

AGCUYO IRRIGATION SYSTEM

The Agcuyo irrigation system is found in Barrio Samoki where the farmers served by the system live. It lies 4 kilometers east of the poblacion of Bontoc, Mountain Province. Located along the Bontoc-Banawe road, the system can be reached by taking the buses plying the route or by hiring a tricycle from the poblacion. However, public transportation from Bontoc to the system is available only early in the morning and late in the afternoon.

The System's Fields

The system serves an area of 9 hectares cultivated by 50 farmers. During the wet season, the area served is less than 9 hectares because the dam is always destroyed at this time by the rains and floods. In fact, the number of hectares irrigated can decrease to as small as 4 hectares, depending on the extent of damage to the dam. During the dry season, on the other hand, the entire 9 hectares is often completely irrigated.

The size of the farmers' ricefields ranges from 40 square meters to 5,000 square meters (or half a hectare), or an average size of 2,500 square meters.

The farms served by the system are planted to rice, mostly of the native varieties like the lad-okan, sedsed, kamati, folik, and waray. Farmers plant the wet season crop in August or September and harvest it in December; the dry season crop is planted in February or March and harvested in June or July.

Technical Aspects of the System

Water supply

The water of the system comes from the Agcuyo River which flows from east to west and empties into the Chico River (near the poblacion). The farmers using the Agcuyo system do not hold any water right permit for the use of the river's water.

The water from the Agcuyo River is shared by two other systems, the Malichom system serving about 50 farmers and located above Agcuyo, and the Ficuco system serving 80 farmers and located below Agcuyo.

There is no formal sharing arrangements among all three systems but there is an informal agreement among them that the farmers of the upper system should not fully block or divert all the water into their fields.

The water supply of the Agcuyo system is abundant during the rainy season or from May to November.¹ However, as already stated, the system cannot make use of the abundant water because of the damage or destruction of the dam brought by the heavy rains. From December to April, the water supply on the river decreases but the system is able to divert sufficient water for the system's 9-hectare riceland.

The physical structures

According to informants, the system has been existing since about 1912 when the original dam was constructed. The earlier dam was largely stone riprap. It was made into concrete in 1974. The local NIA undertook the cementing project but the farmers of the system put in the labor as hired workers. In October 1977, the cemented dam was again destroyed.² The present dam is now made of stone riprap.

From the dam a major canal runs 600 meters long. The first 100 meters from the dam are of grouted stone riprap. The next 100 meters consist of a concrete flume running alongside a cliff. The next 240 meters are again of grouted stone riprap and the last 160 meters are of stone riprap. On the main canal are about 20 take-off points, all of which are temporary cuts, each serving about 3 to 4 farmers.

Management of the System

The association's activity ended, however, immediately after the organizational meeting. At present, the operation of the Agcuyo system is not managed by any formal association, nor by any formal leader.

¹NIA reports that the discharge flow at the creek in November 1977 was 1,495 liters/second while in May 1978, it was 650 liters/second. No discharge measurements were made on the system's canal.

²When the cemented dam was washed out by the strong typhoon in October 1977, some ricefields were also washed out and some portions of the main canal were destroyed. Soon thereafter, the farmers went to the NIA office in Bontoc and brought up their problem of reconstruction, particularly the need for funds. The provincial irrigation engineer, in response, sent a survey team to the place to assess the extent of the damage. But as of April 1978, the Agcuyo farmers have not heard from the NIA about their request for assistance.

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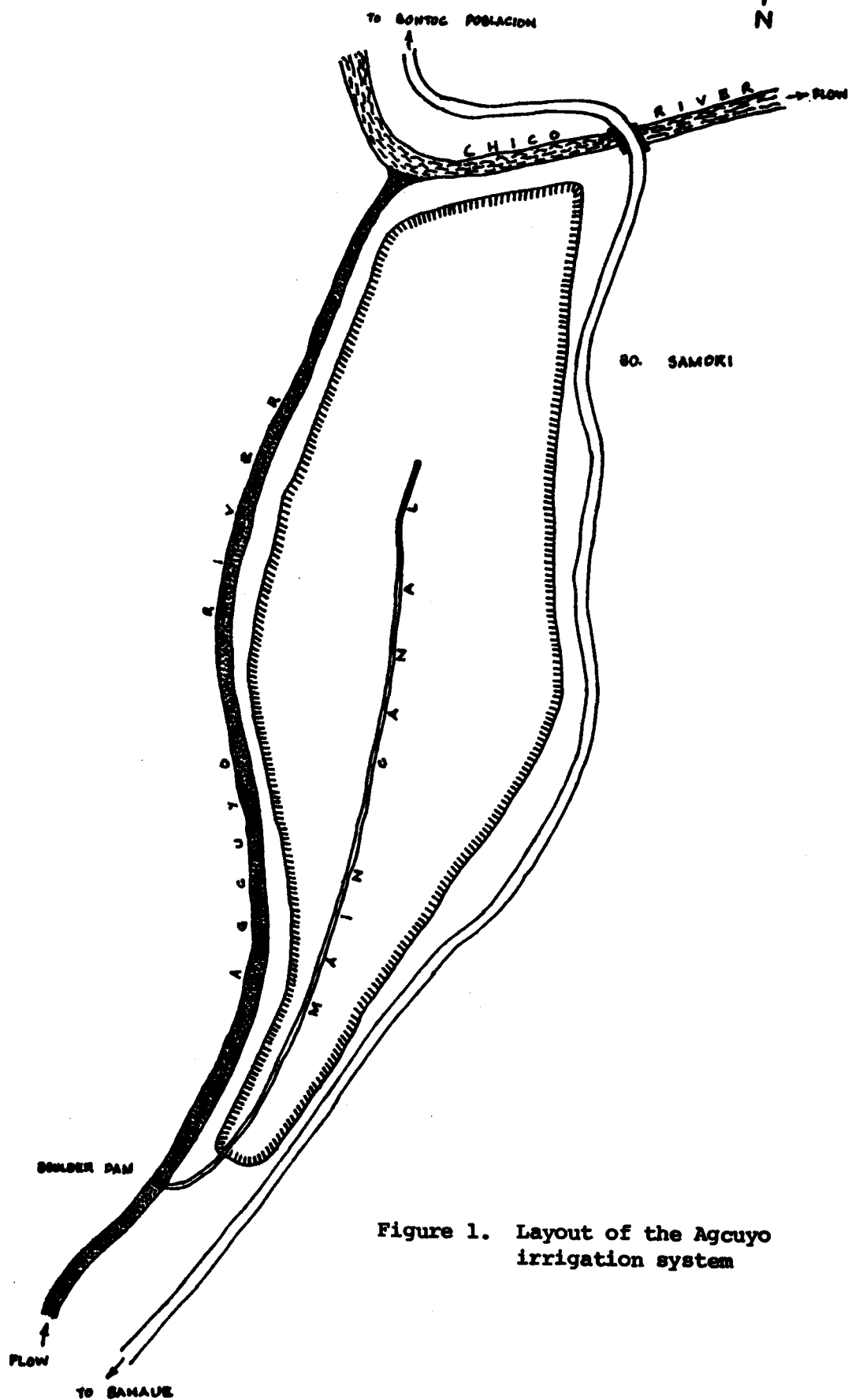


Figure 1. Layout of the Agcuyo irrigation system

Allocation and distribution of water

Nobody in particular is responsible for the allocation and distribution of water in the system. The conveyance of water into the ricefields is the responsibility of the individual farmers who see to it that their farms are sufficiently watered. During the wet season, and under ordinary conditions when water is abundant, each farmer is free to get the amount of water he needs for his fields. But during the dry months when water is less, they take turns in getting water. Hence, for instance, a number of fields get water for 2 or 3 days after which the water is made available to other fields. There is no fixed schedule for taking turns in obtaining water; however, the farmers make their arrangements on the basis of the available supply.

Farmers whose ricefields border the main canal get water directly from its take-off points. The rest of the farmers derive water from the fields ahead of theirs, that is, the farmers who cultivate the lower fields rely on the overflow of the upper fields or they obtain water through cuts on the paddy embankments.

Maintenance of the system

The maintenance and repair of the system's structures are responsibilities of all farmers. The general cleaning and repair of the structures are done in terms of group work. The general cleaning is usually conducted in February, for about 8 to 10 days. If some farmers do not participate in the work, the cleaning and repair may take as many as 15 days. Aside from this group work, farmers may work individually or in small groups in the repair of the system's structures whenever damages occur.

Nonattendance in group work is punishable with a fine in the form of food, like rice and chicken, and drinks.³ The food and drinks are served to those who worked. When it is ascertained that a farmer's absence from group work is due to laziness, the concerned farmer is ridiculed and scolded aside from his being asked to pay the fine. When asked whether fines are actually collected, informants say that the collection of fines is enforced. The informants further explain that paying a fine is considered lesser penalty than getting a scolding or some hard words from the other farmers.

³If a farmer is not able to report for group work, he is allowed to send someone else in his place.

Conflict and conflict management

Besides nonparticipation in group work, nonobservance of the tengaw or holidays is also considered illegal in the system. During the set holidays or when the elders of the community declare a holiday and somebody goes to his field to work, he is fined with rice or chicken or some other food. Such fines, however, are not immediately collected and are saved or accumulated for forthcoming festivities.

Deprivation of water is not used as sanction for any offense or violation of practices since, as an informant puts it, the individual's right to the use of water cannot be questioned. (In much the same way, the informant adds, users of the system are not made to pay for the use of water since, as a member, they are the owners of the system.)

In all conflicts, the barrio officials are called upon to mediate. According to our informants, there has been only one conflict that the barrio officials were not able to solve and it needed the intervention of the police. The trouble arose when one farmer stole the rice granary (a small hut) of another and built it under his own house. The mediation of the barrio officials for the return of the stolen structure proved futile so that the case was brought to the municipal police authorities. The offender was subsequently jailed.