

**PENGUATAN LEMBAGA USAHA EKONOMI SUBAK (LUES) UNTUK
PERTANIAN BERKELANJUTAN DI SUBAK PULAGAN, TAMPAKSIRING, BALI.**

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ABSTRAK

**STRENGTHENING OF SUBAK ECONOMIC BUSINESS INSTITUTIONS (LUES)
FOR SUSTAINABLE AGRICULTURE IN SUBAK PULAGAN TAMPAKSIRING,
BALI.**

ABSTRACT

Subak Pulagan was designated by UNESCO as a World Cultural Heritage (WBD) which is the location of a rice planting cluster with System of Rice Intensification (SRI) to strengthen Subak Economic Business Institution (LUES). This research is Action Research because includes two stages, research and action aspects regarding potential and assistance for LUES development efforts in the Pulagan Subak. Survey method through in-depth interviews and Participatory Rural Appraisal (PRA) through Focus Group Discussions. The research results are; (1) Inhibiting factors strengthening LUES for sustainable agriculture are: The management system still conservative, human resources have limited management skills, organizational nature is socioreligious, entrepreneurial spirit hasn't maximally, low trust of funders (banks), competition and weak information of market; (2) LUES strengthening strategy for sustainable agriculture are: Subak requires legal entity status, business assistance from stakeholders, business management skills training, support from government and society, transformation and reconstruction of modern management as socio-agrarian-religious-economic

Keywords: *Subak Economic Business Institution, Sustainable Agriculture.*

INTRODUCTION

The agricultural institution that grows and develops in Bali is subak. According to Bali Provincial Regulation No. 9 of 2012, subak is a traditional organization in the field of water use and or plant management at the farm level in balinese indigenous peoples which is socioagrarian, religious, and economic in nature which has historically continued to grow and

develop. According to Windia and Wiguna (2013), subak is a reflection of the concept of Tri Hita Karana (THK) which basically consists of parhyangan (man's relationship with God, which is manifested through the sacred buildings of subak and the rituals that follow it in rice fields), pawongan (human relationship with humans, which is manifested in subak institutions and social interactions that occur in subak),

and palemahan (human relationship with nature, which is manifested within the territory or agricultural land that is the territory of the farming business of its members).

Agriculture and subak in Bali are closely related, indicated by the characteristics of the subak, namely socio-agrarian, religious, economical, dynamic, and independent (Windia et al., 2005). However, global developments and internal agricultural problems can threaten the existence of subak and the sustainability of agriculture in Bali. Operationally, SEARCA (1995) defines sustainable agriculture as a farming system that is viewed holistically (holistic approach), economically viable, environmentally sound, in accordance with local culture and can be applied by the community (technically and culturally appropriate), and socially acceptable to the community (socially acceptable). The goal of sustainable agriculture is to improve the quality of life. This can be achieved through: (a) economic development, (b) improving food security, (c) developing and improving

the capacity of human resources, (d) freedom and empowerment of farmers, (e) guaranteeing environmental stability (safe, clean, balanced and renewable), and (f) focusing on long-term productivity goals. The success of sustainable agricultural development is largely determined by two important factors, namely the best agricultural resource management practices and government intervention (Sugino, 2003).

Subak has become a means of social interaction of farmers based on the spirit of mutual cooperation and high religiosity (Wiguna and Surata, 2008; Suyastiri, 2012). Subak has also proven to be a vehicle for the development of productive economic businesses in rural areas, for this reason, it is very important to strengthen subak-based economic and business units. Given the importance of Subak's function as a socio-agrarian, religious and economic agricultural institution which is very important to preserve its sustainability, it is interesting to review the Strengthening of the Subak Economic Business Institute (LUES) for Sustainable Agriculture in Subak

Pulagan Village Tampak Siring, Bali Province.

METODE PENELITIAN

This research is a type of action research because it includes two stages of aspects, namely the research aspect which includes basic studies on the development potential of the Subak Economic Business Institute in Subak Pulagan. Meanwhile, aspects of action or enrichment include strengthening and mentoring businesses through various trainings in the field of subak economic business development. The determination of the location of the study was carried out by purposive sampling in Subak Pulagan, Tampak Siring Village, Gianyar Regency, Bali Province, which was named a World Cultural Heritage | Windia and Wiguna, 2013). Miles and Huberman in Sugiyono (2010) stated that activities in qualitative data analysis are carried out interactively and take place continuously until complete so that the data is saturated. Activities in data analysis are data reduction, data presentation (display), and drawing

conclusions or verification (concluding drawing / verification).

RESULTS AND DISCUSSION

The Subak Pulagan area is on the east side of Tampak Siring Village far from Jalan Ir. Soekarno as the main road of Tampak Siring Village. The location of Subak Pulagan, which is far from the main road, makes it an advantage for Subak Pulagan in relation to preventing the conversion of agricultural land. Subak Pulagan is one of the three subak classified as Subak Landscape in the Pakerisan watershed. The area of Subak Pulagan is 104 hectares, and it is located along the west side of Tukad Pakerisan which is about one kilometer south of Tirta Empul Temple. Subak Pulagan is also side by side with other ancient cultural sites such as Mengening Temple and Gunung Kawi Temple.

To date, there are 223 subak members of the Subak Pulagan organization with details of 133 people who are enrichers who are active members and are involved in every subak activity, while the other 90 people have the status of casting, namely passive members who

due to some obstacles cannot be actively involved in subak activities and in return they are required to pay. Subak Pulagan is coordinated by a pekaseh (chairman) accompanied by a pangliman (deputy), a secretary (secretary), and a patengen (treasurer).

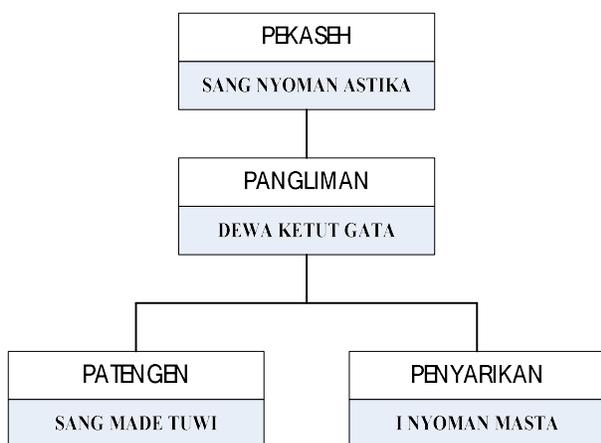


Figure 1. Organizational Structure of Prajuru Subak Pulagan Source: Awig-awig Subak Pulagan (Suasih, 2016).

Pekaseh is the Chairman of Subak who has the obligation to lead a subak. In his daily life, Pekaseh will be in charge of chairing subak meetings, whose meeting materials can be in the form of determining Pekaseh Kesinoman Kelian Krama / Subak Members, subak regulations, water distribution arrangements, handling conflicts / disputes if any, arranging religious ceremonies

related to subak, including coordinating with other parties (institutions) at the village and sub-district levels so that subak can carry out their roles / functions properly. If the subak area is large enough that it is more difficult to arrange, the area is divided into smaller areas, called Tempek. Another term commonly used for the word tempek is munduk or empelan. Each tempek/munduk/empelan is led by a Kelian, whose name is Kelian Tempek or Kelian Munduk or Kelian Empelan. These kelians were assisted by a Kasinoman or Juru Arah or Saya who is in charge of assisting Kelian in conveying information, decisions that must be implemented as agreed in the subak meeting chaired by Pekaseh. The diversity of subak management structure occurs because the problems faced are not the same between one subak and another subak, in addition to differences in innovation / creation in developing subak in order to better prosper subak members.

All of these subak krama are responsible for the continuity of Subak Pulagan as well as all the series of religious ceremonies at Ulun Suwi Temple in the

Subak Pulagan region. Ulun Suwi Temple is a temple built in certain subak areas or several subak that use water from the same water source (Surata, 2013). Unlike most Ulun Suwi Temples, Ulun Suwi Temple, which is worshipped by subak Pulagan krama, has a dalem like Khayangan Tiga Temple owned by villages in Bali, so it is quite unique. According to Pekaseh Subak Pulagan, Sang Nyoman Astika, this uniqueness is believed to be the remains of the relics of the village that once stood in this area in the past.

Strengthening the economic function of subak is very necessary, in addition to the social function that is already owned by the subak institution as an irrigation institution that has become a World Cultural Heritage (WBD). Based on the results of in-depth interviews with research informants, namely Pekaseh (Head of Subak) Pulagan, Mr. Sang Nyoman Astika and the results of Focus Group Discussions (FGD) with farmers who are members of Subak Pulagan and related older stakeholders, research information was obtained, as follows.

1) Ekonomi dari Subak1) Economic Aspects of Subak

a) Establishment of Subak Economic Business Institution (LUES)

The establishment of the Subak Economic Business institution is an urgent need to be carried out in Subak Pulagan to be able to support the economic activities of subak members, starting from upstream to downstream, namely from providing production facilities, breeding to marketing agricultural products. In Subak Pulagan, it must be helped to develop subak economic functions based on the concept of agribusiness systems and businesses. The government through Presidential Instruction No. 3 of 1999 has also provided opportunities for a dual role for farmer institutions including Subak which is not only the manager of the irrigation system, but also provides convenience and opportunities to form economic and business businesses that are legal entities at the farmer business level. To increase the income and welfare of farmers and the establishment of food security. In the forum of the Subak

Economic Business Institution (LUES) farmers can develop the function of production facilities services, the function of agricultural machine tool services (alsintan) the function of microcredit financial services, the function of implementing farm business technology, the function of purchasing and processing crops and marketing functions. Layanan Sarana Produksi

- a) Service Function of Agricultural Machine Tools (Alsintan)
- b) Purchase and processing of crops
- c) Marketing functions of agricultural products

The Subak Economic Business Institute (LUES) is in principle an agribusiness based on food and paddy fields, this farming business will succeed in developing well if the subak member farmers are able to sell their products with decent results. In addition, to increase the level of income of farmers, it is necessary to apply the principle of planting - picking - processing - selling, so that there is added value to the product in this case rice. Farmers in

Subak pulagan process rice as rengginang snacks, which are traditional Balinese snacks used during religious ceremonies. Limited labor in the agricultural sector can be substituted by providing agricultural tools and machinery, this means opportunities for the development of business units for LUES namely the Farmer Production Equipment (ALSINTAN) service business. Similarly, land-owning farmers who are no longer able to work on their land can lease/lend their land to LUES for the development of various crop, livestock, and fish farming businesses with the Tumpang Sari (mixed farming) system.

The habit of farmers in Subak Pulagan is to sell crops in the form of dry harvested grain (GKP), so the business that needs to be developed by LUES / Farmer Group (KOPTAN) is the rice storage business. With this rice barn, it will ensure the availability of food at the level of farmer groups / subak. The next business development is a rice milling unit that is feasible and adequate. Adequate rice milling

facilities and infrastructure are equipped with drying floors, milling machines, grain drying machines, production rooms, grain warehouses, rice warehouses, transportation facilities and are supported by adequate human resources. A decent and adequate rice mill certainly requires considerable capital as well, but that is not a problem because business development capital can be sourced from cooperative loans (credit) supported by an accurate business feasibility analysis. The production activity of this rice milling business will also produce by-products in the form of bran and husks in addition to the main product in the form of rice. Bran will have a higher selling value if it is processed into poultry feed, pigs and cattle. This means that there are opportunities for the development of animal feed businesses.

2) Factors that became obstacles in the establishment of the Subak Economic Business Institution (LUES) in Subak Pulagan

There are several obstacles in the formation of subak-based economic

business institutions, which include the following. There are several obstacles in the formation of subak-based economic business institutions, which include the following.

a) Internal constraints such as a very simple management system, human resources whose knowledge and skills are still lacking, the socioreligious nature of the organization, and the lack of entrepreneurial spirit.

b) Internal constraints such as a very simple management system, human resources whose knowledge and skills are still lacking, the nature of the organization is socioreligious, and external constraints, in the form of low trust of funders (Banks) and competition and weak mastery of market information. For this reason, support from various parties and efforts are needed to prepare professional personnel. The support needed, including the spirit of entrepreneurship.

1) Recognition of the status of a legal entity in an economic undertaking.

Subak in carrying out its role as an economic business institution requires the status of a legal entity in order to allow subak access to various financing institutions and related agencies that can provide business development facilities to obtain capital assistance. Investment and working capital are indispensable in capturing various existing business opportunities.

4) Assistance with business facilities.

The necessary business facilities may consist of business facilities, such as shop buildings and warehouses, production equipment that can be directly used for business activities. Because subak is a new actor engaged in economic business, this support is very necessary to motivate and start a business by subak. Therefore, it is necessary to take the sincerity of the subak management to approach the Supervisory agency which is expected to provide these facilities.

5) Training in business management skills.

Subak urgently needs support from relevant agencies in the form of business management skills training programs,

which can be in the form of: (a) small business management training, to provide broader knowledge and insight into thinking to subak administrators on how to manage a business activity, (b) training on the preparation of business feasibility studies, to equip business administrators or implementers with skills in planning business activities that are feasible to run, (c) practical financial bookkeeping (accounting) training for implementers of small business activities, to equip them with knowledge and skills in accounting for business activities.

(1) Support from the government and society

Support from the village government and the community is needed to grow various business activities carried out. With this support, it will be very easy to drive participation from the community / farmer members so that finally they contribute to the success of the business that will be run by subak

2) Pulagan members. Recognition of the status of a legal entity in an economic undertaking.

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(2) Subak urgently needs support from relevant agencies in the form of business management skills training

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(3) Support from the village government and the community is needed to grow various business activities carried out. With this support, it will be very easy to drive participation from the community / farmers of subak members, so that finally they contribute to the success of the business that will be run by subak Pulagan members. Transformasi dan

rekonstruksi manajemen modern memungkinkan subak untuk berkembang menjadi organisasi yang sosio-agraris-religius-ekonomius.

- (4) The Subak economic institution is expected to become a modern economic enterprise from Subak. But not taking over the function of Subak. However, adding business innovation to the subak institution so that the function of economic activity becomes stronger, to increase added value, income and welfare of farmers increases.

Subak's socioeconomic institutional mechanisms that are in accordance with the needs and desires of stakeholders, are as follows.

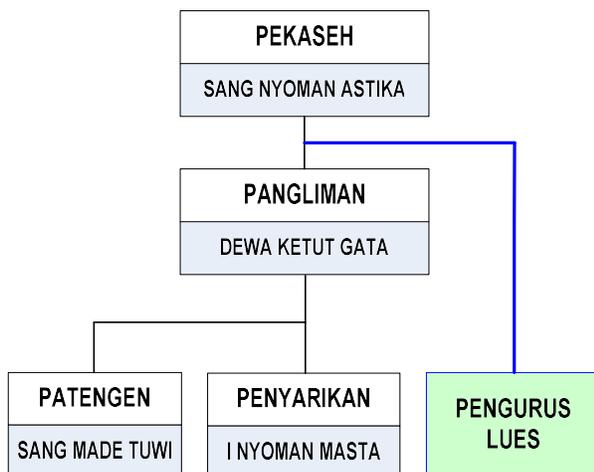


Figure 2. Subak Institutional Mechanism Best Suits Stakeholders' Wishes Sumber: Olahan Peneliti (2022)

The traditional management of Subak that has been running so far is Pekaseh which is assisted by Petengen and Penyarikan in charge of managing the irrigation system and religious rituals in Subak including matters related to the harmony of Parahyangan, Pawongan, and Palemahan which in its implementation is assisted by each Kelian Tempek, together with subak members, and administratively assisted by Penyarikan as secretary at the Subak Institution. Subak as an autonomous institution, means that subak has no direct relation of orders and responsibilities to other institutions, both at the village level and at the sub-district or district / city and even provincial levels. With institutions outside subak, it is only coordinative, namely coordinating subak activities so that they can be understood and if necessary invited to participate and support so that the activities carried out by subak can run successfully. Cooperation and coaching relationships

by other institutions, for example with the Agriculture Office through the PPL (Field Agricultural Extension Officers), the Public Works Office, and the Regional Revenue Service. Subak is also not related to the boundaries of village or sub-district administrative areas. Therefore, one subak area can overlap with several villages or sub-districts and maybe even districts/cities. The subak area is based on a stretch of rice fields that receive water from one source of irrigation water. The management structure of subak in Bali which was initially very simple then became rather complex in line with the development of government policies and demands to be able to develop the subak organization so that it became a truly independent institution and could exist according to changing times.

The transformation of Subak's traditional management to modern management with the aim of strengthening the economic function of Subak, Pekaseh in managing the Subak Economic Business Institution (LUES) which in its implementation will be

assisted by a LUES Management and a manager appointed by the LUES Management. The LUES manager is tasked with managing all business activities in subak which in its implementation is assisted by management tools, such as general administration, finance, accounting and marketing. Meanwhile, the business units that can be developed are the Agricultural Production Facilities Trading Business Unit (Saprotan), the Agricultural Production Equipment Rental Business Unit (Alsintan), Microcredit Business Unit, Rural/Handicraft Agroindustry Business Unit, Tourism Management Business Unit in Subak Pulagan. The units and parts in the Subak Economic Business Institute are directly related to the Subak members. With this new institution, it is hoped that later the dual role of Subak, namely the social function and economic function of Subak, can be strengthened, so that later it can realize agricultural sustainability and welfare for farmers in Subak Pulagan, Tampaksiring DistrictProvinsi Bali.

CONCLUSION

Based on the results of the study, it can be concluded, as follows: The factors that become internal and external obstacles to strengthening the Subak Economic Business Institute (LUES) for sustainable agriculture in Subak Pulagan Tampaksiring Village, are (a) Internal constraints such as a very simple management system, human resources whose knowledge and management skills are still lacking; (b) The socioreligious nature of the organization, i.e. the subak organization is more social and spiritual than its economic function and the lack of entrepreneurial spirit among the subak administrators. For this reason, it is necessary to transform and reconstruct modern management that allows subak to become a socioreligious economic organization; (c) External constraints, in the form of low trust of funders (banks) and the existence of competition and weak control over market information. Because subak economic institutions do not yet have a legal entity, it is difficult to get access to financing or capital loans

from banks or other financial institutions. The strategy of strengthening the Subak Economic Business Institution (LUES) for sustainable agriculture in Subak Pulagan Tampaksiring Village, Bali Province, is as follows: (a) Subak in carrying out its role as an economic business institution requires legal entity status to allow subak access to financing institutions and related agencies that can provide business development facilities; (b) Provision of business assistance from stakeholders, because subak is a new actor engaged in economic business, this support is needed to motivate and start the business by Subak Pulagan; (c) Training in business management skills. Subak urgently needs support from relevant agencies in the form of business management skills training programs; (d) Support from the government and the public. Support from the village government and the community is needed to grow various business activities carried out; (e) The transformation and reconstruction of modern management allowed subak to

develop into a socio-agrarian-religious-economic organization.

REFERENSI

Agrisep. September 2010; ISSN: 1412-8837, 9 (2):153-65.

Arifin. *Psikologi Dakwah Suatu Pengantar Studi*. Jakarta: Bumi Aksara; 2000.

Lestari, N.P.N. Eka; Budhi, MKS; Suidarma, I Made. The Role of Subak as Culture Capital to Develop Community Based Tourism Village (Case Study in Pinge Village, Bali Province, Indonesia). *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*. 2019; 19(3):357-68.

North, Douglas C. Economic Performance Through Time. *The American Economic Review*. June 1994; 84(3):359-68.

Peraturan Daerah (Perda) Provinsi Bali Nomor 9 Tahun 2012 tentang Subak.

Pitana, I Gde dan Surya Diarta, I Ketut. *Pengantar Ilmu Pariwisata*. Yogyakarta: Penerbit Andi; 2009.

SEARCA. *Working Paper on Sustainable Agriculture Indicators*. SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA). College, Laguna 4031, Philippines; 1995.

Sugino, T. *Identification of Pulling Factors for Enhancing the Sustainable*. 2003.

Sugiyono. *Metode Penelitian Administratif*. Bandung: Alfabeta; 2010.

Suasih, Ni Nyoman Reni. Analisis Determinan Kesejahteraan Petani (Studi Kasus Di Subak Pulagan, Desa Tampaksiring, Kabupaten Gianyar). *Disertasi*. Program Pascasarjana Universitas Udayana Denpasar; 2016.

Suyastiri Y.P, Ni Made. Pemberdayaan Subak Melalui "Green Tourism" Mendukung Keberlanjutan Pembangunan Pertanian Di Bali. *Jurnal SEPA*. Pebruari 2012; 8(2):51-182.

Wiguna, I W.A.A. dan S.P. Kaler Surata. *Multifungsi Dari Ekosistem Subak Dalam Pembangunan Pariwisata Budaya*. Yogyakarta: Aksara; 2008.

Windia, W., N.G. Ustriyana, I W. Budiasa, I W. Ginarsa, dan I W. Sudarta. *Keberlanjutan Nilai-nilai Tri Hita Karana untuk Pelestarian Sumberdaya Budaya di Kabupaten Gianyar*. Kerjasama antara Bappeda Kab. Gianyar dan Jurusan Sosek Fakultas Pertanian Universitas Udayana, Denpasar; 2001.

Windia, Wayan; Sumiyati; dan Gede Sedana. Aspek Ritual pada Sistem Irigasi Subak sebagai Warisan Budaya Dunia. *Jurnal Kajian Bali*. April 2005; 05(01).

Windia, W. *Transformasi Sistem Irigasi Subak yang Berlandaskan Konsep Tri Hita Karana*. Denpasar: Pustaka Bali Post; 2006.

Windia, W. dan W.A.A. Wiguna. Subak Warisan Budaya Dunia. *The Cultural Landscape of Bali Province Inscribed on the World Heritage List in 2012*. Denpasar: Udayana University Press; 2013.