

APPENDIX

Verbal Instructions

(Translated from Spanish)

Today we have ___ people helping with this exercise: _____, . . . , and _____.

FIRST PART INSTRUCTIONS

The objective of this exercise is to understand how the people of Puerto Nariño (from the urban area and the indigenous reserves) make decisions on the use of a natural resource, for example, fishing in Lake Tarapoto. We can decide whether we fish or not, and when to do so. We can also decide how many fish we catch each day; we can catch two or three “strings of fish” [common size and weight known by all in the community] or catch enough fish to bring back to the house or sell. These exercises are similar to those types of decisions.

In order to participate in this exercise, each *paisano* [compatriot, a common term among people who live in Puerto Nariño] will make decisions in a group with four other paisanos. However, the decisions will be individual; no one in your group must know about your decisions. Each paisano will be identified by a number throughout the exercise.

Today, there are ___ groups of paisanos participating at the same time. Each group of paisanos will work separately, and the decisions of one group will not affect in any way those of the other groups. Each group will have different-colored sheets during the exercise, and one of us [researcher] will facilitate the development of the exercise in each group. In other words, one of us will be your group’s monitor.

<Announce who will monitor which group.>

In this exercise, each paisano can earn money based on his or her decisions and the decisions of the other paisanos in the group.

The reason we use money in this exercise is to represent real-life situations, since the fishing decisions you make have economic consequences.

You will play several rounds, and each round represents one day of fishing.

In each round, each paisano will earn money according to his or her fishing decisions. At the end of the exercise, we will add the earnings of each round and pay you in cash. In order to receive your earnings, you must participate until the end of the exercise, which can take up to four hours.

We will now explain how to participate in the exercise. Please pay close attention to these instructions, remain seated, and do not talk to other paisanos during the exercise. If you have any questions, please raise your hand.

Your decisions are private and cannot be shown to the other paisanos.

Earnings Table

Next, we will hand out the EARNINGS TABLE, which shows what each paisano can earn according to the number of strings of fish he or she extracts from the lake. All paisanos have the same EARNINGS TABLE.

<Hand out the tables.>

The tables you are receiving are exactly the same as the one in this poster.

The red numbers in the table are the number of pesos you can earn in each round depending on your decisions (what you decide to fish) and the decisions of the other paisanos in your group (what the others decide to fish). When each of you makes a decision on how many strings of fish to extract, you will not know the decisions of the other paisanos in your group.

In each round, each paisano must decide how many strings of fish to extract. In this exercise, this decision can be anything between 1 and 9 strings of fish. Your decision will be called MY AMOUNT FISHED. In the EARNINGS TABLE, the row MY AMOUNT FISHED shows the different quantities you can fish in each round: from 1 to 9 strings of fish. In other words, in this exercise, each paisano can fish a maximum of 9 strings of fish.

However, each paisano's earnings will depend on the decisions of the other paisanos in the group. In the EARNINGS TABLE, the decisions of the other paisanos are in the column AMOUNT FISHED BY OTHERS, which can be any number from 4 to 36 strings of fish. This number is the sum of the strings of fish extracted by the other paisanos in your group in each round.

Remember that when each one of you makes a decision of how many strings of fish to extract, you will not know the decisions taken by the other paisanos in your group. The amount fished by the other paisanos will be known afterward, when we add the group's TOTAL.

We will add the number of strings of fish extracted by each *paisano* and give you the TOTAL of strings fished by the group.

The total strings fished by the group will show you the quantity fished by the rest of the group, but NOT the individual fishing decisions made by each person.

Let's look at some examples:

<Do this exercise on the board.>

Remember there are 5 paisanos in your group deciding on how many strings of fish to extract.

Imagine that one paisano (Don Jose, for example) decides that MY AMOUNT FISHED is 4 strings of fish and the other four paisanos in the group also decide to fish 4 strings of fish each. We add the number of strings fished by each member of the group and announce to the group that the TOTAL amount fished by the group was 20 strings of fish ($4+4+4+4+4$).

Because Don Jose decided to extract 4 strings of fish, he can calculate AMOUNT FISHED BY OTHERS like this:

<Write this table on the board.>

	How many strings did you decide to fish?
Don Jose MY AMOUNT FISHED	4 strings
Paisano 2	4 strings
Paisano 3	4 strings
Paisano 4	4 strings
Paisano 5	4 strings
TOTAL FISHED BY THE GROUP	$4+4+4+4+4 = 20$ strings.
TOTAL FISHED BY OTHERS	20 strings $- 4$ (MY AMOUNT FISHED) = 16 strings

Now you can calculate your earnings by looking where MY AMOUNT FISHED (4) and AMOUNT FISHED BY OTHERS (16) cross in the EARNINGS TABLE. In other words, where the column with MY AMOUNT FISHED 4 and the row with AMOUNT FISHED BY OTHERS 16 meet. In this case, we can see in the table that Don Jose's earnings would be 859 pesos.

However, if Don Jose extracts 4 strings of fish and the other paisanos in the group extract 2, 3, 7 and 8 each, we will add them and announce that the TOTAL fished by the group was 24 (4+2+3+7+8). Because Don Jose decided to extract 4, the AMOUNT FISHED BY OTHERS would be $24 - 4 = 20$.

<Change the numbers in the table previously written on the board.>

	How many strings did you decide to fish?
Don Jose MY AMOUNT FISHED	4 strings
Paisano 2	2 strings
Paisano 3	3 strings
Paisano 4	7 strings
Paisano 5	8 strings
TOTAL FISHED BY THE GROUP	$4+2+3+7+8 = 24$ strings.
TOTAL FISHED BY OTHERS	24 strings $- 4$ (MY AMOUNT FISHED) = 20 strings

In this case, as we can see in the EARNINGS table, Don Jose's earnings would be 754 pesos, as it is possible to see where MY AMOUNT FISHED (4) and AMOUNT FISHED BY OTHERS (20) cross. In other words, where the column with MY AMOUNT FISHED 4 and the row with AMOUNT FISHED BY OTHERS 20 meet.

On the other hand, if Jose chooses 8 and the others choose 3, 9, 7, and 6 each, the total amount fished would be 33, the amount fished by others would be 25, and Don Jose's earnings would be 679, as it is possible to see where MY AMOUNT FISHED (8) and AMOUNT FISHED BY OTHERS (25) cross. In other words, where the column with MY AMOUNT FISHED 8 and the row with AMOUNT FISHED BY OTHERS 25 meet.

<Change the numbers in the table previously written on the board.>

	How many strings did you decide to fish?
Don Jose MY AMOUNT FISHED	8 strings
Paisano 2	3 strings
Paisano 3	9 strings
Paisano 4	7 strings
Paisano 5	6 strings
TOTAL FISHED BY THE GROUP	$8+3+9+7+6$
TOTAL FISHED BY OTHERS	33 strings -8 (MY AMOUNT FISHED)= 25 strings

As you can see, your earnings depend on your decisions and the decisions made by the rest of the group.

Decision Cards

In order to make your decisions in each round, you will receive a “Fishing Card” with the number that identifies each paisano. The Fishing Card is a small piece of paper like the one we will hand out next. *<Distribute the cards to the participants.>*

The card you are receiving is identical to the one on this poster.

In each round, you must write:

- The number of the round, which will be announced by us.
- The number of strings of fish you think the others will extract (a number between 4 and 36 strings). This is the sum of the strings of fish you believe the other 4 participants will extract. Remember that when you decide how many strings to fish, you do not know how much the other paisanos will be fishing. This information is interesting for us as it tells us what you are expecting about the amount the others will choose when making your decision.
- You must also write the amount you want to fish (the number of strings you decided to fish), a number between 1 and 9.

After all the paisanos in your group have written down their decisions, we will pick up the cards of the 5 paisanos and add the TOTAL fished by the group. Once we know the

TOTAL fished, we will announce it to the group so everyone can calculate the AMOUNT FISHED BY OTHERS. With this information and the number of strings of fish you extracted, you will be able to tell how much you earned in the EARNINGS TABLE.

It is very important for you to remember that your decisions are private and that you cannot show them to the other paisanos.

Calculation Sheet

Remember that you can earn money. Thus, you will receive a calculation sheet that looks like the one on this poster so it will be easy for you to keep track of your earnings. This sheet will allow each of you to calculate your earnings based on the number of strings of fish chosen by you and the number chosen by the others. The calculation sheet looks like this poster.

We will see how the calculation sheet is used with an example.

Remember, there are 5 paisanos deciding on how many strings to fish.

Suppose you decide to fish 4 strings.

You then have to write in the Fishing Card (the small piece of paper) the number 4 in MY AMOUNT FISHED.

You must also write this number on the calculation sheet in MY AMOUNT FISHED = 4 (Column A).

All of you will be writing your fishing decision on two pieces of paper, the Fishing Card, which you will hand back to us, and the Calculation Sheet, where you will record your decisions and your earnings.

Remember also to write on the Fishing Card what you believe the other paisanos of your group will be fishing. For example, 18.

<Write numbers on the board as participants write on their calculation sheets.>

After all of the paisanos in your group have made their decisions, we will pick up the cards from the 5 paisanos and add the numbers for the TOTAL amount fished by the group.

In this case, the sum of the group's decisions was 20 strings. You must write 20 in TOTAL amount fished (Column B). Now, in order to know the amount fished by the others, you have to subtract the amount fished by you from the total amount fished by the group (Column B minus Column A).

This result must be written in Column C AMOUNT FISHED BY OTHERS. In our example, the AMOUNT FISHED BY OTHERS is 16, $20 - 4$.

To calculate your earnings, you must use the EARNINGS TABLE. In this case, since MY AMOUNT FISHED is 4, and AMOUNT FISHED BY OTHERS is 16, my earnings are 859. You must write this information in MY EARNINGS IN THIS ROUND (Column D).

Practice Rounds

Before starting the exercise we will do a few practice rounds.

We will now start the exercise.

SECOND PART INSTRUCTIONS

We will now start the second part of this exercise, which will last 10 rounds. In the second part, we will continue to make decisions about how much to fish, but there is now a rule that says that **in each round each one of you is allowed to fish a maximum of two strings**. If all the paisanos in your group extract only two strings each, there will be more earnings for the entire group.

However, you can decide how much to fish and whether you comply or not with this rule.

In order to supervise the compliance of this rule, there will be an inspection in each round.

The paisano who is inspected and is breaking the rule—in other words, is fishing more than 2 strings—will be sanctioned. This sanction implies that you will not be able to decide the amount you fish in the next round and you will have to extract only 1 string on that round. This means that in the next round you must fill in your card and hand it back to me, but in MY AMOUNT FISHED you must write “1 string.”

No one else within the group will know if during the inspection a paisano was found breaking the rule. In other words, no one in the group will know if the inspected paisano was or was not sanctioned.

You will only be sanctioned if you are inspected and found to be fishing more than two strings. You are able to fish more than two strings, but if you do so and are inspected, you will be sanctioned. This means that you will not be able to decide how much to fish in the next round and you will be able to fish only one string in that round.

It would be very difficult to inspect the decisions made by every paisano in the group. This is why, after each paisano has decided on the amount he or she will fish and has handed back the Fishing Card, the inspection will be assigned through a raffle as follows:

In order to decide who will be inspected, we will pick a ball from a bag that contains 5 balls with the numbers of each participant and 5 blank balls. The number of the participant that appears on the ball will be inspected. If a blank ball is picked, no one will be inspected in that round.

There will be one raffle per session; in other words, all groups must go at the same time.

If your participant number is picked, the monitor (one of us) will check how many strings you have fished in that round. If you fished more than two strings, you will be sanctioned and you will not be able to decide how much to fish in the next round and you will only be able to fish 1 string.

No one else in your group will know the result of this inspection. In other words, no one in the group will know if the inspected paisano was sanctioned or not.

You will only be sanctioned if you are inspected and you fished more than two strings. Therefore, you can decide how much to fish and if you comply or not with the rule in each round.

In each round, we will pick only one ball. If your number is picked, you will be inspected and no one else will be inspected in that round. If a blank ball is picked, there will be no inspection at all.

The ball that was picked will be returned to the bag. Therefore, anyone can be inspected more than once during the entire exercise. It is also possible for you to never be inspected if the ball with your number is never picked.

Let's do some examples:

First example:

If you fish 5 strings in round 1, you will be breaking the rule because you will be fishing 3 more strings than the allowed amount of 2 strings.

If the ball with your number is picked, you will be inspected. Because you fished 5 strings, you will be sanctioned and in the next round you will not be able to decide how much to fish and you will have to fish 1 string only in that round.

In other words, in round 2, when you fill in your Fishing Card in MY AMOUNT FISHED you will have to write 1 string, and 1 string only.

If you are not inspected, you will not be sanctioned and will be able to decide how much to fish in the next round.

Another example:

If you fish 2 strings, you are fulfilling the rule because the amount you fished is equal to the amount allowed.

Then, if your number is picked, you will be inspected. Because you only fished the allowed amount, you will not be sanctioned and you will be able to decide how much to fish in the next round. The other paisanos in your group will not know if you were sanctioned or not.

Last example:

If you fish 1 string, you are complying with the rule because the amount you fished is lower than the allowed maximum amount of 2 strings.

Then, if your number is picked, you will be inspected. Because the amount you fished is lower than the maximum amount permitted, you will not be sanctioned and you will be able to decide how much to fish in the next round.

Remember that you will only be sanctioned if you are inspected and the amount you fished is greater than 2 strings.

Calculation Sheet

We will now use a calculation sheet that is similar to the one in the previous exercise, but has two new columns.

The Columns A, B, C and D are used in the same way as in previous rounds, but there are two additional columns.

In Column E you must write if you were inspected or not during that round. The monitor will write YES if you are inspected (that means, if the ball with your number was picked) and you will write NO if your number is not picked.

Column F (Did I pick more than two strings?) will only be filled if you are inspected. The monitor will fill in this column only if your number is picked. In this column we will write if you are breaking the rule or not.

Remember, if you are inspected and sanctioned for fishing more than 2 strings, you will not be able to decide how much you fish in the next round and you must only fish 1 sting. If you are not inspected, you must not write anything in column F.

Example:

Imagine that the amount fished by Don Jose was 5 strings and the total fished by the group was 25 strings. Write this information down in the corresponding columns as in the previous rounds. In this case, the amount fished by the others is 20 (column C), and your earnings are 790. Write this information down in column D.

If Don Jose's number is picked, he will then be inspected and the monitor will write "YES" in column E. Because he was inspected and was breaking the rule because he fished 5 strings, then the monitor will write "YES" in column F.

This means that Don Jose will be sanctioned and will not be able to decide how much to fish in the next round and will be forced to fish only 1 string. In other words, in the next round, he must hand in his fishing card as the rest of the group but in MY AMOUNT FISHED he will write "1 string." In the "amount expected to be fished by others," you will continue to write what you expect the others will fish as in the previous rounds.