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THE PROPOSED BALONGAY FISHPOND ESTATE:  
HOW DO THE TAGA-BALONGAY FEEL ABOUT IT?

CONVEYED REVISED

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**ABSTRACT.** In early December 1973 the SSRU interviewed 90 household heads living in three barrios of Calabanga, Camarines Sur. Located at the mouth of the Bicol River, these barrios are part of the tidelands popularly known as the Balongay area. Being considered as a possible site for a proposed fishpond-estate project, this area covers about 500 hectares of coastal fringe supporting a typical vegetation pattern of mangrove trees and nipa palms. Findings of the survey indicate that about half the respondents living in the study area are willing to exchange their present occupations for so-called fishpond farming. Support for this shift is very strong among those who are currently fishermen, but rice and nipa farmers are relatively cool to the proposal. It is concluded that unless certain intermediate steps are taken first, it is unlikely that a majority of residents will approve the suggested project. Further, additional conclusions are drawn regarding the folk view of fishpond farming.

In early December 1973 the SSRU interviewed residents of three barrios at the mouth of the Bicol River, about six kilometers west of Calabanga poblacion, Camarines Sur. Behind the inquiry was the fact that this tidal-land area had been proposed as the possible site of a fishpond-estate project.

This research report is based on findings made in the SSRU's Small Study 3 (early December 1973). A technical summary of SS3 is found in SSRU Research Activity Summary, No. 5 and is available from the SSRU on request. J. V. Barrameda, the senior author of this report, is the SSRU publications officer. S. S. Roco, who directed the study and prepared the interim report is the SSRU field supervisor. Frank Lynch directs the SSRU and did the final editing of the report.

being considered for implementation by several Philippine government agencies, including the Bicol River Basin Development Program. Information was needed on the people who lived there, above all on how they made their living and how they felt about becoming fishpond operators.

The report that follows concerns the most important findings of the study. Discussed in turn are the characteristics of the respondents and of the three barrios that comprise the study area, the way in which household heads were selected for interview, their occupations and incomes, their attitudes toward becoming fishpond farmers and, more generally, their occupational preferences. A section on conclusions closes the text.

## THE SURVEY

### Respondents' Backgrounds and General Characteristics

1. The 90 people who were interviewed (invariably in Bikol) can be briefly described in two sets of phrases, the first of which applies to all of them; the second, to most of them.

#### Everyone interviewed is:

- a. A barrio resident of the municipality of Calabanga, Camarines Sur; and
- b. A household head.

#### Almost everyone interviewed is:

- a. Married (91 percent);
- b. Male (92 percent);
- c. A nipa farmer (62 percent) or a fisherman (30 percent); and
- d. Literate (87 percent).<sup>1</sup>

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<sup>1</sup>Minimal functional literacy was the norm used to determine whether a respondent should be considered literate or not. To be functionally literate, one must be able to read and write simple messages in any language.

2. The median age of the respondents is about 40 years; their median length of residence in their barrios is around 24 years; their median education is an incomplete elementary course (less than six years of formal study).
3. In terms of materials of which houses are constructed, nearly all (98 percent) of the dwelling units have nipa roofs. Of these, 63 percent have nipa sides as well; 14.4 percent, wood; 14.4 percent, wood and nipa; and the rest (8 percent), combinations of wood, nipa, and other materials such as bamboo or coconut fronds. In effect, all dwelling units are of mixed or light materials.<sup>2</sup>
4. The median house size is 14.87 square meters. Most houses are between 11 and 20 square meters in size (Table RS04.01).

Table RS04.01. SS3 respondents (n = 90) classified by house size (Calebanga, Camarines Sur, early December 1973)

House size (square meters) <sup>a</sup>	n	Percent
01 - 10	24	27%
11 - 20	48	53
21 - 30	9	10
31 - 40	5	6
41 - 50	2	2
51 - 60	0	0
61 - 70	1	1
71 or more	1	1
Total	90	100%

<sup>a</sup>Measurements are of the dwelling area itself (haróng), and do not include attached working areas, which are usually open-walled light-material extensions (su-yáb) added to a side of the dwelling unit.

<sup>2</sup>Even those residents who could afford homes of strong materials opt for light or mixed construction. Their reasoning is that, since typhoons and floods destroy more expensive structures almost as easily as cheaper

### The Study Area

5. The study area covers approximately 500 hectares of nipa-palm stands and mangrove trees set in brackish, waterlogged land on the northwest side of Calabanga. More commonly known as the Balongay area (pronounced /balónggay/), the site roughly describes the shape of an index finger pointed towards the Calabanga poblacion. The area is bounded on the north by San Miguel Bay; on the east, by the upper end of the Sabang-Ilaud River, which empties into that bay; on the south, by the national road, which is roughly parallel to the bay shore, and runs from the poblacion to the ferry crossing at Barrio Balongay, on the edge of the Bicol River; and on the west, by the Bicol River, which in turn also flows into San Miguel Bay.

Three small rivers, all branches of the Bicol River, cut through the survey area. The first is the Gabon-Gabon River, which serves as a channel to San Miguel Bay; the Balatasan River, the longest of the three, snakes eastward for more than half the entire length of the project site and roughly divides the area into two parts; the Duminorog River runs between the Balatasan River and the national road and is parallel to both.

6. All survey respondents reside in three barrios which form part of the Balongay area: Duminorog (pop. 450), Balatasan (600), and Punta (304).<sup>3</sup> Duminorog, situated between the Duminorog River and the national road, is the most accessible of the three communities. A 200-meter trail

ones, one should cut his losses by investing in the lower-cost housing. The "disposable culture" spoken of by Alvin Toffler (Future shock) has apparently been around a long time.

<sup>3</sup>The population figures are for 1973, and were gathered during SSRU Municipality Survey 1 (early January 1974). MS1 gathered baseline data on 31 municipalities and two cities in the basin area. The data cited above are enumeration figures submitted by barrio captains to the office of the municipal mayor of Calabanga in connection with the latter's municipal census of 1973.

connects it to the national road. Balatasan, situated on the southern bank of the Balatasan River nearly a kilometer north of Duminorog, is reached by a trail which passes through Duminorog. A road connects Balatasan to Tacolod in the east (and through Tacolod, to the poblacion), but it is all but impassable in places. Consequently it is of little use as an intercommunity link. Besides, commuting via the national road, using the connecting trail that passes through Duminorog, is relatively easier and more practical.

Punta, geographically the most distant of the three communities, is a coastal barrio at the mouth of the Bicol River. Its western flank faces the river; its northern side, San Miguel Bay; its southern and eastern boundaries are formed by the Gabon-Gabon River. Punta is reached only by watercraft, from Balongay. By motorboat, the downstream trip takes about 10 minutes; bancas take at least twice that length of time. Rough weather inevitably curtails or prevents travel to and from Punta.

7. All three barrios are subject to flooding. The most destructive floods occur during typhoons, especially when a typhoon's passage coincides with a high tide period in San Miguel Bay. On such occasions the Bicol River, swollen by heavy rains and unable to drain into the bay because of the latter's higher tidal level, overflows first into its three branches in the Balongay area. These branches in turn burst their banks within minutes as more and more water, rushing down the length of the Bicol River all the way from its source (Lake Bato), accumulates at the bottleneck point, unable to flow out to sea. Moreover, when the typhoon's hurricane winds blow from the north, they aggravate the situation by adding "push" to the tidal surges, which then overrun the entire length of the area's northern coastline and send sea-water cascading inland.

### The Selection of Respondents

8. In all, 90 respondents were interviewed. They were selected by a four-step procedure: first, the number of dwelling units in each of the three barrios was ascertained (it was said to be 50 in every case); second, the maximum sample size required for 10 percent error at 0.95 reliability was determined (30 respondents from each barrio); third, from a random start, sample dwelling units were selected by systematic random sampling; fourth, in each dwelling unit (all were single-household units) the male household head was sought out for interview (in seven out of 90 cases, however, the female household head was necessarily taken instead of the male).
9. An actual dwelling-unit count was conducted by SSRH staff members after the survey had been completed. The results differ from the figures on which the sampling plan was based. Thus the number of homes (and households) was not 150, but 225, distributed as follows: Duminorog, 75; Balatasan, 100; and Punta, 50 (for the corresponding population figures see paragraph 6, above). Because of this finding, one must conclude that while the error limit for Barrio Punta remains plus or minus 10 percent, the error will be slightly greater for Duminorog and Balatasan. However, the aggregate Balongay-area data will still be accurate within 10 percent.

### Respondents' Occupations

10. For 62 percent of the respondents, nipa farming is the primary occupation. Another 30 percent give fishing as the activity that occupies most of their working time.
11. Differences by barrio are marked. Thus household heads of Duminorog may be characterized as nipa farmers (93 percent) whose most common secondary occupation is the raising of rice and other crops. The men

of Balatasan are also nipa farmers (87 percent), but where they have a secondary source of income (37 percent have none) it tends to be fishing. In Punta, on the other hand, fishing is the most commonly mentioned primary occupation (87 percent), and most men report no other income-producing activity (see Table RSO4.02).

Table RSO4.02. 883 respondents (n = 90) classified by primary and secondary occupations, crossclassified by barrio of residence (Calabanga, Camarines Sur, early December 1973)

Occupation	Barrio			Total n
	Duminorog	Balatasan	Punta	
<b>1. Primary occupation</b>				
Nipa farming	93%	87%	6%	56
Fishing	-	3	87	27
Rice/other crops	7	3	-	3
Laborer	-	-	-	-
Others	-	7	7	4
Total	30	30	30	90
<b>2. Secondary occupation</b>				
None	7%	37%	70%	34
Nipa farming	7	3	10	6
Fishing	17	43	7	20
Rice/other crops	67	10	3	24
Laborer	3	-	3	2
Others	-	7	7	4
Total	30	30	30	90

#### Annual Household Income

12. The annual household incomes reported by respondents are relatively low. The mean figure is P1,675; the median, P1,554. This is equivalent to only P140/150 per month. The mean/median ratio is 1.07.

13. The distribution of incomes by intervals of P1000 is shown in Table RS04.03.

Table RS04.03. SS3 respondents by annual income category and by barrio (Calabanga, Camarines Sur, early December 1973)

Annual income	Duminorog		Balatasan		Punta		Total	
	N	%	N	%	N	%	N	%
P1000 or less	14	50%	6	20%	5	17%	25	28%
1001 - 2000	7	25	13	43	13	43	33	38
2002 - 3000	2	7	3	10	5	17	10	11
3001 or more	5	18	8	27	7	23	20	23
Total	28	100%	30	100%	30	100%	88	100%
No data	2		0		0		2	

14. Incomes and income disparity differ by barrios and by primary occupation. This is best shown in tabular form (Table RS04.04).

Table RS04.04. SS3 respondents by barrio of residence, by primary occupation, and by annual household income (Calabanga, Camarines Sur, early December 1973)

Category	Annual household income		Mean/median ratio
	Mean	Median	
<u>Barrio</u>			
Duminorog	P1,315	P1,000	1.32
Balatasan	1,814	1,700	1.07
Punta	1,874	1,750	1.07
<u>Primary occupation</u>			
Nipa farming	1,583	1,280	1.24
Fishing	1,908	1,700	1.12



Briefly, of the two most common primary occupations in the Balongay area, fishing is notably more lucrative than nipa farming. It follows almost as a corollary that the greater the percentage of fishermen in a barrio, the higher the average annual income. Income disparity (as suggested by the mean/median ratio) is notably greater among nipa farmers.

15. Confirming the relatively higher economic status of fishermen is the fact that although the people of the fishing village, Punta, are only 23 percent of the total study population, they include 43 percent of those respondents whose income is above the median. Conversely, the residents of the nipa-farming village, Duminorog (33 percent of the total population), account for only 20 percent of the better-off respondents. Balatasan, which is a mixed farming and fishing barrio, has 44 percent of the population and 36 percent of the above-median-income households.

#### Respondents' Attitude Toward Being Fishpond Operators

16. Of the 90 respondents, one-half say they are willing to become fishpond operators.
17. Differences in willingness do not occur by age, educational attainment, income, or length of residence in respondent's present barrio.
18. Differences do occur, however, by occupation and by residence. Favoring the idea of fishpond operation are 68 percent of those for whom fishing is a primary occupation, and 65 percent of those for whom it is secondary. Only 39 percent of nipa farmers are so inclined.
- Again, while 73 percent of Punta residents (mostly fishermen) are interested in becoming fishpond operators, the corresponding percentage is 50 percent in Balatasan (primarily nipa farmers, many of whom list fishing as a secondary activity), and only 25 percent in Duminorog (few fishermen; mostly nipa farmers).

### Occupational Preferences

Another way of approaching the question of willingness to become fishpond operators is less direct. Instead of asking about willingness to change to this occupation, the inquiry was more general: paired comparisons of occupations. Four occupations were discussed: nipa farming, fishpond farming, sea fishing, and river fishing.

20. Residents of the three barrios give as their preferred occupation their present principal occupations: nipa farming for Duminorog and Balatasan, sea fishing for Punta.
21. In all barrios, fishpond farming is the second choice. But Punta respondents are much more interested in it than are the residents of Duminorog or Balatasan.
22. The third choice is river fishing for Duminorog and Balatasan, nipa farming for Punta.
23. In last place is sea fishing for Duminorog and Balatasan, river fishing for Punta.

## CONCLUSIONS

The most obvious conclusion to be drawn from this inquiry is that, on the whole, the people of the study area are not enthusiastic about becoming fishpond operators. They'd rather remain what they are. For while the area's fishermen, as a group, favor the fishpond idea more than others do, they constitute only a minority (30 percent) of the total population (Findings 1, 16, and 18).

More interesting than the conclusion itself are the reasons that underlie this reaction to the proposed change of occupation. In the paragraphs that follow we suggest what some of these reasons might be.

To begin with, Balongay-area residents are poor. Their mean annual income of P1,675 (Finding 12) is only about one-half the income reported by the average Bicolano family. Further, while about one-third of Bicolano families have incomes of more than P3,000 per year, the figure is 23 percent for the taga-Balongay, and even less for the people of Duminorog (Table RSC4.03).<sup>4</sup> Another clear evidence of the poverty of the study area is the fact that 90 percent of households have living quarters with 30 square meters of floor space or less. This area is below the minimum 32 square meters recommended in 1973 for relocated Naga City squatters (DDCI 1973).

Poor as they are, the taga-Balongay nonetheless have a relatively secure source of income. The nipa and the fish are there for the taking.

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<sup>4</sup>The Bicol regional figures for 1973 are estimates based on data for 1971 found in Mijares and Belarmino (1973). In 1971 the mean annual income for Region VI (the Bicol provinces, including Camarines Sur) was P2,784. Given the increase in prices in the 1971-73 interval, the mean regional income as of late 1973 was almost certainly in the area of P3,400, or about twice the Balongay-area average at that time. Similarly, if 29 percent of families reported incomes over P3,000 in 1971, the figure must have been at least 33 percent by late 1973.

and the markets for fish and for nipa products (including nipa shingles, or tiklad) are well established and familiar to all. In their conservative reaction to the fishpond proposal the people of the study area show the same kind of shrewd common sense demonstrated by those share tenants who are reluctant to become lessees or amortizing owners. Readers familiar with earlier publications in the SSRU Research Report Series may recall that in 1973 only two-thirds of tenant rice farmers of Camarines Sur said they wanted to own the land they tilled (Lynch 1973: 10); in Nueva Ecija in 1971 the corresponding figure was 55 percent (Pahilanga-de los Reyes and Lynch 1972: 29). As Christenson rightly pointed out (1972: 170), share tenants and owners are relatively secure, while lessees (and, we would add, amortizing owners) are not.

Poor but relatively secure people will not readily exchange a sure source of income, provided it be adequate for their perceived needs, for some other occupation, just because it is said to be more lucrative. For one thing, the proposed occupation may be strange and unfamiliar to them, and therefore seen as a risky proposition at best. Again, in rural society where any surplus (as locally defined) is fair game for needy relatives and friends, an assured and adequate income may be much more attractive than a possibly higher level of living.

How then do we explain the fact that fishermen, regardless of income (Finding 18), show more interest in fishpond operation than farmers do (Finding 19)? One answer might be that the taga-Balongay do not see fishpond culture as the technicians do--that is, as fishpond farming--but as fishpond fishing. For fishermen, the new occupation may be viewed as a less risky kind of fishing, while for farmers it may be an unfamiliar and hazardous economic undertaking.<sup>5</sup>

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<sup>5</sup>In the case of Punta, another factor may be involved. The fishpond-

However, a more likely reason for the fishermen's greater enthusiasm for fishpond culture is this: he can become a fishpond operator and still return to the sea whenever need requires. Unlike the nipa farmer, whose source of livelihood will be replaced by the fishpond, the fisherman always has a way out, a back-up system to sustain him should the new venture fail.

To summarize, in view of the facts and probabilities discussed above, we must conclude that the reactions of the taga-Balongay to the proposed fishpond project are reasonable indeed. We suggest further that enthusiasm for innovations of this kind (in this area or elsewhere) will be directly proportional to (a) the people's understanding of the details of the new source of income, (b) the extent to which they feel they will be able to master the techniques involved, and (c) the assurance they have of a secure, familiar source of income until such time as they decide to make a final shift to the new occupation.

It follows that the change-over from one occupational base to another should be planned, not merely as a goal, but as a process. Indeed, if the details of the transitional period are not wisely designed, the final result may never be achieved; or if it is--if, for example, fishponds do in fact eventually replace nipa farms as the community's resource base--it will have been accomplished at an unnecessarily high human cost. Development planners, like surgeons, are in conscience bound to monitor and manage the life signs of their communities both during and after their remedial operations.

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estate project may be seen as an opportunity to acquire land holdings which most residents do not have and many presumably would like to have.

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