Visitor Perspectives on Tropical Rainforests

A Report based on the 1988
Tropical Rainforest: A Disappearing Treasure
Information Study

INSTITUTIONAL STUDIES

Smithsonian
Institution
VISITOR PERSPECTIVES
ON TROPICAL RAINFORESTS
A Report Based on the 1988
TROPICAL RAINFORESTS:
A DISAPPEARING TREASURE
INFORMATION STUDY

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Preface

The purpose of this study was to assess the effectiveness of the Tropical Rainforests: A Disappearing Treasure exhibition in communicating facts about and issues associated with the state of tropical rainforests. It was conducted by the Smithsonian Institution Traveling Exhibition Service (SITES) with the collaboration of Institutional Studies, Office of the Secretary. While SITES has participated in previous studies to consider exhibition attendance patterns, the Tropical Rainforests study was the first to collect detailed information about demographic characteristics, attitudes, and perceptions of our exhibition public, together with an experiment to increase attendance and a study of attendance patterns.

The survey reported here represents the collective efforts of many devoted people who should be recognized. The commitment of Tom L. Freudenheim, Assistant Secretary for Museums, to understanding audience dynamics on controversial yet topical subjects and his appreciation of research results are appreciated. Anna R. Cohn, Director, SITES, supported this research at every step, mobilized resources and people to implement this survey, and provided critical comments on this report. She has thereby not only vocalized but demonstrated her total commitment to professional survey research as one of the foundations of SITES' future.

Several members of the SITES exhibition organizing team participated in the design of this study so that it can be a prototype to facilitate future learning from our audiences as well as serve its immediate purpose. These include Martha Cappelletti, Assistant Director for Exhibition Implementation, Judith Gradwohl, Exhibition Curator, and Myriam Springuel, Curator of Education. Judy Gradwohl's comments in reviewing this report assisted greatly in ensuring the exhibition researchers' perspective. Penni Billett, Anne Michelle Fayer, Laura Mikoliczeak, Allison McGuire, Karen Nichols, and Amy Weissman provided long, hard hours of interviewing and many perceptive observations about the public.

In the Institutional Studies office, Kathleen Paasch and Lisa Mathai, Research Assistants, and Manjula Kumar, Operations Specialist, provided technical support in questionnaire design, data processing and analysis. Kelly Black, Statistician, made a major contribution in reviewing the report and ensuring its technical consistency and accuracy.

About 700 Smithsonian visitors were interviewed for this study. Their participation and useful comments are appreciated as SITES seeks to improve the ways that exhibitions translate research into presentations for the general museum-going audience. Errors in interpretation are the responsibility of the authors.
Executive Summary

Introduction

Increasingly, discussions at the Smithsonian address the importance of presenting critical social and environmental issues in exhibitions. The Smithsonian Institution Traveling Exhibition Service (SITES) is committed to such presentations, and is especially concerned with scientific assessments that measure the congruence between exhibition goals and the public's understanding of issues as they are presented. Between November 21 and December 18, 1988, SITES conducted a study of visitors to its exhibition, Tropical Rainforests: A Disappearing Treasure. The purpose of the study was to assess the exhibition's effectiveness in communicating the facts and issues related to the state of tropical rainforests in today's world. This report presents the results of that study. The highlights are summarized below; more detailed summaries are at the end of each section.

Study Design and Implementation

A total of 625 Smithsonian visitors, selected on the basis of gender, age, and exposure (saw or not) to the exhibition were interviewed at four building exits using a fixed schedule (time of day and day of week). Three of these exits, the S. Dillon Ripley Center, Arthur M. Sackler Gallery pavilion, and National Museum of African Art pavilion were used by visitors departing from the exhibition in the International Gallery; the fourth, the Arts & Industries Building, was from an adjacent museum.

The questionnaire was constructed to measure basic exhibition information and educational goals. Parallel questions were asked of those who had seen the exhibition and those who had not. All respondents were asked whether or not they had read about tropical rainforests in the media. The research design and data allowed us to divide respondents into four groups, based on exposure to the exhibition and awareness of the subject area through the media. The presentation of results is based on these groups:

- **Group I.** No exposure to the exhibition and no familiarity with the subject through media exposure (No Exp), number=96;
- **Group II.** Exposure to the exhibition and no familiarity with the subject through media exposure (Exh Only), number=81;
- **Group III.** No exposure to the exhibition but familiarity with the subject through media exposure (Media Only), number=159; and
- **Group IV.** Exposure to the exhibition and familiarity with the subject through media exposure (Exh and Media), number=289.
Group Descriptions and Comparisons

Although respondents were selected on the basis of having seen or not seen the exhibition, and subsequently were divided for analysis into media awareness categories, the results show striking similarities between individuals who keep up with issues in the press, and similarity between those who do not, independent of the exhibition.

- The demographic characteristics of individuals from Groups I (No Exp) and II (Exh Only) were very similar.
  -- These media unaware people tended to be much younger than media aware adults: about one fourth of Groups I (No Exp) and II (Exh Only) visitors were under 18 years old, compared with 6-10 percent of Groups III (Media Only) and IV (Exh and Media).
  -- The visitors in Groups I (No Exp) and II (Exh Only) were also more diverse ethnically (19-29 percent minorities) than visitors from Groups III (Media Only) and IV (Exh and Media): 15-16 percent minorities; they were more likely to be students or have lower educational attainment, as well as less likely to live in D.C. or its suburbs than the media aware groups. These visitors came more often in groups of students, several adults, and adults with children.

- Visitors who were familiar with the subject through media exposure, Groups III (Media Only) and IV (Exh and Media), were also homogeneous.
  -- They reflected a much older population, nearly half of each group being over 35 years of age, compared to 32-40 percent of Groups I (No Exp) and II (Exh Only) in the same age brackets.
  -- Media aware visitors came mainly alone or with one other adult, many work within walking distance of the Smithsonian, and were more predominantly white.

- The data indicate that the visitors who had no previous exposure to tropical rainforest issues, Group I (No Exp), or who had only recently become aware of the subject after visiting the SITES exhibition, Group II (Exh Only), were visiting families and students. Fifty-four percent and 66 percent of these groups, respectively, were repeat visitors to the Smithsonian, compared to 70 percent and 77 percent of media aware visitors (Groups III (Media Only) and IV Exh and Media).
Attitudes and Perceptions about Tropical Rainforests

To assess the exhibition's effectiveness in communicating the facts and issues about the state of tropical rainforests, the questionnaire was oriented to measure specific, basic exhibition information and educational goals. These included: Are tropical rainforests perceived as beautiful and fragile? Do visitors think the tropical rainforest is of importance to their everyday lives? Do visitors understand the complexity of the issues concerning the use, destruction, conservation, and management of the tropical rainforests? Do visitors believe that they, as individuals, can do something about the environmental plight of the rainforests? The results suggest that this exhibition, treating critical environmental issues, accomplished its basic educational and informational goals.

- One of the values the exhibition team sought to communicate was that tropical rainforests are places of beauty. Group II visitors (Exh Only) reflected an understanding of this message more directly in their responses than did people exposed to media presentations. Group II (Exh Only) visitors were far more likely than Group III (Media Only) and Group IV (Exh and Media) visitors to conclude that rainforests are places of beauty and that the basic message of the exhibition is a call to protect and preserve the rainforests, with less cynicism about the ability to do something about it.

- Media exposure conveyed a perception of "gloom and doom," regardless of seeing the exhibition. For people familiar with the media (Groups III (Media Only) and IV (Exh and Media)), the exhibition reinforced preconceived attitudes that the situation is bad, politically embroiled, and requires governmental cooperation on international levels to resolve. These media aware visitors were far more likely to say that solutions to the problem of rainforests are complex and difficult. They were more likely to report that their own personal choices lie in the political arena---writing Congress, joining environmental groups---than those people whose knowledge stemmed only from the exhibition.

- Exhibition exposure alone results in a heightened awareness of the rainforest as a precious and beautiful resource. The exhibition presented some information about political ramifications of resource decisions, but exhibition-only visitors did not pick up on this information. The exhibition was less effective than the media in conveying the political dimensions, the pessimism over deforestation, and the urgent call to action. However, Group II (Exh Only) visitors were far more likely to say that the exhibition had a basic message (72 percent) than were people who were exposed to the issue through only the media; only 52 percent of Group III (Media Only) visitors believed that the media presented a basic message.
The exhibition team developed *Tropical Rainforests* as an educational vehicle to take the message of tropical deforestation to the Smithsonian's public. Indeed, people who saw the exhibition, regardless of media exposure, proved to have a high regard for education as a means of resolving the issues at hand. The groups who saw the exhibition were more likely to say that education and awareness of tropical deforestation was an important and effective course of personal action (24 percent of both Groups II and IV). Visitors to the Smithsonian who were exposed only through the media did not place equal emphasis on the need for education of oneself or others.

As intended by the curatorial team, the exhibition did communicate an aesthetic appreciation and an introduction to the issue. Its educational value was demonstrated by highly positive reactions to questions about message and content, although Group II (*Exh Only*) visitors did not seem to grasp broader implications, such as how the situation affects people's everyday lives and future generations, and what are the major causes and solutions of deforestation.

**Observations**

The quota sampling method in this study does not allow us to generalize these results to all visitors to *Tropical Rainforests*. For purposes of studying the effectiveness of some of the exhibition's messages for different groups, however, this method isolated definite trends in perceptions and attitudes as a result of exhibition and media exposure.

This analysis begins to suggest that exhibitions treating critical environmental issues can accomplish educational goals by providing information that reinforces an individual's prior exposure to or commitment to a topic. More importantly, such exhibitions appear to be a valuable introduction to the visitor who happens to visit them accidentally and view them without any prior information. The design of our study does not allow us to estimate how many of the people who saw the exhibition during its tenure in the International Gallery were "accidental" visitors compared to individuals intent on seeing that particular show.

As social scientists, our methodological challenge lies in refining approaches to investigate the learning process that occurs in the exhibition context as well as provide estimates of population groups at exhibitions. The challenge to exhibition teams in the future: creating exhibitions that attract those serendipitous visitors who otherwise forego the wealth of knowledge embodied in an exhibition.
Table of Contents

Preface ........................................................................................................ iii
Executive Summary ................................................................................ iv

List of Tables and Charts ................................................................... ix

Section

I. Background ........................................................................................ 1

II. Description of Survey Respondents

   Introduction ...................................................................................... 3
   Respondent Demographic Characteristics ..................................... 3
   Characteristics of Respondents' Visits .......................................... 6
   Summary and Observations ............................................................. 8

III. Visitor Reactions to Tropical Rainforests: Issues and Questions

   Introduction ..................................................................................... 10
   Awareness of the Exhibition ........................................................ 10
   Conceptual Reactions to Tropical Rainforests ............................ 13
   Summary and Observations ............................................................. 26

 Appendices

A. Design and Implementation of the Tropical Rainforests
   Information Survey ........................................................................ 28
B. Questionnaire .................................................................................. 38
C. Interviewing Schedule and Sample Control Form ..................... 42
D. Respondent Comments ................................................................. 45
List of Tables and Charts

<table>
<thead>
<tr>
<th>Tables</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Demographic Characteristics of Survey Respondents, by Exposure to the Exhibition and Awareness of Subject Area</td>
<td>4</td>
</tr>
<tr>
<td>2.2 Characteristics of the Smithsonian Visit, by Group</td>
<td>7</td>
</tr>
<tr>
<td>3.1 Awareness of the Exhibition, by Respondents' Exposure to the Exhibition and Awareness of Subject Area</td>
<td>11</td>
</tr>
<tr>
<td>3.2 Descriptions of a Tropical Rainforest, by Respondents' Exposure to the Exhibition and Awareness of Subject Area</td>
<td>14</td>
</tr>
<tr>
<td>3.3 Perceived Future of Tropical Rainforests, by Group</td>
<td>15</td>
</tr>
<tr>
<td>3.4 Perceived Personal Effects of Tropical Rainforests' Disappearance, by Group</td>
<td>16</td>
</tr>
<tr>
<td>3.5 Perceived Message of the Exhibition and Media Treatments, by Group</td>
<td>18</td>
</tr>
<tr>
<td>3.6 Perceived Causes of Tropical Rainforests' Disappearance, by Group</td>
<td>20</td>
</tr>
<tr>
<td>3.7 Opinions about Major Solutions to Rainforests' Disappearance, by Group</td>
<td>21</td>
</tr>
<tr>
<td>3.8 Perceived Personal Actions, by Group</td>
<td>23</td>
</tr>
<tr>
<td>3.9 Classification of Additional Respondent Comments, by Group</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
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<th>Charts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>12</td>
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<tr>
<td>3.2 Perceived Future of Tropical Rainforests, by Group</td>
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</tr>
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<td>3.3 Perceived Personal Effects of Tropical Rainforests' Disappearance, by Group</td>
<td>17</td>
</tr>
<tr>
<td>3.4 Opinions about Major Solutions to Rainforests' Disappearance, by Group</td>
<td>22</td>
</tr>
<tr>
<td>3.5 Perceived Personal Actions, by Group</td>
<td>24</td>
</tr>
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I. Background

Introduction

The Smithsonian Institution Traveling Exhibition Service (SITES) is committed to presenting contemporary and provocative issues in its exhibitions. Part of this commitment includes scientific assessments of the congruence between exhibition goals and the public's understanding of the issues presented. When SITES planned an exhibition on tropical rainforests and the complex issues surrounding this unique ecosystem -- deforestation, multicultural demands, resource management -- one of the goals of the exhibition included such an assessment.¹

The *Tropical Rainforests: A Disappearing Treasure* exhibition opened in the International Gallery of the S. Dillon Ripley Center on May 21, 1988 and closed on January 2, 1989. Several studies were planned in conjunction with this project: (1) an estimation of the number of visitors to the show; (2) an experiment on rerouting people through the use of flyers in other Smithsonian museums, to encourage attendance from other sites on the Mall; and (3) a survey to determine if visitors left the exhibition with new understanding about the state of tropical rainforests.² This report is an analysis of the third project: a survey of 625 visitors conducted between November 21 and December 18, 1988.

SITES originally planned to measure long-term learning or awareness by conducting telephone interviews with visitors some time after their visit to the exhibition. Resource constraints prevented this fuller and preferable scope of assessing the impact of *Tropical Rainforests*.

Purpose of the Study

Major exhibitions not only represent a substantial commitment of research, staff and financial resources; they are potent vehicles for communicating information. *Tropical Rainforests: A Disappearing Treasure* will travel to fourteen locations, from points as disparate as Oregon to North Carolina, after its first venue in the Smithsonian's S. Dillon Ripley Center International Gallery. Its itinerary ends in January, 1994. To assess the exhibition's effectiveness in communicating the facts and issues about the state of tropical rainforests, the

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¹ Support for the study came from two sources. First, the exhibition provided the Smithsonian's Institutional Studies office with a laboratory in which to explore ways of assessing exhibition effectiveness. Second, the MacArthur Foundation, the major underwriter of the exhibition, requested an evaluation of the educational value of the project.

² The results of the first two studies will be reported separately in a forthcoming report by the Institutional Studies office.
research team articulated five research questions and designed a study accordingly:

1. Are tropical rainforests perceived as beautiful?
2. Are tropical rainforests perceived as fragile?
3. Do visitors think the tropical rainforest is of importance to their everyday lives?
4. Do visitors understand the complexity of the issues concerning the use, destruction, conservation, and management of the tropical rainforests?
5. Do visitors believe that they, as individuals, can do something about the environmental plight of the rainforests?

Report Contents and Approach

This report is divided into four sections. In addition to this introduction and an Executive Summary, two sections treat the design of the survey, the description of the visitors interviewed, and the analysis of visitors' responses to the exhibition and its contents. Section II summarizes the study design and presents a profile of the individuals interviewed. The demographic portrait of the respondents includes characteristics such as age, gender, residence, group sizes, and characteristics of a visit. Section III presents the substantive analysis of visitors' experiences with the exhibition. For those visitors who had not seen the exhibition but were familiar with the topic, we report on their attitudes, too. Sections II and III contain summaries. Ancillary materials are included in appendices and will be referred to in the course of the report.

Wherever possible, tables are self-explanatory and present the substantive data from the survey discussed in the text; textual annotations will indicate any omitted data. Conclusions are otherwise based upon the data found in this report. Statistical tests of significance were used in making decisions about what to include or exclude from the discussion. In some cases, even when the apparent percentage difference in the tables appear large the differences are not statistically significant due to the small number of cases involved.

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3 The research team consisted of the authors, Martha Cappelletti, Project Director, and Myriam Springuel, Curator of Education, SITES; and Manjula Kumar, Operations Specialist, Institutional Studies.
4 A complete description of the study design, including sampling method, interviewing schedule and questionnaire development, can be found in Appendix A.
5 The term "significant" in this report means statistically significant at the .05 level. That is, we would expect to see similar results less than 5 times out of 100 in samples of this same population if the two characteristics we are studying truly have no relationship to each other. There are also instances in which we have elected not to discuss a "statistically significant" relationship because it has no "practical significance" when it comes to an understanding of the issues at hand.
II. Description of Survey Respondents

Introduction

What are the demographic characteristics of the visitors to the Smithsonian who were interviewed for the *Tropical Rainforests* study? In this section we present a visitor profile, before we discuss the respondents' attitudes to questions of topical substance in Section III. The reader is encouraged to remember that interviewers chose respondents according to a quota sampling system. Therefore, this visitor profile cannot be extrapolated as representative of the museums' typical publics.¹

Respondent Demographic Characteristics

Our design and data allowed us to divide respondents into four groups, based on exposure to the exhibition and awareness of the subject area through the media, although the data gathering procedure called for respondent selection based on having seen or not seen the exhibition, gender, and age. The presentation of results will be based on these groups:

Group I. No exposure to the exhibition and no familiarity with the subject through media exposure (No Exp), number=96;
Group II. Exposure to the exhibition and no familiarity with the subject through media exposure (Exh Only), number=81;
Group III. No exposure to the exhibition but familiarity with the subject through media exposure (Media Only), number=159; and
Group IV. Exposure to the exhibition and familiarity with the subject through media exposure (Exh and Media), number=289.

Table 2.1 shows various demographic characteristics by the above four groups. The ensuing discussion will focus on how different groups, based on their exposure to the exhibition and issues, are similar or differ.

Differences in gender representation among the respondent groups are slight. Overall, women represented a very marginally higher proportion of the respondents, 51 percent, versus 49 percent men. Differences were greatest in Group II (Exh Only), 40 percent male, and Group III (Media Only), 55 percent male.

Similarities between Groups I (No Exp) and II (Exh Only) in their age are clearly evident. Nearly a quarter of both groups (24 percent and 27 percent respectively) were quite young (less than 18), with percentages generally decreasing until age 65. Groups III (Media Only) and IV (Exh and Media) were

¹ For an explanation of quota sampling, see the Note at the end of Appendix A.
Table 2.1

Demographic Characteristics of Survey Respondents, by Exposure to the Exhibition and Awareness of Subject Area (In Percent)

<table>
<thead>
<tr>
<th>Respondent Characteristics</th>
<th>Group*</th>
<th>I. No</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
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</thead>
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<td><strong>Gender</strong></td>
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<td></td>
<td></td>
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<tr>
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<td>39.5</td>
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<td><strong>Age</strong></td>
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<td>18-24</td>
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<td>17.3</td>
<td>19.5</td>
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<td>25-34</td>
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<td>55 and Older</td>
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<td>7.4</td>
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<td>28.4</td>
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<td>18.5</td>
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<td>BA/BS/Some graduate study</td>
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<td>MA/PhD/Prof degree</td>
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<td>Hispanic/Native Amer</td>
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<td>79.9</td>
<td>71.3</td>
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<td>100.0</td>
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(continued)
Table 2.1 (continued)

Demographic Characteristics of Survey Respondents, by Exposure to the
Exhibition and Awareness of Subject Area
(In Percent)

<table>
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<tr>
<th>Group*</th>
<th>I. No Exposure</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
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<td>Residence</td>
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<td></td>
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<td>Washington, D.C.</td>
<td>12.5</td>
<td>18.5</td>
<td>21.4</td>
<td>24.4</td>
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<td>D.C. Suburbs</td>
<td>5.2</td>
<td>7.4</td>
<td>8.2</td>
<td>8.0</td>
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<tr>
<td>Elsewhere in MD/VA</td>
<td>21.9</td>
<td>30.9</td>
<td>18.9</td>
<td>27.9</td>
</tr>
<tr>
<td>Elsewhere on E.Coast</td>
<td>15.6</td>
<td>16.0</td>
<td>15.1</td>
<td>8.0</td>
</tr>
<tr>
<td>Midwest</td>
<td>11.5</td>
<td>6.2</td>
<td>9.4</td>
<td>7.0</td>
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<td>South</td>
<td>11.5</td>
<td>9.9</td>
<td>13.2</td>
<td>8.4</td>
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<td>West</td>
<td>15.6</td>
<td>7.4</td>
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<td>9.7</td>
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<tr>
<td>Foreign</td>
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<td>3.8</td>
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<td>Total</td>
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<table>
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<th>Work Location+</th>
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<tbody>
<tr>
<td>Walking distance</td>
</tr>
<tr>
<td>Not walking distance</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

| Total Number** | 96 | 81 | 159 | 289 |
| Percent of Total | 15.4 | 13.0 | 25.4 | 46.2 |

+Significant group differences in this characteristic.
*See text for discussion of Groups.
**Some sub-categories are based on slightly smaller numbers, due to missing data.
***Numbers in brackets ([ ]) are sub-categories of the Minority category shown above.

The Smithsonian visitor is a person of exceptionally high educational attainment. Individuals who had neither exposure through the exhibition nor the media (Group I) and those introduced to rainforest issues through the exhibition (Group II) reflected markedly lower educational attainment levels than their media aware cohorts. Table 2.1 shows educational background by group. While only 38 percent of Groups I visitors and 47 percent of Group II respondents had completed a Bachelor’s or higher degree, fully two-thirds of
Group III (Media Only) visitors and nearly three-quarters of Group IV (Exh and Media) visitors possessed this educational background. Approximately one quarter of Group I and II respondents (24 percent and 28 percent) reported their educational experience as high school or less. This lower educational profile, coupled with the higher concentration of these groups in lower age brackets, denotes a strong presence of secondary school students in the sample.

The next portion of Table 2.1 contains the ethnic composition of the Smithsonian visitors interviewed in this survey. Visitors who were not exposed to media presentations of tropical rainforests were far more likely to be from a racial or ethnic minority. Nineteen percent of visitors with no exposure whatsoever and 29 percent of visitors whose experience was limited to the exhibition (Group II) were minorities. In contrast, both groups who had heard about rainforests in the media were far less likely be minority group members (15 percent of Group III and 16 percent of Group IV).

Visitors indicating media exposure to the issues were more likely to be from local populations. The proportions of Group III and IV visitors who lived in Washington, D.C., and its suburbs were greater than visitors with no media exposure. Group I (No Exp) visitors were more evenly distributed throughout the country in their residence patterns, while media aware individuals appeared to be more concentrated in the D.C. metropolitan area. Media aware visitors were also more likely to be visiting on their lunch hour. A full 34 percent of Group III (Media Only) visitors and 44 percent of Group IV (Exh and Media) respondents work within walking distance. In contrast, 17 percent of Group I and 26 percent of Group II stated they enjoyed the same lunch hour convenience to the Institution.

In sum, the visitor demographic characteristics of Group I (No Exp) and Group II (Exh Only) visitors were very similar, as were Groups III (Media Only) and IV (Exh and Media).

**Characteristics of Respondents' Visits**

What brought these visitors to the Smithsonian the day of their interview, and what characteristics of the visit can give us clues to visitation patterns? Bearing in mind that visitors were intercepted not only at the S. Dillon Ripley Center (Kiosk), the Sackler Gallery (Sackler) and the Museum of African Art (NMAfA), but also at the Arts & Industries Building (A&I), the following discussion of visit characteristics draws a broad picture of visitors’ inclinations toward the Smithsonian and includes responses from all four of the "exposure" groups.

Table 2.2 confirms overwhelmingly that respondents in this study were repeat visitors. Those individuals with no exposure had the highest proportion of respondents for whom this was a first Smithsonian visit, or 46 percent. At least two-thirds of the three remaining groups were repeat visitors, with as many as 77 percent of Group IV (Exh and Media) in this category.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group I. No Exposure</th>
<th>Group II. Exhibition Only</th>
<th>Group III. Media Only</th>
<th>Group IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visit to Smithsonian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>45.8</td>
<td>34.6</td>
<td>29.7</td>
<td>22.8</td>
</tr>
<tr>
<td>Repeat</td>
<td>54.2</td>
<td>65.7</td>
<td>70.3</td>
<td>77.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Visit to Quadrangle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>82.9</td>
<td>63.5</td>
<td>61.2</td>
<td>55.9</td>
</tr>
<tr>
<td>Repeat</td>
<td>17.1</td>
<td>36.5</td>
<td>38.8</td>
<td>44.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Reason for This Visit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General SI visit</td>
<td>70.8</td>
<td>50.6</td>
<td>49.7</td>
<td>42.2</td>
</tr>
<tr>
<td>Mus of African Art</td>
<td>5.2</td>
<td>4.9</td>
<td>8.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Sackler Gallery</td>
<td>8.3</td>
<td>4.9</td>
<td>10.0</td>
<td>6.9</td>
</tr>
<tr>
<td>Tropical Rainforest exhibition</td>
<td>--</td>
<td>9.9</td>
<td>--</td>
<td>15.9</td>
</tr>
<tr>
<td>Class, appt., work</td>
<td>4.2</td>
<td>17.3</td>
<td>15.1</td>
<td>17.6</td>
</tr>
<tr>
<td>Other</td>
<td>11.5</td>
<td>12.4</td>
<td>17.0</td>
<td>11.1</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Configuration of Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One adult</td>
<td>26.0</td>
<td>25.9</td>
<td>39.2</td>
<td>46.3</td>
</tr>
<tr>
<td>Two adults</td>
<td>34.4</td>
<td>39.5</td>
<td>36.7</td>
<td>31.7</td>
</tr>
<tr>
<td>Organized group</td>
<td>5.2</td>
<td>9.9</td>
<td>3.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Several adults</td>
<td>15.6</td>
<td>9.9</td>
<td>9.5</td>
<td>9.4</td>
</tr>
<tr>
<td>Adult(s) with child(ren)</td>
<td>18.7</td>
<td>14.8</td>
<td>10.8</td>
<td>8.7</td>
</tr>
<tr>
<td>Total</td>
<td>99.9</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Number in Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>26.0</td>
<td>25.3</td>
<td>39.2</td>
<td>46.3</td>
</tr>
<tr>
<td>Two</td>
<td>35.4</td>
<td>41.8</td>
<td>36.7</td>
<td>32.3</td>
</tr>
<tr>
<td>Three-Five</td>
<td>30.2</td>
<td>22.8</td>
<td>18.4</td>
<td>15.8</td>
</tr>
<tr>
<td>Six or more</td>
<td>8.3</td>
<td>10.1</td>
<td>5.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Total Number ***: 96, 81, 159, 289
Percent of Total: 15.4, 13.0, 25.4, 46.2

+ Significant group differences in this characteristic.
* See text for discussion of Groups.
** Asked only of respondents who indicated a previous Smithsonian visit.
*** Some sub-categories are based on slightly smaller numbers, due to missing data.
If the interview was conducted at any of the three sites other than the Arts & Industries Building, interviewers asked visitors if this was their first visit to the new building complex. People with both exhibition and media exposure (Group IV) were the most likely to have visited the building complex previously, 44 percent, while 83 percent of Group I (No Exp) said this was their first visit.

The next portion of Table 2.2 reveals the fact that the more media aware the individuals (progressing across exposure levels among the groups), the more likely visitors were to state a specific reason for their visit that day, as opposed to a "general SI visit." As one might expect, 71 percent of Group I visitors (No Exp) stated "general visit" as the reason for their being at the Smithsonian. A higher proportion of nearly every group intended to come for a visit to the Sackler rather than to the other museum in the building, the NMAfA. Of further interest to the exhibition team is the fact that among visitors in the two exhibition-exposure groups (II--Exh Only and IV--Exh and Media) coming specifically to see the exhibition outpaced every other foreseen reason within those groups, except for the purpose of attending a Smithsonian class or to keep an office appointment or work. Approximately 17 percent of both groups cited this reason---SI class or work---for their visit. This may indicate that interviewers intercepted a proportionately high percentage of walk-throughs who were employed in the building as opposed to visiting the museum facilities.

The analysis of visit characteristics would be incomplete without a discussion of the social configurations of visitors. As indicated in Table 2.2, at least three of every four media aware visitors came alone or with one other adult. Not even two thirds of their media unaware counterparts did so. Group I (No Exp) and Group II (Exh Only) respondents outstripped the media aware visitors in proportions of group attendance in all categories: in school groups, in adult groups, and among adults with kids. Groups I and II, once again, were very similar in this characteristic. These groups were more likely to be visiting with families, be involved in organized groups, and come from out of town.

Summary and Observations

The demographic characteristics of individuals from Groups I (No Exp) and II (Exh Only) were very similar. These media unaware people tended to be much younger than media aware adults: about one fourth of Groups I (No Exp) and II (Exh Only) visitors were under 18 years old, compared with 6-10 percent of Groups III (Media Only) and IV (Exh and Media). The visitors in Groups I (No Exp) and II (Exh Only) were also more ethnically diverse (19-29 percent minorities) than visitors from Groups III (Media Only) and IV (Exh and Media): 15-16 percent minorities; they were more likely to be students or of lower educational attainments, as well as less likely to live in Washington, D.C., or its suburbs than their media-aware counterparts. These visitors came more frequently in groups of students, several adults, and adults with children.

Visitors who were familiar with the subject through media exposure [Groups III, (Media Only), and IV, (Exh and Media)] reflected a much older population, nearly half of each group being over 35 years of age, compared to 32-40 percent of Groups I (No Exp) and II (Exh Only) in the same age brackets. Media-aware folks came mainly alone or with one other adult, many work within walking distance, and were more predominantly white.
The fact emerges that the visitors who had no previous exposure to tropical rainforest issues, or who had only recently become aware of the subject after visiting the SITES exhibition, were visiting families and students. This is evident in that 54 percent and 66 percent of these groups, respectively, were repeat visitors, compared to 70 percent and 77 percent of media aware visitors.

In conclusion, genuine comparisons can be made between Groups I and II, neither of which had media exposure to deforestation issues through the media, and between Groups III and IV, or people who were aware of current and topical issues through the press. Although respondents were selected on the basis of having seen or not seen the exhibition, and subsequently divided into media awareness categories for analysis, the results show striking similarities between individuals who keep up with issues in the press and among those who do not, independent of the exhibition.

As an aside, we have information which suggests that although respondents were selected based on a quota sample, their characteristics are not dissimilar to those of a representative population visiting the Smithsonian just prior to the December holidays. In late 1987, the inaugural exhibition of the International Gallery, Generations, was the subject of a visitor study that focused on visitor demographics and traffic patterns rather than attitudes toward the exhibition's content.\(^2\)

The visitors to the same complex during that period were 84 percent white; in the current study they are 82 percent white. Both studies report an identical percentage of Afro-American/Black visitors (8 percent in both studies). Near majorities in both cases lived within the Washington, D.C., metropolitan area (50 percent in 1987 vs. 54 percent), while an identical portion of both respondent segments live elsewhere along the East Coast (12 percent) or outside the United States (5 percent). Educational attainment was similarly high, with nearly three-quarters having completed at least four years of college in the 1987 profile compared to 63 percent of all respondents here.

These comparisons, however, should be viewed with care, since the sample design of the Tropical Rainforests study does not allow for generalization to the museum-going public at large. It is interesting to note, however, the apparent continuities in the visitors' background over a two year period, independent of the exhibition.

III. Visitor Reactions to Tropical Rainforests: Issues and Questions

Introduction

As in the preceding section, the discussion of visitors’ substantive reactions to questions about the exhibition and the issues surrounding the future of tropical rainforests will focus on responses from different groups of individuals. The division of respondents used previously will be retained; i.e., based on whether or not visitors had attended the exhibition and whether or not they were familiar with rainforest issues as a result of exposure to these current affairs in the press.

In the ensuing analysis of visitors’ perceptions and attitudes, however, we will exclude the group with absolutely no exposure whatsoever because they were not asked these questions. Therefore, the following presentation concerns itself with three groups:

- **Group II.** Exposure to the exhibition and no familiarity with the subject through media exposure (Exh Only), number=81;
- **Group III.** No exposure to the exhibition but familiarity with the subject through media exposure (Media Only), number=159; and
- **Group IV.** Exposure to the exhibition and familiarity with the subject through media exposure (Exh and Media), number=289.

Awareness of the Exhibition

The survey results point to the "serendipitous visitor" as a predominant pattern at the Smithsonian's International Gallery. Table 3.1 confirms that, for people who saw the exhibition but had not heard about rainforests in the press (Group II), 71 percent had no previous knowledge about the exhibition but saw it anyway during their Smithsonian visit that day. Given these results, one third of Group III (Media Only) people and a majority (51 percent) of Group IV visitors (Exh and Media) were aware of the Smithsonian's exhibition beforehand. Thus, the exhibition appears to have successfully drawn the "stumble in" visitor.

We demonstrated earlier that Smithsonian visitors are highly educated; we can also state that their exhibition interest is mirrored in their alertness to current issues. Of the visitors who saw the exhibition, 78 percent were equally

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1 As discussed at length in Appendix A, we discovered during the pretest phase that respondents grew irritated by questions that probed for such perceptions, if the visitors had already expressed no familiarity with tropical rainforest problems. In addition, we demonstrated that this group (Group I--No Exp) was strikingly similar in both demographic profile and in attendance patterns (visit characteristics) to the group of people who were aware of rainforest issues only through visiting the exhibition (Group II--Exh Only).
conscious of tropical rainforest issues from media coverage. Conversely we can say that people aware of current affairs are likely to reinforce that awareness and seek education through museum experiences.

Publicity efforts and advertising appear to have been ineffectual means of drawing attendance to this exhibition. Table 3.1 indicates that, of those who had heard of the exhibition previously, few visitors responded to newspaper, TV or radio; i.e., both print and electronic media. Chart 3.1 graphically depicts those comparative results. The single predominant factor that influenced attendance or information among all three groups was word of mouth: other people's recommendations appear to matter. For Group III visitors (Media Only), the one other factor that came the closest was reading about *Tropical Rainforests* in Smithsonian publications. One in four of Group III visitors and one in five of Group IV respondents who had heard about the exhibition indicated that

Table 3.1

<table>
<thead>
<tr>
<th>Information</th>
<th>Group*</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Information about Exhibition+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>28.7</td>
<td>32.7</td>
<td>51.0</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>71.3</td>
<td>67.3</td>
<td>49.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Sources of Information**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspapers</td>
<td></td>
<td>4.4</td>
<td>10.0</td>
<td>11.5</td>
</tr>
<tr>
<td>TV or Radio</td>
<td></td>
<td>--</td>
<td>6.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Smithsonian publications</td>
<td>13.0</td>
<td>26.0</td>
<td>21.6</td>
<td></td>
</tr>
<tr>
<td>In other SI museums</td>
<td>17.4</td>
<td>18.0</td>
<td>12.8</td>
<td></td>
</tr>
<tr>
<td>From other people (inc. teachers)</td>
<td>60.9</td>
<td>28.0</td>
<td>46.6</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>4.3</td>
<td>12.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Banner Outside Kiosk+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saw</td>
<td></td>
<td>55.6</td>
<td>38.9</td>
<td>68.4</td>
</tr>
<tr>
<td>Did not see</td>
<td></td>
<td>44.4</td>
<td>61.1</td>
<td>31.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total Number***</td>
<td>81</td>
<td>159</td>
<td>289</td>
<td></td>
</tr>
</tbody>
</table>

+Significant group differences in this characteristic.
* See text for discussion of Groups.
**Asked only of respondents who had prior information (Group II, N=58 ; Group III, N=107; Group IV, N=147).
***Some sub-categories are based on slightly smaller numbers, due to missing data.

2 In this, and the subsequent charts, the data have been sorted in ascending order for Group II (Exh Only) across the chart.
they read about it in Smithsonian publications; this was perhaps in reference to
a general article about tropical rainforests that appeared in the Smithsonian
Magazine earlier in the year (April 1988) as well as in other publications.3

The greatest portion of respondents who had heard about the show,
however, indicated they did so from other people, including from teachers who
may have instructed students to visit the show for a class project. Visitors who
had only seen the exhibition (Group II) ranked this far and above the greatest
source of their hearing about the show: 61 percent. A plurality of Group IV
respondents (Exh and Media), 47 percent, heard about the show from others,
while merely 28 percent of Media Only visitors did so. Word of mouth was
clearly the greatest influencing factor for people who did not keep up with media
reports of this environmental problem. More importantly, verbal publicity among
friends and colleagues is the most frequently cited source of information about
the exhibition among any group of visitors. The museum-going public obviously
relies upon a human-intensive network to make choices about attending
specific exhibitions.

Chart 3.1 Awareness of the Exhibition, by Respondents'
Exposure to the Exhibition and Awareness of Subject Area
(In Percent)

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3 The internal monthly, Torch (January 1988) and the Smithsonian News Service (May 1988)
carried stories.
As stated during the discussion of visit characteristics in Section II, the banner located outside the Kiosk proved a powerful attention-getter. Fifty-two percent of all respondents saw the banner, while two-thirds of all visitors to the exhibition spotted it outside the Kiosk before entering. The effectiveness of an external banner as an influence on exhibition attendance is critical, when we observe that among the Media Only crowd (Group III), or those who did not visit the exhibition, nearly the same proportion (61 percent) in fact did not see the banner. We can only speculate how many of those visitors might have visited the show had they observed the colorful banner along the Mall.

**Conceptual Reactions to Tropical Rainforests**

The substantive portion of this study focuses on visitor attitudes and opinions about tropical rainforests. The pretest phase of this study enabled us to develop conceptual categories of answers to questions that probed attitudes about (1) the appearance of rainforests; (2) the prognosis for the rainforests' future; (3) whether and how tropical deforestation affects our everyday lives; (4) the explicit message in the exhibition or media coverage; (5) causes of and solutions to the disappearance of tropical rainforests; and (6) what individuals can do on their own level to help solve the problem.

For some questions, the data collection procedures accommodated as many responses as the visitor offered, others accepted only one or two opinions. In every case, it must be stressed, the interviewer did not read the list of possible responses. No visitor prompting was permitted. Interviewers were trained to listen for the words and concepts spontaneously offered by the visitor and to categorize those responses into one or more of the preconceived and printed conceptual groups. They did not read possible responses out loud. In cases where interviewers recorded more than one response, tables in the text reflect the order in which possible responses were listed in the questionnaire. The bold numbers next to the percentages in each column indicate the rank order of responses for each group of visitors.

Requests for physical descriptions of tropical rainforests elicited one overwhelming idea: a stalwart majority of the respondents think of a humid, swampy, green, lush environment. Interviewers were instructed to record as many responses as the visitor offered to this question, so the percentages for each semantic category in Table 3.2 would exceed 100 percent if totaled. The second most evoked physical characteristic of tropical rainforests was the notion of a jungle, teeming with life and diverse species. One successfully communicated intent of the exhibition team was to emphasize the biological diversity of the rainforest environment. Twenty-six percent of people whose exposure consisted only of seeing Tropical Rainforests chose this image, while about two in five of both media aware groups (Groups III and IV) envisioned these rainforest characteristics.

The third most often mentioned physical characteristic among Group II (Exh Only) and Group IV (Exh and Media) visitors was the rainforest's quality of being beautiful, exotic, or different as their physical image of a rainforest. Researchers
speculated that the exhibition would communicate the aesthetic value of rainforests, and while this was not the first physical characteristic in ranking, aesthetic appreciation was more frequently cited among exhibition goers (17 percent and 19 percent of the two respective groups) than among visitors whose exposure was simply media awareness: 7 percent of Group III visitors noted the idea of beauty, or the fifth ranked physical quality among this group of respondents. Though not a majority opinion, beauty was evidently one of the impressions communicated through the exhibition. The exhibition organizers can consider themselves successful in having conveyed this aesthetic appreciation.

Table 3.2

Descriptions of a Tropical Rainforest, by Respondents' Exposure to the Exhibition and Awareness of Subject Area (In Percent)

<table>
<thead>
<tr>
<th>Description*</th>
<th>Group II. Exhibition Only</th>
<th>Group III. Media Only</th>
<th>Group IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark, wet, humid, green, lush</td>
<td><strong>1 59.3</strong></td>
<td>1 76.1</td>
<td>1 62.6</td>
</tr>
<tr>
<td>Exotic, beautiful, different</td>
<td>3 17.3</td>
<td>5 6.9</td>
<td>3 19.4</td>
</tr>
<tr>
<td>Jungle, many species, wild</td>
<td>2 25.9</td>
<td>2 40.3</td>
<td>2 38.8</td>
</tr>
<tr>
<td>Fragile, endangered</td>
<td>4 8.6</td>
<td>3 10.1</td>
<td>4 9.7</td>
</tr>
<tr>
<td>Natural resources, producing oxygen</td>
<td>6 3.7</td>
<td>4 7.5</td>
<td>5 8.3</td>
</tr>
<tr>
<td>Other</td>
<td>5 6.2</td>
<td>6 1.9</td>
<td>6 3.8</td>
</tr>
<tr>
<td>Total Number**</td>
<td>81</td>
<td>159</td>
<td>289</td>
</tr>
</tbody>
</table>

* Questions 12 and 21. See Appendix A for a discussion of the concepts underlying the categories in the table. Percents do not add to 100 as respondents could provide words in more than one category.

Concerning the perceived future of tropical rainforests, visitors clearly understood that it is not good. Respondents were asked for only one answer to this question. The most cited prognosis universally was bleak or doomed as revealed in Table 3.3 and Chart 3.2, ranking highest with all groups: 35 percent of Group II (Exh Only), 43 percent of Group III (Media Only), and a majority 56 percent of Groups IV (Exh and Media). In second place, for exhibition-only visitors, was a view of disappearance or destruction (21 percent of Group II), but awareness of media treatments elicited a different response: both Groups III and IV said that the future was one of being endangered or environmentally threatened -- by 23 percent and 16 percent, respectively. The concept of endangerment ranked third for exhibition-only viewers. The need to protect or take action to prevent disappearance was relatively weak in occurrence (ranging from 4 to 6 percent in each group).
Table 3.3
Perceived Future of Tropical Rainforests, by Group (In Percent)

<table>
<thead>
<tr>
<th>Perception of Future*+</th>
<th>Group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>II. Exhibition Only</td>
<td>III. Media Only</td>
<td>IV. Exhibition and Media</td>
<td></td>
</tr>
<tr>
<td>Bleak, doomed, not good</td>
<td><strong>1</strong> 34.6</td>
<td>1 43.4</td>
<td>1 56.1</td>
<td></td>
</tr>
<tr>
<td>Disappearance, destruction</td>
<td>2 21.0</td>
<td>3 15.7</td>
<td>3 14.9</td>
<td></td>
</tr>
<tr>
<td>Endangered, threatened</td>
<td>3 11.1</td>
<td>2 23.3</td>
<td>2 15.6</td>
<td></td>
</tr>
<tr>
<td>Need to protect</td>
<td>4 6.2</td>
<td>5 4.4</td>
<td>5 4.8</td>
<td></td>
</tr>
<tr>
<td>Natural resources or species will disappear</td>
<td>5 3.7</td>
<td>7 0.6</td>
<td>7 0.7</td>
<td></td>
</tr>
<tr>
<td>Don't know, No opinion</td>
<td>2 21.0</td>
<td>4 11.3</td>
<td>4 5.2</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>6 2.4</td>
<td>6 1.3</td>
<td>6 2.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Total Number 81 159 289

* Significant group differences in this characteristic.

** Questions 13 and 21. See Appendix A for a discussion of the concepts underlying the categories in the table.

** Numbers in bold indicate rank order of perception within each group.

Chart 3.2 Perceived Future of Tropical Rainforests, by Group (In Percent)
Of particular note is the frequency with which Group II (Exh Only) visitors said they didn’t know or had no opinion about the future. A full 21 percent of these viewers -- the same likelihood as those to say disappearance is the future -- chose to comment no further. All groups concentrated on the general notion of a pessimistic, immediate prognosis for rainforest survival rather than on the proactive, specific step of political protection or the micro-level impact of species disappearance; individuals unaware of media discussions were less likely to form opinions. The exhibition thus served as an introduction to the topic rather than a confirmation of previously held attitudes.

To measure personal involvement with the problem of tropical deforestation, interviewers asked for a single impression from each visitor in answer to how this affects everyday life. Responses reveal striking differences among the groups. Those with familiarity only from the exhibition most often said it affected their lives very little. Table 3.4 denotes more heightened and internalized awareness among visitors exposed to the media's message. This fact emerges graphically in Chart 3.3, for which Group II (Exh Only) data have been sorted in ascending order of occurrence across the chart. People who both saw the exhibition and were media aware (Group IV) said first that deforestation affects their lives dramatically (32 percent), and secondly influences them through the greenhouse effect (26 percent). Visitors restricted to media awareness (Group III) were most likely to cite the greenhouse effect (25 percent) and secondly the dramatic or intense degree of effect upon everyday life (22 percent).

Table 3.4

<table>
<thead>
<tr>
<th>Perception of Personal Effects+</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you think this effects your everyday life?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dramatically, a lot **</td>
<td>16.0</td>
<td>22.0</td>
<td>1</td>
</tr>
<tr>
<td>Not much</td>
<td>25.9</td>
<td>19.5</td>
<td>3</td>
</tr>
<tr>
<td>Education and awareness needed</td>
<td>1.2</td>
<td>1.9</td>
<td>8</td>
</tr>
<tr>
<td>Modify consumer actions/purchases</td>
<td>6.2</td>
<td>0.6</td>
<td>6</td>
</tr>
<tr>
<td>Greenhouse effect</td>
<td>16.1</td>
<td>24.5</td>
<td>2</td>
</tr>
<tr>
<td>Need to protect natural resources</td>
<td>4.9</td>
<td>5.0</td>
<td>7</td>
</tr>
<tr>
<td>Will affect future generations</td>
<td>6.2</td>
<td>15.7</td>
<td>4</td>
</tr>
<tr>
<td>I can't fully realize impacts</td>
<td>2.5</td>
<td>5.0</td>
<td>7</td>
</tr>
<tr>
<td>Don't know, No opinion</td>
<td>21.0</td>
<td>4.4</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>1.4</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Total Number: 81 159 289

*Questions 14 and 23. See Appendix A for a discussion of the concepts underlying these categories. **Numbers in bold indicate rank order of perception within each group.
One area in which media aware people far outpaced exhibition-only viewers was in looking to the impacts on their children or future generations: 10 to 15 percent of Groups III and IV said this will affect future generations, as opposed to 6 percent of exhibition-only visitors. Another area of divergence was in the conviction that consumer actions and choices of products in the marketplace could make an impact. Perhaps in response to one of the sections in the exhibition about household products that incorporate ingredients from a rainforest, 6 percent of Group II (Exh Only) and 4 percent of Group IV (Exh and Media) visitors said they could modify their consumer actions while less than one percent of Group III (Media Only) visitors believed this would affect their everyday life. The exhibition was somewhat successful, therefore, in explaining how personal actions do indeed affect the continuing destruction of the rainforests.

Chart 3.3 Perceived Personal Effects of Tropical Rainforests' Disappearance, by Group
Exhibitions are the vehicles by which museums present knowledge to the visiting public. Whether an exhibition conveys a specific message is one of the tests of its public success. As Table 3.5 attests, 86 percent of those interviewed about *Tropical Rainforests* understood there to be a message, broken down into 72 percent of Group II (Exh Only) visitors and 90 percent of Group IV (Exh and Media) respondents. Only 52 percent of their media aware counterparts could identify a basic message in the media's portrayal of the issues.

### Table 3.5

**Perceived Message of the Exhibition and Media Treatments, by Group (In Percent)**

<table>
<thead>
<tr>
<th>Message*</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of Basic Message+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71.6</td>
<td>52.2</td>
<td>90.2</td>
</tr>
<tr>
<td>No</td>
<td>28.4</td>
<td>47.8</td>
<td>9.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total Number</td>
<td>81</td>
<td>159</td>
<td>289</td>
</tr>
<tr>
<td>Basic Message**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need to preserve, protect</td>
<td><strong>3</strong></td>
<td>48.3</td>
<td>1</td>
</tr>
<tr>
<td>Public awareness needed</td>
<td>4</td>
<td>5.2</td>
<td>3</td>
</tr>
<tr>
<td>Loss of natural resources</td>
<td>7</td>
<td>1.7</td>
<td>7</td>
</tr>
<tr>
<td>Destruction, disappearance</td>
<td>3</td>
<td>6.9</td>
<td>2</td>
</tr>
<tr>
<td>General environmental problems</td>
<td>4</td>
<td>5.2</td>
<td>4</td>
</tr>
<tr>
<td>Need for political action</td>
<td>5</td>
<td>3.5</td>
<td>6</td>
</tr>
<tr>
<td>Rainforests are endangered</td>
<td>3</td>
<td>6.9</td>
<td>5</td>
</tr>
<tr>
<td>Rainforests are beautiful</td>
<td>2</td>
<td>8.6</td>
<td>7</td>
</tr>
<tr>
<td>Human disregard for ecosystem</td>
<td>7</td>
<td>1.7</td>
<td>6</td>
</tr>
<tr>
<td>Pessimistic situation</td>
<td>8</td>
<td>--</td>
<td>7</td>
</tr>
<tr>
<td>Don't know, No Opinion</td>
<td>2</td>
<td>8.6</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>3.4</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>99.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total Number</td>
<td>58</td>
<td>82</td>
<td>260</td>
</tr>
</tbody>
</table>

*Significant group differences in this characteristic.

*Questions 15 and 24 (message) and Questions 16 and 25 (what message is). See Appendix A for a discussion of the concepts underlying these categories.

**Asked only of those who indicated that the exhibition or media had a basic message.

***Numbers in bold indicate rank order of basic message within each group.
Despite this comparative gap in message perception between exhibition visitors and media-only visitors, all three groups agreed that the most important message is the need to protect and preserve the tropical rainforests. Table 3.5 indicates that, whereas other responses were very evenly and thinly distributed among other choices for Group I (Exh Only) respondents, people with media exposure were much more likely to focus on messages of "gloom and doom." The media presentations clearly induce a more pessimistic perception of tropical deforestation, as these media aware groups concentrated their second and third most likely responses in these categories of perceived rainforest destruction and in an urgent need for public awareness. For visitors exposed strictly to the exhibition, that message was not nearly as preponderant. Only 5 percent of Group II exhibition goers expressed the perceived need for public awareness, fewer than those Group II members who perceived the message to be one of beauty (9 percent).

The isolated responses of Group II visitors provide a powerful test of the exhibition's communicative strength. Visitors unbiased by other presentations of tropical rainforest issues did indeed pick up on the messages the exhibition team sought to portray: protection and beauty. Visitors with media exposure were more likely to read other problematic issues into the message: awareness, destruction, environmental problems, and general negativity. As a result of the exhibition, Group II visitors gleaned knowledge they could immediately recall. That message was more diluted for other visitors. Thus, the exhibition served its role successfully as an introduction -- and an effective one at that, given the public's immediate ability of recall -- to this complex and current issue.

In answer to questions about perceived causes of the rainforests' disappearance and what major solutions might be, visitors could offer up to two responses. As in the preceding table, Tables 3.6 and 3.7 represent the possible choices in the order of the questionnaire, with ranking of the response per group in boldface type. People see economic pressures and development as the predominant cause of rainforest disappearance -- at least a quarter of all responses in each group. Visitors also appeared to concur on the second and third most salient causes, regardless of group. Either greed or "human needs or causes" ranked second or third in each of the three visitor groups, but both media aware groups (Groups III and IV) agreed that human needs were more prominent than greed as a major cause. These factors differ by only one or two percentage points among groups, however, thereby attributing elements within the scope of human, social and political control as the driving forces of rainforest destruction.

Visitors with only media exposure believed forestry to be as pressing a cause as human needs (17 percent of Group III), but the other two groups both ranked the wood industry as the fourth most destructive cause. As to other industrial pressures, agriculture and cattle ranching did not seem to elicit the accusatory responses as did human ignorance and greed, across all groups. Human pressures and human attitudes appear quite consistently as well as closely linked as the culprits in visitors' minds: these motives explain, to all respondents, the destroying influences at work upon the rainforest habitat. While less virulent, economics appears to be more of a driving pressure in this
ecological race than politics, religion, or technology, according to members of all groups. While some visitors -- particularly 5 percent of Group II (Exh Only) -- plainly saw deforestation as "nature's way" and a phenomenon that would run its own course, most visitors viewed the causes to be derived from human acts and therefore capable of human influence or reversal.

Table 3.6
Perceived Causes of Tropical Rainforests' Disappearance, by Group (In Percent)

<table>
<thead>
<tr>
<th>Perceived Causes*</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition Only and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics, industry, development</td>
<td><strong>1</strong> 24.7</td>
<td>1 39.6</td>
<td>1 34.3</td>
</tr>
<tr>
<td>Forestry</td>
<td>4 16.0</td>
<td>2 17.0</td>
<td>4 19.4</td>
</tr>
<tr>
<td>Ranching, cattle</td>
<td>8 4.9</td>
<td>8 3.1</td>
<td>9 5.2</td>
</tr>
<tr>
<td>Agriculture, farming</td>
<td>6 9.9</td>
<td>4 12.0</td>
<td>8 10.1</td>
</tr>
<tr>
<td>Population growth</td>
<td>8 4.9</td>
<td>6 7.5</td>
<td>6 12.1</td>
</tr>
<tr>
<td>Abuse</td>
<td>7 7.4</td>
<td>7 5.0</td>
<td>7 10.4</td>
</tr>
<tr>
<td>Ignorance</td>
<td>6 9.9</td>
<td>5 10.7</td>
<td>5 15.2</td>
</tr>
<tr>
<td>Greed</td>
<td>2 19.8</td>
<td>3 15.1</td>
<td>3 19.7</td>
</tr>
<tr>
<td>Human needs or causes</td>
<td>3 18.5</td>
<td>2 17.0</td>
<td>2 20.4</td>
</tr>
<tr>
<td>Religion</td>
<td>9 1.2</td>
<td>11 --</td>
<td>1 4 0.3</td>
</tr>
<tr>
<td>Politics</td>
<td><strong>10</strong> --</td>
<td>8 3.1</td>
<td><strong>11</strong> 1.4</td>
</tr>
<tr>
<td>Technology</td>
<td>9 1.2</td>
<td>11 --</td>
<td>13 0.7</td>
</tr>
<tr>
<td>Evolution, natural process</td>
<td>8 4.9</td>
<td>10 1.9</td>
<td>10 2.4</td>
</tr>
<tr>
<td>Don't know, No opinion</td>
<td>5 14.8</td>
<td>9 2.5</td>
<td>12 1.0</td>
</tr>
<tr>
<td>Other</td>
<td><strong>10</strong> --</td>
<td>8 3.1</td>
<td>13 0.7</td>
</tr>
</tbody>
</table>

Total Number | 81 | 159 | 289

* Question 26. See Appendix A for a discussion of the concepts underlying these categories. Percents are not additive as respondents could name one or two causes.
** Numbers in bold indicate rank order of perceived causes within each group.

Among visitors possessing a media awareness of tropical rainforest problems, one major solution to rainforest disappearance, summarized in Table 3.7, predominates all others: international cooperation. Slightly more than one fifth of both Groups III and IV affirmed that this global problem can be solved only on a global level. Whenever respondents offered Third World debt forgiveness as an exchange for rainforest preservation, involving the International Monetary Fund and/or the World Bank, this was recorded as "international cooperation and solutions." Media only people barely favored this resort over total puzzlement: just one percent of the responses implied the problem was too complex, too difficult to answer. Visitors with only one level of
exposure, either Group II (Exh Only) or Group III (Media Only), saw preservation, conservation of land as a critical solution. Chart 3.4 portrays the comparative ranking of the responses in Table 3.7, arranged in terms of Group II's responses.

In distinct contrast to these perceptions of the need for complex managerial and intergovernmental solutions, Group II visitors (Exh Only) were most likely to defer any opinion on the matter. However, this is consistent with the study's evidence that the exhibition served as an educational vehicle to provide museum goers with a positive and wide-ranging introduction to the topic. Reflecting upon their first experience in considering the problems associated with tropical rainforests, these visitors may not have felt adequately informed to develop conclusive opinions about solutions to these multi-dimensional resource problems. In all, the solutions that could be implemented on an individual's level, such as recycling or population control, received little support.

Table 3.7

Opinions about Major Solutions to Rainforests' Disappearance, by Group
(In Percent)

<table>
<thead>
<tr>
<th>Solutions*</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex, difficult to solve</td>
<td><strong>5</strong> 8.6</td>
<td>2 20.1</td>
<td>2 17.6</td>
</tr>
<tr>
<td>Education</td>
<td>3 14.8</td>
<td>6 8.2</td>
<td>4 14.9</td>
</tr>
<tr>
<td>Recycling</td>
<td>9 1.2</td>
<td>10 --</td>
<td>11 5.0</td>
</tr>
<tr>
<td>Preservation, conservation of land</td>
<td>2 22.2</td>
<td>2 20.1</td>
<td>3 15.9</td>
</tr>
<tr>
<td>Research</td>
<td>8 3.7</td>
<td>9 3.8</td>
<td>7 7.6</td>
</tr>
<tr>
<td>Population control</td>
<td><strong>10</strong> --</td>
<td>9 3.8</td>
<td><strong>10</strong> 5.2</td>
</tr>
<tr>
<td>Money</td>
<td>6 6.2</td>
<td>4 9.4</td>
<td>9 6.2</td>
</tr>
<tr>
<td>Public awareness and media attention</td>
<td>5 8.6</td>
<td>7 5.7</td>
<td>9 6.2</td>
</tr>
<tr>
<td>Fines or punitive (legal) measures</td>
<td>7 4.9</td>
<td>8 5.0</td>
<td>6 8.0</td>
</tr>
<tr>
<td>International cooperation and solutions</td>
<td>4 11.1</td>
<td>1 21.4</td>
<td>1 21.1</td>
</tr>
<tr>
<td>Don't know, No opinion</td>
<td>1 23.5</td>
<td>3 18.2</td>
<td>5 11.8</td>
</tr>
<tr>
<td>Other</td>
<td>7 4.9</td>
<td>5 8.8</td>
<td>8 6.9</td>
</tr>
</tbody>
</table>

Total Number 81 159 289

* Question 27. See Appendix A for a discussion of the concepts underlying these categories. Percents are not additive as respondents could name one or two solutions. ** Numbers in bold indicate rank order of proposed solutions within each group.
Solutions recorded as "Other" tended to reflect quite specific ideas about human-made alternatives. These are provided in full in Appendix D. Several people suggested that individual governments should supplement the incomes of people living in the areas or provide alternative jobs, so as to remove the coercive economic pressures that force denizens to harvest the rainforests. Others saw it as evidence of political corruption on the local governmental level that must be curbed, or a call for a long-term collective boycott and political blackmail by the United States to force change. Some suggested that the rainforests should be taken over and made into national parks or forest reserves. Others believed pollution control would solve the problem.

Chart 3.4 Opinions about Major Solutions to Rainforests' Disappearance, by Group (In Percent)

In an effort to encourage consideration of personal involvement, we asked what visitors thought they could do to help solve the problems. Table 3.8 states it clearly: people who had only seen the exhibition still couldn't envision their direct actions as contributing anything. Their most frequently given response was "nothing." In contrast, media aware people had greater belief in the effectiveness of their political engagement. Group III (Media Only) visitors stated that first and foremost, they could write Congress and act politically (34 percent of the responses made). Group IV visitors, by 27 percent, said they
could join or donate funds to environmental groups. Of particular meaning to exhibition teams is the fact that both groups who had seen the exhibition cited, in second position of frequency, that they could educate themselves and others (24 percent in of both groups). This points to the educational orientation of the visitors interviewed during this study, as we have pointed out earlier in discussions of educational attainment. Group III (Media Only) respondents, in contrast, ranked education fourth in order of frequency, or 19 percent of this group. Such opinionated divergences are very apparent from the ranked comparisons in Chart 3.5.

Table 3.8
Perceived Personal Actions, by Group
(In Percent)

<table>
<thead>
<tr>
<th>Actions*</th>
<th>Group 1 (Exhibition Only)</th>
<th>Group 2 (Media Only)</th>
<th>Group 3 (Exhibition and Media)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>43.2</td>
<td>29.6</td>
<td>26.6</td>
</tr>
<tr>
<td>Act politically, write Congress, vote</td>
<td>14.8</td>
<td>34.0</td>
<td>22.5</td>
</tr>
<tr>
<td>Join or donate money to environmental groups</td>
<td>19.8</td>
<td>22.6</td>
<td>26.6</td>
</tr>
<tr>
<td>Consumer actions, boycotts</td>
<td>6.9</td>
<td>6.9</td>
<td>17.0</td>
</tr>
<tr>
<td>Write letters to editor, alert media</td>
<td>9.9</td>
<td>8.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Educate self and others</td>
<td>23.5</td>
<td>18.9</td>
<td>23.5</td>
</tr>
<tr>
<td>Other</td>
<td>9.9</td>
<td>1.3</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Total Number: 81 159 289

* Question 28. See Appendix A for a discussion of the concepts underlying these categories. Percents are not additive as respondents could name one or two actions.
** Numbers in bold indicate rank order of perceived personal action within each group.

Joining or donating to environmental groups was an important personal conviction in other groups, too. About one in every five of the comments made by members of Groups II (Exh Only) and III (Media Only) underscored the importance which Group IV (Exh and Media) attached to this option as the number one personal choice of involvement. As listed in Table 3.8, expressing one's environmental conscience through consumer actions and boycotts or through letters to the editor and media contacts drew tepid support. It is the collective action which seems to be a more realistic option to the visitor, perhaps because of the abstractness, remteness, or global nature of the issue. Responses to many of the preceding questions appear to reinforce this self-distancing reaction among all visitors.
In further comments to this question of personal action, a few visitors advocated Peace Corps involvement. One visitor, an employee in a planning agency, urged resource planning. One person thought visiting a forest would help him take action, while two people promised to encourage others to visit the exhibition and another felt he was doing his part by participating in the survey. A young visitor indicated he was inspired to start his own environmental group, a more proactive attitude than the woman who promised to "tell her husband to do something."

The concluding question seeking visitor reactions and attitudes gave individuals an opportunity to comment on any subject. The results of this final question are tabulated in Table 3.9, having been grouped into general categories. It should be emphasized that the comments were spontaneous, rather than answers to very specific questions dealing with specific subjects. In fact, many of the comments dealt with subjects covered more systematically earlier in the questionnaire. Without responses to structured questions about each of the subjects mentioned in the comments, we cannot genuinely differentiate between widespread concerns or opinions and more limited ones within each of the groups. Thus, the discussion here is illustrative and suggestive of the attitudes and opinions expressed by these respondents, rather than a rigorous analysis. It is in that spirit that Table 3.9 and the comments in Appendix D should be read.
Table 3.9
Classification of Additional Respondent Comments, by Group
(In Percent)

<table>
<thead>
<tr>
<th>Comment Contents</th>
<th>II. Exhibition Only</th>
<th>III. Media Only</th>
<th>IV. Exhibition and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibition was good, educational**</td>
<td>44.4</td>
<td>--</td>
<td>1 52.2</td>
</tr>
<tr>
<td>Specific comment on exhibition</td>
<td>2 22.2</td>
<td>--</td>
<td>3 26.0</td>
</tr>
<tr>
<td>Disappointed in exhibition</td>
<td>3 3.7</td>
<td>--</td>
<td>6 4.8</td>
</tr>
<tr>
<td>Feel depressed, overwhelmed</td>
<td>4 1.2</td>
<td>4 1.9</td>
<td>8 0.7</td>
</tr>
<tr>
<td>Glad Smithsonian is addressing issue</td>
<td>4 1.2</td>
<td>3 5.7</td>
<td>5 6.2</td>
</tr>
<tr>
<td>Want to get involved</td>
<td>5 --</td>
<td>5 0.6</td>
<td>7 2.1</td>
</tr>
<tr>
<td>Don't know, No opinion</td>
<td>1 44.4</td>
<td>1 76.4</td>
<td>2 28.7</td>
</tr>
<tr>
<td>Other</td>
<td>3 3.7</td>
<td>2 15.7</td>
<td>4 8.0</td>
</tr>
<tr>
<td>Total Number</td>
<td>81</td>
<td>159</td>
<td>289</td>
</tr>
</tbody>
</table>

* Question 29. See Appendix A for a discussion of the concepts underlying these categories. Percents are not additive as respondents could make comments on more than one subject.
** Numbers in bold indicate rank order of comment contents within each group.

Visitors who saw the exhibition offered high praise for its educational quality; 52 percent of Group IV comments were immediate positive reactions to the exhibition, while 44 percent of the comments made by their Group II counterparts were, too. An equal proportion of Group II visitors (44 percent) also declined any additional comment, and this keeps in line with the observed pattern that the exhibition served as an introduction to these visitors, without positioning them to draw extended conclusions. In sharp contract, 76 percent of Group III (Media Only) respondents had nothing further to say. Although several respondents during the pretest stated they felt overwhelmed by the issue, less than 2 percent of any group departed with that additional reflection.

Few visitors opted to state anything critical of the exhibition (less than 5 percent of the comments made by either exhibition-going group). Indeed, the Smithsonian was more likely to receive direct commendation for addressing this topic, if the visitor had media exposure. In competition with many other sources of information about tropical rainforests, visitors may have viewed that the Smithsonian's attention to the subject validated their previously held concerns and beliefs. It is also possible that visitors are reluctant to criticize or express disapproval. The tendency on the part of visitors to give "socially acceptable" responses is a concern in all studies conducted in the Smithsonian setting.

Nearly a quarter of all comments made by exhibition goers concerned some further, specific comment on the exhibition. These comments are also included in Appendix D. The nature of these statements ranged from the emotional ("It makes people feel there is hope") to disillusionment over the exhibition experience ("Expected a replica of a tropical rainforest"; "Should have had real animals"; "It's one step up from Disneyland"). Other audience members were
lavishly enthusiastic about the sensory impacts of the video games, the multimedia elements, and the slide show. Some comments confirm that the public appreciates the courage of the Smithsonian to tackle such a complex issue, but others found it biased ("Did not address political issues enough; needs more emphasis on people in tropical rainforest countries"; "The message wasn't strong enough, needs to show more forest devastation").

What can we learn from this wide range of praiseworthy as well as accusatory reactions offered in this departing opportunity? Perhaps these comments, in their many emotional gradations, simply mirror the maelstrom of confusion an individual is trying to reconcile, as she or he attempts to internalize this educational experience with all its global, human, political, and economic ramifications.

Summary and Observations

We can summarize our assessment of the exhibition most effectively by comparisons and contrasts between exhibition and media exposure:

One of the values the exhibition team wished to communicate was that tropical rainforests are places of beauty.

-- Group II visitors (Exh Only) reflect this message more directly in their responses than did people exposed to media presentations.
-- Group II visitors were far more likely than Group III and IV visitors to conclude that rainforests are places of beauty and that the basic message of the exhibition is a call to protect and preserve the rainforests, with less cynicism about our ability to do something about it.

Media exposure conveyed a perception of "gloom and doom," regardless of having seen the exhibition.

-- For those people [Groups III (Media Only and IV (Exh and Media))], the exhibition simply reinforced an attitude that the situation is bad, politically embroiled, and requires governmental cooperation on the international level to resolve. These people were far more likely to say that solutions are complex and difficult. They are more likely to interpret their own personal choices to lie in the political arena -- writing Congress, joining environmental groups -- than are people whose knowledge stems only from the exhibition.

Exhibition exposure alone results in a heightened awareness of the rainforest as a precious and beautiful resource.

-- The exhibition presented some information about political ramifications of resource decisions, but exhibition-only visitors did not pick up on this information.
-- The exhibition was less effective than the media in conveying the political dimensions, the pessimism over deforestation, and an urgent call to action.
-- However, Group II (Exh Only) visitors were far more likely to say that the exhibition has a basic message (72 percent) than people who were
exposed to the issue only through the media believed that the media presents a basic message (52 percent of Group IV visitors).

The exhibition team developed *Tropical Rainforests* as an educational vehicle, to take the message of tropical deforestation to the Smithsonian's public.

-- Indeed, people who saw the exhibition, regardless of media exposure, proved to have a high regard for education as a means of resolving the issues at hand. These groups were more likely to say that education and awareness of tropical deforestation was the course of personal action they could effectively take. Visitors who were only exposed through the media did not place equal emphasis on the need for education of oneself and others.

As intended by the curatorial team, the exhibition does communicate an aesthetic appreciation and an introduction to the issue.

-- Its educational value was proven in highly positive reactions to questions about message and content, although Group II visitors revealed a lacking comprehension about broader implications, such as how the situation affects people's everyday lives, bears impacts on future generations, and what are major causes and solutions of deforestation.

Because we used a quota sampling method, we cannot generalize these results to all exhibition visitors. For purposes of understanding some of the messages of the exhibition across different groups, however, this method confirms definite trends in perceptions and attitudes as a result of exhibition and media exposure.

The second location of the exhibition's tour, the World Forestry Institute in Portland, Oregon, has patterned a visitor survey on the questions we developed for this study. We will monitor their results and work with other exhibitors of *Tropical Rainforests: A Disappearing Treasure* to review all reports of visitor studies on this exhibition.

This analysis begins to suggest that exhibitions treating critical environmental issues can accomplish educational goals by providing information that reinforces an individual's commitment to a topic. More importantly, exhibitions appear to be a valuable introduction to the visitor who happens to "stumble in." The design of the study doesn't allow us to estimate how many of the people who saw the exhibition during its tenure in the International Gallery were "stumble in" visitors or individuals with an intent to visit that particular show. Our methodological challenge lies in refining the approach to investigate the learning process that occurs in the exhibition context. The challenge to exhibition teams in the future lies in creating exhibitions that attract those serendipitous visitors who otherwise forego the wealth of knowledge embodied in an exhibition.
Appendix A.

Design and Implementation of the
Tropical Rainforests Information Survey

Introduction

This appendix provides a detailed description of the Tropical Rainforests Information Survey. It includes a discussion of the overall design plus information about the sample design, survey implementation, and the questionnaire contents. The basic design for this survey called for personal interviews, using a short, pre-coded questionnaire with a quota sample of individuals based on their experience with the exhibition (for both people who had and had not seen the exhibition), gender and age. Individuals were to be interviewed as they were leaving the S. Dillon Ripley Center (Ripley Center) via the Kiosk which is the intended access point to the site of the exhibition. Interviews were also to take place at the National Museum of African Art (NMAfA), the Arthur M. Sackler Gallery (Sackler), and the Arts & Industries Building (A&l) between November 21 and December 18, 1988. Each aspect of the design is discussed below.

Sample Design

The decision to use a quota sample for this survey resulted from several considerations. A quota sample would allow, within the constraints of resources and personnel, to see if there were attitudinal differences between individuals who had seen the exhibition and those who had not. Our intent was to assess if the public at large is familiar with the issue of tropical rainforests, independent of a museum exhibition, and if knowledge about rainforest issues differs measurably between these groups. Gender and age quotas would allow us to determine whether differences in attitudes about tropical deforestation can be explained by these demographic factors. These quotas would allow us to test the effectiveness of the exhibition's theme and presentation, independent of and between these factors.

Quotas were established, therefore, for the following six visitor groups: (1) men who had seen the exhibition; (2) men who had not seen the exhibition; (3) women who had seen the exhibition; (4) women who had not seen the exhibition; (5) young people (less than 25 years of age) who had seen the exhibition; and (6) young people who had not seen it. Young people were selected without regard to gender.

As discussed in the Note, the disadvantage of a quota sample is that it does NOT allow us to generalize to the population as a whole. Thus, the results

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1 For a discussion of quota samples, see the Note at the end of this Appendix.
reported here cannot be applied to the Smithsonian visiting public nor to the total visiting audience at the Tropical Rainforests exhibition.

In order to impose controls on the sample selection procedure, as well as take into account conventional wisdom about museum visitors, quotas were assigned within the following framework:

(1) Only six calendar weeks were available for interviewing before the close of the exhibition and the end-of-year holidays. Since we felt that the holiday weeks and the last week of public viewing might produce some atypical attendance patterns, i.e. many repeat visitors, staff, etc., we restricted interviewing to four weeks.²

(2) Within each week, the exhibition was open 52.5 hours, from 10 a.m. to 5:30 p.m. everyday. Observations in the Gallery suggested that hours could be aggregated into two-hour blocks, making the assumption that visitors in those blocks would be quite similar to each other. For example, visitors who worked in the area would be most likely to visit during their lunch hours; thus, the first time block, 11 a.m. - 1 p.m., was set to permit the first "wave" of visitors to get through the exhibition in the morning and account for a portion of the crowd visiting the show on a lunch hour. The second block, 1 p.m. - 3 p.m., also captured a portion of the luncheon crowd as well as individuals who came specifically for a gallery visit after their lunch hour, more typically tourists and visiting groups. The third time block, 3 p.m. - 5 p.m., avoided the closing half hour of the day and its potential idiosyncrasies.

(3) Since the exhibition was open everyday of the week, we had three time blocks per day, 21 time blocks available during each week, for a total of 84 time blocks.

(4) Four sites were selected at which to conduct exit interviews. The Kiosk, or the main entry and exit building for the S. Dillon Ripley Center, is the intended access point to the International Gallery. Visitors to the Ripley Center can also flow into or out of the Sackler Gallery and the National Museum of African Art which are housed in the same building complex. Interviews at these museums' respective pavilions were considered equally critical. We felt that some distance from the prescribed exhibition entrance and exit point was essential to capture effect of the visit and avoid a "testing" environment. Finally, to ensure a sufficient number of interviews with people who had not seen the exhibition, one interviewer was stationed at the Mall door of the Arts & Industries Building, one Smithsonian building to the east of the Ripley Center complex.

(5) Interviewers rotated among the four survey sites, from week to week and day to day. This avoided bias that may have arisen from repeatedly interviewing at the same place and at the same time.

² The interviewing schedule is in Appendix C.
Interviewers were also required to count five persons between each visitor intercept. In addition, they could not interview more than one person from a visitor group; i.e., both members of a couple could not be used to fill the quota.

In addition to the demographic criteria for the quotas, interviewers were instructed to review questionnaires when they completed a specific quota and to ensure that they had fulfilled the sufficient number of responses of people who HAD seen the exhibition or HAD NOT seen the exhibition.

Estimating that a minimum of six interviews would be conducted for each for the four sites (two per quota group), for each of the 21 time blocks that were the time frame of the survey, we established 504 completed interviews as the target.

**Survey and Sample Implementation**

The survey was conducted during the final four weeks of the exhibition, avoiding the erratic days surrounding the Christmas and New Year holidays. The first day of interviewing was Monday, November 21, 1988, and the last day was Sunday, December 18, 1988. This period included the Thanksgiving holiday attendance pattern, as well as visits that were attributable to holiday shopping in the museum shops.

Interviewing sites were the four noted above in the survey design: the Kiosk of the S. Dillon Ripley Center; the garden pavilions of the Sackler Gallery and the National Museum of African Art; and the Arts & Industries Building (Mall side door). Visitors were thus intercepted as they left the buildings, rather than solely at the exit of the exhibition itself.

Each interviewer received instructions to fulfill a quota of two interviews per quota group, depending on her location. If the interviewer was stationed at the Kiosk or at either of the museum pavilions, interviewing continued during the time block until two interviews were completed with men who had seen the exhibition, two with women who had seen the exhibition, as well as two with young people who had seen the show. The exception to this pattern was the interviewer at the Arts & Industries Building: she needed to complete two interviews for each of the three gender or age quotas of people who had not seen the exhibition.

The interviewing schedule in Appendix C shows that every two-hour time block for every day of the week was successfully completed, with quotas filled for each block. Interviewers completed a total of 625 questionnaires and incurred 158 refusals over the four-week period.\(^3\)

The initial design assumed that few, if any, individuals would be encountered who were totally unfamiliar with tropical rainforest issues through newspapers or television reports. However, the initial analysis indicated that ninety-six (96) respondents had been interviewed who had neither seen the exhibition.

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\(^3\) This unusually high refusal rate, 20 percent, resulted from some misunderstanding on the part of interviewers about the procedures as well as the timidity of several interviewers. The schedule for the survey precluded special training.
exhibition, nor had they been aware of tropical rainforest issues. This allowed for classification and analysis of the 625 completed interviews into four groups:

- **Group I.** No exposure to the exhibition and no familiarity with the subject through media exposure (No Exp), number=96;
- **Group II.** Exposure to the exhibition and no familiarity with the subject through media exposure (Exh Only), number=81;
- **Group III.** No exposure to the exhibition but familiarity with the subject through media exposure (Media Only), number=159; and
- **Group IV.** Exposure to the exhibition and familiarity with the subject through media exposure (Exh and Media), number=289.

**Questionnaire Development**

The basic research questions, discussed in Section I, were used as reference for developing an initial questionnaire. They are repeated here, for reference:

1. Are tropical rainforests perceived as beautiful?
2. Are tropical rainforests perceived as fragile?
3. Do visitors think the tropical rainforest is of importance to their everyday lives?
4. Do visitors understand the complexity of the issues concerning the use, destruction, conservation, and management of the tropical rainforests?
5. Do visitors believe that they, as individuals, can do something about the environmental plight of the rainforests?

In addition to questions designed to elicit responses to the research questions, items were added to provide a context for the interview, such as the purpose of the visitors' presence in the Smithsonian, whether they attended the rainforest exhibition that day, their reactions to various statements about the content of the show or the issues, and demographic information.

During the development phase of the questionnaire, November 3-9, four interviewers conducted almost 60 interviews. The initial questions looking for attitudes about the exhibition were open-ended, i.e., interviewers recorded responses in the visitors' own words. From the open-ended answers collected during the pretest, we developed semantic, pre-coded categories to questions such as "What words would you use to physically describe a tropical rainforest?" to elicit a notion of beauty or fragility. This process led to semantic categories from answers to questions about the physical description of rainforests, attitudes about the future of the rainforests, how the depletion of the rainforests affects an individual's life, the basic message of the exhibition or the media's treatment of the issue, and the causes of and solutions to the problems (aiming to measure the perception of the subject's complexity). Once those semantic categories were coded and a new questionnaire drafted, we tested fourteen more respondents before finalizing the questions and the pre-coded responses.

In sum, in formulating response categories for the questions related to the exhibition's content, we relied upon conceptual dimensions isolated during the
pretest as well as ideas raised by the exhibition team. The logic of the response categories for each question is provided in the following discussion, as background to the analysis presented in Section III.

Finally, many trial interviews confirmed that if the individual had not seen the exhibition nor heard about tropical rainforest issues in the media, any further questioning about the matter was perceived with hostility or a sense of being "tested." In this event, we designed the questionnaire to skip immediately to the collection of demographic information alone.

**Conceptual Content of Specific Questions**

This section describes how we developed the semantic response categories used in Q. 12-16 and Q. 21-29. These are the questions that seek to capture what peoples' attitudes and perceptions are about tropical rainforests, the message of the exhibition, the issues of cause and effect in rainforest use, and an individual's ability to do something about the problem.

1. **Do visitors perceive the tropical rainforest as beautiful?**

One of the main impressions the exhibition seeks to communicate is that tropical rainforests nurture a highly esthetic environment, with beauty on many scales. During the questionnaire development phase, we discovered that, in answer to the question, "What impressions of the physical appearance of tropical rainforests do you have from the exhibition?" or "What words would you use to describe tropical rainforests?" respondents commented more on the physical appearance of the exhibition itself, not on rainforests in general. By making the reference to the rainforests singular, the problem was solved. In answer to the final question, "What words would you use to describe PHYSICALLY a tropical rainforest?" the responses could be divided into five conceptual categories:

1. the notion of a dark and wet environment (Dark/Wet/ Humid/ Warm/ Tropical/ Swampy/ Lush), also connoting a tropical or equatorial location, green and rich;
2. a concept of the exotic (Different/ Exotic/ Rare/ Interesting/ Beautiful) that includes beauty and a fascination with the mysterious side of the unknown;
3. an understanding of biological diversity, an abundance of species, bordering on the wild with mention of a jungle (Diverse Species/ Teeming with Life/ Wild/ Jungle);
4. an environmental response of species depletion and ecosystem imbalance (Fragile/ Endangered)—although the notion of 'endangered' was intended to be reserved for another question, many visitors clued in on this immediately; and
5. the view that a rainforest is a natural ecosystem with its own intrinsic balance, contributing precious resources to the rest of the earth (Natural Resources/ Producing Oxygen).

During the survey, visitors were encouraged to offer as many words as they liked, and interviewers marked all that applied. Responses that could not be readily categorized, recorded in "Other," either during the interview or immediately afterwards, will be discussed in the analysis later.
2. Do visitors perceive the rainforest as fragile?

We focused on the rainforests' future to elicit responses of fragility or endangerment, in designing questions to provide answers to this research query. Six notions recurred during the questionnaire development phase:

(1) the idea of a bad, negative, unavoidable, pessimistic future for the rainforests (Bleak/Doomed/Not Good);
(2) a future of certain disappearance and/or destruction;
(3) an emphasis on the environment of the rainforest as an endangered and threatened ecosystem (the posited response), though not necessarily an irrevocable loss;
(4) a notion that the rainforests' future is inextricably tied to efforts of protection and political action, as well as consumptive restrictions being necessary for any conceivable future (Need to protect/Take action);
(5) specific statements about the disappearance of species, oxygen depletion, destruction of the ozone layer, and other natural resource depletion; and
(6) don't know or no opinion.

We did not explore, as it may be helpful to do in future surveys, whether those who offered "Don't Know/No Opinion" did so because of confusion related to the exhibition's message (or the media's message), or if they felt overwhelmed or "tested" by the question.

3. Do visitors think the tropical rainforest is important to their everyday lives?

Q. 14 (Appendix B) reflects this research question verbatim. Responses collected during the questionnaire development phase divided into nine discrete categories, ranging in vague notions of intensity (Dramatically/A Lot vs. Very little/Not much) or lack of personal connection (I can't fully realize impacts or Don't know/No opinion). Other responses signified that respondents occasionally would have internalized the information and translated how personal actions or socio-political initiatives might influence the issue. Many emphasized the need for developing awareness and becoming educated, not only for themselves but for their children and other members of society in general. Some even took this to the level of describing ways they could recycle, alter consumer demand, "not buy from McDonald's," and otherwise regulate personal consumer patterns (Consumer actions/products). Others disassociated their own lives from the issue but acknowledged that posterity will feel the effects of today's problems (Not me but children/future generations will suffer). Some respondents addressed forthrightly the need for natural resource conservation, protection, and the curbing of development or industry (Protection of natural resources/nature necessary). Another notion respondents consistently offered was a statement about the greenhouse effect, permanently altered weather patterns, or depletion of the ozone layer—a frequently cited semantic category to merit its own response category (Greenhouse effect/Air Quality/Weather). Finally, several respondents offered the "Don't know/No Opinion" default.

4. Do visitors understand the complexity of the issues concerning the use/destruction/conservation/management of the tropical rainforests?
To address this fourth research question, we developed a progression of four separate questions. First, we needed to ask the public if they believed the exhibition’s treatment of the issue conveyed a basic message (Q. 15). If the subject responded “Yes,” the interviewer asked what that message is. In the questionnaire development phase, the answer most often repeated was the notion of protection and preservation; this also embodies the mention of conservation and limited industrial exploitation. Many respondents felt education and public awareness was the message, while the scope of environmental responses were meted out into three categories: the recognition of lost natural resources (any specific resource such as soil, species, flowers, trees, etc. may have been mentioned); the concept of destruction or disappearance; and a message of general environmental problems, short of specifying the need for protection or the pathway to destruction.

Beyond education or awareness, some thought the message of the exhibition was to act politically. Responses from this development phase led us to dedicate singular categories for the statements "Tropical rainforests are endangered" and "Tropical rainforests are beautiful," although we expected these responses to emerge from earlier questions. Ideas of human disregard, lack of management, cultural impositions and absence of global vision for ecological balance are combined in the response "Human disregard for balance of planet/ecosystem." The last days of refining the questionnaire led us to add the response "Pessimistic." This word cropped up repeatedly in pretest responses, and the notion of pessimism had not adequately been captured in any of the other conceptual categories. The final category was "Don’t know/No opinion."

All respondents who had seen the exhibition or heard about tropical rainforests in the media were asked what they thought the causes and the solutions might be. Interviewees could express at least two ideas to each question. The decision to restrict respondents to only two items in these answers arose from reactions during the questionnaire development. We found that most respondents, in fact, gave only one response to each. Some, however, felt the need to show their knowledge and engaged interviewers in lengthy conversation. By recording two, we provide the respondents with flexibility while preserving our analytic need to focus on two principle causes and solutions.

To probe the notion of complexity further, researchers focused attention on this aspect in the causes and solutions questions. In response to the question, "What do you think are the main causes of the rainforests’ disappearance?" many offered a generalized reflection about the role of economic development and industry (Economics/Industry/Development/Exploitation), while others targeted specific industries (Forestry; Ranching/Cattle; Agriculture/Farming). The concept of Forestry also captures responses such as slash and burn tactics and clearcutting. The next conceptual categories lean toward notions of human biology and attitudes: Population growth/Pressure; Abuse; Ignorance; and Greed. These responses consistently came through in these precise words; no interpretation was necessary by interviewer or editor to categorize these responses.
The next conceptual category offered, "Human needs/causes" reflected some respondents' ideas that human life imposes complex demands upon environmental resources. Religion and Politics, occasionally offered during the pretest phase, differed concretely enough from other human motives to warrant their own response categories. So did the notion of technology, but if specific industrial advances due to technological discoveries were cited (i.e., genetic developments in cattle breeding), this would have been classified under the particular industry's heading. Some respondents believed the causes of rainforest destruction are inherently natural, the evolutionary results of our planetary development, nothing to worry about. Finally, several offered the "Don't know/No opinion" level of comprehension.

Further exploration of the complexity issue concludes with the final content-related question about the exhibition: "What are your opinions about major solutions to the disappearance of tropical rainforests?" As in the preceding question, respondents could register up to two concepts. The first and most encountered response during the pretest was an expression of complexity itself (Complex problem/Difficult/No easy answers). Other responses were similar to concepts identified in Q. 26: Education, including of oneself or of others generally; a broader notion of public awareness and more attention by the media (Public awareness/interest/media attention); Recycling and other consumer actions; Preservation or conservation, as well as other expressions of land use control; Research or R&D, including industrial research and development; and Population control.

Other conceptual groups echoed very specific ideas about the solutions to the problem. Some thought that money was the answer, although rarely did respondents indicate if this should come from private or public sources; Fines/Punitive measures also encompassed a notion that laws and restrictive legal or regulatory measures offered adequate remedy. "International cooperation and solutions" frequently surfaced. If the interviewee offered the idea of the United States' reducing or forgiving Third World debt, this was recorded as both "International cooperation" and "Money." Again, pre-set categories terminated with "Don't know/No Opinion."

5. What can an individual (like you) do about this?

While some respondents during the questionnaire development phase had already concentrated on adjusting their behavior to help solve rainforest disappearance (consumer actions or recycling), we also wanted to measure the perceived efficacy of individual involvement in this socio-politico-ecological issue. The following response concepts were developed:

(1) Nothing;
(2) Involvement in political activity, be it writing elected officials, lobbying, or voting directly when the opportunity arises on the federal, state, or local levels of government (Political/Write Congress/Vote on issues);
(3) Contribute to, donate money to, and join environmental groups or causes (Join environmental groups);
(4) Consumer action/boycott of products (same gamut of reactions expressed in preceding questions);
(5) Attempt in one’s own capacity to spread the word, through letters to the editor, writing articles, or communicating in some public vein (Alert/write media/newspapers); and
(6) Education, including both self and others (Learn/Personal education and awareness).

To capture other responses that arose sporadically, an "Other" category was created in which interviewers could record answers verbatim during the actual survey period.

Other Comments

As a courtesy to respondents, they were offered an invitation to make additional comments. The responses of both the pretest and the survey can be conceptually divided into three categories: (1) those relative to the exhibition and/or the Smithsonian; (2) those residing on an emotionally conclusive note; and (3) no opinion or response. In the first category, some people simply offered support for the exhibition or, conversely, disappointment in the show either from what they thought was biased presentation or incomplete treatment of the subject. Also in this category were praises for the Smithsonian Institution's willingness to address such a current and controversial topic. In the second category (emotional residue), many pretest cases expressed overwhelming depression at the rainforests' prospects or over their lack of ability to act effectively, while others expressed a firm resolve to get more involved. Finally, many commented further, most often with reactions to specific components of the exhibition or suggestions for its improvement. These responses will be discussed in Section III of the report.

Final Questionnaire Structure

So that we could compare attitudes from respondents who were familiar with tropical rainforest issues from media reports rather than from the exhibition, we devised a set of mirrored questions for this group. Interviewers were instructed to ask, if a visitor had not seen the show, whether he/she was aware of tropical deforestation from the general media. If the response was positive, the same content questions were posed, based on that individual's understanding from media coverage.

The final questionnaire used for all 625 interviews is in Appendix B. Questions 1-6 elicit information about the person's visit in general (first time visit, entrance used, etc.). The next question asks whether or not the visitor saw "Tropical Rainforests;" the response determines whether the interviewer pursues with Q. 7-16, asking about the visitor's experience in the exhibition, or skips to Q. 17, probing for perceptions based on hearing about tropical rainforests in the general media (Q. 17-25). If the visitor has neither seen the exhibition nor heard about the issue in the press, we collected only demographic information on that person.

All respondents who had seen the show or were otherwise informed were asked Q. 26-29. These questions seek to measure understanding about the causes and solutions surrounding the issue, what the respondent believes he/she can do, and additional comments. Many people shared ideas about
improving the exhibition or reactions to specific components of the show. We recorded these amplifications in Q. 29 (For a complete listing of additional responses, see Appendix D). Finally, all subjects were asked to provide general demographic information as collected in Q. 30-37.

Depending on the response pattern and the location where the interview was conducted, a given individual was asked as few as 12 questions or a maximum of 28. Interviewers kept a tally of their quota fulfillment in a cover sheet; an example follows the interviewing schedule in Appendix C.

**Note**

**Sample Design.** Due to the constraints of time and the multiple pathways to visit and exit the exhibition, quota sampling was selected for this study. This is a nonprobability technique in which interviewers are instructed to select respondents based on certain characteristics. This conscious method of interviewee selection enables the researcher to draw conclusions based on specific characteristics such as age, race, or gender, and test specific hypotheses. A probability sample, on the other hand, requires that interviewers conduct the survey by selecting respondents according to a conditional probability mechanism, such as every tenth person exiting the exhibition during a given time period. A quota sample permits interviewers the flexibility of completing the quota independently of time. Controls designed to eliminate or limit selection bias may include a cap on the number of interviews, per quota group, to be completed during an established time period.

The major difference between probability sampling and any type of non-probability sampling is the ability to generalize to the total population. This difference is best illustrated by comparison to systematic sampling. For instance, a systematic design could require that in order to get 200 interviews from an expected attendance of 2,000 during a specified time frame, we need to intercept every tenth person leaving from the exhibition. Every visitor thus has an equal chance of being selected and the resulting pool of responses can be extrapolated to the population as a whole, with statistical validity. Nonprobability sampling does not allow us to draw conclusions about a population's characteristics or behavior.

Other aspects of quota sampling make it an attractive method of sampling, however, especially for exhibition visits. First of all, researchers don't need to know the size of the population (such as total expected attendance). Second, substitution avoids problems of nonresponse. If an interviewer intercepts a person who meets the quota criteria but refuses to participate, he or she finds an alternate respondent who meets the same quota sample characteristics. But while the quota may be met, substitution also means that people who are hard to interview and who may be different from those who agree to complete an interview are underrepresented. Finally, interviewers can complete questionnaires in a short time span and thereby reduce the costs of completing a more ambitious survey, unbound by time and resource impositions. The above features led researchers to select quota sampling as the most feasible method of intercepting visitors for this survey, as opposed to a random sample design.
Appendix B.

1988 Tropical Rainforests: A Disappearing Treasure

Information Survey

Questionnaire
SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE
INFORMATION SURVEY: TROPICAL RAINFORESTS

1. Is this your first visit to the Smithsonian Institution?  
   1 Yes 2 No

   IF AT A&l, GO TO Q. 5

2. Is this your first visit to this building complex?  
   1 Yes GO TO Q.4  2 No

   3. How many times have you been to this complex before?  
      1 2 3 4 5 6 7 8+ 10

4. Which entrance did you use to come into this building complex?  
   1 Kiosk  3 Sackler  2 African Art  4 Unsure

5. What was your main reason for visiting the Smithsonian today?  
   1 General SI Visit/NGA  5 Other
   2 African Art Museum  6 Other
   3 Sackler Gallery
   4 To see "TROPICAL RAINFOREST": GO TO Q.8

6. Have you seen the TROPICAL RAINFORESTS exhibition in the International Gallery on the 3rd Level (of the new building complex)?  
   1 Yes  2 No: GO TO Q.17

7. Did you visit this exhibition today?  
   1 Yes  2 No

8. Had you heard or read about this exhibition before seeing it?  
   1 Yes:  2 No: GO TO Q.10

9. If yes, where?  
   (MARK ONE)  1 In the newspapers
   2 On TV/radio
   3 In Smithsonian publications
   4 In other SI museums
   5 From other people/teachers
   6 Other

10. Did you see the banner outside the Kiosk?  
    1 Yes  2 No

11. More generally, have you heard or read about the issue of tropical rainforests in the media--press, radio, or TV?  
    1 Yes  2 No

NOW I'M GOING TO ASK YOU A FEW QUESTIONS ABOUT THE EXHIBITION ITSELF.

12. What words would you use to describe PHYSICALLY a tropical rainforest?  
    (MARK ALL THAT APPLY)
    0 Dark/Wet/Humid/Warm/Tropical/Thorny/Lush
    0 Different/Exotic/Rare/Interesting/Beautiful
    0 Diverse Species/Teeming with Life/Wild/Jungle
    0 Fragile/Endangered
    0 Natural Resources/Producing Oxygen
    0 Other

13. From the exhibition, what do you think is the FUTURE of tropical rainforests?  
    (MARK ONE)
    1 Bleak/Doomed/Not Good
    2 Disappearance/Destruction
    3 Endangered/Environmentally threatened
    4 Need to protect/Take action
    5 Species will disappear/Natural resources will disappear
    6 Don't know/No opinion
    7 Other

14. How do you think this affects your everyday life?  
    (MARK ONE)
    1 Dramatically/A Lot
    2 Very little/Not much
    3 Awareness/Education necessary
    4 Consumer actions/products
    5 Greenhouse effect/Air quality/Weather
    6 Protection of natural resources/nature necessary
    7 Not me but children/future generations will suffer
    8 I can't fully realize impacts
    9 Don't know/ No opinion
    10 Other

15. Do you think the exhibition has a basic message?  
    1 Yes  2 No: GO TO Q. 26

16. What do you think that message IS?  
    (MARK ONE)
    1 Preservation/Protection needed
    2 Public awareness needed
    3 Loss of natural resources (soil, forests, species)
    4 Destruction/Disappearance
    5 Environmental problems (general)
    6 Need for action (political)
    7 Tropical rainforests are endangered
    8 Tropical rainforests are beautiful
    9 Human disregard for balance of planet/ecosystem
    10 Don't know/No opinion
    11 Pessimistic
    12 Other

GO TO Q.26
IF HAS NOT VISITED EXHIBITION:

17. Had you heard or read about the TROPICAL RAINFOREST exhibition?
   1 Yes
   2 No: GO TO Q. 19

18. If yes, where? (MARK ONE)
   1 In the newspapers
   2 On TV/radio
   3 In Smithsonian publications
   4 In another SI museum
   5 From other people
   6 Other__________________

19. Did you see the banner outside the Kiosk?
   1 Yes
   2 No

20. More generally, have you heard or read about the issue of tropical rainforests in the media—press, radio, or TV?
   1 Yes
   2 No: GO TO Q. 30

21. What words would you use to describe PHYSICALLY a tropical rainforest? (MARK ALL THAT APPLY)
   0 Dark/Wet/Humid/Warm/Tropical/Swampy/Lush
   0 Different/Exotic/Rare/Interesting/Beautiful
   0 Diverse Species/Teeming with Life/Wild/Jungle
   0 Fragile/Endangered
   0 Natural Resources/Producing Oxygen
   0 Other__________________

22. What do you think is the FUTURE of tropical rainforests? (MARK ONE)
   1 Bleak/Doomed/Not Good
   2 Disappearance/Destruction
   3 Endangered/Tenuous/Environmentally threatened
   4 Need to protect/Take action
   5 Species/Natural resources will disappear
   6 Don’t know/No opinion
   7 Other__________________

23. How do you think this affects your everyday life? (MARK ONE)
   1 Dramatically/A Lot
   2 Very little/Not much
   3 Awareness/Education necessary
   4 Consumer actions/products
   5 Greenhouse effect/Air quality/Weather
   6 Protection of natural resources/nature necessary
   7 Not me but children/future generations will suffer
   8 I can’t fully realize impacts
   9 Don’t know/No opinion
   10 Other__________________

24. In the media do you think there is a message about tropical rainforests?
   1 Yes
   2 No: GO TO Q. 26

25. What do you think that message IS? (MARK ONE)
   1 Preservation/Protection needed
   2 Public awareness needed
   3 Loss of natural resources (soil, forests, species)
   4 Destruction/Disappearance
   5 Environmental problems (general)
   6 Need for action (political)
   7 Tropical rainforests are endangered
   8 Tropical rainforests are beautiful
   9 Human disregard for balance of planet/ecosystem
   10 Don’t know/No opinion
   11 Pessimistic
   12 Other__________________

26. What do you think are the main causes of the rainforests’ disappearance? (MARK NO MORE THAN TWO)
   0 Economics/Industry/Development/Exploitation
   0 Forestry
   0 Ranching/Cattle
   0 Agriculture/Planting
   0 Population growth/Pressure
   0 Abuse
   0 Ignorance
   0 Greed
   0 Human needs/causes
   0 Religion
   0 Politics
   0 Technology
   0 Evolution of planet/Natural causes
   0 Don’t know/No opinion
   0 Other__________________

27. What are your opinions about major solutions to the disappearance of tropical rainforests? (MARK NO MORE THAN TWO)
   0 Complex problem/Difficult/No easy answers
   0 Education
   0 Recycling
   0 Preservation of lands/Conservation
   0 Research/R&D
   0 Population control
   0 Money
   0 Public awareness/Interest/media attention
   0 Fines/Punitive measures
   0 International cooperation and solutions
   0 Don’t know/No opinion
   0 Other__________________
28. FINALLY, What do you think someone like you can do about this?  
(MARK NO MORE THAN TWO)

- Nothing
- Political/Write Congress/Vote on issues
- Join environmental groups
- Consumer action/boycott of products
- Alert/write media/newspapers
- Learn/Personal education and awareness

29. Do you have any other comments you would like to share about this exhibition or this topic?  
(MARK ALL THAT APPLY)

- Good exhibition/educational
- Feel overwhelmed/depressed by problem
- Glad to see Smithsonian addressing topic
- Disappointed in exhibition/insufficient
- Want to get involved/take action
- No/Don't Know
- Specific comment on TR exhibition:

FINALLY, A FEW QUESTIONS ABOUT YOU 
SO WE CAN DESCRIBE OUR VISITORS:

30. Gender:  
1 Male  2 Female

31. How old are you? 
1 Under 12  5 35-44  0
2 12-17  6 45-54  0
3 18-24  7 55-64  0
4 25-34  8 65 and older  0

32. Who are you here with? 
1 Alone  2 One other adult
goto q. 34
3 School Trip  6 Several adults
4 Tour Group  7 Adult w/ children
5 Group of Teens  8 Adults w/ children
6 Child(ren)

33. How many other people are with you in this building today? 
1 Zero  5 Four
2 One  6 5-10
3 Two  7 11-20
4 Three  8 21 or more

34. Where do you live? 
1 Washington, DC
2 Washington, DC suburbs
3 Elsewhere in MD/VA
4 Elsewhere on East Coast
5 Midwestern U.S.
6 Southern U.S.
7 Western U.S.
8 Outside the U.S. (indicate country)

35. Do you work within walking distance?  
1 Yes  2 No

36. What is your educational background? 
1 Grade School (1-8)
2 High School Student/NG
3 High School Graduate
4 Asso/Jr. College/Technical
5 Some College
6 Bachelor's Degree
7 Some graduate study
8 Master's/Doctorate/Professional

37. With which ethnic/cultural group do you identify? 
1 Afro-American/Black  4 Hispanic
2 American Indian/Alaskan Native  5 White
3 Asian/Pacific Islander  6 Other

THANK YOU VERY MUCH FOR YOUR TIME!

a) Interviewer #:  1  2  3  4  5  6  7

b) Location:  1 Kiosk
c) Time Block:  1 11 am-1 pm
d) Quota Group:  1 MS
2 African Art  2 1-3 pm
3 Sackler Gallery  2 FS
4 Arts & Industries  3 3-5 pm
5 Girs
6 KNS
e) Date:  
        -41-  
Month Day
Appendix C.

1988 *Tropical Rainforests: A Disappearing Treasure*

Information Survey

Interviewing Schedule and Sample Control Form
# TROPICAL RAINFORESTS VISITOR SURVEY
## Interviewing Schedule

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
<th>SUNDAY</th>
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<th>Location No.</th>
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<td>November 21</td>
<td>November 22</td>
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<td>Kiosk - Laura</td>
<td>1 pm - 3 pm</td>
<td>Kiosk - Laura</td>
<td>AFA - Karen</td>
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<tr>
<td>3 pm - 5 pm</td>
<td>SG - Michelle</td>
<td>1 pm - 3 pm</td>
<td>SG - Michelle</td>
<td>AFI - Michelle</td>
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</table>
Please fill out this sheet after completing your interviews:

Interviewer Name: ____________
Interviewer Number: 1  2  3  4  5  6  7
Location:  1 Kiosk
          2 African Art
          3 Sackler Gallery
          4 Arts & Industries

Date: ____________  ____________
     Month       Day

Fill in slash marks for number of interviews completed in each category and refusals:

<table>
<thead>
<tr>
<th>HAVE SEEN EXHIBITION</th>
<th>HAVE NOT SEEN EXHIBITION</th>
<th>REFUSALS</th>
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<tr>
<td>Kids/Any Gender</td>
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</tbody>
</table>

1. QUADRANGLE INTERVIEWS: Must complete at least 2 "HAVE SEEN EXHIBITION" for each quota group (minimum of 6 "HAVE SEEN" interviews for (1) Male, (2) Female, and (3) Kids/any gender).

2. ARTS & INDUSTRIES INTERVIEWS: Must complete at least 2 "HAVE NOT SEEN EXHIBITION" for each quota group (minimum of 6 "HAVE NOT SEEN" interviews for (1) Male, (2) Female, and (3) Kids/any gender).
Appendix D.

1988 Tropical Rainforests: A Disappearing Treasure
Information Survey

Respondent Comments

Introduction

Examination of the questionnaire in Appendix B shows that Questions 5, 9 (or 18), 12 (or 21) 13 (or 22), 14 (or 23), and 16 (or 25) included a space on which interviewers could record an "Other ____________" response. Our pretesting showed that most responses could be assigned to a preprinted category; nevertheless, this recording option helped interviewers in those situations in which they were unsure of how to assign a spontaneous response. During the review of the questionnaires, these responses were either assigned to an appropriate category based on conceptual similarity, or they were left as a separate "Other" response. These relatively few residual responses are of no special interest to the reader.

Questions 27, 28, and 29 are somewhat different in character. Although interviewers were able to assign most of the answers to the predetermined categories as they listened to visitors' impressions about major solutions to deforestation, what visitors thought they could do about it, we encouraged them to record verbatim comments, if possible, in addition to recording comments they could not assign. As illustrated in Tables 3.7, 3.8, and 3.9, most of the responses are accommodated in pre-existing categories. However, in order to give the reader an appreciation of the interest many respondents gave to the interview, we have provided the responses recorded as "Other" for these three questions, as well as related respondent comments.

Q.27: What are your opinions about major solutions to the disappearance of tropical rainforests?

Isolate as a forest wonder
International park
Buy it all and make a park
Nature will replace itself; do not need to do anything
Supplement people living in area
Political
Control over who can utilize resources and property
Let nature take its course

National park
U.S. should exert its influence and give incentives to those countries to stop the abuse
Political interference by the U.S.
Absolute control by individual governments
Make a big green house and put one of every species inside to keep a record of what is in the forest
Too little too late
Each country should take individual responsibility and give incentives not to destroy. Give alternative livelihood to people who are cutting down rainforests. Debt for forest swap. Curb pollution. National park; no hydroelectric development. Need to implement their ideas. Reserve areas for forest. Boycott. Make it an economical issue and make people aware that it will affect their lives. Major economic reform needed on the part of local and national governments. Turn into a park. Cancelling foreign debts if countries limit destruction of forests. Nothing can be done; it's just the evolution of the earth. National preserves; alternate means of resources. Collective boycott (blackmail); as radical as possible, not short term. Go somewhere else. Build homes outside of the rainforest. Divest. Support environmental organizations. More exhibitions such as this. Change economics. Make a park.

Q. 28: What do you think someone like you can do about this?

Send Peace Corps over. Hard to answer -- too difficult. Educate on fragility of forest. Should be done at highest level of government. Hard to say -- issue so complex. Private citizens can't do much; Congressmen can do more. Give to people to save it. Tell husband to do something. Not eat at McDonald's. Planning is important (respondent with a planning agency). Support government in preservation efforts. Stop polluting. Active in conservation work. Encourage public education of recycling. Join the Peace Corps. Get people to see the exhibition. Gardening. Give money to research. Talk to other people about their way of life and how it affects others; she is an environmental engineer. Teach students; incorporate tropical rainforest into curriculum (she is a teacher). Participate in survey; not sure he'll do anything, even if there is something to do. Contact the U.N., native of countries to indicate preparedness to help. Visit a rainforest. No tourism. Pray, talk, education, understanding, stop smuggling. Don't know; have no say politically which is where help needs to begin. Start my own environmental group. Work with multinational corporations who are in rainforests to find alternative ways of functioning outside of the forest. Raise awareness level of people until expert scientists and such are employed to handle situation. Encourage people to see the exhibition. Work in the environmental field. Pollute less. Not much, it is an internal issue for those countries. Would like to find a way to make a living and help rainforests. Recycle.
Q. 29: Do you have any other comments you would like to share about this exhibition or this topic?

Specific comments about the exhibition:

- Good for people who can't read
- Important public service
- Was hoping for a more tropical environment
- Excellent; film was especially good
- Article in Washington Post was misleading; expected to walk into a plush forest-like environment filled with vegetation
- Unique exhibit; had an impact
- Should have had real animals
- Need more information on what one can do to help in the brochures
- Excellent; (1) put couple sentences at end to sum up; (2) put shocking photos of destruction in
- Exhibit lets you understand seriousness of topic while presenting it in an informative, attractive manner
- Makes people feel there is hope
- Thought the exhibition was boring
- Bring school children--pitty the exhibition is hidden in the basement
- Needs to be more depressing so people know how bad it is
- Exhibition extremely thorough; gave all sides to issue
- Expected a replica of a tropical rainforest
- Dramatic exhibition
- Moderately interesting and informative; nothing new or different from what's in media
- Should travel to other venues in many big cities
- Not enough in exhibition; need film, explain more (like a National Geographic film)
- As an informed viewer, she understood message, but didn't think uninformed people would get the message that the rainforests are disappearing

A joy! No idea (a rainforest) is so pretty!
- Slide show was wonderful; simplistic (overall); introduced the basics but did not go beyond that
- Felt had to read between the lines to get message from the exhibition
- Wants to spend more time in exhibition
- Informative, well organized
- Needs to have alligators
- Had difficulties finding the exhibition
- Beautiful; makes what I learned in grade school much more meaningful
- From the slide show, a tropical rainforest looks like a beautiful place
- Good location; successful
- Really gives the message
- Excellent; informative
- Noise level of the audio is high
- Fun video games and things to do
- Message wasn't strong enough; need to show more forest devastation
- Didn't feel warning came through clearly
- Slides and sound were good
- Especially liked the interactive parts; forces people to become more involved
- Liked especially the folklife festival
- Tapped into all your senses
- Great exhibit; striking
- Liked slide presentation
- Liked video
- Used exhibit for son's report; film was excellent
- Good statistics and especially good for people who knew nothing about the topic
- Liked film
- Depicts too many people as being "bad guys" when in reality they are just trying to survive
- Fascinating to look at! Very tactile
Topic very timely—glad Smithsonian is together on the issues
Fun; lots of different things
Loved slide show, but it does not mention the problem, and the slide show is what most people see
Glad to see my tax money is going to good use!
Fascinating to look at; holds your attention
Colorful
People who know nothing about the situation can learn a lot
Great to see that SI and National Geographic are bringing issues to public and making us socially conscious
In showing such an environment in such an appealing way, will make people want to tour
Everyone should have to see it
Needs more on what individuals can do
Did not get the idea that preservation was a choice in the tropical rainforest question; the possibility of preservation should be made a stronger message; did not like the exhibition, it was "one step up from Disneyworld"
Did not address political issues enough; needs more emphasis on people in tropical rainforest countries
Wonderful exhibition!
Wish exhibition could stay up longer
Will go to see the exhibition
Need information on how to help
All of my grandchildren, from age 4 to teenagers, got something out of the exhibition; all understood
Love the exhibition; have been here many times; glad they don't charge admission
Wish she could spend a week there to absorb the smaller things; exhibition's impact is there
Exhibition unclear; information too scattered; difficult to focus on any one aspect; "too designed"

Appreciation for thoughtfulness of those who arranged exhibit; hope SI continues to do these
Well done not only in scope but took what could have been very boring and uninteresting and made it exciting and interactive
Wonderful, visually appealing
Loved multi-media; flowed well; we're not zeroing in on problem; need to be more clear about how destruction would affect America
Fun!
Visitor from Central America: was not overwhelmed but thought exhibition was impressive
Enjoyed exhibition very much; saw how much of forests are in our homes
Very comprehensive exhibit; easy for common American to understand how forests affect his everyday life
Very well done; liked that it was multi-sensory
Don't like the "dummy" manikins; did like the wall lifts, but could have been more to it, seemed simplistic; like variety
Thought there would be more of a feeling of being in a rainforest; overwhelming amount of information but still informative
Found exhibition confusing, not as focused as hoped
Points of destruction not expressed loudly enough; need larger prints; more television presentation
Timely topic, important issue
Confusing
Exhibition was pretty

Misc. Comments (to Q. 29):

Need more people who are worried about the future
Need more publication about cause and effect
Need more education to let know how to solve
Hope action is kept up
Something must be done, but it must come from the government
This is a very important issue
Concerned
Solution lies with American multinational corporations
Worried that tropical rainforests are producing most of the oxygen; when they disappear, what will happen?
Should be town meetings on this situation
The rainforest issue is the most important thing on earth
Concerned for children; hope they could get something out of it
Think media should put more effort into publicizing the issue
Disappearance due to mass consumption of rainforest products by USA
The more press the better
Symptomatic of our material culture
Get major TV stations to present issues during prime time
Understand the problem and that solution is complex
More publicity
Beautiful museum (referring to the Sackler Gallery)
Information needs to be presented elsewhere, i.e. Europe
Contributions needed to conserve; government needs to pass bills not to destroy trees
Should have more exhibitions on other parts of the world
Rainforests are part of many concerns that focus on whether humans should exploit or caretake
Like to see more about the issue in media; important
Not enough advertising; get more people involved
Rainforest beautiful, but will be destroyed
It's a shame that these rainforests are disappearing; affects the natives a great deal
Don't think of tropical rainforests; from what was seen, think they would survive
International cooperation and understanding very important
SI should do more on this topic and environmental issues
SI should do more exhibits on similar topics
Get school groups to see exhibition
Have been hearing a lot about rainforests in general
Would like to see survey results
Would like to see a rainforest someday
Stop destroying it
Don't hear enough about tropical rainforests and their problems
We need to leave rainforests alone
Don't think people are aware of the problem
Surveys are good to learn what people think
Nice for world government to start replanting
LOVE the building complex!
Would love to go to a rainforest

-49-