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THE CONCEPT OF ENVIRONMENTAL CONSERVATION IN THE JAVANESE COMMUNITY IN THE 19TH CENTURY

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Abstract

Environmental conservation in the Javanese-Indonesian community in the 19th century can be understood clearly from the ancient manuscript Serat Centhini. This manuscript was written during the reign of the Surakarta King, Sunan Pakubuwana V (1757 – 1881 AD). The original manuscript, written in Javanese script, is already damaged so this research instead uses a copy of the manuscript printed in Latin script and consisting of 12 volumes, published by Yayasan Centhini in Yogyakarta between 1988 and 1992. Following a careful process of reading, classification, and interpretation, it was found that (1) Serat Centhini contains two categories of conservation, namely natural conservation and social conservation. (2) There is more description about social conservation than natural conservation. Javanese cosmology views environmental conservation as a kind of union between man and God (manunggaling kawula lan Gusti) which is the pinnacle of the life philosophy of the Javanese. (3) Serat Centhini is an encyclopaedia of Javanese culture which contains information various fields of traditional Javanese knowledge that are still relevant to the modern life of today.

Keywords: Ancient manuscript;, Serat Centhini; Suluk Tambangraras; Conservation; Java; Environment

Introduction

Java is an area of the Indonesian archipelago with a written tradition that dates back thousands of years and has produced a large number of manuscripts [1]. The Javanese literature that can still be found today in a number of libraries belonging to the traditional Javanese kingdoms is only a small part of the numerous works written by Javanese writers over the centuries that spanned the Hindu-Buddhist era and the pre-Islamic era, right up to the 19th century [2]. In other words, this ancient written heritage is a window which connects knowledge from the past with that of the present [3].

The most complete and best known of all the ancient manuscripts from the 19th century found on the Island of Java is Serat Centhini, which was completed around 1814 AD, during the reign of Sunan Pakubuwana IV [4]. Some experts say that the source of the Serat Centhini story was a book written during the reign of Sinuwun Pakubuwana III from the Surakarta kingdom. This book was also extremely popular amongst Javanese society at the time because it contained various forms of Javanese knowledge and wisdom that were arranged in the form of literature [5]. Experts refer to this ancient book as Suluk Tambangraras, and it is considered to be the greatest work of Javanese literature, written in the form of poetic verse (*tembang*) which is grouped according to the different types of song.

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Suluk Tambangraras is a book that contains various kinds of worldly and spiritual knowledge of the Javanese community at that time [6]. It was compiled by three great literary scholars from Surakarta, Raden Ngabehi Ranggasutrasna, Raden Ngabehi Yasadipura II, and Raden Ngabehi Sastradipura [7]. Prior to carrying out this task, all three writers were sent to Saudi Arabia to study. Pengeran Adipati Anom wrote volumes 5-10 and volumes 1-4 were written together by the three literary scholars of the royal court mentioned above. The overall content of the book is very diverse, containing a wide range of information related to the social sciences, the arts, Javanese-Islamic spiritualism, culture, the environment, flora, fauna, and economy.

One of the more prominent topics that is of interest to be studied in more detail is the forms of environmental conservation that existed in the Javanese community at that time. These forms of environmental conservation are quite unique because they form a single entity with the conservation of life [8]. In essence, a sustainable natural environment is united with the social and cultural environment of the community [9]. This is why the image of Javanese culture is known throughout the world, because of its unique and diverse cultural strategies [10]. It is hoped that this research about environmental conservation will contribute to the conservation efforts being made by the government, and by other institutions, organizations, and environmental groups, as well as by individuals.

The explanation about biodiversity in Serat Centhini describes the existence of a variety of living organisms that inhabit the biosphere. This includes millions of plants, animals, and microorganisms, and the ecosystems they have created to become living entities [11]. The diversity of these living creatures is due to the differences in colour, size, shape, number, texture, appearance, and other characteristics. In addition, the diversity of all these living creatures can be seen because of the similarity in some of their features. In addition to serving as a form of conservation, this research aims to describe the strategies for environmental conservation in the Javanese community in the 19th century.

Research Method

The form of research deemed suitable and able to provide a comprehensive picture is qualitative research [12-14]. This decision was made based on the characteristics of the research topic, data sources, and research data [15]. The research was carried out in the UNS Museum and the Javanology Institute Library at UNS, both of which are located at Jalan Ir. Sutami 36 A Surakarta. The data source for the research was the 12 volumes of Serat Centhini published by Yayasan Centhini Yogyakarta with different printing houses. Centhini Volume 1 was printed in 1982 by CV Batu Hitam Offset, Volumes 2 and 3 by Percetakan Surya Gading Yogyakarta (1986), Volumes 4 and 5 by PT. KR Yogyakarta (1988), Volumes 6 and 7 by PT. Hidayat Yogyakarta (1989), Volumes 8, 9, 10, 11, and 12 by Balai Pustaka in 1990 and 1991 [16-27]. The research data was collected using the technique of content analysis, in which the contents of Serat Centhini were analyzed by identifying the characteristics of each item of information and applying systematic coding to each section in an objective, systematic, and general manner (using theoretical references).

This research uses the strategy of a single focused case study [28] because it is directed towards only a single characteristic of the problem, which is the concept and form of environmental management in Serat Centhini. The data analysis was performed using an interactive method involving the following three components: (i) data reduction, to separate important data from less important data in accordance with the research problem by reading the manuscript meticulously and carefully; (ii) data presentation based on the characteristics of the data and the questions addressed in the study; (iii) verification as a way of drawing a conclusion [29]. The final step was to formulate a conclusion.

Literature Review

Socio-historical conditions of Serat Centini

The composition of Serat Centini or Kidung Tembangraras was completed in the reign of PB V. This was during the era of the renaissance of modern Javanese letters which covered the period from 1757 – 1881 AD. After the end of the Kartasura Kingdom (1680–1744), there was a split which divided the kingdom into three parts: the kingdoms of Surakarta, Yogyakarta, and Mangkunegaran. The power of the kingdoms was under the control of the Dutch which meant that the kingdoms concentrated only on economic, literary, and art and cultural matters [30]. The kingdoms opposed Dutch domination using symbolic politics led by the literary scholars of the royal kingdoms.

In the 19th century, Javanese literature experienced a rapid development in the Surakarta kingdom [31] with the emergence of the court scholar Raden Ngabei Ranggawarsita. Drewes considers this era (1757 – 1873) to be the renaissance of modern Javanese letters. A large number of literary works were written during this time, one of the most famous of which was Serat Centhini [32]. In total Serat Centhini consists of 722 cantos, 31,837 stanzas of poetry, and 3,467 pages of text, divided into 12 volumes. It is the longest ancient manuscript of all time written by anyone in the world.

The reign of Susuhunan Pakubuwana V in Surakarta (1820-1823) witnessed a surge in the writing and copying of Javanese manuscripts. Fantastically, more than 121 manuscripts were produced by Yayasan Tepas Kapujanggan. The same situation also occurred in the Sultanate of Yogyakarta. Hundreds of ancient Javanese manuscripts were produced and became a part of the collection of the Kawedanan Ageng Punakawan "Widya Budaya" Court Library. This collection of manuscripts continued to grow in both numbers and genres [5]. One of the most famous collections is Serat Centhini, which is one of the main collections of the Reksa Pustaka Library in the Mangkunegaran Palace in Surakarta, with catalogue number CA. Na. 217 b.



Fig. 1. Serat Centhini Latin, Personal Photo, September, 2018.

In the 1980s, Yayasan Centhini in Yogyakarta attempted to transliterate Serat Centhini and print it as 12 separate volumes. However, the foundation encountered problems with funding. Eventually, the manuscript was duplicated by a number of different printing houses. In 1990, Balai Pustaka Jakarta and Yogyakarta helped with the printing of Serat Centhini from volume 8 to 12. The twelve printed volumes of the Centhini manuscript are utilized as the primary data source for this research.

Concept of the Living Environment

Conservation is the preservation or protection and careful management of the environment and its natural resources [33]. In reality, the understanding of conservation has

developed to mean a form of protection and long-term management of the social environment and of natural resources. Conservation is based on the belief that the social environment and natural habitat of an area can be managed for the sustainability of a better life for humankind. According to Law no. 4 (1982), the conservation of natural resources is the management of natural resources which guarantees their wise and proper utilization. In the case of renewable resources, conservation must have the ability to guarantee the continuity of their supply, quality, and diversity. Conservation of the social environment is the management of social resources which guarantees the availability of social resources for improving the quality of their value, endurance, ability and development.

The purpose of environmental management is to achieve harmony in the relationship between man and the living environment [34] as a goal for building the Indonesian people as complete human beings, human beings who are embodied as environmental developers; to implement environmentally-minded development for the sake of current and future generations; to protect the country from the effect of activities outside the country's territory which cause environmental damage and pollution; to achieve harmony, accord, and balance between man and the environment, and create Indonesian people who are environmentally-minded in their attitudes and actions; to guarantee the interests of the current generation and generations to come; to achieve sustainability in the function of the living environment; to control the wise utilization of natural resources, and to protect the territory of the Indonesian Republic from endeavours and/or activities outside the country which cause pollution and/or damage to the living environment.

Results and Discussion

Conservation of the Natural Environment

Based on the analysis of data, a number of results or findings were obtained: (i) it is not possible to deduce the meaning directly because it is encased in a literary story and figurative language; (ii) the data display distinguishes several different types of conservation, forms of conservation, volumes (data sources), excerpts, and pages; (iii) there are 6 types of conservation based on their own special characteristics which are found in each section of the story in Serat Centhini; (iv) the 6 types of conservation can be divided further into 14 forms of conservation, most of which require a sharpness of interpretation. The reason for this is that they are all found in the story of Sheikh Amongraga's journey around the Island of Java.

A summary of the types, forms, manuscript sources, and manuscript pages are presented in the table below.

Table 1. Forms of Environmental Conservation

No.	Type of Conservation	Form of Conservation	Centhini (Volume)	Page
1	Water environment	Look after water	1	143-144
		Make wells	3	306
2	Forest environment	Protect the forest.	3	209
		Method for cutting down teak trees		
3	Agricultural/garden	Agricultural methods	7	201-215
	environment	Plant banana trees	9	212-214
		earthquakes Work in the rice-fields	1	142-152;
		_	7	203,207, 214-215
4	Sky environment	Look after the sky	5	71-78
	-	The nature of comets	2	127-136
		The Pleiades and Orion	8	39-40
5	Animal environment	Take care of animals	2	33-35
		Take care of horses	2	35-38
6	Pranatamangsa	Pranatamangsa	1	182-190
	ū	Nature of time	2	33-34;
			3	41-50

Water is the most important dimension in the life of the Javanese community, as in any other community. The representation of this important position of water is evident in the symbols and norms that appear in the community. The names of people, events, and places in the Centhini story reflect the imagination and conditions of society at that time. The mythical symbols that appear in the story refer to the common norms upheld in the imaginary community created by the writer. Serat Centhini portrays the situation of a community that still adheres closely to traditional culture. This is clear from the linguistic expressions, behaviour, and storyline. An example of how to take care of water can be found in the part of the story which relates the procedure for making a well.

Pêrlune ngupaya dina, supaya wêtuning warih, bisa agung drês êtuknya, dene prênahe trêpneki, watêg myang angsar milih, ingkang prayoga puniku, etungan aria pan, saka wuku kang lumaris, amiliha Wuku Landêp nuju dina. (C-III/P.248-Sinom/b.14/h.306)

Translation:

The purpose of choosing a (good) day, is so that the water comes out (from its source), so that the water can come gushing out from its source, when related to the appropriate place, the characteristic and way of choosing, what is good is, depending on the calculation of days, from the applicable astrology, choose *Wuku Landhep* on the day for making it.

Note: C-III = Centhini volume 3, P. = pupuh (canto), b. = bait (stanza), h.= halaman (page), and / = limit.

The same can also be seen in the description of the way for taking care of the forest and trees. C-III/P.224-Pangkur/b5-9/h.209-210 explains several requirements for maintaining the sustainability of the forest, as follows:

- (i) not cutting down trees at will;
- (ii) knowing how to plant trees so that they grow well;
- (iii) knowing how to chop down trees without damaging other trees;
- (iv) being aware of the purpose of chopping down trees.

The majority of the Javanese community earn a living from farming and planting. Looking after rice-fields/plantations, rice and other crops, attending to and harvesting crops, and the time after the harvest are all attended to with great care. The Javanese look after the rice-fields/plantations in ways that are both visible and also invisible.

Ingideri neng galengan, watese sawah andika, den-kongsi atepung-gelang, saben pojoking galengan, landheyan tumbalan (walang) kapa, pinantheng keblat sakawan, niki japane apalna, ama tulak balak-balak. (C-VII/P.395-Gurisa/b.7/h.203)

Translation:

Circling the embankments separating the rice-fields/plantations, the boundaries of your rice-fields, going full circle, each corner of the embankments, giving a (grasshopper) sacrifice to the rice-fields, in all four directions, here is the mantra to memorize, a mantra to ward off pests that carry disease.

The traditional Javanese community knows quite a lot about astrology. Stars are considered a symbol of life for the Javanese people. The success of a person can be recognized by the stars that surrounded him. An eclipse of the sun and the moon are viewed as myths and symbols depicting events that a person will face in his life. In addition, Javanese culture has a special kind of knowledge for calculating the seasons (an agricultural calendar), known as *pranatamangsa*.

Sang wiku ngandika rum. wêwatêke mangsa kanggo mayu, awit Kasa tumêka Sadhanireki. dhewe-dhewe watêkipun piyarsakna sun cariyos. (C-I/P.50/Gambuh/b 23/h.169) Translation:

Wiku speaks slowly, about the characteristics of the season, from Kasa to Sadha, their different traits and characters, listen to all that I say.

Social Conservation

Compared with environmental conservation, social conservation is much more prominent in Serat Centhini. An examination of the data shows: (i) there are 8 types of social conservation, concerning health, harmony and social systems, religion, language/literature, philosophy, technology, works of art, and traditional ceremonies; (ii) There are 42 forms of social conservation found in these 8 types.

Table 2. Forms of Social Conservation

No	Type of Conservation	Form of Conservation	Centhini Volume	Page
1	Health	Taking care of the human	1	145
		psyche	3	
		Taking care of the foetus, baby,		71-77
		child		
2	Harmony/Social Systems	Choosing a wife	3	54-55
		Women and romance	3	33-70
		Marriage	2	50-58
		Life teachings	3	14-21,
		Communal ritual meal	4	23-24
3	Religion	Rules for religion of the deities	1	215-216
		Rules for Sambo religion	1	216-218
		Rules for Brama religion	1	219-227
		Rules for Wisnu religion	1	227-230
		Prophetic religion	1	230-245
		Characteristics of Allah	7	261-265
		Meaning of Islam	8	266-267
		Praying and prophets	9	274, 52-62,
4	Language/Literature	Character of a name	12	49-50
		Arabic script	3	22-25
		Shaman	3	78-80
		Name of house, mosque, puppet	3	208-268
		Women and romance		
			3	55-70
5	Philosophy	Life cycle	3	144-145
	• •	Teachings of life and death	1	39-42
		Knowledge of desires		
		Sareat, tarekat, makrifat	5	79-80
			5	133-137
6	Technology	Taking care of the home	2	119-122, 145,
		Traditional dagger and spear		79-89
			2	
7	Works of Art	Tambourines	4	89-120
		Puppets	2	193-201
		Dance	2	201-202
8	Traditional Ceremonies	Tradition of travelling	1	148
		Tradition of seven month	1	149
		pregnancy ceremony	1	146
		Tradition of debts and	2	125-127
		receivables	2	148
		Moving house	2	149-153, 154-
		Renovating a house	2	160; 254-259;
		Calculating the day of a	6	1-5;
		celebration	6	35-40
		Offerings		
		Ritual meal		
		Javanese bride		

The Javanese community has a strong concern for living together 'socially/collectively as a community' (*bebrayan*) as one of the ways for taking care of the social environment. One of the traditions practiced by the agrarian community described in Serat Centhini is to follow

advice about the time for planting crops in order to ensure the best results. This has an impact on the prosperity of the community. Below is an excerpt explaining this practice.

Nandur pala-brungkah tulus becik. Soma Manis rahayu nandura, pala-bungkrah dadi wohe. Anggara Paing iku, barangkarya datan prayogi, turunning taragnyana, tuju miwah teluh, ngadhang aywa lunga-lunga. Buda Epon rahayu sabarang kardi. Respati Wage bagya. (C-1/P. 43-Dhandhanggula/b.35/h. 144)

Translation:

The best time for planting tubers (is) Monday *Legi*, the tubers will grow well, on Tuesday *Paing*, all the work will be bad, accompanied by pests, disaster and sorrow, do not go out, Wednesday *Pon* is good for all matters, Thursday *Wage* is a day of happiness.

Taking care of the atmosphere of the environment is described as being extremely important. It starts with the first sign of human growth, family, community, and country. Human growth begins with the coming together of the seed of a man and woman. Every day, week, and month the growth of the foetus in the mother's womb is a very important time for the formation of human character.

Lan ana pralambang malih, yen priya lawan wanita, ênggonne sarêsmi rêke. pamudharing risang prasa, dhaup asasarêngan, Sang Hyang Kamajaya kumpul, kaparêng dening Pangeran. (C-3/P.191-Asmaradana/b. 34/h. 71)

Translation:

And there is another sign, if a man meets a woman and their bodies are joined together, the release of pleasure, coming together, as though imbued by Sang Hyang Kamajaya, and getting permission from God.

Maintaining harmony in the Javanese community is described as beginning with the family as the smallest unit of society. The sequence is as follows: the family environment becomes the neighbourhood environment, the community environment, the nation's environment, and the living environment, for which the following aspects are very important:

- a. When choosing a spouse, 3 conditions need to be met: *bobot* (coming from a good family), *bềbềt* (having sufficient wealth, able to guarantee a good life), and *bibit* (being knowledgeable, religious, and influential) (C-3/h.54-55.);
- b. In maintaining a marriage, it is essential to always ask for God's blessings. Everything that happens is in accordance with God's will (C-3/h.56-70; C-7/h.88);
- c. Living properly in accordance with life teachings, as it is in the spirit and with wisdom and prestige like the character of a shadow pupper play (C-3/h.56-70; C-7/h.108);
- d. A complete *seldengan sesaji* ceremony should be performed to ensure safety in this world and the next (C-3/h.56-70; C-7/h.112).

Regarding religious procedures, Serat Centhini describes the different religions that came to the Island of Java. It mentions Hindu, Buddhist, Islamic, and Christian influences, all of which have had an effect on the life of the Javanese community. All religions teach people to love the environment and not to damage the universe ("..... agawe memalaning jagad") (C-5/h.22; C-8/h.98; C-11/h.144). Taking care of the home is important because a clean environment can be seen from people's homes. The arts passed down from the ancestors of the Javanese people are also a form of social capital of which they should be proud (C-2/h.89). This art heritage includes the art of tambourine playing, the art of shadow puppet theatre (wayang), and the art of dance (C-2/h. 199-202; C-4/h. 99-120).

Social conservation is closely related to cultural traditions that are well looked after (see Lombart, 1996). Serat Centhini describes numerous cultural traditions, including the tradition of *petangan* (calculating dates, days, directions, areas, periods of time, places, and events) (C-1/h.148-149; C-2/h.125-259), the tradition of *selamatan* (communal ritual meals) (C-6/h. 1, 2, 4, 5) and celebrations (C-2/h.149-153), which provide the basic colour for the spiritual life of the Javanese people in terms of their connection with the Creator. God and life as a community are positioned along a single connecting line. This means that damaging the social environment

automatically means damaging the intrinsic connection between man and God. The types of conservation of traditional ceremonies also include the tradition of debts and receivables, the rights and obligations of debt players, and the way to build and renovate a house.

Discussion

Serat Centhini conveys the meaning of the elaboration and exemption of various views, understandings, and assumptions about the word "conservation". Conservation has a much broader meaning than simply the wise use of natural resources. In this ancient book, environmental conservation is understood more broadly as the utilization of all natural and or social resources for human life, both individually and collectively, while continuing to prioritize divine teachings as the main source of life. The purpose of conservation can be achieved by not creating a distance between the natural environment and the social environment, with man as the subject and the main part of life, and divine values as the foundation of all values. This means that environmental conservation has three basic foundations:

- a. The foundation of the Godhead, in that the process of practising conservation must continue to be founded on divine values which always teach people not to be extravagant, always to be thankful, and to 'beautify the beauty of nature' (*memayu hayuning negara*).
- b. The foundation of Universality, in that endeavours to conserve the living and social environment are joint efforts involving all elements of life on earth to prevent the world from destruction.
- C. The foundation of Civilization, in that environmental conservation efforts should all be directed towards improving the civilization of human beings and all God's creatures in the world for ever.

Up to the present time, the process of implementing these conservation efforts – in both the social and natural environment – continues to encounter a number of obstacles: (i) Conceptually, conservation efforts always come up against the life needs of human beings in large numbers and for long periods of time; (ii) conservation is always viewed as an attempt to manage natural resources unilaterally without sufficiently involving the social life of the community.

Serat Centhini answers these problems by allocating a more detailed portion to social conservation. Although in terms of quantity, there is a difference between the two forms of conservation – 16:42 to the social environment – this does not mean that the value of the teachings is of a higher quality. The reason for this is that a number of sources state that historically, the composition of Centhini began with a journey around the region of East Java. The would-be writers encountered various forms of temples, shrines, mosques, and social groups with various different ethnic characteristics. This socio-empirical wealth appears to have had a strong influence on the contents of this book.

Based on the explanation above, according to Serat Centhini, environmental conservation is a complex entity with a number of indicators:

- a. Serat Centhini describes two categories of conservation, natural conservation and social conservation. This reinforces the fact that Serat Centhini is the most comprehensive encyclopaedia of Javanese culture from the past.
- b. In terms of quantity, the number of forms of social conservation is greater than the number of types of natural conservation. A large portion of the writing about social conservation is devoted to traditional ceremonies and culture. This is an indication of the spirit and diversity of the Javanese culture.
- c. Success in taking care of the social environment must begin with knowledge and affirmation of the self and the family as the smallest unit of society.

d. Environmental and social conservation efforts must mutually complement one another. Man, as the main subject who inhabits the world should naturally be given special attention because anthropologically, human beings are the source of both damage and upkeep of the universe.

Conclusions

The following conclusions are drawn from the analysis of the paper:

- a. Serat Centhini or Kidung Tembangraras is an ancient Javanese literary work (19th century) that is still actual to study, especially about the concepts of natural and social environmental conservation. In this manuscript, the contents of the story are full of Javanese symbols and idioms. The main difficulty in this study lies precisely in the mastery of the old Javanese language which is currently not used.
- b. The concept of environment in Serat Centhini is explained as the unity of all living things (micro and macro cosmos) and the total environment. Humans are part of the nature that has the obligation to maintaining and care for their environment as a excistence of devotion to God.
- c. The contents of Serat Centhini are environmental laws and provisions that can be studied further by scientists and world environmental activists as new references for the preservation of the natural and social environment based on Javanese cultural wisdom.

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