

SABANGAN BATO IRRIGATION SYSTEM

The farms served by the Sabangan Bato irrigation system are situated in three barrios--Bidbiday, Pagangpang, and Sabangan Bato--of the town of Galimuyod in Ilocos Sur. To reach the system's ricefields from Vigan, the provincial capital of Ilocos Sur, one can take any of the public transportation vehicles plying the Vigan-Candon route. At Candon, a neighboring municipality of Galimuyod, one can ride on the vehicles which ply the Candon-Galimuyod route. And then from the Galimuyod poblacion, one can take the jeepneys which go to the different barrios.

The System's Fields

During the wet season, the Sabangan Bato system serves about 94 hectares which are tilled by some 97 farmers. The smallest land area cultivated is 2,500 square meters while the largest is about 2 hectares.

The irrigated area in each of the three barrios and the number of farmers who till the fields located in a barrio are these: Bidbiday, 15 hectares and 15 farmer-users; Pagangpang, 20 hectares and 35 farmer-users; and Sabangan Bato, 65 hectares and 47 farmer-users.

The farms of the Sabangan Bato system are planted to rice only during the wet season. Planting is in July or August and harvesting is in October, November, or December. Most of the farmers use traditional varieties, such as virgie, bulastog, santal, dinominga, and purpuraw, but a few farmers also plant the modern, high-yielding varieties.

Technical Aspects of the System

Water supply

The system derives its water from the Candon River. There are two other irrigation systems which obtain water from the Candon River; the Aloy irrigation system, above Sabangan Bato, serve less than 20 farmers; and the NIA-constructed Legaspi irrigation system, below Sabangan Bato, serve more or less 100 farmers.

The farmers of the Sabangan Bato system can get water from the river only during the rainy months (June to December). During the dry

months (January to May), there is no flowing water in the river.¹ Thus the farmers obtaining water from the Sabangan Bato dam plant rice only during the wet season; during the dry season, the farmers plant tobacco. In irrigating their tobacco crop, farmers use pumps to draw water from open wells located all over the fields.

The physical structures

The dam of the Sabangan Bato system is made of stone riprap with tree trunks and branches piled on top of it. From this dam originates a 3.45-kilometer main canal. There are five subcanals which branch out of this main canal. The subcanal situated most upstream is about 190 meters in length; the next is 250 meters; the third is 480 meters; the fourth, 220 meters; and the fifth, 1.45-kilometers. The main canal as well as the subcanals are all earthen, except for a small portion of the first subcanal which is lined with cement.²

Farmers claim that there are 97 take-off points along the system's canal network, just as there are 97 farmers. In other words, every farmer has his own take-off point along the canal. The take-off points in this system are all of temporary materials, bamboo tubes or just cuts on the canal embankments.

Management of the System

The Sabangan Bato system, which has been in existence since the early twenties, is currently managed by an irrigation association. We were not able to determine clearly when the association was formed but it seems that the formal organization of the association was made only recently, in the early seventies. As of April 1976, the association was not in fact registered yet with the Securities and Exchange Commission.

The present association is composed of all 97 farmers who utilize the system's water. The current association officials are the president (who is also called the cabecilla), a vice-president, a secretary-treasurer, an auditor, and a business manager. Of the officials, only

¹NIA reports that in September 1977 the water flow in the river was 4,500 liters/second, while the discharge flow on the Sabangan Bato main canal (close to the headgate) in the same month was only 135 liters/second. No discharge measurements were taken for the dry season since there is no water during the said period.

²In 1964, the irrigation association was awarded some bags of cement by the Presidential Arm on Community Development (PACD) which the association used in cementing the first 40 meters of the first upstream subcanal.

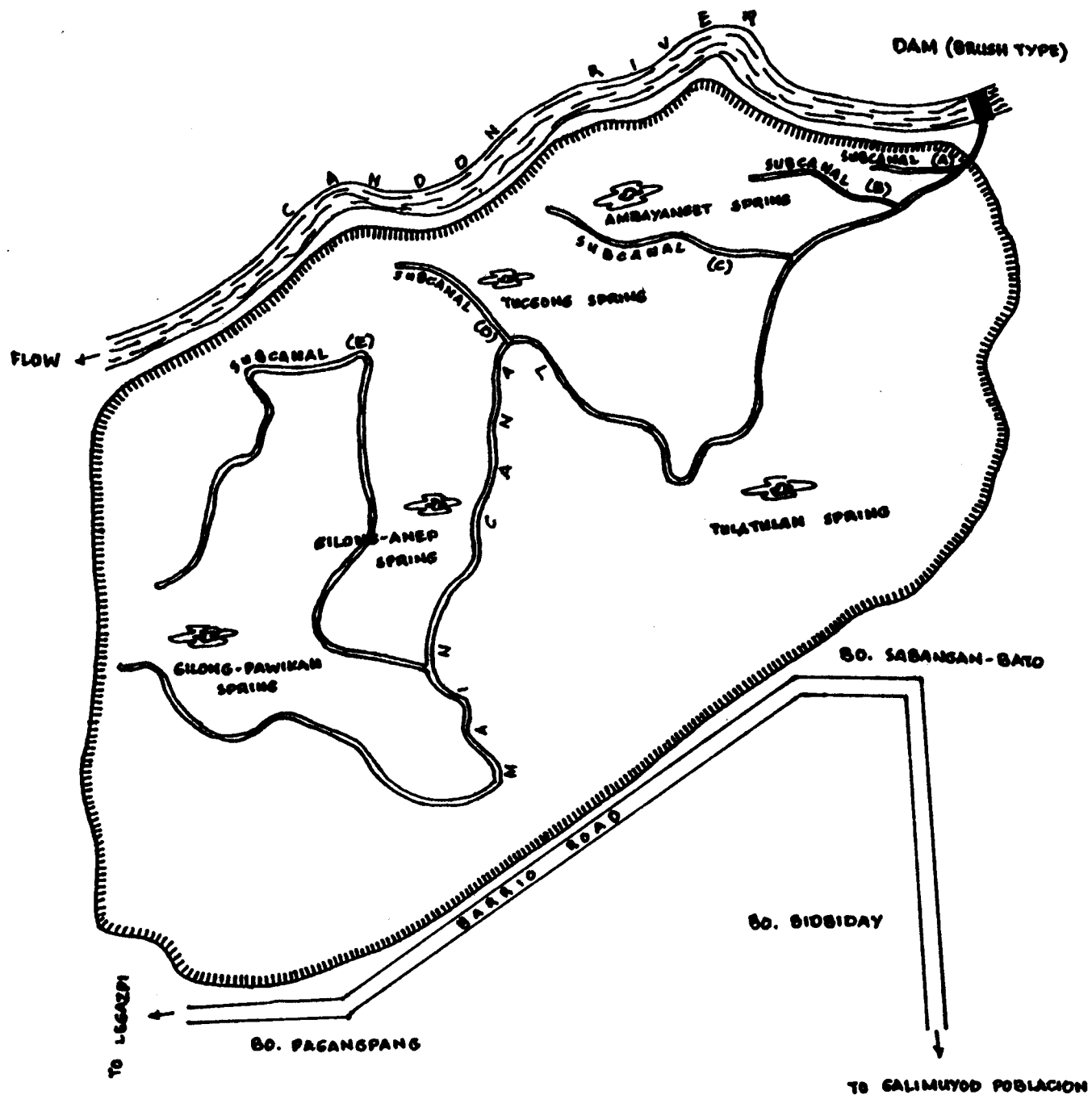


Figure 1. Layout of the Sabangan Bato irrigation system

the president and the auditor hold other positions in the community. The president is the treasurer of the barrio council while the auditor is a barrio captain.

The association officials are supposed to be elected yearly, but the present set of officers has been actually in office for more than 2 years now. All of them do not receive any salary or compensation.

Allocation and distribution of water

While the system is managed by the association, the farmers report that the association officials do not take charge of water allocation. This task is a responsibility of each farmer. That is, a farmer has to personally see to it that his field gets irrigated. Thus, if a farmer is busy with other concerns and he cannot keep watch over the flow of water into his fields, he may hire someone to patrol the area for him. In April 1978, for instance, about 10 farmers hired a person to ensure that irrigation water gets into their fields. The hired man was paid ₱5 a day.

Although, all of the system's farmers get water directly from the canals, the flow of water into the ricefields is not always continuous. Since water is not sufficient for the fields even during the wet season, the farmers explain that they do take turns in getting water. But there is no fixed schedule for the distribution of water. Necessity dictates the rule, that is, a farmer who needs water very badly gets the water first.

Maintenance of the system

While the association officials do not supervise water allocation, they attend to the maintenance needs of the system. For instance, the association has scheduled a twice-a-week maintenance work, on Wednesdays and Saturdays. This schedule has not been strictly followed, but farmers report that they work in cleaning or repairing the system whenever the need arises.

When maintenance work is to be done, the cabecilla informs at least one farmer in each of the three barrios covered by the system. These farmers in turn are assigned the task of informing the other farmers in the barrio.

Absence from the maintenance work is sanctioned by ordering the nonparticipant to work in the system apart from the group (for example, clean the canals) or fining him ₱5 per workday. When a farmer refuses

to render the service or pay the fine, the association officials (particularly the cabecilla) could obtain the fine from the rice yield of the offending farmer. But it is not clear whether the cabecilla has actually forcibly taken part of a farmer's yield as payment for absence from maintenance work.