



Local Wisdom of Balinese People Managing Water in *Tirta* (Holy Water) Concept

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ABSTRACT

Water is a source of life on the surface of the earth because it becomes a necessity for every organism. The need for water continues to increase, but the availability of clean water continues to decrease. Efforts to preserve important water sources are made to meet current and future water needs. Hindus in Bali have long practiced water resources conservation and managing water quality through various forms of local wisdom. Local wisdom is passed down through generations of routine activities in daily life. Water as a gift because it gives life is placed as a holy one which is then referred to as holy water or *tirta*. The use of *tirta* in various ceremonial activities causes Hinduism in Bali to be often identified with *tirta* religion. For Balinese people, water is a symbol of Vishnu which is a manifestation of God as the preserver of world life. Positioning water as a sacred thing has the meaning of obligation to maintain the quality and quantity of water to be maintained. Positioning the water source as a sacred area is also a form of effort to protect the springs to avoid pollution. The ceremony of *mendak tirta* and *mendak toya* became a form of local wisdom on the procedures of water use and efficient use of water. The concept of *nyegara-Gunung* (sea-mountain) is one of the proofs that Balinese Hindus commit to maintaining the hydrological cycle, so that life is maintained.

1. INTRODUCTION

1.1. Research Background

Water (H₂O) becomes a compound and available resources are abundant on the earth's surface, covering more than 70 percent of the Planet. Water is one of the constituents of the human body whose composition is about 55% to 78% [1]. Water makes up more than two-thirds of the human body; The human brain is made up of 95 percent water, the blood is 82 percent water, and the lungs are 90 percent water. Water is a vital component of every organism's life in the world, especially humans [2]. The history of human civilization and culture places water as a resource for various purposes, ranging from profane to non-profane activities [3]. As a resource, water also plays an important role in the world economy, as it serves as a solvent for a wide range of chemicals, coolers, and transportation in the industry [1].

The need for clean water continues to increase, while availability is reduced. As a result of several studies, the need for clean water, especially in disaster conditions reached 15-20 liters/person/day [4]. Various efforts have been made to meet the needs for clean water [6]. Pollution causes the potential of clean water to continue to decrease and has an impact on the decline of public health [6]. The dominant decrease in quality and quantity

of clean water occurred in areas with high population density [7]. Water demand is predicted to continue to increase in some developing regions by more than 50% by 2030 [1].

Balinese people have a variety of local wisdom in managing water and water sources so that their sustainability is maintained. Local wisdom can be found in the form of ceremonies and oral messages. But it is quite rare to scientifically review the meaning in terms of environmental aspects of the ceremony and oral messages aimed at maintaining the sustainability of the water. Scientific reviews are important for future generations' knowledge in maintaining existing local wisdom and preserving the environment.

1.2. Literature Review

Increased human activity and industrialization have caused various physical, chemical, and biological pollutants to enter water bodies and affect human life [8]. The quantity of water and its sustainability is expected to be worse in the future due to depleted resources, mismanagement, and poor governance. Groundwater is thinning globally due to rising population demand and the growth of major cities, and rising pollution threatens its quality. Predicted by 2025, two-thirds of the world's population will live in water-deprived countries [9].

Water has an important function for life so it should be treated properly, not soiled with organic and inorganic impurities or with harsh words [10]. Water in human civilization also has a function of spirituality, where water in religious activities has the meaning of cleansing, purification, and symbol of the source of life. Religion and the flow of belief in the world in every process of general rituals using water or water elements [3].

The Hindu view places water as the first and foremost gift so that it gets a special place and respect in the life of Hindus in Bali [10]. In addition to meaning fertility, purification, immortality, cycle, welfare, and preservation, water use in Bali is also a medium of treatment known as *usada we* (treatment that uses water facilities). The water used is taken from the holy place, in the ceremony, given prayer, so that it will have a positive impact and have the power to cure various diseases [10]. Traditional Balinese society puts water as something sacred because in every religious ceremony the existence of water always accompanies a major component that must exist [11]. Water is believed to be a form of Vishnu which is a manifestation of God almighty who is considered as the guardian of the life of the world. His wife is Dewi Sri, who in everyday life is analogous to rice so that rice cannot be separated by water [10].

1.3. Research Objective

This study aimed to scientifically review the local wisdom of Balinese people managing water in *tirta* (holy water) concept.

2. MATERIALS AND METHODS

The method used in this research is observation and literature study. Observation through a field visit to see firsthand the phenomenon that occurred. Library studies are conducted to obtain scientific problem studies through books and scientific journals. Observation is a method or method used to collect information or data done by systematic observation and recording of objects that become observations [12]. Observational research can obtain unique reliability and valid answers to some problems [13].

The use of library review methods in this research is important because library reviews are the foundation for all types of research [14]. A review of a library can be a simple summary of the source, but it usually has an organizational pattern and combines both summary and synthesis [15]. Library reviews can be the basis for knowledge development, create guidelines for policies and practices, provide evidence of effects, and, if done well, can spawn new ideas and directions for specific fields [14].

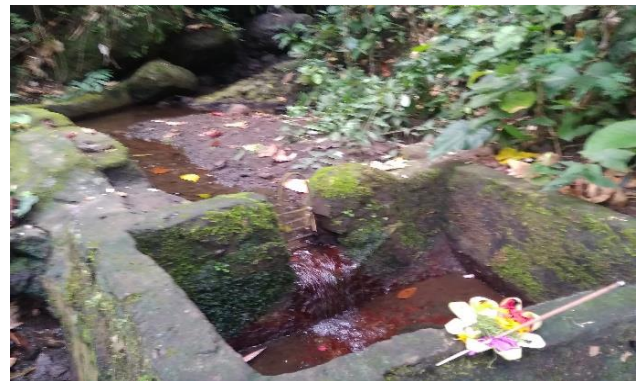
The research data was collected from August-November 2020, then analyzed descriptively. Use a descriptive analysis to describe the data or information collected without the aim of making general conclusions. The goal is to turn raw data denser and concise so it's easy to understand.

3. RESULT AND DISCUSSION

Balinese people place water as something important for the support of life sustainability. Various strategies are carried out through generations to maintain water sustainability, ranging from water sources to downstream that boils down to the sea. One way to do this is to place water as something that is purified or often referred to as holy water or *tirta*. According to Ref. [16] and

Ref. [17], the placement of water is something sacred because water becomes a symbol of life. After all, it has a double function. Water in addition to the important importance of the human body and become a daily necessity, also has a function in religious activities.

Maintaining the source of water is done by Hindus in Bali by placing or referring to the source of the water as a source of *tirta*. The source of *tirta* will be maintained together by the people by building *pelinggih* (place of worship). Ref. [9] revealed that Hindus used to preserve and maintain water sources through local wisdom by creating sacred ponds whose water was utilized in religious ceremonies. Through these efforts, no one will dare to damage because there are customary sanctions. Ref. [11] views that from the religious point of view of Balinese people there is a belief that maintaining the water cycle has the meaning of maintaining peace of heart and mind which is then expressed in the context of water or water as cleansing. Maintaining water is also believed to maintain the prosperity outlined in the concept of *tirta amrta sanjiwani* and water as an introduction to life in the realm of death in the concept of *tirta pengentas* or water as a path to the hereafter.



(a)



(b)

Figure 1. The local wisdom of Balinese people in conserving water is to make the water source a sacred area (a) and make water as holy water or *tirta* (b).

One of the big springs that are still purified to this day in Bali is at Tirta Empul Temple. Balinese people often use the water from the springs at Tirta Empul Temple as *tirta* for various ceremonial activities. Tirta Empul Temple is still one of the places where Balinese people do their activities to clean up. The activities carried out by the Balinese Hindu community at Tirta Empul Temple, in its development were followed by tourists visiting the temple [18]. This is in line with Ref. [19] statement which states that the Hindu and Buddhist kingdoms were built

quite a lot of sacred buildings that were functionally related to the use of water and religious activities called *petirthaan*. *Petirthaan* buildings are generally equipped with ponds, showers, and temples.

The creation of sacred buildings and ceremonies in the spring area by the Balinese people is one form of implementation of the concept of *Tri Hita Karana* or three basics that cause happiness or balance of life. The three basic things include maintaining a good relationship between man and God, man and man, and a man with the environment. The construction of sacred buildings and ceremonies when viewed from the concept of the human relationship with God has the meaning of gratitude or gratitude for grace in the form of springs. When viewed in terms of the human relationship with humans, the existence of sacred buildings and ceremonies serves as a reminder to sesame humans to jointly maintain the source of the springs. In terms of the human relationship with the environment, the existence of sacred buildings and ceremonies at the spring is a form of commitment to maintain the environment around the source of the spring. The rest of the ceremony will also be fodder for animals and become an organic material that nourishes plants.

As something sacred, the Balinese give a fairly special treatment of water. There are rules or ordinances in the use of water that must be adhered to, in the hope that the quality and quantity of water are maintained. In Balinese Hindu ceremonies there is the term *mendak tirta*, where *mendak* in Balinese means pick up and *tirta* means holy water. The procession of *mendak tirta* is usually performed at the source of the purified spring, through a ceremonial process. Ref. [20] states that for Balinese Hindus, water has a very fundamental position in religious practice. Where water is seen not only from the physical side but also spiritually. Water is seen as having the power to provide chastity, intelligence, health, and happiness. A similar opinion was also conveyed by Ref. [19] who stated that people have long considered that the water coming out of the earth is sacred because it gives life and fertility. This means that ecologically, ancient peoples adapted to the environment, both physically and spiritually.

The splash of holy water that has been given a mantra or prayer by religious leaders is believed to provide freshness and health. Holy water is not only a physical and spiritual cleanser but it is also believed to provide healing. According to Ref. [21], the water given by prayer can heal because water crystals are influenced by the environment. Physically this phenomenon can be explained by the influence of outside magnets such as bio-magnetics. The influence of bio-magnetic magnets causes water to be polarized so that it can store information. Ref. [22] stated that through the giving of prayer, water has the power of livelihood. This power caused the Balinese to call the water "to-ya" which means "he is". He who gives life is in this case the ruler of the universe of God.

Preferential treatment is also given by the Balinese towards the water to be used for daily activities. The use of water for irrigation of rice fields for example, where the process of irrigation will begin with the ceremony of *mendak toya*. This *mendak toya* ceremony is a form of respect for farmers who are organized in *Subak* group in Bali towards the water. *Mendak* in Balinese means to pick up, while *toya* means water. So the ceremony of *mendak toya* which means to fetch water is a form of preferential treatment of water as a source of life. The ceremony also means that the use of water must be done as

necessary so that nothing is wasted for free. According to Rema Ref. [10], the ceremony of *mendak toya* is a form of a plea to God to give blessings to the water that will be used by farmers to irrigate rice fields.

To maintain the quality and quantity of water, *Subak* member farmers then routinely conduct mutual cleaning of irrigation channels. In the process of cleaning the irrigation channel, farmers ensure that no garbage obstructs the flow of water and ensures no hazardous materials are thrown into the irrigation channel. In everyday Balinese people, there is also a ban on littering, urinating, and defecating in river bodies. The prohibition when reviewed from environmental science studies related to awareness to maintain water quality and avoid pollution to water. Ref. [23] stated that there is a belief in Bali that waterways, from rivers to sewers in households must be maintained smoothly. Blockage of waterways can have a catastrophic impact, such as flooding.

Maintaining water sustainability in *tirta* concept is not only done by Balinese Hindus in the upstream area or water source but up to downstream, namely seawater. Seawater is positioned as melting water or holy water that cleanses all filth so that it returns to be holy. The water flowing from the mountain which then boils in the sea is identified as a unity known as the concept of *nyegara-gunung* (sea-mountain). The concept of mountaineering if it is interpreted in a scientific form in the water cycle is the same as the concept of hydrology. This opinion is in line with the statement of Ref. [23] which states that the concept of *nyegara-Gunung* is a concept of mandala meaning a diagram circle that has magical powers. While Ref. [10] stated that the journey of water from the mountain to the sea is a cycle of *sangkan-paran*. Seawater that gets the sun's heat will then evaporate into clouds, saturated clouds then become raindrops and then absorbed by the roots of plants. The absorbed water then becomes a spring that then flows to give life to all creatures, then returns to the sea.

4. CONCLUSION

Positioning water as a sanctified or *tirta* for Balinese Hindus has a responsibility to manage and conserve water. Management is realized in the form of maintaining water sources by declaring it as a sacred area so that the springs are maintained and free from pollution. Maintaining a spring means maintaining the quantity and quality of water that is the source of life.

Balinese Hindu society has long introduced good water use procedures to give blessings for life. The concept of the procedure of taking and using water is poured in a pearl of local wisdom, namely the ceremony of *mendak tirta* and *mendak toya*. This ceremony contains the meaning of gratitude so that the water obtained provides benefits and the water obtained is used effectively and efficiently, to meet the needs of the community.

Nyegara-gunung (sea-mountain) is proof that Balinese Hindus have a strong commitment to maintaining water from upstream in the mountains to downstream, namely the sea. The term *nyegara gunung* is proof that Balinese Hindus have known the hydrological cycle since a long time ago. Where the water from the mountain boils in the sea, then the seawater due to the heating process evaporates and returns to the mountain in the form of rainwater.

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