

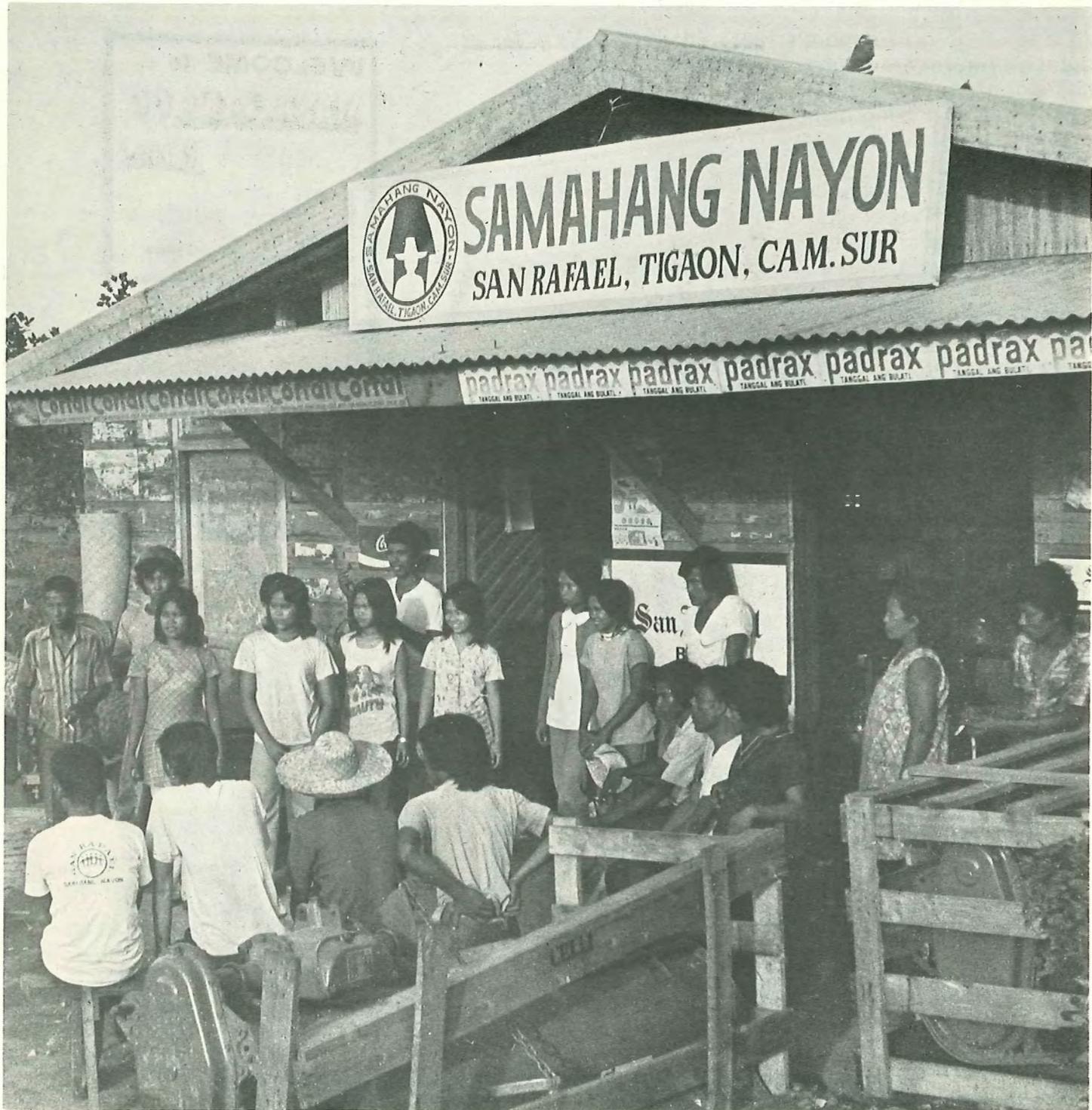
# The Bicol River Basin

US ASSISTANCE TO THE  
BICOL RIVER BASIN  
DEVELOPMENT PROGRAM





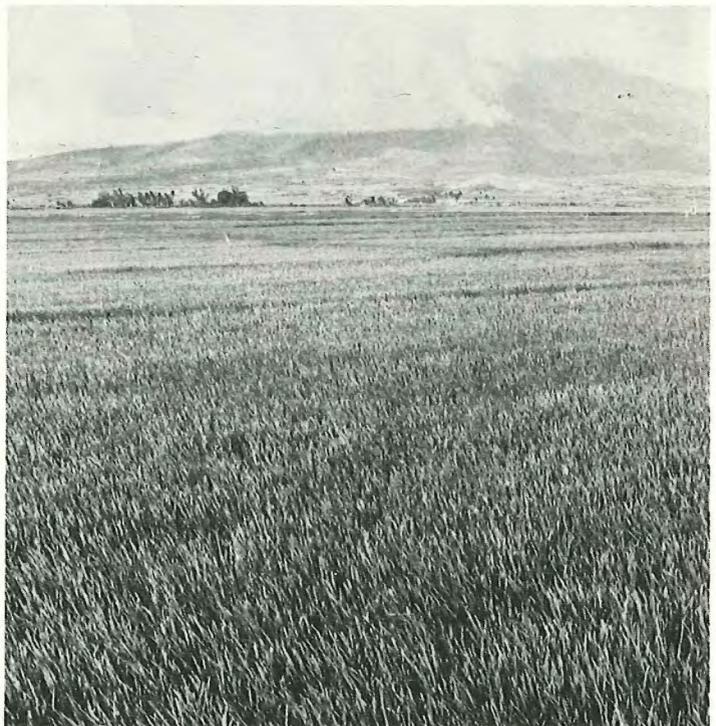
Samahang Nayon - Barrio Association building in Tigaon, Camarines Sur.



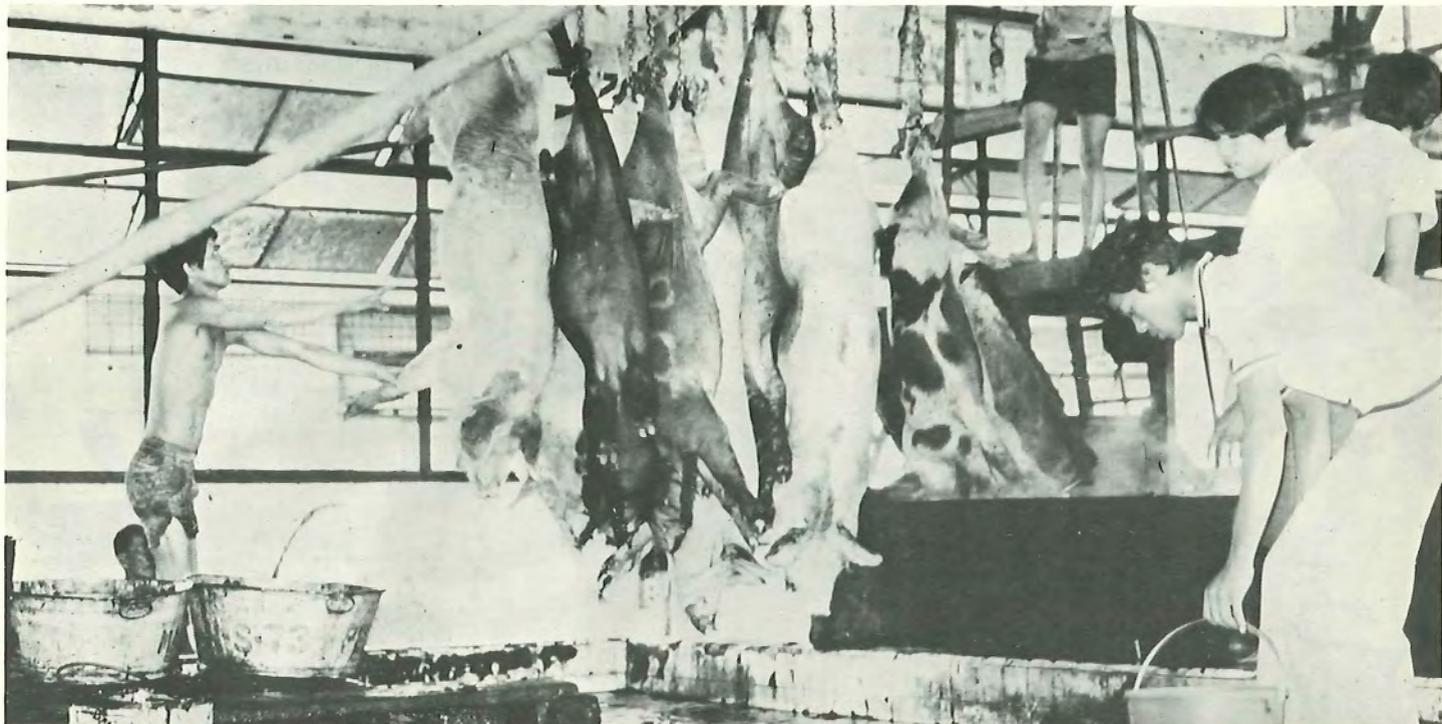
1. A bumper rice harvest in store for compact farmers in Milaor, Camarines Sur.
2. A Bicol farmer uses a specially designed small-scale power tiller.

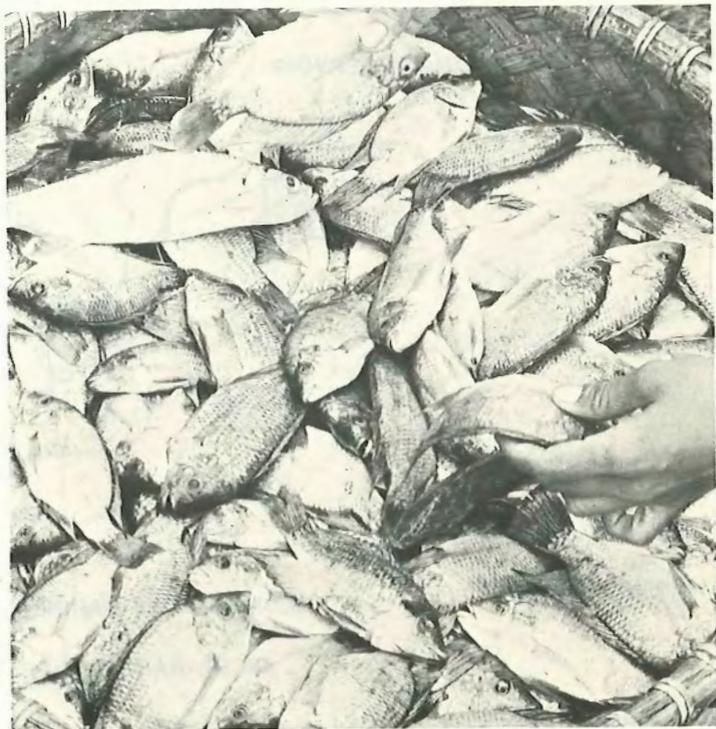


1. Samahang Nasyon meeting in Camarines Sur.
2. Roadside advice for the farmer
3. Rich Bicol rice land in the shadow of Mount Mayon.



An important part of the Bicol River Basin Program is the development of inland fisheries and small-scale livestock production.





## Flood Control and Irrigation

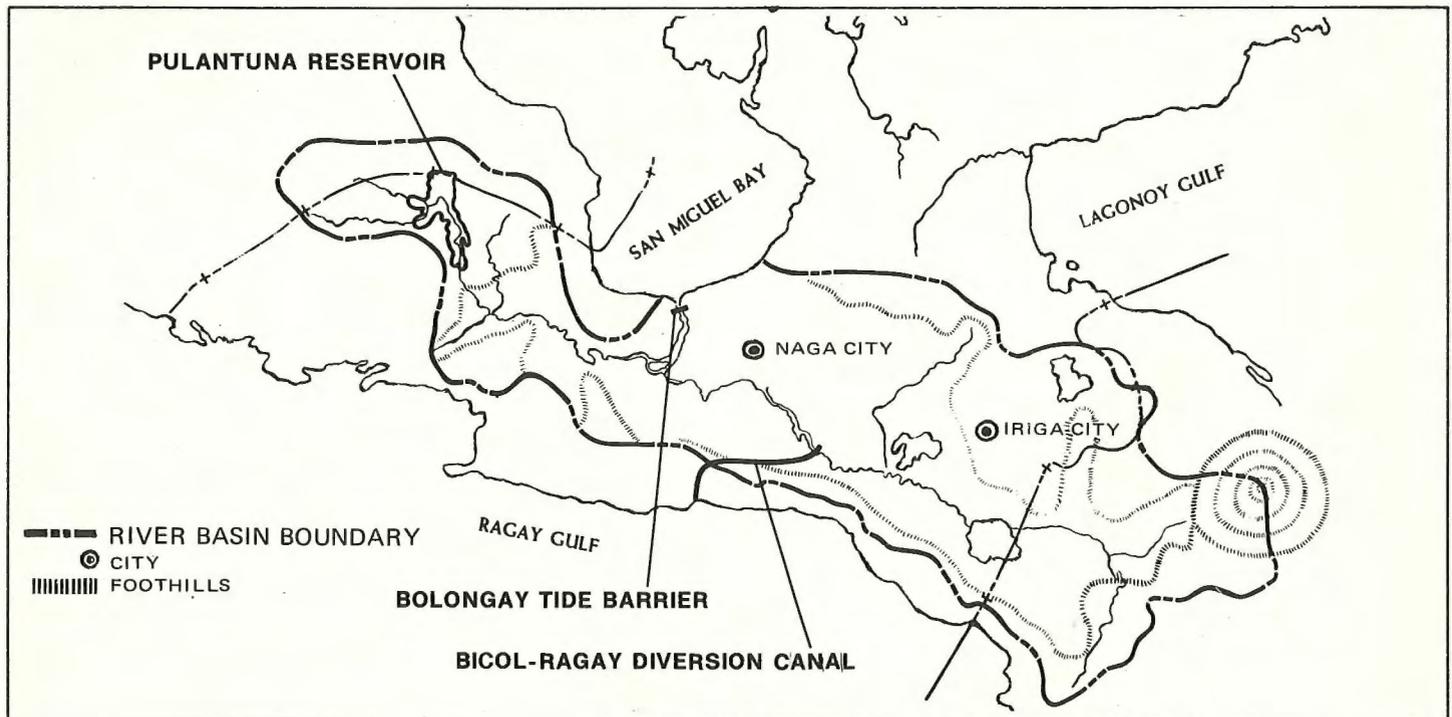
Over 42,000 hectares of the best agricultural land in the Bicol River Basin are periodically inundated by severe floods. Flood recovery is slow because the low, flat land is poorly drained. Because of this recurrent flooding, existing irrigation systems are located outside the boundaries of the flood plain. Farms within the flood plain, therefore, suffer from too much water in the wet season and too little in the dry months.

To deal comprehensively with this problem, USAID has contracted with the Asian Institute

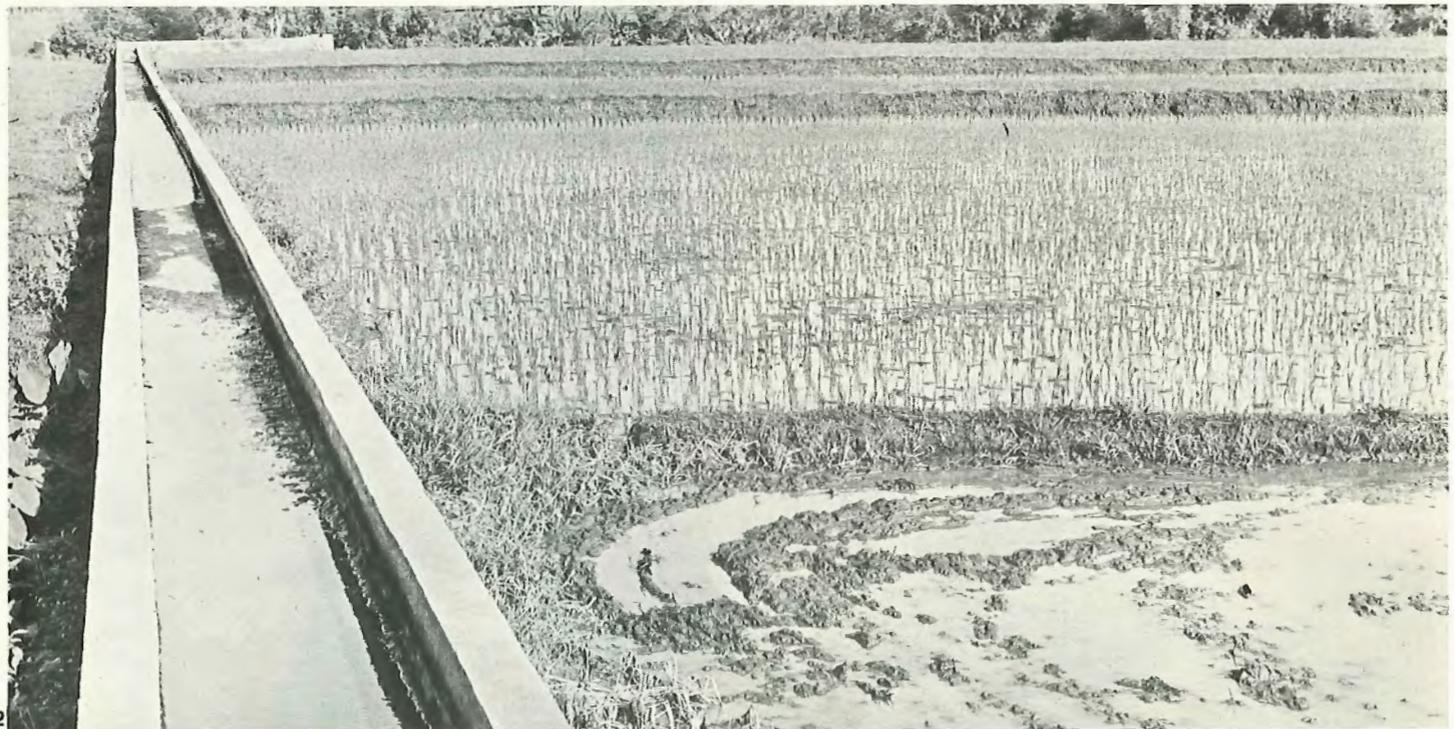
of Technology in Bangkok for a flood control study. To complete the survey of the Basin's water resources, a comprehensive water resource study is scheduled for the near future.

Based on completed prefeasibility studies, three projects have been identified which should greatly relieve the problem of flooding, reduce salt water intrusion, and provide reliable, year-round irrigation water. These projects are the Bicol-Ragay Diversion Channel, the Balongay Salinity Barrier, and the Pulantuna Dam and Reservoir.

Outline map of the three projects included in the Bicol Basin flood control study.



1. Constructing flood control dikes.
2. Successfully irrigated farm land, Camarines Sur.



### Supporting Infrastructure

To support the agricultural development of the area, other activities, including transportation and electrification, have been integrated into the plan. Farm-to-market roads and bridges are now being constructed under the USAID-financed Provincial Development Assistance Program; over the years a major secondary transportation development program is envisioned. In Albay, a geothermal plant now under construction will generate electric power for distribution through a system of rural electrification cooperatives planned for development within the Basin.





## Introduction

The Bicol River and its watershed are the focal points of an innovative approach to rural development in the Philippines.

The program, which is a joint undertaking by the Philippine Government and USAID, represents a special effort to integrate planning and program implementation on an area basis rather than applying the more traditional sectoral or project approach to development.

The program aims to raise the incomes of the farming and rural population within the Bicol River Basin area by increasing agricultural productivity and employment opportunities and through the promotion of agro-industrial and industrial development in the area. Progress in achieving a more equitable distribution of wealth among the Basin's agrarian population has already

begun with the Government's vigorous implementation of the Agrarian Reform Program in the area.

## The Bicol River Basin

The Bicol Region, composed of six provinces, is situated on the southern tip of Luzon about 550 km. from Manila. The dominant feature of the region is the Bicol River Basin, an elongated plain which covers 312,000 hectares primarily in the provinces of Camarines Sur and Albay.

The leading urban centers in the River Basin are Iriga and Naga cities. The River Basin area has a population of some 900,000, which is expected to increase to 1.5 million by 1995. The population density within the basin of 195 persons per sq. km. is considerably greater than the national average of 123.



- 1. A typical Bicol river scene.
- 2. Iriga city-center
- 3. Shopping at the market in Iriga City.



1

2

3

### **Development Problems**

In order to assure a satisfactory livelihood for the large population of the relatively small Bicol River Basin, changes will have to be made at all levels.

However, the two major problems presently retarding the development of the Bicol River Basin into a productive agricultural area are the land tenure system and recurrent flooding.

These two problems are at the head of the agenda of the Bicol River Basin Development Program.

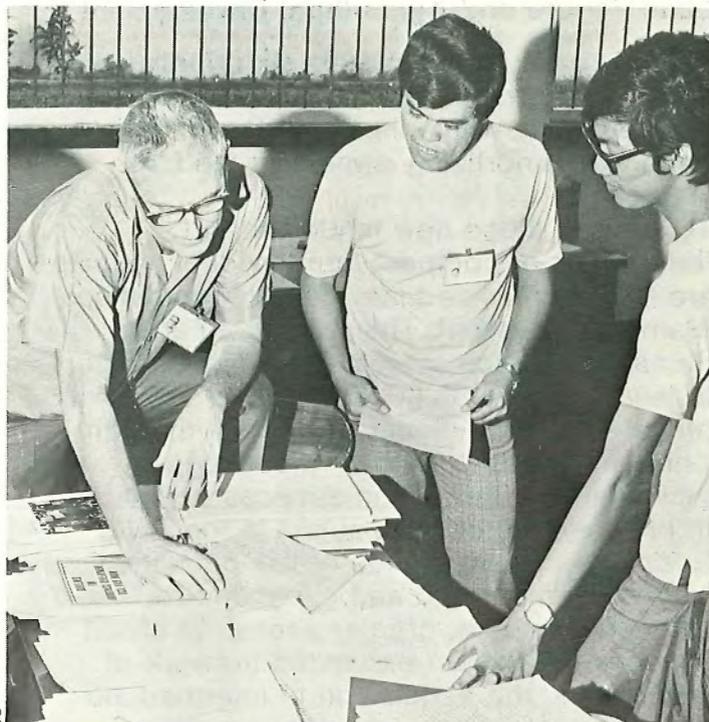
Severe flooding often devastates prime agricultural land in the Bicol River Basin.



1. Bicol farmer sprays his rice paddy with insecticide.



2. Father Lynch, chairman of the Ateneo Social Science and Research Unit (SSRU) explains on-going projects.



3. Officials of the Bicol River Basin Project and SSRU representatives discuss future plans.



## **Land Tenure and Agricultural Development**

As one of the government's six priority agrarian reform areas, rice and corn share-tenants within the Bicol River Basin are becoming amortizing owners of the land they till.

To support these new landowners, federations of compact farm production units are being organized into Barrio Associations (Samahang Nayon). The Compact Farm/Samahang Nayon system, which is expected to involve some 35,000 farmers by 1979, will provide the institutional framework through which farmers will receive a package of technical assistance and services designed to increase agricultural output in the River Basin area. Components of this package include an improved and expanded extension service, greater access to credit facilities through an expanded network of rural banks, the acquisition of intermediate scale farm machinery, land access to modern irrigation system and on-farm water management technology.

Through the compact farm mechanism, small-scale livestock production is being intensified. A modern slaughterhouse and cold storage plant is planned for Naga City. The expansion of fresh and brackish water inland fisheries is also envisioned.

To provide market outlets for this increased production, feasibility studies are under way to identify opportunities for private and cooperative agro-business ventures to be financed by local and international lending agencies.

Roads under construction in the USAID-financed Provincial Development Assistance Project.



1. A meeting of the Provincial Advisory Council which included heads of the Bicol provincial offices.  
2/3. Rural Bank in the municipality of Bato, Camarines Sur.



1. Rural electrification plays an important part in the Bicol River Basin Program.
2. Abaca, a traditional Bicol Product, is dried after dyeing.
3. The new Geo-Thermal Plant at Tiwi, Albay.



## The Program Planners

President Marcos has created a seven-member Bicol River Basin Council and the Council's Program Office in Camarines Sur exercises overall responsibility for the program. Members of the Council represent the government at both the national and local level.

To plan and carry out the many developmental activities in the program, Philippine Government planners have developed a range of project support

services. Among these are a technical assistance group from the University of the Philippines at Los Banos and the Social Survey Research Unit of the Institute of Philippine Culture at Ateneo University. These groups typify the Government's pledge to provide the best technical talent in the country to support the program. To augment the concerted Philippine effort involved in the program, USAID is providing assistance for technical feasibility studies, local and foreign training for government officials, and commodity assistance for the program office.

1/2 Meeting in Iriga City to form the first Area Development Team in the Bicol region.



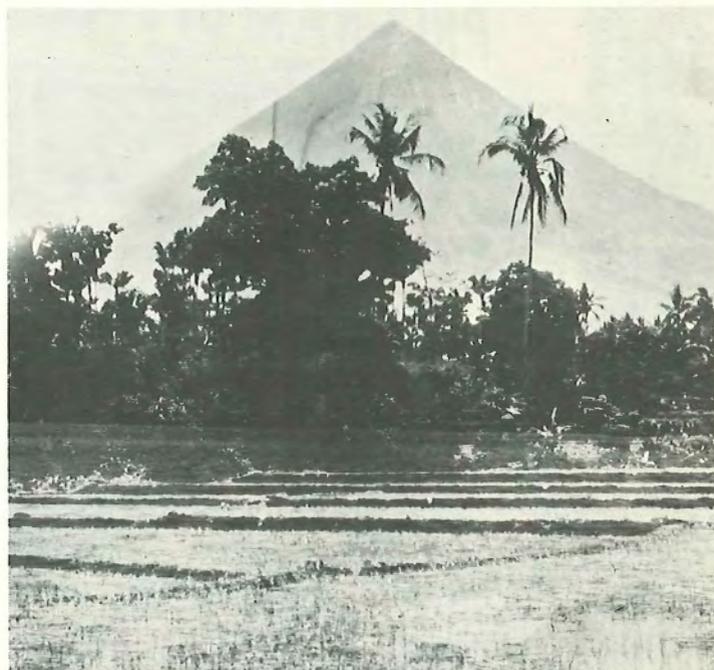
The Bicol River Basin Council office in Camarines Sur.



### **Hope for the Future**

The Bicol River Basin Development Program is the result of years of experience on the part of both the Philippine Government and USAID in fostering rural development.

The integrated area development concept has now been adopted as a national policy. Government projects are increasingly being targeted for delimited geographic areas to insure maximum impact through the efficient and systematic allocation of all government resources.



The Bicol River Basin Development Program is intended to bring about important gains in social and economic improvement within the Bicol River Basin and at the same time, to set the stage for similar undertakings in other areas of the Philippines.

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