

# Cultural Landscape of Bali Province

the *Subak* System as a Manifestation of the *Tri Hita Karana* Philosophy



## Map of the Cultural Landscape of Bali Province

This map presents the uniqueness of the 'Cultural Landscape of Bali Province: the *Subak* System as a Manifestation of the *Tri Hita Karana* Philosophy' - a World Heritage Site in Bali, Indonesia. The text included with this map has been taken directly from the nomination dossier, by which this property was inscribed in 2012. This map illustrates the suggested route through which visitors can experience the Outstanding Universal Value of the site, and also provides interpretations for each of the inscribed components of the property. This map has been produced under the project entitled 'The Power of Culture: Supporting Community-Based Management and Sustainable Tourism at World Heritage Sites in Malaysia and Southeast Asia', which was funded by the Government of Malaysia via the Malaysia Funds-in-Trust, and is part of UNESCO's joint effort to conserve and safeguard World Heritage Sites for future generations.

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## Subak Landscape Defined

The existence of *subak* in Bali has been known since approximately 1,000 years ago. *Subak* is a unique Balinese social and religious institution; a self-governing, democratic organization of farmers who share the responsibility for the fair and efficient use of irrigation water to grow paddy rice. According to the Balinese inscriptions, the first reference to rice fields dated back to 882 A.D., which contains the word *huma* or rice field in Balinese. Rice cultivation was also mentioned in King Purana's inscription in Klungkung from 1072 A.D. under the word *kasuwakan*, which was translated from *seuwakan* (single stream) that means the division of water that goes through the rice terraces through *seuwak* (single stream or water channel). As an organization, *subak* not only addresses water management within the rice field, but also manages the network of shrines and water temples. *Subak* is led by a *pekaseh*, who is elected by its members to manage water distribution and other related activities for a period of time. It regularly holds ceremonial offerings prior to the start of a planting season, and continues through the cultivation process until harvesting.



### Parts of Subak

There are several elements within the *subak* networks, that range from the water sources to the rice fields:

1. *Empelan*: the source of water that irrigates the rice fields
2. *Bungas* or *Buka*: water inlet
3. *Telabah*: the water channel. Water that comes from a spring runs through this stream. There are several kinds of *telabah*. *Telabah aya* (*gede*) is the main water channel usually located nearby the source. *Telabah aya* then distributes the water into other *telabah*, namely *telabah pemaron* (sub-water channel), *telabah cerik* (twig water channel), and *telabah tempek* (sub-*subak* water channel). There are several names that refer to the distribution of water in small parts of the *subak*, *telabah penyacah* (*talikunda* and *samakunda*), *penasas*, *panca* and *pamijian*. If it is not possible to build an open water channel, *subaks* build *aungan* or underground tunnels to distribute the water.
4. *Pemaron* (also known as *Tembuku*): a construction that serves the purpose of water distributor. It has several parts as well, including *tembuku aya* (the main construction for the distribution of water), *tembuku pemaron*, *tembuku gede*, and *tembuku cerik*
5. *Telabah pengutangan*: water outlet.
6. Temples: there are also several within the network. The first is Ulun Suwi Temple, which is worshipped by *subaks* within the same water source. A Bedugul Temple is built in each *empelan* and *tembuku*. The highest temple is Ulun Danu Temple. It is located at four main lakes regarded as the main water source for irrigation in Bali

### Statement of Outstanding Universal Value

A line of volcanoes dominates the landscape of Bali and have provided it with fertile soil which, combined with a wet tropical climate, make it an ideal place for crop cultivation. Water from the rivers has been channeled into canals to irrigate the land, allowing the cultivation of rice on both flat land and mountain terraces.

Rice, the water that sustains it, and *subak*, the cooperative social system that controls the water, have altogether shaped the landscape over the past thousand years and are an integral part of religious life. Rice is seen as the gift of God, and the *subak* system is part of temple culture. Water from springs and canals flows through the temples and out onto the rice paddy fields. Water temples are the focus of a cooperative management of water resource by a group of *subaks*. Since the 11<sup>th</sup> century, the water temple networks have managed the ecology of rice terraces at the scale of whole watersheds. They provide a unique response to the challenge of supporting a dense population on a rugged volcanic island.

The overall *subak* system exemplifies the Balinese philosophical principle of *Tri Hita Karana* that draws together the realms of the spirit, the human world and nature. Water temple rituals promote a harmonious relationship between people and their environment through the active engagement of people with ritual concepts that emphasise dependence on the life-sustaining forces of the natural world.

In total, Bali has about 1,200 water collectives, and between 50 and 400 farmers manage the water supply from one source of water. The property consists of five sites that exemplify the interconnected natural, religious, and cultural components of the traditional *subak* system, where the *subak* system is still fully functioning, where farmers still grow traditional Balinese rice without the aid of fertilisers or pesticides, and

where the overall landscapes are seen to have sacred connotations.

The sites are: (1) the Supreme Water Temple of Pura Ulun Danu Batur on the edge of Lake Batur whose crater lake is regarded as the ultimate origin of every spring and river; (2) the Subak Landscape of the Pakerisan Watershed as the oldest known irrigation system in Bali; (3) the Subak Landscape of Catur Angga Batukaru with terraces mentioned in a 10<sup>th</sup> century inscription making them amongst the oldest in Bali and prime examples of Classical Balinese temple architecture; and (4) the Royal Water Temple of Pura Taman Ayun, the largest and most architecturally distinguished regional water temple, exemplifying the fullest expansion of the *subak* system under the largest Balinese kingdom of the 19<sup>th</sup> century.

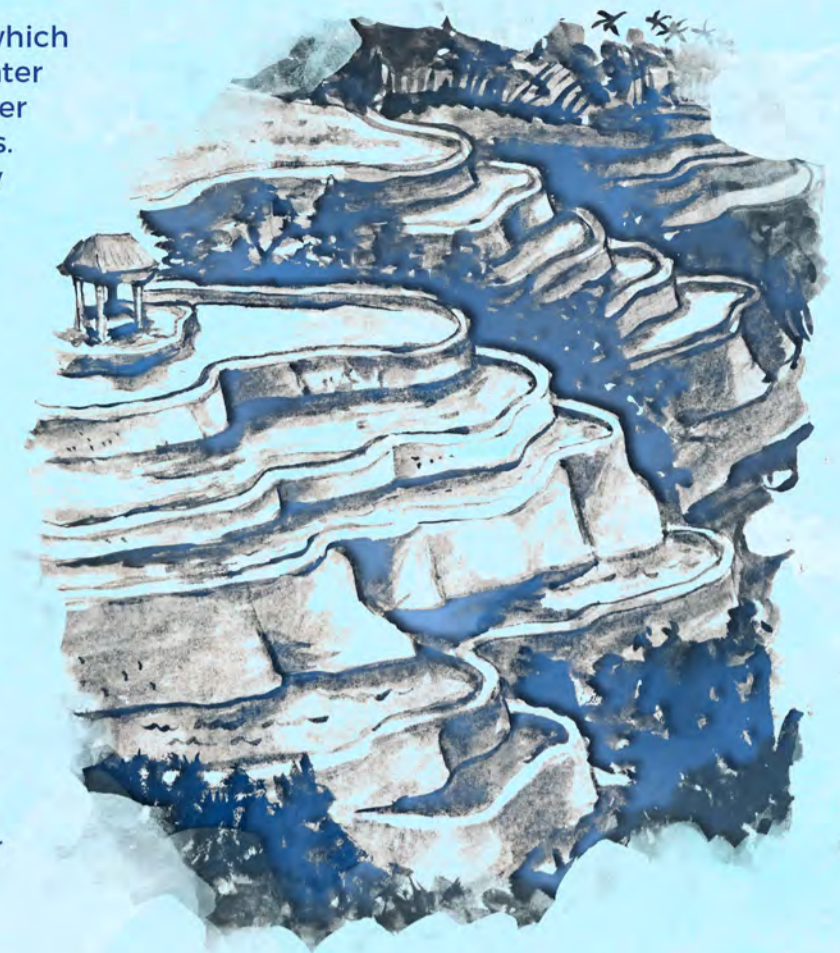


### Relationship to the Philosophy of Tri Hita Karana

The philosophy which governs the establishment of *subak* and their daily activities is the Hindu-Balinese concept of *Tri Hita Karana* (three causes of goodness or prosperity). According to this belief, prosperity and goodness can be achieved through a harmonious relationship between human and the God (*parhyangan*), their fellow men (*pawongan*), and nature (*palemahan*). This abstract idea is given concrete realization in the lives of the Balinese through the institutions of *subaks* (ancient, democratic self-governing farmer's associations) and water temples, which give spiritual meaning to the governance of the rice terrace ecology. Since the 12<sup>th</sup> century, water temple networks have expanded to manage the ecology of rice terraces at the scale of whole watersheds, transforming the volcanic landscape into faceted terraces whose jewel-like perfection creates general prosperity. The concept of *Tri Hita Karana* is expressed differently in different water temple networks, with regional and even local variation. There are nonetheless, attributes common to all *subaks*.

## Subak Today

*Subaks* face many challenges nowadays, which include pressures from land conversion, water scarcity, and lack of interest by younger generations to take on farming activities. These changes inevitably reorient the way the *subaks* react in today's world. The rapid development in Bali for the last decade has put *subaks* in danger, especially since many rice fields are being converted in order to construct tourism infrastructures and buildings for public housing, hotels, villas, restaurant, etc. These challenges are not only happening in urban areas but are also beginning to influence rural areas. Meanwhile, the investor demands for building in areas with tourism potential are rising. This only contributes further water shortages in the rice fields because catchment areas are being reallocated for other purposes. Spring water is not exclusively used for rice fields but is also increasingly being applied for industrial purposes that include hotels and villas, poultry farms, and drinking water enterprises.



This shortage has impacted planting and harvesting cycles in rice fields, and even resulted in the abandonment of the fields due to the lack of water for irrigation. Most of the farmers who still work in rice fields are now in their 50s and the younger generation is more attracted to working in the tourism industry in the urban areas. This shifting preference is also partly due to the high cost of managing the rice fields and the increasingly smaller benefit of farming. Therefore, opportunities in countering the threats in protecting and safeguarding the World Heritage Site are being identified: empowerment of local communities as native guardians to participate in sustainable tourism activities, such as promoting the site as agro-tourism, eco-tourism, and/or spiritual tourism; new development in organic farming system; and commodification of local *subak* traditional practices with respect to the sacred values.



## Do's and Don'ts

Visitors to the Cultural Landscape of Bali Province should observe the following principles:

### DO'S

1. Wear appropriate attire when you are going to the temples and rice fields. For example: wear sarong when entering temples, put a sash on, and tie your hair (for women);
2. Be courteous in each site. Behave appropriately in the temples and rice fields, always be mindful to maintain the serenity when you are there;
3. If you are going to the lake and forest, make sure you notify the authorities beforehand. Strict rules may apply to campers in some sites, do comply with the rules and instructions from the locals;
4. Engage with local community respectfully to get to know the sites better;
5. Support local community by purchasing local and organic products, such as rice and red rice tea;
6. Be friendly and keep smiling;
7. Enjoy the site and share your fascinating story about the Cultural Landscape of Bali Province;
8. Keep the environment clean.



### DON'TS

1. Do not litter;
2. Do not enter the temples if you are mourning over the recent passing of a relative;
3. Do not enter the temples while on your period (for women);
4. Do not shed blood inside the temples;
5. Do not step on offerings;
6. Do not smoke in temples and forests;
7. Do not use profanities while in temples or rice fields;
8. Do not pluck the paddy;
9. Do not support businesses which discourage the preservation of the *subak*;
10. Do not pollute the water channels;
11. Do not stroll absent-mindedly within the site.





## 1. SUPREME WATER TEMPLE OF PURA ULUN DANU AND LAKE BATUR



The cluster includes two component parts: the temple and the lake. It is located in the District of Kintamani, Bangli Regency. The water temple is believed by Balinese farmers to be home of the Goddess of the Lake, *Dewi Danu*. As a water temple, Supreme Water Temple of Pura Ulun Danu Batur has a unique collection of attributes; it was once the most universal *subak* temple, the sacred summit of the cosmic mountain, the source of the most potent holy water and the only temple where the priesthood is selected by the Gods themselves.

The crater lake is regarded as the ultimate source of water for the *subaks* and in a more general sense for all the life on the island of Bali. Beneath the lake surface, there is said to be several water canals that connect through the underground water network.

### Places of Interest



While visiting the Supreme Water Temple of Pura Ulun Danu Batur and Lake Batur, you can also visit the Batur Volcanic Museum located in Penelokan Village in the District of Kintamani. The museum provides information on the history of Mount Batur and several other volcanic mountains in Indonesia. There is also a documentary film that features the development of Mount Batur and its sequence of eruption. You can also observe the status of Mount Batur using binoculars.

Penelokan is also a good place for sightseeing the beauty of Mount Batur. You get a perfect point of view overlooking the mountain and Lake Batur. Indulge yourself in hot springs! There are plenty that offer the excitement of bathing in natural hot springs while enjoying the magnificent view of Mount Batur and Lake Batur in a distance.

Across the lake, you can visit Trunyan Village, a traditional *Bali Aga* Village. *Bali Aga* is the people who predominantly inhabit the island. In this village the dead are not cremated or buried, they are simply laid on the ground and left to rot. There is an ancient tree that is said to stop the corpses from smelling. Take a boat from the other side of the lake, you will get to the village in 15-20 minutes.

Kintamani produces one of the best oranges in the island. They sell the product across Bali and outside the island too. Try to taste some local oranges while you are in Kintamani.



## 4. ROYAL WATER TEMPLE OF PURA TAMAN AYUN



Located in the heart of the District of Mengwi, Badung Regency, Royal Water Temple of Pura Taman Ayun is one of the largest and most architecturally distinguished temple that shows the complex relationship of *subaks* and water temple to the Balinese Kingdom. Pura Taman Ayun is one of the largest and most architecturally distinguished temple that shows the complex relationship of *subaks* and water temple to the Balinese Kingdom. Pura Taman Ayun is one of the largest and most architecturally distinguished temple that shows the complex relationship of *subaks* and water temple to the Balinese Kingdom.

Once a year, heads of *subak* (*pekaseh*), water temple priests (*pemangku*), and the King of Mengwi perform the annual water opening ritual at Lake Beratan. Subsequently, the holy water is brought to the shrine and then distributed throughout the *subak* members for rice field blessing.

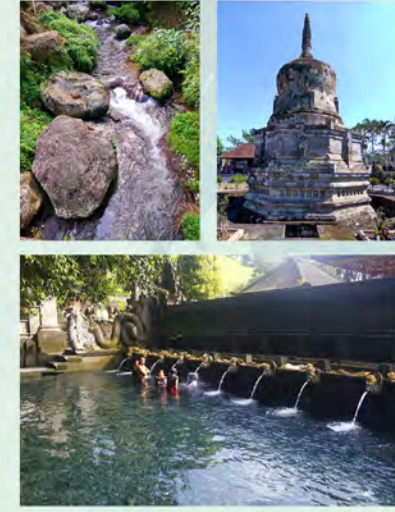
### Place of Interest

Within the area of Pura Taman Ayun, you can visit Museum Manusa Yadnya and the Historical Site of Mengwi Kingdom, the largest Balinese Kingdom of the 19<sup>th</sup> century.

## MUSEUM SUBAK

Museum Subak or Subak Museum, is an ethnographic museum that presents all components of *subak* and farming tools used by Balinese farmers in the past and present. Located at Banjaranyar in Tabanan, Museum Subak invites visitors to discover all sorts of information on *subak*, as well as to provide instruments for study or observation.

## 2. SUBAK LANDSCAPE OF PAKERISAN WATERSHED



Pakerisan Watershed cluster is located in District of Tampaksiring, Gianyar, around 40 km from Denpasar. It represents a continuous living tradition of ecological management by the *subaks* that has continued for over a millennium. You can observe series of ancient temples and the *subaks* within the cluster site as follows:

1. Subak Pulagan and Subak Kulub (Upper and Lower).
2. Water Temple of Pura Pegulingan.
3. Water Temple of Pura Tirta Empul.
4. Water Temple of Pura Mengening.
5. Ancient archaeological sites of Pura Gunung Kawi.

### Subak Pulagan and Subak Kulub (Upper and Lower)

The historical evidence indicates that the *subaks* within this cluster site were among the first locations in Bali where wet-rice agriculture was developed. Their close proximity to the pristine water sources allow the *subaks* to preserve the native Balinese rice for thousands of years. The *subaks* extend south along the Pakerisan River and encompass the small village of Kulub and a major irrigation dam, the Dam Pejeng, which provides water for many downstream *subaks*.

### Water Temple of Pura Pegulingan



Pura Pegulingan overlooks Pura Tirta Empul, which is 200 meters to the west. This temple exemplifies the interconnection of villages and *subaks* in Bali. Pura Pegulingan is both a community temple for the village and a *subak* temple (*ulun swi*). The primary monument at this site is a Buddhist stupa (12 m high and 3 m diameter at the base) dated to the 9<sup>th</sup> century. The architectural symbolism of the temple is suitable to communicate the desire of the Balinese to sustain harmonious relationship with God, with fellow human beings, and with nature. Pura Pegulingan is the only temple in Bali with Buddhist stupa. During annual temple festivals, farmers bring offerings of rice bundles to the *ulun swi subak* shrine located in the middle courtyard of the complex, and perform rituals to assure the fertility of 25 hectares of rice fields irrigated by the springs.

### Water Temple of Pura Tirta Empul



This beautiful, ancient, and functional spring temple is an important pilgrimage destination for Balinese who revere it as the source of the Pakerisan River, which provides water for the extensive rice fields in the Pejeng area to the south. The ancient *subak* of Pulagan receives its irrigation water from the dam immediately downstream from the temple spring. In return, the *subak* contributes rice, eggs, and beautiful offerings during annual festivals at the temple, which fall on the fourth full moon of Balinese moon calendar.

### Water Temple of Pura Mengening



The temple shows strong ties with Subak Kulub, which is the source of irrigation for the rice fields and comes from the springs in the temple. Similar to the Gunung Kawi site, the temple represents the old relationship between *subak* and ancient civilization in Balinese Kingdoms since the 11<sup>th</sup> century. Inside the temple complex, there is a stone structure called *Prasada Agung*. This structure features three special components, which symbolize the three worlds and the principles of *Tri Hita Karana*. People can also visit this temple to perform purification ritual as in Pura Tirta Empul since there are several springs dedicated to serve this religious purpose.

### Ancient archeological site of Pura Gunung Kawi



The rock-cut temple of Gunung Kawi exhibits the prosperity attained by the early Balinese Kingdom, associated with the emergence of the ancient irrigation systems, *subaks*, and water temples dating back to the 11<sup>th</sup> century. Architecturally, Pura Gunung Kawi highlights the ritual connection with water illustrated by the division of water channels, carved into the sloping river banks at the temple site. There are ten *candi* in this compound dedicated to the royal family of King Udayana.

### Places of Interest

If you visit the site from Denpasar, you may pass Celuk region well-known for its silver handicraft and Blahbatuh region where you can see beautiful sculptures along the main road. The Pakerisan Watershed cluster is located just 30 minutes drive from Ubud, a famous city for its art and culture.

You can join the purification ritual of *melukat* in Water Temple of Pura Tirta Empul, sightsee in the temple, and at the top of the slope, you can see the Tampaksiring Presidential Palace built during Soekarno era, which currently is used for state functions by the National Government of Indonesia.

Aside from the temples and *subaks*, you may also visit other interesting places such as the ancient relief of Yeh Pulu, Goa Gajah Temple, and Samuan Tiga Temple. All are located in Bedulu Village.



## 3. SUBAK LANDSCAPE OF CATUR ANGGA BATUKARU



Subak Landscape of Catur Angga Batukaru exemplifies the multi-layered structure of the Balinese *subak* system and its historic expansion in western Bali. The cluster is located in the District of Penebel, Tabanan Regency and District of Sukasada, Buleleng Regency. It includes two mountain lakes, a large protected forest, 20 *subaks* with their beautifully crafted rice terraces, villages, water temples, springs, and sections of several rivers. This site consists of:

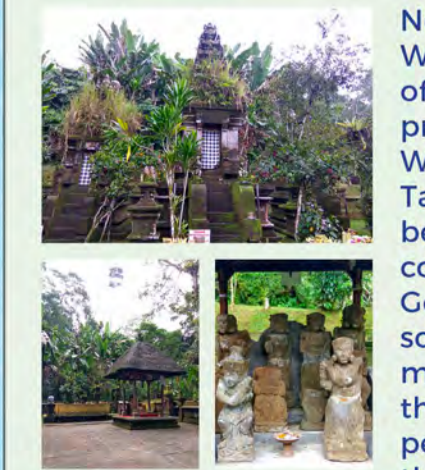
1. Lake Buyan and Lake Tamblingan;
2. *Subaks* of Anyar Sangketan, Bedugul, Dalem, Jatiluwih, Kedampal, Keloncing, Pancoran Sari, Penatahan, Pesagi, Piak, Piling, Puakan, Puring, Rejasa, Sangketan, Sri Gumana, Tegallingham, Tengkidak, Tingkih

Kerep, Wongaya Betan; 3. Villages of Mangesta, Jatiluwih, Wangaya Gede, Tengkidak, Penatahan, Tegallingham, Sangketan, Pesagi, Rejasa; 4. Water Temple of Pura Luhur Batukaru; 5. Water Temple of Pura Luhur Pucak Petali; 6. Water Temple of Pura Luhur Tambawaras; 7. Water Temple of Pura Luhur Besikalung; 8. Water Temple of Pura Luhur Muncaksari. These five important temples define the boundaries of the region, called Catur Angga Batukaru (the Four Components of Batukaru).

### Lake Buyan and Lake Tamblingan

Lake Buyan and Lake Tamblingan are considered to be the source of water for the upland springs that feed Tabanan's irrigated terraces. Both lakes are located in the District of Sukasada, Buleleng Regency, and are part of the Natural Park of Taman Wisata Alam Danau Buyan-Danau Tamblingan. Each year, *subaks* in Tabanan perform *mendak tirta*, a water opening ritual, in Lake Buyan and Lake Tamblingan, to honour the deities and the Goddess of the Lake, *Dewi Danu*.

### Water Temple of Pura Luhur Batukaru



Nested in the slope of Mount Batukaru, the Water Temple of Pura Luhur Batukaru is one of Bali's most important sacred sites, and the preeminent temple in the region. Located in Wangaya Gede Village, District of Penebel in Tabanan Regency, the temple is believed to be built in the 11<sup>th</sup> century. Within the temple compound, there are three shrines for the Goddess of Lake Tamblingan, the mythological source of Batukaru's springs and rivers, and the mountain God of Mount Batukaru. Farmers in the *Subak* Landscape of Catur Angga Batukaru perform the annual water opening ritual at the Water Temple of Pura Luhur Batukaru, attended by all heads of *subak*, *pekaseh*, *subak* members, priests, and representative from the Royal Kingdom of Tabanan.

### Places of Interest

Tabanan Regency offers many places of interest nearby Subak Landscape of Catur Angga Batukaru, such as the Subak Museum, as well as Bali Botanical Garden where you can enjoy the largest botanical garden in Bali for educational and recreational purposes.

Located in the north of Subak Jatiluwih is Candikuning Traditional Market in Candikuning Village, where you can buy fresh and organic local fruits and vegetables.

Set along the twisting road from the Botanical Garden toward Buleleng Regency is the Munduk Village. This beautiful village presents a magnificent view of the mountains with its cool and misty air. Located approximately 800 metres above sea level, this place has trekking routes and exquisite waterfalls to explore.

### Water Temple of Pura Luhur Tambawaras



This temple is located on the south slope of Mount Batukaru, Sangketan Village, and is widely known as the provider of medical assistance to cure sickness, either *sekala* (physically) or *niskala* (spiritually).

### Water Temple of Pura Muncaksari



The Water Temple of Pura Muncaksari is situated in the protected forest of Batukaru in Sangketan Village. It is located nearby the Water Temple of Pura Luhur Tambawaras and is a symbol of prosperity and fertility.

The temple also functions as a venue to perform the rice blessing rituals for *subaks*.

### Water Temple of Pura Luhur Pucak Petali



The Water Temple is the principal site to worship *Ida Sesuhunan Petali*, the God of Petali, who is the chief minister to the God of Mount Batukaru. Located in Jatiluwih Village, the water temple is of primary importance to *subak* farmers in the region who come to honour the fertility gods and ask for assistance with irrigation canals or to cope with pests, water shortages, or other problems in the rice fields. The temple has strong relationship with Lake Tamblingan, the water source that irrigates the rice fields in *subaks* within the Subak Landscape of Catur Angga Batukaru.

### Water Temple of Pura Luhur Besikalung



The temple is located in Utu Village, District of Penebel in Tabanan Regency, and is an ancient temple which contains several *menhirs* and prehistoric stone statues. Surrounded by pristine forest and streams, the land around the temple provides sanctuary for wildlife. Water Temple of Pura Luhur Besikalung serves the purpose as one of the four guardian temples in Batukaru. There is a custom that prohibits people to hunt in the area of Besikalung forest, as it is believed that not only physical punishment from the village, but spiritual punishment will also be served. It is also believed that the temple has an ancient magical stone which can detect calamity.