Gianyar
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Majalah Pusaka Budaya merupakan terbitan berita yang terbit setiap bulan setahun yang memuat berbagai artikel yang mengeksplor aspek-aspek pelestarian budaya dan kota pusaka Kabupaten Gianyar. Redaksi juga menerima artikel, tulisan reportase, dan foto-foto yang berkaitan dengan dinamika kota pusaka di Nusantara, yang terkait atau tidaknya ditentukan oleh Dewan Redaksi.
Gianyar in the Peak of Appreciation from Three World Heritage Cities and World Heritage Organizations (OWHC, INTO, UNESCO): Reflections and Holistic Recommendations

Wayan Gerlya

The progress of the Gianyar Regency as a World Heritage Cities Region has indeed brilliant achievements over the past three years (2015 to 2017) under the leadership of the Regent Anak Agung Gde Agung Bharata and Vice Regent Made Mahayana.

Ritual Aspect in Subak Irrigation System, as a Manifestation of Cultural Heritage in Bali

Wayan Windia and Gde Sedana

Agricultural development in Bali, Indonesia cannot be separated from the existence of subak systems as a traditional irrigation system (Sutawar, 2005; Sedana, 2012; Windia dan Wijaya, 2014). The area of irrigated land (paddy land) scattered in Bali is under the subak system. As a staple food, rice production is very important and has increased its productivity and quality for fulfilling the needs of the community living in Indonesia, including the island of Bali, which has many farmers from other regions and countries.

Gianyar as a Cultural Heritage City

Ketut Ardhana

Gianyar was also the ancient capital of Bali in the 6th–11th centuries. At that time, Udayana was a great king, ruling with his wife, Mahendradatta or Shri Gunapriya (Kemermaputri), from East Java. Through this marriage, Udayana and Mahendradatta had three sons: Airlangga who became a king in East Java and Madakasa and Anak Wijaya who became kings in Bali. This period, known as the Bali Classical History period, included the oldest kingdoms in Bali, after Bali entered its historical periods in the 8th century (see also Abdullah 2012).

Portrait Masks; The New Creation of Gianyar Art

Wayan Dibia

The island of Bali is home to various traditional art forms. Presently there are at least six major art forms featuring and won the highest recognition at the International Festival of World Arts and Culture in 2017. Enacting stories derived from different traditional arts, the wooden masks representing different characters and spirits, to human beings, animals, and demons. Topeng is perhaps one of the most popular forms of dance theatre on the island of Bali.
RITUAL ASPECT
IN SUBAK IRRIGATION SYSTEM,
AS A WORLD CULTURAL HERITAGE IN BALI

Wayan Windia and Gde Sedana

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I. INTRODUCTION

Agricultural development in Bali, Indonesia cannot be separated with the traditional irrigation system, an on-demand system (Gusawan, 2008; Sedana, 2014). The entire irrigated land (paddy land scattered in Bali) is under the management of subak, a local organization that is responsible for the irrigation water management and ensuring the consumption of the community living in Indonesia. These visitors from other island and countries.

Since several decades ago, subak has been involved by the government in the agricultural government program, particularly in achieving rice self-sufficiency. The government has good trust in the management of subak. This is supported by the management of subak in farming activities. The most important thing found in the farming activities is the principle of fairness, supporting the role of farmers and subak in water management. The best example is the role of subak, which has been acknowledged as a world cultural heritage since 2012. This article aims to describe the ritual aspects performed within subak.
II RITUAL ASPECTS OF TRADITIONAL IRRIGATION SYSTEM OF SUBAK

2.1 Traditional Irrigation System of Subak

Subak is also viewed as a farmers' group on irrigation water management including farming activities and ritual ceremony activities as well. Therefore, subak is characterized by a physical aspect covering a compound rice fields, irrigation facilities (canal, division structure, temple, etc.), water source, and non-physical aspect such as social-cultural activities (Windia, 2007). The two aspect are extremely inter-related between each other. As an organization, subak has an autonomous management.

Subak is not under the formal control of the village, but between the two have a coordination management on the particular activities (Windia, 2007). Subak is a hydrological boundary limit, not the administrative boundary. Thus, there are many cases that the area of Subak overlaps with the area of the village boundary, even sub-district and districts as well. This is caused by the source of water is located in the upstream area and its canal pass through the village (s).

The irrigated land of subak is fully dependent on the availability of water at the source level (capacity of dam on the river) and the location of subak area. The subak area scattered on the hilly area is relatively smaller than those which are located in the downstream area.

It is worth noting that the existence of subaks is vary relating to the use of source of water through the dam constructed. There is a singular subak when it has individual dam on the river. The other is some subaks (more than one subak) seize water from a similar dam where in between/among the subaks will have an water division structure. For those subaks getting water from one dam, there is a coordinating body of subaks which is locally called subak-gede. This has main functions to coordinate water management among the subaks as members of subak-gede and also coordinate the ritual ceremony at the temple constructed near the dam. Besides, the subaks which get water along the river (through several dams constructed on the river) might have another coordination among the subaks. This coordinating body is locally called subak-agung. Similar to subak-gede, subak-agung should coordinate the water management among the river and also coordinate the ritual ceremony among the subaks.
Coordination between/among subaks is much needed as the availability of water becomes scarce. At least, this coordinating body of subaks might give a solution to cope with the water availability problem, particularly during the dry season.

Irrigation water is the most important resource for the subak system as this constitutes a affiliating factor of farmers. In Bali, farmers who are mostly Hindu make a personification of water as the God of Vishnu. Not only water, rice field cultivated by farmers as members of subak is manifested as a God of Sri (God of Fertility). This belief bring about the subak must maintain and manage water at the source level (river) which is flowed to the rice field cultivated by its members. Accordingly, subak system in Bali has a specific activities rather than water management only, it is ritual ceremony activities. Therefore, subaks believe that water is also regarded as a sacred object.

Therefore, the conflict caused by problems with the water sought to be avoided. The government encouraged some Subak receive irrigation water from one source to join a forum for coordination. Thus, the conflict caused by problems with irrigation water can be avoided optimally.

The boundaries of subak are natural borders, such as river, canal, rural area, or the likes. These boundaries are indicated that irrigation water of subak could not flow any more to the upstream area because blocked by the cited borders. Subak is an autonomous institution, and not under the administration of the village. Different management between the two is very helpful to avoid conflict, even though the lands overlap regions Subak and rural areas. They have own roles to make decisions without an intervention of others. Between subak and the village, always make coordination, particularly the implementation of ritual activity and other social works within the village. the language of political science condition is called as concept of polycentry (McGinnis, 1999).

Presently, the land conversion, particularly in the city area and surrounding is happening very fast (average of 750 ha/year). Consequently, the areas of several subaks in Bali become narrow. This condition might bring about the cash contribution in the water management system for ritual ceremony activities become. This fact is very disturbing subak. Farmers have to bear an increasing heavy burden for ritual ceremonies. The need a lot of cash money. Due to the availability of farmers are very limited, many temples subak that seems abandoned and not maintained. In some cases, there might be a friction, where the temple should be managed by the village where subak located, or should become management of subak.
Arif (1999) states that there is a significant relationship between the condition of the subak temple with the merits of the organization concerned subak system. Furthermore, it can be stated that the existence of subak system in Bali is inseparable from the role of the king in Bali in the past. It is noted that the existence of subak system in Bali has been preceded by the presence of farming systems that have evolved in Bali since the year 678 (Wardha, 1989; and Arfian, 1989). This means that the existence of subak system in Bali has taken about 393 years since the development of the agricultural system. Purwita (1993) mentioned that the terms of subak system in Bali was found since the year 1071.

In the past, the role of the kings on irrigation system in Bali is found in archaeological research that indicates a subsidy in the form of exemption for farmers who work on irrigated land. Such subsidies were not given to farmers in dryland. The King gave permission for farmers organization (subak) to open new rice fields by utilizing the existing forest areas. It means that the King allowed subak to take and drain the water from the river to the wetland that has been made by farmers. Due to the influence of powerful king in agricultural systems and irrigation systems (subak) and the king was regarded as traditional leaders in the area, so subak as an irrigation system is also developed as traditional institutions based on the socio-cultural local community. Thus Subak irrigation system can also be mentioned as a traditional institution that is based on socio-cultural local community that serves to manage irrigation water to the welfare of society (farmers). Because of Hindu religion was developing when subak firstly established has Tri Hita Karana (THK) concept, and subak has been implemented the THK concept for the management of irrigation systems.

Furthermore, Subak irrigation system has continued to develop in accordance with the development of the surrounding communities. It is considered as a normal because the irrigation system based on socio-cultural local community will always evolve in tune with the development of its environment. Pusposutardjo (1996) states that this condition is a process of transformation of subak system with its environment. The developments that are currently happening in subak system in Bali are: (i) the scope of the management on subak system; (ii) institutional subak system; (iii) Subak system management authority; and (iv) stakeholders/components that play a role in subak system.
2.2 Subak as a World Cultural Heritage

Subak system has been recognized by UNESCO as a World Cultural Heritage (WCH) since year 2012 in Russia. Subak has met several requirements as WBD as designated by UNESCO, including the following.

(1) Subak is a cultural tradition that makes up the landscape of Bali. Subak has been present in Bali since the 11th century, and is a traditional institution that implements the philosophy of Tri Hita Karana in their activities. There are some temples of subak which became the spiritual center in subak irrigation management, through a number of rituals, offerings, and performing arts. Pura Subak is a place, where farmers seek harmony with the God.

(2) Landscape of Bali is an extraordinary evidence of subak system. A system that is democratic and egalitarian.

(3) Subak temple is a unique as an inspiration of rituals which has been done since centuries in Bali. Various performed at subak temple as the existence of subak in the implementation of the management. It is a marks the implementation of the philosophy of Tri Hita Karana, which there should be harmony between man and God, Harmony between man and Temple.

Since the 11th century he managing a network of subak temples, ecological environment terraced rice fields, were part of the watershed in Bali. Subak temple management is a solution in the face of increasingly complex challenges in the area.
That is why, subak system which implements the philosophy of Tri Hita Karana in its activities, is mentioned as the bumper of Balinese culture. It is well known that the Tri Hita Karana is a three path to happiness in life, namely, (i) the harmony between man and God (parhyangan), (ii) the harmony between man and his neighbor (pawongan), and (iii) the harmony between man and the natural environment (polemahan).

In term of parhyangan aspect, which is implemented by subak through performing various rituals in temples of subak, and other temples related to the subak's activities. In addition, farmers (subak members) also perform individual rituals on their own farm. Basically, every farmer will organize his farm, so they are always preceded by ritual activities. For pawongan aspect, which is implemented by compiling rules of subak (locally called awig-awig). This regulates what is allowed and what should not be done by members of subak to make an harmony in subak system. Meanwhile, polemahan aspect is implemented by making and sustain the natural environment, such as making the rice field in accordance with the contour of the land. Farmers make a rice field with no damage the contour, thus there is a beautiful terrace rice field.

2.3 Implementation of the ritual at Subak System

Basically, Subak is a common irrigation system in the form of farmer managed irrigation systems (FMIS). But it is not just a subak irrigation system since there is a ritual ceremony activities that are strongly performed. These ritual activities distinguish between the common irrigation systems and subak irrigation system. Coward (1980) and Sutawan (2008) mention that subak has main functions as follows: (i) the distribution and allocation of irrigation water; (ii) maintenance of irrigation canals; (iii) resource mobilization; (iv) conflict solution; and (v) the ritual activities.

Ritual activities in subak are implemented at the farm level (in his paddy field, respectively), at the level of subak (at subak temple), and the other temples related to the subak irrigation management and water source (for example: dam temple, temple in lakes, etc.). The purpose of this ritual ceremony in subak is basically to wish to God Almighty that his farming activities can be successful. The individual ritual performed by Farmers (subak members) on his own farm can be seen in Table 1 (Sutawan, 2008).
<table>
<thead>
<tr>
<th>No.</th>
<th>Name of ritual</th>
<th>Period</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Nsendagin/memungkan/nuak teun</td>
<td>Starting to flow rice field</td>
<td>To have permission from the God (Fertility God living on the ricefield: farmer is preparing the land for planting)</td>
</tr>
<tr>
<td>2.</td>
<td>Pengwiwit/ngurit</td>
<td>Preparing seedling work</td>
<td>To wish to the God for having good seedling before transplanting grain</td>
</tr>
<tr>
<td>3.</td>
<td>Nuunen nandur</td>
<td>Transplanting of seedlings</td>
<td>To wish to have good transplanting for good growth of seedlings transplant</td>
</tr>
<tr>
<td>4.</td>
<td>Ngulapin</td>
<td>After transplanting of seedling and there are seedling damage</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>5.</td>
<td>Ngeraras</td>
<td>After 12 days transplanting</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>6.</td>
<td>Mubuin</td>
<td>After 15 days transplanting</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>7.</td>
<td>Neduh/Ngebulinin</td>
<td>After 35 days transplanting</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>8.</td>
<td>Nyungung/niseh/ngela/nusi/decinan</td>
<td>After 42 hari transplanting</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>9.</td>
<td>Biukukung/miseh/niseh</td>
<td>Starting flowering of rice</td>
<td>To wish to the God in order that the crop will grow well</td>
</tr>
<tr>
<td>10.</td>
<td>Niywa Sraya</td>
<td>After Flowering</td>
<td>To wish to the God in order that the crop will grow well and bring</td>
</tr>
<tr>
<td>11.</td>
<td>Nyusaba/ngusaba nini/mantenin Dewi Sri.</td>
<td>After the rice mature</td>
<td>To wish to the God in order that the crop will grow well and bring</td>
</tr>
<tr>
<td>12.</td>
<td>Mebanten manyi</td>
<td>Preparing harvest</td>
<td>To wish to the God in order that the harvest bring good yield</td>
</tr>
<tr>
<td>13.</td>
<td>Ngerasakin</td>
<td>After finishing harvest</td>
<td>To say thanksgiving to the God for his harvest is good and prepare; further planting</td>
</tr>
<tr>
<td>14.</td>
<td>Manteen</td>
<td>After storing harvested rice</td>
<td>To say thanksgiving to the God for his harvest is good and prepare; further planting</td>
</tr>
<tr>
<td>15.</td>
<td>Ngeresiti/Nanggluk merana</td>
<td>If there is vulnerable diseases</td>
<td>To wish the God in order that the pest and diseases any more</td>
</tr>
</tbody>
</table>
Unless the ceremony at the paddy field by individual farmers, there is also a ceremony at the subak level. The ceremony at the level of subak Subak is implemented by all members simultaneously, on a certain day agreed by the relevant Subak. The ritual ceremonies held at subak level, are: (i) mendak toya ceremony (fetching water) is carried out on the temple located in a water source (dams, water division structure or spring); (ii) ngusaba, ceremony is conducted in temple of subak (called ulun suwi or bedugul).

Beside, there is also a ritual ceremony held in several temples in Bali which is believed by subaks at the district level in the relation to water source. In the implementation of the ceremony, the subak just give dues, and not as an organizer because the government will organize this event. For example, the performance of ceremony at the temple located near the lakes (Ulun Danu Batur temple, at Lake Batur, Kintamani, Bangli Regency, Pura Beratan at Lake Beratan, Tabanan Regency) are followed by many subaks in Bali.

Related with the development of the society living, the role of agricultural sector in Bali always decrease. The contribution of agricultural sector in Bali, for Domestic Product of Regional Bruto at year 1971 (where the development of Indonesia economy was moved), is 59.07%. At year 2003, the role of agricultural sector, was decrease become 19.98%. Then at year 2013, its contribution was still decrease also, become 17% (Bank of Indonesia, 2014). Also noted by Bank of Indonesia that the index of Value of Farmer Change of the Bali farmer is under 100%. Its mean that the farmers (subak member) at lose condition. Attermoment, the age of Bali farmer, is relatively so old. Sarita (2013) that have did research at world cultural heritage site at Tampaksiring, Gianyar, noted that the average of farmer age was 62.59 year, which the range between 40-77 year.

The decreasing at agricultural sector and the age of farmers are almost very old, will influence the interest and activity of the farmers to do subak ritual. The
situation almost same with the conditions at Sabah and Sarawak (Malaysia), where several rituals at farmers level are decline. Its condition occur, because the declining of farmer income from agricultural activities, and the young generation are dislike involve at agricultural sector (Husni, 2014). If the declining of the ritual activities at farmer level in Bali occur, it will influence the existence of Bali culture. Koentjaraningrat (1993) stated that the ritual is a basic of culture.

III CLOSING REMARKS
Subak is actually a common irrigation system in the form of farmer managed irrigation systems, but it has intensive ritual ceremony activities under the philosophy of Tri Hita Karana (THK). Subak implemented the THK philosophy in field. Subak irrigation system is seen as an socio-technical irrigation system. The technical character evolving is a technological character, has developed in accordance with customs and culture of the local community. So many rituals has been implemented by subak in the rice field. Therefore, subak system is also be viewed as a technology that has evolved into local culture, or a term that is in conformity with the local phenomenon. Owing to subak system, a cultural system (technology that has become a cultural community), the elements can be assessed with the subsystem of mindset/values, subsystem of social, and the sub-artifacts/objects.