Ringkasan

Subak merupakan salah satu dari banyak kelompok sosial yang ada dalam masyarakat Bali. Agama Hindu yang diadopsi oleh bangsa semula orang Bali sudah merupakan tradisi yang membedakan satu dan upacara keagamaan yang keramat.

Dari 73.875 ha sawah di Bali hampir semuanya (71.600 ha) mem-pakau sawah berpengairan pelosap dengan sistem irigasi yang seluruhnya diselenggarakan oleh petani. Satu kesatuan lingkup kecil yang bersumber dari sumber air atau sumber alam oleh subak organisasi adalah subak yang selalu menggerus pengairan jago memupuk kegiatan yang meliputi pertanian, sosial ekonomi dan keagamaan.

Subak sudah ada sejak beratus-ratus tahun yang lalu sepanjang ingatan orang Bali. Ia digunakan berbagai karenanya adanya pentingnya bersamaan kelompok petani akan kebutuhan air pengairan untuk pertanian dari sumber air tertentu dan mereka bersama membantu untuk pemakaian masalah mereka bersama secara gotong royong dan saling. Ia menjadi hal yang perlu untuk pertanian sawah di Bali.

Auggota subak adalah orang-orang yang ada di bagian masyarakat dengan sawah baik pemilik sawah pengairan non pemilik; kesulitan ada perbedaan dalam hak dan kewajiban. Hak dan kewajiban anggota subak diatur dalam anggaran dasar subak atau swig-swig, meliputi hak-hak dan kewajiban anggota subak organisasi yang demokratis, seperti hak memilih, hak

dipilih, hak mengemukakan pendapat dan sebagainya, dan hak kut meliki kekayaan subak dan pelayanan air pengairan dan sebagainya secara adil.

Tugas dan kewajiban anggota subak meliputi:

(1) bidang fisik, yaitu membentuk dan memelihara bangunan bangunan pengairan dan bangunan subak lainnya.

(2) bidang keagamaan, memeliharaan upacara keagamaan yang berkaitan dengan pertanian, dan

(3) bidang sosial, untuk menstasi dan memelihara kelangsungan organisasi dengan ikut bertanggung jawab terhadap pelaksanaan kepentingan kepentingan organisasi dengan kegiatan dan sanksi-sanksinya.

Dari berbagai bidang kegiatan yang dilakukan oleh subak, sedemikian jauh berjalan lancar dan telah berhasil dilaksanakan dalam kegiatan bersama secara gotong royong, baik secara periodik maupun insidental, termasuk pengembalian kredit bimas, penelitian IPEDA, pembuatan kantor subak dan lain-lainnya. Namun di sini bahwa sekalikal di dalam organisasi tradisional subak mampu memecahkan masalahnya sendiri dalam kegiatan dan keputusan bersama.

Subak mempunyai kerja sama yang erat dengan dinas-dinas pemerintah daerah setempat, terutama dinas yang ada hubungannya dengan pengairan dan pertanian. Pemerintah dapat berupa:

(1) bantuan langsung berupa biaya, materi atau pembuatan bangunan irigasi,

(2) bantuan dalam koordinasi antar subak dan dengan pemerintah, dan

(3) penggunaan subak untuk mensubsidi program pembangunan.

Jadi mampu di sini bahwa subak sangat berbelas sebagai suatu organisasi di tingkat petani didasarkan atas beberapa hal:

(1) adaanya kesadaran akan adanya kepentingan bersama dari para anggotanya yang berupa kebutuhan akan air pengairan,

(2) dirasakan adanya kebutuhan yang sungguh-sungguh dari para anggotanya untuk dapat mencapai sesuatu dengan kegiatan bersama, hal ini sudah merupakan tradisi orang Bali untuk mengatasi masalah di antara mereka sendiri,

(3) adanya ikatan yang selalu dipelihara dengan sesuatu upacara keagamaan yang kuat,

(4) adanya landasan yang dapat digunakan sebagai pedoman berupa awig-awig yang berisi aturan-aturan sebagai pedoman dasar yang sudah berakar kuat dalam masyarakat Bali, dan
(3) adanya bantuan, pelayanan dan kebijakan-kebijakan pemerintah yang memberikan iklim yang baik untuk perkembangan subak.

Karena subak merupakan organisasi yang terbentuk dari bawah maka anggota dan pengurus tabu benar alasan apa menolak harus bergabung dan kegiatan kelompok, membayar iuran dan juga cabang benar apa yang dagrant dibapapkan dan subak.

Ongkos deniikian subak yang sudah berakar dan ternyata sangat bermanfaat untuk usaha pembangunan pertanian. Pembinaan organ-

asisi subak ini lebih ringan bagi pemerintah karena dapat dibina pada bantuan - bantuan yang sungguh - sungguh diperlukan oleh subak dan diharapkan memanfaatkan subak seperti bangunan - bangunan pengisian yang lebih modern dan dalibo skala besar, penggunaan teknologi baru dalam pertanian dan sebagainya.
1. Introduction

In speaking about subak, it can't be apart from the behavior of Balinese community with all the socio-structural complexities. Subak is only one of many groupings in Balinese community that based on various unrelated bases, resulting grouping those are intercrops to each others.

The Balinese people are an ethnic group united by the consciousness of the same culture, strengthened by the same language, although there are still some local differences. The Hindu Religion had long been integrated in the Balinese culture and to be another element to that unity.

The Bali Province have more than two millions population, with 400 people per square kilometer density, and most are Hindus (93%). The other religions are Moslem (5%), Buddha, Catholic and Christian.

The Island of Bali is 5561 km² of size, divided by east - west striking mountains, with volcanous of 1200 – 3000 meters, form a narrower flat land in north and wider is the south of 8 - 16 km from the coast. All the areas are cut by many small rivers into pieces of land of hundreds meters wide. Most of the mountains cover by forests those are very important in the Balinese beliefs. At those mountains are located the holy temples of Bali.

A Balinese village is mainly based on territory. Beside that this village is also a religious based unit determined by a set of village temples. So this village as a socio-territorial based unit is strengthened by custom and holy religious ceremonies.

An adat village is a traditional custom based unit, divided in several smaller units called banjar, headed by king banjar, that is elected for a certain period. A banjar has a central place in bali banjar where members can meet each other and hold meetings periodically.
A Banjar does not only deal with administration and social aspect of the banjar community, but also in religion, land and adat law etc.

Beside the village and banjar system, social system in Balinese Community is a more complex system with the influences of river (caste), dadel (relative), nda (special activities) and others that inter-connected each others.

Most of the 73,375 hectares of sawah rice fields in Bali are irrigated (71,650 hectares) by systems of small scale irrigations those are entirely carried out by farmers. The farmers build small dams made of coconut trees and brojung (a bamboo made filled with stone) primary, secondary and tertiary irrigation canals with all the irrigation accessories needed. Beside that there are also some large scale irrigation structures built by the Government.

An ecological unit area in both side of a river is called pasehan, under a soduhan. Each pasehan consists of many smaller units those are get from single streamflow canals out of the river, called subak. These small units are basic elements of the agricultural system in Bali. Although the main job of subak deals with irrigation, it is more than that. Subak is an autonomous traditional institution, a planning board of agricultural activities and a religious group.

So a subak is a traditional-religious organizations deals with irrigation in Bali, but its activities also covers agriculture, socio-economic and religious aspects.

Knowing more about subak recently a case of subak of Lepat are taken, in the Baha Village, the Kabupaten of Badung.

2. The Background Information of the Baha Village

The Baha Village is in the Kecamatan of Mengwi, the Kabupaten of Badung, Bali Province. This village is 5529 populated with the increase in the last five years was negative because of the trans-migrations to Sunuteru (1974 - 1975) and Tulakasri (1976 - 1977).

Most of the people are farmers (47%), and laborers (48%), and few of them do handicraft works, traders and civil servant etc.

The Baha Village headed by a village leader called perbokel, and the administrative unit of this village is also called Perbokelan Baha. A perbokel is assisted by a Juru tulis perbokel as secretary. The Perbokelan Baha is divided into ten banjars with 348 to 857 population of each (table 1).
<table>
<thead>
<tr>
<th>No.</th>
<th>The Name of Banjar</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selat</td>
<td>669</td>
</tr>
<tr>
<td>2.</td>
<td>Tengah</td>
<td>687</td>
</tr>
<tr>
<td>3.</td>
<td>Narungan</td>
<td>857</td>
</tr>
<tr>
<td>4.</td>
<td>Dukuh</td>
<td>581</td>
</tr>
<tr>
<td>5.</td>
<td>Budil</td>
<td>521</td>
</tr>
<tr>
<td>6.</td>
<td>Gegeran</td>
<td>462</td>
</tr>
<tr>
<td>7.</td>
<td>Kedra</td>
<td>562</td>
</tr>
<tr>
<td>8.</td>
<td>Pengriatan</td>
<td>352</td>
</tr>
<tr>
<td>9.</td>
<td>Busana Kelod</td>
<td>348</td>
</tr>
<tr>
<td>10.</td>
<td>Busana Kaja</td>
<td>513</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5579</td>
</tr>
</tbody>
</table>

Besides the administrative unit of perbekelan, there are adat villages (traditional custom villages). An adat village characterized with a complete set of pura (temples). A complete set of pura consists of kening tiga and rokatempat. Kayangan tiga consist of pura lalam, pura pancak, and pura deus.

The Perbekelan of Baha covers four adat villages: Baha, Sabangan, Dukuh, and Cengkok. Klisan (leader) of an adat village is assisted by one or more klanpatis. Baha village has six klanpatis: three in Sabangan and one each in Baha, Dukuh and Cengkok.

The banjar and the adat village are not related. The perbekelan only help in coordinating inter adat villages.

The agricultural land in Baha village is 665.77 hectares, mainly sawah 299.64 hectares (45%), upland 264.13 ha (40%), and home-yard 103 ha (15%). In general the sawahs have good irrigation with three rice crops a year or two crops of rice and one pala wi (non rice crop). The first rice crop is in March-July, the second is in July-November, and the third crop of rice or pala wi is November-March. The pala wi here are: corn, soy bean, peanut etc.

Most rice varieties here were non IRRI varieties which have high yield, about 4 – 5 ton per ha. The HYV’s were among others: IR32, IR30, IR20.

Hog, chicken and duck are the main husbandery been, and a few of cattle. The number of hogs in the Baha village was 1523, cattle 659, chicken 2921 and duck 2780.
The people of Bali have known subak since hundred years, it has not been known when the first exist. It might be founded because a group of farmers with the same need on irrigation water from the same source, tried to solve their problem together based on mutual help and agreements, and then tried to manage a better water distribution.

So it seems that subak can not be apart from the history of the agricultural development in Bali itself.

Some people said that subak began in Markandesa era, a yogi known as Jaya in the first century of Baha, together with his followers, opened the forest in Bali for agriculture. An archeologist, Dr. E. Gores, stated that in the year of 600 BC agriculture was known in Bali, using cow and gareb (water buffalo) and tilled irrigation system. From the written Depoiste (prasasti) it was found that in year 806 of Saka (882 AC) the word mukah ater was known, means pekasah or irrigation leader. Other statement said that subak was known in 894 and developed in 1022. The word subak might be from "bewak" that means a good distribution of water.

People said that the subak of Lepat is the result of the people of Baha village in a successful water source searching. It was because of the increasing need of food from agricultural produce because of the population increase, that make them tried to get irrigation water to increase production. They were looking for water resources and found a spring and called Taya Sanpian Patihung Lepat.

The useful spring is always maintained by the people united as members of Lepat subak.

4. The Membership

The member of subak are people those are related with irrigated fields. Usually they are distinguished between owners and operators. Some people call the owners as a formal members and operators as a practical members. But most people said that operators are the members of subak, because they do the activities related to subak.

The word ngenst ngangng for non-operator-owners, means that they do not participate in the work but sharing in financing, and ngenst ngangng for operators that do the works.

The whole member of subak can be divided into three kind: krama pekanah, pengampel and deluwana. Krama pekanah or krama subak also called subak people with water association, are members those do the subak activities in irrigation works. Pengampel is non-active members in the water-distribution works, but they pay an amount of money decided in subak rule. Lepatbaru are free from water distribution works in the substitute of carrying out religious ceremonies of
subak. The members of the Leput subak are 728 Krama, 882 owners, and 857 operators, cover the sawak area of 273.85 hectares. These members are grouped in smaller groups called tempol or munduk (Table 2).

<table>
<thead>
<tr>
<th>No.</th>
<th>Munduk/Tempol</th>
<th>Krama owners</th>
<th>operators</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Narungun</td>
<td>51</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Kebon</td>
<td>62</td>
<td>47</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>Apunun</td>
<td>64</td>
<td>64</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Monteos</td>
<td>70</td>
<td>84</td>
<td>99</td>
</tr>
<tr>
<td>5</td>
<td>Sana</td>
<td>102</td>
<td>87</td>
<td>112</td>
</tr>
<tr>
<td>6</td>
<td>Babakan</td>
<td>62</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>7</td>
<td>Baha</td>
<td>80</td>
<td>83</td>
<td>810</td>
</tr>
<tr>
<td>8</td>
<td>Ngabetan</td>
<td>118</td>
<td>89</td>
<td>124</td>
</tr>
<tr>
<td>9</td>
<td>Gaeng</td>
<td>75</td>
<td>73</td>
<td>102</td>
</tr>
<tr>
<td>10</td>
<td>Saga</td>
<td>40</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>728</strong></td>
<td><strong>682</strong></td>
<td><strong>857</strong></td>
</tr>
</tbody>
</table>

The members of subak has their rights, jobs and duties written in the subak rule of awil-awil. The rights of subak members are the rights:

1. (1) to elect subak leaders (peaseh, penyarikan, lianu, tempol, juru arah etc.)
2. (2) to be elected as subak leaders.
3. (3) to speak and to vote easily in subak meeting.
4. (4) to get services and treatments fairly from subak.
5. (5) to get a share of subak properties.
6. (6) to get a share of money paid as penalties from members not doing their duties.

The jobs and duties of the subak member consist of physical, religious, and socio-economic fields.

The physical jobs are building and maintaining all the irrigation structures and necessary and non-irrigation structures, together or not together. The non-irrigation structures are subak roads, sawak hall for meeting and places of religious ceremonies related to subak. There are many-religions from land preparation up to the harvest it stored. Some are done together and some others are not. In Leput there are 13 kinds of ceremonies, and another additional ceremonies for preventing special pests, such as mouse, hopper etc.

In socio-economic field, every subak member as a member of an organization, hold the responsibility of all the rules and decisions of it with all the activities and penalties, and ought to obey and maintain the life of the organization.
Those dates are among others as follows:

(1) to obey and carry on the subak rule, written in the owner's or not written
(2) to carry on all the decisions of subak meeting
(3) to do all the instructions of subak leaders and subak say
(4) to attend the subak meeting
(5) to conduct a proper water distribution
(6) to pay fees and penalties
(7) to carry on the government instructions stated through subak
(8) kraja subak ought to do the nggor ngayah in all the subak activities.
(9) to do the repairing and maintaining the irrigation structures, roads and paddy together.
(10) to carry on religious ceremonies related to subak.

The penalties in the form of money must be paid by members who are not doing the jobs. Such as a kraja subak, who do not do the nggor ngayah has to pay one kilogram of rice.

If he do not do it three times in a servies, he could be regarded as a nonactive member and has to pay nggor ngayah, one kilogram of rice for every 2, 1 kg. Not attending the meeting has to pay 2 kg of rice etc.

8. Organization

Subak is an autonomous organization. This freedom of subak to arrange the irrigation has been since the kingdom era and continued until now. The highest rank in subak organization is sedah or agung. He is a government official at kehupaten level with the job dealing with irrigation, subak and land tax.

Under the sedahan agung there is sedahan, also a government official with the same job and smaller area. In the old written articles they are often called as tax officials and the recent articles the are more regarded as irrigation officials.

The job of sedahan and sedahan agung according to I.B. Tekah et al (1973) are:

(1) to manage the irrigation and water resources in their areas.
(2) to solve the problem among subak those cannot be solved by themselves.
(3) to collect the land tax (now IPEDA)
(4) to facilitate a better communication between subak and the government in deciding the dates of many kinds of ceremonies.
(5) to coordinate at least ceremonies related to subak.
Ugler sedahan there is pokasih or ilau subak

Pokasih is not a governorship official, nominated and elected from and by the subak members in swak meetings, generally does not get any land, except in Badung kabupaten.

The election of pokasih is done in a meeting attended by all members and leaders, in an agreement basis, and often also attended by sedahan and perbeka.

In a small subak under pokasih are members directly. But in a larger one, it divided in smaller units called tempok or tempeh. In Leput these smaller units are called munduk. There are differences between the structure of subak leaders in general and Leput. In general a tempok lead by a ilau tempok assisted by juru arah, kasimmon and juru ilau. A juru arah delivers orders and announcement from leaders to members. Kasimmon is a general assistant and juru ilau specially distributes water. In certain areas there is also a man with a job on securing the irrigation netflow and water distribution called petlik.

In Leput there are one or two juru munduk in every munduk, and two to three munduk are under a pengelma that is nominated by pokasih, usually a man that able to read and write.

There are two kind of member meeting: periodical and special meeting. The periodical meeting is once in 35 days. The special meeting is help when there is a need to discuss work plans and activities have to be done soon (flood, pest, quarelling etc).

6. The Activities

The subak activities consist of organizational, irrigational and agricultural, and socio-religious activities. The organizational activities are those all kind of meetings. From the samples of Leput members, there were only 3% attending all the meeting in the last year (1977-78), 40% attending 75% of the meeting or more, 37% attending 50%, 23% attending less than half of the meetings.

The irrigation and agricultural activities are a group action in repairing and maintaining the irrigation structure and accessories, implementing biases (registering participants, distributing fertilizers and pesticides, credit repayment etc.).

The religious activities are participating in ceremonies and offerings. The others are repairing and maintaining subak road together, cleaning and maintaining pura, subak road, the place for meeting, subak office etc.

7. The Decision Making

The foundation of the subak organization is written in subak awig-awig. All the decisions decided by leaders based on the awig-
awig. In dealing with important things the decisions decided in a meeting, where every member can participate the decision making. The decision are taken based on agreement and the most voters support basis.

In general the problems and the implementation of subak activities are decided in meetings, such as bimas, credit repayment, the input use, JPEDA (tax) penalties, building the office, the election of pekhek, cropping pattern, ceremony arrangement etc.

There are some decisions that are decided in the meeting of munduk level, such as the election of klan munduk or juru munduk, repairing canals or accessories of each munduk, ceremonies at Bedugul (the place for ceremonies of each munduk).

When there is an unsolved problem by pekash, it goes to the sedahau. And when sedahau cannot solve either, it goes to the sedahau agung. And when sedahau agung cannot decide either, it goes to the court. But generally all problems can be decided and solved at the subak level. The difficult problem because of lack of prove just ended with mocaron, a statement at the religious ceremonies with certain offerings according to the traditional costum.

3. The Experiences and the Problems

From the various kind of activities done by subak, so far, are running well.

These activities covers routine and incidental activities. The routine activities related with irrigation, road, ceremonies, bimas, tax and credit repayment. The incidental are building the subak office, building and repairing permanent irrigation structures. All the works are done in a group action on mutual help basis (gotong-royong) periodically, once in a season or else.

It seems that the mechanism within the traditional organization of subak is able to solve its problem by itself. All of these are based on (1) the same need for irrigation water, strengthen by (2) the holy religious ceremonies, and (3) the awig-awig which contain all the rule as a basic guidance to face problems together, that strongly rooted in Balinese community.

4. The Support Services

An irrigation (and agricultural) organization at the farmers' level can live and develop, among others, when there is an awareness of the serious need of its members to achieve by group activities and also there exist aids and services from the government policies to create a good climate in developing this organization.
The role of the government in relation to subak can be:
(1) a direct aid in the form of finance or material aid in irrigation structure rehabilitation or to build the dam itself, supervising agriculture,
(2) coordination between subak and between subak and the government,
and (3) using subak for a successful government programs, such as the bimas, the agricultural extension and the tax collection.

It seems here that subak has a very close relationship with the local government agencies, especially the irrigation and the agricultural agencies. In the increasing food production program through the bimas, the government officials in Bali tend to use the subak thus other institutions.

The role of the irrigation section of the public work (PU) are important too in the irrigation construction, the technical assistance to subak, and technical training.

In the Kabupaten level there is a Board of irrigation (Pantiya Panganairan), headed by Bupati (the chief of kabupaten), with members of subak, the head of Agricultural Service, the head of irrigation section of public work, the head of agrarian office, the head of Community Development Service and the head of the police.

The jobs of this board are to facilitate the coordination in using water, in cropping pattern, security and maintaining irrigation structures as the mainstream flow canals, and to facilitate the coordination among government agencies, that the Governor be able to aid with policies and finance from the development budget allocation.

10. Discussion and Evaluation.

Subak is one of the social groupings those exist in Balinese community. The Hindu religion that is widely adopted by most people of Bali to be a tradition in the Balinese people. The Balinese villages are a socio-economic and territorial unit based on traditional custom and holy religious ceremonies.

From the 73,375 hectares of sawah in Bali, most (71,600 ha) are irrigated with the irrigation system arranged by farmers. A small unit of an irrigation area originated from a single water canal is managed by a traditional organization of subak that also deal with agricultural, socio-economic aspect and religious ceremonies.

The subak has existed since centuries ago. It might be founded because of the same need and the will to solve the problem together in a group activities based on mutual help and agreements.

Members of a subak are people related to sawah, although there are some differences among them, each member has his own right and duties. So far activities are running very well, also in making the
government program to be successful. The close relationship with the local government agencies and the support services have made all the successful story of subak.

It seems here that subak is a very successful organization at the farmer level based on several bases:

1. the consciousness on the same need of irrigation water
2. the serious need of group activities in achieving their goal; that roots in Balinese tradition to solve the problem by themselves.
3. the alliance that is always maintained by the holy religious ceremonies.
4. the foundation that to be a guidance in the form of the awig-awig contains the rule strongly rooted in the Balinese community
5. the aids and the support services from the government policies to facilitate the development of subak.

In fact a subak is a bottom-up organization, that the members and the leaders know very well why they joint in it, pay fees and what can be expected.

So the strongly rooted subak is a very beneficial for development efforts. With some aids at the key points those seriously needed, this existing organization can be improved and made more useful toward the development as a whole.

References: