PART I

Good morning, I’m—representing-. The Universitat Autònoma de Barcelona is conducting an anonymous survey about the different aspects of the forests. You have been chosen at random and I should thank you if you could answer some questions.

[SHOW MAP A]
40% of the area of Catalonia are forests. On the map the colour green represents the forest area. At present, an increase of this area from 40% to 50% of the total area of Catalonia is being studied.

[SHOW MAP B] This increase will be carried out through a reforestation program which will consist of planting trees, mostly in abandoned or not very productive agricultural land.

Next, I will tell you some of the effects that this reforestation would have. We should thank you if you could value each one of these according to how you consider this effect VERY POSITIVE, QUITE POSITIVE, SLIGHTLY POSITIVE, NEITHER POSITIVE NOR NEGATIVE, SLIGHTLY NEGATIVE, QUITE NEGATIVE OR VERY NEGATIVE. [SHOW THE CARD] [MAKE SURE THAT THE RESPONDENT HAS UNDERSTOOD THE MEANING OF THE MARKS]

1. With agricultural reforestation, agricultural production would decrease a little, but the quantity of forest products like wood and firewood would increase. How would you value this change? [SHOW CARD]

2. The new forest would decrease the air pollution a little because the trees sequester CO₂ and renew the air oxygen. [INTERVIEWER: IF THE RESPONDENT DOESN’T KNOW WHAT CO₂ IS, SAY THAT CO₂ IS FOR EXAMPLE, ONE OF THE EXHAUST GASES FROM CARS]. How would you value this effect? [SHOW CARD]

3. In the reforested lands, the trees would fix the soil through their roots and would prevent it from being dragged away by the rain or the wind, which with soil erosion would be less and it would be productive for more years How would you value this effect? [SHOW CARD]

4. The new forest would suppose more land for recreational activities such as picnicking, picking mushrooms or walking. How would you value this effect as? [SHOW CARD]

5. As well as the effects that you have marked: Do you think that this reforestation of agricultural land could have other positive or negative effects?

YES ....................... 1
NO ......................... 2
DOESN’T KNOW 3
DON’T ANSWER . 4

GO TO QUESTION 7

ONLY IF HE/SHE THINKS OF OTHERS EFFECTS OF THE REFORESTATION (P5 = 1)

6. ¿Which ones? [MAKE A NOTE OF THE ANSWERS, DON’T SUGGEST, INSIST]

POSITIVE________________________________________________________

NEGATIVE________________________________________________________
PART II

7. Do you think the idea of this reforestation programme of a 10% of the Catalonia area, is:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY GOOD</td>
<td>5</td>
</tr>
<tr>
<td>GOOD</td>
<td>4</td>
</tr>
<tr>
<td>NEITHER GOOD NOR BAD</td>
<td>3</td>
</tr>
<tr>
<td>BAD</td>
<td>2</td>
</tr>
<tr>
<td>VERY BAD</td>
<td>1</td>
</tr>
<tr>
<td>DOESN’T KNOW</td>
<td>8</td>
</tr>
<tr>
<td>DOESN’T ANSWER</td>
<td>9</td>
</tr>
</tbody>
</table>

If the programme is approved it will be financed through the contributions that all Catalan citizens will make to a fund exclusively devoted to the reforestation and conservation of the new forest. [IN CASE THAT THE RESPONDENT IS UNSURE, OR HE/SHE ASKS, TELL HIM/HER THAT THE CONTRIBUTIONS AREN’T VOLUNTARY AND ALL PEOPLE WILL PAY IF THE PROGRAMME IS APPROVED].

The different effects that the different ways of reforesting an extra 10% of Catalonia could have, will depend on the tree species planted, in which lands they will be planted, and which regulations for forest use are applied.

The tree species that will be planted will influence the decrease of air pollution. [SHOW AND EXPLAIN THE CO₂ CARD]. Depending on the proportion among the tree species that will be planted, the new forest would be able to eliminate each year the quantity of CO₂ that produces annually a city of … people.

In relation to erosion, [SHOW AND EXPLAIN THE EROSION CARD] if reforestation takes place in the following types of land… [EXPLAIN THE EROSION CARD]

Finally, the recreational activities that would be allowed in the new forest are … [SHOW AND EXPLAIN THE RECREATIONAL CARD] depending on the regulation of forest use that would be applied.

Bearing in mind all these aspects, next, I will ask your opinion about different ways of doing this reforestation, and their cost. Your answers are important for seeing what type of reforestation the population prefers.

Please, look at these cards [SHOW AND EXPLAIN A, B, C, AND D CARDS] In each card you can see the most important effects that a certain way of reforesting an extra 10% of the area of Catalonia would have, and what you would have to pay each year for this reforestation.

Look at the cards attentively. [GIVE TIME TO THE RESPONDENTS TO UNDERSTAND EACH CARD, AND IF HE/SHE DOESN’T UNDERSTAND SOMETHING EXPLAIN AGAIN].

8. Of these cards, which ones do you accept and which ones do you turn down? You can accept or turn down all the cards. [MAKE A NOTE OF THE ACCEPTED AND TURNED DOWN CARDS]

<table>
<thead>
<tr>
<th>Card</th>
<th>Accept</th>
<th>Turn down</th>
<th>NU</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Card A</td>
<td>1</td>
<td></td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>b. Card B</td>
<td>1</td>
<td></td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>c. Card C</td>
<td>1</td>
<td></td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>d. Card D</td>
<td>1</td>
<td></td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

ONLY IF HE/SHE ACCEPTS MORE THAN 1 CARD

9. [SHOW AGAIN THE CARDS THAT HE/SHE HAS ACCEPTED]. Now, can you rank the cards that you have accepted from most preferable to least preferable? [MAKE A NOTE OF THE REFERENCE IN ACCORDANCE WITH THE ORDER THAT THE RESPONDENT GIVES] [ALLOW INDIFFERENCE]

Reference of the card

<table>
<thead>
<tr>
<th>Reference</th>
<th>Most Preferable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st option</td>
<td></td>
</tr>
<tr>
<td>2nd option</td>
<td></td>
</tr>
<tr>
<td>3rd option</td>
<td></td>
</tr>
<tr>
<td>4th option</td>
<td></td>
</tr>
</tbody>
</table>

1st option most preferable______
2nd option most preferable______
3rd option most preferable______
4th option most preferable______

DOESN’T KNOW .....8
DOESN’T ANSWER......9
10. [SHOW AGAIN THE CARDS THAT HE/SHE HAS TURNED DOWN]. Now, can you rank the cards that you have turned down from less harmful to more harmful? [MAKE A NOTE OF THE REFERENCE IN ACCORDANCE WITH THE ORDER THAT THE RESPONDENT GIVES] [ALLOW THE INDIFFERENCE]

Reference of the card
1st option less harmful
2nd option less harmful
3rd option less harmful
4th option less harmful

11. [SHOW AGAIN THE CARDS THAT HE/SHE HASN’T ANSWERED OR HE/SHE HAS SAID “DOESN’T KNOW”] ¿What are the reasons for your answer?
REASON/S: ______________________________________________________________________

12. The reforestation that the administration is thinking about carrying out is the reforestation corresponding to the card [SHOW CARD R1 ], i.e., they would do a reforestation with these effects [EXPRESS AGAIN THE MEANING OF THE LEVELS AND ATTRIBUTES OF THE CARD] ¿Would you accept this reforestation?

YES ....................... 1
NO ......................... 2
DOESN’T KNOW ..... 8
DOESN’T ANSWER.... 9

13. For what reasons aren’t you willing to pay for do this reforestation?
REASON/S: ______________________________________________________________________

PART III

Until now, I have asked your opinion about the reforestation of an additional area of 10% of Catalonia. Now we are interested in your opinion about forest fires.

[SHOW CARD D] Because of forest fires, in Catalonia every year 10,000 hectares of forest burn down on average, i.e., a 1% of all Catalonia forest area. At the moment the Government allots some 500 pesetas annually per person for forest conservation and cleanliness. By a new programme of forest conservation and cleanliness they could decrease this fire risk by half, i.e., each year on average of 0.5% of the forest area would burn. To carry out this programme they would allot 1500 pesetas per person each year.

14. ¿Would you be willing to pay 1000 pesetas each year in additional taxes to carry out this programme for reducing the risk of fire by half? [BE SURE HE/SHE UNDERSTANDS THAT THIS PROGRAMME IS INDEPENDENT OF THE REFORESTATION PROGRAMME THAT THE RESPONDENT HAS VALUED PREVIOUSLY]

YES ....................... 1
GO TO QUESTION 16
NO ......................... 2
DOESN’T KNOW 8
DOESN’T ANSWER..... 9

15. For what reasons aren’t you willing to pay?
REASON/S: ______________________________________________________________________
PART IV

Finally, we would like to ask you a few questions about your use of forests.

In the last year, have you ever gone to the forest for recreational activities such as, for example, getting some exercise, picnicking, picking mushrooms or walking?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>DOESN’T KNOW</th>
<th>D0N’T ANSWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

ONLY IF HE/SHE HAS EVER GONE TO THE FOREST FOR DOING RECREATIONAL ACTIVITIES (Q16=1)

17. Approximately, how many times?

.................Times

18. ¿What was the principal activity that you did the last time you went to a forest?


19. How far away was the forest you visited last? [ASK FOR THE VILLAGE AND THE AREA WHERE THE FOREST IS]

Forest............................................................
Village............................................................
Area..............................................................

20. How many days did you spend in your visit?

.......... Days


HOTEL, GUEST HOUSE............................... 1
RURAL HOUSE................................. 2
FLAT................................................. 3
PRIVATE HOUSE.............................. 4
CAMP SITE........................................ 5
ORGANISED CAMP......................... 6
MOUNTAIN SHELTER.................... 7
SHELTER..................................... 8
OTHERS (specify)............................ 9

DOESN’T KNOW........................................ 10
DOESN’T ANSWER.............................. 11

22. ¿What means of transport did you use to go from your village to the forest? [IF HE/SHE USED MORE THAN ONE, ASK FOR THE PRINCIPAL]

PRIVATE CAR........1   BICYCLE.............6
MOTORBIKE........2   OTHER (specify)......7
TRAIN.................3
BUS....................4   DOESN’T KNOW......8
WALKING.............5   DOESN’T ANSWER....9

23. How many people, including yourself, went together in the visit?

ALONE.........................0
WITH OTHER PEOPLE......1   NUMBER.....INCLUDING THE RESPONDENT
DOESN’T KNOW.............10
DOESN’T ANSWER.........11
ONLY IF HE/SHE WENT WITH OTHER PEOPLE (Q23=1)

24. How many people were younger than 16 years old?
NUMBER............

25. Are you member of any organisation or group which has some relation with nature?

YES ....................... 1
NO ...................... 2
DOESN'T KNOW 8
DOESN'T ANSWER 9

GO TO Q.27

ONLY IF HE/SHE IS MEMBER OF SOME ORGANIZATION/GROUP WHICH HAS SOME RELATION WITH THE NATURE (Q24=1)

26. ¿ What type of organisation?
ENVIRONMENTAL ORGANISATION.................1
SPORTS ORGANISATION....................................2
CENTRE OF NATURE STUDIES...........................3
OTHER (write) .........................................................4

PART V

27. In what year were you born?
.......................Year

28. What is your current job?

........................................

29. What is the highest level of education you have completed?

ANY STUDIES OR PRIMARY.........................1
EGB, ESO, ELEMENTARY SCHOOL, FP1.............2
HIGH SCHOOL.....................................................3
UNIVERSITY DEGREE .........................................4
POSTGRADUATE ............................................. 5

30. Would you say that your social status is high, middle-high, middle, middle-low, low?

LOW..............1
MIDDLE-LOW..2
MIDDLE....3
MIDDLE-HIGH....4
HIGH....5

31. Would you say that the average net monthly income is included in some of these ranges?

WITHOUT INCOME .1
UNDER 50,000 PTAS.2
50,001 - 100,000 PTAS. 3
100,001 - 150,000 PTAS. 4
150,001 - 200,000 PTAS. 5
200,001 - 250,000 PTAS. 6
250,001 - 300,000 PTAS. 7
300,001 - 350,000 PTAS. 8
350,001 PTAS OR OVER........................................9
DOESN'T KNOW ................................................10
DOESN'T ANSWER ...........................................11
32. Finally, who do you think has ordered this study? [SUGGEST]

ENVIRONMENTAL ORGANIZATION............1
FOREST ORGANIZATION..........................2
AGRICULTURAL ORGANIZATION...............3
PRIVATE COMPANY..................................4
REGIONAL GOVERNMENT........................5
OTHER (write) ...........................................6

33. Is there anything else that you would like to say about the subject of this survey?

_________________________________________________________________________________________________________

Thank you for answering the survey and for your time.

INFORMATION TO FILL BY THE INTERVIEWER

34. Sex of the respondent

Male...................1
Female...............2

35. Would you say that the degree in which the respondent has understood the questions is

HIGH............1
MIDDLE...........2
LOW...............3

36. And the attitude of the respondent to the survey is:

GOOD.....................1
INDIFFERENT..........2
LITTLE WILLING.....3

Comments and suggestions..........................................................................................

Date of the survey ____/_____/99   Start time.............   Finish time..........

Place of the survey (address).................................................. Village......................

Number of the survey of this series .................   Name of the interviewer..................
### Survey about the Valuation of the Forest Externalities.
#### Pairwise Version

Except the **Part II** the rest of the questionnaire (**Part I, Part III, Part V and Part IV**) is the same for the two versions (ranking and pairwise).

If the programme is approved it will be financed through the contributions that all the Catalan citizens will make to a fund exclusively dedicated to the reforestation and conservation of the new forest. **[In case that the respondent is unsure, or he/she asks, tell him/her that the contributions aren’t voluntary and all people will pay if the reforestation is carried out]**.

The different effects that the different ways of reforesting a 10% of the Catalonia area could have, will depend on the tree species planted, in which lands they will be planted, and the use of forest regulations that are applied.

The tree species that will be planted will influence the decrease of air pollution. **[Show the CO₂ Card]**. Depending on the tree species that will be planted, the new forest would be able to eliminate each year the quantity of CO₂ that produces annually a city of....

In relation to erosion, **[Show the Erosion Card]** if they make the reforestation in lands... **[Explain the Erosion Card]**

Finally, the recreational activities that would be permitted in the new forest are**[Show and explain the recreational card]** depending on the use of forest regulations that would be applied.

Bearing in mind all these aspects, next, I will ask your opinion about different ways of doing this reforestation, and their cost. Your answers are important for seeing what type of reforestation the population prefers.

Please, look these cards **[Show the combination A1]**

In each card you can see the most important effects that a certain way of reforestation a 10% of the area of Catalonia would have and what you would have to pay each year for this reforestation. **[Don’t suggest the shading options]**

---

### 8. [Show the combination A1 and explain the meaning of each attribute and level] Of these two ways of reforesting 10% of the area of Catalonia would you choose A, B, or neither? [Allow Indifference]

<table>
<thead>
<tr>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation A</td>
<td>1</td>
</tr>
<tr>
<td>Reforestation B</td>
<td>2</td>
</tr>
<tr>
<td>Neither</td>
<td>3</td>
</tr>
<tr>
<td>Indifferent</td>
<td>4</td>
</tr>
<tr>
<td>Doesn’t Know</td>
<td>8</td>
</tr>
<tr>
<td>Doesn’t Answer</td>
<td>9</td>
</tr>
</tbody>
</table>

### 9. [Show the combination A2 and explain the meaning of each attribute and level] Of these two ways of reforesting 10% of the area of Catalonia would you choose A,B, or neither? [Allow Indifference]

<table>
<thead>
<tr>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation A</td>
<td>1</td>
</tr>
<tr>
<td>Reforestation B</td>
<td>2</td>
</tr>
<tr>
<td>Neither</td>
<td>3</td>
</tr>
<tr>
<td>Indifferent</td>
<td>4</td>
</tr>
<tr>
<td>Doesn’t Know</td>
<td>8</td>
</tr>
<tr>
<td>Doesn’t Answer</td>
<td>9</td>
</tr>
</tbody>
</table>

### 10. [Show the combination A3 and explain the meaning of each attribute and level] Of these two ways of reforesting 10% of the area of Catalonia would you choose A, B, or neither? [Allow Indifference]

<table>
<thead>
<tr>
<th>Response</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation A</td>
<td>1</td>
</tr>
<tr>
<td>Reforestation B</td>
<td>2</td>
</tr>
<tr>
<td>Neither</td>
<td>3</td>
</tr>
<tr>
<td>Indifferent</td>
<td>4</td>
</tr>
<tr>
<td>Doesn’t Know</td>
<td>8</td>
</tr>
<tr>
<td>Doesn’t Answer</td>
<td>9</td>
</tr>
</tbody>
</table>
11. [SHOW THE COMBINATION A4 AND EXPLAIN THE MEANING OF EACH ATTRIBUTE AND LEVEL] Of these two ways of reforesting 10% of the area of Catalonia would you choose A, B, or neither? [ALLOW INDIFFERENCE]

REFORESTATION A...........1
REFORESTATION B...........2
NEITHER.......................3
INDIFFERENT...............4
DOESN’T KNOW.............8
DOESN’T ANSWER............9

12. The reforestation that the administration is thinking about carrying out is the reforestation corresponding to the card [SHOW THE CARD P1], i.e., they would do a reforestation with these effects [EXPLAIN AGAIN THE MEANING OF THE LEVELS AND ATTRIBUTES OF THE CARD]. Would you accept this reforestation?

YES ....................... 1
NO ....................... 2
DOESN’T KNOW..... 8
DOESN’T ANSWER.... 9

ONLY IF THE RESPONDENT DOESN’T AGREE WITH ANY CARD (Q8 = 2 AND Q12 = 2)

13. What are the reason/s which you aren’t willing to pay for do this reforestation? Some others?

REASON/S: ____________________________________________________________