



**Front-End Evaluation of Ironbound Films  
Informal Science Education Project: *The Change***

Front-End Evaluation Report

June 13, 2012

*Prepared for*  
Seth Kramer  
**Ironbound Films, Inc.**  
P.O. Box 441  
35 Garrison's Landing  
Garrison, NY 10524

*Prepared by*  
Lisa Kohne, Ed.D.  
**SmartStart Educational Consulting Services**  
4000 Barranca Pkwy, Suite 250  
Irvine, CA 92604  
Phone: 949.262.3217

**June 2012**

# Table of Contents

---

<b>Section 1. Executive Summary</b> .....	<b>1</b>
1.1 Overview.....	1
1.2 Findings.....	1
<b>Section 2. Introduction</b> .....	<b>2</b>
2.1 Background of the project .....	2
2.2 Background of the evaluation .....	4
<b>Section 3. Evaluation Findings</b> .....	<b>6</b>
3.1 Evaluation of participant responses .....	6
Response analysis by focus group .....	7
Cumulative analysis of sub-themes addressed by focus group .....	30
Rating of perception towards the reality of climate change .....	31
<b>Section 4. Key Findings and Recommendations</b> .....	<b>32</b>
<b>Appendix A: Focus group protocol</b> .....	<b>34</b>
<b>Appendix B: Data form for focus group participants</b> .....	<b>36</b>

# List of Figures

---

Figure 1. Participant groups for front-end evaluation.....	2
Figure 2. Participant demographics by focus group .....	3
Figure 3. Georgia film content responses .....	7
Figure 4. Georgia film editing responses .....	8
Figure 5. Georgia project goal responses .....	8
Figure 6. Florida film content responses.....	9
Figure 7. Florida film editing responses .....	9
Figure 8. Florida project goal responses .....	10
Figure 9. California film content responses .....	11
Figure 10. California film editing responses.....	13
Figure 11. California project goal responses .....	15
Figure 12. Utah film content responses .....	17
Figure 13. Utah film editing responses .....	17
Figure 14. Utah project goal responses .....	18
Figure 15. Idaho film content responses .....	19
Figure 16. Idaho film editing responses.....	19
Figure 17. Idaho project goal responses.....	19
Figure 18. New York film content responses .....	21
Figure 19. New York film editing responses .....	22
Figure 20. New York project goal responses.....	23
Figure 21. Fort Yates, ND film content response .....	24
Figure 22. Fort Yates, ND film editing responses .....	24
Figure 23. Fort Yates, ND project goal responses .....	25
Figure 24. Bismarck, ND content responses.....	26
Figure 25. Bismarck, ND film editing responses.....	26
Figure 26. Bismarck, ND 2 project goal responses.....	27
Figure 27. New Mexico film content responses .....	28
Figure 28. New Mexico film editing responses .....	28
Figure 29. New Mexico project goal responses.....	29
Figure 30. Cumulative focus group response chart.....	30
Figure 31. Participants’ perception of the reality of climate change .....	31

# Section 1. Executive Summary

---

## 1.1 Overview

From January 2012 to May 2012, **SmartStart Educational Consulting Services** conducted a front-end evaluation of the documentary film *The Change*, in production by Ironbound Films, Inc. The focus of this front-end evaluation is to offer an informed analysis inferred from the data collected in order to improve film production and increase decision-making capacity so as to ensure the film and film maker's success in meeting established goals and objectives.

The film *The Change* seeks to:

- Increase viewers' knowledge of how climate change affects communities and cultures and help viewers understand how scientists are responding to these changes
- Inform viewers' attitudes towards climate change and how it will affect communities around the world
- Motivate viewers to become actively involved in the assistance of people who are adversely affected by climate change
- Give a voice to the native people who will be forced to adapt or relocate as a result of climate change

Focus group interviews were conducted with group participants to measure their initial impressions of the film and its content. Focus group participant responses were qualitatively analyzed to identify themes, commonalities and differences across the groups.

## 1.2 Findings

Participant responses do address the goals and questions established in the guiding evaluation questions. Most of the content of participant responses exhibited increased knowledge and awareness about the issues surrounding climate change; most responses also exhibited informed attitudes about the issues surrounding climate change and how it affects communities around the world. Some participants expressed increased motivation in wanting to help those who have been affected by climate change. Lastly, participant responses recognized the authentic voices of those depicted in the film. Participants offered numerous suggestions which include: changing the film's working title, incorporating comparative/statistical data, general film editing recommendations, and expanding upon the development of Katie's character. These findings are explained in further detail in the section for evaluation findings.

## Section 2. Introduction

### 2.1 Background of the project

In the summer of 2011, Ironbound Films, Inc. received a National Science Foundation (NSF) Informal Science Education (ISE) grant to produce their latest forthcoming documentary, *The Change* which examines the indigenous communities hardest hit by climate change through the eyes of a teenage girl, who is also the daughter of an American anthropologist and a Siberian builder. The NSF ISE program invests in projects that promote lifelong learning of STEM in a wide variety of informal settings. Funding is provided for projects that advance understanding of informal STEM learning, that develops and implements innovative strategies and resources for informal STEM education, and that build the national professional capacity for research, development, and practice in the field.<sup>1</sup> The film reel submitted to NSF and which is used to conduct the front end evaluation contains footage from filming in Siberia. Since then film-makers have filmed in the Kiribati islands and the full length film is currently in production.

### Project goals

The project goals of the Ironbound Films, Inc. documentary *The Change* are:

**Goal 1** - Increase viewers' knowledge of how climate change affects communities and cultures and help viewers understand how scientists are responding to these changes

**Goal 2** - Inform viewers' attitudes towards climate change and how it will affect communities around the world

**Goal 3** - Motivate viewers to become actively involved in the assistance of people who are adversely affected by climate change

**Goal 4** - Give a voice to native people who will be forced to adapt or relocate due to climate change

### Project participants

Eleven groups were established to participate in front end focus group interviews. Focus groups were located in cities across the United States and were composed of various types of audiences. A total of 105 people participated in the front-end focus groups. Figure 1 presents details on the audience, geographic location of the focus group, and the number of participants in each group.

**Figure 1. Participant groups for front-end evaluation**

Focus Group #	Audience	Location	Type of community	Number of participants
1	General (Adult)	Suwanee, GA	Suburban	8
2	General (Adult)	Ft. Myers, FL	City	10
3	General (Adult)	Glendora, CA	Suburban	10
4	General (Adult)	Salt Lake City, UT	City	8
5	General (MS students)	Pocatello, ID	Rural	10
6	General (HS students)	Hopewell Junction, NY	Rural	12
7	General (HS students)	Hopewell Junction, NY	Rural	12
8	Native American (College students)	Fort Yates, ND	Rural	3
9	Native American (College students)	Bismarck, ND	City	11
10	Native American (HS students)	Shiprock, NM	Rural	11
11	Native American (HS Students)	Shiprock, NM	Rural	10

<sup>1</sup> NSF ISE Request for Proposal [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf09553](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf09553)

Figure 2 presents a demographic description of focus group participants. The table reflects a diverse group of participants. The average participant age was 32 years but the minimum age was 11 years old and the maximum was 78 years old. On average 41% were male and 59% were female. Underrepresented minorities<sup>2</sup> represented an average of 38% and Native Americans represented an average of 32%.

**Figure 2. Participant demographics by focus group**

		GA (n=8)		FL (n=10)		LA (n=10)		UT (n=8)		NY1 (n=12)		NY2 (n=12)		ID (n=10)		NM1 (n=11)		NM2 (n=10)		ND1 (n=3)		ND2 (n=11)		Average
		N	%	N	N	%	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
<b>Age</b>	Average	55.5	--	65.9	--	47.1	--	49	--	14.4	--	14.1	--	12.8	--	16.6	--	16.4	--	28	--	36.6	--	32 yrs
	Min	30	--	59	--	30	--	37	--	14	--	14	--	11	--	14	--	16	--	11	--	28	--	
	Max	63	--	72	--	78	--	61	--	15	--	15	--	14	--	18	--	18	--	14	--	47	--	
<b>Gender</b>	Male	3	38%	5	50%	6	60%	2	25%	6	50%	6	50%	5	50%	6	55%	3	30%	0	0%	5	46%	41%
	Female	5	63%	5	50%	4	40%	6	75%	6	50%	6	50%	5	50%	5	46%	7	70%	3	100%	6	55%	59%
<b>Ethnicity<sup>3</sup></b>	African American	0	0%	0	0%	0	0%	0	0%	0	0%	1	8%	0	0%	0	0%	0	0%	0	0%	0	0%	1%
	Asian	0	0%	0	0%	1	10%	1	13%	2	17%	2	17%	2	20%	1	9%	0	0%	0	0%	0	0%	8%
	Caucasian	8	100%	10	100%	8	80%	6	75%	9	75%	5	42%	5	50%	1	9%	0	0%	0	0%	3	27%	51%
	East Indian	0	0%	0	0%	0	0%	0	0%	1	8%	1	8%	0	0%	0	0%	0	0%	0	0%	0	0%	2%
	Hispanic	0	0%	0	0%	0	0%	1	13%	0	0%	1	8%	2	20%	0	0%	0	0%	0	0%	0	0%	4%
	Middle Eastern	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0%
	Native American	0	0%	0	0%	0	0%	0	0%	0	0%	1	8%	0	0%	9	82%	9	90%	3	100%	8	73%	32%
	Pacific Islander	0	0%	0	0%	1	10%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1%
	Other	0	0%	0	0%	0	0%	0	0%	0	0%	1	8%	1	10%	0	0%	1	10%	0	0%	0	0%	3

<sup>2</sup> African American, Hispanic, Native American, Pacific Islander

<sup>3</sup> Percentages may now equal 100 due to rounding

## 2.2 Background of the evaluation

A front-end evaluation was conducted for Ironbound Films, Inc. for their documentary film, *The Change*, which is currently under production. The front-end evaluation aimed to assess participants' initial views and impressions about the film's characters, narrative, scientific clarity, and relevance to personal interests. A formative evaluation using participants from these same focus groups will be conducted when the rough cut of the entire film is ready and a summative evaluation using new participant groups and pre/post surveys will be conducted on the final film and the project website. Evaluation methods employ both qualitative and quantitative indicators to answer the guiding evaluation questions associated with this project.

### Guiding evaluation questions

Guiding evaluation questions are based on the Ironbound Films, Inc. project goals. Does viewing the film *The Change*:

- Increase viewers' knowledge of how climate change affects communities and cultures and help viewers understand how scientists are responding to these changes?
- Inform viewers' attitudes towards climate change and how it will affect communities around the world?
- Motivate viewers to become actively involved in the assistance of people who are adversely affected by climate change?
- Give a voice to the native people who will be forced to adapt or relocate as a result of climate change?

### Assessment development

In collaboration with the PI, SmartStart developed (or will develop) the following assessment instruments for this project.

- A front end focus group protocol was designed to assess level of participants' interest, connection to characters, ability to inform about climate change, and attitudes towards climate change. The protocol draft was sent to the PI and his suggestions were incorporated into the final draft. (Appendix A).
- A brief demographic questionnaire was developed to record participants' age, gender, and ethnicity. Also, at the PI's request, a single Likert-scale question regarding a change in participants' perception caused by viewing the film (Appendix B).
- In the upcoming year a formative focus group protocol will be developed that will be similar to the front-end protocol.
- In the final year, a summative pre/post survey will be developed based on project goals.

### Data collection methods

A SmartStart Senior Evaluator traveled to various cities across the United States to conduct focus group interviews with 11 groups. Participants read the description of the film prior to viewing the video reel. Next, participants viewed a 14 minute film reel of *The Change* and then participated in a focused discussion facilitated by the evaluator using the front-end focus group protocol. All focus group conversations were recorded. Interviews were transcribed by a SmartStart assistant in the SmartStart office.

## **Data analyses**

SPSS and Excel were used to analyze data with descriptive statistics. Baseline frequencies were reported in the form of percentages. Participant responses from the focus group interviews were transcribed, coded, and analyzed to identify emerging themes in accordance with the film's content in addition to the project goals for this project.

The procedure for analyzing the participant responses followed the three steps outlined below:

1. A first pass of reading participant responses was completed to identify themes that emerged from the discussion that occurred during the focus group.
2. Text from participant responses was then re-examined and coded for instances of each of the identified themes. In addition, responses were coded for relevance to the evaluation codes. Coding was done using an Excel spreadsheet to track all responses.
3. Once analysis for each of the focus group participant responses was completed, a cross-case analysis was conducted to examine the participant responses across the focus groups to identify similarities and differences among group responses.

## **Evaluation components conducted during front-end evaluation**

The following components were developed and conducted during the front-end evaluation of this project:

Developed:

- Focus Group Interview Protocol (Appendix A)
- Participant Data Form (Appendix B)

Conducted:

- Interviews with eleven focus groups
- Qualitative analysis of Focus Group Participant responses
- Coding of qualitative data from participant responses to identify common themes
- Quantitative analysis of descriptive statistics of participants' demographics and their perceptions of climate change

## Section 3. Evaluation Findings

---

### 3.1 Evaluation of participant responses

To assess film quality and to answer guiding evaluation questions, the evaluator analyzed participant responses from the 11 focus groups. Questions asked during focus group meetings sought to obtain feedback about the overall layout, structure, and content of the film. Questions also sought to acquire insight into participants' initial impressions of the film with respect to knowledge and awareness about the issues presented. Analysis and findings for each focus group is be presented individually. Then, results of a cumulative analysis are presented. Findings are presented thematically with the following themes addressed: *Film Content, Film Editing, and Project Goals*.

#### Film content themes

Three sub-themes related to film content were identified:

- 1) Context Development
- 2) Character Development
- 3) Comparative/Statistical Data

*Context Development* responses focused on the way the context of the film was established with respect to background information on location, characters, and issues. *Character Development* responses focused on how the film's main character, Katie, behaved throughout the film reel. *Comparative/Statistical Data* responses focused on participants' suggestions that the use of comparative or statistical data might help deepen their understanding of issues explored in the film.

#### Film editing themes

Four sub-themes related to film editing were identified:

- 1) Organization of Content
- 2) Target Audience
- 3) Title Change Suggestions
- 4) Editing Suggestions

*Organization of Content* responses focused on how the information in the film was organized and presented. *Target Audience* responses focused on questions they had regarding who the target audience was for the film. *Title Change* responses focused on suggestions for changing the title of the film. *Editing Suggestions* responses focused on suggestions offered for editing the film for improved quality and development.

#### Project goals themes

Participant responses were examined for relevance to the project goals. Each goal is a sub-theme:

- 1) Increased Knowledge
- 2) Informed Attitudes
- 3) Increased Motivation
- 4) Recognition of the Authentic Voice of the Native People.

Each focus group's responses were examined to measure levels of increased knowledge and awareness of issues covered in the video reel, levels of informed attitudes participants exhibited towards climate change, levels of increased motivation to become involved in assisting those affected by climate change, and awareness and recognition of the voice of the native people featured in the 14-minute film reel.

## Response analysis by focus group

### Suwanee Georgia participants: General adult group

#### Film content

Participants' responses with respect to film content focused on areas surrounding context development, character development, and the recommended use of data and/or statistics. Participants discussed a need for further establishment of context in order to understand the background of Katie and her family and how it relates to the issues discussed in Siberia. Participants also discussed their interest in wanting to hear more from the perspective of the film's character, Katie, as well as suggesting the potential increase in the use and presentation of data to further illustrate the issues surrounding climate change. Responses are shown in Figure 3.

**Figure 3. Georgia film content responses**

<b>Sub-themes and coded content</b>
<b>Context development</b>
<ul style="list-style-type: none"><li>• <i>I couldn't focus on the child's living conditions, her mother's marriage status with the father, and how acclimated the daughter was with her Siberian heritage. The film should perhaps discuss the family unit more before continuing with the movie.</i></li></ul>
<b>Character development</b>
<ul style="list-style-type: none"><li>• <i>I was interested to hear the teenage girls' perspective on global warming. Not just the main girl, but also her friends. If you have kids watching the video, it shows some peer interest in the subject.</i></li><li>• <i>The teenage girl was an interesting character to hold your attention.</i></li></ul>
<b>Comparative statistics</b>
<ul style="list-style-type: none"><li>• <i>The numbers they gave in one instance was merely a three year period, which isn't much in the grand scheme of things.</i></li><li>• <i>Seeing scientists' studies would give credibility to the message.</i></li></ul>

#### Film editing

Participant responses focused on issues in film editing relating to the organization of content, suggestions for changing the working title, and other miscellaneous editing recommendations to improve the viewing quality. Some participants found the film clip to be "choppy" in parts and were unclear as to the specific message of the film. Participants suggested the film's working title be changed in order to clarify the film's content. One suggestion was to name the film: *The Warming*. Lastly, editing suggestions included deleting of the "can-smashing" scene and clarifying where people were at present in their lives. Responses are shown in Figure 4.

**Figure 4. Georgia film editing responses**

Sub-themes and coded content
<b>Organization of content</b>
<ul style="list-style-type: none"> <li>• <i>Its not as focused as it could have been. I don't know where in the movie that's gonna fit in.</i></li> <li>• <i>Kinda depends from producer's perspective, they want to create a multigenerational perspective. This was choppy, and hopefully will be edited for the final version.</i></li> <li>• <i>I didn't sense any real urgency from anyone's perspective, rather they just touched on some issues, but no one was overly anxious about anything. It's just one tiny little segment before the finished product though, and we don't ultimately know what it's going to be like. You could ultimately show any cultures around the world that might be more interesting.</i></li> <li>• <i>At first didn't know if the girl's two friends were from Siberia, going to Siberia, just seemed confusing</i></li> <li>• <i>Climate change... I didn't know if that was their message. It wasn't clear whether or not we were causing the climate change, or were they just saying this is a phenomenon?</i></li> </ul>
<b>Title suggestions</b>
<ul style="list-style-type: none"> <li>• <i>When I hear this title I think of menopause or Obama-change.</i></li> <li>• <i>That would not capture my attention if I saw an advertisement for this</i></li> <li>• <i>You could call it... The Warming?</i></li> </ul>
<b>Editing suggestions</b>
<ul style="list-style-type: none"> <li>• <i>The can-smashing seemed unnecessary.</i></li> <li>• <i>When they were eating pizza, didn't know if they were in Siberia.</i></li> <li>• <i>Will there be a "needs to be done" list at the end? I would like to see one.</i></li> </ul>

**Project goals**

Participants expressed feelings of increased knowledge as a result of screening the film's clip. Participants also expressed a desire to acquire additional information relating to climate change. With respect to levels of motivation, participants did not appear eager to assist people affected by climate change as one participant answered *"the next generation is going to have to deal with it."* Responses are shown in Figure 5.

**Figure 5. Georgia project goal responses**

Sub-themes and coded content
<b>Increased knowledge</b>
<ul style="list-style-type: none"> <li>• <i>It was about stuff I never thought a lot about. I thought it was cold all the time in Siberia</i></li> <li>• <i>It expands awareness when you see these microcosms in Siberia, or cultures you can't really relate to. Because of the American anthropologist and daughter, it creates ties as an American to the native people</i></li> <li>• <i>The icebergs melting and breaking apart, I would want some information on that</i></li> </ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"> <li>• <i>I was curious as to what caused the climate change in India, there's the permafrost in Siberia. Maintained interest because he wanted to see what would happen there.</i></li> <li>• <i>Five people nod or motion with a yes.</i></li> <li>• <i>I never got the sense that this was a crisis we have to drop everything for</i></li> <li>• <i>It usually impacts wildlife and animals more so than humans, but in this case it can affect a human civilization?</i></li> </ul>
<b>Increased motivation to assist those affected by climate change</b>
<ul style="list-style-type: none"> <li>• <i>The next generation is going to have to deal with it</i></li> </ul>
<b>Authentic voice of native people</b>
<ul style="list-style-type: none"> <li>• <i>It is really slow at times, but they're trying to depict the life for that culture. It's a slower society in terms of pace.</i></li> </ul>

## **Ft. Myers Florida participants: General adult group**

### **Film content**

Participant responses centered on concerns that the film focused heavily on Siberia and that, for US audiences, may not be completely relatable. Participants also suggested the use of data or statistical information to establish context surrounding the issue of climate change. Some participants wanted to know the difference between the terms *global warming* and *climate change* and if there is a distinction between the two. Responses are shown in Figure 6.

**Figure 6. Florida film content responses**

<b>Sub-themes and coded content</b>
<b>Context development</b>
<ul style="list-style-type: none"> <li>• <i>This is going to be a 50 minute documentary This movie did not reflect enough information because it was all about Siberia and they brought in their culture which I don't think affects global warming as the whole world</i></li> <li>• <i>For US audiences, Siberia may be distant. There's an acknowledgement between global warming and climate change. There was acknowledgement of a balance between them.</i></li> </ul>
<b>Comparative Data/Statistics</b>
<ul style="list-style-type: none"> <li>• <i>The film made a reference to changing earth temperature due to permafrost, but didn't say what was changing or included any facts.</i></li> </ul>

### **Film editing**

Participants shared several suggestions for editing to improve film viewing quality. Participants discussed the possibility of changing the film's working title as they felt it created confusion as to the film's focus. Participants in this group also were strongly recommending starting with American based environments/places in order to connect with audiences more. Responses are shown in Figure 7.

**Figure 7. Florida film editing responses**

<b>Sub-themes and coded content</b>
<b>Organization of content</b>
<ul style="list-style-type: none"> <li>• <i>I didn't feel there was enough info to come up with anything. Nothing was informative except Siberia, and there are other places that are suffering with natural disasters. I wonder why we are spending grant money on this.</i></li> <li>• <i>They never mentioned anything good about what's going on, they only mentioned what they think is bad. There was un-tillable land in the US before the ice age which afterwards helped the region, so there's more than one side to that story</i></li> <li>• <i>What is the end result of this? We have seen from this clip, things we can see everywhere else. What is the agenda, because I'm suspicious of the direction of this movie? (Woman in the back agrees).</i></li> <li>• <i>If I was flipping through channels, I would keep going. I think the producers should make a very clear statement upfront if they can: there is a neutral message, but that there are some changes in the world. Why and what needs to be done needs to be rectified, but there are already consequences</i></li> <li>• <i>I didn't get it at all; I'd have turned it off when I'd get into bed. I'm old-school management philosophy, tell me the purpose upfront. I watched this whole 15 minutes and I still don't know what I'm going to watch.</i></li> <li>• <i>NSF needs to make a statement at the beginning to disclose no one is to blame and no political stance is taken.</i></li> </ul>
<b>Title suggestions</b>
<ul style="list-style-type: none"> <li>• <i>The change could relate to us as women.</i></li> <li>• <i>I agree with Change, but we have to have more information at the beginning. If I'm scrolling down, I don't want to watch a documentary about "change." It needs to be change: global changing.</i></li> <li>• <i>The name didn't give enough information about the movie.</i></li> <li>• <i>The name in the title should mention climate change instead, which most agree to.</i></li> <li>• <i>Is there a change? You've made the assumption that there is a change when you say that</i></li> </ul>

Sub-themes and coded content
<b>Editing suggestions</b>
<ul style="list-style-type: none"> <li>• <i>We want to see USA and less of other countries</i></li> <li>• <i>If I would show it to that audience, I would remove the scenes where teens are using games during the presentation.</i></li> <li>• <i>The film should maybe start in Alaska for American audiences.</i></li> <li>• <i>If you want to draw people in, don't start with Siberia.</i></li> </ul>

### **Project goals**

Participant responses, in contrast to other groups, were largely negative with respect to levels of increased knowledge, informed attitudes, increased motivation, and recognizing the authentic voice of the native groups. Responses are shown in Figure 8.

**Figure 8. Florida project goal responses**

Sub-themes and coded content
<b>Increased knowledge</b>
<ul style="list-style-type: none"> <li>• <i>What I got out of this is that they are farming people, and they are damaging land, and that there is land underwater because of permafrost.</i></li> <li>• <i>I'm not clear between permafrost tunnel and what was happening on top.</i></li> <li>• <i>Hardly any information about the big topic.</i></li> <li>• <i>There was one guy studying permafrost.</i></li> </ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"> <li>• <i>If you're at home, then yes you got my attention. Did I relate to it? No! It's not what I expected and I was disappointed. I care about what's going on, but I can't do anything about it</i></li> <li>• <i>What I think was missing in that was "what're you gonna do about it?" There were was no talk about looking for higher ground, or taking other practices from other cultures</i></li> <li>• <i>They need to know they need to adapt</i></li> <li>• <i>I didn't see any hardship, they have already been living with the raised water levels</i></li> </ul>
<b>Increased motivation to assist those affected by climate change</b>
<ul style="list-style-type: none"> <li>• <i>When asked about science of climate change, a unanimous yes is heard from the group</i></li> <li>• <i>It showed people affected, the kids could care less, should have made a mention of "how climate change is affecting certain cultures," and to me it did in Siberia.</i></li> <li>• <i>I totally disagree with that statement, we are trying to protect the whole world. People like George Clooney attach their names to causes to help places like Africa, we have to help other places.</i></li> </ul>
<b>Authentic voice of native people</b>
<ul style="list-style-type: none"> <li>• <i>When asked if the characters give a voice to native people, a unanimous no is heard from the group.</i></li> </ul>

## Glendora, California participants: General adult group

### Film content

Participant responses from this group offered numerous recommendations with respect to context and character development such as more background on the family, more detail, and make connections to USA problems. They also suggested incorporating more data. Responses are shown in Figure 9.

**Figure 9. California film content responses**

<b>Sub-themes and coded content</b>
<b>Context development</b>
<ul style="list-style-type: none"><li>• <i>They should also focus on the complexities of what's going with the Siberian people and what is causing all these problems that exist now. I was kind of confused on why these problems are... I see the flooding, but the issues that come with it. The trees are dying, but what else is going on? More detail.</i></li><li>• <i>I don't think there's going to be enough buy-in unless the film shows how the climate change affects us here. Most of us know it's affecting other areas, but how does it impact our lives on a day-to-day basis? I think it should cover a broad spectrum of the United States because if you just say, "Well in Siberia this is happening, in India this is happening, in the Sudan this is happening," people go, "meh, that's fifteen thousand miles away, who cares?"</i></li><li>• <i>To get the natural, you have to get the human part of it, to get people to even buy into it and all that. I think both are equally important, but knowing those things, who is the mom? How did they meet? You know, where did they come from? We've got this girl, we know little about her, except for she lives in Siberia, she lives in Pittsburgh or whatever. How did this come about?</i></li><li>• <i>Although I agree with you, I think and again we were seeing fifteen minutes but more details. How it will eventually... impact them. I mean this says that two hundred million people will be forced from their homes, it didn't say that at least in the bit we saw that and we saw a few horses and cows struggling, but what does that mean? I have a vivid imagination, but what does it mean that the wolves are getting closer. But I thought that the town hall meeting was a good thing.</i></li><li>• <i>Americans have a fondness for happy endings in their entertainment. So is there any suggestion at the end, that there are some positive things we can do. The problem with the environmental movement is how the sky is always falling, and that cosmic proportions are such that we are helpless as ordinary individuals, so there has to be some hint if you want a happy ending and that people feel they got their money's worth, at least indicate the possibility that there are things that human beings can do to make a difference. And that would provide that happy ending.</i></li></ul>
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"><li>• <i>She's amazing, she draws you into the film and makes it human.</i></li><li>• <i>For me the girl, because it seems like she started off like she was going to get something out of this eventually. Being a high school teacher, I could see my students looking at that and going "She's not me, but I could very well be in the same place and doing something like that so it's identifiable for someone younger definitely. Which I feel for these type of movies that's sort of where they're geared toward the younger generation that has that "start it now and make a difference, and if we grow up and we teach ourselves to do that all the time then it doesn't go back the other way, we're already making an impact."</i></li><li>• <i>I agree about the girl, and I would also like to see, I understand that this is a small clip, I'd like to hear from her. She's in an extremely unique situation that is very remote group of people that I have no contact with that I know of. It would be interesting to hear her talk because she navigates both cultures really well. I'd like for her to talk more about what that means to her. What living in Pennsylvania, that where she's from? You know, a very typical American teenager life, and obviously, from that little clip, it seems like she obviously enjoyed her Siberian family, and to hear from her what that means, and if they're struggling and having difficulty, what that means to her. Why would she care if they're losing their land and their horses can't graze and that sort of thing?</i></li><li>• <i>Did you say the focus was going to be on the girl and her mom? Ones of the things I put was to identify relationships a little more, and I think one way to draw people, they liked it when she said she to pretend to not to be bored, and I think even snippets of the mom being very "mom-ish," and the kid and really establishing that relationship and then we're going to follow them wherever they go. I think, more. Because we saw her,</i></li></ul>

## Sub-themes and coded content

*and then we saw the mom, almost very separate throughout most of it, and the dad.*

- *What if she goes from playing solitaire on her phone, to giving a damn, to convince her friends that this really is real.*
- *Seems it's going to follow her and she really needs to change for us to really have the buy-in at the end anyway. (two people agree). That she needs to go "This is really what's happening. I've seen it, I've been there, I'm going to start my own."*
- *She's at the age to share it with high-school kids.*
- *Then it will take some creative editing, because if it isn't acting, then it's real. And that's going to take some creative editing. If she is not the kind of girl that will do that.*
- *Yeah so no more solitaire for her.*
- *She'd fit right in southern California, because she doesn't look different from anybody else.*
- *That was interesting because she says, "I'm brown!" I felt, aren't we all? Hello! You can see every color of the rainbow! She doesn't live here.*
- *I think the film maker is trying to say, here's a unique individual that has one foot in Siberia, and the other in Pennsylvania. And it gives her a sort of unique way of looking at things, because she's very close to her Siberian family. I agree with you that the film maker needs to figure it out how to not make it about race, and yet get across that here's this very very unique young lady, who has people she cares about in two very different places. You can't think of many places more different than Siberia.*
- *I think it's the term, "I'm brown." If she just said I'm different from other people where I live...*
- *If there was a voiceover from her, kinda similar to what she had written on the paper and what it says there. If she said, you know what, I'm different from other people here. Half my family lives in a completely different country halfway across the world, and I live here, and I get to visit and it would incorporate that voiceover part of it and give you that kind of a little bit of background. I think it's the term brown...*
- *Or even different. How about unique, or special? Like positives we're talking about the positives, like give me a silver lining.*
- *That moment when they have the pizzas, for instance. Using, the race isn't going to be of interest, but the difference would be, there's the pizza, that's American. Then they could have immediately shifted to what're they eating in Siberia, or something like that. And that would have established, here is the difference between these cultures, and she's part of something unique.*

*Except I think that's the strongest role that young woman had. She was able to introduce us to a culture that I had no knowledge of and do it in a really effective way. She had already learned the language, I was really impressed with that, she obviously cared about those people which are her family, and considered them her family. And so that made a very powerful personal connection that I think you need, to care.*

## Comparative Data/Statistics

- *More statistics.*
- *The problematic aspect of that I think that if it's a human interest story, and it doesn't involve the science of the story, the greatest grievance against this whole issue is that the charge that it isn't really scientific, that it's really political. So if you avoid the science, which is really tedious for people that are watching this as entertainment, then you're also avoiding the fact that if you don't prove it, then it's just a plot. Has to be some testimony by a scientist in terms of the scope and seriousness of the problem. Otherwise it's just material for a daytime serial.*
- *Open it up to another family, you know, which is completely different. Could be one hundred percent, one hundred eighty degrees on the other side.*
- *I didn't see any scientists.*
- *There was one guy... the researcher. He didn't really speak enough, he didn't know why he was there.*
- *Yeah, he didn't know why he was there, he didn't have a large role. You saw his little underground lair, and then you saw him at the meeting, and they're like someday you'll grow up and be just as great as he is. I don't know, what does he do?*
- *Also, explain permafrost to us.*
- *You know, something simple and doesn't have much to do with this question, but we're talking about showing other things. When they flew in on the airplane, she said, last time I was here it was flat and it was dry. Next day she came in an airplane right? I know it's unfortunate she probably didn't take pictures.*
- *I was like, I see what you're talking on the airplane, but boy I would have loved to have seen it with no water, to this water, to this water, without me feeling like I've been tricked by technology and you digitally did it. I*

### Sub-themes and coded content

*actually would have loved to have seen... They lead you right to it and it's like...*

- *Just like here, the most effective drought image, is when they show a reservoir or lake, in California, Nevada, or Arizona, and show you were it was, you can see the water line and where it is now. Pretty amazing to see.*
- *I think that's why they should put more scientists in there to give them more facts.*

### Film editing

Participants offered numerous suggestions and recommendations for editing the film for improved viewing quality. Participants offered feedback with respect to the film's working title in which many participants felt that the current working title lends itself to the possibility of confusing audiences as the scope and focus of the film. Responses are shown in Figure 10.

**Figure 10. California film editing responses**

### Sub-themes and coded content

#### Organization of content

- *It is a human testimony of ordinary people rather than a scientific report. I don't know who the film is directed at in terms of eventual viewers, but the problematic aspect is will people in Glendora think about the problems that exotic foreigners here when they're fine and comfortable here?*
- *No established goal at the beginning, maybe a little bit of a narrativist purpose of the entire film, but you don't know what you should be looking for. For example, they show an old tundra and then you see little girls walking down the street. Knowing the goal would help me watch it.*
- *You don't see the Al Gore concept of compare and contrast. I want to see that because it's very convincing and across the board, make it easier for anyone to understand.*
- *I enjoyed the not knowing, I was watching it and not knowing where it was going to go. I liked just watching and see what was going to be unveiled.*
- *In a way the film so far, the segment, is playing it safe, it is sort of human interest stuff, but the reality of it is this is a very controversial issue. And, certainly in the United States and the politics of this issue, is the film going to end up playing it safe or not? If it's controversial, if it's honest it's got to be ending up problematic and controversial. That is, what we have to do in this room is to change our lifestyles in order to make it better in Siberia. I'm not so sure how many people in this room are prepared to change their lifestyles and so unless we get down to that, then the film might be a pleasant entertainment, maybe even informative, but it's going to skip the hardcore problematic issues that involve a worldwide responsibility to change lifestyles so that Siberia can improve, it's not a change of the lifestyles of those people in Siberia, it's a change in the life cycle of those people in Glendora. And if they don't get there, then it's essentially dishonest. I want it to be at least a challenge to the intelligence and morality of everyone who sees it, a challenge. And I don't want to play it safe.*
- *You know when she was talking with her friends, "yeah my dad doesn't believe in it," some people look at this and say, "well, two hundred million people are (inaudible)... How do you make this seem like it's large enough or urgent enough problem for the audience to do anything?"*
- *Plus it's kinda hard, it's only fifteen minutes and ultimately not knowing what their goal is. Is the focus really Siberia? Or is the focus something else, because with a fifteen minute clip you don't only want to commit to the larger schemes and such...*

#### Target Audience

- *I think if it's going to do that too, is it for high school kids, college kids? (Someone asks what the target demographic is). I think that if it is going to then succeed in challenging right from the beginning, make us identify even more with the girl, or sympathize even more with her, and I think there needs to be more clarity in terms of, some people aren't going to know where Siberia is. I think some simplistic things like a map (someone agrees in background), or dates and times like the handout says, "two years later," or over the course of two years, that's not clear in the film, at least, that's the small part that we have, so I think some real, specific kinds of, "here's where they are, here's where we are, and then really push the 7/11, facebook, here's a typical American-ish girl to draw the audience in, so that when, if the challenges made we need to do some really serious things, we have some buy-in.*

## Sub-themes and coded content

- *And if you're targeting high school kids, I think it's getting them focused with something that has nothing to do with what you're trying to say. Because the rest of them will look at each other and be like, are we different? You're brown, I'm brown. Am I different? You don't want race or anything like that or difference to be part of what this is about. Especially in that targeted age group, that's going to be the first thing they latch on to.*
- *Well, what I really liked about it was that everyone was saying that this girl brought you in, that she was real. The problem I see is that with a lot of these movies is that they're either preaching or beating you down with it so hard that it's almost illogical for someone who's moderate and in the middle. To someone that loves it, it's like oh amen. However, it's the middle ground people that will ultimately decide whether or not they will teach that to their children. The people that already believe it and teach it, it's not going to do anything. It needs to be factual, but don't make it catastrophic.*
- *Well, are you just trying to reach the people that aren't real?*
- *The people in the middle?*
- *You want to make it watchable for everyone, ultimately that would be the goal. The goal would be someone that believe in it would watch it, someone that finds it can get pulled into the story because it's a girl can watch it, and someone who gets into the story that likes a good show can identify with the characters. Maybe I'm not going to watch it by myself, but with enough people this can be cool. Think about why we watch the movies we watch, we watch certain movies because our kids want to watch it, we don't watch Mickey's clubhouse because we get something out of it, but you'll watch it. One of the parts that I enjoyed was when he was welcoming into his house, there was a procedure there. Grass meant wealth, and then burned something and explained the symbolism. All of that takes time. All of us are concerned about how to get something ten seconds faster on our iPhone. We've made ten seconds so important, and for him it's so important he welcomes us into his house properly that he takes time to explain the proper way.*
- *If geared toward younger people it needs to be edited that way. Clips aren't as long, the high school kids respond to the ones that are quick. I show a couple documentaries each year, and for the slow ones I hear students moan and complain, but with the ones that are a little faster, they keep with it, it moves quickly and I think that's an important part of it. And little bit of music, it doesn't assault your ears as much as they're used to. Needs to be MTV-style, where they see one minute of footage, but there are forty or so different cuts with different angles. Perhaps add some American music, but also Siberian music as well so students can really see the contrast.*

## Title Suggestions

- *You then need to title this appropriately, because someone might not tune in that is scanning the guide.*
- *Clay...*
- *Because somebody just said, the immediate thing was... menopause?*
- *Yeah, I'd get the e-vite and think, well I'm not opening this...*
- *What's happening?*
- *If he just added another word to "change."*
- *And I could understand his position to start the film with something that doesn't suggest global warming. Perhaps a little mystery in the title, what is he going to talk about? The change doesn't give enough mystery actually. Totally erroneous interpretation.*
- *Another viewpoint, and we don't often agree on things so I'll offer it, it could suggest a crisis and a challenge. So that it kind of addresses the whole movie on it, rather than just playing it safe, I get it. And what this represents, for the world, for all of us, is both a crisis and a challenge. And a crisis and challenge for humankind, now that's a very ambitious title, but I think it gets closer to the truth, and it doesn't play safe.*

## Editing Suggestions

- *The only thing I want to say off the bat is that I think a voiceover, would add to the enjoyment of the film because everyone can read the subtitles, a voiceover, especially for here since there's so many different languages spoken, reading the language is a lot more difficult for people who have English as a second language, than hearing it. So a lot of people can understand it and hear it, but you can't read it. So for me voiceovers are better than subtitles.*
- *I agree because voiceovers allows me to see the rest of the movie instead of reading the subtitles because I want to see the guy throwing the brass, the hay, the film, and if there's a voiceover I don't have to read, I'm just watching the movie.*
- *Well, even if they had the subtitles, if they put a background on it, because sometimes the subtitle is blending into*

### Sub-themes and coded content

- the movie, so... Yeah, if they had a background on it, it was dark and all the letters were white, and vice versa.*
- *It's a documentary style film, I mean you can't do that in Mission Impossible, when they're in France or whatever, but you can do it in a movie like this.*
  - *I want to hear more with the older people talking, they had something from the past, and they had obviously farmed in Siberia and lived there. It's a quick... maybe they can go back to it...*
  - *I was unclear whether they were switching to talk in people in India then, then we were done with Siberia, or I didn't know if we would spend more time there...*
  - *Well that's how teenagers are though. She's going to break out her iPod and have that moment where her mom says "put away those headphones." Yes, that would be nice to see.*
  - *How did they buy so much Monster? I know this has nothing to do with climate change, but how old were they?*
  - *Kids should not be drinking Monster*

### Project goals

Participants expressed their feelings of increased knowledge and awareness, informed attitudes, increased motivation to assist those affected by climate change, and a recognition of the authentic native voices illustrated throughout the film's clip. Participants also expressed a desire to learn more about issues pertaining to climate change, in addition to the present issues illustrated in Siberia. Responses are shown in Figure 11.

**Figure 11. California project goal responses**

### Sub-themes and coded content

#### Increased knowledge

- *A collective yes is heard from the group when asked if they were becoming more interested in climate change.*
- *It was personal. It was very impactful to them, and their way of life. It draws an assumption and the polar ice is melting and creating all this water and the permafrost is defrosting. I don't think it said that, but I think reading the intro and you just assume that.*
- *Another thing I'd like to see, of course this is taking place in Siberia, but what is their local government doing to help these people?*

#### Informed attitudes

- *It made me more aware, about the glaciers melting, I mean there's some kind of... almost cliché things that we now know and accept about global warming, I mean quite honestly I've never given the Siberian much of a second thought, so that's good.*
- *I'll say one thing. I'm from the Midwest with horses and cattle, grass fields and hay, and I never... You hear about climate change, and how the polar ice caps are melting, and the sea levels are rising, I'm like, I don't give a damn if the sea comes up, big deal. I see the beach, there's 100 yards of sand, if it comes up two feet who cares. To see that the permafrost is melting, and it's flooding interior lands and taking away farmland and impacting people who you wouldn't affect... that was interesting.*

#### Increased motivation to assist those affected by climate change

- *I realize it's important for people to identify and feel compassion for the people in the film, and I feel that's an advantage of the film, I don't want a human viewpoint necessarily, I want an understanding of what is happening to the natural environment, the animals, to the natural life, not just a disturbance in the lifestyle of even people in Siberia, but I think the integrity of the ecology and environment of the natural world, has its own rights and its own integrity, not just a "people" problem.*
- *To me, I care about the people, I didn't care about the other stuff.*
- *There is a silence when asked if they were more interested about science of climate change.*

#### Authentic voice of native people

## Sub-themes and coded content

- *I think the great strengths of the brief fragment we saw was the fact that these people are unknown to us and just that brief preview of them we invest in them and care about them and that's one of the strongest parts of the film, now I don't think no any one film can have all the things we want it to do, but to be invested in their plight, and to care about them, I think was done with great sensitivity by the film and that's a great strength. We still haven't dealt with that sequence when we look at a problem, cause, effect, solution. And if the film can be that ambitious I'm not sure. To say this is what's happening, what's the cause. The film we saw did not get into the causes, and then what are the possible responses, that might be asking too much of any one film.*
- *I think too there might've been more testimony or history from people in the audience to give it some more perspective. It was all current, and maybe talking with a voiceover, from then talk about how many generations have lived and farmed on this land. Maybe not so much about the greeting ceremony, but perhaps talk about the longevity of the community and how they have been able to live a certain way for long periods of time and making that assumption... and maybe having some factual information would help.*
- *I liked it. Each talk was short, sweet, to the point. It wasn't over-emotional, someone in the film said, "I don't understand this, and the wolves are getting closer," someone else said, "this used to be flat and dry, and now I've got water everywhere." It was more they were standing there questioning what's going on, and here's what I see. There wasn't a big ordeal about each one of them, just boom, here it is. But you could tell they were completely confused, "what is going on? Somebody help me or tell me why? I'm too old, I don't have the resources to really adapt to any other way than I've known my entire life, what do I do, somebody help me."*

## Salt Lake City, Utah participants: General adult group

### Film content

Participant responses with respect to film content focused on clarifying the film’s contextual background, the development of Katie’s character throughout the film, and suggestions for incorporating the use of data and/or statistics. Participants discussed a need for knowing where Siberia is situated, what the geographical location looked like prior to the observed environmental changes along with a need for further explanation of what *permafrost* is. With respect to Katie’s character, participants expressed a desire of wanting to know more about Katie and the relationship she has with her mother. Participants also recommended that the illustration of Katie’s development and evolution in her understanding of climate change be further expressed; many found Katie to be relatable to younger audiences, such as teenagers and school-age children. Lastly, a majority of participants suggested that the film’s message would be strengthened with the use of data or statistical information in order to offer a reference point for viewers about the scope and depth of the types of changes Katie and Katie’s mother are seeing in Siberia with respect to climate. Responses are shown in Figure 12.

**Figure 12. Utah film content responses**

Sub-themes and coded content
<b>Context development</b>
<ul style="list-style-type: none"> <li>• <i>There needs to be a map, people need to know where Siberia is</i></li> <li>• <i>We need to see what it was before to what it is now to be sure it is climate change</i></li> <li>• <i>I thought they did it well, but no context to put it in (no before/after pictures)</i></li> <li>• <i>Have Mr. Permafrost man explain what permafrost is. You aren't selling this to the top 2% intellectual America</i></li> </ul>
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"> <li>• <i>I wanted to know more about the mother-daughter relationship, the mother-father relationship, and her interviewing the villagers. The type of questions she asks will reveal her mindset</i></li> <li>• <i>It may be understandable earlier in the movie if it's to contrast her attitude from the beginning</i></li> <li>• <i>I think this girl is very relatable to the target audience</i></li> </ul>
<b>Comparative Data/Statistics</b>
<ul style="list-style-type: none"> <li>• <i>Your duty is to send this message, it has to be good and have scientific underpinning</i></li> <li>• <i>You can use emotional appeal of girl's story, but needs some type of scientific backing</i></li> <li>• <i>The information needs to be credibly presented</i></li> <li>• <i>The man needs to quantify comparisons of what he had to what he has now</i></li> <li>• <i>You can't blind people with science, but it cannot be just an emotional appeal</i></li> </ul>

### Film editing

Participants in the Utah group offered numerous suggestions with respect to editing the film for improved viewing. Suggestions range from editing scenes to clearly establish the movie’s point of view to camera movement to deleting specific scenes. Responses are shown in Figure 13.

**Figure 13. Utah film editing responses**

Sub-themes and coded content
<b>Organization of content</b>
<ul style="list-style-type: none"> <li>• <i>The movie is unclear in what it's doing. Participant talks about debate in America in regards to climate change, explaining how the legitimacy of climate change in the U.S. Says there needs to be things in the film that addresses the skeptic at the beginning or throughout.</i></li> <li>• <i>What are the objectives of the film company with the movie?</i></li> <li>• <i>But it depends on the goals on the film, is it to educate on what's happening, to educate about what kids think</i></li> </ul>

Sub-themes and coded content
<p><i>about climate change. I like the fact that it's called climate change. It doesn't involve warming per say. If they go to a place at the beginning that gets colder, it will change people's perceptions about only thinking about global warming."</i></p> <ul style="list-style-type: none"> <li>• <i>There isn't a vision, I didn't know it wanted to do, and the movie doesn't know what it wanted to do. You can edit to a vision, but it isn't clear here</i></li> <li>• <i>I don't know what the issues were.</i></li> <li>• <i>Why Siberia? Typical American will be ignorant to what the rest of the world is going through. There are plenty of examples we could use here in America that would hit much closer to home. People think Siberia is just some part of Russia. Just recently, we had tornadoes, el nino, etc. The whole Southwest region is burning</i></li> <li>• <i>I don't know goal, because Siberia doesn't affect us in any way. The clip was disconnected, and I don't understand the point. 50% of the trailer was boring, the first half</i></li> <li>• <i>You have to know what it's about, and because of that it's hard to give feedback. If it's a story of a girl's journey, it's going to be a different approach than scientific approach</i></li> </ul>
Title suggestions
<ul style="list-style-type: none"> <li>• <i>Get rid of the "the" in "the change."</i></li> <li>• <i>It should be something about Katie's discovery</i></li> </ul>
Editing suggestions
<ul style="list-style-type: none"> <li>• <i>Incredible footage, poorly edited. First seven minutes were very disconnected, weak transitions.</i></li> <li>• <i>It would have helped to have a date/place tracker so the viewer knows passage of time, and when they switch areas</i></li> <li>• <i>I felt there was too much time spent with the energy drinks and 7/11; if friends came through the film later when she returns</i></li> <li>• <i>She's the main character; you don't need to see her friends much in the beginning</i></li> <li>• <i>You could say the same thing in a lot less time by taking out the monster drinks and showing the part with the fridge and looking/feeling different</i></li> <li>• <i>There needs to be accompanying visuals with the song and phrase "the times they are a changin'"</i></li> <li>• <i>It was counterproductive to show her messing around on her iPhone while the villagers were talking</i></li> </ul>

### Project goals

Participant responses with respect to project goals focused mostly on their level of having more informed attitudes. Responses are shown in Figure 14.

**Figure 14. Utah project goal responses**

Sub-themes and coded content
Informed Attitudes
<ul style="list-style-type: none"> <li>• <i>We are not addressing any root causes of global warming. People are living in places where climate change will make a huge difference. 100 years ago, we didn't live there, and true problem is population control.</i></li> <li>• <i>If I didn't believe in climate change, this wouldn't convince me it existed. As someone who has done work on this area it didn't teach me anything I didn't know.</i></li> <li>• <i>Have you seen the other climate change documentaries? You see icebergs collapsing, and I didn't see any drastic thing happen. In comparison to other documentaries, it doesn't have that.</i></li> <li>• <i>If you want people's attitude to change, you have to talk about earth's carrying capacity.</i></li> </ul>

## Pocatello, Idaho participants: Middle school students

### Film Content

Participant responses with respect to film content primarily focused on character development of the main character, Katie, and her attitude exhibited through the film. Responses are shown in Figure 15.

**Figure 15. Idaho film content responses**

<b>Sub-themes and coded content</b>
<b>Character Development</b>
<ul style="list-style-type: none"><li>• <i>That girl has a bad attitude about going Siberia, she should be more appreciative</i></li><li>• <i>Her opinion changes when she sees the trees drowning</i></li></ul>

### Film Editing

Participant responses offered suggestions for changing the film’s working title in addition to offering suggestions for film editing. Responses are shown in Figure 16.

**Figure 16. Idaho film editing responses**

<b>Sub-themes and coded content</b>
<b>Title suggestions</b>
<ul style="list-style-type: none"><li>• <i>They should call it the change if you’re moving someplace</i></li><li>• <i>They should call it “The Cause”</i></li></ul>
<b>Editing suggestions</b>
<ul style="list-style-type: none"><li>• <i>Didn’t like that the daughter was playing solitaire during the presentation, felt like the daughter didn’t care but comes to care later on</i></li><li>• <i>Take out the scene with the monster and Redbull at the beginning</i></li><li>• <i>You don’t hear a narrator going through the issue, you hear people talking about the problems they’re facing</i></li><li>• <i>Subtitles were hard to read</i></li><li>• <i>Having subtitles made it hard to watch what they were doing, other than the song</i></li></ul>

### Project goals

Participants expressed feelings of increased knowledge, informed attitudes, increased motivation to assist those affected by climate change, and recognizing the authentic native voices displayed within the film. Several participants discussed a desire to want to help those affected by climate change with one participant saying, “*I don’t see why we can’t do something to help them, like send food.*” Responses are shown in Figure 17.

**Figure 17. Idaho project goal responses**

<b>Sub-themes and coded content</b>
<b>Increased knowledge</b>
<ul style="list-style-type: none"><li>• <i>It is good for learning about things about climates, how they’re changing, and that they are in a secluded place.</i></li><li>• <i>It raised awareness of places like Siberia that are dealing with climate change</i></li><li>• <i>I didn’t know what it (climate change) was before</i></li><li>• <i>Seven other participants comment on how they, too, didn’t know about it before</i></li></ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"><li>• <i>Four students say yes to changing their attitude over course of the movie</i></li><li>• <i>One girl stated, I want to try to find a solution, on trying to slow it down or stop it</i></li></ul>

## Sub-themes and coded content

### Increased motivation to assist those affected by climate change

- Another collective yes when question was redirected towards climate change
- *I want to know more about it and how I can help*
- Evaluator hears a collective yes
- *I don't see why we can't do something to help them, like send food*
- *It's kind of like the Haiti earthquake were we all chipped in for a cause...*

### Authentic voice of native people

- *I liked when it talked about the culture, learning about a previously unknown culture*
- *I liked to see some of the fabrics and things they do*
- *I thought the dad's smoke ritual was interesting and different*
- *It's interesting to see how their culture is*
- *I like the activities in the movie, they were making crafts and quilts*
- *It sounds like it would be hard for them to adapt to a new place. People would think their rituals may be weird*

## Hopewell Junction, New York Participants: General high school students

Two groups were interviewed as part of the New York Focus group. Due to the similarity within the groups' responses, the coded content for each of the two focus groups is presented together.

### Film content

Participant responses focused on the film's context development, character development, and the recommendation of incorporating data. They discussed feeling slightly confused about the established relationship between Katie's mother and father in addition to feeling a need for additional background on Siberia (location, climate, people) and what it was like before the observed changes started to happen. Participants talked about Katie's character, recommending her development be illustrated more to show her changing character. Participants felt it would benefit audiences to see Katie's change in perspective parallel with the changes observed in the country she visited. Lastly, participants suggested the use of comparative data and/or statistical information as a means of illustrating a clear comparison of what countries, like Siberia, were like prior to the observed changes in their climate. Responses are shown in Figure 18.

**Figure 18. New York film content responses**

Sub-themes and coded content
<b>Context development</b>
<ul style="list-style-type: none"> <li>• One female participant was unclear if the parents were together, another male participant thought they were</li> <li>• <i>Give more background on the climate of Siberia and how it's supposed to be so people can understand the severity of the changes.</i></li> <li>• <i>It was nice to get an idea of where things are, I don't know where all the countries are.</i></li> <li>• <i>I like that there is a story, so it isn't fact after fact.</i></li> </ul>
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"> <li>• <i>I felt she was a pessimistic character, because she kept talking about how she tried not to be bored. She doesn't show she cares, even though we know she does but it's not obvious.</i></li> <li>• <i>I felt she should be more involved since she is the main character</i></li> <li>• <i>She seemed like all-American girl but has family in different parts of the world, but hard to understand because she speaks very fast.</i></li> <li>• <i>I didn't know if Katie spoke the language</i></li> <li>• <i>I wish there was more of her mom working with her dad more, they seemed separated in terms of what they were doing and their tasks</i></li> <li>• <i>She (Katie) doesn't seem moved or changed by her experiences.</i></li> <li>• <i>It would be good if after her friends disagree with global warming, it would be nice to see Katie use her knowledge to talk with her friends about that.</i></li> <li>• <i>It would be nice to show Katie using her experiences to influence her peers</i></li> <li>• <i>It would be nice to parallel actual change in environment with Katie's change. So as she visits more places and becomes more interested and involved.</i></li> <li>• <i>I liked that the main character doesn't know everything at the beginning; she's like us at the beginning, because we as teenagers don't think about what's going on all the time.</i></li> <li>• <i>I liked main character, just like us who isn't aware until she sees it firsthand.</i></li> <li>• <i>I liked the mom/daughter relationship; mom knows a lot and has a lot to teach the daughter.</i></li> <li>• <i>I liked how dad is from Siberia; it gives firsthand information of global warming.</i></li> </ul>
<b>Comparative Data/Statistics</b>
<ul style="list-style-type: none"> <li>• <i>There needs to be evidence presented of human causes of climate change.</i></li> <li>• <i>There are only two experts in the movie, there aren't that many working on it. If they show more opinions and experiments from other scientists, that would be better.</i></li> <li>• <i>Female participant agrees with previous sentiment that charts should be shown rather than just pictures.</i></li> <li>• <i>Since it's called The Change, it would be helpful to show before and after.</i></li> </ul>

### Sub-themes and coded content

- *It would be interesting to compare statistics and cultures being affected.*
- *Balance this view of what's happening with science and statistics.*
- *Maybe they can present some math and science to show what is changing in our world*
- *I would like to know the rate at which it's affecting places. For the place that was flooded, how long has that been going on?*
- *And provide some graphs so we know the normal temperature and then compare*
- *The film makers could include statistics and the technical side of things, but not to make it less enjoyable, I enjoyed the balance.*

### Film editing

Participants offered several suggestions for editing the film in order to improve viewing quality including organizing content, clarifying the target audience, and changing the film's title.

Participants talked about Katie's use of the energy drinks and, similar to other groups, felt this scene was unnecessary. Participants also felt that the current title opens the door for some confusion among viewers. One suggestion was to name the film, *The Effect*. Responses are shown in Figure 19.

**Figure 19. New York film editing responses**

### Sub-themes and coded content

#### Organization of content

- *The beginning was strange, even as a teenager it was strange even though I understood they were trying to make a connection about chugging energy drinks, should have been an introduction*
- *If I didn't know it was a climate change movie I would be confused because of the way it starts out*
- *It did, but forgot it was about climate change in the beginning. After the part with the pizza, they are asked how they feel about climate change and then it becomes more clear*
- *If I knew nothing about global warming or climate change prior to the video, I wouldn't know the causes because the video doesn't cover that.*
- *There were moments that didn't relate to anything that were going on, like her smashing energy drink cans.*
- *Her being a teenager makes it more relatable, but stuff in between was unnecessary.*
- *I didn't understand the "this is why I'm different" part on her fridge*

#### Title suggestions

- *I want to know the intended audience, like who is the person you're trying to send the message to? The title doesn't tell me anything about the movie.*

#### Editing suggestions

- *It would be useful to show a chart of the weather change*
- *Female participant agrees taking a differing approach than telling people polar bears are drowning will help keep interest about climate change.*
- *The subtitles are annoying to read; in a classroom it would be tough to read them. I just want to watch and listen, not read too.*
- *Maybe if you had someone translating for the people talking.*
- *Two female participants also mention: I want to hear the person rather than subtitles*
- *We didn't have to see the girl playing solitaire.*
- *One of my biggest pet peeves is when the camera is shaky, the shakiness was very annoying*
- *The subtitle font needs to be larger; I sat in front and I still couldn't read them due to bad eyesight*
- *Identify with subtitles who is speaking, and only the scientists really display their name on screen. Also isn't clear who is narrating at times.*
- *When asked if subtitles were easy to follow, two people respond somewhat and sort of*
- *They say the name, Siberia, but that doesn't exactly let us know where it is.*
- *If they had other teenagers not just one person's opinion, and you could see different people's experiences*

## Project goals

Participant responses illustrate levels of increased knowledge and awareness with respect to both issues surrounding climate change and various cultures. Participants also spoke to feeling more informed and engaged while viewing the film. While three participants exhibited attitudes of skepticism and indifference, most participants felt interested in the issues discussed in the film. Participants also demonstrated levels of motivation in seeking out resources to help not only other countries, but their own as well. Responses are shown in Figure 20.

**Figure 20. New York project goal responses**

Sub-themes and coded content
<b>Increased knowledge</b>
<ul style="list-style-type: none"> <li>• <i>I realized scientists do research on how cultures are affected by certain things. Thought scientists only did experiments in labs. Was surprised to see research was being done on how it directly affects people</i></li> <li>• <i>I liked it, and how they brought awareness about places like Siberia and what's going on in the world</i></li> <li>• <i>It was interesting to see how a normal teenage girl gets exposed to all this information about climate change</i></li> <li>• <i>I didn't know about the permafrost until I saw the clip</i></li> <li>• <i>Yeah, you're not going to remember a specific statistic, you're going to remember the ruined crops</i></li> <li>• <i>I liked seeing other cultures, and how it's personally affecting them</i></li> <li>• <i>I liked the culture, and how it's first person perspective and not just facts and statistics</i></li> </ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"> <li>• <i>The film held my attention, not just focused on climate change but on her as a person</i></li> <li>• <i>Three participants say yes to wanting to know more about the characters after the clip</i></li> <li>• <i>A unanimous yes is heard among the group in response to wanting to learn more about climate change.</i></li> <li>• <i>Yeah I was interested to see what they would find in Siberia, and other parts of the world.</i></li> <li>• <i>A female participant says it adds sympathy and makes people feel for the people</i></li> <li>• <i>I guess a little, but when I throw a gum wrapper away I don't care. I'll see a film like this that makes me care for a little bit, but then I'll go back</i></li> <li>• <i>Everyone says it won't affect me in my lifetime, it is showing that it is showing people today are suffering through visible effects</i></li> <li>• <i>It didn't, I'm skeptical on the actual causes, there have been climate changes in the past that there was no way for humans to cause</i></li> </ul>
<b>Increased motivation to assist those affected by climate change</b>
<ul style="list-style-type: none"> <li>• <i>It would be better if they listed things that contribute to it or what people can do to help, and then it would be more relatable</i></li> <li>• <i>I'm interested too, this issue may affect us soon and we may not know it</i></li> <li>• <i>I would like to know what surrounding countries are doing to help</i></li> <li>• <i>I would like to see how this will affect the United States eventually, or even now. I want to know how it's eventually going to affect me.</i></li> </ul>
<b>Authentic voice of native people</b>
<ul style="list-style-type: none"> <li>• <i>One of my favorite scenes was the town meeting, it showed what was really happening with all the anecdotes, you're seeing the people and their reactions</i></li> <li>• <i>I feel sympathy is a given, it's not a National Geographic video that's just facts. It shows real consequences of climate change</i></li> <li>• <i>Less science than actually learning from the people's perspectives. Fewer charts and such than I expected, and a lot of people's perspectives about how their life was changed</i></li> <li>• <i>The villagers speaking was most touching, they should do that for all the places they travel.</i></li> </ul>

## Fort Yates, North Dakota participants: Native American college students

### Film Content

One participant responded with insight into the film's content specific to character development, shown in Figure 21.

Figure 21. Fort Yates, ND film content response

Sub-themes and coded content
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"><li><i>I liked the young girl narrating I; empowering youth through knowledge, and the community input and the change they have noticed over the years.</i></li></ul>

### Film editing

Participants offered several suggestions with respect to film editing. Some of the more prominent suggestions offered by the participants included changing the title of the film as there were points of confusion surrounding initial impressions of the film given its current working title. One suggestion included a subtitle after the main title to clarify what “change” is taking place within the film. Responses are shown in Figure 22.

Figure 22. Fort Yates, ND film editing responses

Sub-themes and coded content
<b>Organization of content</b>
<ul style="list-style-type: none"><li><i>If they're going to go with the same plan, the youth needs to be the lead there. Youths need to understand the culture, spirituality, and science of it. If there was a presentation, there wouldn't be someone with a cell phone there</i></li><li><i>Is the extent to what they're going to do with this particular group of people and they're going to other places as well? I feel like there's a lot of questions left out there about those people and what happens to them</i></li><li><i>I thought they could've gone into what they did. What were the horses useful for in Siberia? No clear cut uses like cattle.</i></li><li><i>What is the period of this movie? They come back after a couple of years?</i></li></ul>
<b>Title suggestions</b>
<ul style="list-style-type: none"><li><i>Yes it's about global warming, but it's also about the change people have to make I think the title's fitting</i></li><li><i>I think of the change of going from child to adult. In this period, are we seeing drastic change in mindset? If so, then The Change connotes several things. By calling it The Change, it implies something is going to change in the film, and you see it toward the end of the film when she's taking pictures and such. That's what I think of when I hear The Change</i></li><li><i>Maybe a subtitle so people know what the change is</i></li><li><i>So... it's not a puberty film?</i></li><li><i>...or menopausal?</i></li></ul>
<b>Editing suggestions</b>
<ul style="list-style-type: none"><li><i>A female participant said "she tries not to look bored, being on your phone doesn't agree with that"</i></li><li><i>The beginning of the film could be changed, not specific, but if I didn't have the background I wouldn't watch past the first four minutes</i></li><li><i>I thought they were focusing on certain tribes, she was the only non-white in the beginning, need more diverse people. Everyone is affected by climate change, so why highlight how she is different?</i></li><li><i>The beginning of it didn't have anything to do with the later part of global warming</i></li><li><i>Where it should have started off is when they're eating and talking about global warming</i></li></ul>

## Project goals

Participants expressed feelings of increased knowledge, informed attitudes, increased motivation to assist those affected by climate change, and recognizing the authentic native voices exhibited in the film. Participants also noted the similarities between the native people in the film and their own beliefs and experiences. For example, they noted how important grass is to their own belief system, and expressed empathy with the gravity of the impact flooding on the Siberian peoples' spirituality. Responses are shown in Figure 23.

**Figure 23. Fort Yates, ND project goal responses**

<b>Sub-themes and coded content</b>
<b>Increased knowledge</b>
<ul style="list-style-type: none"><li>• <i>I liked at the beginning that the girl was asking her friends about climate change, difference between global warming</i></li><li>• <i>Their climate is much different, so it was alarming to see things so drastic in that area</i></li><li>• <i>I would want to see from a governmental standpoint where we're at as a nation, and where Europe is from a scientific and educational stance about climate change</i></li></ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"><li>• <i>We saw it because of the drought, it affected the wheat fields and our cattle. We all knew it was global warming. Over there, global warming is giving them too much water</i></li><li>• <i>It's affecting the animal (deer) population</i></li><li>• <i>It's an eye-opener because it happened here</i></li><li>• <i>We already know it's happening, it's affecting all living things</i></li><li>• <i>Affects their spirituality, in our tribe grass is important too and hold similar beliefs</i></li></ul>
<b>Increased motivation to assist those affected by climate change</b>
<ul style="list-style-type: none"><li>• <i>I get a sense that this will be our next movement, in a grassroots level</i></li><li>• <i>It hits close to home, want to see something more local</i></li><li>• <i>I want to know what we can do to stop it. The real question is when action is going to take place?</i></li><li>• <i>The film echoed how important it is to use tribe knowledge of the land to help scientists</i></li></ul>
<b>Authentic voice of native people</b>
<ul style="list-style-type: none"><li>• <i>The elders, and when the animals were acting different, and show how connected to nature they are. The older people could compare the changes such as the wolves being closer than usual and how the land used to be flat</i></li><li>• <i>One of the men talked about the increased rain, and how it affected his blood pressure/health</i></li><li>• <i>Think they could do other tribes, like here in the US</i></li></ul>

## Bismarck, North Dakota participants: Native American college students

### Film content

Participant responses focused on offering feedback in the areas of context development, character development, and the incorporation of forms of data. Participants discussed the need for focusing more on facts, data, and science in order to illustrate the situation and the events taking place contextually. Responses are shown in Figure 24.

Figure 24. Bismarck, ND film content responses

Sub-themes and coded content
<b>Context development</b>
<ul style="list-style-type: none"><li><i>They need to focus on the science and facts more. Letting us see the effects is great too, but interviewing people and having a more in-depth discussion would be better.</i></li></ul>
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"><li><i>They could have done a better job, focus on those people and their story. I liked the town hall meeting they had with the scientists, I want more feedback from them and the things that they're noticing. Maybe we can have a sit-down with someone and look at ways they are trying to prepare</i></li></ul>
<b>Comparative Data/Statistics</b>
<ul style="list-style-type: none"><li><i>I would want to see if there's a historical video or photos so you can see the difference. You see the wetlands forming, but don't see a "before" photo or anything</i></li></ul>

### Film editing

Participants offered some suggestions with respect to film editing to improve the quality of viewing. Participants suggested that some of the more extraneous information or material be removed from the film, such as the “pizza eating and banter.” With respect to the film’s working title, participants felt that the title was suitable to the film. Responses are shown in Figure 25.

Figure 25. Bismarck, ND film editing responses

Sub-themes and coded content
<b>Organization of content</b>
<ul style="list-style-type: none"><li><i>I thought they wasted too much time getting to the point. Lots of extraneous material, like the pizza and banter, I'd turn it off.</i></li><li><i>There is lots of background stuff, I'd rather hear the elders and village than chitchat and crushing energy drink cans. More interaction with the community. Don't know if the story is the girl learning, but don't know which direction the film is headed</i></li></ul>
<b>Title suggestions</b>
<ul style="list-style-type: none"><li><i>I think it's pretty suiting, it fits pretty well</i></li><li><i>I don't really have any other suggestions.</i></li></ul>
<b>Editing suggestions</b>
<ul style="list-style-type: none"><li><i>If story continues with daughter, bring closure to how she feels and see if she comes around</i></li></ul>

### Project goals

Participants expressed a desire to learn more about the issues surrounding Permafrost in addition to additional scientific discoveries, as one participant said, “we’re a science crowd, we want to hear the science!” Participants also discussed how important issues like this are to be brought to the public’s attention and some participants expressed a desire to see what happens next within the film. Regarding giving a voice to native people, having one-on-one interviews with elders was suggested. Responses are shown in Figure 26.

**Figure 26. Bismarck, ND project goal responses**

<b>Sub-themes and coded content</b>
<b>Increased knowledge</b>
<ul style="list-style-type: none"> <li>• <i>They showed research on permafrost, I wanted to see more of what he does. The introduction could be shortened</i></li> <li>• <i>We're a science crowd, we want to hear the science!</i></li> <li>• <i>I guess not in any way I didn't previously know. Didn't know that much permafrost is melting, but I knew it was there. To physically see it though, hits home</i></li> <li>• <i>I thought it was interesting to see people doing research from Siberia. They are vested in their community</i></li> </ul>
<b>Informed attitudes</b>
<ul style="list-style-type: none"> <li>• <i>I feel the same about climate change; I believe that it's happening. I think it's good, and I hope people get to see what's happening and what others are going through.</i></li> <li>• <i>I've been paying attention to global warming for years, going to conferences and presentations and other tribes losing hunting grounds. Films like these communicate the firsthand knowledge that needs to be addressed immediately.</i></li> </ul>
<b>Increased motivation to assist those affected by climate change</b>
<ul style="list-style-type: none"> <li>• <i>I liked it, I want to see what happens</i></li> <li>• <i>I feel the same way, people in more urban areas are blind to it, they don't believe it, and I get mad when I hear it. I have a lot of sympathy when I see people like that, they don't know any different and live off the land</i></li> </ul>
<b>Authentic voice of native people</b>
<ul style="list-style-type: none"> <li>• <i>I liked the guy being there and helping his own people</i></li> <li>• <i>I would like an elder to give interview, and also youth so people can see if there is different view of things occurring</i></li> </ul>

## Shiprock, New Mexico participants: Native American high school students

Two groups were interviewed as part of the Shiprock, NM focus group. Due to the similarity within the groups' responses, the coded content for each of the two focus groups is presented together.

### Film content

Participant responses were brief, but did have some important pieces of feedback with respect to context development, character development, and the incorporation of data within the film. One participant asked where Siberia was located, which indicates a need to describe where this place is located in addition to offering some background information. Participants also discussed Katie's character and that it would be useful to see her perspective a little more. Lastly, like previous groups, participants discussed a desire to see more scientific data to help foster a deeper understanding of the ramifications countries, like Siberia, are experiencing in relation to climate change. Responses are shown in Figure 27.

**Figure 27. New Mexico film content responses**

Sub-themes and coded content
<b>Context development</b>
<ul style="list-style-type: none"> <li>• <i>Where is Siberia?</i></li> </ul>
<b>Character Development (Katie, mother, and father)</b>
<ul style="list-style-type: none"> <li>• <i>It would be useful if they got Katie's view on everything</i></li> <li>• <i>I thought it was interesting how the girl grew up compared to other people</i></li> <li>• <i>It was interesting how the mom studies other cultures</i></li> </ul>
<b>Comparative Data/Statistics</b>
<ul style="list-style-type: none"> <li>• <i>I would like to see more about how the scientists are involved in helping</i></li> <li>• <i>I would like to see more of the scientific talk about climate change, they should start off with the science.</i></li> </ul>

### Film editing

Participants offer suggestions for film editing with respect to the organization of the content, suggestions for changing the working title, and other miscellaneous editing suggestions. Participants expressed slight confusion at the beginning of the film clip because they were not quite sure what was happening. With respect to the working title, participants offered a few suggestions such as *Change Around the World* or adding *in Siberia* at the end of the present working title. Some participants said that the title is fine the way it is. As for miscellaneous editing, participants offering a couple of suggestions such as deleting the "mother-daughter conflict" near the beginning of the film clip. Responses are shown in Figure 28.

**Figure 28. New Mexico film editing responses**

Sub-themes and coded content
<b>Organization of content</b>
<ul style="list-style-type: none"> <li>• <i>How does the beginning part tie in, I didn't really understand that part and why they put it at the beginning</i></li> <li>• <i>What was the purpose for filming for climate change? What happens if the water level rises too high?</i></li> </ul>
<b>Title suggestions</b>
<ul style="list-style-type: none"> <li>• <i>I thought it was good because, it details how the climate is... changing</i></li> <li>• <i>It's pretty good</i></li> <li>• <i>I like it</i></li> </ul>

Sub-themes and coded content
<ul style="list-style-type: none"> <li>• <i>I like it, it's pretty good</i></li> <li>• <i>...in Siberia</i></li> <li>• <i>It's good</i></li> <li>• <i>"Change around the World"</i></li> </ul>
Editing suggestions
<ul style="list-style-type: none"> <li>• <i>Perhaps showing other places</i></li> <li>• <i>Find more people's points of view in the communities visited</i></li> <li>• <i>There appeared to be lots of dead air, when nothing was said. Didn't see the point of mother-daughter conflict at the beginning rather than learning about climate change.</i></li> </ul>

### Project goals

Participants express levels of increased knowledge, informed attitudes, increased motivation to assist those affected by climate change, and a recognition of the authentic native voices illustrated within the film. A couple of participants talked about how viewing the film put issues surrounding climate change in perspective with other participants saying that it caught their attention and increased levels of concern surrounding the issue. During the discussion, there was a unanimous "yes" when asked about levels of motivation to assist those who have been affected by climate change. Participants mentioned how, through the film, they were able to see those who have been affected and also appreciated seeing their point of view. Responses are shown in Figure 29.

**Figure 29. New Mexico project goal responses**

Sub-themes and coded content
Increased Knowledge
<ul style="list-style-type: none"> <li>• <i>Hearing about global warming, showing how many floods there are and high they get</i></li> <li>• <i>We can learn about climate change and where it comes from</i></li> </ul>
Informed Attitudes
<ul style="list-style-type: none"> <li>• <i>It catches your attention, makes you want to learn more</i></li> <li>• <i>Yes, more concerned about it now</i></li> <li>• <i>Yes, I didn't think it was that important, but now I see what happens to other places</i></li> </ul>
Increased Motivation to Assist Those Affected by Climate Change
<ul style="list-style-type: none"> <li>• <i>A unanimous yes is heard among the group participants when asked.</i></li> </ul>
Authentic Voice of Native People
<ul style="list-style-type: none"> <li>• <i>Yeah I think so because it shows other people around the world and how they respond</i></li> <li>• <i>I can see how the climate is affecting them</i></li> <li>• <i>I liked the point of view, how the people who lived there knew their land</i></li> </ul>

## Cumulative analysis of sub-themes addressed by focus groups

Participants across all 11 focus groups, for the most part, addressed the three thematic areas of film content, film editing, and progress towards goal achievement. *Identifying the target audience* was addressed least often. *Title change* and *editing suggestions* were addressed most often. All participants except those in Florida and Georgia exhibited levels of increased knowledge awareness, informed attitudes, increased motivation to help those affected by climate change, and recognized authentic native voices displayed in the film. Figure 30 summarizes responses across all focus groups.

**Figure 30. Cumulative focus group response chart**

Themes and Sub-themes	GA	FL	CA	UT	ID	NY	FY, ND	B, ND	NM	% Commenting
<b>Formative: Film Content</b>										
Context Development	✓	✓	✓	✓		✓		✓	✓	82%
Development of Katie's Character	✓		✓	✓	✓	✓	✓	✓	✓	91%
Use of comparative/statistical data	✓	✓	✓	✓		✓		✓	✓	91%
<b>Formative: Film Editing</b>										
Organization of Content	✓	✓	✓	✓		✓	✓	✓	✓	91%
Target Audience			✓			✓				23%
Title Change Suggestions	✓	✓	✓	✓	✓	✓	✓	✓	✓	100%
Editing Suggestions	✓	✓	✓	✓	✓	✓	✓	✓	✓	100%
<b>Summative: Project goals</b>										
Increased Knowledge	✓		✓		✓	✓	✓	✓	✓	82%
Informed Attitude	✓		✓	✓	✓	✓	✓	✓	✓	91%
Increased Motivation			✓		✓	✓	✓	✓	✓	73%
Authentic Voice of the Native People	✓		✓		✓	✓	✓	✓	✓	82%

As shown in Figure 30, all of the focus groups discuss issues surrounding changing the film title and offer various editing suggestions including deleting certain scenes. One particular scene many groups felt merited deletion was when Katie and her friends are seen consuming energy drinks. Many participants felt that this scene bore little relevance to the film and was not needed. In addition, many participants felt that it would benefit the film if a narrator explained what is happening a voice-over was used in lieu of subtitles. Participants expressed that this would aid in the viewer's comprehension. Lastly, many of the groups commented on the need to incorporate more information about climate change and more statistical data. Participants expressed concerns about ensuring the establishment of credibility through the use of additional data. Participants said that doing so would allow them to understand the extent of the changes experienced by those affected by climate change in Siberia.

Groups responded positively to Katie and her experiences depicted in the film clip. Most groups stated they would like to see more of her metamorphosis into a person who becomes increasingly concerned about climate. Many participants also expressed a desire to want to learn more about Katie, her family, and her background. Participants explained that in doing so the film would strengthen the establishment of film context.

Finally, most of the groups’ responses addressed the project goals. Most participants shared that they learned quite a bit from this film clip and there were aspects of climate change they had not previously learned or heard about – for some participants, the content in the film was entirely new to them. Most participants also expressed concern for those affected by climate change as portrayed in the film, with many participants expressing a desire to help those affected.

### Rating of perception towards the reality of climate change

After watching the film all participants rated (on the demographic questionnaire) the extent to which they agreed that the film changed their perception of the reality of climate change on a scale of 1 to 5, 1 = *strongly disagree*, 5=*strongly agree*, thus responses of 4 and 5 indicate agreement. In Figure 31, average participant responses across focus group location, gender, ethnicity, and age are shown. Most demographic groups had a mean score of 3.50<sup>4</sup> and above, suggesting that the film positively affected their perception that climate change is real. Ratings lower than 3.50 are highlighted yellow. Locations with an average lower than 3.50 are Fort Yates, ND, Florida and Utah. Asians, Hispanics, early age (20-39) and senior groups also had a mean score below 3.50. It is important to note that many participants were already convinced of the reality of climate change so they had minimal room for growth.

**Figure 31. Participants’ perception of the reality of climate change**

		Mean Score
<b>Focus Group Location</b>	Georgia	3.75
	Florida	1.90
	California	3.80
	Utah	2.38
	New York	3.71
	Idaho	3.70
	New Mexico	4.29
	Fort Yates, North Dakota	3.00
	Bismarck, North Dakota	4.00
<b>Gender</b>	Male	3.51
	Female	3.62
<b>Ethnicity</b>	African American	4.00
	Asian	3.33
	Caucasian	3.55
	East Indian	4.00
	Hispanic	3.25
	Native American	3.60
	Pacific Islander	5.00
Other	4.00	
<b>Age</b>	10-19	3.91
	20-29	2.67
	30-39	3.36
	40-49	3.88
	50-59	3.13
	60-69	2.82
	70-79	2.43

<sup>4</sup> 3.50 was selected as the “cut-off” because it is the midpoint between a rating of 1 and a rating of 5.

## Section 4. Key Findings and Recommendations

Based on the results of this front-end evaluation, the following key findings and recommendations for the film *The Change* have been identified:

**1. Develop the context more:** In general, participants were interested in the context of the film however, they wanted more information on the setting, situation, and circumstances.

*Participants request more information on the background of the family, the location and relevance of Siberia, and more a more detailed description of the people and location. Many suggested showing a map of the world then zooming into this location in Siberia. They also suggested making connections to USA problems, and clarifying the goal and focus of the film to viewers.*

**2. Develop Katie's character:** Participants responded well to Katie's character with most groups sharing that they would like to see more of her and her development throughout the film. The younger participants at the middle school and high school level felt her character was relatable. The adult participants appreciate the use of her character and would like to see her character developed more in addition to seeing more of the relationship between Katie and her family (namely, her mother).

*Participants ask to hear Katie's perspective on global warming. They recommend paralleling the physical changes observed in the environment via climate change with Katie's own personal growth and development in learning more about this issue. They suggested bringing the film's main character's opinions "full circle" as she travels around the world and becomes more aware of climate change.*

**2. Incorporate comparative/statistical data:** A majority of participants across all focus groups spoke to a need for more statistical or comparative data. Participants expressed a desire to have additional information to establish further context of the issues discussed in the film.

*Many participants recommended showing more scientists studying the issue and incorporating the use of statistical data and maps in order to draw a clearer picture as to the severity of the changes experienced by these people of Siberia. They also wanted clarification on what is the actual problem and what is permafrost. They wanted to see more evidence of climate change in this location such as before and after pictures of the area.*

**2. Select a new film title:** Participants from the 11 focus groups all suggested that the title of the film be changed. A large majority of the participants stated that the current working title, *The Change*, has the potential to confuse viewers as the title can mean a variety of things: menopause, puberty, or President Barack Obama were predominant responses for what participants thought the title of the film originally referenced.

*Participants recommend that the title be changed or clarified to enable viewers to have some insight into the contents of the film. Groups offered a few suggestions such as "The Warming," "The Effect," or "The Change in Siberia." Other participants suggested the use of a colon after the current working title followed by a subtitle offering a little more insight into the content of the film.*

3. **General film editing:** Participants shared various suggestions for general film editing in order to improve comprehension and clearly articulate the ideas that are expressed in the film. Some groups expressed confusion about where the film was taking place and the order of events in the film.

*Participants offered various suggestions for overall film editing which included:*

- *Delete the scene (or clarify its purpose) in which Katie and her friends drink energy drinks at the beginning of the film*
- *Clarify the purpose of the scene where Katie is playing on her phone or iPod. If the purpose is to show Katie's disinterest in the issue/problem then carry the theme of her growth throughout the film.*
- *Organize the sequence of scenes for improved flow and transitions*
- *Use a narrator to explain what is happening, especially in transitions*
- *Use a voice-over instead of subtitles*
- *Show/describe more clearly where filming occurs (such as a world map showing Siberia)*
- *Consider labeling characters/locations with text on the screen to aid viewers*
- *Clarify the target audience*
- *Start in Alaska (or anywhere in the USA) to generate interest then move to other countries.*

5. **Project goals:** Participant responses answered the guiding evaluation questions. Most of the content of participant responses exhibited increased knowledge and awareness about the issues surrounding climate change. Most responses also exhibited informed attitudes about the issues surrounding climate change and how it affects communities around the world. Some participants expressed increased motivation in wanting to help those who have been affected by climate change. Lastly, most participant responses recognized the authentic voices of those depicted in the film.

*While the responses demonstrate that the goals for this front-end evaluation have been addressed, participant responses to these four areas can be strengthened by incorporating their suggestions as the film is developed and produced. In general, participants made the following suggestions to increase goal achievement:*

***Increase Knowledge*** – *Provide more information on filming locations such as maps and background of the culture. Incorporate more scientific information, data, and facts.*

***Inform Attitudes*** – *Incorporate more of a sense of crisis. Show the problems associated with climate change more clearly.*

***Increase motivation to assist*** – *Explain what is leading to climate change in each location and what are the specific effects. Are the indigenous people contributing to it? What can the viewers do to assist?*

***Recognition of the authentic voice of the native people:*** *Ask them to explain what they and their leaders are doing to help themselves and what their plans are for the future.*

## Appendix A: Focus group protocol

---

**Focus Group:**      Front end evaluation of Ironbound Films Film – *The Change*

Date:

Location:

### **Guiding Evaluation Questions:**

Does viewing *The Change* film:

1. Increase viewers' knowledge of how climate change affects communities and cultures and help viewers understand how scientists are involved in climate change?
2. Inform viewers' attitudes towards climate change and how it will affect communities around the world?
3. Motivate viewers to become actively involved in the assistance of people who are adversely affected by climate change?
4. Give a voice to the native people who will be forced to adapt or relocate as a result of climate change?

### **Focus Group Protocol:**

Good afternoon. I would like to thank all of you for coming today and taking time out of your busy schedules to participate in the evaluation of this film. Has everyone signed in?

My name is \_\_\_\_\_ and I work for SmartStart Educational Consulting Services. We are conducting a front end, formative and summative evaluation of the documentary film entitled *The Change* by Ironbound Films and sponsored by the National Science Foundation. The film is still being produced and you will participate in the front end phase of the evaluation. You will watch a short video reel of the film which will eventually be 50 minutes long. The purpose of the evaluation is to give feedback to the producers to help improve the quality of the film and to increase its impact on viewers.

Your participation in this evaluation is voluntary. You may choose to not participate in any portion of this evaluation, to not answer a question, and to excuse yourself at any time.

I will be recording our discussions so I can compile and organize your responses later. No names will be used during this discussion. Do you have any questions before we begin?

### **Front end evaluation:**

Today you will participate in the front end evaluation of this film. First, I will read the description of the film. Next you will view a 14-minute video reel. Finally, we will hold a group discussion about your perspectives on the film description and the video reel. Feel free to make notes as we read and view the film.

*Distribute note paper and pencils for participants to make notes as they listen and watch.*

*Distribute film description and read out loud with participants.*

*Show video reel.*

*Ask participants to arrange their chairs in a semi-circular fashion.*

I am going to ask questions to the entire group. Please feel free to answer any time you like.

1. Tell me your first impression of this film. Did you like it? Did it hold your attention?
2. Did it maintain your interest? What were the most interesting elements of the clip to you?
3. Now tell me about the film's characters, what they talked about, and the stories they told. Were the characters interesting?
4. After viewing this clip did you want to know more about the characters? Climate change? The science of climate change?
5. What did you learn about how climate change is affecting the community shown in the film?
6. Has watching this film made you more sympathetic to the issues that these people are facing? Please explain why or why not.
7. Has watching this film changed your attitudes about climate change? Please explain why/not.
8. What have you learned about how scientists are involved in climate change?
9. One of the goals of this film is to show the voices and experience of native people who may have to adapt or relocate because of climate change. How well do you think this film accomplishes this goal?
10. Questions may have popped into your mind as you were viewing the film clip. Were your questions answered? If not, what unanswered questions do you have?
11. The working title of the film is *The Change*. What do you think of that title? If you could suggest another title what would it be?
12. What specific suggestions to for improvement would make that we haven't already discussed?

I enjoyed talking with you. I want to thank you very much for participating in this discussion group.

## Appendix B: Data form for focus group participants

---



### *The Change* Front End Focus Group

Thank you for participating today. Please answer the following questions. Please be assured that your answers are kept confidential.

How much do you agree with the following?

This video made climate change more real to me. (please check 1 box)

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

---

We ask the following questions so we will be able to describe the gender, age and ethnic background of the groups of people we talk to.

1. With which gender do you identify? (Please check 1 box)

- Male
- Female

2. With which ethnicity do you most closely identify? (please check 1 box)

- African American (Black)
- Asian (Chinese, Filipino, Japanese, Vietnamese, etc.)
- Caucasian (White)
- East Indian (from India, Sri Lanka, etc.)
- Hispanic (Latino/a, Mexican, Chicano/a, Brazilian)
- Middle Eastern
- Native American (American Indian/Alaskan Native)
- Pacific Islander / Hawaiian
- Other, please specify \_\_\_\_\_

3. What is your age? \_\_\_\_\_(years)