Pro Behavior (GEBS) with a low degree of correlation.

Regression Test

Researchers used a simple regression test to test the research hypothesis whether the Ascription of Responsibility significantly contributed to pro-environmental behavior in the Jakarta community. In addition, a regression test is used to determine the value of R-Square as a percentage of the variance of independent variables on pro-environment behavior. Here are the results of the calculation:

Table 5: Test of ascription of responsibility hypothesis of pro-environmental behavior

Entered / Removed Variables

Model	Variables Entered	Variables Removed	Method
1	Ascription Of Responsibility[a]	.	Enter

a. All requested variables entered.
b. Dependent Variable: GEBS

The table above describes the variables entered and the methods used. In this case the variable entered is the Ascription Of Responsibility variable as the Independent variable and the pro-environment behavior (GEBS) as the Dependent variable and the method used is the Enter method.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1449.819	1	1449.819	8.142	.006[a]
	Residual	13889.731	78	178.073		
	Total	15339.550	79			

a. Predictors: (Constant), Ascription Of Responsibility
b. Dependent Variable: GEBS

The table above explains the correlation value (R) that is equal to 0.307. And the output obtained by the coefficient of determination (R Square) of 0.095, which implies that the effect of the independent variable (Ascription Of Responsibility) on the dependent variable (pro-environmental behavior) is equal to 09.5%.

From the output it is known that the F value count = 8.142 with a significance level of 0.006> 0.05, then the regression model can be used to predict the variables of pro-environment behavior or in other words there is influence / relationship variable Ascription Of Responsibility (X) on behavior variables pro-environment (y) but the relationship is not very significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	56.059	15.411		3.638	.000
	Ascription Of Responsibility	1.820	.638	.307	2.853	.006

a. Dependent Variable: GEBS

The Constant value (a) is 56,059, while the Ascription of Responsibility (b / regression coefficient) is 1,820, so the regression can be written:

Y = a + bX
Y = 56,059 + 1,820

can be translated:

• The constant is 56,059, which means that the variable value of Performance is 56,059
• The regression coefficient X of 1.820 states that for each addition of 1% of the Ascription Of Responsibility value, the value of pro-environmental behavior increases by 1.820. The regression coefficient is positive, so it can be said that the direction of influence / relationship of variable X to Y is positive.

5 CONCLUSION

Based on the results of the analysis carried out by researchers it was found that the Ascription Of Responsibility correlates with pro-environment behavior. Which is known r table = 0.2159 and Pearson correlation is 0.307. Then it can be said that the Pearson correlation> r table = relates. And it can be concluded that the Ascription Of Responsibility is positively related to the Environmental Pro Behavior (GEBS) with a low degree of correlation.

Jakarta people who have an Ascription Of Responsibility can have good pro-environment behavior, so that with the good pro-environment behavior that is owned by the community, it can help the Government in maintaining the sustainability and environmental cleanliness of the City of Jakarta.

REFERENCES

Dunlap, R.E.; van Liere, K.D. (1978). *A proposed measuring instrument and preliminary results: The 'New Environmental Paradigm'*. J. Environ. Educ, 9, 10–19.

Fransson, N., & Garling, T. (1999). Environmental concern: Conceptual definitions, measurement methods, and research finding. *Journal of Environmental Psychology*, 19, 369-382.

Gamal, Y. (2009). *Faktor-faktor yag mempengaruhi perilaku pro-lingkungan pada masyarakat perkotaan (survey terhadap*

masyarakat kota Jakarta selatan sebagai peraih adipura). Depok: Universitas Indonesia.

Gifford, R.,& Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behavior. *Article Dapertement of Psychology*.

Hansla, Andre., Amelie, G., Asgeir, J., and Garling, T. (2008). *The relationships between awareness of consequences, environmental concern, and value orientations. Journal of Environmental Psychology* 28, 1–9.

Kaiser. Gary. E. (2004). *Direct stain of Micrococcus luteus*.

Patten, D. M. (2005). "*An Analysis of the Impact of Locus of Control on Internal Auditor Job Performance and Satisfaction*." Managerial Auditing Journal20 (9): 1016-1029.

Ramus C.A., & Killmer, A. (2007). Corporate greening through prosocial extra role behaviors. *Business Strategy and the Environment*, 16, 554-570.

Robbins, Stephen P. (2001). *Perilaku Organisasi*, Edisi 8. Prentice Hall, Jakarta.

Schwartz, S. H. (1992). Universal in the content and structure of values: *Theory and empirical test in 20 countries. Advances in experimental social psychology*, 25, 1-65.doi: 10.1016/S0065-2601(08)60281-6

Steg, L.; Vlek, C. (2009). Encouraging pro-environmental behavior : *An integrative review and research agenda. J. Environ. Psychol*. 29, 309–317.

Stern, P.C. (2000). *Toward a coherent theory of environmentally significant behavior*. J. Soc. Issues,56, 407– 424.

Stern, P.C.; Dietz, T.; Abel, T.D.; Guagnano, G.A.; Kalof, L. (1999). A value-belief-norm theory of supportfor social movements: The case of environmentalism. Hum. Ecol. 6, 81–98.

Sugiyono. (2011). *Metode penelitian kuntitatif kualitatif dan R&D*. Alfabeta

Texier, P. (2008). *Floods in Jakarta: when the extreme reveals daily structural constraints and mismanagement, Disaster Prevention and Management*, 17, Iss: 3, 358 – 372

http://eprints.undip.ac.id/29500/1/jurnal_skripsi.pdf

http://faktadki.com/2016/11/08/fenomena-banjir-di-dki-jakarta-tahun-2014-2016/

http://id.wikipedia.org/wiki/Banjir

http://megapolitan.kompas.com/read/2017/02/22/15564111/faktor.penyebab.jakarta.banjir.aktivitas.warga.ikut.berperan

http://www.tribunnews.com/topic/banjir-di-jakarta

http://ejournal.unisba.ac.id/index.php/mimbar/article/viewFile/1306/pdf

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