

臺灣灌溉事業與管理組織

Irrigation Development and Management Organization in Taiwan

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摘 要

臺灣灌溉早在500年前已開始。自鄭成功逐出荷蘭人以後，大批大陸之移民陸續來臺開墾。依據年代之變遷及社會之背景，其沿革可分為：早期（1895年以前），日據時代（1896-1945年）及光復（1945年）以後等三個顯著時期。本文之主要目的乃向未與灌溉有關及外國人士提供一般性之介紹。文中對每一時期均述及灌溉開發，投資及管理三個問題。惟對光復後之情形較為詳細。

臺灣灌溉原屬於私人事業，經過一段時間後，因經費，技術問題，及人口之增加，成為大眾之需要，嗣由政府補助逐漸由小型系統發展為大規模之灌溉事業，以至目前政府注重現有設施之改善更新以維持配合農業生產之功能，其間管理組織亦受政府之輔導，由私人之運用逐漸改為公共之管理組織，並經多次改組及合併以後，成為現在之農田水利會組織。

光復以後臺灣灌溉管理組織經幾次改組，但在農田水利會以下之田間灌溉管理上之組織系統，大致維持相同之型態。一般在水利會之下，設有水利工作站直接執行灌溉配水管理維護及徵收水費，為實際田間灌溉排水之管理維護等工作，在水利工作站之下，依照水利系統由水利會會員（農民）本身組織水利小組成為水利會之基層組織。其工作之推行乃受水利會之監督及指導。本文後段詳述此種田間管理組織。

臺灣灌溉事業及其管理組織之歷史悠久，並配合其他農業改良部門，對推動農業增產之貢獻甚大。

I. Introduction

Taiwan is an island located in the western Pacific just east of the Chinese mainland. The total area is 35,962 km². It is subtropical in climate, with high temperatures and a heavy annual rainfall averaging 2,430 mm. Typhoons, which occur during June to September, bring strong winds and storms, and sometimes cause serious damage.

Rivers in Taiwan are short and steep. They originate from the Central Mountain Range, which divides this island into two parts; east and west. On the east coast, the topography is unfavorable for cultivation; the lands are rolling and soils

are gravelly and subject to flooding. The region is sparsely populated and the areas suitable for farming are limited to low elevations. On the west coast, there are more agricultural lands with well developed economic activities and industries.

Rainfall is not distributed quite in accordance with the growing seasons of crops. The period from November to the following April is dry, when more water is needed for crops. Irrigation is required and this depends on available facilities. Drainage facilities are also needed for reducing flood damage and improving the soils. On the other hand, the warm climate of Taiwan provides a comparatively long growing season in which two or more crops can be planted in a year in areas where water is available.

Of the total area of Taiwan, 25% or 890,000 ha. is cultivated lands including approximately 60% as paddy fields and 40% as upland farms. Rice is the principal irrigated crop. Therefore, the development of water resources has been mainly for rice irrigation. Irrigation and drainage facilities are operated and managed by irrigation associations, which are organized by farmers under the supervision of the government.

In Taiwan, there is an irrigated area of about 500,000 ha., of which 440,000 ha. is under the jurisdiction of irrigation associations and served by irrigation systems including main canals and laterals totaling 52,560 km in length, 1,543 shallow and deep wells, and 18 reservoirs. In 1975, irrigation accounted for about 87% of the total water use or 14.7 billion m³, of which 74% came from rivers, 9% from wells, and 17% from drainage channels and other sources.

Regarding irrigation development and management organization in Taiwan, there are three significant periods, namely, the early period, the Japanese occupation period and the period after World War II. In this paper, more details are given to describe the situation after World War II,

II. Early Period (Before 1895)

1. Irrigation development:

The history of irrigation development for agricultural production in Taiwan may be traced back to 500 years ago before the Dutch came to this island. After Koxinga, the national hero, expelled them from this island, large numbers of immigrants from the Chinese mainland arrived for land reclamation and settlement. Taiwan became a territory of China during the Ching dynasty in 1683 until it was colonized by Japan in 1895. During this 212 year period, many irrigation facilities were constructed by the Chinese settlers, which were, however, primitive and simple canals and diversions to take water from natural rivers and creeks, occasionally with addition of farm ponds.

The water resources were not well utilized essentially because of technical difficulties. By 1895, the total area reclaimed as paddy fields was more than 200,000 ha., of which 107,716 ha. was served by irrigation systems.

2. Financing of development:

All the irrigation systems were constructed by individual efforts without

financial and technical assistance from the government, except one canal system in Kaohsiung, which was built under government technical guidance. Because this canal system was built by C. Tsao, it was named after him for his distinguished achievement. Another canal system in the north was constructed by Shi-Liu Kuo and was also named after him.

3. Irrigation management:

In this period, population was sparse, land was plentiful, and there was no need to restrict and regulate the use of land and water. All the irrigation systems were privately owned and managed without supervision of the government. Because of this, purchases and sales of the canal systems could be made.

III. Japanese Occupation Period (1896-1945)

1. Irrigation development:

During the first six years of Japanese occupation, an overall survey was made on the status of the private irrigation systems. Then, in order to promote rice and sugar cane production in Taiwan, two measures were taken for irrigation development.

The first measure was the improvement of all existing systems, including remodeling and consolidation of the storage ponds in the Taoyuan area. The second measure was the construction of new canal systems and reservoirs. The construction projects were carried out under government supervision. The major irrigation systems completed in this period were the Taoyuan canal system which supplied water for 22,000 ha. in the north, and the Chianan canal system which took water from the Wushantou reservoir to irrigate 75,000 ha. in the south.

By 1945, the total irrigation area was increased to over 500,000 ha. The highest record of annual rice production was 1,400,000 m/t. During World War II, about 260,000 ha. of the irrigated area went out of service due to deferred maintenance and destruction of the facilities by the war and typhoons. The rice production in 1945 dropped to 639,000 m/t.

The increases in cultivated lands, paddy fields and irrigated areas during this fifty-year period are shown in Table 1.

2. Financing of development:

The construction costs of irrigation systems were financed partly with subsidies from the Japanese government and partly with loans to the local farmers. In the beginning of this period, all big canal systems were initiated and constructed by the government at its expense; by 1908, 54 such systems were constructed. But later on, the beneficiaries of this kind of construction works were required to share a certain portion of the costs. For the construction of facilities related to sugar cane production, the Sugar Company also had to provide contributions.

The loans were extended either by banks or by the Japanese national treasury. The funds for loan repayment and maintenance of facilities came from the collection of fees levied according to the size of benefited area.

Table 1, Increases in Cultivated Lands, Paddy Fields and Irrigated Areas, 1900-1945

Year	Cultivated Lands (ha.)	Paddy Fields (ha.)	Irrigated Areas (ha.)
1900	347,408	194,656	141,260
1905	624,501	304,907	194,223
1910	674,099	332,372	226,706
1915	700,080	343,087	242,455
1920	740,419	367,177	305,270
1925	775,468	373,628	350,471
1930	812,116	396,670	441,477
1935	831,003	478,689	465,920
1940	860,456	529,621	530,113
1945	768,147	474,802	512,977

Source: Lin, H. H., T. Y. Lee and S. T. Hsu, "Water Conservancy," History of Taiwan Province IV (Chinese), Taiwan Literature Commission, Taiwan, ROC, 1945, P. 37

3. Management organization:

a. Evolution of organization:

In order to execute its colonial policy for economical control of Taiwan and in view of the fact that the private irrigation systems were not well managed and subject to damage, the Japanese government in 1901 promulgated a set of regulations calling for the registration, as public facilities, of all private canals considered to be of public benefit for placing them under government supervision. In 1903, 69 private canals were so registered. However, most of the canals were still privately operated by their owners.

The years later, under the guidance of the Japanese government, 181 public canal cooperatives were established; those with financial difficulty were taken over by the government for direct operation and management.

In the meantime, government canal cooperatives were also established for the operation and management of the canals which were constructed by government effort.

In 1921, the Japanese government further promulgated regulations to combine various cooperatives that operated public canals, government canals and newly constructed canals and reorganize them into irrigation cooperatives. The reorganization work was completed in 1937 with the formation of a total of 108 irrigation cooperatives. Thus, the foundation of irrigation management organization in Taiwan was consolidated. In 1942, the service areas of the cooperatives were redivided, and they were combined into 38 units until the end of the war.

b. Management system:

The functions of the irrigation cooperatives were irrigation development, management and maintenance. The chairmen of the cooperatives were appointed by

the Japanese government for a term of four years to represent the cooperatives in carrying out these functions. For the supervision of the cooperatives, deliberation committees were organized, which were concurrently headed by the chairmen of the cooperatives. The deliberation committee members also served a term of four years without salary; half of them might be appointed by the government, and half elected from among the cooperative's members. The elections were held under the direction of the chairmen of the cooperatives. Such a management system was entirely controlled by the Japanese government.

Under the irrigation cooperatives, there were local executive cooperatives in charge of the actual operation, management and maintenance of the farm irrigation and drainage facilities. For better coordination of the irrigation development activities of the irrigation cooperatives, a joint council of irrigation cooperatives was established in Taipei.

IV. Period After World War II (Since 1945)

1. Irrigation development:

Taiwan was restored to the sovereignty of China in 1945. Since then, irrigation development for agricultural production has been undertaken in several stages.

The work of irrigation rehabilitation started after World War II, and the 260,000 ha. of lands which had been out of irrigation service recovered production gradually by 1950.

Then, the projects left unfinished by the Japanese were completed. In addition, many single-purpose irrigation projects including reservoirs, canal diversions, pumps and ponds were implemented, and drainage improvement was also planned.

The rapid population growth in Taiwan after the war necessitated new irrigation development efforts to increase food production. These efforts covered large-scale irrigation extension, construction of multipurpose reservoirs, ground water exploitation, and irrigation of reclaimed tidal and river lands. For economical and efficient use of the available water supply, rotational irrigation improvement and canal lining projects were also carried out. The major accomplishments in this period included: lining of 1,024 km of canals, in chianan area, extension [of rotational irrigation to more than 120,000 ha., drilling of 726 deep wells, reclamation of some 5,800 ha. of tidal lands, and construction of the Shihmen, Tapu, Paiho, Mingteh and Tsengwen reservoirs as well as their irrigation systems.

A land consolidation program was started in 1959 to facilitate and increase the efficiency of farming by improving the shape and size of farm plots and the layout of farm roads, and irrigation and drainage ditches as well as exchange of land holdings. Some 275,000 ha. of agricultural lands have been consolidated.

Since 1973, under the Accelerated Rural Development Program (ARDP), attention has been paid to the improvement, strengthening and repair of existing irrigation and drainage facilities to prolong their service life in the interest of agricultural production. This measure is as important as construction of new facilities, because the latter is costly and will take a long time to realize benefits.

Although some of the farm lands in Taiwan have been shifted to non-agricultural

uses owing mainly to industrialization and urbanization, the above mentioned measures together with other agricultural improvements have raised the annual rice production from 639,000 m/t in 1945 to 2,600,000 m/t in 1977.

2. Financing of development:

Sources of financing for irrigation development include the Government and the Joint Commission on Rural Reconstruction (JCRR) for grants, and JCRR and the Joint Irrigation Loan Fund for loans. Loans are to be repaid with interest by the project beneficiaries, whose repayment ability is determined by the amount of the loan and the benefit to be derived from the project.

Before 1960, for new irrigation projects, the east coast received 70% and the west coast 50% of the financing in grants. For the improvement projects such as rotational irrigation, supplementary ground water irrigation and canal lining, the percentages of grants were lower and depended on the annual budget availability.

JCRR contributions in the early years came from the U. S. Aid Program, which was phased out in 1965. Since then, JCRR has been operating with funds appropriated annually from the Sino-American Fund for Economic and Social Development (SAFED). The influence of SAFED has declined as funding from the Government budget has relatively increased. A uniform interest rate of 6% per annum was charged against the loans extended by JCRR for all irrigation projects prior to 1961. In that year the interest rate was raised to 12%. As a result, the progress of irrigation development was much retarded, even though the interest rate was later reduced. Three rates prevailed after 1965: 6% for new water resources development, 8.28% for irrigation improvement and ground water development, and 10.08% for projects which for three years had carried an interest rate of 8.28%. In 1971, in view of the depression of the rural economy, all interest rates higher than 6% on outstanding loans of JCRR were reduced to 6%.

The Joint Irrigation Loan Fund was established in 1960 by the irrigation associations (see next sections) to take care of their increased collections of membership fees which were readjusted in that year. The fund was deposited in the Land Bank for generating interest for expansion. Since 1974, no more loans from JCRR have been extended for irrigation projects, and this fund has become a major source of low-interest loans at 6% per annum.

Under the ARDP, projects for the improvement and repair of irrigation and drainage facilities have been financed with government subsidies amounting to 80-95% of the total cost. The balance was met by matching funds provided by the associations either with loans from the Joint Irrigation Loan Fund or with allocations from their own annual budgets.

In 1976, the Government made a special appropriation of NT\$ 300 million to the irrigation associations to help them pay their outstanding debts which had been a heavy burden to them in the past.

3. Management organization:

a. General description:

Since 1945, the organization responsible for irrigation management has been the

irrigation association, which is organized by farmers receiving irrigation benefits from the facilities controlled by the association.

Usually the irrigation associations undertake the construction work of an irrigation project having a service area of less than 500 ha. All larger projects are handled by the government, with the facilities constructed to be turned over to the irrigation association for operation and maintenance after completion.

Water use and control in Taiwan are governed basically by the Water Law. The irrigation associations are organized and operated in accordance with the General Rules Governing the Organization of Irrigation Associations, and the Regulations Governing the Administration of Irrigation Undertakings in Taiwan, respectively.

The major functions of irrigation associations are:

- (1) Construction, improvement, operation, management and maintenance of irrigation and drainage facilities.
- (2) Preparation of irrigation plans and regulation of water distribution.
- (3) Settlement of water disputes among farmers.
- (4) Collection of ordinary membership fees for financial operation.
- (5) Collection of engineering costs for loan repayment.
- (6) Study of ways to expand irrigation and drainage benefits.
- (7) Coordination with the government in carrying out policies on land and water resources development.

b. Organizational status before 1975:

Irrigation associations underwent reorganization several times after 1945. They numbered 24 in 1974: 2 in Taipei under the supervision of the Taipei Municipal Bureau of Reconstruction, and 22 in Taiwan province under the supervision on the Provincial Water Conservancy Bureau. There was a joint irrigation association in Taipei for coordination of activities of all the irrigation associations.

The chairmen of the irrigation associations were elected by the members' representatives, who in turn were elected from among the members of the associations. The number of representatives, for an association was determined on the basis of the size of its irrigation area, as shown in Table 2.

Table 2. Irrigation Area vs. Number of Members' Representatives

Area (ha.)	No. of Representatives
More than 100,000	55-49
100,000-50,000	47-41
50,000-30,000	39-33
30,000-20,000	31-29
20,000-10,000	27-25
10,000- 5,000	23-21
Less than 5,000	19-15

Source: Taiwan Provincial Government, Organization Rules of Irrigation Associations, 1970.

At least two-thirds of the representatives must be cultivating land owners. The representatives met once every six months. Special meetings were also held at the request of over 40% of the representatives. The representatives were responsible mainly for the election and recall of chairman, screening of financial reports, discussion and approval of operational plans, determination of membership fee rates, and study of matters proposed by members. They were only paid an allowance for the time spent in the meetings.

Both the chairmen and the members' representatives were elected for a term of four years. The chairmen could serve only two terms if re-elected, while there was no such limitation for the representatives.

c. Reorganization in 1975:

The two irrigation associations in Taipei city have remained as they were before. They are small in terms of the size of irrigation area, and still have members' representatives who elect their chairmen.

In order to strengthen the 22 irrigation associations in Taiwan province both organizationally and financially to enable them to carry out their functions more effectively, they were merged into 14 associations in January 1975. According to the size of their irrigation area, these 14 associations were divided into three classes: Class A (more than 50,000 ha.), Class B (50,000-20,000 ha.), and Class C (less than 20,000 ha.).

There are now 16 irrigation associations and one joint irrigation association in Taiwan. After reorganization, [the joint irrigation association was moved from Taipei to Changhua in central Taiwan. The Chianan Irrigation Association in the south is the largest one having a service area of about 87,000 ha., and the Liukung Irrigation Association in Taipei is the smallest with a service area of only 500 ha.

The main measures taken for the reorganization of the irrigation associations in Taiwan province were as follows:

(1) For efficient operation and management of water resources and irrigation systems, the service areas of the existing 22 irrigation associations were readjusted, and the associations were consolidated into 14 according to water regions.

(2) Elections for members' representatives and chairmen were abolished. The 14 chairmen were appointed by the Government.

(3) A Provincial Supervisory Committee was established as a temporary setup for decision making and for supervising the operations of the irrigation associations.

(4) The number of staff was set on the basis of one person per 150 ha. About 1,200 persons in the 14 associations either had to be declared surplus or had to apply for retirement.

(5) The Government provided a special appropriation of NT\$ 300 million for reducing the outstanding debts of the associations.

(6) The Government also decided to appropriate NT\$ 200 million annually from 1976 to 1978 for the improvement and repair of existing irrigation and drainage facilities which are in poor working condition owing to deferred maintenance

caused by financial difficulties of the associations in the past.

(7) An amount of NT\$100 million was to be earmarked annually by the Government for rehabilitation of flood-damaged facilities.

These measures together with the ARDP have assisted [the irrigation associations in solving their financial problems, strengthening their operation and management, and improving their irrigation and drainage facilities. A study on how to further improve the organization of irrigation associations is in progress.

V. Operational Systems of Typical Irrigation Associations

1. General description:

The chairman represents the irrigation association and is assisted by a general manager in performing the functions of the association. A chief engineer is assigned to an association with a service area of more than 50,000 ha. (Class A), and a principal engineer assigned to an association with a service area of 20,000-50,000 ha. (Class B), to take care of the technical and engineering matters of the association. For an association serving less than 20,000 ha. (Class C), the position of a chief engineer or a principal engineer is not provided.

In the head office of the association, there are two main divisions, engineering and management, which are directly concerned with irrigation. The former is in charge of planning, layout, survey, design and construction of irrigation projects, while the latter is in charge of operation, management and maintenance of the completed irrigation works. However, an association serving less than 20,000 ha. (Class C) has only a management division to take care of all the technical and engineering matters.

The head office of the association also includes a finance division, an administrative division, an accounting office, a personnel office and a security office, which take care of matters in their respective areas.

Under the association there are irrigation working stations which perform most of the work of the association in the field. An irrigation association with a large service area or with some of its service area in a remote region also has local management offices, which supervise the work of irrigation working stations. For a small irrigation association, the management division in the head office supervision over the irrigation working stations. Each irrigation working station exercises direct handles an area of 1,000-2,000 ha. For a large irrigation system, there are also water source working stations and main canal working stations, which are parallel in function to the irrigation working stations.

Under the irrigation working stations, irrigation groups are organized by members of the association as the basic units for irrigation and drainage operation and management at the farm level, each handling an area of 50-150 ha. Members of such groups serve gratis; they receive only a small allowance for attending the meetings of the association, and are supplied with equipment needed for maintenance of the facilities. Each irrigation group consists of several irrigation teams of 10-15 members. The group heads and the team leaders are elected by the me-

Figure 1. Organization Chart of Irrigation Associations, Class A and Class B

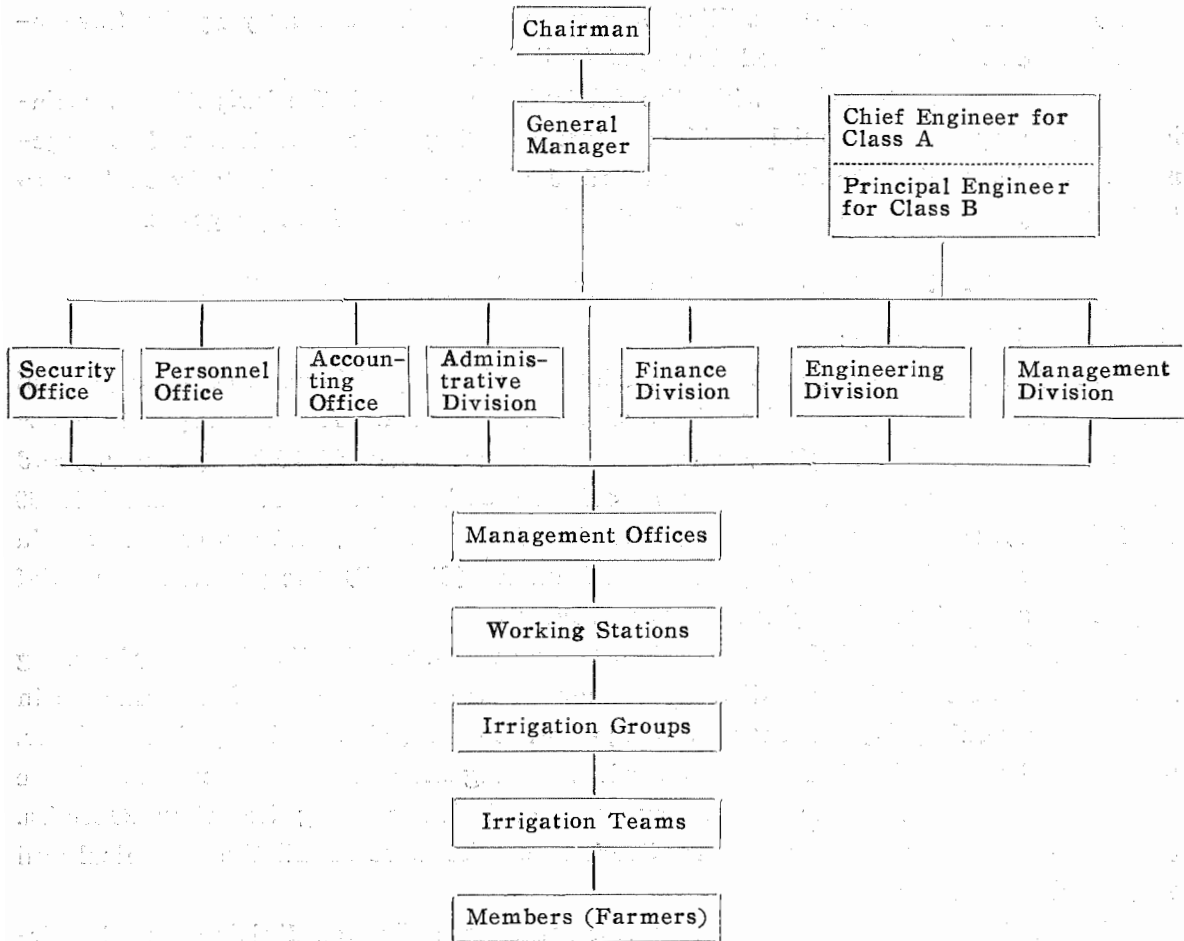
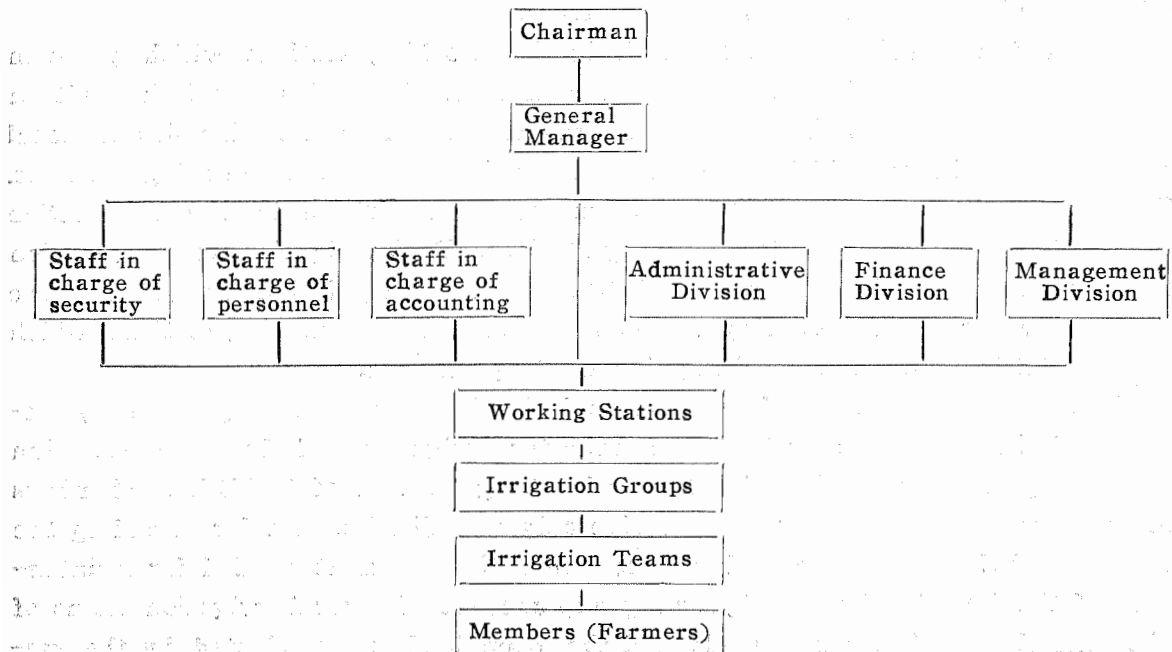


Figure 2. Organization Chart of Irrigation Association Class C



members. They can continuously serve if re-elected.

In addition to assisting in irrigation operation and management, the irrigation group also contributes labor for the annual maintenance of facilities at the farm level, and helps in planning and setting up of common nurseries, collecting membership fees, etc.

Figure 1 and Figure 2 show the organization charts of the typical irrigation associations, and Table 3 shows their respective irrigation areas and management organization.

Table 3. Irrigation Areas and Management Organization of Irrigation Associations

Name of IA.	Irrigation Area (ha.)	No. of Local Management Offices	No. of Working Stations	No. of Irrigation Groups
Yilan	20,282	—	8	174
Peichi	11,525	1	4	74
Taoyuan	30,886	—	13	342
Shihmen	14,709	—	8	135
Hsinmiao	20,388	2	10	227
Taichung	38,797	3	22	339
Nantou	13,603	1	9	129
Changhua	50,286	—	32	390
Yunlin	67,104	5	47	500
Chianan	86,866	9	98	769
Kaohsiung	23,368	—	16	154
Pingtung	35,318	—	18	312
Taitung	10,379	—	8	96
Hualien	11,049	—	10	90
Liukung	500	—	1	15
Chihsing	1,833	—	—	22
Total	436,893	21	304	3,768

Remarks: (1) The above statistics were supplied by the 16 irrigation associations in May 1976.

(2) The first 14 associations are in Taiwan province, and the last 2 are in Taipei city.

2. Financing of the irrigation associations:

The annual budget of an association comes mostly from the collection of ordinary membership fees, for which different rates are set according to water use. In principle, the total amount of the collected membership fees must meet the annual requirements for administrative and personnel expenses as well as irrigation operation and maintenance costs. The rates of membership fees formerly ranged between an upper limit of 300 kg of paddy and a lower limit of 20 kg of paddy per ha. per year, which were collected in cash according to the prevailing price of

paddy. Additional irrigation fees for water obtained through pumping were collected according to the actual operation costs expended.

In order to minimize the farmers' burden, the Government lowered the rates of all membership fees by 10% in 1971. Since then, the membership fees have been collected at rates between 20 and 270 kg of paddy per ha. per year. According to an analysis, the membership fee paid by a farmer makes up only 3 to 4% of his total farming cost.

Owing to the increase in personnel expenses, labor wages and material prices, the amount of membership fees collected is always insufficient for maintenance and repair of the facilities. Therefore, government subsidies are needed unless the rates of the membership fees can be readjusted so as to enable the associations to promote a self-financing capability.

3. Irrigation operation and maintenance:

a. Irrigation operation:

The technical staff of the irrigation association controls water delivery at main canals and laterals. From turnout gates through farm ditches to individual fields, the water is distributed by the irrigation groups under the supervision of the association staff.

Usually, the management division in the head office of the association prepares annually an irrigation guide according to past experiences, government policy, production goals, water sources available, etc. for distribution to the local irrigation working stations through management offices. Then, meetings with the irrigation groups will be called to discuss and work out detailed irrigation plans, which will be reported to the management offices and the head office for approval and compilation. The irrigation plan will include the name of the canal system, number of rotation districts, names of irrigation groups, estimated amounts of water from different water sources, irrigation methods and intervals, kinds of crops and areas to be planted, conveyance losses, water requirements of seedbeds, land preparation and main fields, times of irrigation, water delivery schedules, etc.

The water delivery schedule may be revised to meet actual needs when it is put into operation, taking into account the actual water sources and amounts of effective rainfall during the irrigation period. When water shortage happens and the available water is not sufficient for regular or normal irrigation, a strict rotational irrigation plan will be followed.

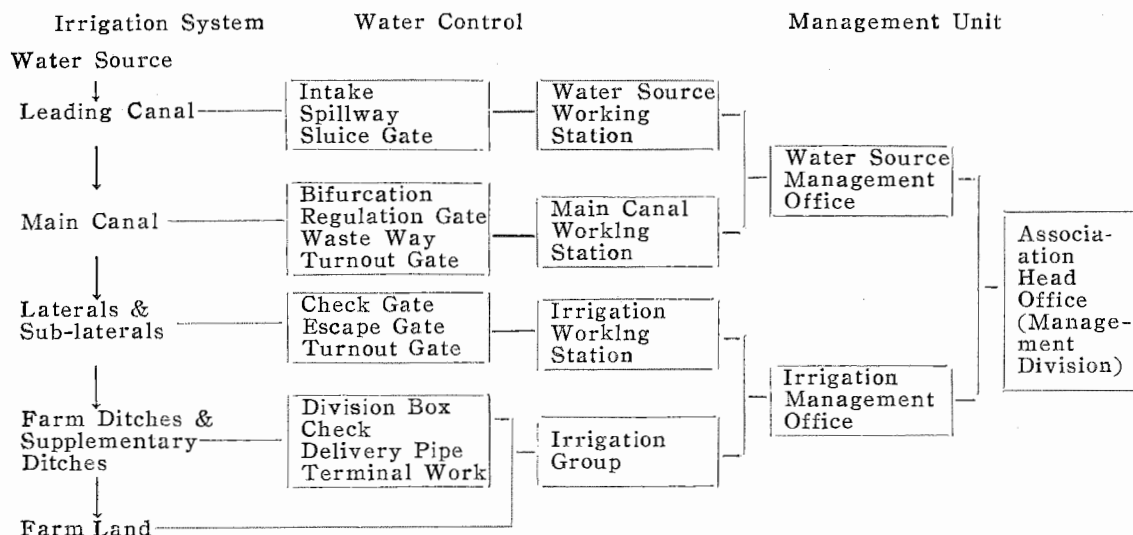
Records of the irrigation work done are prepared by the working stations and reported to the management offices and the management division in the head office for checking and for reference in future irrigation planning.

The water delivery system of a typical irrigation association is shown in Figure 3.

b. Irrigation maintenance:

The engineering facilities should be properly maintained so as to facilitate irrigation operation. The maintenance work is generally divided into three categories, namely, routine maintenance, annual maintenance, and emergency repairs.

Figure 3. Water Delivery System of a Typical Irrigation Association



Source: Cheng, K. T., T. Y. Tsai and S. T. Hsu, Operation and Maintenance of Irrigation in Taiwan, 1961.

Remarks: 1. The original figure has been modified.
2. For a small irrigation association, water control at the water source, leading canal and main canal is undertaken by the irrigation working stations.

In routine maintenance, repairs are done immediately on the spot upon discovery of damage. Annual maintenance is performed during the non-irrigation period to insure proper operation of the facilities in the next irrigation season. Emergency repairs are carried out mainly after damage is caused by floods and they must be completed in time for irrigation. If the damage is serious, financial and technical assistance is requested from the Government for emergency repair and subsequent rehabilitation of the facilities. The costs of routine maintenance and annual maintenance are usually paid out of the association's own budget.

Generally, the annual maintenance work is carried out by the following procedure:

(1) Irrigation working station:

- (a) To find out farmers' needs.
- (b) To investigate all the engineering facilities and identify those requiring maintenance.
- (c) To prepare an annual maintenance plan, and submit it to the local management office.

(2) Local management office:

- (a) To assign persons to make field investigations for preliminary screening of the proposed maintenance plan.
- (b) To revise the proposed plan after screening, and transmit it to the management division in the head office of the association.
- (c) To supervise construction after the plan is approved for implementation.

(3) Management division of the head office:

(a) To assign persons, if necessary, to make field investigations again for finalizing the annual maintenance plan.

(b) To budget the maintenance requirements for approval by the chairman.

(c) To notify the local management offices or working stations of the approved plan for implementation.

(d) To make final inspections for acceptance or rejection of the completed maintenance works.

VI. Refereneecs

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